SAF-RC-075
100-D/DR Burial Grounds & Remaining Sites – Soil Full Protocol
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 7/30/12
INITIAL/DATE

COMMENTS:

SDG KP0114 SAF RC-075

Rad only Chem only ☑ Rad & Chem

☑ Complete Partial

Waste Site: 100-D-65 Outfall

EBERLINE SERVICES

EBERLINE ANALYTICAL CORPORATION
2030 Wright Avenue
Richmond, California 94804-3849
Phone (510) 235-2633 Fax (510) 235-0438
Toll Free (800) 841-5487
www.eberlineservices.com

July 27, 2012

Ms. Joan Kessner
Washington Closure Hanford
2620 Fermi Avenue
MSIN H4-21
Richland, WA 99352

Reference: **P.O. #S00W235A01**
Eberline Analytical S2-07-063-7740 SDG KP0114

Dear Ms. Kessner:

Enclosed is the data report for thirteen soil samples designated under SAF No. RC-075. The samples were received at Eberline Analytical on July 20, 2012. The samples were analyzed according to the accompanying chain-of-custody documents.

Please call if you have any questions concerning this report.

Sincerely,

Joseph Verville
Client Services Manager

NJV/

Enclosure: Data Package

1.0 GENERAL

Washington Closure Hanford (WCH) Sample Delivery Group KP0114 was composed of thirteen soil samples designated under SAF No. RC-075 with a Project Designation of: 100-D/DR Burial Grounds & Remaining Sites – Soil Full Protocol.

The samples were received as stated on the Chain-of-Custody documents. Any discrepancies are noted on the Eberline Analytical Sample Receipt Checklist. The results were transmitted to WCH via e-mail on July 27, 2012.

2.0 ANALYSIS NOTES

2.1 Tritium Analysis

No problems were encountered during the course of the analyses.

2.2 Carbon-14 Analysis

No problems were encountered during the course of the analyses.

2.3 Nickel-63 Analysis

No problems were encountered during the course of the analyses.

2.4 Isotopic Strontium Analysis

No problems were encountered during the course of the analyses.

2.5 Isotopic Uranium Analysis

No problems were encountered during the course of the analyses.

2.6 Isotopic Plutonium Analysis

No problems were encountered during the course of the analyses.

2.7 Gamma Spectroscopy

No problems were encountered during the course of the analyses.

3.0 Case Narrative Certification Statement

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

7/27/12

Joseph Verville
Client Services Manager

Date

E B E R L I N E A N A L Y T I C A L / R I C H M O N D
SAMPLE DELIVERY GROUP KP0114

SDG	7740
Contact	Joseph Verville

Client	Hanford
Contract	No. S00W235A01
Case no	SDG KP0114

S U M M A R Y D A T A S E C T I O N

T A B L E O F C O N T E N T S

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Prepared by

Reviewed by

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-TOC
Version	3.06
Report date	07/27/12

SDG 7740
Contact Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A01
Case no SDG_KP0114

ABOUT THE DATA SUMMARY SECTION

The Data Summary Section of a Data Package has all data, in several useful orders, necessary for first level, routine review of the data package for a Sample Delivery Group (SDG). This section follows the Data Package Narrative, which has an overview of the data package and a discussion of special problems. It is followed by the Raw Data Section, which has full details.

The Data Summary Section has several groups of reports:

SAMPLE SUMMARIES

The Sample and QC Summary Reports show all samples, including QC samples, reported in one SDG. These reports cross-reference client and lab sample identifiers.

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches (lab groupings reflecting how work was organized) relevant to the reported SDG with information necessary to check the completeness and consistency of the SDG.

WORK SUMMARY

The Work Summary Report shows all samples and work done on them relevant to the reported SDG.

METHOD BLANKS

The Method Blank Reports, one for each Method Blank relevant to the SDG, show all results and primary supporting information for the blanks.

LAB CONTROL SAMPLES

The Lab Control Sample Reports, one for each Lab Control Sample relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 07/27/12

ABOUT THE DATA SUMMARY SECTION

DUPLICATES

The Duplicate Reports, one for each Duplicate and Original sample pair relevant to the SDG, show all results, differences and primary supporting information for these QC samples.

MATRIX SPIKES

The Matrix Spike Reports, one for each Spiked and Original sample pair relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DATA SHEETS

The Data Sheet Reports, one for each client sample in the SDG, show all results and primary supporting information for these samples.

METHOD SUMMARIES

The Method Summary Reports, one for each test used in the SDG, show all results, QC and method performance data for one analyte on one or two pages. (A test is a short code for the method used to do certain work to the client's specification.)

REPORT GUIDES

The Report Guides, one for each of the above groups of reports, have documentation on how to read the associated reports.

EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

SDG 7740
Contact Joseph Verville

LAB SAMPLE SUMMARY

Client Hanford
Contract No. S00W235A01
Case no SDG KP0114

LAB SAMPLE ID	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAF NO	CHAIN OF CUSTODY	COLLECTED
S207063-01	J1PVL2	100-D-65 Outfall	SOIL		RC-075	RC-075-305	07/18/12 12:30
S207063-02	J1PVL3	100-D-65 Outfall	SOIL		RC-075	RC-075-305	07/18/12 12:20
S207063-03	J1PVL4	100-D-65 Outfall	SOIL		RC-075	RC-075-305	07/18/12 12:10
S207063-04	J1PVL5	100-D-65 Outfall	SOIL		RC-075	RC-075-305	07/18/12 11:50
S207063-05	J1PVL6	100-D-65 Outfall	SOIL		RC-075	RC-075-305	07/18/12 10:40
S207063-06	J1PVL7	100-D-65 Outfall	SOIL		RC-075	RC-075-305	07/18/12 10:25
S207063-07	J1PVL8	100-D-65 Outfall	SOIL		RC-075	RC-075-305	07/18/12 10:10
S207063-08	J1PVL9	100-D-65 Outfall	SOIL		RC-075	RC-075-305	07/18/12 10:00
S207063-09	J1PVM0	100-D-65 Outfall	SOIL		RC-075	RC-075-305	07/18/12 09:50
S207063-10	J1PVM1	100-D-65 Outfall	SOIL		RC-075	RC-075-305	07/18/12 09:35
S207063-11	J1PVM2	100-D-65 Outfall	SOIL		RC-075	RC-075-305	07/18/12 09:20
S207063-12	J1PVM3	100-D-65 Outfall	SOIL		RC-075	RC-075-305	07/18/12 08:55
S207063-13	J1PVM4	100-D-65 Outfall	SOIL		RC-075	RC-075-305	07/18/12 12:30
S207063-14	Lab Control Sample		SOIL		RC-075		
S207063-15	Method Blank		SOIL		RC-075		
S207063-16	Duplicate (S207063-01)	100-D-65 Outfall	SOIL		RC-075		07/18/12 12:30

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LS
Version 3.06
Report date 07/27/12

EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

SDG 7740
Contact Joseph Verville

QC SUMMARY

Client Hanford
Contract No. S00W235A01
Case no SDG KP0114

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% SOLIDS	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	DAYS SINCE COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
7740	RC-075-305	J1PVL2	SOIL	98.3	814 g		07/20/12	2	S207063-01	7740-001
		J1PVL3	SOIL	98.1	897 g		07/20/12	2	S207063-02	7740-002
		J1PVL4	SOIL	96.1	739 g		07/20/12	2	S207063-03	7740-003
		J1PVL5	SOIL	96.3	685 g		07/20/12	2	S207063-04	7740-004
		J1PVL6	SOIL	95.7	693 g		07/20/12	2	S207063-05	7740-005
		J1PVL7	SOIL	96.3	744 g		07/20/12	2	S207063-06	7740-006
		J1PVL8	SOIL	96.3	690 g		07/20/12	2	S207063-07	7740-007
		J1PVL9	SOIL	97.5	843 g		07/20/12	2	S207063-08	7740-008
		J1PVM0	SOIL	95.7	740 g		07/20/12	2	S207063-09	7740-009
		J1PVM1	SOIL	95.5	600 g		07/20/12	2	S207063-10	7740-010
		J1PVM2	SOIL	86.1	589 g		07/20/12	2	S207063-11	7740-011
		J1PVM3	SOIL	89.7	582 g		07/20/12	2	S207063-12	7740-012
		J1PVM4	SOIL	98.5	817 g		07/20/12	2	S207063-13	7740-013
		Method Blank	SOIL						S207063-15	7740-015
		Lab Control Sample	SOIL						S207063-14	7740-014
		Duplicate (S207063-01)	SOIL	98.3	814 g		07/20/12	2	S207063-16	7740-016

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-QS
Version 3.06
Report date 07/27/12

EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

SDG 7740
Contact Joseph Verville

PREP BATCH SUMMARY

Client Hanford
Contract No. S00W235A01
Case no SDG KP0114

TEST	MATRIX	METHOD	PREPARATION BATCH	ERROR 2σ %	PLANCHETS ANALYZED CLIENT	MORE	RE	BLANK	LCS	DUP/ORIG	MS/ORIG	QUALIFIERS
Alpha Spectroscopy												
PU	SOIL	Plutonium, Isotopic in Solids	7734-099	8.0	13			1	1	1/1		
U	SOIL	Uranium, Isotopic in Solids	7734-099	8.0	13			1	1	1/1		
Beta Counting												
SR	SOIL	Total Strontium in Solids	7734-099	10.4	13			1	1	1/1		
Gamma Spectroscopy												
GAM	SOIL	Gamma Scan	7734-099	7.0	13			1	1	1/1		
Liquid Scintillation Counting												
C	SOIL	Carbon 14 in Solids	7734-099	10.0	13			1	1	1/1		
H	SOIL	Tritium in Solids	7734-099	10.0	13			1	1	1/1		
NI_L	SOIL	Nickel 63 in Solids	7734-099	11.2	13			1	1	1/1		

Duplicates and Spikes are those with original sample in the QC Batch of some Client sample in this SDG.
Blank and LCS planchets are those in the same preparation batch as some Client, Duplicate or Spike sample.

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-PBS
Version 3.06
Report date 07/27/12

EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

SDG 7740
Contact Joseph Verville

LAB WORK SUMMARY

Client Hanford
Contract No. S00W235A01
Case no SDG KP0114

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
S207063-01	J1PVL2			7740-001	C		07/25/12	07/27/12	MWT	Carbon 14 in Solids
07/18/12	100-D-65 Outfall		SOIL	7740-001	GAM		07/23/12	07/25/12	CSS	Gamma Scan
07/20/12	RC-075-305	RC-075		7740-001	H		07/25/12	07/27/12	MWT	Tritium in Solids
				7740-001	NI_L		07/26/12	07/27/12	MWT	Nickel 63 in Solids
				7740-001	PU		07/25/12	07/26/12	BW	Plutonium, Isotopic in Solids
				7740-001	SR		07/25/12	07/27/12	BW	Total Strontium in Solids
				7740-001	U		07/25/12	07/26/12	BW	Uranium, Isotopic in Solids
S207063-02	J1PVL3			7740-002	C		07/25/12	07/27/12	MWT	Carbon 14 in Solids
07/18/12	100-D-65 Outfall		SOIL	7740-002	GAM		07/23/12	07/25/12	CSS	Gamma Scan
07/20/12	RC-075-305	RC-075		7740-002	H		07/25/12	07/27/12	MWT	Tritium in Solids
				7740-002	NI_L		07/26/12	07/27/12	MWT	Nickel 63 in Solids
				7740-002	PU		07/25/12	07/26/12	BW	Plutonium, Isotopic in Solids
				7740-002	SR		07/25/12	07/27/12	BW	Total Strontium in Solids
				7740-002	U		07/25/12	07/26/12	BW	Uranium, Isotopic in Solids
S207063-03	J1PVL4			7740-003	C		07/25/12	07/27/12	MWT	Carbon 14 in Solids
07/18/12	100-D-65 Outfall		SOIL	7740-003	GAM		07/23/12	07/25/12	CSS	Gamma Scan
07/20/12	RC-075-305	RC-075		7740-003	H		07/25/12	07/27/12	MWT	Tritium in Solids
				7740-003	NI_L		07/26/12	07/27/12	MWT	Nickel 63 in Solids
				7740-003	PU		07/25/12	07/26/12	BW	Plutonium, Isotopic in Solids
				7740-003	SR		07/25/12	07/27/12	BW	Total Strontium in Solids
				7740-003	U		07/25/12	07/26/12	BW	Uranium, Isotopic in Solids
S207063-04	J1PVL5			7740-004	C		07/25/12	07/27/12	MWT	Carbon 14 in Solids
07/18/12	100-D-65 Outfall		SOIL	7740-004	GAM		07/23/12	07/25/12	CSS	Gamma Scan
07/20/12	RC-075-305	RC-075		7740-004	H		07/25/12	07/27/12	MWT	Tritium in Solids
				7740-004	NI_L		07/26/12	07/27/12	MWT	Nickel 63 in Solids
				7740-004	PU		07/25/12	07/26/12	BW	Plutonium, Isotopic in Solids
				7740-004	SR		07/25/12	07/27/12	BW	Total Strontium in Solids
				7740-004	U		07/25/12	07/26/12	BW	Uranium, Isotopic in Solids
S207063-05	J1PVL6			7740-005	C		07/25/12	07/27/12	MWT	Carbon 14 in Solids
07/18/12	100-D-65 Outfall		SOIL	7740-005	GAM		07/23/12	07/25/12	CSS	Gamma Scan
07/20/12	RC-075-305	RC-075		7740-005	H		07/25/12	07/27/12	MWT	Tritium in Solids
				7740-005	NI_L		07/26/12	07/27/12	MWT	Nickel 63 in Solids
				7740-005	PU		07/25/12	07/26/12	BW	Plutonium, Isotopic in Solids
				7740-005	SR		07/25/12	07/27/12	BW	Total Strontium in Solids
				7740-005	U		07/25/12	07/26/12	BW	Uranium, Isotopic in Solids

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 07/27/12

EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

SDG 7740
Contact Joseph Verville

WORK SUMMARY, cont.

Client Hanford
Contract No. S00W235A01
Case no SDG KP0114

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
S207063-06	J1PVL7			7740-006	C		07/25/12	07/27/12	MWT	Carbon 14 in Solids
07/18/12	100-D-65 Outfall		SOIL	7740-006	GAM		07/23/12	07/25/12	CSS	Gamma Scan
07/20/12	RC-075-305	RC-075		7740-006	H		07/25/12	07/27/12	MWT	Tritium in Solids
				7740-006	NI_L		07/26/12	07/27/12	MWT	Nickel 63 in Solids
				7740-006	PU		07/25/12	07/26/12	BW	Plutonium, Isotopic in Solids
				7740-006	SR		07/25/12	07/27/12	BW	Total Strontium in Solids
				7740-006	U		07/25/12	07/26/12	BW	Uranium, Isotopic in Solids
S207063-07	J1PVL8			7740-007	C		07/25/12	07/27/12	MWT	Carbon 14 in Solids
07/18/12	100-D-65 Outfall		SOIL	7740-007	GAM		07/23/12	07/25/12	CSS	Gamma Scan
07/20/12	RC-075-305	RC-075		7740-007	H		07/25/12	07/27/12	MWT	Tritium in Solids
				7740-007	NI_L		07/26/12	07/27/12	MWT	Nickel 63 in Solids
				7740-007	PU		07/25/12	07/26/12	BW	Plutonium, Isotopic in Solids
				7740-007	SR		07/25/12	07/27/12	BW	Total Strontium in Solids
				7740-007	U		07/25/12	07/26/12	BW	Uranium, Isotopic in Solids
S207063-08	J1PVL9			7740-008	C		07/25/12	07/27/12	MWT	Carbon 14 in Solids
07/18/12	100-D-65 Outfall		SOIL	7740-008	GAM		07/23/12	07/25/12	CSS	Gamma Scan
07/20/12	RC-075-305	RC-075		7740-008	H		07/25/12	07/27/12	MWT	Tritium in Solids
				7740-008	NI_L		07/26/12	07/27/12	MWT	Nickel 63 in Solids
				7740-008	PU		07/25/12	07/26/12	BW	Plutonium, Isotopic in Solids
				7740-008	SR		07/25/12	07/27/12	BW	Total Strontium in Solids
				7740-008	U		07/25/12	07/26/12	BW	Uranium, Isotopic in Solids
S207063-09	J1PVM0			7740-009	C		07/25/12	07/27/12	MWT	Carbon 14 in Solids
07/18/12	100-D-65 Outfall		SOIL	7740-009	GAM		07/23/12	07/25/12	CSS	Gamma Scan
07/20/12	RC-075-305	RC-075		7740-009	H		07/25/12	07/27/12	MWT	Tritium in Solids
				7740-009	NI_L		07/26/12	07/27/12	MWT	Nickel 63 in Solids
				7740-009	PU		07/25/12	07/26/12	BW	Plutonium, Isotopic in Solids
				7740-009	SR		07/25/12	07/27/12	BW	Total Strontium in Solids
				7740-009	U		07/25/12	07/26/12	BW	Uranium, Isotopic in Solids
S207063-10	J1PVM1			7740-010	C		07/25/12	07/27/12	MWT	Carbon 14 in Solids
07/18/12	100-D-65 Outfall		SOIL	7740-010	GAM		07/23/12	07/25/12	CSS	Gamma Scan
07/20/12	RC-075-305	RC-075		7740-010	H		07/25/12	07/27/12	MWT	Tritium in Solids
				7740-010	NI_L		07/26/12	07/27/12	MWT	Nickel 63 in Solids
				7740-010	PU		07/25/12	07/26/12	BW	Plutonium, Isotopic in Solids
				7740-010	SR		07/25/12	07/27/12	BW	Total Strontium in Solids
				7740-010	U		07/25/12	07/26/12	BW	Uranium, Isotopic in Solids

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 07/27/12

EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

SDG 7740
Contact Joseph Verville

WORK SUMMARY, cont.

Client Hanford
Contract No. S00W235A01
Case no SDG KP0114

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
S207063-11	J1PVM2			7740-011	C		07/25/12	07/27/12	MWT	Carbon 14 in Solids
07/18/12	100-D-65 Outfall		SOIL	7740-011	GAM		07/23/12	07/25/12	CSS	Gamma Scan
07/20/12	RC-075-305	RC-075		7740-011	H		07/25/12	07/27/12	MWT	Tritium in Solids
				7740-011	NI_L		07/26/12	07/27/12	MWT	Nickel 63 in Solids
				7740-011	PU		07/25/12	07/26/12	BW	Plutonium, Isotopic in Solids
				7740-011	SR		07/25/12	07/27/12	BW	Total Strontium in Solids
				7740-011	U		07/25/12	07/26/12	BW	Uranium, Isotopic in Solids
S207063-12	J1PVM3			7740-012	C		07/25/12	07/27/12	MWT	Carbon 14 in Solids
07/18/12	100-D-65 Outfall		SOIL	7740-012	GAM		07/23/12	07/25/12	CSS	Gamma Scan
07/20/12	RC-075-305	RC-075		7740-012	H		07/25/12	07/27/12	MWT	Tritium in Solids
				7740-012	NI_L		07/26/12	07/27/12	MWT	Nickel 63 in Solids
				7740-012	PU		07/25/12	07/26/12	BW	Plutonium, Isotopic in Solids
				7740-012	SR		07/25/12	07/27/12	BW	Total Strontium in Solids
				7740-012	U		07/25/12	07/26/12	BW	Uranium, Isotopic in Solids
S207063-13	J1PVM4			7740-013	C		07/25/12	07/27/12	MWT	Carbon 14 in Solids
07/18/12	100-D-65 Outfall		SOIL	7740-013	GAM		07/23/12	07/25/12	CSS	Gamma Scan
07/20/12	RC-075-305	RC-075		7740-013	H		07/25/12	07/27/12	MWT	Tritium in Solids
				7740-013	NI_L		07/26/12	07/27/12	MWT	Nickel 63 in Solids
				7740-013	PU		07/25/12	07/26/12	BW	Plutonium, Isotopic in Solids
				7740-013	SR		07/25/12	07/27/12	BW	Total Strontium in Solids
				7740-013	U		07/25/12	07/26/12	BW	Uranium, Isotopic in Solids
S207063-14	Lab Control Sample			7740-014	C		07/26/12	07/27/12	MWT	Carbon 14 in Solids
			SOIL	7740-014	GAM		07/23/12	07/25/12	CSS	Gamma Scan
		RC-075		7740-014	H		07/26/12	07/27/12	MWT	Tritium in Solids
				7740-014	NI_L		07/26/12	07/27/12	MWT	Nickel 63 in Solids
				7740-014	PU		07/25/12	07/26/12	BW	Plutonium, Isotopic in Solids
				7740-014	SR		07/25/12	07/27/12	BW	Total Strontium in Solids
				7740-014	U		07/25/12	07/26/12	BW	Uranium, Isotopic in Solids
S207063-15	Method Blank			7740-015	C		07/25/12	07/27/12	MWT	Carbon 14 in Solids
			SOIL	7740-015	GAM		07/23/12	07/25/12	CSS	Gamma Scan
		RC-075		7740-015	H		07/25/12	07/27/12	MWT	Tritium in Solids
				7740-015	NI_L		07/26/12	07/27/12	MWT	Nickel 63 in Solids
				7740-015	PU		07/25/12	07/26/12	BW	Plutonium, Isotopic in Solids
				7740-015	SR		07/25/12	07/27/12	BW	Total Strontium in Solids
				7740-015	U		07/25/12	07/26/12	BW	Uranium, Isotopic in Solids

Lab id EBRLNE
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EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

SDG 7740
Contact Joseph Verville

WORK SUMMARY, cont.

Client Hanford
Contract No. S00W235A01
Case no SDG KP0114

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
S207063-16	Duplicate (S207063-01)			7740-016	C		07/25/12	07/27/12	MWT	Carbon 14 in Solids
07/18/12	100-D-65 Outfall		SOIL	7740-016	GAM		07/23/12	07/25/12	CSS	Gamma Scan
07/20/12		RC-075		7740-016	H		07/25/12	07/27/12	MWT	Tritium in Solids
				7740-016	NI_L		07/26/12	07/27/12	MWT	Nickel 63 in Solids
				7740-016	PU		07/25/12	07/26/12	BW	Plutonium, Isotopic in Solids
				7740-016	SR		07/25/12	07/27/12	BW	Total Strontium in Solids
				7740-016	U		07/25/12	07/26/12	BW	Uranium, Isotopic in Solids

COUNTS OF TESTS BY SAMPLE TYPE

TEST	SAF No	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP SPIKE	TOTAL
C	RC-075	Carbon 14 in Solids	C14LL_COX_LSC	13			1	1	1	16
GAM	RC-075	Gamma Scan	GAMMA_GS	13			1	1	1	16
H	RC-075	Tritium in Solids	TRITIUM_COX_LSC	13			1	1	1	16
NI_L	RC-075	Nickel 63 in Solids	NI63_LSC	13			1	1	1	16
PU	RC-075	Plutonium, Isotopic in Solids	PUISO_PLATE_AEA	13			1	1	1	16
SR	RC-075	Total Strontium in Solids	SRTOT_SEP_PRECIP_GPC	13			1	1	1	16
U	RC-075	Uranium, Isotopic in Solids	UISO_PLATE_AEA	13			1	1	1	16
TOTALS				91			7	7	7	112

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EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

7740-015 Method Blank

METHOD BLANK

SDG	7740	Client/Case no	Hanford	SDG_KP0114	
Contact	Joseph Verville	Contract	No. S00W235A01		
Lab sample id	S207063-15	Client sample id	Method Blank		
Dept sample id	7740-015	Material/Matrix		SOIL	
		SAF No	RC-075		

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	0.485	3.6	6.12	10.0	U	H
Carbon 14	14762-75-5	-2.01	2.9	4.97	1.00	U	C
Nickel 63	13981-37-8	-0.487	1.6	2.85	30.0	U	NI_L
Total Strontium	SR-RAD	-0.012	0.11	0.232	1.00	U	SR
Uranium 233/234	U-233/234	0	0.050	0.190	1.00	U	U
Uranium 235	15117-96-1	0	0.060	0.229	1.00	U	U
Uranium 238	U-238	0	0.050	0.190	1.00	U	U
Plutonium 238	13981-16-3	-0.013	0.013	0.045	1.00	U	PU
Plutonium 239/240	PU-239/240	-0.003	0.007	0.026	1.00	U	PU
Potassium 40	13966-00-2	U		0.215		U	GAM
Cobalt 60	10198-40-0	U		0.017	0.050	U	GAM
Cesium 137	10045-97-3	U		0.018	0.100	U	GAM
Europium 152	14683-23-9	U		0.051	0.100	U	GAM
Europium 154	15585-10-1	U		0.052	0.100	U	GAM
Europium 155	14391-16-3	U		0.036	0.100	U	GAM
Radium 226	13982-63-3	U		0.040	0.100	U	GAM
Radium 228	15262-20-1	U		0.074	0.200	U	GAM
Thorium 228	14274-82-9	U		0.027		U	GAM
Thorium 232	TH-232	U		0.074		U	GAM
Uranium 235	15117-96-1	U		0.088	0.300	U	GAM
Uranium 238	U-238	U		2.11	10.0	U	GAM
Americium 241	14596-10-2	U		0.021	0.300	U	GAM

QC-BLANK #82186

Lab id	EBRLNE
Protocol	Hanford1
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EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

7740-014 Lab Control Sample

LAB CONTROL SAMPLE

SDG 7740 Client/Case no Hanford SDG KP0114

Contact Joseph Verville Contract No. S00W235A01

Lab sample id S207063-14 Client sample id Lab Control Sample

Dept sample id 7740-014 Material/Matrix SOIL

SAF No RC-075

ANALYTE	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST	ADDED pCi/g	2σ ERR pCi/g	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS
Tritium	633	17	6.53	10.0		H	650	26	97	84-116	80-120
Carbon 14	2150	43	10.6	1.00		C	2130	85	101	83-117	80-120
Nickel 63	237	6.2	2.82	30.0		NI_L	258	10	92	83-117	80-120
Total Strontium	8.16	0.52	0.261	1.00		SR	8.44	0.34	97	81-119	80-120
Uranium 233/234	10.7	1.4	0.278	1.00		U	10.7	0.43	100	76-124	80-120
Uranium 238	11.0	1.4	0.278	1.00		U	10.7	0.43	103	76-124	80-120
Plutonium 238	10.8	0.47	0.036	1.00		PU	11.3	0.45	96	86-114	80-120
Plutonium 239/240	11.9	0.50	0.031	1.00		PU	13.2	0.53	90	86-114	80-120
Cobalt 60	1.55	0.051	0.022	0.050		GAM	1.57	0.063	99	87-113	80-120
Cesium 137	1.83	0.049	0.032	0.100		GAM	1.82	0.073	100	87-113	80-120

QC-LCS #82185

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LCS
Version 3.06
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EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

7740-016 J1PVL2

DUPLICATE

SDG	7740	Client/Case no	Hanford SDG KP0114
Contact	Joseph Verville	Contract	No. S00W235A01
DUPLICATE		ORIGINAL	
Lab sample id	S207063-16	Lab sample id	S207063-01
Dept sample id	7740-016	Dept sample id	7740-001
		Received	07/20/12
% solids	98.3	% solids	98.3
Client sample id	J1PVL2		
Location/Matrix	100-D-65 Outfall SOIL		
Collected/Weight	07/18/12 12:30 814 g		
Custody/SAF No	RC-075-305 RC-075		

ANALYTE	DUPLICATE pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST	ORIGINAL pCi/g	2σ ERR (COUNT)	MDA pCi/g	QUALI-FIERS	RPD %	3σ TOT	DER σ
Tritium	-0.552	3.3	5.80	10.0	U	H	0.278	3.4	5.84	U	-		0.4
Carbon 14	-1.15	2.7	4.60	1.00	U	C	-1.30	2.7	4.67	U	-		0.1
Nickel 63	-1.15	1.8	3.12	30.0	U	NI_L	0.184	1.6	2.80	U	-		1.1
Total Strontium	0.023	0.11	0.227	1.00	U	SR	-0.023	0.15	0.308	U	-		0.5
Uranium 233/234	0.399	0.20	0.153	1.00		U	0.676	0.27	0.167		52	95	1.6
Uranium 235	0.121	0.097	0.185	1.00	U	U	0.079	0.11	0.202	U	-		0.6
Uranium 238	0.778	0.25	0.153	1.00		U	0.589	0.22	0.167		28	75	1.1
Plutonium 238	0.015	0.025	0.047	1.00	U	PU	0.045	0.037	0.054	U	-		1.3
Plutonium 239/240	0.003	0.012	0.024	1.00	U	PU	0.015	0.022	0.036	U	-		1.0
Potassium 40	11.7	0.41	0.222			GAM	10.1	1.3	0.815		15	24	1.8
Cobalt 60	U		0.020	0.050	U	GAM	U		0.074	U	-		1.4
Cesium 137	U		0.020	0.100	U	GAM	U		0.062	U	-		1.3
Europium 152	U		0.057	0.100	U	GAM	U		0.206	U	-		1.4
Europium 154	U		0.063	0.100	U	GAM	U		0.237	U	-		1.4
Europium 155	U		0.055	0.100	U	GAM	U		0.152	U	-		1.2
Radium 226	0.402	0.044	0.041	0.100		GAM	0.393	0.14	0.140		2	57	0.1
Radium 228	0.602	0.11	0.099	0.200		GAM	0.528	0.22	0.239		13	67	0.6
Thorium 228	0.530	0.033	0.029			GAM	0.682	0.13	0.135		25	36	2.1
Thorium 232	0.602	0.11	0.099			GAM	0.528	0.22	0.239		13	67	0.6
Uranium 235	U		0.120	0.300	U	GAM	U		0.406	U	-		1.3
Uranium 238	U		2.43	10.0	U	GAM	U		8.36	U	-		1.4
Americium 241	U		0.088	0.300	U	GAM	U		0.087	U	-		0

QC-DUP#1 82187

100-D/DR Burial Grounds & Remaining Sites-
Soil Full Protocol

Lab id EBRLNE
Protocol Hanford1
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EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

7740-001 J1PVL2

DATA SHEET

SDG	7740	Client/Case no	Hanford	SDG_KP0114	
Contact	Joseph Verville	Contract	No. S00W235A01		
Lab sample id	S207063-01	Client sample id	J1PVL2		
Dept sample id	7740-001	Location/Matrix	100-D-65 Outfall	SOIL	
Received	07/20/12	Collected/Weight	07/18/12 12:30	814 g	
% solids	98.3	Custody/SAF No	RC-075-305	RC-075	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	0.278	3.4	5.84	10.0	U	H
Carbon 14	14762-75-5	-1.30	2.7	4.67	1.00	U	C
Nickel 63	13981-37-8	0.184	1.6	2.80	30.0	U	NI_L
Total Strontium	SR-RAD	-0.023	0.15	0.308	1.00	U	SR
Uranium 233/234	U-233/234	0.676	0.27	0.167	1.00		U
Uranium 235	15117-96-1	0.079	0.11	0.202	1.00	U	U
Uranium 238	U-238	0.589	0.22	0.167	1.00		U
Plutonium 238	13981-16-3	0.045	0.037	0.054	1.00	U	PU
Plutonium 239/240	PU-239/240	0.015	0.022	0.036	1.00	U	PU
Potassium 40	13966-00-2	10.1	1.3	0.815			GAM
Cobalt 60	10198-40-0	U		0.074	0.050	U	GAM
Cesium 137	10045-97-3	U		0.062	0.100	U	GAM
Europium 152	14683-23-9	U		0.206	0.100	U	GAM
Europium 154	15585-10-1	U		0.237	0.100	U	GAM
Europium 155	14391-16-3	U		0.152	0.100	U	GAM
Radium 226	13982-63-3	0.393	0.14	0.140	0.100		GAM
Radium 228	15262-20-1	0.528	0.22	0.239	0.200		GAM
Thorium 228	14274-82-9	0.682	0.13	0.135			GAM
Thorium 232	TH-232	0.528	0.22	0.239			GAM
Uranium 235	15117-96-1	U		0.406	0.300	U	GAM
Uranium 238	U-238	U		8.36	10.0	U	GAM
Americium 241	14596-10-2	U		0.087	0.300	U	GAM

100-D/DR Burial Grounds & Remaining Sites-
Soil Full Protocol

Lab id	EBRLNE
Protocol	Hanford1
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EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

7740-002 J1PVL3

DATA SHEET

SDG	7740	Client/Case no	Hanford	SDG_KP0114	
Contact	Joseph Verville	Contract	No. S00W235A01		
Lab sample id	S207063-02	Client sample id	J1PVL3		
Dept sample id	7740-002	Location/Matrix	100-D-65 Outfall	SOIL	
Received	07/20/12	Collected/Weight	07/18/12 12:20	897 g	
% solids	98.1	Custody/SAF No	RC-075-305	RC-075	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	0	3.4	5.94	10.0	U	H
Carbon 14	14762-75-5	-1.80	3.0	5.18	1.00	U	C
Nickel 63	13981-37-8	-0.606	1.8	3.07	30.0	U	NI_L
Total Strontium	SR-RAD	-0.073	0.14	0.291	1.00	U	SR
Uranium 233/234	U-233/234	0.639	0.22	0.163	1.00		U
Uranium 235	15117-96-1	0.026	0.052	0.197	1.00	U	U
Uranium 238	U-238	0.511	0.22	0.163	1.00		U
Plutonium 238	13981-16-3	-0.016	0.032	0.077	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.008	0.031	1.00	U	PU
Potassium 40	13966-00-2	10.9	1.4	0.720			GAM
Cobalt 60	10198-40-0	U		0.069	0.050	U	GAM
Cesium 137	10045-97-3	U		0.065	0.100	U	GAM
Europium 152	14683-23-9	U		0.185	0.100	U	GAM
Europium 154	15585-10-1	U		0.225	0.100	U	GAM
Europium 155	14391-16-3	U		0.134	0.100	U	GAM
Radium 226	13982-63-3	0.644	0.11	0.096	0.100		GAM
Radium 228	15262-20-1	0.744	0.29	0.233	0.200		GAM
Thorium 228	14274-82-9	0.792	0.12	0.125			GAM
Thorium 232	TH-232	0.744	0.29	0.233			GAM
Uranium 235	15117-96-1	U		0.310	0.300	U	GAM
Uranium 238	U-238	U		7.53	10.0	U	GAM
Americium 241	14596-10-2	U		0.153	0.300	U	GAM

100-D/DR Burial Grounds & Remaining Sites-
Soil Full Protocol

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EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

7740-003 J1PVL4

DATA SHEET

SDG	7740	Client/Case no	Hanford	SDG_KP0114	
Contact	Joseph Verville	Contract	No. S00W235A01		
Lab sample id	S207063-03	Client sample id	J1PVL4		
Dept sample id	7740-003	Location/Matrix	100-D-65 Outfall	SOIL	
Received	07/20/12	Collected/Weight	07/18/12 12:10	739 g	
% solids	96.1	Custody/SAF No	RC-075-305	RC-075	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	0.170	3.1	5.38	10.0	U	H
Carbon 14	14762-75-5	-1.25	2.6	4.47	1.00	U	C
Nickel 63	13981-37-8	-0.085	1.9	3.24	30.0	U	NI_L
Total Strontium	SR-RAD	0.008	0.13	0.271	1.00	U	SR
Uranium 233/234	U-233/234	0.539	0.21	0.159	1.00		U
Uranium 235	15117-96-1	0.075	0.10	0.192	1.00	U	U
Uranium 238	U-238	0.664	0.25	0.159	1.00		U
Plutonium 238	13981-16-3	0.015	0.023	0.043	1.00	U	PU
Plutonium 239/240	PU-239/240	0.015	0.023	0.037	1.00	U	PU
Potassium 40	13966-00-2	11.6	1.3	0.545			GAM
Cobalt 60	10198-40-0	U		0.059	0.050	U	GAM
Cesium 137	10045-97-3	U		0.078	0.100	U	GAM
Europium 152	14683-23-9	U		0.219	0.100	U	GAM
Europium 154	15585-10-1	U		0.240	0.100	U	GAM
Europium 155	14391-16-3	U		0.163	0.100	U	GAM
Radium 226	13982-63-3	0.566	0.15	0.128	0.100		GAM
Radium 228	15262-20-1	0.632	0.25	0.302	0.200		GAM
Thorium 228	14274-82-9	0.654	0.11	0.092			GAM
Thorium 232	TH-232	0.632	0.25	0.302			GAM
Uranium 235	15117-96-1	U		0.403	0.300	U	GAM
Uranium 238	U-238	U		8.24	10.0	U	GAM
Americium 241	14596-10-2	U		0.099	0.300	U	GAM

100-D/DR Burial Grounds & Remaining Sites-
Soil Full Protocol

Lab id	EBRLNE
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EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

7740-004 J1PVL5

DATA SHEET

SDG	7740	Client/Case no	Hanford	SDG_KP0114	
Contact	Joseph Verville	Contract	No. S00W235A01		
Lab sample id	S207063-04	Client sample id	J1PVL5		
Dept sample id	7740-004	Location/Matrix	100-D-65 Outfall	SOIL	
Received	07/20/12	Collected/Weight	07/18/12 11:50	685 g	
% solids	96.3	Custody/SAF No	RC-075-305	RC-075	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	0.456	3.4	5.75	10.0	U	H
Carbon 14	14762-75-5	-1.35	2.9	5.01	1.00	U	C
Nickel 63	13981-37-8	0.188	1.7	2.85	30.0	U	NI_L
Total Strontium	SR-RAD	-0.004	0.13	0.251	1.00	U	SR
Uranium 233/234	U-233/234	0.626	0.23	0.141	1.00		U
Uranium 235	15117-96-1	0.045	0.045	0.171	1.00	U	U
Uranium 238	U-238	0.792	0.26	0.141	1.00		U
Plutonium 238	13981-16-3	0.004	0.035	0.073	1.00	U	PU
Plutonium 239/240	PU-239/240	0.004	0.017	0.033	1.00	U	PU
Potassium 40	13966-00-2	10.9	1.3	0.721			GAM
Cobalt 60	10198-40-0	U		0.073	0.050	U	GAM
Cesium 137	10045-97-3	0.219	0.084	0.075	0.100		GAM
Europium 152	14683-23-9	0.247	0.13	0.182	0.100		GAM
Europium 154	15585-10-1	U		0.210	0.100	U	GAM
Europium 155	14391-16-3	U		0.185	0.100	U	GAM
Radium 226	13982-63-3	0.424	0.14	0.152	0.100		GAM
Radium 228	15262-20-1	0.825	0.31	0.271	0.200		GAM
Thorium 228	14274-82-9	0.768	0.14	0.148			GAM
Thorium 232	TH-232	0.825	0.31	0.271			GAM
Uranium 235	15117-96-1	U		0.414	0.300	U	GAM
Uranium 238	U-238	U		8.85	10.0	U	GAM
Americium 241	14596-10-2	U		0.304	0.300	U	GAM

100-D/DR Burial Grounds & Remaining Sites-
Soil Full Protocol

Lab id	EBRLNE
Protocol	Hanford1
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EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

7740-005 J1PVL6

DATA SHEET

SDG	7740	Client/Case no	Hanford	SDG_KP0114	
Contact	Joseph Verville	Contract	No. S00W235A01		
Lab sample id	S207063-05	Client sample id	J1PVL6		
Dept sample id	7740-005	Location/Matrix	100-D-65 Outfall	SOIL	
Received	07/20/12	Collected/Weight	07/18/12 10:40	693 g	
% solids	95.7	Custody/SAF No	RC-075-305	RC-075	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	1.02	3.4	5.82	10.0	U	H
Carbon 14	14762-75-5	-1.17	2.8	4.86	1.00	U	C
Nickel 63	13981-37-8	0.843	1.9	3.20	30.0	U	NI_L
Total Strontium	SR-RAD	0.025	0.12	0.241	1.00	U	SR
Uranium 233/234	U-233/234	0.675	0.24	0.148	1.00		U
Uranium 235	15117-96-1	0.047	0.047	0.178	1.00	U	U
Uranium 238	U-238	0.829	0.28	0.148	1.00		U
Plutonium 238	13981-16-3	0.011	0.029	0.055	1.00	U	PU
Plutonium 239/240	PU-239/240	-0.007	0.014	0.039	1.00	U	PU
Potassium 40	13966-00-2	10.8	1.3	0.627			GAM
Cobalt 60	10198-40-0	U		0.073	0.050	U	GAM
Cesium 137	10045-97-3	0.166	0.080	0.082	0.100		GAM
Europium 152	14683-23-9	U		0.274	0.100	U	GAM
Europium 154	15585-10-1	U		0.211	0.100	U	GAM
Europium 155	14391-16-3	U		0.159	0.100	U	GAM
Radium 226	13982-63-3	0.454	0.13	0.126	0.100		GAM
Radium 228	15262-20-1	0.916	0.32	0.257	0.200		GAM
Thorium 228	14274-82-9	0.792	0.11	0.114			GAM
Thorium 232	TH-232	0.916	0.32	0.257			GAM
Uranium 235	15117-96-1	U		0.442	0.300	U	GAM
Uranium 238	U-238	U		8.73	10.0	U	GAM
Americium 241	14596-10-2	U		0.096	0.300	U	GAM

100-D/DR Burial Grounds & Remaining Sites-
Soil Full Protocol

Lab id	EBRLNE
Protocol	Hanford1
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EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

7740-006 J1PVL7

DATA SHEET

SDG	7740	Client/Case no	Hanford	SDG_KP0114
Contact	Joseph Verville	Contract	No. S00W235A01	
Lab sample id	S207063-06	Client sample id	J1PVL7	
Dept sample id	7740-006	Location/Matrix	100-D-65 Outfall	SOIL
Received	07/20/12	Collected/Weight	07/18/12 10:25	744 g
% solids	96.3	Custody/SAF No	RC-075-305	RC-075

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-1.86	3.1	5.58	10.0	U	H
Carbon 14	14762-75-5	-0.341	3.0	5.06	1.00	U	C
Nickel 63	13981-37-8	-1.33	2.0	3.49	30.0	U	NI_L
Total Strontium	SR-RAD	-0.022	0.11	0.227	1.00	U	SR
Uranium 233/234	U-233/234	1.00	0.28	0.150	1.00		U
Uranium 235	15117-96-1	0.024	0.047	0.182	1.00	U	U
Uranium 238	U-238	0.823	0.24	0.150	1.00		U
Plutonium 238	13981-16-3	0.009	0.026	0.053	1.00	U	PU
Plutonium 239/240	PU-239/240	0.030	0.026	0.033	1.00	U	PU
Potassium 40	13966-00-2	10.1	1.1	0.514			GAM
Cobalt 60	10198-40-0	U		0.063	0.050	U	GAM
Cesium 137	10045-97-3	U		0.072	0.100	U	GAM
Europium 152	14683-23-9	U		0.191	0.100	U	GAM
Europium 154	15585-10-1	U		0.193	0.100	U	GAM
Europium 155	14391-16-3	U		0.145	0.100	U	GAM
Radium 226	13982-63-3	0.431	0.13	0.127	0.100		GAM
Radium 228	15262-20-1	0.484	0.21	0.214	0.200		GAM
Thorium 228	14274-82-9	0.754	0.12	0.117			GAM
Thorium 232	TH-232	0.484	0.21	0.214			GAM
Uranium 235	15117-96-1	U		0.319	0.300	U	GAM
Uranium 238	U-238	U		7.39	10.0	U	GAM
Americium 241	14596-10-2	U		0.157	0.300	U	GAM

100-D/DR Burial Grounds & Remaining Sites-
Soil Full Protocol

Lab id	EBRLNE
Protocol	Hanford1
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EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

7740-007 J1PVL8

DATA SHEET

SDG	7740	Client/Case no	Hanford	SDG_KP0114	
Contact	Joseph Verville	Contract	No. S00W235A01		
Lab sample id	S207063-07	Client sample id	J1PVL8		
Dept sample id	7740-007	Location/Matrix	100-D-65 Outfall	SOIL	
Received	07/20/12	Collected/Weight	07/18/12 10:10	690 g	
% solids	96.3	Custody/SAF No	RC-075-305	RC-075	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	0.909	3.4	5.74	10.0	U	H
Carbon 14	14762-75-5	-1.01	3.1	5.25	1.00	U	C
Nickel 63	13981-37-8	0.435	2.0	3.30	30.0	U	NI_L
Total Strontium	SR-RAD	0.001	0.12	0.236	1.00	U	SR
Uranium 233/234	U-233/234	0.491	0.21	0.157	1.00		U
Uranium 235	15117-96-1	0.025	0.050	0.190	1.00	U	U
Uranium 238	U-238	0.921	0.29	0.157	1.00		U
Plutonium 238	13981-16-3	-0.030	0.030	0.074	1.00	U	PU
Plutonium 239/240	PU-239/240	-0.015	0.022	0.054	1.00	U	PU
Potassium 40	13966-00-2	12.2	1.2	0.472			GAM
Cobalt 60	10198-40-0	U		0.062	0.050	U	GAM
Cesium 137	10045-97-3	0.090	0.078	0.074	0.100		GAM
Europium 152	14683-23-9	U		0.207	0.100	U	GAM
Europium 154	15585-10-1	U		0.226	0.100	U	GAM
Europium 155	14391-16-3	U		0.166	0.100	U	GAM
Radium 226	13982-63-3	0.638	0.13	0.109	0.100		GAM
Radium 228	15262-20-1	0.683	0.27	0.274	0.200		GAM
Thorium 228	14274-82-9	0.684	0.10	0.080			GAM
Thorium 232	TH-232	0.683	0.27	0.274			GAM
Uranium 235	15117-96-1	U		0.353	0.300	U	GAM
Uranium 238	U-238	U		7.90	10.0	U	GAM
Americium 241	14596-10-2	U		0.090	0.300	U	GAM

100-D/DR Burial Grounds & Remaining Sites-
Soil Full Protocol

Lab id	EBRLNE
Protocol	Hanford1
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EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

7740-008 J1PVL9

DATA SHEET

SDG	7740	Client/Case no	Hanford	SDG_KP0114	
Contact	Joseph Verville	Contract	No. S00W235A01		
Lab sample id	S207063-08	Client sample id	J1PVL9		
Dept sample id	7740-008	Location/Matrix	100-D-65 Outfall	SOIL	
Received	07/20/12	Collected/Weight	07/18/12 10:00	843 g	
% solids	97.5	Custody/SAF No	RC-075-305	RC-075	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	0.365	3.4	5.75	10.0	U	H
Carbon 14	14762-75-5	-1.87	2.7	4.73	1.00	U	C
Nickel 63	13981-37-8	-1.37	2.0	3.60	30.0	U	NI_L
Total Strontium	SR-RAD	0.063	0.12	0.227	1.00	U	SR
Uranium 233/234	U-233/234	0.422	0.18	0.170	1.00		U
Uranium 235	15117-96-1	0.027	0.054	0.206	1.00	U	U
Uranium 238	U-238	0.667	0.23	0.170	1.00		U
Plutonium 238	13981-16-3	-0.009	0.026	0.063	1.00	U	PU
Plutonium 239/240	PU-239/240	0.009	0.009	0.033	1.00	U	PU
Potassium 40	13966-00-2	10.0	1.2	0.723			GAM
Cobalt 60	10198-40-0	U		0.069	0.050	U	GAM
Cesium 137	10045-97-3	U		0.059	0.100	U	GAM
Europium 152	14683-23-9	U		0.171	0.100	U	GAM
Europium 154	15585-10-1	U		0.194	0.100	U	GAM
Europium 155	14391-16-3	U		0.163	0.100	U	GAM
Radium 226	13982-63-3	0.401	0.13	0.134	0.100		GAM
Radium 228	15262-20-1	0.498	0.28	0.282	0.200		GAM
Thorium 228	14274-82-9	0.646	0.11	0.112			GAM
Thorium 232	TH-232	0.498	0.28	0.282			GAM
Uranium 235	15117-96-1	U		0.356	0.300	U	GAM
Uranium 238	U-238	U		7.64	10.0	U	GAM
Americium 241	14596-10-2	U		0.266	0.300	U	GAM

100-D/DR Burial Grounds & Remaining Sites-
Soil Full Protocol

Lab id	EBRLNE
Protocol	Hanford1
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EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

7740-009 J1PVM0

DATA SHEET

SDG	7740	Client/Case no	Hanford	SDG_KP0114	
Contact	Joseph Verville	Contract	No. S00W235A01		
Lab sample id	S207063-09	Client sample id	J1PVM0		
Dept sample id	7740-009	Location/Matrix	100-D-65 Outfall	SOIL	
Received	07/20/12	Collected/Weight	07/18/12 09:50	740 g	
% solids	95.7	Custody/SAF No	RC-075-305	RC-075	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-1.09	3.2	5.71	10.0	U	H
Carbon 14	14762-75-5	-0.318	2.8	4.71	1.00	U	C
Nickel 63	13981-37-8	1.21	2.0	3.28	30.0	U	NI_L
Total Strontium	SR-RAD	0.061	0.12	0.235	1.00	U	SR
Uranium 233/234	U-233/234	0.475	0.22	0.165	1.00		U
Uranium 235	15117-96-1	0	0.052	0.200	1.00	U	U
Uranium 238	U-238	0.626	0.22	0.165	1.00		U
Plutonium 238	13981-16-3	0	0.020	0.042	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.007	0.026	1.00	U	PU
Potassium 40	13966-00-2	10.5	1.3	0.936			GAM
Cobalt 60	10198-40-0	U		0.072	0.050	U	GAM
Cesium 137	10045-97-3	0.102	0.080	0.083	0.100		GAM
Europium 152	14683-23-9	U		0.255	0.100	U	GAM
Europium 154	15585-10-1	U		0.284	0.100	U	GAM
Europium 155	14391-16-3	U		0.169	0.100	U	GAM
Radium 226	13982-63-3	0.437	0.14	0.132	0.100		GAM
Radium 228	15262-20-1	0.446	0.26	0.297	0.200		GAM
Thorium 228	14274-82-9	0.737	0.11	0.111			GAM
Thorium 232	TH-232	0.446	0.26	0.297			GAM
Uranium 235	15117-96-1	U		0.456	0.300	U	GAM
Uranium 238	U-238	U		8.34	10.0	U	GAM
Americium 241	14596-10-2	U		0.102	0.300	U	GAM

100-D/DR Burial Grounds & Remaining Sites-
Soil Full Protocol

Lab id	EBRLNE
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EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

7740-010 J1PVM1

DATA SHEET

SDG	7740	Client/Case no	Hanford	SDG KP0114	
Contact	Joseph Verville	Contract	No. S00W235A01		
Lab sample id	S207063-10	Client sample id	J1PVM1		
Dept sample id	7740-010	Location/Matrix	100-D-65 Outfall	SOIL	
Received	07/20/12	Collected/Weight	07/18/12 09:35	600 g	
% solids	95.5	Custody/SAF No	RC-075-305	RC-075	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	1.14	3.3	5.55	10.0	U	H
Carbon 14	14762-75-5	-1.29	2.7	4.61	1.00	U	C
Nickel 63	13981-37-8	-0.386	1.9	3.25	30.0	U	NI_L
Total Strontium	SR-RAD	-0.024	0.12	0.248	1.00	U	SR
Uranium 233/234	U-233/234	0.315	0.18	0.172	1.00		U
Uranium 235	15117-96-1	0	0.054	0.208	1.00	U	U
Uranium 238	U-238	0.719	0.28	0.172	1.00		U
Plutonium 238	13981-16-3	0.003	0.026	0.050	1.00	U	PU
Plutonium 239/240	PU-239/240	0.007	0.007	0.025	1.00	U	PU
Potassium 40	13966-00-2	10.5	1.1	0.418			GAM
Cobalt 60	10198-40-0	U		0.059	0.050	U	GAM
Cesium 137	10045-97-3	U		0.050	0.100	U	GAM
Europium 152	14683-23-9	U		0.155	0.100	U	GAM
Europium 154	15585-10-1	U		0.209	0.100	U	GAM
Europium 155	14391-16-3	U		0.139	0.100	U	GAM
Radium 226	13982-63-3	0.343	0.12	0.123	0.100		GAM
Radium 228	15262-20-1	0.520	0.31	0.316	0.200		GAM
Thorium 228	14274-82-9	0.630	0.11	0.104			GAM
Thorium 232	TH-232	0.520	0.31	0.316			GAM
Uranium 235	15117-96-1	U		0.314	0.300	U	GAM
Uranium 238	U-238	U		7.66	10.0	U	GAM
Americium 241	14596-10-2	U		0.149	0.300	U	GAM

100-D/DR Burial Grounds & Remaining Sites-
Soil Full Protocol

Lab id	EBRLNE
Protocol	Hanford1
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EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

7740-011 J1PVM2

DATA SHEET

SDG	7740	Client/Case no	Hanford	SDG KP0114	
Contact	Joseph Verville	Contract	No. S00W235A01		
Lab sample id	S207063-11	Client sample id	J1PVM2		
Dept sample id	7740-011	Location/Matrix	100-D-65 Outfall	SOIL	
Received	07/20/12	Collected/Weight	07/18/12 09:20	589 g	
% solids	86.1	Custody/SAF No	RC-075-305	RC-075	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	0	3.1	5.29	10.0	U	H
Carbon 14	14762-75-5	-0.291	2.5	4.32	1.00	U	C
Nickel 63	13981-37-8	-0.165	2.4	4.18	30.0	U	NI_L
Total Strontium	SR-RAD	-0.011	0.13	0.258	1.00	U	SR
Uranium 233/234	U-233/234	0.752	0.28	0.174	1.00		U
Uranium 235	15117-96-1	0.028	0.055	0.211	1.00	U	U
Uranium 238	U-238	0.661	0.23	0.174	1.00		U
Plutonium 238	13981-16-3	0.006	0.019	0.042	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.013	0.030	1.00	U	PU
Potassium 40	13966-00-2	12.0	1.4	0.787			GAM
Cobalt 60	10198-40-0	U		0.081	0.050	U	GAM
Cesium 137	10045-97-3	U		0.115	0.100	U	GAM
Europium 152	14683-23-9	U		0.236	0.100	U	GAM
Europium 154	15585-10-1	U		0.241	0.100	U	GAM
Europium 155	14391-16-3	U		0.342	0.100	U	GAM
Radium 226	13982-63-3	0.625	0.16	0.147	0.100		GAM
Radium 228	15262-20-1	0.992	0.29	0.278	0.200		GAM
Thorium 228	14274-82-9	0.702	0.12	0.109			GAM
Thorium 232	TH-232	0.992	0.29	0.278			GAM
Uranium 235	15117-96-1	U		0.425	0.300	U	GAM
Uranium 238	U-238	U		10.2	10.0	U	GAM
Americium 241	14596-10-2	U		0.108	0.300	U	GAM

100-D/DR Burial Grounds & Remaining Sites-
Soil Full Protocol

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
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EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

7740-012 J1PVM3

DATA SHEET

SDG	7740	Client/Case no	Hanford	SDG_KP0114
Contact	Joseph Verville	Contract	No. S00W235A01	
Lab sample id	S207063-12	Client sample id	J1PVM3	
Dept sample id	7740-012	Location/Matrix	100-D-65 Outfall	SOIL
Received	07/20/12	Collected/Weight	07/18/12 08:55	582 g
% solids	89.7	Custody/SAF No	RC-075-305	RC-075

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-1.58	3.3	5.85	10.0	U	H
Carbon 14	14762-75-5	-0.792	2.8	4.84	1.00	U	C
Nickel 63	13981-37-8	-0.962	1.9	3.32	30.0	U	NI_L
Total Strontium	SR-RAD	-0.006	0.11	0.236	1.00	U	SR
Uranium 233/234	U-233/234	0.391	0.19	0.176	1.00		U
Uranium 235	15117-96-1	0	0.056	0.213	1.00	U	U
Uranium 238	U-238	0.322	0.19	0.176	1.00		U
Plutonium 238	13981-16-3	-0.012	0.031	0.062	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.015	0.037	1.00	U	PU
Potassium 40	13966-00-2	9.14	1.1	0.749			GAM
Cobalt 60	10198-40-0	U		0.063	0.050	U	GAM
Cesium 137	10045-97-3	U		0.067	0.100	U	GAM
Europium 152	14683-23-9	U		0.171	0.100	U	GAM
Europium 154	15585-10-1	U		0.195	0.100	U	GAM
Europium 155	14391-16-3	U		0.161	0.100	U	GAM
Radium 226	13982-63-3	0.371	0.11	0.115	0.100		GAM
Radium 228	15262-20-1	0.382	0.28	0.288	0.200		GAM
Thorium 228	14274-82-9	0.488	0.11	0.108			GAM
Thorium 232	TH-232	0.382	0.28	0.288			GAM
Uranium 235	15117-96-1	U		0.353	0.300	U	GAM
Uranium 238	U-238	U		7.96	10.0	U	GAM
Americium 241	14596-10-2	U		0.275	0.300	U	GAM

100-D/DR Burial Grounds & Remaining Sites-
Soil Full Protocol

Lab id	EBRLNE
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EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

7740-013 J1PVM4

DATA SHEET

SDG	7740	Client/Case no	Hanford SDG_KP0114
Contact	Joseph Verville	Contract	No. S00W235A01
Lab sample id	S207063-13	Client sample id	J1PVM4
Dept sample id	7740-013	Location/Matrix	100-D-65 Outfall SOIL
Received	07/20/12	Collected/Weight	07/18/12 12:30 817 g
% solids	98.5	Custody/SAF No	RC-075-305 RC-075

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-0.679	3.1	5.36	10.0	U	H
Carbon 14	14762-75-5	-1.41	2.6	4.42	1.00	U	C
Nickel 63	13981-37-8	-0.695	1.8	3.11	30.0	U	NI_L
Total Strontium	SR-RAD	-0.009	0.12	0.254	1.00	U	SR
Uranium 233/234	U-233/234	0.410	0.19	0.174	1.00		U
Uranium 235	15117-96-1	0	0.055	0.211	1.00	U	U
Uranium 238	U-238	0.524	0.23	0.174	1.00		U
Plutonium 238	13981-16-3	0	0.022	0.049	1.00	U	PU
Plutonium 239/240	PU-239/240	-0.007	0.007	0.035	1.00	U	PU
Potassium 40	13966-00-2	11.4	0.46	0.248			GAM
Cobalt 60	10198-40-0	U		0.021	0.050	U	GAM
Cesium 137	10045-97-3	U		0.020	0.100	U	GAM
Europium 152	14683-23-9	U		0.066	0.100	U	GAM
Europium 154	15585-10-1	U		0.070	0.100	U	GAM
Europium 155	14391-16-3	U		0.048	0.100	U	GAM
Radium 226	13982-63-3	0.352	0.053	0.046	0.100		GAM
Radium 228	15262-20-1	0.511	0.098	0.095	0.200		GAM
Thorium 228	14274-82-9	0.601	0.038	0.033			GAM
Thorium 232	TH-232	0.511	0.098	0.095			GAM
Uranium 235	15117-96-1	U		0.149	0.300	U	GAM
Uranium 238	U-238	U		2.62	10.0	U	GAM
Americium 241	14596-10-2	U		0.029	0.300	U	GAM

100-D/DR Burial Grounds & Remaining Sites-
Soil Full Protocol

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	07/27/12

EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

Test PU Matrix SOIL
SDG 7740
Contact Joseph Verville

LAB METHOD SUMMARY

PLUTONIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client Hanford
Contract No. S00W235A01
Contract SDG KP0114

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Plutonium 238		Plutonium 239/240	
Preparation batch 7734-099								
S207063-01			7740-001	J1PVL2	U		U	
S207063-02			7740-002	J1PVL3	U		U	
S207063-03			7740-003	J1PVL4	U		U	
S207063-04			7740-004	J1PVL5	U		U	
S207063-05			7740-005	J1PVL6	U		U	
S207063-06			7740-006	J1PVL7	U		U	
S207063-07			7740-007	J1PVL8	U		U	
S207063-08			7740-008	J1PVL9	U		U	
S207063-09			7740-009	J1PVM0	U		U	
S207063-10			7740-010	J1PVM1	U		U	
S207063-11			7740-011	J1PVM2	U		U	
S207063-12			7740-012	J1PVM3	U		U	
S207063-13			7740-013	J1PVM4	U		U	
S207063-14			7740-014	Lab Control Sample	ok		ok	
S207063-15			7740-015	Method Blank	U		U	
S207063-16			7740-016	Duplicate (S207063-01)	-	U	-	U
Nominal values and limits from method				RDLs (pCi/g)	1.00		1.00	

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 07/27/12

EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

Test PU Matrix SOIL	Client Hanford
SDG 7740	Contract No. S00W235A01
Contact Joseph Verville	Contract SDG KP0114

LAB METHOD SUMMARY

PLUTONIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MAX MDA pCi/g	ALIQ g	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7734-099			2σ prep error 8.0 %		Reference Lab Notebook 7734 pg. 99											
S207063-01			J1PVL2	0.054	0.500			92		822			7	07/25/12	07/25	SS-031
S207063-02			J1PVL3	0.077	0.500			83		822			7	07/25/12	07/25	SS-032
S207063-03			J1PVL4	0.043	0.500			89		822			7	07/25/12	07/25	SS-033
S207063-04			J1PVL5	0.073	0.500			81		822			7	07/25/12	07/25	SS-034
S207063-05			J1PVL6	0.055	0.500			91		822			7	07/25/12	07/25	SS-035
S207063-06			J1PVL7	0.053	0.500			80		822			7	07/25/12	07/25	SS-036
S207063-07			J1PVL8	0.074	0.500			92		822			7	07/25/12	07/25	SS-037
S207063-08			J1PVL9	0.063	0.500			82		822			7	07/25/12	07/25	SS-038
S207063-09			J1PVM0	0.042	0.500			85		820			7	07/25/12	07/25	SS-057
S207063-10			J1PVM1	0.050	0.500			86		820			7	07/25/12	07/25	SS-058
S207063-11			J1PVM2	0.042	0.500			86		825			7	07/25/12	07/25	SS-002
S207063-12			J1PVM3	0.062	0.500			77		825			7	07/25/12	07/25	SS-008
S207063-13			J1PVM4	0.049	0.500			81		824			7	07/25/12	07/25	SS-013
S207063-14			Lab Control Sample	0.036	0.500			92		825				07/25/12	07/25	SS-014
S207063-15			Method Blank	0.045	0.500			87		825				07/25/12	07/25	SS-015
S207063-16			Duplicate (S207063-01)	0.047	0.500			85		825			7	07/25/12	07/25	SS-016
Nominal values and limits from method				1.00	0.500			30-110		100	100		180			

PROCEDURES	REFERENCE	PUISO_PLATE_AEA
	SPP-071	Soil Dissolution, > 1.0g Aliquot, rev 1
	CP-941	Plutonium in Water and Dissolved Samples by Extraction Chromatography, rev 12
	CP-008	Heavy Element Electroplating, rev 13

AVERAGES ± 2 SD FOR 16 SAMPLES				
MDA	0.054	±	0.025
YIELD	86	±	9

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	07/27/12

EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

Test U Matrix SOIL
SDG 7740
Contact Joseph Verville

LAB METHOD SUMMARY

URANIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client Hanford
Contract No. S00W235A01
Contract SDG KP0114

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	1: Uranium 233/234	2: Uranium 235	3: Uranium 238	RESULT RATIOS (%) 1÷3	2σ	2÷3	2σ
Preparation batch 7734-099											
S207063-01			7740-001	J1PVL2	0.676	U	0.589	115	63	13	19
S207063-02			7740-002	J1PVL3	0.639	U	0.511	125	69	5	10
S207063-03			7740-003	J1PVL4	0.539	U	0.664	81	44	11	16
S207063-04			7740-004	J1PVL5	0.626	U	0.792	79	39	6	6
S207063-05			7740-005	J1PVL6	0.675	U	0.829	81	40	6	6
S207063-06			7740-006	J1PVL7	1.00	U	0.823	122	49	3	6
S207063-07			7740-007	J1PVL8	0.491	U	0.921	53	28	3	5
S207063-08			7740-008	J1PVL9	0.422	U	0.667	63	35	4	8
S207063-09			7740-009	J1PVM0	0.475	U	0.626	76	44	0	8
S207063-10			7740-010	J1PVM1	0.315	U	0.719	44	30	0	8
S207063-11			7740-011	J1PVM2	0.752	U	0.661	114	58	4	8
S207063-12			7740-012	J1PVM3	0.391	U	0.322	121	93	0	17
S207063-13			7740-013	J1PVM4	0.410	U	0.524	78	50	0	10
S207063-14			7740-014	Lab Control Sample	ok		ok				
S207063-15			7740-015	Method Blank	U	U	U				
S207063-16			7740-016	Duplicate (S207063-01)	ok	- U	ok	51	31	16	13
Nominal values and limits from method				RDLs (pCi/g)	1.00	1.00	1.00	100		4	
							Averages	86		5	

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 07/27/12

EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

Test	U
Matrix	SOIL
SDG	7740
Contact	Joseph Verville

LAB METHOD SUMMARY

URANIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client	Hanford
Contract	No. S00W235A01
Contract	SDG KP0114

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MAX MDA pCi/g	ALIQ g	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7734-099			2σ prep error 8.0 %		Reference Lab Notebook 7734 pg. 99											
S207063-01			J1PVL2	0.202	0.500			96		110			7	07/25/12	07/25	SS-055
S207063-02			J1PVL3	0.197	0.500			99		110			7	07/25/12	07/25	SS-057
S207063-03			J1PVL4	0.192	0.500			100		110			7	07/25/12	07/25	SS-058
S207063-04			J1PVL5	0.171	0.500			95		131			7	07/25/12	07/25	SS-060
S207063-05			J1PVL6	0.178	0.500			92		131			7	07/25/12	07/25	SS-061
S207063-06			J1PVL7	0.182	0.500			96		131			7	07/25/12	07/25	SS-062
S207063-07			J1PVL8	0.190	0.500			96		116			7	07/25/12	07/25	SS-065
S207063-08			J1PVL9	0.206	0.500			89		116			7	07/25/12	07/25	SS-066
S207063-09			J1PVM0	0.200	0.500			93		130			7	07/25/12	07/25	SS-051
S207063-10			J1PVM1	0.208	0.500			87		130			7	07/25/12	07/25	SS-052
S207063-11			J1PVM2	0.211	0.500			93		130			7	07/25/12	07/25	SS-053
S207063-12			J1PVM3	0.213	0.500			90		130			7	07/25/12	07/25	SS-054
S207063-13			J1PVM4	0.211	0.500			98		103			7	07/25/12	07/25	SS-055
S207063-14			Lab Control Sample	0.278	0.500			90		103				07/25/12	07/25	SS-057
S207063-15			Method Blank	0.229	0.500			90		103				07/25/12	07/25	SS-058
S207063-16			Duplicate (S207063-01)	0.185	0.500			94		122			7	07/25/12	07/25	SS-065
Nominal values and limits from method				1.00	0.500			30-110		100	100		180			

PROCEDURES	REFERENCE	UISO_PLATE_AEA
	SPP-071	Soil Dissolution, > 1.0g Aliquot, rev 1
	CP-921	Uranium in Water and Dissolved Samples by Extraction Chromatography, rev 5
	CP-008	Heavy Element Electroplating, rev 13

AVERAGES ± 2 SD FOR 16 SAMPLES				
MDA	0.203	±	0.050
YIELD	94	±	8

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	07/27/12

EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

Test SR Matrix SOIL
SDG 7740
Contact Joseph Verville

LAB METHOD SUMMARY

TOTAL STRONTIUM IN SOLIDS

BETA COUNTING

Client Hanford
Contract No. S00W235A01
Contract SDG KP0114

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Total Strontium	
Preparation batch 7734-099						
S207063-01			7740-001	J1PVL2	U	
S207063-02			7740-002	J1PVL3	U	
S207063-03			7740-003	J1PVL4	U	
S207063-04			7740-004	J1PVL5	U	
S207063-05			7740-005	J1PVL6	U	
S207063-06			7740-006	J1PVL7	U	
S207063-07			7740-007	J1PVL8	U	
S207063-08			7740-008	J1PVL9	U	
S207063-09			7740-009	J1PVM0	U	
S207063-10			7740-010	J1PVM1	U	
S207063-11			7740-011	J1PVM2	U	
S207063-12			7740-012	J1PVM3	U	
S207063-13			7740-013	J1PVM4	U	
S207063-14			7740-014	Lab Control Sample	ok	
S207063-15			7740-015	Method Blank	U	
S207063-16			7740-016	Duplicate (S207063-01)	-	U

Nominal values and limits from method RDLs (pCi/g) 1.00

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 07/27/12

EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

Test SR Matrix SOIL
SDG 7740
Contact Joseph Verville

LAB METHOD SUMMARY

TOTAL STRONTIUM IN SOLIDS
BETA COUNTING

Client Hanford
Contract No. S00W235A01
Contract SDG KP0114

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/g	ALIQ g	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7734-099			2σ prep error 10.4 % Reference Lab Notebook 7734 pg. 99													
S207063-01			J1PVL2	0.308	1.00			94		100			7	07/25/12	07/25	GRB-225
S207063-02			J1PVL3	0.291	1.00			97		100			7	07/25/12	07/25	GRB-227
S207063-03			J1PVL4	0.271	1.00			97		100			7	07/25/12	07/25	GRB-228
S207063-04			J1PVL5	0.251	1.00			96		100			7	07/25/12	07/25	GRB-225
S207063-05			J1PVL6	0.241	1.00			94		100			7	07/25/12	07/25	GRB-230
S207063-06			J1PVL7	0.227	1.00			96		100			7	07/25/12	07/25	GRB-228
S207063-07			J1PVL8	0.236	1.00			96		100			7	07/25/12	07/25	GRB-221
S207063-08			J1PVL9	0.227	1.00			96		100			7	07/25/12	07/25	GRB-222
S207063-09			J1PVM0	0.235	1.00			94		100			7	07/25/12	07/25	GRB-223
S207063-10			J1PVM1	0.248	1.00			97		100			7	07/25/12	07/25	GRB-224
S207063-11			J1PVM2	0.258	1.00			93		100			7	07/25/12	07/25	GRB-229
S207063-12			J1PVM3	0.236	1.00			97		100			7	07/25/12	07/25	GRB-230
S207063-13			J1PVM4	0.254	1.00			96		100			7	07/25/12	07/25	GRB-231
S207063-14			Lab Control Sample	0.261	1.00			93		100				07/25/12	07/25	GRB-201
S207063-15			Method Blank	0.232	1.00			94		100				07/25/12	07/25	GRB-202
S207063-16			Duplicate (S207063-01)	0.227	1.00			96		100			7	07/25/12	07/25	GRB-203
Nominal values and limits from method				1.00	1.00			40-110		100			180			

PROCEDURES	REFERENCE	SRTOT_SEP_PRECIP_GPC
	SPP-061	Determination of Moisture Content in Solid Samples rev 0
	SPP-060	Soil Preparation, rev 0
	SPP-071	Soil Dissolution, > 1.0g Aliquot, rev 1
	CP-383	Strontium in Dissolved Solid of < 5.0g Aliquot, rev 4

AVERAGES ± 2 SD FOR 16 SAMPLES
MDA 0.250 ± 0.047
YIELD 95 ± 3

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 07/27/12

EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

Test GAM Matrix SOIL
SDG 7740
Contact Joseph Verville

LAB METHOD SUMMARY

GAMMA SCAN

GAMMA SPECTROSCOPY

Client Hanford
Contract No. S00W235A01
Contract SDG KP0114

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Cobalt 60	Cesium 137
Preparation batch 7734-099						
S207063-01			7740-001	J1PVL2	U	U
S207063-02			7740-002	J1PVL3	U	U
S207063-03			7740-003	J1PVL4	U	U
S207063-04			7740-004	J1PVL5	U	0.219
S207063-05			7740-005	J1PVL6	U	0.166
S207063-06			7740-006	J1PVL7	U	U
S207063-07			7740-007	J1PVL8	U	0.090
S207063-08			7740-008	J1PVL9	U	U
S207063-09			7740-009	J1PVM0	U	0.102
S207063-10			7740-010	J1PVM1	U	U
S207063-11			7740-011	J1PVM2	U	U
S207063-12			7740-012	J1PVM3	U	U
S207063-13			7740-013	J1PVM4	U	U
S207063-14			7740-014	Lab Control Sample	ok	ok
S207063-15			7740-015	Method Blank	U	U
S207063-16			7740-016	Duplicate (S207063-01)	- U	- U
Nominal values and limits from method				RDLs (pCi/g)	0.050	0.100

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 07/27/12

EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

Test GAM Matrix SOIL
SDG 7740
Contact Joseph Verville

LAB METHOD SUMMARY

GAMMA SCAN

GAMMA SPECTROSCOPY

Client Hanford
Contract No. S00W235A01
Contract SDG KP0114

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/g	ALIQ g	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7734-099			2σ prep error 7.0 %	Reference Lab Notebook 7734 pg. 99												
S207063-01			J1PVL2	0.074	206					101			5	07/21/12	07/23	JR,03,00
S207063-02			J1PVL3	0.069	201					101			5	07/21/12	07/23	JR,04,00
S207063-03			J1PVL4	0.059	182					101			5	07/21/12	07/23	JR,06,00
S207063-04			J1PVL5	0.073	187					101			5	07/21/12	07/23	JR,08,00
S207063-05			J1PVL6	0.073	188					107			5	07/21/12	07/23	JR,03,00
S207063-06			J1PVL7	0.063	187					107			5	07/21/12	07/23	JR,04,00
S207063-07			J1PVL8	0.062	195					107			5	07/21/12	07/23	JR,06,00
S207063-08			J1PVL9	0.069	199					107			5	07/21/12	07/23	JR,08,00
S207063-09			J1PVM0	0.072	196					101			5	07/21/12	07/23	JR,03,00
S207063-10			J1PVM1	0.059	188					101			5	07/21/12	07/23	JR,04,00
S207063-11			J1PVM2	0.081	168					101			5	07/21/12	07/23	JR,06,00
S207063-12			J1PVM3	0.063	182					102			5	07/21/12	07/23	JR,08,00
S207063-13			J1PVM4	0.021	207					922			5	07/21/12	07/23	JR,03,00
S207063-14			Lab Control Sample	0.022	160					922				07/21/12	07/23	JR,04,00
S207063-15			Method Blank	0.017	160					923				07/21/12	07/23	JR,06,00
S207063-16			Duplicate (S207063-01)	0.020	206					923			5	07/21/12	07/23	JR,08,00
Nominal values and limits from method				0.050	160					100			180			

PROCEDURES	REFERENCE	GAMMA_GS
	SPP-100	Preparation of Sample for Gamma Spectroscopy, rev 0

AVERAGES ± 2 SD FOR 16 SAMPLES
MDA 0.056 ± 0.045
YIELD ____ ± ____

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 07/27/12

EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

Test C Matrix SOIL
SDG 7740
Contact Joseph Verville

LAB METHOD SUMMARY

CARBON 14 IN SOLIDS

LIQUID SCINTILLATION COUNTING

Client Hanford
Contract No. S00W235A01
Contract SDG KP0114

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Carbon 14	
Preparation batch 7734-099						
S207063-01			7740-001	J1PVL2	U	
S207063-02			7740-002	J1PVL3	U	
S207063-03			7740-003	J1PVL4	U	
S207063-04			7740-004	J1PVL5	U	
S207063-05			7740-005	J1PVL6	U	
S207063-06			7740-006	J1PVL7	U	
S207063-07			7740-007	J1PVL8	U	
S207063-08			7740-008	J1PVL9	U	
S207063-09			7740-009	J1PVM0	U	
S207063-10			7740-010	J1PVM1	U	
S207063-11			7740-011	J1PVM2	U	
S207063-12			7740-012	J1PVM3	U	
S207063-13			7740-013	J1PVM4	U	
S207063-14			7740-014	Lab Control Sample	ok	
S207063-15			7740-015	Method Blank	U	
S207063-16			7740-016	Duplicate (S207063-01)	-	U

Nominal values and limits from method RDLs (pCi/g) 1.00

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 07/27/12

EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

Test C Matrix SOIL
SDG 7740
Contact Joseph Verville

LAB METHOD SUMMARY

CARBON 14 IN SOLIDS

LIQUID SCINTILLATION COUNTING

Client Hanford
Contract No. S00W235A01
Contract SDG KP0114

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/g	ALIQ g	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7734-099			2σ prep error 10.0 % Reference Lab Notebook 7734 pg. 99													
S207063-01			J1PVL2	4.67	0.315			100		50			7	07/25/12	07/25	LSC-006
S207063-02			J1PVL3	5.18	0.305			100		50			7	07/25/12	07/25	LSC-006
S207063-03			J1PVL4	4.47	0.336			100		50			7	07/25/12	07/25	LSC-006
S207063-04			J1PVL5	5.01	0.320			100		50			7	07/25/12	07/25	LSC-006
S207063-05			J1PVL6	4.86	0.315			100		50			7	07/25/12	07/25	LSC-006
S207063-06			J1PVL7	5.06	0.326			100		50			7	07/25/12	07/25	LSC-006
S207063-07			J1PVL8	5.25	0.321			100		50			7	07/25/12	07/25	LSC-006
S207063-08			J1PVL9	4.73	0.318			100		50			7	07/25/12	07/25	LSC-006
S207063-09			J1PVM0	4.71	0.322			100		50			7	07/25/12	07/25	LSC-006
S207063-10			J1PVM1	4.61	0.325			100		50			7	07/25/12	07/25	LSC-006
S207063-11			J1PVM2	4.32	0.343			100		50			7	07/25/12	07/25	LSC-006
S207063-12			J1PVM3	4.84	0.312			100		50			7	07/25/12	07/25	LSC-006
S207063-13			J1PVM4	4.42	0.336			100		50			7	07/25/12	07/25	LSC-006
S207063-14			Lab Control Sample	10.6	0.300			100		10				07/25/12	07/26	LSC-006
S207063-15			Method Blank	4.97	0.300			100		50				07/25/12	07/25	LSC-006
S207063-16			Duplicate (S207063-01)	4.60	0.317			100		50			7	07/25/12	07/25	LSC-006
Nominal values and limits from method				1.00	0.300					50			180			

PROCEDURES REFERENCE C14LL_COX_LSC
CP-251 Tritium/Carbon-14 Oxidation, rev 11

AVERAGES ± 2 SD FOR 16 SAMPLES
MDA 5.14 ± 2.96
YIELD 100 ± 0

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 07/27/12

EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

Test H Matrix SOIL
SDG 7740
Contact Joseph Verville

LAB METHOD SUMMARY

TRITIUM IN SOLIDS

LIQUID SCINTILLATION COUNTING

Client Hanford
Contract No. S00W235A01
Contract SDG KP0114

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Tritium	
Preparation batch 7734-099						
S207063-01			7740-001	J1PVL2	U	
S207063-02			7740-002	J1PVL3	U	
S207063-03			7740-003	J1PVL4	U	
S207063-04			7740-004	J1PVL5	U	
S207063-05			7740-005	J1PVL6	U	
S207063-06			7740-006	J1PVL7	U	
S207063-07			7740-007	J1PVL8	U	
S207063-08			7740-008	J1PVL9	U	
S207063-09			7740-009	J1PVM0	U	
S207063-10			7740-010	J1PVM1	U	
S207063-11			7740-011	J1PVM2	U	
S207063-12			7740-012	J1PVM3	U	
S207063-13			7740-013	J1PVM4	U	
S207063-14			7740-014	Lab Control Sample	ok	
S207063-15			7740-015	Method Blank	U	
S207063-16			7740-016	Duplicate (S207063-01)	-	U

Nominal values and limits from method RDLs (pCi/g) 10.0

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 07/27/12

EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

Test H Matrix SOIL
SDG 7740
Contact Joseph Verville

LAB METHOD SUMMARY

TRITIUM IN SOLIDS

LIQUID SCINTILLATION COUNTING

Client Hanford
Contract No. S00W235A01
Contract SDG KP0114

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/g	ALIQ g	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7734-099			2σ prep error 10.0 %		Reference Lab Notebook 7734 pg. 99											
S207063-01			J1PVL2	5.84	0.315			100		50			7	07/25/12	07/25	LSC-004
S207063-02			J1PVL3	5.94	0.305			100		50			7	07/25/12	07/25	LSC-004
S207063-03			J1PVL4	5.38	0.336			100		50			7	07/25/12	07/25	LSC-004
S207063-04			J1PVL5	5.75	0.320			100		50			7	07/25/12	07/25	LSC-004
S207063-05			J1PVL6	5.82	0.315			100		50			7	07/25/12	07/25	LSC-004
S207063-06			J1PVL7	5.58	0.326			100		50			7	07/25/12	07/25	LSC-004
S207063-07			J1PVL8	5.74	0.321			100		50			7	07/25/12	07/25	LSC-004
S207063-08			J1PVL9	5.75	0.318			100		50			7	07/25/12	07/25	LSC-004
S207063-09			J1PVM0	5.71	0.322			100		50			7	07/25/12	07/25	LSC-004
S207063-10			J1PVM1	5.55	0.325			100		50			7	07/25/12	07/25	LSC-004
S207063-11			J1PVM2	5.29	0.343			100		50			7	07/25/12	07/25	LSC-004
S207063-12			J1PVM3	5.85	0.312			100		50			7	07/25/12	07/25	LSC-004
S207063-13			J1PVM4	5.36	0.336			100		50			7	07/25/12	07/25	LSC-004
S207063-14			Lab Control Sample	6.53	0.300			100		50				07/25/12	07/26	LSC-004
S207063-15			Method Blank	6.12	0.300			100		50				07/25/12	07/25	LSC-004
S207063-16			Duplicate (S207063-01)	5.80	0.317			100		50			7	07/25/12	07/25	LSC-004
Nominal values and limits from method				10.0	0.300					50			180			

PROCEDURES REFERENCE TRITIUM_COX_LSC
CP-251 Tritium/Carbon-14 Oxidation, rev 11

AVERAGES ± 2 SD FOR 16 SAMPLES
MDA 5.75 ± 0.606
YIELD 100 ± 0

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 07/27/12

EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

Test NI L Matrix SOIL
SDG 7740
Contact Joseph Verville

LAB METHOD SUMMARY

NICKEL 63 IN SOLIDS

LIQUID SCINTILLATION COUNTING

Client Hanford
Contract No. S00W235A01
Contract SDG KP0114

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Nickel 63	
Preparation batch 7734-099						
S207063-01			7740-001	J1PVL2	U	
S207063-02			7740-002	J1PVL3	U	
S207063-03			7740-003	J1PVL4	U	
S207063-04			7740-004	J1PVL5	U	
S207063-05			7740-005	J1PVL6	U	
S207063-06			7740-006	J1PVL7	U	
S207063-07			7740-007	J1PVL8	U	
S207063-08			7740-008	J1PVL9	U	
S207063-09			7740-009	J1PVM0	U	
S207063-10			7740-010	J1PVM1	U	
S207063-11			7740-011	J1PVM2	U	
S207063-12			7740-012	J1PVM3	U	
S207063-13			7740-013	J1PVM4	U	
S207063-14			7740-014	Lab Control Sample	ok	
S207063-15			7740-015	Method Blank	U	
S207063-16			7740-016	Duplicate (S207063-01)	-	U

Nominal values and limits from method RDLs (pCi/g) 30.0

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 07/27/12

EBERLINE ANALYTICAL/RICHMOND

SAMPLE DELIVERY GROUP KP0114

Test NI L Matrix SOIL
SDG 7740
Contact Joseph Verville

LAB METHOD SUMMARY

NICKEL 63 IN SOLIDS

LIQUID SCINTILLATION COUNTING

Client Hanford
Contract No. S00W235A01
Contract SDG KP0114

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/g	ALIQ g	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7734-099			2σ prep error 11.2 % Reference Lab Notebook 7734 pg. 99													
S207063-01			J1PVL2	2.80	0.500			100		50			8	07/26/12	07/26	LSC-007
S207063-02			J1PVL3	3.07	0.500			92		50			8	07/26/12	07/26	LSC-007
S207063-03			J1PVL4	3.24	0.500			87		50			8	07/26/12	07/26	LSC-007
S207063-04			J1PVL5	2.85	0.500			99		50			8	07/26/12	07/26	LSC-007
S207063-05			J1PVL6	3.20	0.500			88		50			8	07/26/12	07/26	LSC-007
S207063-06			J1PVL7	3.49	0.500			83		50			8	07/26/12	07/26	LSC-007
S207063-07			J1PVL8	3.30	0.500			85		50			8	07/26/12	07/26	LSC-007
S207063-08			J1PVL9	3.60	0.500			79		50			8	07/26/12	07/26	LSC-007
S207063-09			J1PVM0	3.28	0.500			86		50			8	07/26/12	07/26	LSC-007
S207063-10			J1PVM1	3.25	0.500			86		50			8	07/26/12	07/26	LSC-007
S207063-11			J1PVM2	4.18	0.500			69		50			8	07/26/12	07/26	LSC-007
S207063-12			J1PVM3	3.32	0.500			84		50			8	07/26/12	07/26	LSC-007
S207063-13			J1PVM4	3.11	0.500			94		50			8	07/26/12	07/26	LSC-007
S207063-14			Lab Control Sample	2.82	0.500			100		50				07/26/12	07/26	LSC-007
S207063-15			Method Blank	2.85	0.500			100		50				07/26/12	07/26	LSC-007
S207063-16			Duplicate (S207063-01)	3.12	0.500			95		50			8	07/26/12	07/26	LSC-007
Nominal values and limits from method				30.0	0.500			40-110		25			180			

PROCEDURES	REFERENCE	NI63_LSC
	SPP-071	Soil Dissolution, > 1.0g Aliquot, rev 1
	CP-281	Nickel-63 Purification By Extraction Chromatography, rev 5

AVERAGES ± 2 SD FOR 16 SAMPLES				
MDA	3.22	±	0.696
YIELD	89	±	17

Lab id EBRLNE
Protocol Hanford1
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Version 3.06
Report date 07/27/12

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Client Hanford
Contract No. S00W235A01
Case no SDG_KP0114

SAMPLE SUMMARY

The Sample and QC Summary Reports show all samples, including QC samples, reported in one Sample Delivery Group (SDG).

The Sample Summary Report fully identifies client samples and gives the corresponding lab sample identification. The QC Summary Report shows at the sample level how the lab organized the samples into batches and generated QC samples. The Preparation Batch and Method Summary Reports show this at the analysis level.

The following notes apply to these reports:

* LAB SAMPLE ID is the lab's primary identification for a sample.

* DEPARTMENT SAMPLE ID is an alternate lab id, for example one assigned by a radiochemistry department in a lab.

* CLIENT SAMPLE ID is the client's primary identification for a sample. It includes any sample preparation done by the client that is necessary to identify the sample.

* QC BATCH is a lab assigned code that groups samples to be processed and QCed together. These samples should have similar matrices.

  QC BATCH is not necessarily the same as SDG, which reflects samples received and reported together.

* All Lab Control Samples, Method Blanks, Duplicates and Matrix Spikes are shown that QC any of the samples. Due to possible reanalyses, not all results for all these QC samples may be relevant to the SDG. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 07/27/12

SDG 7740
Contact Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A01
Case no SDG_KP0114

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches in one Sample Delivery Group (SDG) with information necessary to check the completeness and consistency of the SDG.

The following notes apply to this report:

* The preparation batches are shown in the same order as the Method Summary Reports are printed.

* Only analyses of planchets relevant to the SDG are included.

* Each preparation batch should have at least one Method Blank and LCS in it to validate client sample results.

* The QUALIFIERS shown are all qualifiers other than U, J, B, L and H that occur on any analysis in the preparation batch. The Method Summary Report has these qualifiers on a per sample basis.

  These qualifiers should be reviewed as follows:

  X Some data has been manually entered or modified. Transcription errors are possible.

  P One or more results are 'preliminary'. The data is not ready for final reporting.

  2 There were two or more results for one analyte on one planchet imported at one time. The results in DVD may not be the same as on the raw data sheets.

  Other lab defined qualifiers may occur. In general, these should be addressed in the SDG narrative.

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Form DVD-RG
Version 3.06
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Contact Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A01
Case no SDG_KP0114

WORK SUMMARY

The Work Summary Report shows all samples, including QC samples, and all relevant analyses in one Sample Delivery Group (SDG). This report is often useful as supporting documentation for an invoice.

The following notes apply to this report:

* TEST is a code for the method used to measure associated analytes. Results and related information for each analyte are on the Data Sheet Report. In special cases, a test code used in the summary data section is not the same as in associated raw data. In this case, both codes are shown on the Work Summary.

* SUFFIX is the lab's code to distinguish multiple analyses (recounts, reworks, reanalyses) of a fraction of the sample. The suffix indicates which result is being reported. An empty suffix normally identifies the first attempt to analyze the sample.

* The LAB SAMPLE ID, TEST and SUFFIX uniquely identify all supporting data for a result. The Method Summary Report for each TEST has method performance data, such as yield, for each lab sample id and suffix and procedures used in the method.

* PLANCHET is an alternate lab identifier for work done for one test. It, combined with the TEST and SUFFIX, may be the best link to raw data.

* For QC samples, only analyses that directly QC some regular sample are shown. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.

* The SAS (Special Analytical Services) Number is a client or lab assigned code that reflects special processing for samples, such as rapid turn around. Counts of tests done are lists by SAS number since it is likely to affect prices.

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DATA SHEET

The Data Sheet Report shows all results and primary supporting information for one client sample or Method Blank. This report corresponds to both the CLP Inorganics and Organics Data Sheet.

The following notes apply to this report:

* TEST is a code for the method used to measure an analyte. If the TEST is empty, no data is available; the analyte was not analyzed for.

* The LAB SAMPLE ID and TEST uniquely identify work within the Summary Data Section of a Data Package. The Work Summary and Method Summary Reports further identify raw data that underlies this work.

  The Method Summary Report for each TEST has method performance data, such as yield, for each Lab Sample ID and a list of procedures used in the method.

* ERRORs can be labeled TOTAL or COUNT. TOTAL implies a preparation (non-counting method) error has been added, as square root of sum of squares, to the counting error denoted by COUNT. The preparation errors, which may vary by preparation batch, are shown on the Method Summary Report.

* A RESULT can be 'N.R.' (Not Reported). This means the lab did this work but chooses not to report it now, possibly because it was reported at another time.

* When reporting a Method Blank, a RESULT can be 'N.A.' (Not Applicable). This means there is no reported client sample work in the same preparation batch as the Blank's result. This is likely to occur when the Method Blank is associated with reanalyses of selected work for a few samples in the SDG.

The following qualifiers are defined by the DVD system:

U The RESULT is less than the MDA (Minimum Detectable Activity).

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DATA SHEET

If the MDA is blank, the ERROR is used as the limit.

J The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.

B A Method Blank associated with this sample had a result without a U flag and, after correcting for possibly different aliquots, that result is greater than or equal to the MDA for this sample.

Normally, B is not assigned if U is. When method blank subtraction is shown on this report, B flags are assigned based on the unsubtracted values while U's are assigned based on the subtracted ones. Both flags can be assigned in this case.

For each sample result, all Method Blank results in the same preparation batch are compared. The Method Summary Report documents this and other QC relationships.

L Some Lab Control Sample that QC's this sample had a low recovery. The lab can disable assignment of this qualifier.

H Similar to 'L' except the recovery was high.

P The RESULT is 'preliminary'.

X Some data necessary to compute the RESULT, ERROR or MDA was manually entered or modified.

2 There were two or more results available for this analyte. The reported result may not be the same as in the raw data.

Other qualifiers are lab defined. Definitions should be in the SDG narrative.

The following values are underlined to indicate possible problems:

* An MDA is underlined if it is bigger than its RDL.

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G U I D E , c o n t .

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D A T A S H E E T

* An ERROR is underlined if the 1.645 sigma counting error is bigger than both the MDA and the RESULT, implying that the MDA may not be a good estimate of the 'real' minimum detectable activity.

* A negative RESULT is underlined if it is less than the negative of its 2 sigma counting ERROR.

* When reporting a Method Blank, a RESULT is underlined if greater than its MDA. If the MDA is blank, the 2 sigma counting error is used in the comparison.

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Protocol Hanford1
Version Ver 1.0
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REPORT GUIDE

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LAB CONTROL SAMPLE

The Lab Control Sample Report shows all results, recoveries and primary supporting information for one Lab Control Sample.

The following notes apply to this report:

* All fields in common with the Data Sheet Report have similar usage. Refer to its Report Guide for details.

* An amount ADDED is the lab's value for the actual amount spiked into this sample with its ERROR an estimate of the error of this amount.

  An amount added is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

* REC (Recovery) is RESULT divided by ADDED expressed as a percent.

* The first, computed limits for the recovery reflect:

  1. The error of RESULT, including that introduced by rounding the result prior to printing.

     If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.

  2. The error of ADDED.

  3. A lab specified, per analyte bias. The bias changes the center of the computed limits.

* The second limits are protocol defined upper and lower QC limits for the recovery.

* The recovery is underlined if it is outside either of these ranges.

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Protocol Hanford1
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Version 3.06
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R E P O R T G U I D E

Client Hanford
Contract No. S00W235A01
Case no SDG_KP0114

D U P L I C A T E

The Duplicate Report shows all results, differences and primary supporting information for one Duplicate and associated Original sample.

The following notes apply to this report:

* All fields in common with the Data Sheet Report have similar usage. This applies both to the Duplicate and Original sample data. Refer to the Data Sheet Report Guide for details.

  If the Duplicate has data for a TEST and the lab did not do this test to the Original, the Original's RESULTs are underlined.

* The RPD (Relative Percent Difference) is the absolute value of the difference of the RESULTs divided by their average expressed as a percent.

  If both RESULTs are less than their MDAs, no RPD is computed and a '-' is printed.

  For an analyte, if the lab did work for both samples but has data for only one, the MDA from the sample with data is used as the other's result in the RPD.

* The first, computed limit is the sum, as square root of sum of squares, of the errors of the results divided by the average result as a percent, hence the relative error of the difference rather than the error of the relative difference. The errors include those introduced by rounding the RESULTs prior to printing.

  If this limit is labeled TOT, it includes the preparation error in the RESULTs. If labeled CNT, it does not.

  This value reported for this limit is at most 999.

* The second limit for the RPD is the larger of:

  1. A fixed percentage specified in the protocol.

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Protocol Hanford1
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GUIDE, cont.

Client Hanford
Contract No. S00W235A01
Case no SDG KP0114

DUPLICATE

2. A protocol factor (typically 2) times the average MDA as a percent of the average result. This limit applies when the results are close to the MDAs.

* The RPD is underlined if it is greater than either limit.

* If specified by the lab, the second limit column is replaced by the Difference Error Ratio (DER), which is the absolute value of the difference of the results divided by the quadratic sum of their one sigma errors, the same errors as used in the first limit.

  Except for differences due to rounding, the DER is the same as the RPD divided by the first RPD limit with the limit scaled to 1 sigma.

* The DER is underlined if it is greater than the sigma factor, typically 2 or 3, shown in the header for the first RPD limit.

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-RG
Version 3.06
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SDG 7740
Contact Joseph Verville

REPORT GUIDE

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Contract No. S00W235A01
Case no SDG KP0114

MATRIX SPIKE

The Matrix Spike Report shows all results, recoveries and primary supporting information for one Matrix Spike and associated Original sample.

The following notes apply to this report:

* All fields in common with the Data Sheet Report have similar usage. This applies both to the Spiked and Original sample data. Refer to the Data Sheet Report Guide for details.

  If the Spike has data for a TEST and the lab did not do this test to the Original, the Original's RESULTs are underlined.

* An amount ADDED is the lab's value for the actual amount spiked into the Spike sample with its ERROR an estimate of the error of this amount.

  An amount is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

* REC (Recovery) is the Spike RESULT minus the Original RESULT divided by ADDED expressed as a percent.

* The first, computed limits for the recovery reflect:

  1. The errors of the two RESULTs, including those introduced by rounding them prior to printing.

     If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.

  2. The error of ADDED.

  3. A lab specified, per analyte bias. The bias changes the center of the computed limits.

* The second limits are protocol defined upper and lower QC limits

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MATRIX SPIKE

for the recovery.

These limits are left blank if the Original RESULT is more than a protocol defined factor (typically 4) times ADDED. This is a way of accounting for that when the spike is small compared to the amount in the original sample, the recovery is unreliable.

* The recovery is underlined (out of spec) if it is outside either of these ranges.

SDG 7740
Contact Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A01
Case no SDG_KP0114

METHOD SUMMARY

The Method Summary Report has two tables. One shows up to five results measured using one method. The other has performance data for the method. There is one report for each TEST, as used on the Data Sheet Report.

The following notes apply to this report:

* Each table is subdivided into sections, one for each preparation batch. A preparation batch is a group of aliquots prepared at roughly the same time in one work area of the lab using the same method.

  There should be Lab Control Sample and Method Blank results in each preparation batch since this close correspondence makes the QC meaningful. Depending on lab policy, Duplicates need not occur in each batch since they QC sample dependencies such as matrix effects.

* The RAW TEST column shows the test code used in the raw data to identify a particular analysis if it is different than the test code in the header of the report. This occurs in special cases due to method specific details about how the lab labels work.

  The Lab Sample or Planchet ID combined with the (Raw) Test Code and Suffix uniquely identify the raw data for each analysis.

* If a result is less than both its MDA and RDL, it is replaced by just 'U' on this report. If it is greater than or equal to the RDL but less than the MDA, the result is shown with a 'U' flag.

  The J and X flags are as on the data sheet.

* Non-U results for Method Blanks are underlined to indicate possible contamination of other samples in the preparation batch. The Method Blank Report has supporting data.

* Lab Control Sample and Matrix Spike results are shown as: ok, No data, LOW or HIGH, with the last two underlined. 'No data'

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 07/27/12

METHOD SUMMARY

means no amount ADDED was specified. 'LOW' and 'HIGH' correspond to when the recovery is underlined on the Lab Control Sample or Matrix Spike Report. See these reports for supporting data.

* Duplicate sample results are shown as: ok, No data, or OUT, with the last two underlined. 'No data' means there was no original sample data found for this duplicate. 'OUT' corresponds to when the RPD is underlined on the Duplicate Report. See this report for supporting data.

* If the MDA column is labeled 'MAX MDA', there was more than one result measured by the reported method and the MDA shown is the largest MDA. If not all these results have the same RDL, the MAX MDA reflects only those results with RDL equal to the smallest one.

  MDAs are underlined if greater than the printed RDL.

* Aliquots are underlined if less than the nominal value specified for the method.

* Prepareation factors are underlined if greater than the nominal value specified for the method.

* Dilution factors are underlined if greater than the nominal value specified for the method.

* Residues are underlined if outside the range specified for the method. Residues are not printed if yields are.

* Yields, which may be gravimetric, radiometric or some type of recovery depending on the method, are underlined if outside the range specified for the method.

* Efficiencies are underlined if outside the range specified for the method. Efficiencies are detector and geometry dependent so this test is only approximate.

METHOD SUMMARY

* Count times are underlined if less than the nominal value specified for the method.

* Resolutions (as FWHM; Full Width at Half Max) are underlined if greater than the method specified limit.

* Tracer drifts are underlined if their absolute values are greater than the method specified limit. Tracer drifts are not printed if percent moistures are.

* Days Held are underlined if greater than the holding time specified in the protocol.

* Analysis dates are underlined if before their planchet's preparation date or, if a limit is specified, too far after it.

For some methods, ratios as percentages and error estimates for them are computed for pairs of results. A ratio column header like '1÷3' means the ratio of the first result column and the third result column.

Ratios are not computed for Lab Control Sample, Method Blank or Matrix Spike results since their matrices are not necessarily similar to client samples'.

The error estimate for a ratio of results from one planchet reflects only counting errors since other errors should be correlated. For a ratio involving different planchets, if QC limits are computed based on total errors, the error for the ratio allows for the preparation errors for the planchets.

The ratio is underlined (out of spec) if the absolute value of its difference from the nominal value is greater than its error estimate. If no nominal value is specified, this test is not done.

For Gross Alpha or Gross Beta results, there may be a column showing the sum of other Alpha or Beta emitters. This sum includes all relevant

METHOD SUMMARY

results in the DVD database, whether reported or not. Results in the sum are weighted by a particles/decay value specified by the lab for each relevant analyte. Results less than their MDA are not included. No sums are computed for Lab Control, Method Blank or Matrix Spike samples since their various planchets may not be physically related.

If a ratio of total isotopic to Gross Alpha or Beta is shown, the error for the ratio reflects both the error in the Gross result and the sum, as square root of sum of squares, of the errors in the isotopic results.

For total elemental uranium or thorium results, there may be a column showing the total weight computed from associated isotopic results. Ignoring results less than their MDAs, this is a weighted sum of the isotopic results. The weights depend on the molecular weight and half-life of each isotope so as to convert activities (decays) to weight (atoms).

If a ratio of total computed to measured elemental uranium or thorium is shown, the error for the ratio reflects the errors in all the measurements.

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-305	Page 1 of 6

Collector ~~Q Stowe~~ J Smith D 7-18-12	Company Contact: J Kessner	Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH
Price Code 8L 8B D 7-18-12	Data Turnaround 21 Days 7 D 7-18-12		
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location: 100-D-65 Outfall KP0114 (7740)	SAF No.: RC-075	
Ice Chest No.: SML-363	Field Logbook No.: EL-1607-14	COA: 000D652000	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A110440		Bill of Lading/Air Bill No.: SEE OSPL

POSSIBLE SAMPLE HAZARDS/REMARKS
~~None~~ Potential Radioactivity DA 7/19/12

Special Handling and/or Storage
Cool at 4 deg C

Preservation	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None
Type of Container	G/P	G/P	G/P	aG	aG	aG	aG	G/P	G/P	G/P
No. of Container(s)	1	1	1	1	1	1	1	1	1	0
Volume	125mL	125mL	125mL	125mL	125mL	120mL	125mL	500mL	125mL	125mL
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	IC Anions - 9056 Modified; NO2/NO3 - 353.2; pH (Soil) - 9045	Semi-VOA - 8270A (SCL)	PAHs - 8310	PCBs - 8082	Pesticides - 8081	See item (2) in Special Instructions.	Carbon-14; Tritium - HB	Nickel-63; Strontium-89,90 -- Total Sr

Sample No.	Matrix *	Sample Date	Sample Time										
J1PVL2	SOIL	7-18-12	1230								X	X	X
J1PVL3	SOIL	7-18-12	1220								X	X	X
J1PVL4	SOIL	7-18-12	1210								X	X	X
J1PVL5	SOIL	7-18-12	1150								X	X	X
J1PVL6	SOIL	7-18-12	1040								X	X	X

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Jason Smith	7-18-12 1340	Received By/Stored In: DWOOLERY	7-18-12 1340
Relinquished By/Removed From: DWOOLERY	7-18-12 1600	Received By/Stored In: 1060 #3 Dennis Newman	1600 7-18-12
Relinquished By/Removed From: WCH Dennis Newman	Date/Time 1225 7/19/12	Received By/Stored In: Fed Ex	Date/Time
Relinquished By/Removed From: FED EX	Date/Time	Received By/Stored In: M. WATKOWSKI	Date/Time 07/20/12 0920
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

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) {Mercury}
(2) Gamma Spec (Client List) {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}

KP0114

REVIEWED BY Mushen DATE 7/19/12

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

2 D 7-18-12

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-305	Page 4 of 6

Collector ~~Q Stowe~~ SMITH J D 7-18-12	Company Contact J Kessner	Telephone No. 509-375-4688	Project Coordinator KESSNER, JH	Price Code 8L 8B D 7-18-12	Data Turnaround 21 Days 7
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location 100-D-65 Outfall KP0114 (7740)		SAF No. RC-075		
Ice Chest No. SML-363	Field Logbook No. EL-1607-14	COA 000D652000	Method of Shipment FEDEX D 7-18-12		
Shipped To EBERLINE SERVICES / LIONVILLE	Offsite Property No. A110440		Bill of Lading/Air Bill No. SEE OSPL		

POSSIBLE SAMPLE HAZARDS/REMARKS
~~None~~ Potential Radioactivity DA 7/19/12

Special Handling and/or Storage
Cool at 4 deg C

Preservation	None	None										
Type of Container	G/P	G/P										
No. of Container(s)	0	0										
Volume	125mL	125mL										
SAMPLE ANALYSIS	Isotopic Plutonium	Isotopic Uranium										
Sample No. / Matrix * / Sample Date / Sample Time												
J1PVL2 / SOIL / 7-18-12 / 1230	X	X										
J1PVL3 / SOIL / 7-18-12 / 1220	X	X										
J1PVL4 / SOIL / 7-18-12 / 1210	X	X										
J1PVL5 / SOIL / 7-18-12 / 1150	X	X										
J1PVL6 / SOIL / 7-18-12 / 1040	X	X										

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Jason Smith	7-18-12 1340	DWOOLERY	7-18-12 1340
Relinquished By/Removed From	DWOOLERY	7-18-12 1600	Received By/Stored In 1060 #3	1600
Relinquished By/Removed From	WCH Dennis Newman	7/19/12 1225	D. Newman Dennis Newman	7-18-12
Relinquished By/Removed From	FED EX		Received By/Stored In	
Relinquished By/Removed From			Received By/Stored In	7/20/12 0920
Relinquished By/Removed From			Received By/Stored In	
Relinquished By/Removed From			Received By/Stored In	

SPECIAL INSTRUCTIONS

KP0114

REVIEWED BY JWSchen DATE 7/19/12

Matrix *
S=Soil
SE=Sediment
SO=Solid
SI=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

3 D 7-18-12

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-305	Page 1 of 6

Collector ~~Q Stowe~~ J. Smith D 7-18-12	Company Contact J Kessner	Telephone No. 509-375-4688	Project Coordinator KESSNER, JH	Price Code 8L 8B D 7-18-12	Data Turnaround ~~21~~ 7 Days D 7-18-12
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location 100-D-65 Outfall KP0114 (7740)		SAF No. RC-075		
Ice Chest No. SML-363	Field Logbook No. EL-1607-14	COA 000D652000	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES / LIONVILLE	Offsite Property No. A110440		Bill of Lading/Air Bill No. SEE OSPL		

~~POSSIBLE SAMPLE~~ HAZARDS/REMARKS
~~None~~ Potential Radioactivity AM 7/19/12

Special Handling and/or Storage
Cool at 4 deg C

Preservation	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None
Type of Container	G/P	G/P	G/P	aG	aG	aG	aG	G/P	G/P	G/P
No. of Container(s)	1	1	1	1	1	1	1	1	1	0
Volume	125mL	125mL	125mL	125mL	125mL	120mL	125mL	500mL	125mL	125mL
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	IC Anions - 9056 Modified; NO2/NO3 - 353.2; pH (Soil) - 9045	Semi-VOA - 8270A (TCL)	PAHs - 8310	PCBs - 8082	Pesticides - 8081	See item (2) in Special Instructions.	Carbon-14; Tritium - HB	Nickel-63; Strontium-89,90 -- Total Sr

7-18-12

Sample No.	Matrix *	Sample Date	Sample Time									
J1PVL7	SOIL	7-18-12	1025							X	X	X
J1PVL8	SOIL	7-18-12	1010							X	X	X
J1PVL9	SOIL	7-18-12	1000							X	X	X
J1PVM0	SOIL	7-18-12	0950							X	X	X
J1PVM1	SOIL	7-18-12	0935							X	X	X

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Jason Smith	7-18-12 1340	DWOOLBRY	7-18-12 1340
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
DWOOLBRY	7-18-12 1600	1060 #3 Dennis Newman	1600 7-18-12
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
WCH Dennis Newman	7/19/12 1225	Fed Ex	
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
FED EX		M. MATSUMAMA	07/20/12 0930
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

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) {Mercury}
(2) Gamma Spec (Client List) {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}

KP0114

REVIEWED BY M Shea DATE 7/19/12

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

4 D7-18-12

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-305	Page 2 of 6

Collector ~~Q Stowe~~ J Smith D 7-18-12	Company Contact J Kessner / Telephone No. 509-375-4688	Project Coordinator KESSNER, JH	Price Code ~~8L~~ 8B D7-18-12 / Data Turnaround ~~21~~ Days 7 D7-18-12
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location 100-D-65 Outfall KP0114 (7740)	SAF No. RC-075	
Ice Chest No. SML-363	Field Logbook No. EL-1607-14 / COA 000D652000	Method of Shipment FED EX	
Shipped To EBERLINE SERVICES / DIONVILLE	Offsite Property No. A110 440	Bill of Lading/Air Bill No. SEE OSPL	

POSSIBLE SAMPLE HAZARDS/REMARKS
~~None~~ Potential Radioactivity DN 7/19/12

Special Handling and/or Storage
Cool at 4 deg C

Preservation	None	None									
Type of Container	G/P	G/P									
No. of Container(s)	0	0									
Volume	125mL	125mL									
SAMPLE ANALYSIS	Isotopic Plutonium	Isotopic Uranium									
Sample No. / Matrix * / Sample Date / Sample Time											
J1PVL7 / SOIL / 7-18-12 / 1025	X	X									
J1PVL8 / SOIL / 7-18-12 / 1010	X	X									
J1PVL9 / SOIL / 7-18-12 / 1000	X	X									
J1PVM0 / SOIL / 7-18-12 / 0950	X	X									
J1PVM1 / SOIL / 7-18-12 / 0935	X	X									

CHAIN OF POSSESSION	Sign/Print Names	Date/Time
Relinquished By/Removed From	Received By/Stored In	
Jason Smith	D0001827	7-18-12 1340
Relinquished By/Removed From	Received By/Stored In 1060 #3	Date/Time 7-18-12
D0001827	Dennis Newman	7-18-12 1600
Relinquished By/Removed From WCH	Received By/Stored In	Date/Time 1225
Dennis Newman	Fed Ex	7/19/12
Relinquished By/Removed From	Received By/Stored In	Date/Time
FED EX	[illegible]	07/20/12 0920
Relinquished By/Removed From	Received By/Stored In	Date/Time
Relinquished By/Removed From	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

KP0114

REVIEWED BY mwsher DATE 7/19/12

Matrix *
S=Soil
SE=Sediment
SO=Solid
SI=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

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Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-305	Page 2 of 6

Collector: ~~Q Stowe~~ J Smith 7-18-12	Company Contact: J Kessner	Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH
Price Code: 8L 8B 7-18-12	Data Turnaround: ~~21~~ 7 Days 7-18-12		
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location: 100-D-65 Outfall KP0114 (77740)	SAF No.: RC-075	
Ice Chest No.: SML-363	Field Logbook No.: EL-1607-14	COA: 000D652000	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A110440	Bill of Lading/Air Bill No.: SEE OSR	

POSSIBLE SAMPLE HAZARDS/REMARKS
~~None~~ Potential Radioactivity 7/19/12

Special Handling and/or Storage
Cool at 4 deg C

Preservation	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None
Type of Container	G/P	G/P	G/P	aG	aG	aG	aG	G/P	G/P	G/P
No. of Container(s)	1	1	1	1	1	1	1	1	1	0
Volume	125mL	125mL	125mL	125mL	125mL	120mL	125mL	500mL	125mL	125mL
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	IC Anions - 9056 Modified; NO2/NO3 - 353.2; pH (Soil) - 9045	Semi-VOA - 8270A (TCL)	PAHs - 8310	PCBs - 8082	Pesticides - 8081	See item (2) in Special Instructions.	Carbon-14; Tritium - HB	Nickel-63; Strontium-89,90 -- Total Sr

Sample No.	Matrix *	Sample Date	Sample Time										
J1PVM2	SOIL	7-18-12	0920								X	X	X
J1PVM3	SOIL	7-18-12	0855								X	X	X
J1PVM4	SOIL	7-18-12	1230								X	X	X
~~J1PVM5~~ 7-18-12	SOIL	~~7-18-12~~ 7-18-12											

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Jason Smith	7-18-12 1340	DWOOLERY	7-18-12 1340
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
DWOOLERY	7-18-12 1600	1060 #3 Dennis Newman	1600 7-18-12
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
WCH Dennis Newman	1225 7/19/12	Fed Ex	
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
FED EX		M ALAPANATHAN	07/20/12 0930
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

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) {Mercury}
(2) Gamma Spec (Client List) {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}

REVIEWED BY Mwshea DATE 7/19/12

KP0114

Matrix *
S=Soil
SE=Sediment
SO=Solid
SI=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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-305	Page 6 of 6
Collector ~~Q Stowe~~ J Smith 7-18-12	Company Contact: J Kessner; Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~8L~~ 80 7 7-18-12
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location: 100-D-65 Outfall KP0114 (7740)	SAF No.: RC-075	Data Turnaround: ~~21~~ 7 Days 7-18-12
Ice Chest No.: SML-363	Field Logbook No.: EL-1607-14; COA: 000D652000	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A110 440	Bill of Lading/Air Bill No.: SEE OSPL	

POSSIBLE SAMPLE HAZARDS/REMARKS

~~None~~ Potential Radioactivity 7/19/12

Special Handling and/or Storage

Cool at 4 deg C

Preservation	None	None										
Type of Container	G/P	G/P										
No. of Container(s)	0	0										
Volume	125mL	125mL										
SAMPLE ANALYSIS	Isotopic Plutonium	Isotopic Uranium										
Sample No. / Matrix * / Sample Date / Sample Time												
J1PVM2 / SOIL / 7-18-12 / 0920	X	X										
J1PVM3 / SOIL / 7-18-12 / 0855	X	X										
J1PVM4 / SOIL / 7-18-12 / 1230	X	X										
~~J1PVM5~~ 7-18-12 / SOIL / 7-18-12												

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Jason Smith	7-18-12 1340	DWOOLERY	7-18-12 1340
Relinquished By/Removed From	DWOOLERY	7-18-12 1600	Received By/Stored In: 1060, #3	1600
Relinquished By/Removed From	WCH Dennis Newman	7/19/12 1225	Received By/Stored In: Dennis Newman	7/18/12
Relinquished By/Removed From	FED EX		Received By/Stored In: Fed EX	
Relinquished By/Removed From			Received By/Stored In: [illegible]	07/20/12 0920
Relinquished By/Removed From			Received By/Stored In	
Relinquished By/Removed From			Received By/Stored In	

SPECIAL INSTRUCTIONS

KP0114

REVIEWED BY [illegible] DATE 7/19/12

Matrix *
S=Soil
SE=Sediment
SO=Solid
SI=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

EBERLINE SERVICES

RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

7740

Client: W.C. HANFORD City RICHLAND State WA

Date/Time received 07/20/12 0930 CoC No. RC-075-305

Container I.D. No. SML-363 Requested TAT (Days) 7 P.O. Received Yes [ ] No [ ]

INSPECTION

1. Custody seals on shipping container intact? Yes [X] No [ ] N/A [ ]
2. Custody seals on shipping container dated & signed? Yes [X] No [ ] N/A [ ]
3. Custody seals on sample containers intact? Yes [X] No [ ] N/A [ ]
4. Custody seals on sample containers dated & signed? Yes [X] No [ ] N/A [ ]
5. Packing material is: Wet [ ] Dry [X]
6. Number of samples in shipping container: 13 Sample Matrix S
7. Number of containers per sample: 2 (Or see CoC _____)
8. Samples are in correct container Yes [X] No [ ]
9. Paperwork agrees with samples? Yes [X] No [ ]
10. Samples have: Tape [ ] Hazard labels [ ] Rad labels [X] Appropriate sample labels [X]
11. Samples are: In good condition [X] Leaking [ ] Broken Container [ ] Missing [ ]
12. Samples are: Preserved [ ] Not preserved [ ] pH N/A Preservative _____
13. Describe any anomalies:

14. Was P.M. notified of any anomalies? Yes [ ] No [ ] Date _____
15. Inspected by [signature] Date: 07/20/12 Time: 1045

Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	Wipe	Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	wipe
the Skimpies	480						

Ion Chamber Ser. No. _____ Calibration date _____

Alpha Meter Ser. No. _____ Calibration date _____

Beta/Gamma Meter Ser. No. 100482 Calibration date 06DEC11

Form SCP-02, 07-30-07

over 55 years of quality nuclear services

LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

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

27 July 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 #	1207048
SDG #	KP0114
SAF #	RC-075
Date Received	07/20/12
# Samples	14
Matrix	SOIL
Volatiles	
Semivolatiles	X
Pest/PCB	X
Glycols	
DRO/KRO/GRO	
PAHs	X
Herbicides	
Metals	X
Inorganics	X

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 177 pages.

CHAIN OF CUSTODY

Lionville Laboratory Use Only

1207048

Custody Transfer Record/Lab Work Request

Page 1 of 2

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Lionville Laboratory
A Division of Eberline Analytical Corporation

Client: W.C. Hanford SAF# RC-075
Est. Final Proj. Sampling Date:
Project#:
Project Contact/Phone#:
Lionville Laboratory Project Manager: Arlette Johnson
QC: STD Del: STD TAT: 7 days

Date Rec'd: 7-20-12 Date Due: 7-27-12

		A	B		C	D		E		F	G				
Refrigerator #		2	2		2	2		2		2	2				
#/Type Container	Liquid														
	Solid	1aql	1aql		1aql	1aql		1		1	1				
Volume	Liquid														
	Solid	125	125		120	125		125		125	125				
Preservatives		—	—		—	—		—		—	—				
ANALYSES REQUESTED →		ORGANIC						INORG							
		VOA	BNA	Pest/PCB	Herb	PCBs	PAHs 8310	(1) Metal + HSL	CN	Cr+6	IC Anions	N02/N03, pH			
								Lionville Laboratory Use Only							
			8270	8081		PCB	8310 PAH	metals		Cr6	anions	N3NZ pH			

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	J1PVL2			S	7.18.12	1230		X	X		X	X		X		X	X	X		
02	J1PVL3					1220		X	X		X	X		X		X	X	X		
03	J1PVL4					1210		X	X		X	X		X		X	X	X		
04	J1PVL5					1150		X	X		X	X		X		X	X	X		
05	J1PVL6					1040		X	X		X	X		X		X	X	X		
06	J1PVL7					1025		X	X		X	X		X		X	X	X		
07	J1PVL8					1010		X	X		X	X		X		X	X	X		
08	J1PVL9					1000		X	X		X	X		X		X	X	X		
09	J1PVM0					0950		X	X		X	X		X		X	X	X		
10	J1PVM1					0935		X	X		X	X		X		X	X	X		

Special Instructions:
METALS = HSL + B, Mo, Si (NO TL)

Special Instructions:
1.
2.
3.
4.
5.
6.

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	7-20-12	10:00

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time

Lionville Laboratory Use Only

1207048

Custody Transfer Record/Lab Work Request

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Lionville Laboratory
A Division of Eberline Analytical Corporation

Client W.C. Hanford SAF# RC-075
Est. Final Proj. Sampling Date
Project#
Project Contact/Phone#
Lionville Laboratory Project Manager Orletta Johnson
QC Del TAT

Date Rec'd Date Due

		A	B		C	D		E		F	G				
Refrigerator #		2	2		2	2		2		2	2				
#/Type Container	Liquid														
	Solid	1aal	1aal		1aal	1aal		1		1	1				
Volume	Liquid														
	Solid	125	125		120	125		125		125	125				
Preservatives		—	—		—	—		—		—	—				
ANALYSES REQUESTED		ORGANIC						INORG							
		VOA	BNA	Pest/PCB	Herb	PCBs	PAHs 8310	Metal + Hg	CN	Cr+6	IC Anions	NO2 NO3, pH			

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

Lionville Laboratory Use Only

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected		8270	PESTICIDES		PCB	8310		METALS		Cr+6	Anions	NO2 NO3 pH			
11	JIPVM2			S	7-18-12	0920		X	X		X	X		X		X	X	X			
12	JIPVM3					0855		X	X		X	X		X		X	X	X			
13	JIPVM4					1230		X	X		X	X		X		X	X	X			
14	JIPVM5					1230		X						X							

Special Instructions:

Special Instructions:
1.
2.
3.
4.
5.
6.

Relinquished by	Received by	Date	Time
FedEx	[illegible]	7-20-12	10:00

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time

2 7-18-12

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-305	Page 1 of ~~2~~ 3

Collector ~~O Stowe~~ J SMITH 2 7-18-12	Company Contact J Kessner	Telephone No. 509-375-4688	Project Coordinator KESSNER, JH
Price Code ~~8L~~ 8B 2 7-18-12	Data Turnaround ~~21~~ 7 Days 2 7-18-12		
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location 100-D-65 Outfall	SAF No. RC-075	
Ice Chest No. RCC-08-028	Field Logbook No. EL-1607-14	COA 000D652000	Method of Shipment FED EX
Shipped To EBERLINE SERVICES / LIONVILLE	Offsite Property No. A110469	Bill of Lading/Air Bill No. SEE OSPL	

POSSIBLE SAMPLE ~~HAZARDS/REMARKS~~
~~None~~ Potential Radioactivity 7/19/12

Special Handling and/or Storage
Cool at 4 deg C

Preservation	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None
Type of Container	G/P	G/P	G/P	aG	aG	aG	aG	G/P	G/P	G/P
No. of Container(s)	1	1	1	1	1	1	1	1	1	0
Volume	125mL	125mL	125mL	125mL	125mL	120mL	125mL	500mL	125mL	125mL
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	IC Anions - 9056 Modified; NO2/NO3 - 353.2; pH (Soil) - 9045	Semi-VOA - 8270A (TCL)	PAHs - 8310	PCBs - 8082	Pesticides - 8081	See item (2) in Special Instructions.	Carbon-14; Tritium - 3	Nickel-63; Strontium-89,90 -- Total Sr

Sample No.	Matrix *	Sample Date	Sample Time										
J1PVL2	SOIL	7-18-12	1230	X	X	X	X	X	X	X	X		
J1PVL3	SOIL	7-18-12	1220	X	X	X	X	X	X	X	X		
J1PVL4	SOIL	7-18-12	1210	X	X	X	X	X	X	X	X		
J1PVL5	SOIL	7-18-12	1150	X	X	X	X	X	X	X	X		
J1PVL6	SOIL	7-18-12	~~1140~~	X	X	X	X	X	X	X	X		

7-18-12

CHAIN OF POSSESSION — Sign/Print Names 1040 2 7-18-12

Relinquished By/Removed From	Date/Time	Received By/~~Stored In~~	Date/Time
Jason Smith Jason Smith 7/18/12	1340	DWOOLERY 7-18-12	1340
DWOOLERY 7-18-12	1600	Dennis Newman Dennis Newman	1600
WCH Dennis Newman 7/19/12	1245	Fed Ex	
Fed Ex 7.20.12	1000	7.20.12	1000

Received By/Stored In 1060 #3 Date/Time 7/18/12

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010TR (Close-out List) {Aluminum, Antimony, Arsenic, Barium Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Mangarese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV) {Mercury}
(2) Gamma Spec (Client List) {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}

Analysis by 300 per Skessner

REVIEWED BY MWSheu DATE 7/19/12

KP0114

Matrix *
S=Soil
SE=Sediment
SO=Solid
SI=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

2 7-18-12

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-305	Page 2 of 3

Collector: ~~Q Stowe~~ J Smith 2 7-18-12	Company Contact: J Kessner	Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~8L~~ 8B 2 7-18-12	Data Turnaround: ~~21~~ 7 Days 2 7-18-12		
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location: 100-D-65 Outfall	SAF No.: RC-075	
Ice Chest No.: RCC-08-022	Field Logbook No.: EL-1607-14	COA: 000D652000	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A110469	Bill of Lading/Air Bill No.: SEE OSPL	

POSSIBLE SAMPLE HAZARDS/REMARKS
~~None~~ Potential radioactivity 7/19/12

Special Handling and/or Storage
Cool at 4 deg C

Preservation	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None
Type of Container	G/P	G/P	G/P	aG	aG	aG	aG	G/P	G/P	G/P
No. of Container(s)	1	1	1	1	1	1	1	1	1	0
Volume	125mL	125mL	125mL	125mL	125mL	120mL	125mL	500mL	125mL	125mL
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	IC Anions - 9056 Modified; NO2/NO3 - 353.2; pH (Soil) - 9045	Semi-VOA - 8270A (TCL)	PAHs - 8310	PCBs - 8082	Pesticides - 8081	See item (2) in Special Instructions.	Carbon-14; Tritium - HB 7-18	Nickel-63; Strontium-89,90 -- Total Sr

Sample No.	Matrix *	Sample Date	Sample Time										
J1PVL7	SOIL	7-18-12	1025	X	X	X	X	X	X	X	X		
J1PVL8	SOIL	7-18-12	1010	X	X	X	X	X	X	X			
J1PVL9	SOIL	7-18-12	1000	X	X	X	X	X	X	X			
J1PVM0	SOIL	7-18-12	0950	X	X	X	X	X	X	X			
J1PVM1	SOIL	7-18-12	0935	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Jason Smith	7/18/12 1340	DWOOLERY	7-18-12 1340
DWOOLERY	7-18-12 1600	1060#3 Dennis Newman	1600 7-18-12
WCH Dennis Newman	1245 7/19/12		
Fed Ex	7-20-12 10:00	D Smith	7-20-12 10:00

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) {Mercury}
(2) Gamma Spec (Client List) {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}

analysis by 300 per J Kessner
KP0114

REVIEWED BY Dwshea DATE 7/19/12

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

000000006

D 7-18-12

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-305	Page 3 of 3

Collector: ~~Q Stowe~~ J Smith D 7-18-12	Company Contact: J Kessner	Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH
Price Code: 8L 8B D 7-18-12	Data Turnaround: ~~21~~ 7 Days D 7-18-12		
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location: 100-D-65 Outfall		SAF No.: RC-075
Ice Chest No.: RCC-08-~~028~~ 022 DN 7/19/12	Field Logbook No.: EL-1607-14	COA: 000D652000	Method of Shipment: FED EX D 7-18-12
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A110469		Bill of Lading/Air Bill No.: SEE OSRL

POSSIBLE SAMPLE HAZARDS/REMARKS
~~None~~ Potential Radioactivity DN 7/19/12

Special Handling and/or Storage
Cool at 4 deg C

Preservation	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None
Type of Container	G/P	G/P	G/P	aG	aG	aG	aG	G/P	G/P	G/P
No. of Container(s)	1	1	1	1	1	1	1	1	1	0
Volume	125mL	125mL	125mL	125mL	125mL	120mL	125mL	500mL	125mL	125mL
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	IC Anions - 9056 Modified; NO2/NO3 - 353.2; pH (Soil) - 9045	Semi-VOA - 8270A (TCL)	PAHs - 8310	PCBs - 8082	Pesticides - 8081	See item (2) in Special Instructions.	Carbon-14; Tritium - PB	Nickel-63; Strontium-89,90 -- Total Sr

Sample No.	Matrix *	Sample Date	Sample Time										
J1PVM2	SOIL	7-18-12	0920	X	X	X	X	X	X	X		X	
J1PVM3	SOIL	7-18-12	0855	X	X	X	X	X	X	X			
J1PVM4	SOIL	7-18-12	1230	X	X	X	X	X	X	X			
J1PVM5	SOIL	7-18-12	1230	X			X						

7-18-12

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Jason Smith	7-18-12 1340	DWOOLERY	7-18-12 1340
DWOOLERY	7-18-12 1600	1060 #3 Dennis Newman	7/18/12 1600
WCH Dennis Newman	7/19/12 1245	Fed Ex	
Fed Ex	7.20.12 1000	D Smith	7.20.12 1000

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) {Mercury}
(2) Gamma Spec (Client List) {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}

Anions by 300 per JKessner

KP0114

REVIEWED BY DWShea DATE 7/19/12

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

000000007

Lionville Laboratory

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: W.C. Hanford
Project/SAF/SOW/Release #: RC-075

Date: 7.20.12

LvL Batch #: 12-07048

Sample Custodian: [illegible]

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier FedEx		Airbill # 7938 1018 9669 9772 9750
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 3.2°C 2.8	°C	Cooler # RCC-07-006
How was the temperature taken?	☑ IR 2.4°C	☐ Temp. Blank	☐ Other (Specify): # RCC-08-022 # RCC-07-004
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

000000008

SEMIVOLATILES

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

WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

Analytical Report for Semivolatile Organic Compounds by SW846 8270C

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
J1PVL2	1207048-01	Soil	07/18/2012 12:30	07/20/2012 10:00
J1PVL3	1207048-02	Soil	07/18/2012 12:20	07/20/2012 10:00
J1PVL4	1207048-03	Soil	07/18/2012 12:10	07/20/2012 10:00
J1PVL5	1207048-04	Soil	07/18/2012 11:50	07/20/2012 10:00
J1PVL6	1207048-05	Soil	07/18/2012 10:40	07/20/2012 10:00
J1PVL7	1207048-06	Soil	07/18/2012 10:25	07/20/2012 10:00
J1PVL8	1207048-07	Soil	07/18/2012 10:10	07/20/2012 10:00
J1PVL9	1207048-08	Soil	07/18/2012 10:00	07/20/2012 10:00
J1PVM0	1207048-09	Soil	07/18/2012 09:50	07/20/2012 10:00
J1PVM1	1207048-10	Soil	07/18/2012 09:35	07/20/2012 10:00
J1PVM2	1207048-11	Soil	07/18/2012 09:20	07/20/2012 10:00
J1PVM3	1207048-12	Soil	07/18/2012 08:55	07/20/2012 10:00
J1PVM4	1207048-13	Soil	07/18/2012 12:30	07/20/2012 10:00
J1PVM5	1207048-14	Soil	07/18/2012 12:30	07/20/2012 10:00

LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

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

Case Narrative

Client: WC-HANFORD RC-075 KP0114
LVL #: 1207048

W.O. #: 60049-001-001-0001-00
Date Received: 07-20-2012

SEMIVOLATILE

Fourteen (14) soil samples were collected on 07-18-2012.

The samples and associated QC samples were extracted 07-20-2012 and analyzed 07-23,25-2012 according to Lionville Laboratory SOPs. The extraction procedure was based on SW846 Method 3540C, and the analysis procedure was based on SW846 Method 8270C for TCL Semivolatile target compounds.

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. Samples were extracted and analyzed within holding time.

3. Non-target compounds were detected in these samples.

4. Two (2) of one hundred and eight (108) obtainable surrogate recoveries were outside acceptance criteria. The surrogate recovery criteria were not met for samples J1PVM5 and J1PVM3. A copy of the Sample Discrepancy Report (SDR#12MS138) has been enclosed.

   The loss of the surrogate 2,4,6-Tribromophenol in the samples J1PVM3 and J1PVM5 appears to be due to a chemical reaction rather than to a problem with the extraction process. Peaks on the chromatogram indicate this reaction. The conversion compound has been reported as a non-target compound in the sample J1PVM3 at a retention time of 21.038 minutes and in sample J1PVM5 at a retention time of 21.181 minutes. The loss of this surrogate has been associated with the use of soxhlet extractions.

5. The method blank was below the reporting limit for all target compounds.

6. Two (2) of sixty-four (64) blank spike recoveries were outside acceptance criteria. A copy of the Sample Discrepancy Report (SDR#12MS138) has been enclosed.

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.

7. Two (2) of one hundred and twenty-eight (128) obtainable matrix spike recoveries were outside acceptance criteria. A copy of the Sample Discrepancy Report (SDR#12MS138) has been enclosed.

8. The samples were reported on a dry weight basis.

9. All initial calibrations associated with this data set were within acceptance criteria. Per method 8000B/8270C, the attached Table 1 shows the target compounds where the RSD exceeded 15%, and the mean RSD was used for evaluation of the initial calibration. Results associated with these compounds are considered to have greater uncertainty. Refer to the Analysis Batch Sequence Summary Forms to associate the calibration with client samples.

10. All continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.

11. Internal standard area and retention time criteria were met.

12. Manual integrations are performed according to SOP QA-125 to produce quality data with the utmost integrity. All manual integrations are required to be technically valid and properly documented. Appropriate technical flags are defined in the Glossary ("Technical Flags For Manual Integration").

13. 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 package has been authorized by the Laboratory Manager or designee, as verified by the following signature.

Iain Daniels
LvL Laboratory Manager

7/26/2
Date

Lionville Laboratory Sample Discrepancy Report (SDR)

SDR #: 12MS138

Initiator: Shawn Saylor
Date: 7-26-12
Client: Wilmington RC075 KP0114

Batch: 1207048
Samples: 1207048-14, L207123-MS1
Method: SW846/MCAWW/CLP/

Parameter: 8270C
Matrix: Soil
Prep Batch: L207123

1. Reason for SDR

a. COC Discrepancy __ Tech Profile Error __ Client Request __ Sampler Error on C-O-C __ Transcription Error __ Wrong Test Code __ Other _____

b. General Discrepancy

__ Missing Sample/Extract* __ Container Broken* __ Wrong Sample Pulled __ Label ID's Illegible
__ Hold Time Exceeded __ Insufficient Sample* __ Preservation Wrong __ Received Past Hold
__ Improper Bottle Type __ Not Amenable to Analysis

Note*: Verified by [Log-In] or [Prep Group] (circle)...signature/date: _____

c. Problem (Include all relevant specific results; attach data if necessary) TESS 7-26-12

(1) <10% recovery of 2,4,6-tribromophenol in ~~L207123-MS1~~ JIPVMS
(2) low recovery of 2,4-dinitrophenol and 4,6-dinitro-2-methylphenol in L207123-MS1
(3) low recovery of 2,4,6-trichlorophenol in L207123-MS1
(4) low recovery of 2,4-dinitrophenol in L207123-MSD1

2. Known or Probable Causes(s) (1) May be due to a chemical reaction. Breakdown compound reported as a TIC at a retention time of 21.191 minutes. The loss of this surrogate has been associated with the use of soxhlet extractions. (2) Acidic phenols subject to erratic chromatographic behavior.

Samples all below reporting limit for all target compounds

3. Discussion and Proposed Action Other Description: narrate

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

4. Project Manager Instructions...signature/date: 7/26/12

__ Concur with Proposed Action
__ Disagree with Proposed Action; See Instruction
__ Include in Case Narrative
__ Client Contacted:
Date/Person _____
__ Add
__ Cancel

5. Final Action...signature/date: 7/26/12 Other Explanation:

__ Verified re-[log][leach][extract][digest][analysis] (circle)
✓ Included in Case Narrative
__ Hard Copy COC Revised
__ Electronic COC Revised
__ EDD Corrections Completed

When Final Action has been recorded, forward original to QA for diposition.

Route
__ Lab Manager: Daniels
__ Project Mgr (circle): Johnson / Stone
__ Sample Prep (circle): ~~Ford~~
__ Log-in: King

Route
__ Metals: Welsh / _____
__ Inorganic: Perrone / _____
__ GC/LC: Carey / _____
__ ~~MS VOA~~: Rubino / _____
__ MS BNA: Carden / _____
__ Other: _____

QA-139-A-0208

TABLE 1

TCL - 8000B/8270C COMPOUNDS WHERE THE MEAN %RSD IS USED TO MEET CRITERIA FOR INITIAL CALIBRATION OF AN INDIVIDUAL COMPOUND

MEAN RSD USED FOR EVALUATION: 8.59 CALIBRATION: 1207013

>15% RSD	Compound	>15% RSD	Compound	>15% RSD	Compound
	1,2,4-Trichlorobenzene		Di-n-butyl Phthalate		**Surrogates:**
	1,2-Dichlorobenzene		Di-n-octyl Phthalate		2-Fluorophenol
	1,3-Dichlorobenzene		Fluoranthene		Phenol-d5
	1,4-Dichlorobenzene		Fluorene		Nitrobenzene-d5
	2,4,5-Trichlorophenol		Hexachlorobenzene		2-Fluorobiphenyl
	2,4,6-Trichlorophenol		Hexachlorobutadiene		2,4,6-Tribromophenol
	2,4-Dichlorophenol		Hexachlorocyclopentadiene		p-Terphenyl-d14
	2,4-Dimethylphenol		Hexachloroethane		
✓	2,4-Dinitrophenol		Indeno[1,2,3-cd]pyrene		
	2,4-Dinitrotoluene		Isophorone		
	2,6-Dinitrotoluene		Naphthalene		
	2-Chloronaphthalene		Nitrobenzene		
	2-Chlorophenol		N-Nitrosodi-n-propylamine		
	2-Methylnaphthalene		N-Nitrosodiphenylamine		
	2-Methylphenol	✓	Pentachlorophenol		
	2-Nitroaniline		Phenanthrene		
	2-Nitrophenol		Phenol		
	3- and/or 4-Methylphenol		Pyrene		
	3,3'-Dichlorobenzidine				
	3-Nitroaniline				
	4,6-Dinitro-2-methylphenol		**OLM04.2 TCL addons:**		
	4-Bromophenyl Phenyl Ether		1,1-Biphenyl		
	4-Chloro-3-methylphenol		Atrazine		
	4-Chloroaniline		Benzaldehyde		
	4-Chlorophenyl Phenyl Ether		Caprolactam		
	4-Nitroaniline				
✓	4-Nitrophenol		**NonTCL addons:**		
	Acenaphthene		1,2-Diphenylhydrazine		
	Acenaphthylene		1,4-Dioxane		
	Anthracene		1-Methylnapthalene		
	Benz[a]anthracene		2,3,4,6-Tetrachlorophenol		
	Benzo[a] pyrene		Acetophenone		
	Benzo[b] fluoranthene		Aniline		
	Benzo[g,h,i] perylene		Benzidine		
	Benzo[k] fluoranthene		Benzoic Acid		
	Benzyl alcohol		N-Nitrosodimethylamine		
	Bis(2-chloroethoxy) methane		Pyridine		
	Bis(2-chloroethyl) ether		Tributylphosphate		
	Bis(2-chloroisopropyl) ether				
	Bis(2-ethylhexyl) phthalate				
	Butyl Benzyl Phthalate				
	Carbazole				
	Chrysene				
	Dibenz[a,h]anthracene				
	Dibenzofuran				
	Diethyl Phthalate				
	Dimethyl Phthalate				

ANALYSIS BATCH (SEQUENCE) SUMMARY
8270C

Laboratory:	Lionville Laboratory	SDG:	KP0114
Client:	WC-Hanford, Inc.	Project:	RC-075
Sequence:	2070071	Instrument:	HP5972N
Matrix:	Solid	Calibration:	1207013

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2070071-TUN1	N072301.D	07/23/12 11:26
Calibration Check	2070071-CCV1	N072302.D	07/23/12 11:49
LCS	L207123-BS1	N072305.D	07/23/12 14:35
Blank	L207123-BLK1	N072306.D	07/23/12 15:23
J1PVL4	1207048-03	N072307.D	07/23/12 16:12
J1PVL7	1207048-06	N072309.D	07/23/12 17:49
J1PVL8	1207048-07	N072310.D	07/23/12 18:38
J1PVM0	1207048-09	N072311.D	07/23/12 19:26
J1PVM1	1207048-10	N072312.D	07/23/12 20:14
J1PVL3	1207048-02	N072313.D	07/23/12 21:03
J1PVM5	1207048-14	N072314.D	07/23/12 21:52
J1PVM4	1207048-13	N072315.D	07/23/12 22:41

ANALYSIS BATCH (SEQUENCE) SUMMARY
8270C

Laboratory:	Lionville Laboratory	SDG:	KP0114
Client:	WC-Hanford, Inc.	Project:	RC-075
Sequence:	2070077	Instrument:	HP5972N
Matrix:	Solid	Calibration:	1207013

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2070077-TUN1	N072501.D	07/25/12 10:21
Calibration Check	2070077-CCV1	N072502.D	07/25/12 10:44
J1PVL2	1207048-01	N072503.D	07/25/12 11:33
J1PVL2	L207123-MS1	N072504.D	07/25/12 12:22
J1PVL2	L207123-MSD1	N072505.D	07/25/12 13:10
J1PVL5	1207048-04	N072506.D	07/25/12 13:59
J1PVL6	1207048-05	N072507.D	07/25/12 14:47
J1PVM2	1207048-11	N072508.D	07/25/12 15:36
J1PVM3	1207048-12	N072509.D	07/25/12 16:25
J1PVL9	1207048-08	N072510.D	07/25/12 17:13

GLOSSARY

DATA QUALIFIERS

U	=	Indicates that the compound was analyzed for but not detected. The associated numerical value is the estimated sample quantitation limit, which is included and corrected for dilution and percent moisture.
J	=	Indicates an estimated value. This flag is used under the following circumstances: 1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; or 2) when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. For example, if the limit of detection 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. This flag is also used for a TIC as well as for a positively identified TCL compound.
E	=	Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.
D	=	Identifies all compounds identified in an analysis at a secondary dilution factor.
I	=	Interference.
NQ	=	Result qualitatively confirmed but not able to quantify.
A	=	Indicates that a TIC is a suspected aldol-condensation product.
N	=	Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.
X	=	This flag is used for a TIC compound which is quantified relative to a response factor generated from a daily calibration standard (rather than quantified relative to the closest internal standard).
Y	=	Additional qualifiers used as required are explained in the case narrative.

GLOSSARY

ABBREVIATIONS

BS	=	Indicates blank spike in which reagent grade water is spiked with the CLP matrix spike 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	=	Suffix added to sample number to indicate that results are from a diluted analysis.
NA	=	Not Applicable.
DF	=	Dilution Factor.
NR	=	Not Required.
SP, Z	=	Indicates Spiked Compound.

TECHNICAL FLAGS FOR MANUAL INTEGRATION

Manual quantitation modifications are performed routinely to improve the data quality for a variety of technical reasons. Documentation of these modifications should be clear and concise. The following "flags" are used to indicate the technical reasons for quantitation modifications:

MP	-	Missed Peak: Manually added peak not found by automatic quantitation program.
PA	-	Peak Assignment: quantitation report was changed to reflect correct peak assignment.
RI	-	Routine Integration: routine integrations are performed for some analytes that are consistently integrated improperly by the automatic integration programs. Examples are the dichlorobenzene isomers on the VOA packed column and benzo(b)fluoranthene/benzo(k)fluoranthene, which are poorly resolved on the BNA column.
SP	-	Split Peak: the automatic integration improperly split the peak; a manual integration was performed to get the correct area.
CB	-	Coelution/Background: peak was manually integrated to eliminate contribution from coeluting compounds, background
PI	-	Proper Integration: a peak with poor or inconsistent integration (e.g., excessive tail) was properly integrated manually.

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

WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL2
1207048-01 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
1,2,4-Trichlorobenzene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
1,2-Dichlorobenzene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
1,3-Dichlorobenzene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
1,4-Dichlorobenzene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4,5-Trichlorophenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4,6-Trichlorophenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dichlorophenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dimethylphenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dinitrophenol	1670	U	1670	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dinitrotoluene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,6-Dinitrotoluene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Chloronaphthalene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Chlorophenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Methylnaphthalene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Methylphenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Nitroaniline	1670	U	1670	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Nitrophenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
3,3'-Dichlorobenzidine	667	U	667	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
3-Nitroaniline	1670	U	1670	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4,6-Dinitro-2-methylphenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Bromophenyl Phenyl Ether	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Chloro-3-methylphenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Chloroaniline	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Chlorophenyl Phenyl Ether	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
3- and/or 4-Methylphenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Nitroaniline	1670	U	1670	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Nitrophenol	1670	U	1670	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Acenaphthene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Acenaphthylene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Anthracene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benz[a]anthracene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[a] pyrene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[b] fluoranthene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[g,h,i] perylene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[k] fluoranthene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Bis(2-chloroethoxy) methane	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C

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Exton, PA 19341
Phone: 610-280-3000
Fax: 610-280-3041

WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL2
1207048-01 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
Bis(2-chloroethyl) ether	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Bis(2-chloroisopropyl) ether	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Bis(2-ethylhexyl) phthalate	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Butyl Benzyl Phthalate	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Carbazole	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Chrysene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Dibenz[a,h]anthracene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Dibenzofuran	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Diethyl Phthalate	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Dimethyl Phthalate	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Di-n-butyl Phthalate	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Di-n-octyl Phthalate	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Fluoranthene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Fluorene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachlorobenzene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachlorobutadiene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachlorocyclopentadiene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachloroethane	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Indeno[1,2,3-cd]pyrene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Isophorone	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Naphthalene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Nitrobenzene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
N-Nitrosodi-n-propylamine	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
N-Nitrosodiphenylamine	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Pentachlorophenol	1670	U	1670	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Phenanthrene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Phenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Pyrene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Unknown 1	**242**	B, J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Aldol Condensate 3	**763**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Aldol Condensate 4	**243**	A, J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Aldol Condensate 2	**39900**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Aldol Condensate 1	**2600**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Surrogate: 2-Fluorophenol	*65 %*		*25-121*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: Phenol-d5	*70 %*		*24-113*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: Nitrobenzene-d5	*63 %*		*23-120*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL2
1207048-01 (Soil)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Semivolatile Organic Compounds by SW846 8270C								
Surrogate: 2-Fluorobiphenyl	*66 %*	*30-115*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: 2,4,6-Tribromophenol	*81 %*	*19-122*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: p-Terphenyl-d14	*88 %*	*18-137*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL3
1207048-02 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
1,2,4-Trichlorobenzene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,2-Dichlorobenzene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,3-Dichlorobenzene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,4-Dichlorobenzene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4,5-Trichlorophenol	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4,6-Trichlorophenol	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dichlorophenol	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dimethylphenol	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dinitrophenol	1620	U	1620	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dinitrotoluene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,6-Dinitrotoluene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Chloronaphthalene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Chlorophenol	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Methylnaphthalene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Methylphenol	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Nitroaniline	1620	U	1620	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Nitrophenol	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3,3'-Dichlorobenzidine	648	U	648	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3-Nitroaniline	1620	U	1620	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4,6-Dinitro-2-methylphenol	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Bromophenyl Phenyl Ether	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chloro-3-methylphenol	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chloroaniline	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chlorophenyl Phenyl Ether	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3- and/or 4-Methylphenol	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Nitroaniline	1620	U	1620	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Nitrophenol	1620	U	1620	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Acenaphthene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Acenaphthylene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Anthracene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benz[a]anthracene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[a] pyrene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[b] fluoranthene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[g,h,i] perylene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[k] fluoranthene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-chloroethoxy) methane	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL3
1207048-02 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
Bis(2-chloroethyl) ether	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-chloroisopropyl) ether	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-ethylhexyl) phthalate	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Butyl Benzyl Phthalate	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Carbazole	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Chrysene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dibenz[a,h]anthracene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dibenzofuran	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Diethyl Phthalate	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dimethyl Phthalate	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Di-n-butyl Phthalate	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Di-n-octyl Phthalate	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Fluoranthene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Fluorene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorobenzene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorobutadiene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorocyclopentadiene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachloroethane	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Indeno[1,2,3-cd]pyrene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Isophorone	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Naphthalene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Nitrobenzene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
N-Nitrosodi-n-propylamine	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
N-Nitrosodiphenylamine	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Pentachlorophenol	1620	U	1620	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Phenanthrene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Phenol	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Pyrene	324	U	324	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Unknown 2	**231**	B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Unknown 1	**452**	J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 2	**40000**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 3	**578**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 1	**2470**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Surrogate: 2-Fluorophenol	*55 %*		*25-121*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: Phenol-d5	*57 %*		*24-113*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: Nitrobenzene-d5	*58 %*		*23-120*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*

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WC-Hanford, Inc.	Project: RC-075	
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Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL3

1207048-02 (Soil)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Semivolatile Organic Compounds by SW846 8270C								
Surrogate: 2-Fluorobiphenyl	*59 %*	*30-115*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: 2,4,6-Tribromophenol	*46 %*	*19-122*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: p-Terphenyl-d14	*79 %*	*18-137*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL4
1207048-03 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
1,2,4-Trichlorobenzene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,2-Dichlorobenzene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,3-Dichlorobenzene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,4-Dichlorobenzene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4,5-Trichlorophenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4,6-Trichlorophenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dichlorophenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dimethylphenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dinitrophenol	1690	U	1690	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dinitrotoluene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,6-Dinitrotoluene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Chloronaphthalene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Chlorophenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Methylnaphthalene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Methylphenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Nitroaniline	1690	U	1690	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Nitrophenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3,3'-Dichlorobenzidine	675	U	675	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3-Nitroaniline	1690	U	1690	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4,6-Dinitro-2-methylphenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Bromophenyl Phenyl Ether	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chloro-3-methylphenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chloroaniline	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chlorophenyl Phenyl Ether	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3- and/or 4-Methylphenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Nitroaniline	1690	U	1690	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Nitrophenol	1690	U	1690	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Acenaphthene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Acenaphthylene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Anthracene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benz[a]anthracene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[a] pyrene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[b] fluoranthene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[g,h,i] perylene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[k] fluoranthene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-chloroethoxy) methane	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C

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Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL4
1207048-03 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
Bis(2-chloroethyl) ether	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-chloroisopropyl) ether	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-ethylhexyl) phthalate	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Butyl Benzyl Phthalate	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Carbazole	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Chrysene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dibenz[a,h]anthracene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dibenzofuran	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Diethyl Phthalate	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dimethyl Phthalate	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Di-n-butyl Phthalate	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Di-n-octyl Phthalate	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Fluoranthene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Fluorene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorobenzene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorobutadiene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorocyclopentadiene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachloroethane	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Indeno[1,2,3-cd]pyrene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Isophorone	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Naphthalene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Nitrobenzene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
N-Nitrosodi-n-propylamine	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
N-Nitrosodiphenylamine	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Pentachlorophenol	1690	U	1690	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Phenanthrene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Phenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Pyrene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Unknown 1	**339**	J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 3	**707**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Alkane 1	**123**	J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 2	**38800**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 1	**2760**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Surrogate: 2-Fluorophenol	*68 %*		*25-121*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: Phenol-d5	*72 %*		*24-113*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: Nitrobenzene-d5	*68 %*		*23-120*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*

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WC-Hanford, Inc.	Project: RC-075	
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Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL4
1207048-03 (Soil)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Semivolatile Organic Compounds by SW846 8270C								
Surrogate: 2-Fluorobiphenyl	*65 %*	*30-115*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: 2,4,6-Tribromophenol	*66 %*	*19-122*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: p-Terphenyl-d14	*83 %*	*18-137*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*

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WC-Hanford, Inc.	Project: RC-075	
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Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL5
1207048-04 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
1,2,4-Trichlorobenzene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
1,2-Dichlorobenzene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
1,3-Dichlorobenzene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
1,4-Dichlorobenzene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4,5-Trichlorophenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4,6-Trichlorophenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dichlorophenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dimethylphenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dinitrophenol	1670	U	1670	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dinitrotoluene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,6-Dinitrotoluene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Chloronaphthalene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Chlorophenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Methylnaphthalene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Methylphenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Nitroaniline	1670	U	1670	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Nitrophenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
3,3'-Dichlorobenzidine	668	U	668	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
3-Nitroaniline	1670	U	1670	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4,6-Dinitro-2-methylphenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Bromophenyl Phenyl Ether	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Chloro-3-methylphenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Chloroaniline	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Chlorophenyl Phenyl Ether	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
3- and/or 4-Methylphenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Nitroaniline	1670	U	1670	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Nitrophenol	1670	U	1670	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Acenaphthene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Acenaphthylene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Anthracene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benz[a]anthracene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[a] pyrene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[b] fluoranthene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[g,h,i] perylene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[k] fluoranthene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Bis(2-chloroethoxy) methane	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 11:15

J1PVL5
1207048-04 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
Bis(2-chloroethyl) ether	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Bis(2-chloroisopropyl) ether	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Bis(2-ethylhexyl) phthalate	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Butyl Benzyl Phthalate	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Carbazole	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Chrysene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Dibenz[a,h]anthracene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Dibenzofuran	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Diethyl Phthalate	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Dimethyl Phthalate	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Di-n-butyl Phthalate	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Di-n-octyl Phthalate	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Fluoranthene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Fluorene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachlorobenzene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachlorobutadiene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachlorocyclopentadiene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachloroethane	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Indeno[1,2,3-cd]pyrene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Isophorone	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Naphthalene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Nitrobenzene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
N-Nitrosodi-n-propylamine	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
N-Nitrosodiphenylamine	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Pentachlorophenol	1670	U	1670	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Phenanthrene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Phenol	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Pyrene	334	U	334	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Unknown 1	**445**	J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Aldol Condensate 1	**2380**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Alkane 1	**324**	J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Aldol Condensate 2	**38400**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Aldol Condensate 3	**614**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Surrogate: 2-Fluorophenol	*60 %*		*25-121*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: Phenol-d5	*65 %*		*24-113*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: Nitrobenzene-d5	*59 %*		*23-120*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL5

1207048-04 (Soil)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Semivolatile Organic Compounds by SW846 8270C								
Surrogate: 2-Fluorobiphenyl	*65 %*	*30-115*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: 2,4,6-Tribromophenol	*79 %*	*19-122*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: p-Terphenyl-d14	*79 %*	*18-137*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL6
1207048-05 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
1,2,4-Trichlorobenzene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
1,2-Dichlorobenzene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
1,3-Dichlorobenzene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
1,4-Dichlorobenzene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4,5-Trichlorophenol	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4,6-Trichlorophenol	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dichlorophenol	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dimethylphenol	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dinitrophenol	1680	U	1680	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dinitrotoluene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,6-Dinitrotoluene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Chloronaphthalene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Chlorophenol	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Methylnaphthalene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Methylphenol	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Nitroaniline	1680	U	1680	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Nitrophenol	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
3,3'-Dichlorobenzidine	673	U	673	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
3-Nitroaniline	1680	U	1680	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4,6-Dinitro-2-methylphenol	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Bromophenyl Phenyl Ether	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Chloro-3-methylphenol	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Chloroaniline	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Chlorophenyl Phenyl Ether	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
3- and/or 4-Methylphenol	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Nitroaniline	1680	U	1680	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Nitrophenol	1680	U	1680	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Acenaphthene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Acenaphthylene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Anthracene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benz[a]anthracene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[a] pyrene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[b] fluoranthene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[g,h,i] perylene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[k] fluoranthene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Bis(2-chloroethoxy) methane	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C

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2620 Fermi Avenue	Project Number: KP0114	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL6
1207048-05 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
Bis(2-chloroethyl) ether	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Bis(2-chloroisopropyl) ether	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Bis(2-ethylhexyl) phthalate	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Butyl Benzyl Phthalate	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Carbazole	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Chrysene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Dibenz[a,h]anthracene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Dibenzofuran	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Diethyl Phthalate	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Dimethyl Phthalate	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Di-n-butyl Phthalate	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Di-n-octyl Phthalate	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Fluoranthene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Fluorene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachlorobenzene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachlorobutadiene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachlorocyclopentadiene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachloroethane	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Indeno[1,2,3-cd]pyrene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Isophorone	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Naphthalene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Nitrobenzene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
N-Nitrosodi-n-propylamine	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
N-Nitrosodiphenylamine	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Pentachlorophenol	1680	U	1680	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Phenanthrene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Phenol	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Pyrene	336	U	336	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Unknown 1	**731**	J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Alkane 1	**368**	J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Aldol Condensate 3	**673**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Aldol Condensate 1	**2680**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Aldol Condensate 2	**42600**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Surrogate: 2-Fluorophenol	*56 %*		*25-121*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: Phenol-d5	*58 %*		*24-113*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: Nitrobenzene-d5	*54 %*		*23-120*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*

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WC-Hanford, Inc.	Project: RC-075	
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Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL6
1207048-05 (Soil)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Semivolatile Organic Compounds by SW846 8270C								
Surrogate: 2-Fluorobiphenyl	*57 %*	*30-115*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: 2,4,6-Tribromophenol	*58 %*	*19-122*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: p-Terphenyl-d14	*68 %*	*18-137*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL7
1207048-06 (Soil)

Lionville Laboratory

Semivolatile Organic Compounds by SW846 8270C

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
1,2,4-Trichlorobenzene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,2-Dichlorobenzene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,3-Dichlorobenzene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,4-Dichlorobenzene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4,5-Trichlorophenol	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4,6-Trichlorophenol	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dichlorophenol	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dimethylphenol	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dinitrophenol	1700	U	1700	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dinitrotoluene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,6-Dinitrotoluene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Chloronaphthalene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Chlorophenol	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Methylnaphthalene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Methylphenol	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Nitroaniline	1700	U	1700	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Nitrophenol	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3,3'-Dichlorobenzidine	680	U	680	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3-Nitroaniline	1700	U	1700	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4,6-Dinitro-2-methylphenol	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Bromophenyl Phenyl Ether	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chloro-3-methylphenol	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chloroaniline	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chlorophenyl Phenyl Ether	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3- and/or 4-Methylphenol	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Nitroaniline	1700	U	1700	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Nitrophenol	1700	U	1700	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Acenaphthene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Acenaphthylene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Anthracene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benz[a]anthracene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[a] pyrene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[b] fluoranthene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[g,h,i] perylene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[k] fluoranthene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-chloroethoxy) methane	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL7
1207048-06 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
Bis(2-chloroethyl) ether	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-chloroisopropyl) ether	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-ethylhexyl) phthalate	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Butyl Benzyl Phthalate	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Carbazole	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Chrysene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dibenz[a,h]anthracene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dibenzofuran	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Diethyl Phthalate	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dimethyl Phthalate	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Di-n-butyl Phthalate	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Di-n-octyl Phthalate	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Fluoranthene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Fluorene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorobenzene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorobutadiene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorocyclopentadiene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachloroethane	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Indeno[1,2,3-cd]pyrene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Isophorone	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Naphthalene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Nitrobenzene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
N-Nitrosodi-n-propylamine	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
N-Nitrosodiphenylamine	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Pentachlorophenol	1700	U	1700	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Phenanthrene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Phenol	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Pyrene	340	U	340	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Unknown 1	**395**	J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 3	**569**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 2	**34500**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Alkane 1	**377**	J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 1	**2280**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Surrogate: 2-Fluorophenol	*56 %*		*25-121*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: Phenol-d5	*60 %*		*24-113*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: Nitrobenzene-d5	*58 %*		*23-120*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*

264 Welsh Pool Road
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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL7

1207048-06 (Soil)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Semivolatile Organic Compounds by SW846 8270C								
Surrogate: 2-Fluorobiphenyl	*60 %*	*30-115*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: 2,4,6-Tribromophenol	*23 %*	*19-122*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: p-Terphenyl-d14	*78 %*	*18-137*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL8
1207048-07 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
1,2,4-Trichlorobenzene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,2-Dichlorobenzene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,3-Dichlorobenzene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,4-Dichlorobenzene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4,5-Trichlorophenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4,6-Trichlorophenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dichlorophenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dimethylphenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dinitrophenol	1700	U	1700	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dinitrotoluene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,6-Dinitrotoluene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Chloronaphthalene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Chlorophenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Methylnaphthalene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Methylphenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Nitroaniline	1700	U	1700	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Nitrophenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3,3'-Dichlorobenzidine	679	U	679	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3-Nitroaniline	1700	U	1700	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4,6-Dinitro-2-methylphenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Bromophenyl Phenyl Ether	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chloro-3-methylphenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chloroaniline	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chlorophenyl Phenyl Ether	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3- and/or 4-Methylphenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Nitroaniline	1700	U	1700	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Nitrophenol	1700	U	1700	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Acenaphthene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Acenaphthylene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Anthracene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benz[a]anthracene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[a] pyrene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[b] fluoranthene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[g,h,i] perylene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[k] fluoranthene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-chloroethoxy) methane	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL8
1207048-07 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
Bis(2-chloroethyl) ether	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-chloroisopropyl) ether	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-ethylhexyl) phthalate	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Butyl Benzyl Phthalate	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Carbazole	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Chrysene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dibenz[a,h]anthracene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dibenzofuran	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Diethyl Phthalate	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dimethyl Phthalate	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Di-n-butyl Phthalate	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Di-n-octyl Phthalate	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Fluoranthene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Fluorene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorobenzene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorobutadiene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorocyclopentadiene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachloroethane	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Indeno[1,2,3-cd]pyrene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Isophorone	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Naphthalene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Nitrobenzene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
N-Nitrosodi-n-propylamine	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
N-Nitrosodiphenylamine	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Pentachlorophenol	1700	U	1700	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Phenanthrene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Phenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Pyrene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Unknown 1	**356**	B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 4	**302**	A, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 3	**738**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 2	**40700**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 1	**2810**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Surrogate: 2-Fluorophenol	*65 %*		*25-121*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: Phenol-d5	*68 %*		*24-113*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: Nitrobenzene-d5	*69 %*		*23-120*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL8

1207048-07 (Soil)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Semivolatile Organic Compounds by SW846 8270C								
Surrogate: 2-Fluorobiphenyl	*69 %*	*30-115*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: 2,4,6-Tribromophenol	*55 %*	*19-122*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: p-Terphenyl-d14	*93 %*	*18-137*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL9
1207048-08 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
1,2,4-Trichlorobenzene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
1,2-Dichlorobenzene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
1,3-Dichlorobenzene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
1,4-Dichlorobenzene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4,5-Trichlorophenol	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4,6-Trichlorophenol	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dichlorophenol	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dimethylphenol	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dinitrophenol	1670	U	1670	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dinitrotoluene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,6-Dinitrotoluene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Chloronaphthalene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Chlorophenol	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Methylnaphthalene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Methylphenol	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Nitroaniline	1670	U	1670	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Nitrophenol	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
3,3'-Dichlorobenzidine	666	U	666	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
3-Nitroaniline	1670	U	1670	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4,6-Dinitro-2-methylphenol	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Bromophenyl Phenyl Ether	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Chloro-3-methylphenol	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Chloroaniline	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Chlorophenyl Phenyl Ether	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
3- and/or 4-Methylphenol	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Nitroaniline	1670	U	1670	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Nitrophenol	1670	U	1670	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Acenaphthene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Acenaphthylene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Anthracene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benz[a]anthracene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[a] pyrene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[b] fluoranthene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[g,h,i] perylene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[k] fluoranthene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Bis(2-chloroethoxy) methane	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL9
1207048-08 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
Bis(2-chloroethyl) ether	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Bis(2-chloroisopropyl) ether	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Bis(2-ethylhexyl) phthalate	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Butyl Benzyl Phthalate	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Carbazole	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Chrysene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Dibenz[a,h]anthracene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Dibenzofuran	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Diethyl Phthalate	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Dimethyl Phthalate	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Di-n-butyl Phthalate	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Di-n-octyl Phthalate	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Fluoranthene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Fluorene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachlorobenzene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachlorobutadiene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachlorocyclopentadiene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachloroethane	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Indeno[1,2,3-cd]pyrene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Isophorone	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Naphthalene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Nitrobenzene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
N-Nitrosodi-n-propylamine	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
N-Nitrosodiphenylamine	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Pentachlorophenol	1670	U	1670	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Phenanthrene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Phenol	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Pyrene	333	U	333	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Unknown 1	**393**	J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Aldol Condensate 3	**428**	A, J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Alkane 1	**389**	J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Aldol Condensate 2	**39700**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Aldol Condensate 1	**2440**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Surrogate: 2-Fluorophenol	*62 %*		*25-121*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: Phenol-d5	*62 %*		*24-113*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: Nitrobenzene-d5	*63 %*		*23-120*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVL9

1207048-08 (Soil)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Semivolatile Organic Compounds by SW846 8270C								
Surrogate: 2-Fluorobiphenyl	*66 %*	*30-115*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: 2,4,6-Tribromophenol	*69 %*	*19-122*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: p-Terphenyl-d14	*84 %*	*18-137*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVM0
1207048-09 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
1,2,4-Trichlorobenzene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,2-Dichlorobenzene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,3-Dichlorobenzene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,4-Dichlorobenzene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4,5-Trichlorophenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4,6-Trichlorophenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dichlorophenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dimethylphenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dinitrophenol	1690	U	1690	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dinitrotoluene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,6-Dinitrotoluene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Chloronaphthalene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Chlorophenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Methylnaphthalene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Methylphenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Nitroaniline	1690	U	1690	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Nitrophenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3,3'-Dichlorobenzidine	675	U	675	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3-Nitroaniline	1690	U	1690	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4,6-Dinitro-2-methylphenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Bromophenyl Phenyl Ether	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chloro-3-methylphenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chloroaniline	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chlorophenyl Phenyl Ether	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3- and/or 4-Methylphenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Nitroaniline	1690	U	1690	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Nitrophenol	1690	U	1690	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Acenaphthene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Acenaphthylene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Anthracene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benz[a]anthracene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[a] pyrene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[b] fluoranthene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[g,h,i] perylene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[k] fluoranthene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-chloroethoxy) methane	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVM0
1207048-09 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
Bis(2-chloroethyl) ether	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-chloroisopropyl) ether	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-ethylhexyl) phthalate	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Butyl Benzyl Phthalate	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Carbazole	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Chrysene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dibenz[a,h]anthracene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dibenzofuran	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Diethyl Phthalate	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dimethyl Phthalate	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Di-n-butyl Phthalate	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Di-n-octyl Phthalate	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Fluoranthene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Fluorene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorobenzene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorobutadiene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorocyclopentadiene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachloroethane	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Indeno[1,2,3-cd]pyrene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Isophorone	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Naphthalene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Nitrobenzene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
N-Nitrosodi-n-propylamine	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
N-Nitrosodiphenylamine	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Pentachlorophenol	1690	U	1690	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Phenanthrene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Phenol	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Pyrene	337	U	337	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Unknown 1	**401**	J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 2	**40100**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 3	**724**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 1	**2870**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Alkane 1	**626**	J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Surrogate: 2-Fluorophenol	*69 %*		*25-121*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: Phenol-d5	*73 %*		*24-113*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: Nitrobenzene-d5	*73 %*		*23-120*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVM0

1207048-09 (Soil)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Semivolatile Organic Compounds by SW846 8270C								
Surrogate: 2-Fluorobiphenyl	*77 %*	*30-115*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: 2,4,6-Tribromophenol	*63 %*	*19-122*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: p-Terphenyl-d14	*99 %*	*18-137*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVM1
1207048-10 (Soil)

Lionville Laboratory

Semivolatile Organic Compounds by SW846 8270C

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
1,2,4-Trichlorobenzene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,2-Dichlorobenzene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,3-Dichlorobenzene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,4-Dichlorobenzene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4,5-Trichlorophenol	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4,6-Trichlorophenol	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dichlorophenol	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dimethylphenol	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dinitrophenol	1750	U	1750	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dinitrotoluene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,6-Dinitrotoluene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Chloronaphthalene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Chlorophenol	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Methylnaphthalene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Methylphenol	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Nitroaniline	1750	U	1750	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Nitrophenol	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3,3'-Dichlorobenzidine	700	U	700	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3-Nitroaniline	1750	U	1750	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4,6-Dinitro-2-methylphenol	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Bromophenyl Phenyl Ether	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chloro-3-methylphenol	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chloroaniline	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chlorophenyl Phenyl Ether	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3- and/or 4-Methylphenol	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Nitroaniline	1750	U	1750	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Nitrophenol	1750	U	1750	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Acenaphthene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Acenaphthylene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Anthracene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benz[a]anthracene	**68.9**	J	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[a] pyrene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[b] fluoranthene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[g,h,i] perylene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[k] fluoranthene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-chloroethoxy) methane	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 11:15

J1PVM1
1207048-10 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
Bis(2-chloroethyl) ether	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-chloroisopropyl) ether	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-ethylhexyl) phthalate	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Butyl Benzyl Phthalate	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Carbazole	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Chrysene	**85.2**	J	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dibenz[a,h]anthracene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dibenzofuran	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Diethyl Phthalate	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dimethyl Phthalate	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Di-n-butyl Phthalate	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Di-n-octyl Phthalate	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Fluoranthene	**64.5**	J	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Fluorene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorobenzene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorobutadiene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorocyclopentadiene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachloroethane	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Indeno[1,2,3-cd]pyrene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Isophorone	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Naphthalene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Nitrobenzene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
N-Nitrosodi-n-propylamine	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
N-Nitrosodiphenylamine	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Pentachlorophenol	1750	U	1750	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Phenanthrene	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Phenol	350	U	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Pyrene	**98.2**	J	350	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Unknown 2	**859**	J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Unknown 1	**322**	J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 3	**775**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 2	**41500**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 1	**2940**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Surrogate: 2-Fluorophenol	*64 %*		*25-121*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: Phenol-d5	*67 %*		*24-113*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: Nitrobenzene-d5	*68 %*		*23-120*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 11:15

J1PVM1
1207048-10 (Soil)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Semivolatile Organic Compounds by SW846 8270C								
Surrogate: 2-Fluorobiphenyl	*69 %*	*30-115*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: 2,4,6-Tribromophenol	*35 %*	*19-122*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: p-Terphenyl-d14	*91 %*	*18-137*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 11:15

J1PVM2
1207048-11 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
1,2,4-Trichlorobenzene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
1,2-Dichlorobenzene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
1,3-Dichlorobenzene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
1,4-Dichlorobenzene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4,5-Trichlorophenol	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4,6-Trichlorophenol	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dichlorophenol	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dimethylphenol	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dinitrophenol	1910	U	1910	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dinitrotoluene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,6-Dinitrotoluene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Chloronaphthalene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Chlorophenol	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Methylnaphthalene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Methylphenol	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Nitroaniline	1910	U	1910	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Nitrophenol	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
3,3'-Dichlorobenzidine	765	U	765	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
3-Nitroaniline	1910	U	1910	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4,6-Dinitro-2-methylphenol	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Bromophenyl Phenyl Ether	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Chloro-3-methylphenol	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Chloroaniline	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Chlorophenyl Phenyl Ether	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
3- and/or 4-Methylphenol	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Nitroaniline	1910	U	1910	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Nitrophenol	1910	U	1910	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Acenaphthene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Acenaphthylene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Anthracene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benz[a]anthracene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[a] pyrene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[b] fluoranthene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[g,h,i] perylene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[k] fluoranthene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Bis(2-chloroethoxy) methane	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 11:15

J1PVM2
1207048-11 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
Bis(2-chloroethyl) ether	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Bis(2-chloroisopropyl) ether	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Bis(2-ethylhexyl) phthalate	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Butyl Benzyl Phthalate	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Carbazole	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Chrysene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Dibenz[a,h]anthracene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Dibenzofuran	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Diethyl Phthalate	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Dimethyl Phthalate	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Di-n-butyl Phthalate	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Di-n-octyl Phthalate	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Fluoranthene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Fluorene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachlorobenzene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachlorobutadiene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachlorocyclopentadiene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachloroethane	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Indeno[1,2,3-cd]pyrene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Isophorone	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Naphthalene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Nitrobenzene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
N-Nitrosodi-n-propylamine	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
N-Nitrosodiphenylamine	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Pentachlorophenol	1910	U	1910	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Phenanthrene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Phenol	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Pyrene	383	U	383	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Unknown 1	**509**	J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Unknown 2	**555**	J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Aldol Condensate 3	**444**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Aldol Condensate 1	**2360**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Aldol Condensate 2	**41000**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Surrogate: 2-Fluorophenol	*53 %*		*25-121*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: Phenol-d5	*57 %*		*24-113*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: Nitrobenzene-d5	*53 %*		*23-120*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 11:15

J1PVM2
1207048-11 (Soil)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Semivolatile Organic Compounds by SW846 8270C								
Surrogate: 2-Fluorobiphenyl	*57 %*	*30-115*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: 2,4,6-Tribromophenol	*24 %*	*19-122*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: p-Terphenyl-d14	*71 %*	*18-137*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 11:15

J1PVM3
1207048-12 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
1,2,4-Trichlorobenzene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
1,2-Dichlorobenzene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
1,3-Dichlorobenzene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
1,4-Dichlorobenzene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4,5-Trichlorophenol	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4,6-Trichlorophenol	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dichlorophenol	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dimethylphenol	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dinitrophenol	2050	U	2050	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,4-Dinitrotoluene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2,6-Dinitrotoluene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Chloronaphthalene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Chlorophenol	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Methylnaphthalene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Methylphenol	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Nitroaniline	2050	U	2050	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
2-Nitrophenol	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
3,3'-Dichlorobenzidine	820	U	820	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
3-Nitroaniline	2050	U	2050	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4,6-Dinitro-2-methylphenol	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Bromophenyl Phenyl Ether	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Chloro-3-methylphenol	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Chloroaniline	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Chlorophenyl Phenyl Ether	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
3- and/or 4-Methylphenol	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Nitroaniline	2050	U	2050	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
4-Nitrophenol	2050	U	2050	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Acenaphthene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Acenaphthylene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Anthracene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benz[a]anthracene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[a] pyrene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[b] fluoranthene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[g,h,i] perylene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Benzo[k] fluoranthene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Bis(2-chloroethoxy) methane	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 11:15

J1PVM3
1207048-12 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
			Lionville Laboratory						
Semivolatile Organic Compounds by SW846 8270C									
Bis(2-chloroethyl) ether	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Bis(2-chloroisopropyl) ether	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Bis(2-ethylhexyl) phthalate	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Butyl Benzyl Phthalate	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Carbazole	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Chrysene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Dibenz[a,h]anthracene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Dibenzofuran	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Diethyl Phthalate	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Dimethyl Phthalate	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Di-n-butyl Phthalate	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Di-n-octyl Phthalate	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Fluoranthene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Fluorene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachlorobenzene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachlorobutadiene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachlorocyclopentadiene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Hexachloroethane	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Indeno[1,2,3-cd]pyrene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Isophorone	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Naphthalene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Nitrobenzene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
N-Nitrosodi-n-propylamine	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
N-Nitrosodiphenylamine	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Pentachlorophenol	2050	U	2050	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Phenanthrene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Phenol	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Pyrene	410	U	410	ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Unknown 2	**557**	J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Unknown 1	**515**	J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Aldol Condensate 3	**48300**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Aldol Condensate 1	**372**	A, J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
TIC:Aldol Condensate 2	**2940**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/25/2012	8270C
Surrogate: 2-Fluorophenol	*55 %*		*25-121*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: Phenol-d5	*57 %*		*24-113*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: Nitrobenzene-d5	*57 %*		*23-120*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 11:15

J1PVM3
1207048-12 (Soil)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Semivolatile Organic Compounds by SW846 8270C								
Surrogate: 2-Fluorobiphenyl	*58 %*	*30-115*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: 2,4,6-Tribromophenol	*12 % **	*19-122*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*
Surrogate: p-Terphenyl-d14	*72 %*	*18-137*			*L207123*	*07/20/2012*	*07/25/2012*	*8270C*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 11:15

J1PVM4
1207048-13 (Soil)

Lionville Laboratory

Semivolatile Organic Compounds by SW846 8270C

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
1,2,4-Trichlorobenzene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,2-Dichlorobenzene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,3-Dichlorobenzene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,4-Dichlorobenzene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4,5-Trichlorophenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4,6-Trichlorophenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dichlorophenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dimethylphenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dinitrophenol	1700	U	1700	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dinitrotoluene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,6-Dinitrotoluene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Chloronaphthalene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Chlorophenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Methylnaphthalene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Methylphenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Nitroaniline	1700	U	1700	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Nitrophenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3,3'-Dichlorobenzidine	678	U	678	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3-Nitroaniline	1700	U	1700	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4,6-Dinitro-2-methylphenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Bromophenyl Phenyl Ether	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chloro-3-methylphenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chloroaniline	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chlorophenyl Phenyl Ether	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3- and/or 4-Methylphenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Nitroaniline	1700	U	1700	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Nitrophenol	1700	U	1700	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Acenaphthene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Acenaphthylene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Anthracene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benz[a]anthracene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[a] pyrene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[b] fluoranthene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[g,h,i] perylene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[k] fluoranthene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-chloroethoxy) methane	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	Reported: 07/26/2012 11:15

J1PVM4
1207048-13 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
Bis(2-chloroethyl) ether	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-chloroisopropyl) ether	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-ethylhexyl) phthalate	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Butyl Benzyl Phthalate	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Carbazole	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Chrysene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dibenz[a,h]anthracene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dibenzofuran	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Diethyl Phthalate	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dimethyl Phthalate	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Di-n-butyl Phthalate	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Di-n-octyl Phthalate	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Fluoranthene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Fluorene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorobenzene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorobutadiene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorocyclopentadiene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachloroethane	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Indeno[1,2,3-cd]pyrene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Isophorone	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Naphthalene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Nitrobenzene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
N-Nitrosodi-n-propylamine	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
N-Nitrosodiphenylamine	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Pentachlorophenol	1700	U	1700	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Phenanthrene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Phenol	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Pyrene	339	U	339	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Unknown 1	**265**	J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 3	**802**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 2	**46000**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Alkane 1	**183**	J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 1	**3260**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Surrogate: 2-Fluorophenol	*77 %*		*25-121*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: Phenol-d5	*86 %*		*24-113*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: Nitrobenzene-d5	*75 %*		*23-120*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 11:15

J1PVM4
1207048-13 (Soil)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Semivolatile Organic Compounds by SW846 8270C								
Surrogate: 2-Fluorobiphenyl	*77 %*	*30-115*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: 2,4,6-Tribromophenol	*63 %*	*19-122*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: p-Terphenyl-d14	*95 %*	*18-137*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 11:15

J1PVM5
1207048-14 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
1,2,4-Trichlorobenzene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,2-Dichlorobenzene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,3-Dichlorobenzene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
1,4-Dichlorobenzene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4,5-Trichlorophenol	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4,6-Trichlorophenol	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dichlorophenol	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dimethylphenol	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dinitrophenol	1640	U	1640	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,4-Dinitrotoluene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2,6-Dinitrotoluene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Chloronaphthalene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Chlorophenol	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Methylnaphthalene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Methylphenol	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Nitroaniline	1640	U	1640	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
2-Nitrophenol	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3,3'-Dichlorobenzidine	655	U	655	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3-Nitroaniline	1640	U	1640	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4,6-Dinitro-2-methylphenol	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Bromophenyl Phenyl Ether	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chloro-3-methylphenol	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chloroaniline	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Chlorophenyl Phenyl Ether	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
3- and/or 4-Methylphenol	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Nitroaniline	1640	U	1640	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
4-Nitrophenol	1640	U	1640	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Acenaphthene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Acenaphthylene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Anthracene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benz[a]anthracene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[a] pyrene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[b] fluoranthene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[g,h,i] perylene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Benzo[k] fluoranthene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-chloroethoxy) methane	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C

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Phone: 610-280-3000
Fax: 610-280-3041

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 11:15

J1PVM5
1207048-14 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Semivolatile Organic Compounds by SW846 8270C									
Bis(2-chloroethyl) ether	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-chloroisopropyl) ether	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Bis(2-ethylhexyl) phthalate	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Butyl Benzyl Phthalate	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Carbazole	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Chrysene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dibenz[a,h]anthracene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dibenzofuran	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Diethyl Phthalate	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Dimethyl Phthalate	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Di-n-butyl Phthalate	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Di-n-octyl Phthalate	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Fluoranthene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Fluorene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorobenzene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorobutadiene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachlorocyclopentadiene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Hexachloroethane	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Indeno[1,2,3-cd]pyrene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Isophorone	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Naphthalene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Nitrobenzene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
N-Nitrosodi-n-propylamine	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
N-Nitrosodiphenylamine	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Pentachlorophenol	1640	U	1640	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Phenanthrene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Phenol	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Pyrene	328	U	328	ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Unknown 1	**586**	J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Unknown 2	**1040**	J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 3	**572**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 2	**44500**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
TIC:Aldol Condensate 1	**2460**	A, B, J		ug/kg dry	1	L207123	07/20/2012	07/23/2012	8270C
Surrogate: 2-Fluorophenol	*57 %*		*25-121*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: Phenol-d5	*60 %*		*24-113*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: Nitrobenzene-d5	*64 %*		*23-120*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 11:15

J1PVM5
1207048-14 (Soil)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Semivolatile Organic Compounds by SW846 8270C								
Surrogate: 2-Fluorobiphenyl	*62 %*	*30-115*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: 2,4,6-Tribromophenol	*5 % **	*19-122*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*
Surrogate: p-Terphenyl-d14	*77 %*	*18-137*			*L207123*	*07/20/2012*	*07/23/2012*	*8270C*

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Semivolatile Organic Compounds by SW846 8270C - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L207123 - SW 3540C										
Blank (L207123-BLK1)				Prepared: 07/20/2012 Analyzed: 07/23/2012						
1,2,4-Trichlorobenzene	330	U	330	ug/kg wet						
1,2-Dichlorobenzene	330	U	330	ug/kg wet						
1,3-Dichlorobenzene	330	U	330	ug/kg wet						
1,4-Dichlorobenzene	330	U	330	ug/kg wet						
2,4,5-Trichlorophenol	330	U	330	ug/kg wet						
2,4,6-Trichlorophenol	330	U	330	ug/kg wet						
2,4-Dichlorophenol	330	U	330	ug/kg wet						
2,4-Dimethylphenol	330	U	330	ug/kg wet						
2,4-Dinitrophenol	1650	U	1650	ug/kg wet						
2,4-Dinitrotoluene	330	U	330	ug/kg wet						
2,6-Dinitrotoluene	330	U	330	ug/kg wet						
2-Chloronaphthalene	330	U	330	ug/kg wet						
2-Chlorophenol	330	U	330	ug/kg wet						
2-Methylnaphthalene	330	U	330	ug/kg wet						
2-Methylphenol	330	U	330	ug/kg wet						
2-Nitroaniline	1650	U	1650	ug/kg wet						
2-Nitrophenol	330	U	330	ug/kg wet						
3,3'-Dichlorobenzidine	660	U	660	ug/kg wet						
3-Nitroaniline	1650	U	1650	ug/kg wet						
4,6-Dinitro-2-methylphenol	330	U	330	ug/kg wet						
4-Bromophenyl Phenyl Ether	330	U	330	ug/kg wet						
4-Chloro-3-methylphenol	330	U	330	ug/kg wet						
4-Chloroaniline	330	U	330	ug/kg wet						
4-Chlorophenyl Phenyl Ether	330	U	330	ug/kg wet						
3- and/or 4-Methylphenol	330	U	330	ug/kg wet						
4-Nitroaniline	1650	U	1650	ug/kg wet						
4-Nitrophenol	1650	U	1650	ug/kg wet						
Acenaphthene	330	U	330	ug/kg wet						
Acenaphthylene	330	U	330	ug/kg wet						
Anthracene	330	U	330	ug/kg wet						
Benz[a]anthracene	330	U	330	ug/kg wet						
Benzo[a] pyrene	330	U	330	ug/kg wet						
Benzo[b] fluoranthene	330	U	330	ug/kg wet						
Benzo[g,h,i] perylene	330	U	330	ug/kg wet						
Benzo[k] fluoranthene	330	U	330	ug/kg wet						
Bis(2-chloroethoxy) methane	330	U	330	ug/kg wet						

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Exton, PA 19341
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Fax: 610-280-3041

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 11:15

Semivolatile Organic Compounds by SW846 8270C - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L207123 - SW 3540C										
Blank (L207123-BLK1)				Prepared: 07/20/2012 Analyzed: 07/23/2012						
Bis(2-chloroethyl) ether	330	U	330	ug/kg wet						
Bis(2-chloroisopropyl) ether	330	U	330	ug/kg wet						
Bis(2-ethylhexyl) phthalate	330	U	330	ug/kg wet						
Butyl Benzyl Phthalate	330	U	330	ug/kg wet						
Carbazole	330	U	330	ug/kg wet						
Chrysene	330	U	330	ug/kg wet						
Dibenz[a,h]anthracene	330	U	330	ug/kg wet						
Dibenzofuran	330	U	330	ug/kg wet						
Diethyl Phthalate	330	U	330	ug/kg wet						
Dimethyl Phthalate	330	U	330	ug/kg wet						
Di-n-butyl Phthalate	330	U	330	ug/kg wet						
Di-n-octyl Phthalate	330	U	330	ug/kg wet						
Fluoranthene	330	U	330	ug/kg wet						
Fluorene	330	U	330	ug/kg wet						
Hexachlorobenzene	330	U	330	ug/kg wet						
Hexachlorobutadiene	330	U	330	ug/kg wet						
Hexachlorocyclopentadiene	330	U	330	ug/kg wet						
Hexachloroethane	330	U	330	ug/kg wet						
Indeno[1,2,3-cd]pyrene	330	U	330	ug/kg wet						
Isophorone	330	U	330	ug/kg wet						
Naphthalene	330	U	330	ug/kg wet						
Nitrobenzene	330	U	330	ug/kg wet						
N-Nitrosodi-n-propylamine	330	U	330	ug/kg wet						
N-Nitrosodiphenylamine	330	U	330	ug/kg wet						
Pentachlorophenol	1650	U	1650	ug/kg wet						
Phenanthrene	330	U	330	ug/kg wet						
Phenol	330	U	330	ug/kg wet						
Pyrene	330	U	330	ug/kg wet						
Unknown 1 TICS	835	J		ug/kg wet						
Aldol Condensate 2	2040	A, J		ug/kg wet						
Aldol Condensate 4	967	A, J		ug/kg wet						
Aldol Condensate 3 RW 7/26/12	49200	A, J		ug/kg wet						
Aldol Condensate 1	1460	A, J		ug/kg wet						
Surrogate: 2-Fluorophenol	*1720*			*ug/kg wet*	*2500.0*		*69*	*25-121*		
Surrogate: Phenol-d5	*1820*			*ug/kg wet*	*2500.0*		*73*	*24-113*		
Surrogate: Nitrobenzene-d5	*1230*			*ug/kg wet*	*1666.7*		*74*	*23-120*		

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Phone: 610-280-3000
Fax: 610-280-3041

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 11:15

Semivolatile Organic Compounds by SW846 8270C - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L207123 - SW 3540C									
Blank (L207123-BLK1)			Prepared: 07/20/2012 Analyzed: 07/23/2012						
Surrogate: 2-Fluorobiphenyl	*1260*		*ug/kg wet*	*1666.7*		*75*	*30-115*		
Surrogate: 2,4,6-Tribromophenol	*1640*		*ug/kg wet*	*2500.0*		*66*	*19-122*		
Surrogate: p-Terphenyl-d14	*1680*		*ug/kg wet*	*1666.7*		*101*	*18-137*		
LCS (L207123-BS1)			Prepared: 07/20/2012 Analyzed: 07/23/2012						
1,2,4-Trichlorobenzene	1250		ug/kg wet	2000.0		63	45-110		
1,2-Dichlorobenzene	1250		ug/kg wet	2000.0		62	45-105		
1,3-Dichlorobenzene	1190		ug/kg wet	2000.0		60	40-100		
1,4-Dichlorobenzene	1190		ug/kg wet	2000.0		60	35-105		
2,4,5-Trichlorophenol	1470		ug/kg wet	2000.0		74	30-140		
2,4,6-Trichlorophenol	1210		ug/kg wet	2000.0		60	20-110		
2,4-Dichlorophenol	1360		ug/kg wet	2000.0		68	40-110		
2,4-Dimethylphenol	1330		ug/kg wet	2000.0		66	30-105		
2,4-Dinitrophenol	192		ug/kg wet	2000.0		10*	25-130		
2,4-Dinitrotoluene	1360		ug/kg wet	2000.0		68	50-115		
2,6-Dinitrotoluene	1410		ug/kg wet	2000.0		71	40-120		
2-Chloronaphthalene	1290		ug/kg wet	2000.0		64	45-115		
2-Chlorophenol	1320		ug/kg wet	2000.0		66	45-105		
2-Methylnaphthalene	1260		ug/kg wet	2000.0		63	45-110		
2-Methylphenol	1480		ug/kg wet	2000.0		74	40-120		
2-Nitroaniline	1470		ug/kg wet	2000.0		73	45-120		
2-Nitrophenol	1310		ug/kg wet	2000.0		65	40-110		
3,3'-Dichlorobenzidine	1330		ug/kg wet	2000.0		66	15-130		
3-Nitroaniline	1410		ug/kg wet	2000.0		71	40-130		
4,6-Dinitro-2-methylphenol	380		ug/kg wet	2000.0		19*	20-140		
4-Bromophenyl Phenyl Ether	1540		ug/kg wet	2000.0		77	45-115		
4-Chloro-3-methylphenol	1450		ug/kg wet	2000.0		72	35-115		
4-Chloroaniline	1210		ug/kg wet	2000.0		60	10-100		
4-Chlorophenyl Phenyl Ether	1360		ug/kg wet	2000.0		68	45-110		
3- and/or 4-Methylphenol	1500		ug/kg wet	2000.0		75	40-120		
4-Nitroaniline	1350		ug/kg wet	2000.0		67	40-130		
4-Nitrophenol	1020		ug/kg wet	2000.0		51	15-140		
Acenaphthene	1260		ug/kg wet	2000.0		63	45-110		
Acenaphthylene	1140		ug/kg wet	2000.0		57	45-115		
Anthracene	1370		ug/kg wet	2000.0		68	45-130		
Benz[a]anthracene	1450		ug/kg wet	2000.0		73	45-130		
Benzo[a] pyrene	1470		ug/kg wet	2000.0		74	45-130		

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Exton, PA 19341
Phone: 610-280-3000
Fax: 610-280-3041

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 11:15

Semivolatile Organic Compounds by SW846 8270C - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L207123 - SW 3540C									
LCS (L207123-BS1)			Prepared: 07/20/2012 Analyzed: 07/23/2012						
Benzo[b] fluoranthene	1470		ug/kg wet	2000.0		74	40-130		
Benzo[g,h,i] perylene	1480		ug/kg wet	2000.0		74	45-125		
Benzo[k] fluoranthene	1450		ug/kg wet	2000.0		72	45-125		
Bis(2-chloroethoxy) methane	1310		ug/kg wet	2000.0		65	45-110		
Bis(2-chloroethyl) ether	1280		ug/kg wet	2000.0		64	40-110		
Bis(2-chloroisopropyl) ether	1280		ug/kg wet	2000.0		64	30-115		
Bis(2-ethylhexyl) phthalate	1310		ug/kg wet	2000.0		65	40-145		
Butyl Benzyl Phthalate	1300		ug/kg wet	2000.0		65	50-125		
Carbazole	1490		ug/kg wet	2000.0		74	40-140		
Chrysene	1490		ug/kg wet	2000.0		75	45-130		
Dibenz[a,h]anthracene	1390		ug/kg wet	2000.0		69	45-125		
Dibenzofuran	1340		ug/kg wet	2000.0		67	45-120		
Diethyl Phthalate	1290		ug/kg wet	2000.0		64	50-125		
Dimethyl Phthalate	1280		ug/kg wet	2000.0		64	45-130		
Di-n-butyl Phthalate	1180		ug/kg wet	2000.0		59	50-130		
Di-n-octyl Phthalate	1250		ug/kg wet	2000.0		62	40-150		
Fluoranthene	1290		ug/kg wet	2000.0		64	45-130		
Fluorene	1320		ug/kg wet	2000.0		66	45-120		
Hexachlorobenzene	1600		ug/kg wet	2000.0		80	45-130		
Hexachlorobutadiene	1430		ug/kg wet	2000.0		72	45-105		
Hexachlorocyclopentadiene	794		ug/kg wet	2000.0		40	10-100		
Hexachloroethane	1220		ug/kg wet	2000.0		61	35-110		
Indeno[1,2,3-cd]pyrene	1510		ug/kg wet	2000.0		76	45-130		
Isophorone	1230		ug/kg wet	2000.0		62	40-110		
Naphthalene	1340		ug/kg wet	2000.0		67	40-110		
Nitrobenzene	1240		ug/kg wet	2000.0		62	40-105		
N-Nitrosodi-n-propylamine	1820		ug/kg wet	2000.0		91	30-130		
N-Nitrosodiphenylamine	1470		ug/kg wet	2000.0		73	50-120		
Pentachlorophenol	502		ug/kg wet	2000.0		25	25-120		
Phenanthrene	1380		ug/kg wet	2000.0		69	50-120		
Phenol	1420		ug/kg wet	2000.0		71	40-115		
Pyrene	1420		ug/kg wet	2000.0		71	45-125		
Surrogate: 2-Fluorophenol	*1800*		*ug/kg wet*	*2500.0*		*72*	*25-121*		
Surrogate: Phenol-d5	*1950*		*ug/kg wet*	*2500.0*		*78*	*24-113*		
Surrogate: Nitrobenzene-d5	*1180*		*ug/kg wet*	*1666.7*		*71*	*23-120*		
Surrogate: 2-Fluorobiphenyl	*1180*		*ug/kg wet*	*1666.7*		*71*	*30-115*		
Surrogate: 2,4,6-Tribromophenol	*1700*		*ug/kg wet*	*2500.0*		*68*	*19-122*		

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Fax: 610-280-3041

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 11:15

Semivolatile Organic Compounds by SW846 8270C - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L207123 - SW 3540C									
LCS (L207123-BS1)			Prepared: 07/20/2012 Analyzed: 07/23/2012						
Surrogate: p-Terphenyl-d14	*1330*		*ug/kg wet*	*1666.7*		*80*	*18-137*		
Matrix Spike (L207123-MS1)		**Source: 1207048-01**	Prepared: 07/20/2012 Analyzed: 07/25/2012						
1,2,4-Trichlorobenzene	1240		ug/kg dry	2065.5	334 U	60	45-110		
1,2-Dichlorobenzene	1230		ug/kg dry	2065.5	334 U	60	45-105		
1,3-Dichlorobenzene	1170		ug/kg dry	2065.5	334 U	57	40-100		
1,4-Dichlorobenzene	1180		ug/kg dry	2065.5	334 U	57	35-105		
2,4,5-Trichlorophenol	797		ug/kg dry	2065.5	334 U	39	30-140		
2,4,6-Trichlorophenol	342		ug/kg dry	2065.5	334 U	17*	20-110		
2,4-Dichlorophenol	1270		ug/kg dry	2065.5	334 U	62	40-110		
2,4-Dimethylphenol	1300		ug/kg dry	2065.5	334 U	63	30-105		
2,4-Dinitrophenol	812		ug/kg dry	2065.5	1670 U	39	25-130		
2,4-Dinitrotoluene	1270		ug/kg dry	2065.5	334 U	62	50-115		
2,6-Dinitrotoluene	1350		ug/kg dry	2065.5	334 U	65	40-120		
2-Chloronaphthalene	1310		ug/kg dry	2065.5	334 U	63	45-115		
2-Chlorophenol	1280		ug/kg dry	2065.5	334 U	62	45-105		
2-Methylnaphthalene	1250		ug/kg dry	2065.5	334 U	61	45-110		
2-Methylphenol	1420		ug/kg dry	2065.5	334 U	69	40-120		
2-Nitroaniline	1320		ug/kg dry	2065.5	1670 U	64	45-120		
2-Nitrophenol	1230		ug/kg dry	2065.5	334 U	60	40-110		
3,3'-Dichlorobenzidine	1320		ug/kg dry	2065.5	667 U	64	15-130		
3-Nitroaniline	1280		ug/kg dry	2065.5	1670 U	62	40-130		
4,6-Dinitro-2-methylphenol	1170		ug/kg dry	2065.5	334 U	57	20-140		
4-Bromophenyl Phenyl Ether	1530		ug/kg dry	2065.5	334 U	74	45-115		
4-Chloro-3-methylphenol	1360		ug/kg dry	2065.5	334 U	66	35-115		
4-Chloroaniline	1090		ug/kg dry	2065.5	334 U	53	10-100		
4-Chlorophenyl Phenyl Ether	1360		ug/kg dry	2065.5	334 U	66	45-110		
3- and/or 4-Methylphenol	1400		ug/kg dry	2065.5	334 U	68	40-120		
4-Nitroaniline	1140		ug/kg dry	2065.5	1670 U	55	40-130		
4-Nitrophenol	872		ug/kg dry	2065.5	1670 U	42	15-140		
Acenaphthene	1290		ug/kg dry	2065.5	334 U	62	45-110		
Acenaphthylene	1140		ug/kg dry	2065.5	334 U	55	45-115		
Anthracene	1350		ug/kg dry	2065.5	334 U	65	45-130		
Benz[a]anthracene	1430		ug/kg dry	2065.5	334 U	69	45-130		
Benzo[a] pyrene	1440		ug/kg dry	2065.5	334 U	70	45-130		
Benzo[b] fluoranthene	1400		ug/kg dry	2065.5	334 U	68	40-130		
Benzo[g,h,i] perylene	1790		ug/kg dry	2065.5	334 U	87	45-125		

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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-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 11:15

Semivolatile Organic Compounds by SW846 8270C - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L207123 - SW 3540C									
Matrix Spike (L207123-MS1)		**Source: 1207048-01**		Prepared: 07/20/2012 Analyzed: 07/25/2012					
Benzo[k] fluoranthene	1350		ug/kg dry	2065.5	334 U	65	45-125		
Bis(2-chloroethoxy) methane	1270		ug/kg dry	2065.5	334 U	61	45-110		
Bis(2-chloroethyl) ether	1220		ug/kg dry	2065.5	334 U	59	40-110		
Bis(2-chloroisopropyl) ether	1220		ug/kg dry	2065.5	334 U	59	30-115		
Bis(2-ethylhexyl) phthalate	1360		ug/kg dry	2065.5	334 U	66	40-145		
Butyl Benzyl Phthalate	1300		ug/kg dry	2065.5	334 U	63	50-125		
Carbazole	1390		ug/kg dry	2065.5	334 U	67	40-140		
Chrysene	1480		ug/kg dry	2065.5	334 U	71	45-130		
Dibenz[a,h]anthracene	1580		ug/kg dry	2065.5	334 U	76	45-125		
Dibenzofuran	1320		ug/kg dry	2065.5	334 U	64	45-120		
Diethyl Phthalate	1270		ug/kg dry	2065.5	334 U	62	50-125		
Dimethyl Phthalate	1270		ug/kg dry	2065.5	334 U	61	45-130		
Di-n-butyl Phthalate	1210		ug/kg dry	2065.5	334 U	59	50-130		
Di-n-octyl Phthalate	1150		ug/kg dry	2065.5	334 U	56	40-150		
Fluoranthene	1250		ug/kg dry	2065.5	334 U	60	45-130		
Fluorene	1320		ug/kg dry	2065.5	334 U	64	45-120		
Hexachlorobenzene	1680		ug/kg dry	2065.5	334 U	81	45-130		
Hexachlorobutadiene	1430		ug/kg dry	2065.5	334 U	69	45-105		
Hexachlorocyclopentadiene	796		ug/kg dry	2065.5	334 U	39	10-100		
Hexachloroethane	1160		ug/kg dry	2065.5	334 U	56	35-110		
Indeno[1,2,3-cd]pyrene	1730		ug/kg dry	2065.5	334 U	84	45-130		
Isophorone	1170		ug/kg dry	2065.5	334 U	57	40-110		
Naphthalene	1350		ug/kg dry	2065.5	334 U	65	40-110		
Nitrobenzene	1180		ug/kg dry	2065.5	334 U	57	40-105		
N-Nitrosodi-n-propylamine	1610		ug/kg dry	2065.5	334 U	78	30-130		
N-Nitrosodiphenylamine	1480		ug/kg dry	2065.5	334 U	71	50-120		
Pentachlorophenol	700		ug/kg dry	2065.5	1670 U	34	25-120		
Phenanthrene	1390		ug/kg dry	2065.5	334 U	67	50-120		
Phenol	1350		ug/kg dry	2065.5	334 U	65	40-115		
Pyrene	1390		ug/kg dry	2065.5	334 U	67	45-125		
Surrogate: 2-Fluorophenol	*1670*		*ug/kg dry*	*2581.9*		*65*	*25-121*		
Surrogate: Phenol-d5	*1820*		*ug/kg dry*	*2581.9*		*70*	*24-113*		
Surrogate: Nitrobenzene-d5	*1080*		*ug/kg dry*	*1721.2*		*62*	*23-120*		
Surrogate: 2-Fluorobiphenyl	*1190*		*ug/kg dry*	*1721.2*		*69*	*30-115*		
Surrogate: 2,4,6-Tribromophenol	*544*		*ug/kg dry*	*2581.9*		*21*	*19-122*		
Surrogate: p-Terphenyl-d14	*1270*		*ug/kg dry*	*1721.2*		*74*	*18-137*		

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-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 11:15

Semivolatile Organic Compounds by SW846 8270C - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L207123 - SW 3540C									
Matrix Spike Dup (L207123-MSD1)	**Source: 1207048-01**		Prepared: 07/20/2012 Analyzed: 07/25/2012						
1,2,4-Trichlorobenzene	1230		ug/kg dry	2118.5	334 U	58	45-110	4	40
1,2-Dichlorobenzene	1220		ug/kg dry	2118.5	334 U	58	45-105	3	40
1,3-Dichlorobenzene	1170		ug/kg dry	2118.5	334 U	55	40-100	3	40
1,4-Dichlorobenzene	1190		ug/kg dry	2118.5	334 U	56	35-105	2	40
2,4,5-Trichlorophenol	1260		ug/kg dry	2118.5	334 U	59	30-140	42*	40
2,4,6-Trichlorophenol	1020		ug/kg dry	2118.5	334 U	48	20-110	98*	40
2,4-Dichlorophenol	1290		ug/kg dry	2118.5	334 U	61	40-110	2	40
2,4-Dimethylphenol	1240		ug/kg dry	2118.5	334 U	58	30-105	7	40
2,4-Dinitrophenol	454		ug/kg dry	2118.5	1670 U	21*	25-130	59*	40
2,4-Dinitrotoluene	1220		ug/kg dry	2118.5	334 U	58	50-115	7	40
2,6-Dinitrotoluene	1300		ug/kg dry	2118.5	334 U	61	40-120	6	40
2-Chloronaphthalene	1260		ug/kg dry	2118.5	334 U	60	45-115	6	40
2-Chlorophenol	1280		ug/kg dry	2118.5	334 U	60	45-105	3	40
2-Methylnaphthalene	1220		ug/kg dry	2118.5	334 U	58	45-110	5	40
2-Methylphenol	1390		ug/kg dry	2118.5	334 U	66	40-120	5	40
2-Nitroaniline	1280		ug/kg dry	2118.5	1670 U	61	45-120	6	40
2-Nitrophenol	1240		ug/kg dry	2118.5	334 U	59	40-110	2	40
3,3'-Dichlorobenzidine	1180		ug/kg dry	2118.5	667 U	56	15-130	14	40
3-Nitroaniline	1180		ug/kg dry	2118.5	1670 U	55	40-130	11	40
4,6-Dinitro-2-methylphenol	803		ug/kg dry	2118.5	334 U	38	20-140	40	40
4-Bromophenyl Phenyl Ether	1510		ug/kg dry	2118.5	334 U	71	45-115	4	40
4-Chloro-3-methylphenol	1300		ug/kg dry	2118.5	334 U	61	35-115	7	40
4-Chloroaniline	997		ug/kg dry	2118.5	334 U	47	10-100	11	40
4-Chlorophenyl Phenyl Ether	1280		ug/kg dry	2118.5	334 U	61	45-110	8	40
3- and/or 4-Methylphenol	1390		ug/kg dry	2118.5	334 U	66	40-120	3	40
4-Nitroaniline	1110		ug/kg dry	2118.5	1670 U	52	40-130	6	40
4-Nitrophenol	972		ug/kg dry	2118.5	1670 U	46	15-140	8	40
Acenaphthene	1240		ug/kg dry	2118.5	334 U	58	45-110	7	40
Acenaphthylene	1100		ug/kg dry	2118.5	334 U	52	45-115	6	40
Anthracene	1320		ug/kg dry	2118.5	334 U	62	45-130	4	40
Benz[a]anthracene	1370		ug/kg dry	2118.5	334 U	65	45-130	7	40
Benzo[a] pyrene	1370		ug/kg dry	2118.5	334 U	64	45-130	8	40
Benzo[b] fluoranthene	1310		ug/kg dry	2118.5	334 U	62	40-130	9	40
Benzo[g,h,i] perylene	1700		ug/kg dry	2118.5	334 U	80	45-125	8	40
Benzo[k] fluoranthene	1270		ug/kg dry	2118.5	334 U	60	45-125	8	40
Bis(2-chloroethoxy) methane	1240		ug/kg dry	2118.5	334 U	59	45-110	5	40

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Exton, PA 19341
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Fax: 610-280-3041

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 11:15

Semivolatile Organic Compounds by SW846 8270C - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L207123 - SW 3540C									
Matrix Spike Dup (L207123-MSD1)	**Source: 1207048-01**		Prepared: 07/20/2012 Analyzed: 07/25/2012						
Bis(2-chloroethyl) ether	1220		ug/kg dry	2118.5	334 U	58	40-110	2	40
Bis(2-chloroisopropyl) ether	1220		ug/kg dry	2118.5	334 U	58	30-115	3	40
Bis(2-ethylhexyl) phthalate	1270		ug/kg dry	2118.5	334 U	60	40-145	9	40
Butyl Benzyl Phthalate	1220		ug/kg dry	2118.5	334 U	58	50-125	8	40
Carbazole	1400		ug/kg dry	2118.5	334 U	66	40-140	2	40
Chrysene	1420		ug/kg dry	2118.5	334 U	67	45-130	6	40
Dibenz[a,h]anthracene	1500		ug/kg dry	2118.5	334 U	71	45-125	8	40
Dibenzofuran	1270		ug/kg dry	2118.5	334 U	60	45-120	6	40
Diethyl Phthalate	1200		ug/kg dry	2118.5	334 U	57	50-125	9	40
Dimethyl Phthalate	1190		ug/kg dry	2118.5	334 U	56	45-130	9	40
Di-n-butyl Phthalate	1160		ug/kg dry	2118.5	334 U	55	50-130	7	40
Di-n-octyl Phthalate	1060		ug/kg dry	2118.5	334 U	50	40-150	11	40
Fluoranthene	1240		ug/kg dry	2118.5	334 U	58	45-130	3	40
Fluorene	1250		ug/kg dry	2118.5	334 U	59	45-120	8	40
Hexachlorobenzene	1610		ug/kg dry	2118.5	334 U	76	45-130	7	40
Hexachlorobutadiene	1410		ug/kg dry	2118.5	334 U	67	45-105	4	40
Hexachlorocyclopentadiene	755		ug/kg dry	2118.5	334 U	36	10-100	8	40
Hexachloroethane	1180		ug/kg dry	2118.5	334 U	56	35-110	1	40
Indeno[1,2,3-cd]pyrene	1650		ug/kg dry	2118.5	334 U	78	45-130	7	40
Isophorone	1150		ug/kg dry	2118.5	334 U	54	40-110	5	40
Naphthalene	1320		ug/kg dry	2118.5	334 U	63	40-110	5	40
Nitrobenzene	1170		ug/kg dry	2118.5	334 U	55	40-105	3	40
N-Nitrosodi-n-propylamine	1620		ug/kg dry	2118.5	334 U	77	30-130	2	40
N-Nitrosodiphenylamine	1420		ug/kg dry	2118.5	334 U	67	50-120	6	40
Pentachlorophenol	559		ug/kg dry	2118.5	1670 U	26	25-120	25	40
Phenanthrene	1350		ug/kg dry	2118.5	334 U	64	50-120	5	40
Phenol	1330		ug/kg dry	2118.5	334 U	63	40-115	4	40
Pyrene	1320		ug/kg dry	2118.5	334 U	62	45-125	8	40
Surrogate: 2-Fluorophenol	*1540*		*ug/kg dry*	*2648.1*		*58*	*25-121*		
Surrogate: Phenol-d5	*1630*		*ug/kg dry*	*2648.1*		*62*	*24-113*		
Surrogate: Nitrobenzene-d5	*984*		*ug/kg dry*	*1765.4*		*56*	*23-120*		
Surrogate: 2-Fluorobiphenyl	*1040*		*ug/kg dry*	*1765.4*		*59*	*30-115*		
Surrogate: 2,4,6-Tribromophenol	*1280*		*ug/kg dry*	*2648.1*		*49*	*19-122*		
Surrogate: p-Terphenyl-d14	*1090*		*ug/kg dry*	*1765.4*		*61*	*18-137*		

PREPARATION BENCH SHEET

L207123

Lionville Laboratory

Printed: 7/23/2012 2:12:50PM

Matrix: Solid **Prepared using: SVOCGCMS - SW 3540C** **Surrogate used: 1200845**

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
1207048-01	8270C TCL SVOC	07/20/2012 16:00	31.46	1				500	WC-Hanford, Inc.	
1207048-02	8270C TCL SVOC	07/20/2012 16:00	31.02	1				500	WC-Hanford, Inc.	
1207048-03	8270C TCL SVOC	07/20/2012 16:00	30.52	1				500	WC-Hanford, Inc.	
1207048-04	8270C TCL SVOC	07/20/2012 16:00	30.77	1				500	WC-Hanford, Inc.	
1207048-05	8270C TCL SVOC	07/20/2012 16:00	30.85	1				500	WC-Hanford, Inc.	
1207048-06	8270C TCL SVOC	07/20/2012 16:00	30.22	1				500	WC-Hanford, Inc.	
1207048-07	8270C TCL SVOC	07/20/2012 16:00	30.3	1				500	WC-Hanford, Inc.	
1207048-08	8270C TCL SVOC	07/20/2012 16:00	30.42	1				500	WC-Hanford, Inc.	
1207048-09	8270C TCL SVOC	07/20/2012 16:00	30.66	1				500	WC-Hanford, Inc.	
1207048-10	8270C TCL SVOC	07/20/2012 16:00	31.05	1				500	WC-Hanford, Inc.	
1207048-11	8270C TCL SVOC	07/20/2012 16:00	30.86	1				500	WC-Hanford, Inc.	
1207048-12	8270C TCL SVOC	07/20/2012 16:00	30.2	1				500	WC-Hanford, Inc.	
1207048-13	8270C TCL SVOC	07/20/2012 16:00	30.05	1				500	WC-Hanford, Inc.	
1207048-14	8270C TCL SVOC	07/20/2012 16:00	30.21	1				500	WC-Hanford, Inc.	
L207123-BLK1	QC	07/20/2012 16:00	30	1				500		
L207123-BS1	QC	07/20/2012 16:00	30	1	1200843		600	500		
L207123-MS1	QC	07/20/2012 16:00	30.79	1	1200843	1207048-01	600	500		
L207123-MSD1	QC	07/20/2012 16:00	30.02	1	1200843	1207048-01	600	500		

7/23/12 1430
Extracts Relinquished By Date

7/23/12 1440
Extracts Received By Date

PESTICIDES

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Exton, PA 19341
Phone: 610-280-3000
Fax: 610-280-3041

WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/25/2012 11:34

Analytical Report for Organochlorine Pesticides by SW846 8081A

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
J1PVL2	1207048-01	Soil	07/18/2012 12:30	07/20/2012 10:00
J1PVL3	1207048-02	Soil	07/18/2012 12:20	07/20/2012 10:00
J1PVL4	1207048-03	Soil	07/18/2012 12:10	07/20/2012 10:00
J1PVL5	1207048-04	Soil	07/18/2012 11:50	07/20/2012 10:00
J1PVL6	1207048-05	Soil	07/18/2012 10:40	07/20/2012 10:00
J1PVL7	1207048-06	Soil	07/18/2012 10:25	07/20/2012 10:00
J1PVL8	1207048-07	Soil	07/18/2012 10:10	07/20/2012 10:00
J1PVL9	1207048-08	Soil	07/18/2012 10:00	07/20/2012 10:00
J1PVM0	1207048-09	Soil	07/18/2012 09:50	07/20/2012 10:00
J1PVM1	1207048-10	Soil	07/18/2012 09:35	07/20/2012 10:00
J1PVM2	1207048-11	Soil	07/18/2012 09:20	07/20/2012 10:00
J1PVM3	1207048-12	Soil	07/18/2012 08:55	07/20/2012 10:00
J1PVM4	1207048-13	Soil	07/18/2012 12:30	07/20/2012 10:00

LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

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

Case Narrative

Client: WC-HANFORD RC-075 KP0114
LVL #: 1207048

W.O. #: 60049-001-001-0001-00
Date Received: 07-20-2012

CHLORINATED PESTICIDES

Thirteen (13) soil samples were collected on 07-18-2012.

The samples and associated QC samples were extracted 07-23-2012 and analyzed 07-24,25-2012 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 8081A for client specified target compounds. All samples received Copper-Sulfur cleanup based on SW846 method 3660A.

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. The samples required a 4-fold instrument dilution due to the nature of the matrix. Reporting limits have been adjusted to reflect the necessary dilutions.

4. All obtainable surrogate recoveries were within acceptance criteria.

5. The method blank was below the reporting limit for all target compounds.

6. All blank spike recoveries were within acceptance criteria.

7. Two (2) of forty (40) matrix spike recoveries were outside acceptance criteria. A copy of the Sample Discrepancy Report (SDR#12GC118) has been enclosed.

8. The samples are reported on a dry weight basis.

9. All initial calibrations associated with this data set were within acceptance criteria.

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

10. Per SW846 Method 8000B, the attached table lists compounds where the % difference or drift was greater than 15%, and the mean across all compounds are considered to have greater uncertainty.

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.

Iain Daniels
LvL Laboratory Manager

7/27/12
Date

Lionville Laboratory Sample Discrepancy Report (SDR)

SDR #: 120118

Initiator: Robert Carden
Date: 7/20/12
Client: WCHanford Reports
ICPOLM

Batch: M07048
Samples: J1PV22MS
Method: SW846/MCAWW/CLP/

Parameter: Pest
Matrix: Soil
Prep Batch: L207137

1. Reason for SDR

a. COC Discrepancy __ Tech Profile Error __ Client Request __ Sampler Error on C-O-C __ Transcription Error __ Wrong Test Code __ Other _____

b. General Discrepancy

__ Missing Sample/Extract* __ Container Broken* __ Wrong Sample Pulled __ Label ID's Illegible
__ Hold Time Exceeded __ Insufficient Sample* __ Preservation Wrong __ Received Past Hold
__ Improper Bottle Type __ Not Amenable to Analysis

Note*: Verified by [Log-In] or [Prep Group] (circle)...signature/date: _____

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

Endrin aldehyde + Endosulfan sulfate spike recoveries below QC acceptance criteria in MS (MSD OK, BS OK, unspiked sample ND for cmpds)

2. Known or Probable Causes(s)

3. Discussion and Proposed Action Other Description:

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

Narrate ID.

4. Project Manager Instructions...signature/date: 7/20/12

__ Concur with Proposed Action
__ Disagree with Proposed Action; See Instruction
__ Include in Case Narrative
__ Client Contacted:
Date/Person _____
__ Add
__ Cancel

5. Final Action...signature/date: 7/27/12 Other Explanation:

__ Verified re-[log][leach][extract][digest][analysis] (circle)
✓ Included in Case Narrative
__ Hard Copy COC Revised
__ Electronic COC Revised
__ EDD Corrections Completed

When Final Action has been recorded, forward original to QA for diposition.

Route
__ Lab Manager: Daniels
__ Project Mgr (circle): Johnson / Stone
__ Sample Prep (circle): Ford
__ Log-in: King

Route
__ Metals: Welsh / _____
__ Inorganic: Perrone / _____
__ GC/LC: Carey / _____
__ MS VOA: Rubino / _____
__ MS BNA: Carden / _____
__ Other: _____

QA-139-A-0208

8081A/B Pesticides
Analytes with %Difference or %Drift >15%, Where Mean is Used for Continuing Calibration

Analyte	CCV1 07.24.12 2:24:52PM		CCV2 07.24.12 10:46:36 PM		CCV3 07.25.12 5:12:11 AM		CCV4		CCV5		CCV6		CCV7		CCV8	
	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary
Tetrachloro-meta-xylene (surrogate)																
Decachlorobiphenyl (surrogate)																
alpha-BHC																
gamma-BHC																
beta-BHC	✓		✓		✓											
delta-BHC																
Heptachlor																
Aldrin																
Heptachlor epoxide																
gamma chlordane																
alpha chlordane																
Endosulfan I																
4,4'-DDE																
Dieldrin																
Endrin																
4,4'-DDD																
Endosulfan II																
4,4'-DDT																
Endrin aldehyde				✓		✓										
Endosulfan sulfate		✓		✓		✓										
Methoxychlor				✓	✓	✓										
Endrin ketone		✓		✓		✓										
Toxaphene																
Mean %D or %Drift	-3.1	6.9	-3.3	9.1	-3.2	11.1										

Sample results reported from affected CCV:

CCV1: L207137-BIK1, BS1, MS1, MSD1, 1207048-01 → 06

CCV2: 1207048-07 → 13

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
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Fax: 610-280-3041

WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/25/2012 11:34

J1PVL2
1207048-01 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
gamma-BHC	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
beta-BHC	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
delta-BHC	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Heptachlor	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Aldrin	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Heptachlor epoxide	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
gamma-Chlordane	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
alpha-Chlordane	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endosulfan I	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
4,4'-DDE	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Dieldrin	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endrin	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
4,4'-DDD	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endosulfan II	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
4,4'-DDT	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endrin aldehyde	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endosulfan sulfate	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Methoxychlor	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endrin ketone	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Toxaphene	13.6	U	13.6	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Surrogate: Tetrachloro-meta-xylene	*70.5 %*		*28-166*			*L207137*	*07/23/2012*	*07/24/2012*	*8081A*
Surrogate: Decachlorobiphenyl	*88.7 %*		*37-153*			*L207137*	*07/23/2012*	*07/24/2012*	*8081A*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/25/2012 11:34

J1PVL3
1207048-02 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
gamma-BHC	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
beta-BHC	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
delta-BHC	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Heptachlor	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Aldrin	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Heptachlor epoxide	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
gamma-Chlordane	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
alpha-Chlordane	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endosulfan I	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
4,4'-DDE	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Dieldrin	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endrin	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
4,4'-DDD	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endosulfan II	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
4,4'-DDT	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endrin aldehyde	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endosulfan sulfate	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Methoxychlor	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endrin ketone	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Toxaphene	13.3	U	13.3	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Surrogate: Tetrachloro-meta-xylene	*71.4 %*		*28-166*			*L207137*	*07/23/2012*	*07/24/2012*	*8081A*
Surrogate: Decachlorobiphenyl	*85.5 %*		*37-153*			*L207137*	*07/23/2012*	*07/24/2012*	*8081A*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/25/2012 11:34

J1PVL4

1207048-03 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
gamma-BHC	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
beta-BHC	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
delta-BHC	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Heptachlor	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Aldrin	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Heptachlor epoxide	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
gamma-Chlordane	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
alpha-Chlordane	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endosulfan I	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
4,4'-DDE	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Dieldrin	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endrin	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
4,4'-DDD	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endosulfan II	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
4,4'-DDT	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endrin aldehyde	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endosulfan sulfate	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Methoxychlor	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endrin ketone	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Toxaphene	13.6	U	13.6	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Surrogate: Tetrachloro-meta-xylene	*61.9 %*		*28-166*			*L207137*	*07/23/2012*	*07/24/2012*	*8081A*
Surrogate: Decachlorobiphenyl	*82.8 %*		*37-153*			*L207137*	*07/23/2012*	*07/24/2012*	*8081A*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/25/2012 11:34

J1PVL5
1207048-04 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
gamma-BHC	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
beta-BHC	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
delta-BHC	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Heptachlor	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Aldrin	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Heptachlor epoxide	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
gamma-Chlordane	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
alpha-Chlordane	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endosulfan I	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
4,4'-DDE	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Dieldrin	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endrin	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
4,4'-DDD	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endosulfan II	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
4,4'-DDT	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endrin aldehyde	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endosulfan sulfate	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Methoxychlor	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endrin ketone	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Toxaphene	13.6	U	13.6	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Surrogate: Tetrachloro-meta-xylene	*70.3 %*		*28-166*			*L207137*	*07/23/2012*	*07/24/2012*	*8081A*
Surrogate: Decachlorobiphenyl	*86.9 %*		*37-153*			*L207137*	*07/23/2012*	*07/24/2012*	*8081A*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/25/2012 11:34

J1PVL6
1207048-05 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.37	U	1.37	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
gamma-BHC	1.37	U	1.37	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
beta-BHC	1.37	U	1.37	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
delta-BHC	1.37	U	1.37	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Heptachlor	1.37	U	1.37	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Aldrin	1.37	U	1.37	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Heptachlor epoxide	1.37	U	1.37	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
gamma-Chlordane	1.37	U	1.37	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
alpha-Chlordane	1.37	U	1.37	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endosulfan I	1.37	U	1.37	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
4,4'-DDE	1.37	U	1.37	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Dieldrin	1.37	U	1.37	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endrin	1.37	U	1.37	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
4,4'-DDD	1.37	U	1.37	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endosulfan II	1.37	U	1.37	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
4,4'-DDT	1.37	U	1.37	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endrin aldehyde	1.37	U	1.37	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endosulfan sulfate	1.37	U	1.37	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Methoxychlor	1.37	U	1.37	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endrin ketone	1.37	U	1.37	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Toxaphene	13.7	U	13.7	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Surrogate: Tetrachloro-meta-xylene	*63.2 %*		*28-166*			*L207137*	*07/23/2012*	*07/24/2012*	*8081A*
Surrogate: Decachlorobiphenyl	*81.1 %*		*37-153*			*L207137*	*07/23/2012*	*07/24/2012*	*8081A*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/25/2012 11:34

J1PVL7
1207048-06 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.32	U	1.32	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
gamma-BHC	1.32	U	1.32	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
beta-BHC	1.32	U	1.32	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
delta-BHC	1.32	U	1.32	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Heptachlor	1.32	U	1.32	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Aldrin	1.32	U	1.32	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Heptachlor epoxide	1.32	U	1.32	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
gamma-Chlordane	1.32	U	1.32	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
alpha-Chlordane	1.32	U	1.32	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endosulfan I	1.32	U	1.32	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
4,4'-DDE	1.32	U	1.32	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Dieldrin	1.32	U	1.32	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endrin	1.32	U	1.32	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
4,4'-DDD	1.32	U	1.32	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endosulfan II	1.32	U	1.32	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
4,4'-DDT	1.32	U	1.32	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endrin aldehyde	1.32	U	1.32	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endosulfan sulfate	1.32	U	1.32	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Methoxychlor	1.32	U	1.32	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Endrin ketone	1.32	U	1.32	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Toxaphene	13.2	U	13.2	ug/kg dry	4	L207137	07/23/2012	07/24/2012	8081A
Surrogate: Tetrachloro-meta-xylene	*81.3 %*		*28-166*			*L207137*	*07/23/2012*	*07/24/2012*	*8081A*
Surrogate: Decachlorobiphenyl	*90.7 %*		*37-153*			*L207137*	*07/23/2012*	*07/24/2012*	*8081A*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/25/2012 11:34

J1PVL8
1207048-07 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.39	U	1.39	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
gamma-BHC	1.39	U	1.39	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
beta-BHC	1.39	U	1.39	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
delta-BHC	1.39	U	1.39	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Heptachlor	1.39	U	1.39	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Aldrin	1.39	U	1.39	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Heptachlor epoxide	1.39	U	1.39	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
gamma-Chlordane	1.39	U	1.39	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
alpha-Chlordane	1.39	U	1.39	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan I	1.39	U	1.39	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDE	1.39	U	1.39	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Dieldrin	1.39	U	1.39	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin	1.39	U	1.39	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDD	1.39	U	1.39	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan II	1.39	U	1.39	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDT	1.39	U	1.39	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin aldehyde	1.39	U	1.39	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan sulfate	1.39	U	1.39	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Methoxychlor	1.39	U	1.39	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin ketone	1.39	U	1.39	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Toxaphene	13.9	U	13.9	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Surrogate: Tetrachloro-meta-xylene	*70.0 %*		*28-166*			*L207137*	*07/23/2012*	*07/25/2012*	*8081A*
Surrogate: Decachlorobiphenyl	*85.1 %*		*37-153*			*L207137*	*07/23/2012*	*07/25/2012*	*8081A*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/25/2012 11:34

J1PVL9
1207048-08 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
gamma-BHC	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
beta-BHC	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
delta-BHC	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Heptachlor	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Aldrin	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Heptachlor epoxide	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
gamma-Chlordane	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
alpha-Chlordane	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan I	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDE	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Dieldrin	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDD	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan II	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDT	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin aldehyde	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan sulfate	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Methoxychlor	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin ketone	1.33	U	1.33	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Toxaphene	13.3	U	13.3	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Surrogate: Tetrachloro-meta-xylene	*70.3 %*		*28-166*			*L207137*	*07/23/2012*	*07/25/2012*	*8081A*
Surrogate: Decachlorobiphenyl	*83.8 %*		*37-153*			*L207137*	*07/23/2012*	*07/25/2012*	*8081A*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/25/2012 11:34

J1PVM0
1207048-09 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
gamma-BHC	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
beta-BHC	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
delta-BHC	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Heptachlor	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Aldrin	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Heptachlor epoxide	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
gamma-Chlordane	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
alpha-Chlordane	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan I	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDE	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Dieldrin	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDD	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan II	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDT	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin aldehyde	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan sulfate	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Methoxychlor	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin ketone	1.36	U	1.36	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Toxaphene	13.6	U	13.6	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Surrogate: Tetrachloro-meta-xylene	*71.1 %*		*28-166*			*L207137*	*07/23/2012*	*07/25/2012*	*8081A*
Surrogate: Decachlorobiphenyl	*94.0 %*		*37-153*			*L207137*	*07/23/2012*	*07/25/2012*	*8081A*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/25/2012 11:34

J1PVM1
1207048-10 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.44	U	1.44	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
gamma-BHC	1.44	U	1.44	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
beta-BHC	1.44	U	1.44	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
delta-BHC	1.44	U	1.44	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Heptachlor	1.44	U	1.44	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Aldrin	1.44	U	1.44	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Heptachlor epoxide	1.44	U	1.44	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
gamma-Chlordane	1.44	U	1.44	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
alpha-Chlordane	1.44	U	1.44	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan I	1.44	U	1.44	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDE	1.44	U	1.44	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Dieldrin	1.44	U	1.44	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin	1.44	U	1.44	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDD	1.44	U	1.44	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan II	1.44	U	1.44	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDT	1.44	U	1.44	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin aldehyde	1.44	U	1.44	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan sulfate	1.44	U	1.44	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Methoxychlor	1.44	U	1.44	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin ketone	1.44	U	1.44	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Toxaphene	14.4	U	14.4	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Surrogate: Tetrachloro-meta-xylene	*83.6 %*		*28-166*			*L207137*	*07/23/2012*	*07/25/2012*	*8081A*
Surrogate: Decachlorobiphenyl	*88.1 %*		*37-153*			*L207137*	*07/23/2012*	*07/25/2012*	*8081A*

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Fax: 610-280-3041

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/25/2012 11:34

J1PVM2
1207048-11 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.53	U	1.53	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
gamma-BHC	1.53	U	1.53	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
beta-BHC	1.53	U	1.53	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
delta-BHC	1.53	U	1.53	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Heptachlor	1.53	U	1.53	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Aldrin	1.53	U	1.53	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Heptachlor epoxide	1.53	U	1.53	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
gamma-Chlordane	1.53	U	1.53	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
alpha-Chlordane	1.53	U	1.53	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan I	1.53	U	1.53	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDE	1.53	U	1.53	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Dieldrin	1.53	U	1.53	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin	1.53	U	1.53	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDD	1.53	U	1.53	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan II	1.53	U	1.53	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDT	1.53	U	1.53	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin aldehyde	1.53	U	1.53	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan sulfate	1.53	U	1.53	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Methoxychlor	1.53	U	1.53	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin ketone	1.53	U	1.53	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Toxaphene	15.3	U	15.3	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Surrogate: Tetrachloro-meta-xylene	*73.2 %*		*28-166*			*L207137*	*07/23/2012*	*07/25/2012*	*8081A*
Surrogate: Decachlorobiphenyl	*91.6 %*		*37-153*			*L207137*	*07/23/2012*	*07/25/2012*	*8081A*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/25/2012 11:34

J1PVM3
1207048-12 (Soil)

Lionville Laboratory

Organochlorine Pesticides by SW846 8081A

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
alpha-BHC	1.60	U	1.60	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
gamma-BHC	1.60	U	1.60	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
beta-BHC	1.60	U	1.60	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
delta-BHC	1.60	U	1.60	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Heptachlor	1.60	U	1.60	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Aldrin	1.60	U	1.60	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Heptachlor epoxide	1.60	U	1.60	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
gamma-Chlordane	1.60	U	1.60	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
alpha-Chlordane	1.60	U	1.60	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan I	1.60	U	1.60	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDE	1.60	U	1.60	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Dieldrin	1.60	U	1.60	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin	1.60	U	1.60	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDD	1.60	U	1.60	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan II	1.60	U	1.60	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDT	1.60	U	1.60	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin aldehyde	1.60	U	1.60	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan sulfate	1.60	U	1.60	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Methoxychlor	1.60	U	1.60	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin ketone	1.60	U	1.60	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Toxaphene	16.0	U	16.0	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Surrogate: Tetrachloro-meta-xylene	*73.0 %*		*28-166*			*L207137*	*07/23/2012*	*07/25/2012*	*8081A*
Surrogate: Decachlorobiphenyl	*92.9 %*		*37-153*			*L207137*	*07/23/2012*	*07/25/2012*	*8081A*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/25/2012 11:34

J1PVM4
1207048-13 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.35	U	1.35	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
gamma-BHC	1.35	U	1.35	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
beta-BHC	1.35	U	1.35	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
delta-BHC	1.35	U	1.35	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Heptachlor	1.35	U	1.35	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Aldrin	1.35	U	1.35	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Heptachlor epoxide	1.35	U	1.35	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
gamma-Chlordane	1.35	U	1.35	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
alpha-Chlordane	1.35	U	1.35	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan I	1.35	U	1.35	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDE	1.35	U	1.35	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Dieldrin	1.35	U	1.35	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin	1.35	U	1.35	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDD	1.35	U	1.35	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan II	1.35	U	1.35	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
4,4'-DDT	1.35	U	1.35	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin aldehyde	1.35	U	1.35	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endosulfan sulfate	1.35	U	1.35	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Methoxychlor	1.35	U	1.35	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Endrin ketone	1.35	U	1.35	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Toxaphene	13.5	U	13.5	ug/kg dry	4	L207137	07/23/2012	07/25/2012	8081A
Surrogate: Tetrachloro-meta-xylene	*84.1 %*		*28-166*			*L207137*	*07/23/2012*	*07/25/2012*	*8081A*
Surrogate: Decachlorobiphenyl	*106 %*		*37-153*			*L207137*	*07/23/2012*	*07/25/2012*	*8081A*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/25/2012 11:34

Organochlorine Pesticides by SW846 8081A - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L207137 - SW 3540C										
Blank (L207137-BLK1)				Prepared: 07/23/2012 Analyzed: 07/24/2012						
alpha-BHC	0.330	U	0.330	ug/kg wet						
gamma-BHC	0.330	U	0.330	ug/kg wet						
beta-BHC	0.330	U	0.330	ug/kg wet						
delta-BHC	0.330	U	0.330	ug/kg wet						
Heptachlor	0.330	U	0.330	ug/kg wet						
Aldrin	0.330	U	0.330	ug/kg wet						
Heptachlor epoxide	0.330	U	0.330	ug/kg wet						
gamma-Chlordane	0.330	U	0.330	ug/kg wet						
alpha-Chlordane	0.330	U	0.330	ug/kg wet						
Endosulfan I	0.330	U	0.330	ug/kg wet						
4,4'-DDE	0.330	U	0.330	ug/kg wet						
Dieldrin	0.330	U	0.330	ug/kg wet						
Endrin	0.330	U	0.330	ug/kg wet						
4,4'-DDD	0.330	U	0.330	ug/kg wet						
Endosulfan II	0.330	U	0.330	ug/kg wet						
4,4'-DDT	0.330	U	0.330	ug/kg wet						
Endrin aldehyde	0.330	U	0.330	ug/kg wet						
Endosulfan sulfate	0.330	U	0.330	ug/kg wet						
Methoxychlor	0.330	U	0.330	ug/kg wet						
Endrin ketone	0.330	U	0.330	ug/kg wet						
Toxaphene	3.30	U	3.30	ug/kg wet						
Surrogate: Tetrachloro-meta-xylene	*27.3*			*ug/kg wet*	*33.337*		*82.0*	*28-166*		
Surrogate: Decachlorobiphenyl	*31.5*			*ug/kg wet*	*33.333*		*94.6*	*37-153*		
LCS (L207137-BS1)				Prepared: 07/23/2012 Analyzed: 07/24/2012						
alpha-BHC	30.5		0.330	ug/kg wet	33.333		91.5	65-145		
gamma-BHC	29.8		0.330	ug/kg wet	33.333		89.3	70-143		
beta-BHC	26.1		0.330	ug/kg wet	33.333		78.4	75-143		
delta-BHC	30.3		0.330	ug/kg wet	33.333		90.8	65-143		
Heptachlor	31.1		0.330	ug/kg wet	33.333		93.4	70-139		
Aldrin	29.5		0.330	ug/kg wet	33.333		88.6	70-143		
Heptachlor epoxide	29.8		0.330	ug/kg wet	33.333		89.3	71-138		
gamma-Chlordane	29.5		0.330	ug/kg wet	33.333		88.4	71-137		
alpha-Chlordane	28.5		0.330	ug/kg wet	33.333		85.4	72-136		
Endosulfan I	30.7		0.330	ug/kg wet	33.333		92.2	72-139		
4,4'-DDE	31.2		0.330	ug/kg wet	33.333		93.5	70-154		
Dieldrin	31.6		0.330	ug/kg wet	33.333		94.8	73-143		

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/25/2012 11:34

Organochlorine Pesticides by SW846 8081A - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L207137 - SW 3540C										
LCS (L207137-BS1)				Prepared: 07/23/2012 Analyzed: 07/24/2012						
Endrin	32.3		0.330	ug/kg wet	33.333		97.0	74-137		
4,4'-DDD	35.4		0.330	ug/kg wet	33.333		106	52-153		
Endosulfan II	34.4		0.330	ug/kg wet	33.333		103	72-139		
4,4'-DDT	32.1		0.330	ug/kg wet	33.333		96.4	58-148		
Endrin aldehyde	26.7		0.330	ug/kg wet	33.333		80.2	49-129		
Endosulfan sulfate	31.2		0.330	ug/kg wet	33.333		93.5	66-139		
Methoxychlor	35.8		0.330	ug/kg wet	33.333		107	50-144		
Endrin ketone	30.8		0.330	ug/kg wet	33.333		92.5	70-139		
Surrogate: Tetrachloro-meta-xylene	*27.4*			*ug/kg wet*	*33.337*		*82.2*	*28-166*		
Surrogate: Decachlorobiphenyl	*30.8*			*ug/kg wet*	*33.333*		*92.5*	*37-153*		
Matrix Spike (L207137-MS1)		**Source: 1207048-01**		Prepared: 07/23/2012 Analyzed: 07/24/2012						
alpha-BHC	27.5	D	1.33	ug/kg dry	33.500	1.36 U	82.0	65-145		
gamma-BHC	28.7	D	1.33	ug/kg dry	33.500	1.36 U	85.8	70-143		
beta-BHC	28.6	D	1.33	ug/kg dry	33.500	1.36 U	85.3	75-143		
delta-BHC	23.9	D	1.33	ug/kg dry	33.500	1.36 U	71.2	65-143		
Heptachlor	31.1	D	1.33	ug/kg dry	33.500	1.36 U	92.8	70-139		
Aldrin	28.4	D	1.33	ug/kg dry	33.500	1.36 U	84.7	70-143		
Heptachlor epoxide	30.8	D	1.33	ug/kg dry	33.500	1.36 U	91.8	71-138		
gamma-Chlordane	30.6	D	1.33	ug/kg dry	33.500	1.36 U	91.2	71-137		
alpha-Chlordane	30.4	D	1.33	ug/kg dry	33.500	1.36 U	90.6	72-136		
Endosulfan I	31.2	D	1.33	ug/kg dry	33.500	1.36 U	93.2	72-139		
4,4'-DDE	33.1	D	1.33	ug/kg dry	33.500	1.36 U	98.9	70-154		
Dieldrin	31.5	D	1.33	ug/kg dry	33.500	1.36 U	94.0	73-143		
Endrin	34.1	D	1.33	ug/kg dry	33.500	1.36 U	102	74-137		
4,4'-DDD	36.2	D	1.33	ug/kg dry	33.500	1.36 U	108	52-153		
Endosulfan II	35.5	D	1.33	ug/kg dry	33.500	1.36 U	106	72-139		
4,4'-DDT	31.7	D	1.33	ug/kg dry	33.500	1.36 U	94.6	58-148		
Endrin aldehyde	15.9	D	1.33	ug/kg dry	33.500	1.36 U	47.4*	49-129		
Endosulfan sulfate	20.0	D	1.33	ug/kg dry	33.500	1.36 U	59.7*	66-139		
Methoxychlor	40.1	D	1.33	ug/kg dry	33.500	1.36 U	120	50-144		
Endrin ketone	33.6	D	1.33	ug/kg dry	33.500	1.36 U	100	70-139		
Surrogate: Tetrachloro-meta-xylene	*24.3*			*ug/kg dry*	*33.503*		*72.6*	*28-166*		
Surrogate: Decachlorobiphenyl	*34.0*			*ug/kg dry*	*33.500*		*101*	*37-153*		

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Fax: 610-280-3041

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/25/2012 11:34

Organochlorine Pesticides by SW846 8081A - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L207137 - SW 3540C										
Matrix Spike Dup (L207137-MSD1)		**Source: 1207048-01**		Prepared: 07/23/2012 Analyzed: 07/24/2012						
alpha-BHC	29.0	D	1.40	ug/kg dry	35.331	1.36 U	82.1	65-145	0.122	40
gamma-BHC	29.6	D	1.40	ug/kg dry	35.331	1.36 U	83.9	70-143	2.24	40
beta-BHC	28.8	D	1.40	ug/kg dry	35.331	1.36 U	81.6	75-143	4.43	40
delta-BHC	25.0	D	1.40	ug/kg dry	35.331	1.36 U	70.9	65-143	0.422	40
Heptachlor	31.6	D	1.40	ug/kg dry	35.331	1.36 U	89.3	70-139	3.84	40
Aldrin	28.4	D	1.40	ug/kg dry	35.331	1.36 U	80.4	70-143	5.21	40
Heptachlor epoxide	30.6	D	1.40	ug/kg dry	35.331	1.36 U	86.5	71-138	5.95	40
gamma-Chlordane	29.8	D	1.40	ug/kg dry	35.331	1.36 U	84.3	71-137	7.86	40
alpha-Chlordane	29.7	D	1.40	ug/kg dry	35.331	1.36 U	84.0	72-136	7.56	40
Endosulfan I	30.7	D	1.40	ug/kg dry	35.331	1.36 U	87.0	72-139	6.88	40
4,4'-DDE	31.5	D	1.40	ug/kg dry	35.331	1.36 U	89.2	70-154	10.3	40
Dieldrin	30.8	D	1.40	ug/kg dry	35.331	1.36 U	87.2	73-143	7.51	40
Endrin	33.2	D	1.40	ug/kg dry	35.331	1.36 U	93.9	74-137	8.07	40
4,4'-DDD	35.2	D	1.40	ug/kg dry	35.331	1.36 U	99.6	52-153	8.28	40
Endosulfan II	34.4	D	1.40	ug/kg dry	35.331	1.36 U	97.3	72-139	8.46	40
4,4'-DDT	31.7	D	1.40	ug/kg dry	35.331	1.36 U	89.7	58-148	5.32	40
Endrin aldehyde	27.7	D	1.40	ug/kg dry	35.331	1.36 U	78.5	49-129	49.4*	40
Endosulfan sulfate	31.5	D	1.40	ug/kg dry	35.331	1.36 U	89.2	66-139	39.6	40
Methoxychlor	39.1	D	1.40	ug/kg dry	35.331	1.36 U	111	50-144	7.64	40
Endrin ketone	32.1	D	1.40	ug/kg dry	35.331	1.36 U	90.9	70-139	9.73	40
Surrogate: Tetrachloro-meta-xylene	*26.6*			*ug/kg dry*	*35.335*		*75.3*	*28-166*		
Surrogate: Decachlorobiphenyl	*31.6*			*ug/kg dry*	*35.331*		*89.5*	*37-153*		

PREPARATION BENCH SHEET

L207137

Lionville Laboratory

Printed: 7/24/2012 1:16:23PM

00000094

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
1207048-01	8081A TCL Pesticides	07/23/2012 15:10	30.86	10				250	WC-Hanford, Inc.	
1207048-01	8082 PCBs	07/23/2012 15:10	30.86	10				250	WC-Hanford, Inc.	
1207048-02	8081A TCL Pesticides	07/23/2012 15:10	30.13	10				250	WC-Hanford, Inc.	
1207048-02	8082 PCBs	07/23/2012 15:10	30.13	10				250	WC-Hanford, Inc.	
1207048-03	8081A TCL Pesticides	07/23/2012 15:10	30.31	10				250	WC-Hanford, Inc.	
1207048-03	8082 PCBs	07/23/2012 15:10	30.31	10				250	WC-Hanford, Inc.	
1207048-04	8081A TCL Pesticides	07/23/2012 15:10	30.26	10				250	WC-Hanford, Inc.	
1207048-04	8082 PCBs	07/23/2012 15:10	30.26	10				250	WC-Hanford, Inc.	
1207048-05	8081A TCL Pesticides	07/23/2012 15:10	30.37	10				250	WC-Hanford, Inc.	
1207048-05	8082 PCBs	07/23/2012 15:10	30.37	10				250	WC-Hanford, Inc.	
1207048-06	8081A TCL Pesticides	07/23/2012 15:10	31.1	10				250	WC-Hanford, Inc.	
1207048-06	8082 PCBs	07/23/2012 15:10	31.1	10				250	WC-Hanford, Inc.	
1207048-07	8081A TCL Pesticides	07/23/2012 15:10	29.6	10				250	WC-Hanford, Inc.	
1207048-07	8082 PCBs	07/23/2012 15:10	29.6	10				250	WC-Hanford, Inc.	
1207048-08	8081A TCL Pesticides	07/23/2012 15:10	30.56	10				250	WC-Hanford, Inc.	
1207048-08	8082 PCBs	07/23/2012 15:10	30.56	10				250	WC-Hanford, Inc.	
1207048-09	8081A TCL Pesticides	07/23/2012 15:10	30.36	10				250	WC-Hanford, Inc.	
1207048-09	8082 PCBs	07/23/2012 15:10	30.36	10				250	WC-Hanford, Inc.	
1207048-10	8081A TCL Pesticides	07/23/2012 15:10	30.13	10				250	WC-Hanford, Inc.	
1207048-10	8082 PCBs	07/23/2012 15:10	30.13	10				250	WC-Hanford, Inc.	

S cleaned 07.24.12
Cu Cot# G16W031

7/24/12 1316
Extracts Relinquished By — Date

07.24.12 13:20
Extracts Received By — Date

PREPARATION BENCH SHEET

L207137

Lionville Laboratory

Printed: 7/24/2012 1:16:23PM

00000095

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
1207048-11	8081A TCL Pesticides	07/23/2012 15:10	30.97	10				250	WC-Hanford, Inc.	
1207048-11	8082 PCBs	07/23/2012 15:10	30.97	10				250	WC-Hanford, Inc.	
1207048-12	8081A TCL Pesticides	07/23/2012 15:10	31.02	10				250	WC-Hanford, Inc.	
1207048-12	8082 PCBs	07/23/2012 15:10	31.02	10				250	WC-Hanford, Inc.	
1207048-13	8081A TCL Pesticides	07/23/2012 15:10	30.15	10				250	WC-Hanford, Inc.	
1207048-13	8082 PCBs	07/23/2012 15:10	30.15	10				250	WC-Hanford, Inc.	
L207137-BLK1	QC	07/23/2012 15:10	30	10				250		PEST
L207137-BLK2	QC	07/23/2012 15:10	30	10				250		PCB
L207137-BS1	QC	07/23/2012 15:10	30	10	1200903		250	250		PEST
L207137-BS2	QC	07/23/2012 15:10	30	10	1200902		250	250		PCB
L207137-MS1	QC	07/23/2012 15:10	31.64	10	1200903	1207048-01	250	250		PEST
L207137-MS2	QC	07/23/2012 15:10	30.18	10	1200902	1207048-01	250	250		PCB
L207137-MSD1	QC	07/23/2012 15:10	30	10	1200903	1207048-01	250	250		PEST
L207137-MSD2	QC	07/23/2012 15:10	30	10	1200902	1207048-01	250	250		PCB

Scleared 07.24.12
Cu lot# G16W031

S.A. 7/24/12 1316
Extracts Relinquished By Date

SZah 07.24.12 13:20
Extracts Received By Date

PCBS

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

WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 10:33

Analytical Report for Polychlorinated Biphenyls by SW846 8082

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
J1PVL2	1207048-01	Soil	07/18/2012 12:30	07/20/2012 10:00
J1PVL3	1207048-02	Soil	07/18/2012 12:20	07/20/2012 10:00
J1PVL4	1207048-03	Soil	07/18/2012 12:10	07/20/2012 10:00
J1PVL5	1207048-04	Soil	07/18/2012 11:50	07/20/2012 10:00
J1PVL6	1207048-05	Soil	07/18/2012 10:40	07/20/2012 10:00
J1PVL7	1207048-06	Soil	07/18/2012 10:25	07/20/2012 10:00
J1PVL8	1207048-07	Soil	07/18/2012 10:10	07/20/2012 10:00
J1PVL9	1207048-08	Soil	07/18/2012 10:00	07/20/2012 10:00
J1PVM0	1207048-09	Soil	07/18/2012 09:50	07/20/2012 10:00
J1PVM1	1207048-10	Soil	07/18/2012 09:35	07/20/2012 10:00
J1PVM2	1207048-11	Soil	07/18/2012 09:20	07/20/2012 10:00
J1PVM3	1207048-12	Soil	07/18/2012 08:55	07/20/2012 10:00
J1PVM4	1207048-13	Soil	07/18/2012 12:30	07/20/2012 10:00

LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

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

Case Narrative

Client: WC-HANFORD RC-075 KP0114
LVL #: 1207048

W.O. #: 60049-001-001-0001-00
Received: 07-20-2012

PCBs

Thirteen (13) soil samples were collected on 07-18-2012.

The samples and associated QC samples were extracted 07-23-2012 and analyzed 07-24,25-2012 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. One (1) of thirty-four (34) surrogate recoveries was outside acceptance criteria. A copy of the Sample Discrepancy Report (SDR#12GC117) has been enclosed.
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

7/25/12
Date

r:\group\data\2012\pcb\wc hanford\1207048jes.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.

Lionville Laboratory Sample Discrepancy Report (SDR)

SDR #: 12GC117

Initiator: Robert Carden
Date: 7/26/12
Client: WC Hanford RC075 KP0114

Batch: 1207048
Samples: J1PVL7
Method: SW846/MCAWW/CLP/

Parameter: PCB
Matrix: Soil
Prep Batch: L207137

1. Reason for SDR

a. COC Discrepancy __ Tech Profile Error __ Client Request __ Sampler Error on C-O-C __ Transcription Error __ Wrong Test Code __ Other _____

b. General Discrepancy

__ Missing Sample/Extract* __ Container Broken __ Wrong Sample Pulled __ Label ID's Illegible
__ Hold Time Exceeded __ Insufficient Sample* __ Preservation Wrong __ Received Past Hold
__ Improper Bottle Type __ Not Amenable to Analysis

Note*: Verified by [Log-In] or [Prep Group] (circle)...signature/date: _____

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

TCMX Surrogate recovery marginally below QC acceptance criteria in sample J1PVL7 at 49% (52-141%)

2. Known or Probable Causes(s)

3. Discussion and Proposed Action Other Description:

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

Narrate

4. Project Manager Instructions...signature/date: 7/27/12

__ Concur with Proposed Action
__ Disagree with Proposed Action; See Instruction
✓ Include in Case Narrative
__ Client Contacted:
Date/Person _____
__ Add
__ Cancel

5. Final Action...signature/date: 7/27/12 Other Explanation:

__ Verified re-[log][leach][extract][digest][analysis] (circle)
✓ Included in Case Narrative
__ Hard Copy COC Revised
__ Electronic COC Revised
__ EDD Corrections Completed

When Final Action has been recorded, forward original to QA for diposition.

Route
__ Lab Manager: Daniels
__ Project Mgr (circle): Johnson / Stone
__ Sample Prep (circle): Ford
__ Log-in: King

Route
__ Metals: Welsh / _____
__ Inorganic: Perrone / _____
__ GC/LC: Carey / _____
__ MS VOA: Rubino / _____
__ MS BNA: Carden / _____
__ Other: _____

QA-139-A-0208

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.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 10:33

J1PVL2
1207048-01 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polychlorinated Biphenyls by SW846 8082									
Aroclor 1016	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1221	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1232	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1242	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1248	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1254	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1260	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1262	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1268	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Surrogate: Decachlorobiphenyl	*72 %*		*43-144*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*
Surrogate: Tetrachloro-meta-xylene	*80 %*		*52-141*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 10:33

J1PVL3
1207048-02 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polychlorinated Biphenyls by SW846 8082									
Aroclor 1016	13.4	U	13.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1221	13.4	U	13.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1232	13.4	U	13.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1242	13.4	U	13.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1248	13.4	U	13.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1254	13.4	U	13.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1260	13.4	U	13.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1262	13.4	U	13.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1268	13.4	U	13.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Surrogate: Decachlorobiphenyl	*90 %*		*43-144*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*
Surrogate: Tetrachloro-meta-xylene	*92 %*		*52-141*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 10:33

J1PVL4
1207048-03 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polychlorinated Biphenyls by SW846 8082									
Aroclor 1016	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1221	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1232	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1242	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1248	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1254	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1260	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1262	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1268	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Surrogate: Decachlorobiphenyl	*70 %*		*43-144*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*
Surrogate: Tetrachloro-meta-xylene	*74 %*		*52-141*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 10:33

J1PVL5
1207048-04 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polychlorinated Biphenyls by SW846 8082									
Aroclor 1016	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1221	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1232	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1242	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1248	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1254	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1260	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1262	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1268	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Surrogate: Decachlorobiphenyl	*80 %*		*43-144*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*
Surrogate: Tetrachloro-meta-xylene	*82 %*		*52-141*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 10:33

J1PVL6
1207048-05 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polychlorinated Biphenyls by SW846 8082									
Aroclor 1016	13.8	U	13.8	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1221	13.8	U	13.8	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1232	13.8	U	13.8	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1242	13.8	U	13.8	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1248	13.8	U	13.8	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1254	13.8	U	13.8	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1260	13.8	U	13.8	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1262	13.8	U	13.8	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1268	13.8	U	13.8	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Surrogate: Decachlorobiphenyl	*68 %*		*43-144*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*
Surrogate: Tetrachloro-meta-xylene	*72 %*		*52-141*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/26/2012 10:33

J1PVL7
1207048-06 (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	L207137	07/23/2012	07/25/2012	8082
Aroclor 1221	13.3	U	13.3	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1232	13.3	U	13.3	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1242	13.3	U	13.3	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1248	13.3	U	13.3	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1254	13.3	U	13.3	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1260	13.3	U	13.3	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1262	13.3	U	13.3	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1268	13.3	U	13.3	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Surrogate: Decachlorobiphenyl	*43 %*		*43-144*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*
Surrogate: Tetrachloro-meta-xylene	*48 % **		*52-141*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 10:33

J1PVL8
1207048-07 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polychlorinated Biphenyls by SW846 8082									
Aroclor 1016	14.0	U	14.0	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1221	14.0	U	14.0	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1232	14.0	U	14.0	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1242	14.0	U	14.0	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1248	14.0	U	14.0	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1254	14.0	U	14.0	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1260	14.0	U	14.0	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1262	14.0	U	14.0	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1268	14.0	U	14.0	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Surrogate: Decachlorobiphenyl	*77 %*		*43-144*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*
Surrogate: Tetrachloro-meta-xylene	*80 %*		*52-141*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 10:33

J1PVL9
1207048-08 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polychlorinated Biphenyls by SW846 8082									
Aroclor 1016	13.4	U	13.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1221	13.4	U	13.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1232	13.4	U	13.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1242	13.4	U	13.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1248	13.4	U	13.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1254	13.4	U	13.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1260	13.4	U	13.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1262	13.4	U	13.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1268	13.4	U	13.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Surrogate: Decachlorobiphenyl	*84 %*		*43-144*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*
Surrogate: Tetrachloro-meta-xylene	*80 %*		*52-141*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 10:33

J1PVM0
1207048-09 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polychlorinated Biphenyls by SW846 8082									
Aroclor 1016	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1221	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1232	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1242	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1248	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1254	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1260	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1262	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1268	13.7	U	13.7	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Surrogate: Decachlorobiphenyl	*78 %*		*43-144*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*
Surrogate: Tetrachloro-meta-xylene	*76 %*		*52-141*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 10:33

J1PVM1
1207048-10 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polychlorinated Biphenyls by SW846 8082									
Aroclor 1016	14.5	U	14.5	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1221	14.5	U	14.5	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1232	14.5	U	14.5	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1242	14.5	U	14.5	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1248	14.5	U	14.5	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1254	14.5	U	14.5	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1260	14.5	U	14.5	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1262	14.5	U	14.5	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1268	14.5	U	14.5	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Surrogate: Decachlorobiphenyl	*79 %*		*43-144*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*
Surrogate: Tetrachloro-meta-xylene	*75 %*		*52-141*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 10:33

J1PVM2
1207048-11 (Soil)

Lionville Laboratory

Polychlorinated Biphenyls by SW846 8082

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Aroclor 1016	15.4	U	15.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1221	15.4	U	15.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1232	15.4	U	15.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1242	15.4	U	15.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1248	15.4	U	15.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1254	15.4	U	15.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1260	15.4	U	15.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1262	15.4	U	15.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1268	15.4	U	15.4	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Surrogate: Decachlorobiphenyl	*80 %*		*43-144*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*
Surrogate: Tetrachloro-meta-xylene	*78 %*		*52-141*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 10:33

J1PVM3
1207048-12 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polychlorinated Biphenyls by SW846 8082									
Aroclor 1016	16.1	U	16.1	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1221	16.1	U	16.1	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1232	16.1	U	16.1	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1242	16.1	U	16.1	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1248	16.1	U	16.1	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1254	16.1	U	16.1	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1260	16.1	U	16.1	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1262	16.1	U	16.1	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1268	16.1	U	16.1	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Surrogate: Decachlorobiphenyl	*84 %*		*43-144*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*
Surrogate: Tetrachloro-meta-xylene	*82 %*		*52-141*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 10:33

J1PVM4
1207048-13 (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	L207137	07/23/2012	07/25/2012	8082
Aroclor 1221	13.6	U	13.6	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1232	13.6	U	13.6	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1242	13.6	U	13.6	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1248	13.6	U	13.6	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1254	13.6	U	13.6	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1260	13.6	U	13.6	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1262	13.6	U	13.6	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Aroclor 1268	13.6	U	13.6	ug/kg dry	1	L207137	07/23/2012	07/25/2012	8082
Surrogate: Decachlorobiphenyl	*82 %*		*43-144*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*
Surrogate: Tetrachloro-meta-xylene	*82 %*		*52-141*			*L207137*	*07/23/2012*	*07/25/2012*	*8082*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/26/2012 10:33

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 L207137 - SW 3540C										
Blank (L207137-BLK2)				Prepared: 07/23/2012 Analyzed: 07/24/2012						
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	*29.9*			*ug/kg wet*	*33.333*		*90*	*43-144*		
Surrogate: Tetrachloro-meta-xylene	*28.0*			*ug/kg wet*	*33.337*		*84*	*52-141*		
LCS (L207137-BS2)				Prepared: 07/23/2012 Analyzed: 07/24/2012						
Aroclor 1016	108		13.3	ug/kg wet	166.67		65	50-138		
Aroclor 1260	125		13.3	ug/kg wet	166.67		75	50-148		
Surrogate: Decachlorobiphenyl	*28.3*			*ug/kg wet*	*33.333*		*85*	*43-144*		
Surrogate: Tetrachloro-meta-xylene	*26.4*			*ug/kg wet*	*33.337*		*79*	*52-141*		
Matrix Spike (L207137-MS2)		**Source: 1207048-01**		Prepared: 07/23/2012 Analyzed: 07/25/2012						
Aroclor 1016	129		14.0	ug/kg dry	175.60	13.7 U	73	50-138		
Aroclor 1260	146		14.0	ug/kg dry	175.60	13.7 U	83	50-148		
Surrogate: Decachlorobiphenyl	*29.9*			*ug/kg dry*	*35.120*		*85*	*43-144*		
Surrogate: Tetrachloro-meta-xylene	*30.3*			*ug/kg dry*	*35.124*		*86*	*52-141*		
Matrix Spike Dup (L207137-MSD2)		**Source: 1207048-01**		Prepared: 07/23/2012 Analyzed: 07/25/2012						
Aroclor 1016	100		14.1	ug/kg dry	176.66	13.7 U	57	50-138	26	40
Aroclor 1260	115		14.1	ug/kg dry	176.66	13.7 U	65	50-148	24	40
Surrogate: Decachlorobiphenyl	*21.8*			*ug/kg dry*	*35.331*		*62*	*43-144*		
Surrogate: Tetrachloro-meta-xylene	*22.3*			*ug/kg dry*	*35.335*		*63*	*52-141*		

PREPARATION BENCH SHEET

L207137

Lionville Laboratory

Printed: 7/24/2012 1:16:23PM

000000115

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
1207048-01	8081A TCL Pesticides	07/23/2012 15:10	30.86	10				250	WC-Hanford, Inc.	
1207048-01	8082 PCBs	07/23/2012 15:10	30.86	10				250	WC-Hanford, Inc.	
1207048-02	8081A TCL Pesticides	07/23/2012 15:10	30.13	10				250	WC-Hanford, Inc.	
1207048-02	8082 PCBs	07/23/2012 15:10	30.13	10				250	WC-Hanford, Inc.	
1207048-03	8081A TCL Pesticides	07/23/2012 15:10	30.31	10				250	WC-Hanford, Inc.	
1207048-03	8082 PCBs	07/23/2012 15:10	30.31	10				250	WC-Hanford, Inc.	
1207048-04	8081A TCL Pesticides	07/23/2012 15:10	30.26	10				250	WC-Hanford, Inc.	
1207048-04	8082 PCBs	07/23/2012 15:10	30.26	10				250	WC-Hanford, Inc.	
1207048-05	8081A TCL Pesticides	07/23/2012 15:10	30.37	10				250	WC-Hanford, Inc.	
1207048-05	8082 PCBs	07/23/2012 15:10	30.37	10				250	WC-Hanford, Inc.	
1207048-06	8081A TCL Pesticides	07/23/2012 15:10	31.1	10				250	WC-Hanford, Inc.	
1207048-06	8082 PCBs	07/23/2012 15:10	31.1	10				250	WC-Hanford, Inc.	
1207048-07	8081A TCL Pesticides	07/23/2012 15:10	29.6	10				250	WC-Hanford, Inc.	
1207048-07	8082 PCBs	07/23/2012 15:10	29.6	10				250	WC-Hanford, Inc.	
1207048-08	8081A TCL Pesticides	07/23/2012 15:10	30.56	10				250	WC-Hanford, Inc.	
1207048-08	8082 PCBs	07/23/2012 15:10	30.56	10				250	WC-Hanford, Inc.	
1207048-09	8081A TCL Pesticides	07/23/2012 15:10	30.36	10				250	WC-Hanford, Inc.	
1207048-09	8082 PCBs	07/23/2012 15:10	30.36	10				250	WC-Hanford, Inc.	
1207048-10	8081A TCL Pesticides	07/23/2012 15:10	30.13	10				250	WC-Hanford, Inc.	
1207048-10	8082 PCBs	07/23/2012 15:10	30.13	10				250	WC-Hanford, Inc.	

D. Li 7/24/12 1316
Extracts Relinquished By — Date

Scleaned 07.24.12
Cu Cot# 616W031
S Lak 07.24.12 13:20
Extracts Received By — Date

PREPARATION BENCH SHEET

L207137

Lionville Laboratory

Printed: 7/24/2012 1:16:23PM

000000116

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
1207048-11	8081A TCL Pesticides	07/23/2012 15:10	30.97	10				250	WC-Hanford, Inc.	
1207048-11	8082 PCBs	07/23/2012 15:10	30.97	10				250	WC-Hanford, Inc.	
1207048-12	8081A TCL Pesticides	07/23/2012 15:10	31.02	10				250	WC-Hanford, Inc.	
1207048-12	8082 PCBs	07/23/2012 15:10	31.02	10				250	WC-Hanford, Inc.	
1207048-13	8081A TCL Pesticides	07/23/2012 15:10	30.15	10				250	WC-Hanford, Inc.	
1207048-13	8082 PCBs	07/23/2012 15:10	30.15	10				250	WC-Hanford, Inc.	
L207137-BLK1	QC	07/23/2012 15:10	30	10				250		PEST
L207137-BLK2	QC	07/23/2012 15:10	30	10				250		PCB
L207137-BS1	QC	07/23/2012 15:10	30	10	1200903		250	250		PEST
L207137-BS2	QC	07/23/2012 15:10	30	10	1200902		250	250		PCB
L207137-MS1	QC	07/23/2012 15:10	31.64	10	1200903	1207048-01	250	250		PEST
L207137-MS2	QC	07/23/2012 15:10	30.18	10	1200902	1207048-01	250	250		PCB
L207137-MSD1	QC	07/23/2012 15:10	30	10	1200903	1207048-01	250	250		PEST
L207137-MSD2	QC	07/23/2012 15:10	30	10	1200902	1207048-01	250	250		PCB

Sdeared 07.24.12
Cu lot# G16W031

S.A 7/24/12 1316
Extracts Relinquished By Date

S Shah 07.24.12 13:20
Extracts Received By Date

PAHs

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/27/2012 09:24

Analytical Report for Polynuclear Aromatic Compounds by SW846 8310

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
J1PVL2	1207048-01	Soil	07/18/2012 12:30	07/20/2012 10:00
J1PVL3	1207048-02	Soil	07/18/2012 12:20	07/20/2012 10:00
J1PVL4	1207048-03	Soil	07/18/2012 12:10	07/20/2012 10:00
J1PVL5	1207048-04	Soil	07/18/2012 11:50	07/20/2012 10:00
J1PVL6	1207048-05	Soil	07/18/2012 10:40	07/20/2012 10:00
J1PVL7	1207048-06	Soil	07/18/2012 10:25	07/20/2012 10:00
J1PVL8	1207048-07	Soil	07/18/2012 10:10	07/20/2012 10:00
J1PVL9	1207048-08	Soil	07/18/2012 10:00	07/20/2012 10:00
J1PVM0	1207048-09	Soil	07/18/2012 09:50	07/20/2012 10:00
J1PVM1	1207048-10	Soil	07/18/2012 09:35	07/20/2012 10:00
J1PVM2	1207048-11	Soil	07/18/2012 09:20	07/20/2012 10:00
J1PVM3	1207048-12	Soil	07/18/2012 08:55	07/20/2012 10:00
J1PVM4	1207048-13	Soil	07/18/2012 12:30	07/20/2012 10:00

LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

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

Case Narrative

Client: WC-HANFORD RC-075 KP0114
LVL #: 1207048

W.O. #: 60049-001-001-0001-00
Date Received: 07-20-2012

POLYNUCLEAR AROMATIC HYDROCARBONS (PAH)

Thirteen (13) soil samples were collected on 07-18-2012.

The samples and associated QC samples were extracted 07-20-2012 and analyzed 07-26-2012 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 8310.

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. One (1) of sixteen (16) blank spike recoveries was outside acceptance criteria. A copy of the Sample Discrepancy Report (SDR#12GC120) has been enclosed.

6. Two (2) of thirty-two (32) matrix spike recoveries were outside acceptance criteria. A copy of the Sample Discrepancy Report (SDR#12GC120) has been enclosed.

7. All initial calibrations associated with this data set were within acceptance criteria.

8. All continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.

9. The samples were reported on a dry weight basis.

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.

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

Iain Daniels
LvL Laboratory Manager

7/27/12
Date

Lionville Laboratory Sample Discrepancy Report (SDR)

SDR #: 126C120

Initiator: Robert Carden
Date: 7/27/12
Client: WC Hanford RC 075 KP0114

Batch: 1207048
Samples: MS/MSD/BS
Method: SW846/MCAWW/CLP/

Parameter: PAH
Matrix: Soil
Prep Batch: L207122

1. Reason for SDR

a. COC Discrepancy __ Tech Profile Error __ Client Request __ Sampler Error on C-O-C __ Transcription Error __ Wrong Test Code __ Other _____

b. General Discrepancy

__ Missing Sample/Extract* __ Container Broken __ Wrong Sample Pulled __ Label ID's Illegible
__ Hold Time Exceeded __ Insufficient Sample* __ Preservation Wrong __ Received Past Hold
__ Improper Bottle Type __ Not Amenable to Analysis

Note*: Verified by [Log-In] or [Prep Group] (circle)...signature/date: _____

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

Spike recovery for naphthalene above QC acceptance criteria MS/MSD/BS. Sample results may be biased high

2. Known or Probable Causes(s)

Possible spike mixture has elevated Naphthalene.

3. Discussion and Proposed Action

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

Other Description:

Positive bias does not impact the data since all samples are well below client required detection limit of 100µg/Kg Narrate ID.

4. Project Manager Instructions...signature/date: 7/27/12

__ Concur with Proposed Action
__ Disagree with Proposed Action; See Instruction
✓ Include in Case Narrative
__ Client Contacted:
Date/Person _____
__ Add
__ Cancel

5. Final Action...signature/date: 7/27/12

Other Explanation:

__ Verified re-[log][leach][extract][digest][analysis] (circle)
✓ Included in Case Narrative
__ Hard Copy COC Revised
__ Electronic COC Revised
__ EDD Corrections Completed

When Final Action has been recorded, forward original to QA for diposition.

Route
__ Lab Manager: Daniels
__ Project Mgr (circle): Johnson / Stone
__ Sample Prep (circle): Ford
__ Log-in: King

Route
__ Metals: Welsh / _____
__ Inorganic: Perrone / _____
__ GC/LC: Carey / _____
__ MS VOA: Rubino / _____
__ MS BNA: Carden / _____
__ Other: _____

QA-139-A-0208

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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Exton, PA 19341
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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/27/2012 09:24

J1PVL2
1207048-01 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polynuclear Aromatic Compounds by SW846 8310									
Naphthalene	**2.99**	J	3.51	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthylene	3.51	U	3.51	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthene	**7.38**		3.51	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluorene	3.51	U	3.51	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Phenanthrene	**1.39**	J	3.51	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Anthracene	3.51	U	3.51	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluoranthene	**5.97**		3.51	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Indeno[1,2,3-cd]pyrene	**3.48**	J	3.51	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Pyrene	**3.86**		3.51	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benz[a]anthracene	**3.30**	J	3.51	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Chrysene	**3.30**	J	3.51	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[b] fluoranthene	**2.56**	J	3.51	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[k] fluoranthene	**1.07**	J	3.51	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[a] pyrene	**2.13**	J	3.51	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Dibenz[a,h]anthracene	3.51	U	3.51	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[g,h,i] perylene	**2.63**	J	3.51	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Surrogate: Triphenylene	*89 %*		*68-129*			*L207122*	*07/20/2012*	*07/26/2012*	*8310*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/27/2012 09:24

J1PVL3
1207048-02 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polynuclear Aromatic Compounds by SW846 8310									
Naphthalene	**7.20**		3.20	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthylene	**2.66**	J	3.20	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthene	3.20	U	3.20	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluorene	3.20	U	3.20	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Phenanthrene	**5.41**		3.20	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Anthracene	3.20	U	3.20	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluoranthene	**16.8**		3.20	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Indeno[1,2,3-cd]pyrene	**6.10**		3.20	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Pyrene	**13.4**		3.20	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benz[a]anthracene	**8.05**		3.20	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Chrysene	**7.68**		3.20	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[b] fluoranthene	**5.14**		3.20	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[k] fluoranthene	**3.01**	J	3.20	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[a] pyrene	**5.86**		3.20	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Dibenz[a,h]anthracene	3.20	U	3.20	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[g,h,i] perylene	**8.59**		3.20	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Surrogate: Triphenylene	*89 %*		*68-129*			*L207122*	*07/20/2012*	*07/26/2012*	*8310*

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Phone: 610-280-3000
Fax: 610-280-3041

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 09:24

J1PVL4
1207048-03 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polynuclear Aromatic Compounds by SW846 8310									
Naphthalene	**9.47**		3.43	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthylene	3.43	U	3.43	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthene	**6.73**		3.43	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluorene	3.43	U	3.43	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Phenanthrene	**3.74**		3.43	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Anthracene	3.43	U	3.43	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluoranthene	**8.27**		3.43	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Indeno[1,2,3-cd]pyrene	**5.78**		3.43	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Pyrene	**5.85**		3.43	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benz[a]anthracene	**3.23**	J	3.43	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Chrysene	**3.84**		3.43	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[b] fluoranthene	**2.59**	J	3.43	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[k] fluoranthene	**1.41**	J	3.43	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[a] pyrene	**2.51**	J	3.43	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Dibenz[a,h]anthracene	3.43	U	3.43	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[g,h,i] perylene	**2.97**	J	3.43	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Surrogate: Triphenylene	*77 %*		*68-129*			*L207122*	*07/20/2012*	*07/26/2012*	*8310*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 09:24

J1PVL5
1207048-04 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polynuclear Aromatic Compounds by SW846 8310									
Naphthalene	**2.52**	J	3.40	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthylene	**1.60**	J	3.40	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthene	3.40	U	3.40	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluorene	3.40	U	3.40	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Phenanthrene	3.40	U	3.40	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Anthracene	3.40	U	3.40	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluoranthene	**4.80**		3.40	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Indeno[1,2,3-cd]pyrene	**7.36**		3.40	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Pyrene	3.40	U	3.40	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benz[a]anthracene	3.40	U	3.40	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Chrysene	3.40	U	3.40	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[b] fluoranthene	3.40	U	3.40	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[k] fluoranthene	3.40	U	3.40	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[a] pyrene	3.40	U	3.40	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Dibenz[a,h]anthracene	3.40	U	3.40	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[g,h,i] perylene	3.40	U	3.40	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Surrogate: Triphenylene	*86 %*		*68-129*			*L207122*	*07/20/2012*	*07/26/2012*	*8310*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 09:24

J1PVL6
1207048-05 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polynuclear Aromatic Compounds by SW846 8310									
Naphthalene	**2.25**	J	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthylene	**1.87**	J	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluorene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Phenanthrene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Anthracene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluoranthene	**7.07**		3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Indeno[1,2,3-cd]pyrene	**7.25**		3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Pyrene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benz[a]anthracene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Chrysene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[b] fluoranthene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[k] fluoranthene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[a] pyrene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Dibenz[a,h]anthracene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[g,h,i] perylene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Surrogate: Triphenylene	*87 %*		*68-129*			*L207122*	*07/20/2012*	*07/26/2012*	*8310*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/27/2012 09:24

J1PVL7
1207048-06 (Soil)

Lionville Laboratory

Polynuclear Aromatic Compounds by SW846 8310

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Naphthalene	**3.53**		3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthylene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluorene	**1.14**	J	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Phenanthrene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Anthracene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluoranthene	**11.4**		3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Indeno[1,2,3-cd]pyrene	**7.54**		3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Pyrene	**0.905**	J	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benz[a]anthracene	**1.09**	J	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Chrysene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[b] fluoranthene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[k] fluoranthene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[a] pyrene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Dibenz[a,h]anthracene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[g,h,i] perylene	**1.22**	J	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Surrogate: Triphenylene	*84 %*		*68-129*			*L207122*	*07/20/2012*	*07/26/2012*	*8310*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/27/2012 09:24

J1PVL8

1207048-07 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polynuclear Aromatic Compounds by SW846 8310									
Naphthalene	**2.80**	J	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthylene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluorene	**0.917**	J	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Phenanthrene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Anthracene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluoranthene	**4.24**		3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Indeno[1,2,3-cd]pyrene	**9.78**		3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Pyrene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benz[a]anthracene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Chrysene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[b] fluoranthene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[k] fluoranthene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[a] pyrene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Dibenz[a,h]anthracene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[g,h,i] perylene	3.46	U	3.46	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Surrogate: Triphenylene	*83 %*		*68-129*			*L207122*	*07/20/2012*	*07/26/2012*	*8310*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 09:24

J1PVL9

1207048-08 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polynuclear Aromatic Compounds by SW846 8310									
Naphthalene	**2.32**	J	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthylene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluorene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Phenanthrene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Anthracene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluoranthene	**3.09**	J	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Indeno[1,2,3-cd]pyrene	**7.08**		3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Pyrene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benz[a]anthracene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Chrysene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[b] fluoranthene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[k] fluoranthene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[a] pyrene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Dibenz[a,h]anthracene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[g,h,i] perylene	3.35	U	3.35	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Surrogate: Triphenylene	*83 %*		*68-129*			*L207122*	*07/20/2012*	*07/26/2012*	*8310*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 09:24

J1PVM0

1207048-09 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polynuclear Aromatic Compounds by SW846 8310									
Naphthalene	**1.09**	J	3.44	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthylene	3.44	U	3.44	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthene	3.44	U	3.44	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluorene	**1.48**	J	3.44	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Phenanthrene	3.44	U	3.44	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Anthracene	3.44	U	3.44	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluoranthene	**5.98**		3.44	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Indeno[1,2,3-cd]pyrene	**7.34**		3.44	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Pyrene	3.44	U	3.44	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benz[a]anthracene	3.44	U	3.44	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Chrysene	3.44	U	3.44	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[b] fluoranthene	3.44	U	3.44	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[k] fluoranthene	3.44	U	3.44	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[a] pyrene	3.44	U	3.44	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Dibenz[a,h]anthracene	3.44	U	3.44	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[g,h,i] perylene	3.44	U	3.44	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Surrogate: Triphenylene	*77 %*		*68-129*			*L207122*	*07/20/2012*	*07/26/2012*	*8310*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/27/2012 09:24

J1PVM1
1207048-10 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polynuclear Aromatic Compounds by SW846 8310									
Naphthalene	**2.07**	J	3.53	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthylene	3.53	U	3.53	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthene	**8.01**		3.53	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluorene	3.53	U	3.53	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Phenanthrene	3.53	U	3.53	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Anthracene	3.53	U	3.53	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluoranthene	**3.38**	J	3.53	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Indeno[1,2,3-cd]pyrene	**4.10**		3.53	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Pyrene	**2.90**	J	3.53	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benz[a]anthracene	**3.41**	J	3.53	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Chrysene	**3.98**		3.53	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[b] fluoranthene	**1.42**	J	3.53	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[k] fluoranthene	3.53	U	3.53	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[a] pyrene	**2.19**	J	3.53	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Dibenz[a,h]anthracene	3.53	U	3.53	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[g,h,i] perylene	**1.19**	J	3.53	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Surrogate: Triphenylene	*93 %*		*68-129*			*L207122*	*07/20/2012*	*07/26/2012*	*8310*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/27/2012 09:24

J1PVM2
1207048-11 (Soil)

Lionville Laboratory

Polynuclear Aromatic Compounds by SW846 8310

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Naphthalene	**1.38**	J	3.95	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthylene	3.95	U	3.95	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthene	3.95	U	3.95	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluorene	**2.00**	J	3.95	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Phenanthrene	3.95	U	3.95	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Anthracene	3.95	U	3.95	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluoranthene	3.95	U	3.95	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Indeno[1,2,3-cd]pyrene	**13.1**		3.95	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Pyrene	3.95	U	3.95	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benz[a]anthracene	3.95	U	3.95	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Chrysene	3.95	U	3.95	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[b] fluoranthene	3.95	U	3.95	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[k] fluoranthene	3.95	U	3.95	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[a] pyrene	3.95	U	3.95	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Dibenz[a,h]anthracene	3.95	U	3.95	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[g,h,i] perylene	3.95	U	3.95	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Surrogate: Triphenylene	*88 %*		*68-129*			*L207122*	*07/20/2012*	*07/26/2012*	*8310*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/27/2012 09:24

J1PVM3
1207048-12 (Soil)

Lionville Laboratory

Polynuclear Aromatic Compounds by SW846 8310

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Naphthalene	**1.27**	J	4.14	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthylene	4.14	U	4.14	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthene	4.14	U	4.14	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluorene	4.14	U	4.14	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Phenanthrene	4.14	U	4.14	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Anthracene	4.14	U	4.14	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluoranthene	**2.70**	J	4.14	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Indeno[1,2,3-cd]pyrene	**1.64**	J	4.14	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Pyrene	**1.95**	J	4.14	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benz[a]anthracene	**2.47**	J	4.14	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Chrysene	**2.38**	J	4.14	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[b] fluoranthene	**1.41**	J	4.14	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[k] fluoranthene	4.14	U	4.14	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[a] pyrene	**1.70**	J	4.14	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Dibenz[a,h]anthracene	4.14	U	4.14	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[g,h,i] perylene	**1.31**	J	4.14	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Surrogate: Triphenylene	*87 %*		*68-129*			*L207122*	*07/20/2012*	*07/26/2012*	*8310*

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/27/2012 09:24

J1PVM4
1207048-13 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Polynuclear Aromatic Compounds by SW846 8310									
Naphthalene	**3.74**		3.39	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthylene	3.39	U	3.39	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Acenaphthene	**3.80**		3.39	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluorene	3.39	U	3.39	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Phenanthrene	**0.968**	J	3.39	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Anthracene	3.39	U	3.39	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Fluoranthene	**3.28**	J	3.39	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Indeno[1,2,3-cd]pyrene	**1.88**	J	3.39	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Pyrene	**2.78**	J	3.39	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benz[a]anthracene	**2.02**	J	3.39	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Chrysene	**2.04**	J	3.39	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[b] fluoranthene	**1.46**	J	3.39	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[k] fluoranthene	3.39	U	3.39	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[a] pyrene	**1.17**	J	3.39	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Dibenz[a,h]anthracene	3.39	U	3.39	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Benzo[g,h,i] perylene	**1.65**	J	3.39	ug/kg dry	1	L207122	07/20/2012	07/26/2012	8310
Surrogate: Triphenylene	*84 %*		*68-129*			*L207122*	*07/20/2012*	*07/26/2012*	*8310*

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Phone: 610-280-3000
Fax: 610-280-3041

WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/27/2012 09:24

Polynuclear Aromatic Compounds by SW846 8310 - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L207122 - SW 3540C										
Blank (L207122-BLK1)				Prepared: 07/20/2012 Analyzed: 07/26/2012						
Naphthalene	3.33	U	3.33	ug/kg wet						
Acenaphthylene	3.33	U	3.33	ug/kg wet						
Acenaphthene	3.33	U	3.33	ug/kg wet						
Fluorene	3.33	U	3.33	ug/kg wet						
Phenanthrene	3.33	U	3.33	ug/kg wet						
Anthracene	3.33	U	3.33	ug/kg wet						
Fluoranthene	3.33	U	3.33	ug/kg wet						
Indeno[1,2,3-cd]pyrene	3.33	U	3.33	ug/kg wet						
Pyrene	3.33	U	3.33	ug/kg wet						
Benz[a]anthracene	3.33	U	3.33	ug/kg wet						
Chrysene	3.33	U	3.33	ug/kg wet						
Benzo[b] fluoranthene	3.33	U	3.33	ug/kg wet						
Benzo[k] fluoranthene	3.33	U	3.33	ug/kg wet						
Benzo[a] pyrene	3.33	U	3.33	ug/kg wet						
Dibenz[a,h]anthracene	3.33	U	3.33	ug/kg wet						
Benzo[g,h,i] perylene	3.33	U	3.33	ug/kg wet						
Surrogate: Triphenylene	*156*			*ug/kg wet*	*166.67*		*93*	*68-129*		
LCS (L207122-BS1)				Prepared: 07/20/2012 Analyzed: 07/26/2012						
Naphthalene	485		3.33	ug/kg wet	166.67		291*	0-127		
Acenaphthylene	124		3.33	ug/kg wet	166.67		74	50-140		
Acenaphthene	125		3.33	ug/kg wet	166.67		75	17-139		
Fluorene	130		3.33	ug/kg wet	166.67		78	28-145		
Phenanthrene	132		3.33	ug/kg wet	166.67		79	30-152		
Anthracene	35.6		3.33	ug/kg wet	166.67		21	19-171		
Fluoranthene	138		3.33	ug/kg wet	166.67		83	34-159		
Indeno[1,2,3-cd]pyrene	132		3.33	ug/kg wet	166.67		79	31-156		
Pyrene	131		3.33	ug/kg wet	166.67		79	33-152		
Benz[a]anthracene	124		3.33	ug/kg wet	166.67		74	32-157		
Chrysene	135		3.33	ug/kg wet	166.67		81	31-159		
Benzo[b] fluoranthene	137		3.33	ug/kg wet	166.67		82	33-164		
Benzo[k] fluoranthene	135		3.33	ug/kg wet	166.67		81	28-161		
Benzo[a] pyrene	106		3.33	ug/kg wet	166.67		63	29-149		
Dibenz[a,h]anthracene	125		3.33	ug/kg wet	166.67		75	27-153		
Benzo[g,h,i] perylene	123		3.33	ug/kg wet	166.67		74	32-157		
Surrogate: Triphenylene	*141*			*ug/kg wet*	*166.67*		*84*	*68-129*		

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 09:24

Polynuclear Aromatic Compounds by SW846 8310 - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L207122 - SW 3540C									
Matrix Spike (L207122-MS1)		**Source: 1207048-01**	Prepared: 07/20/2012 Analyzed: 07/26/2012						
Naphthalene	412	3.38	ug/kg dry	169.32	2.99	241*	0-127		
Acenaphthylene	127	3.38	ug/kg dry	169.32	3.51 U	75	50-140		
Acenaphthene	158	3.38	ug/kg dry	169.32	7.38	89	17-139		
Fluorene	134	3.38	ug/kg dry	169.32	3.51 U	79	28-145		
Phenanthrene	135	3.38	ug/kg dry	169.32	1.39	79	30-152		
Anthracene	36.9	3.38	ug/kg dry	169.32	3.51 U	22	19-171		
Fluoranthene	145	3.38	ug/kg dry	169.32	5.97	82	34-159		
Indeno[1,2,3-cd]pyrene	133	3.38	ug/kg dry	169.32	3.48	76	31-156		
Pyrene	134	3.38	ug/kg dry	169.32	3.86	77	33-152		
Benz[a]anthracene	132	3.38	ug/kg dry	169.32	3.30	76	32-157		
Chrysene	137	3.38	ug/kg dry	169.32	3.30	79	31-159		
Benzo[b] fluoranthene	146	3.38	ug/kg dry	169.32	2.56	84	33-164		
Benzo[k] fluoranthene	135	3.38	ug/kg dry	169.32	1.07	79	28-161		
Benzo[a] pyrene	109	3.38	ug/kg dry	169.32	2.13	63	29-149		
Dibenz[a,h]anthracene	124	3.38	ug/kg dry	169.32	3.51 U	73	27-153		
Benzo[g,h,i] perylene	125	3.38	ug/kg dry	169.32	2.63	72	32-157		
Surrogate: Triphenylene	*144*		*ug/kg dry*	*169.32*		*85*	*68-129*		
Matrix Spike Dup (L207122-MSD1)		**Source: 1207048-01**	Prepared: 07/20/2012 Analyzed: 07/26/2012						
Naphthalene	415	3.38	ug/kg dry	169.10	2.99	244*	0-127	0.9	40
Acenaphthylene	131	3.38	ug/kg dry	169.10	3.51 U	77	50-140	3	40
Acenaphthene	129	3.38	ug/kg dry	169.10	7.38	72	17-139	22	40
Fluorene	131	3.38	ug/kg dry	169.10	3.51 U	78	28-145	2	40
Phenanthrene	139	3.38	ug/kg dry	169.10	1.39	81	30-152	3	40
Anthracene	36.9	3.38	ug/kg dry	169.10	3.51 U	22	19-171	0.00004	40
Fluoranthene	145	3.38	ug/kg dry	169.10	5.97	82	34-159	0.09	40
Indeno[1,2,3-cd]pyrene	136	3.38	ug/kg dry	169.10	3.48	78	31-156	3	40
Pyrene	138	3.38	ug/kg dry	169.10	3.86	80	33-152	3	40
Benz[a]anthracene	128	3.38	ug/kg dry	169.10	3.30	74	32-157	3	40
Chrysene	142	3.38	ug/kg dry	169.10	3.30	82	31-159	4	40
Benzo[b] fluoranthene	150	3.38	ug/kg dry	169.10	2.56	87	33-164	3	40
Benzo[k] fluoranthene	139	3.38	ug/kg dry	169.10	1.07	82	28-161	3	40
Benzo[a] pyrene	110	3.38	ug/kg dry	169.10	2.13	64	29-149	2	40
Dibenz[a,h]anthracene	127	3.38	ug/kg dry	169.10	3.51 U	75	27-153	2	40
Benzo[g,h,i] perylene	129	3.38	ug/kg dry	169.10	2.63	74	32-157	3	40
Surrogate: Triphenylene	*147*		*ug/kg dry*	*169.10*		*87*	*68-129*		

PREPARATION BENCH SHEET

L207122

Lionville Laboratory

Printed: 7/23/2012 2:12:37PM

Matrix: Solid **Prepared using: HPLC - SW 3540C** **Surrogate used: 1200612**

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
1207048-01	8310 PAH	07/20/2012 16:00	30.17	5				50	WC-Hanford, Inc.	
1207048-02	8310 PAH	07/20/2012 16:00	31.73	5				50	WC-Hanford, Inc.	
1207048-03	8310 PAH	07/20/2012 16:00	30.29	5				50	WC-Hanford, Inc.	
1207048-04	8310 PAH	07/20/2012 16:00	30.45	5				50	WC-Hanford, Inc.	
1207048-05	8310 PAH	07/20/2012 16:00	30.23	5				50	WC-Hanford, Inc.	
1207048-06	8310 PAH	07/20/2012 16:00	30.99	5				50	WC-Hanford, Inc.	
1207048-07	8310 PAH	07/20/2012 16:00	30	5				50	WC-Hanford, Inc.	
1207048-08	8310 PAH	07/20/2012 16:00	30.5	5				50	WC-Hanford, Inc.	
1207048-09	8310 PAH	07/20/2012 16:00	30.3	5				50	WC-Hanford, Inc.	
1207048-10	8310 PAH	07/20/2012 16:00	31.04	5				50	WC-Hanford, Inc.	
1207048-11	8310 PAH	07/20/2012 16:00	30.18	5				50	WC-Hanford, Inc.	
1207048-12	8310 PAH	07/20/2012 16:00	30.14	5				50	WC-Hanford, Inc.	
1207048-13	8310 PAH	07/20/2012 16:00	30.31	5				50	WC-Hanford, Inc.	
L207122-BLK1	QC	07/20/2012 16:00	30	5				50		
L207122-BS1	QC	07/20/2012 16:00	30	5	1200436		50	50		
L207122-MS1	QC	07/20/2012 16:00	31.3	5	1200436	1207048-01	50	50		
L207122-MSD1	QC	07/20/2012 16:00	31.34	5	1200436	1207048-01	50	50		

Extracts Relinquished By 7/23/12 Date 1430 SA

Extracts Received By 07.23.12 Date 14:3

METALS

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-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 07:52

Analytical Report for Metals by SW846 6000/7000 series

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
J1PVL2	1207048-01	Soil	07/18/2012 12:30	07/20/2012 10:00
J1PVL3	1207048-02	Soil	07/18/2012 12:20	07/20/2012 10:00
J1PVL4	1207048-03	Soil	07/18/2012 12:10	07/20/2012 10:00
J1PVL5	1207048-04	Soil	07/18/2012 11:50	07/20/2012 10:00
J1PVL6	1207048-05	Soil	07/18/2012 10:40	07/20/2012 10:00
J1PVL7	1207048-06	Soil	07/18/2012 10:25	07/20/2012 10:00
J1PVL8	1207048-07	Soil	07/18/2012 10:10	07/20/2012 10:00
J1PVL9	1207048-08	Soil	07/18/2012 10:00	07/20/2012 10:00
J1PVM0	1207048-09	Soil	07/18/2012 09:50	07/20/2012 10:00
J1PVM1	1207048-10	Soil	07/18/2012 09:35	07/20/2012 10:00
J1PVM2	1207048-11	Soil	07/18/2012 09:20	07/20/2012 10:00
J1PVM3	1207048-12	Soil	07/18/2012 08:55	07/20/2012 10:00
J1PVM4	1207048-13	Soil	07/18/2012 12:30	07/20/2012 10:00
J1PVM5	1207048-14	Soil	07/18/2012 12:30	07/20/2012 10:00

LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

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

Case Narrative

Client: WC-HANFORD RC-075
LVL#: 1207048
SDG/SAF#: KP0114/RC-075

W.O.#: 60049-001-001-0001-00
Date Received: 07-20-12

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 14 soil samples.

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

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. All preparation/method blanks (MB) were within method criteria {less than the Limit of Quantitation, samples were 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 11 analytes were outside the 75-125% control limits.

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

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.

following analytes:

Sample ID	Element	PDS Concentration (ppb)	PDS % Recovery
J1PVL2	Aluminum	22,000	80.1
	Antimony	100	86.2
	Boron	100	90.1
	Calcium	20,800	91.2
	Chromium	100	89.8
	Copper	100	90.0
	Iron	42,000	55.2
	Lead	100	83.4
	Manganese*	0	0
	Nickel	100	83.1
	Silicon	2,600	137.7

* The PDS for Manganese was inadvertently not spiked.

12. The duplicate analyses for 1 analtye was outside the 20% Relative Percent Difference (RPD) control limit criteria. The ± 20% RPD control limit applies to sample results greater 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

7/27/12
Date

rgc/07-048hg%

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-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 07:52

Notes and Definitions

U	Analyte included in the analysis, but not detected
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
B	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag)
*	Value outside QC acceptance criteria
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
wet	Sample results reported on a wet weight basis
RPD	Relative Percent Difference

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 07:52

J1PVL2
1207048-01 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	**5960**		4.49	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Antimony	0.539	U	0.539	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Arsenic	**1.99**		0.898	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Barium	**46.1**		0.449	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Beryllium	**0.195**		0.180	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Boron	**0.897**		1.80	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cadmium	**0.0705**		0.180	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Calcium	**6670**		89.8	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Chromium	**11.1**		0.180	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cobalt	**5.50**		1.80	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Copper	**12.2**		0.898	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Iron	**16900**		18.0	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Lead	**2.60**		0.449	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Magnesium	**3990**		67.4	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Manganese	**235**		4.49	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Molybdenum	1.80	U	1.80	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Nickel	**10.5**		3.59	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Potassium	**858**		359	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Selenium	0.269	U	0.269	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silicon	**496**		1.80	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silver	0.180	U	0.180	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Sodium	**324**		44.9	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Vanadium	**44.4**		2.25	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Zinc	**32.4**		8.98	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Mercury	0.0258	U	0.0258	mg/kg dry	1	L207131	07/23/2012	07/24/2012	7471A

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

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 07:52

J1PVL3
1207048-02 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	**6750**		4.62	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Antimony	0.554	U	0.554	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Arsenic	**2.61**		0.923	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Barium	**58.6**		0.462	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Beryllium	**0.237**		0.185	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Boron	**1.30**		1.85	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cadmium	**0.0920**		0.185	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Calcium	**7680**		92.3	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Chromium	**10.3**		0.185	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cobalt	**5.85**		1.85	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Copper	**12.1**		0.923	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Iron	**17900**		18.5	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Lead	**3.16**		0.462	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Magnesium	**4170**		69.2	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Manganese	**253**		4.62	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Molybdenum	**0.363**		1.85	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Nickel	**10.5**		3.69	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Potassium	**1040**		369	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Selenium	0.277	U	0.277	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silicon	**655**		1.85	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silver	0.185	U	0.185	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Sodium	**328**		46.2	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Vanadium	**46.9**		2.31	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Zinc	**36.2**		9.23	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Mercury	0.0261	U	0.0261	mg/kg dry	1	L207131	07/23/2012	07/24/2012	7471A

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

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 07:52

J1PVL4
1207048-03 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	**6230**		4.48	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Antimony	0.538	U	0.538	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Arsenic	**2.45**		0.896	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Barium	**56.6**		0.448	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Beryllium	**0.240**		0.179	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Boron	**1.43**		1.79	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cadmium	**0.0859**		0.179	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Calcium	**8230**		89.6	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Chromium	**9.19**		0.179	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cobalt	**5.58**		1.79	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Copper	**12.5**		0.896	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Iron	**18500**		17.9	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Lead	**3.38**		0.448	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Magnesium	**3830**		67.2	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Manganese	**247**		4.48	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Molybdenum	**0.257**		1.79	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Nickel	**8.50**		3.59	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Potassium	**1080**		359	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Selenium	0.269	U	0.269	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silicon	**838**		1.79	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silver	0.179	U	0.179	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Sodium	**318**		44.8	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Vanadium	**47.9**		2.24	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Zinc	**37.4**		8.96	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Mercury	0.0260	U	0.0260	mg/kg dry	1	L207131	07/23/2012	07/24/2012	7471A

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Exton, PA 19341
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Fax: 610-280-3041

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 07:52

J1PVL5
1207048-04 (Soil)

Lionville Laboratory

Metals by SW846 6000/7000 series

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Aluminum	**7990**		4.99	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Antimony	0.599	U	0.599	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Arsenic	**2.75**		0.998	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Barium	**65.9**		0.499	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Beryllium	**0.313**		0.200	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Boron	**1.33**		2.00	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cadmium	**0.116**		0.200	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Calcium	**7740**		99.8	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Chromium	**10.1**		0.200	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cobalt	**6.82**		2.00	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Copper	**15.2**		0.998	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Iron	**20300**		20.0	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Lead	**4.08**		0.499	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Magnesium	**4490**		74.8	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Manganese	**285**		4.99	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Molybdenum	**0.359**		2.00	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Nickel	**8.67**		3.99	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Potassium	**1100**		399	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Selenium	0.299	U	0.299	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silicon	**575**		2.00	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silver	0.200	U	0.200	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Sodium	**341**		49.9	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Vanadium	**47.7**		2.49	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Zinc	**44.0**		9.98	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Mercury	**0.0235**	B	0.0275	mg/kg dry	1	L207131	07/23/2012	07/24/2012	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 07:52

J1PVL6
1207048-05 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	**8240**		4.44	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Antimony	0.533	U	0.533	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Arsenic	**2.87**		0.888	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Barium	**65.1**		0.444	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Beryllium	**0.310**		0.178	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Boron	**1.42**		1.78	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cadmium	**0.113**		0.178	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Calcium	**9450**		88.8	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Chromium	**10.8**		0.178	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cobalt	**6.14**		1.78	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Copper	**14.5**		0.888	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Iron	**18800**		17.8	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Lead	**4.25**		0.444	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Magnesium	**4500**		66.6	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Manganese	**252**		4.44	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Molybdenum	**0.238**		1.78	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Nickel	**8.85**		3.55	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Potassium	**1120**		355	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Selenium	0.266	U	0.266	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silicon	**478**		1.78	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silver	0.178	U	0.178	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Sodium	**402**		44.4	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Vanadium	**47.6**		2.22	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Zinc	**43.7**		8.88	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Mercury	**0.0223**	B	0.0262	mg/kg dry	1	L207131	07/23/2012	07/24/2012	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 07:52

J1PVL7
1207048-06 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	**6380**		4.63	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Antimony	0.556	U	0.556	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Arsenic	**2.00**		0.927	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Barium	**58.7**		0.463	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Beryllium	**0.264**		0.185	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Boron	**1.54**		1.85	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cadmium	**0.109**		0.185	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Calcium	**7260**		92.7	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Chromium	**8.35**		0.185	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cobalt	**6.37**		1.85	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Copper	**12.8**		0.927	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Iron	**20000**		18.5	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Lead	**3.29**		0.463	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Magnesium	**4090**		69.5	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Manganese	**264**		4.63	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Molybdenum	**0.231**		1.85	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Nickel	**7.70**		3.71	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Potassium	**1020**		371	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Selenium	0.278	U	0.278	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silicon	**556**		1.85	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silver	0.185	U	0.185	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Sodium	**305**		46.3	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Vanadium	**53.5**		2.32	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Zinc	**44.3**		9.27	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Mercury	0.0275	U	0.0275	mg/kg dry	1	L207131	07/23/2012	07/24/2012	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 07:52

J1PVL8

1207048-07 (Soil)

Lionville Laboratory

Metals by SW846 6000/7000 series

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Aluminum	**7930**		4.64	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Antimony	0.556	U	0.556	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Arsenic	**3.03**		0.927	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Barium	**72.0**		0.464	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Beryllium	**0.308**		0.185	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Boron	**1.56**		1.85	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cadmium	**0.115**		0.185	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Calcium	**7270**		92.7	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Chromium	**12.3**		0.185	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cobalt	**6.47**		1.85	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Copper	**13.5**		0.927	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Iron	**19500**		18.5	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Lead	**3.91**		0.464	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Magnesium	**4610**		69.5	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Manganese	**273**		4.64	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Molybdenum	**0.217**		1.85	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Nickel	**11.5**		3.71	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Potassium	**1320**		371	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Selenium	0.278	U	0.278	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silicon	**531**		1.85	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silver	0.185	U	0.185	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Sodium	**245**		46.4	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Vanadium	**49.1**		2.32	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Zinc	**44.3**		9.27	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Mercury	0.0260	U	0.0260	mg/kg dry	1	L207131	07/23/2012	07/24/2012	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 07:52

J1PVL9
1207048-08 (Soil)

Lionville Laboratory

Metals by SW846 6000/7000 series

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Aluminum	**6330**		4.65	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Antimony	0.558	U	0.558	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Arsenic	**1.94**		0.931	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Barium	**56.3**		0.465	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Beryllium	**0.244**		0.186	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Boron	**1.33**		1.86	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cadmium	**0.0946**		0.186	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Calcium	**6820**		93.1	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Chromium	**7.97**		0.186	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cobalt	**6.33**		1.86	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Copper	**12.7**		0.931	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Iron	**19100**		18.6	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Lead	**3.01**		0.465	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Magnesium	**3930**		69.8	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Manganese	**252**		4.65	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Molybdenum	**0.204**		1.86	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Nickel	**7.22**		3.72	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Potassium	**1100**		372	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Selenium	0.279	U	0.279	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silicon	**630**		1.86	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silver	0.186	U	0.186	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Sodium	**364**		46.5	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Vanadium	**51.5**		2.33	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Zinc	**40.4**		9.31	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Mercury	0.0249	U	0.0249	mg/kg dry	1	L207131	07/23/2012	07/24/2012	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 07:52

J1PVM0
1207048-09 (Soil)

Lionville Laboratory

Metals by SW846 6000/7000 series

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Aluminum	**8170**		4.84	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Antimony	0.580	U	0.580	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Arsenic	**2.69**		0.967	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Barium	**67.3**		0.484	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Beryllium	**0.312**		0.193	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Boron	**1.51**		1.93	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cadmium	**0.109**		0.193	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Calcium	**7620**		96.7	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Chromium	**11.4**		0.193	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cobalt	**6.48**		1.93	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Copper	**14.2**		0.967	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Iron	**18200**		19.3	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Lead	**4.08**		0.484	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Magnesium	**4970**		72.5	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Manganese	**259**		4.84	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Molybdenum	**0.197**		1.93	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Nickel	**10.7**		3.87	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Potassium	**1200**		387	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Selenium	0.290	U	0.290	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silicon	**463**		1.93	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silver	0.193	U	0.193	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Sodium	**319**		48.4	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Vanadium	**45.1**		2.42	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Zinc	**43.0**		9.67	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Mercury	**0.0187**	B	0.0285	mg/kg dry	1	L207131	07/23/2012	07/24/2012	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 07:52

J1PVM1

1207048-10 (Soil)

Lionville Laboratory

Metals by SW846 6000/7000 series

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Aluminum	**6300**		4.82	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Antimony	0.578	U	0.578	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Arsenic	**2.06**		0.963	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Barium	**56.5**		0.482	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Beryllium	**0.224**		0.193	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Boron	**0.651**		1.93	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cadmium	**0.0752**		0.193	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Calcium	**6500**		96.3	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Chromium	**9.91**		0.193	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cobalt	**6.56**		1.93	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Copper	**11.6**		0.963	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Iron	**18000**		19.3	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Lead	**3.00**		0.482	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Magnesium	**5160**		72.2	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Manganese	**271**		4.82	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Molybdenum	1.93	U	1.93	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Nickel	**13.0**		3.85	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Potassium	**860**		385	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Selenium	0.289	U	0.289	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silicon	**562**		1.93	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silver	0.193	U	0.193	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Sodium	**295**		48.2	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Vanadium	**48.0**		2.41	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Zinc	**37.9**		9.63	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Mercury	0.0260	U	0.0260	mg/kg dry	1	L207131	07/23/2012	07/24/2012	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 07:52

J1PVM2
1207048-11 (Soil)

Lionville Laboratory

Metals by SW846 6000/7000 series

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Aluminum	**7740**		5.06	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Antimony	0.607	U	0.607	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Arsenic	**2.54**		1.01	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Barium	**76.8**		0.506	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Beryllium	**0.317**		0.202	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Boron	**1.92**		2.02	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cadmium	**0.136**		0.202	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Calcium	**5100**		101	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Chromium	**11.3**		0.202	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cobalt	**6.93**		2.02	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Copper	**13.2**		1.01	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Iron	**20100**		20.2	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Lead	**4.09**		0.506	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Magnesium	**4410**		75.8	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Manganese	**282**		5.06	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Molybdenum	2.02	U	2.02	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Nickel	**9.39**		4.04	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Potassium	**1420**		404	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Selenium	0.303	U	0.303	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silicon	**616**		2.02	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silver	0.202	U	0.202	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Sodium	**247**		50.6	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Vanadium	**50.9**		2.53	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Zinc	**45.9**		10.1	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Mercury	0.0298	U	0.0298	mg/kg dry	1	L207131	07/23/2012	07/24/2012	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 07:52

J1PVM3

1207048-12 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	**6070**		5.79	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Antimony	0.695	U	0.695	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Arsenic	**1.98**		1.16	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Barium	**65.8**		0.579	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Beryllium	**0.226**		0.232	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Boron	**0.673**		2.32	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cadmium	**0.106**		0.232	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Calcium	**6900**		116	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Chromium	**9.80**		0.232	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cobalt	**6.99**		2.32	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Copper	**12.8**		1.16	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Iron	**20300**		23.2	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Lead	**3.17**		0.579	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Magnesium	**5110**		86.8	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Manganese	**309**		5.79	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Molybdenum	**0.234**		2.32	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Nickel	**10.8**		4.63	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Potassium	**772**		463	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Selenium	0.347	U	0.347	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silicon	**592**		2.32	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silver	0.232	U	0.232	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Sodium	**316**		57.9	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Vanadium	**59.8**		2.89	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Zinc	**49.2**		11.6	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Mercury	0.0313	U	0.0313	mg/kg dry	1	L207131	07/23/2012	07/24/2012	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 07:52

J1PVM4
1207048-13 (Soil)

Lionville Laboratory

Metals by SW846 6000/7000 series

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Aluminum	**5610**		4.15	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Antimony	0.498	U	0.498	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Arsenic	**2.25**		0.830	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Barium	**51.8**		0.415	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Beryllium	**0.194**		0.166	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Boron	**0.858**		1.66	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cadmium	**0.0857**		0.166	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Calcium	**7050**		83.0	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Chromium	**9.72**		0.166	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cobalt	**5.15**		1.66	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Copper	**10.4**		0.830	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Iron	**15400**		16.6	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Lead	**2.51**		0.415	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Magnesium	**4080**		62.3	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Manganese	**229**		4.15	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Molybdenum	**0.167**		1.66	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Nickel	**8.87**		3.32	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Potassium	**869**		332	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Selenium	0.249	U	0.249	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silicon	**476**		1.66	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silver	0.166	U	0.166	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Sodium	**263**		41.5	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Vanadium	**41.4**		2.08	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Zinc	**32.8**		8.30	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Mercury	0.0265	U	0.0265	mg/kg dry	1	L207131	07/23/2012	07/24/2012	7471A

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Exton, PA 19341
Phone: 610-280-3000
Fax: 610-280-3041

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 07:52

J1PVM5

1207048-14 (Soil)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	**247**		3.79	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Antimony	0.455	U	0.455	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Arsenic	0.758	U	0.758	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Barium	**2.12**		0.379	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Beryllium	0.152	U	0.152	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Boron	1.52	U	1.52	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cadmium	0.152	U	0.152	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Calcium	**39.9**		75.8	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Chromium	0.152	U	0.152	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Cobalt	1.52	U	1.52	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Copper	0.758	U	0.758	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Iron	**316**		15.2	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Lead	**0.422**		0.379	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Magnesium	**30.9**		56.8	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Manganese	**5.62**		3.79	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Molybdenum	1.52	U	1.52	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Nickel	3.03	U	3.03	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Potassium	**55.3**		303	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Selenium	0.227	U	0.227	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silicon	**160**		1.52	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Silver	0.152	U	0.152	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Sodium	**8.64**		37.9	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Vanadium	**0.277**		1.89	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Zinc	**1.39**		7.58	mg/kg dry	1	L207132	07/24/2012	07/24/2012	6010B
Mercury	0.0237	U	0.0237	mg/kg dry	1	L207131	07/23/2012	07/24/2012	7471A

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Exton, PA 19341
Phone: 610-280-3000
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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 07:52

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 L207131 - SW 7471A Prep										
Blank (L207131-BLK1)				Prepared: 07/23/2012 Analyzed: 07/24/2012						
Mercury	0.0281	U	0.0281	mg/kg wet						
Duplicate (L207131-DUP1)		**Source: 1207048-01**		Prepared: 07/23/2012 Analyzed: 07/24/2012						
Mercury	0.0251	U	0.0251	mg/kg dry		0.0258 U				20
Matrix Spike (L207131-MS1)		**Source: 1207048-01**		Prepared: 07/23/2012 Analyzed: 07/24/2012						
Mercury	0.149		0.0251	mg/kg dry	0.13947	0.0258 U	107	75-125		20
Reference (L207131-SRM1)				Prepared: 07/23/2012 Analyzed: 07/24/2012						
Mercury	1.23		0.0290	mg/kg wet	1.2900		95.3	62.6-138		
Batch L207132 - SW 3050B										
Blank (L207132-BLK1)				Prepared & Analyzed: 07/24/2012						
Aluminum	4.90	U	4.90	mg/kg wet						
Antimony	0.588	U	0.588	mg/kg wet						
Arsenic	0.980	U	0.980	mg/kg wet						
Barium	0.490	U	0.490	mg/kg wet						
Beryllium	0.196	U	0.196	mg/kg wet						
Boron	1.96	U	1.96	mg/kg wet						
Cadmium	0.196	U	0.196	mg/kg wet						
Calcium	7.86		98.0	mg/kg wet						
Chromium	0.196	U	0.196	mg/kg wet						
Cobalt	1.96	U	1.96	mg/kg wet						
Copper	0.980	U	0.980	mg/kg wet						
Iron	19.6	U	19.6	mg/kg wet						
Lead	0.490	U	0.490	mg/kg wet						
Magnesium	73.5	U	73.5	mg/kg wet						
Manganese	4.90	U	4.90	mg/kg wet						
Molybdenum	1.96	U	1.96	mg/kg wet						
Nickel	3.92	U	3.92	mg/kg wet						
Potassium	392	U	392	mg/kg wet						
Selenium	0.294	U	0.294	mg/kg wet						
Silicon	1.96	U	1.96	mg/kg wet						
Silver	0.196	U	0.196	mg/kg wet						
Sodium	49.0	U	49.0	mg/kg wet						
Vanadium	2.45	U	2.45	mg/kg wet						
Zinc	9.80	U	9.80	mg/kg wet						

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Exton, PA 19341
Phone: 610-280-3000
Fax: 610-280-3041

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 07:52

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 L207132 - SW 3050B										
Duplicate (L207132-DUP1)		**Source: 1207048-01**		Prepared & Analyzed: 07/24/2012						
Aluminum	6020		4.82	mg/kg dry		5960			0.965	20
Antimony	0.578	U	0.578	mg/kg dry		0.539 U				20
Arsenic	2.31		0.964	mg/kg dry		1.99			15.1	20
Barium	61.5		0.482	mg/kg dry		46.1			28.6*	20
Beryllium	0.208		0.193	mg/kg dry		0.195			6.46	20
Boron	0.991		1.93	mg/kg dry		0.897			9.87	20
Cadmium	0.0850		0.193	mg/kg dry		0.0705			18.6	20
Calcium	6690		96.4	mg/kg dry		6670			0.390	20
Chromium	10.4		0.193	mg/kg dry		11.1			6.78	20
Cobalt	5.75		1.93	mg/kg dry		5.50			4.44	20
Copper	12.0		0.964	mg/kg dry		12.2			1.62	20
Iron	19400		19.3	mg/kg dry		16900			13.6	20
Lead	2.75		0.482	mg/kg dry		2.60			5.42	20
Magnesium	4210		72.3	mg/kg dry		3990			5.50	20
Manganese	266		4.82	mg/kg dry		235			12.5	20
Molybdenum	0.210		1.93	mg/kg dry		1.80 U				20
Nickel	9.46		3.85	mg/kg dry		10.5			10.9	20
Potassium	861		385	mg/kg dry		858			0.397	20
Selenium	0.289	U	0.289	mg/kg dry		0.269 U				20
Silicon	531		1.93	mg/kg dry		496			6.91	20
Silver	0.193	U	0.193	mg/kg dry		0.180 U				20
Sodium	289		48.2	mg/kg dry		324			11.5	20
Vanadium	51.4		2.41	mg/kg dry		44.4			14.5	20
Zinc	35.3		9.64	mg/kg dry		32.4			8.61	20
Matrix Spike (L207132-MS1)		**Source: 1207048-01**		Prepared & Analyzed: 07/24/2012						
Aluminum	6830		4.42	mg/kg dry	176.66	5960	494*	75-125		
Antimony	13.8		0.530	mg/kg dry	44.164	0.539 U	31.3*	75-125		
Arsenic	142		0.883	mg/kg dry	176.66	1.99	79.3	75-125		
Barium	205		0.442	mg/kg dry	176.66	46.1	89.9	75-125		
Beryllium	3.74		0.177	mg/kg dry	4.4164	0.195	80.3	75-125		
Boron	65.8		1.77	mg/kg dry	88.328	0.897	73.4*	75-125		
Cadmium	3.80		0.177	mg/kg dry	4.4164	0.0705	84.4	75-125		
Calcium	10100		88.3	mg/kg dry	2208.2	6670	156*	75-125		
Chromium	24.4		0.177	mg/kg dry	17.666	11.1	74.9*	75-125		
Cobalt	38.8		1.77	mg/kg dry	44.164	5.50	75.4	75-125		
Copper	27.8		0.883	mg/kg dry	22.082	12.2	70.7*	75-125		

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 07:52

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 L207132 - SW 3050B									
Matrix Spike (L207132-MS1)		**Source: 1207048-01**		Prepared & Analyzed: 07/24/2012					
Iron	17400	17.7	mg/kg dry	88.328	16900	491*	75-125		
Lead	34.6	0.442	mg/kg dry	44.164	2.60	72.5*	75-125		
Magnesium	5920	66.2	mg/kg dry	2208.2	3990	87.4	75-125		
Manganese	311	4.42	mg/kg dry	44.164	235	173*	75-125		
Molybdenum	69.9	1.77	mg/kg dry	88.328	1.80 U	79.1	75-125		
Nickel	42.3	3.53	mg/kg dry	44.164	10.5	71.9*	75-125		
Potassium	2680	353	mg/kg dry	2208.2	858	82.3	75-125		
Selenium	133	0.265	mg/kg dry	176.66	0.269 U	75.4	75-125		
Silicon	650	1.77	mg/kg dry	88.328	496	174*	75-125		
Silver	3.35	0.177	mg/kg dry	4.4164	0.180 U	75.9	75-125		
Sodium	2120	44.2	mg/kg dry	2208.2	324	81.1	75-125		
Vanadium	82.8	2.21	mg/kg dry	44.164	44.4	86.9	75-125		
Zinc	69.4	8.83	mg/kg dry	44.164	32.4	84.0	75-125		
Reference (L207132-SRM1)				Prepared & Analyzed: 07/24/2012					
Aluminum	11000	14.2	mg/kg wet	6670.0		165	0-200.89		
Antimony	50.2	1.70	mg/kg wet	53.000		94.6	0-235.8		
Arsenic	113	2.83	mg/kg wet	114.00		99.2	82.8-117.54		
Barium	295	1.42	mg/kg wet	307.00		96.2	79.8-120.2		
Beryllium	104	0.566	mg/kg wet	108.00		96.0	82.8-117.6		
Boron	79.8	5.66	mg/kg wet	85.100		93.8	67.5-132.8		
Cadmium	219	0.566	mg/kg wet	225.00		97.4	83.6-116.4		
Calcium	3310	283	mg/kg wet	3360.0		98.6	83.3-116.9		
Chromium	83.2	0.566	mg/kg wet	77.200		108	73.3-126.4		
Cobalt	158	5.66	mg/kg wet	166.00		95.4	80.7-118.7		
Copper	259	2.83	mg/kg wet	271.00		95.7	80.8-119.2		
Iron	8280	56.6	mg/kg wet	8420.0		98.3	78.6-121.1		
Lead	177	1.42	mg/kg wet	190.00		93.0	81.6-118.4		
Magnesium	8450	212	mg/kg wet	8570.0		98.5	83.2-116.7		
Manganese	728	14.2	mg/kg wet	965.00		75.5	69.3-130.5		
Molybdenum	236	5.66	mg/kg wet	235.00		100	76.2-123.8		
Nickel	218	11.3	mg/kg wet	221.00		98.6	79.6-120.8		
Potassium	13500	1130	mg/kg wet	14400		94.0	81.9-118.1		
Selenium	187	0.849	mg/kg wet	187.00		100	75.9-124.6		
Silicon	1310	5.66	mg/kg wet	807.00		162	0-219.3		
Silver	79.7	0.566	mg/kg wet	83.500		95.4	82.7-117.1		
Sodium	9000	142	mg/kg wet	9730.0		92.5	82.5-117.2		

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/27/2012 07:52

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 L207132 - SW 3050B									
Reference (L207132-SRM1)			Prepared & Analyzed: 07/24/2012						
Vanadium	103	7.08	mg/kg wet	98.700		104	75.9-123.6		
Zinc	194	28.3	mg/kg wet	199.00		97.3	78.4-121.6		

Lionville Laboratory **Logbook #:** 1128

SAMPLE DIGESTION RECORD

Digestion Batch #: L107132
Date/Time Initiated: 7/23/12 1300
Date/Time Completed: 7/24/12 1245
Analyst: MW
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:
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
1207048-01		0.59	50		TO	fine	brown/sandy	rocks	
1207132-DUP1		0.55	50						
MS1	0.5	0.60	50						
1207048-02		0.55	50			fine	brown/sandy	rocks/veg.	
03		0.58	50			fine	brown/muddy	rocks/veg.	
04		0.52	50			fine	brown/sandy	rocks/veg.	
05		0.54	50			fine	brown/soil	rocks/veg	
06		0.56	50			not fine	brown/soil	small rocks	
07		0.56	50			fine	brown/soil	rocks/veg	
08		0.55	50			fine	brown/soil	veg./small rocks	
09		0.54	50			fine	brown/soil	rocks/veg	
10		0.57	50			not fine	brown/soil	rocks	
11		0.59	50			coarse	brown/muddy	rocks	
12		0.54	50			not fine	brown/sandy mud	rocks	
13		0.62	50			fine	lt. brown/powdery	rocks	
14		0.66	50			not fine	ottawa sand	N/A	
1207132-BLK1		0.51	50			coarse	white boiling chips		
SRM1	A	0.53	50			fine	pink sandy		

MW 7/25/12

Spiking IDs / Expiration Date:
MS#: 1200457

LCS#: 1101357 B

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:
RGT 7/25/12

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Signed\SPI\Metals Digestion log.doc

Page #:

Lionville Laboratory

MERCURY PREPARATION

Analyst: Mikel
Date 7/23/12
Start Time/Temp: 1910/94°
End Time/Temp: 1945/96°

Instrument ID: HG3.1
Balance # B14 /NA
Pipette Calibration (Daily) (Y)

Logbook # 1143
Prep Batch: L207131
Worksheet: HG072401
SOP No. ME-HgCVAA
BLOCK 1 (3) 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 ug/l		0.100		10ml	50	
1.0 ug/l		0.500		10ml	50	
2.0 ug/l		1.000		10ml	50	
5.0 ug/l		2.500		10ml	50	
10.0 ug/l		5.000		10ml	50	
ICV		0.125	2.5	10ml	50	
CCV		0.250	5.0	10ml	50	
ICB/CCB				10ml	50	
L207131-BLK1				0.32	50	
SRM1		(*)	(*)	0.31	50	
1207048-01				0.37	50	
L207131-DUP1				0.38	50	
MS1		0.500	1.0	0.38	50	
1207048-02				0.35	50	
03				0.36	50	
04				0.34	50	
05				0.36	50	
06				0.34	50	
07				0.36	50	
08				0.37	50	
09				0.33	50	
10				0.38	50	
11				0.36	50	
12				0.36	50	
13				0.35	50	
14				0.38	50	

Standard:	ID	Prep Date/Time
ICAL/MS	RI 1200588	7/23/12 1615
ICV/CCV/LCS	(I.V. 1200532)	N/A

Reviewed By/Date: Rom 7/26/12

se book # 1143, pg 1 for std traceability information

Soil LCS True Value = 1.24 mg/Kg
Standard # 1101357 (*)

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

ME-HgCVAA-Prep0910

Page #:

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INORGANICS

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/27/2012 10:34

Analytical Report for Wet Chemistry

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
J1PVL2	1207048-01	Soil	07/18/2012 12:30	07/20/2012 10:00
J1PVL3	1207048-02	Soil	07/18/2012 12:20	07/20/2012 10:00
J1PVL4	1207048-03	Soil	07/18/2012 12:10	07/20/2012 10:00
J1PVL5	1207048-04	Soil	07/18/2012 11:50	07/20/2012 10:00
J1PVL6	1207048-05	Soil	07/18/2012 10:40	07/20/2012 10:00
J1PVL7	1207048-06	Soil	07/18/2012 10:25	07/20/2012 10:00
J1PVL8	1207048-07	Soil	07/18/2012 10:10	07/20/2012 10:00
J1PVL9	1207048-08	Soil	07/18/2012 10:00	07/20/2012 10:00
J1PVM0	1207048-09	Soil	07/18/2012 09:50	07/20/2012 10:00
J1PVM1	1207048-10	Soil	07/18/2012 09:35	07/20/2012 10:00
J1PVM2	1207048-11	Soil	07/18/2012 09:20	07/20/2012 10:00
J1PVM3	1207048-12	Soil	07/18/2012 08:55	07/20/2012 10:00
J1PVM4	1207048-13	Soil	07/18/2012 12:30	07/20/2012 10:00
J1PVM5	1207048-14	Soil	07/18/2012 12:30	07/20/2012 10:00

LIONVILLE LABORATORY
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Exton, Pennsylvania 19341
Phone (610) 280-3000
Fax (610) 280-3041

Case Narrative

Client: WC-HANFORD RC-075 KP0114
LVL#: 1207048 **Date Received:** 07-20-12

INORGANIC NARRATIVE

1. This narrative covers the analyses of 14 soil samples.

2. The samples were prepared and analyzed in accordance with the methods indicated on the data summary report. Results for soil or solid pH are measured in water at 25°C unless otherwise specified.

   Lionville Lab (LvL) is NELAP accredited by the State of Pennsylvania. For a complete list 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.

3. Sample holding times as required by the method and/or contract were met with the exception of Nitrate, Nitrite and Orthophosphate which were analyzed past holding time.

4. The results presented in this report are derived from samples that met LvL's sample acceptance policy with the exceptions noted on the Sample Receipt Checklist.

5. The method blanks were within the method criteria.

6. The Laboratory Control Samples (LCS) were within the laboratory control limits and method criteria.

7. The matrix spike recoveries were within the 75-125% control limits.

8. The replicate analyses were within the 20% Relative Percent Difference (RPD) control limit.

9. Results for soil samples are 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 hard copy package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.

Iain Daniels
Laboratory Manager
Lionville Laboratory

7/27/12
Date

njp\i07-048

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 19 pages.

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/27/2012 10:34

Notes and Definitions

U	Analyte included in the analysis, but not detected
D	Results reported from a dilution; related reporting limits are elevated due to the presence of an interference or a high target value.
B	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
*	Value outside QC acceptance criteria
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
Dry	Sample results reported on a dry weight basis
Wet	Sample results reported on a wet weight basis
RPD	Relative Percent Difference
LOD	Limit of Detection (LOD): the minimum estimated concentration of a target analyte that can be detected reliably. Concentrations at the LOD or between the LOD and LOQ are flagged estimated with either a 'J' qualifier or client-specific qualifier.
LOQ	Limit of Quantitation (LOQ): the minimum concentration of a target analyte that can be quantified reliably

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Fax: 610-280-3041

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 10:34

Wet Chemistry
Lionville Laboratory

Analyte	Result and Qualifier		LOD	LOQ	Units	Dilution	Batch	Prepared	Analyzed	Method
J1PVL2 (1207048-01) Soil										
%Solids	**94.3**			0.1	% by Weight	1	L207136	07/23/2012	07/23/2012	SM2540G
Bromide	1.0	U	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Chloride	1.0	U	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Fluoride	1.0	U	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate	**4.8**	B	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrite	1.0	U	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Orthophosphate	2.1	U	2.1	10.3	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Sulfate	**5.0**	B	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate/Nitrite as N	**1.34**		0.10	0.51	mg/kg dry	1	L207169	07/25/2012	07/26/2012	EPA 353.2
Hexavalent Chromium	0.21	U	0.21	0.53	mg/kg dry	1	L207129	07/23/2012	07/23/2012	SW846 7196A
pH	**9.16**		0.10	0.10	pH Units	1	L207165	07/26/2012	07/26/2012	SW846 9045D
J1PVL3 (1207048-02) Soil										
%Solids	**98.5**			0.1	% by Weight	1	L207136	07/23/2012	07/23/2012	SM2540G
Bromide	1.0	U	1.0	4.9	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Chloride	1.0	U	1.0	4.9	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Fluoride	1.0	U	1.0	4.9	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate	**2.6**	B	1.0	4.9	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrite	1.0	U	1.0	4.9	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Orthophosphate	**3.0**	B	2.0	9.9	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Sulfate	**3.7**	B	1.0	4.9	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate/Nitrite as N	**0.81**		0.10	0.49	mg/kg dry	1	L207169	07/25/2012	07/26/2012	EPA 353.2
Hexavalent Chromium	0.20	U	0.20	0.51	mg/kg dry	1	L207129	07/23/2012	07/23/2012	SW846 7196A
pH	**9.16**		0.10	0.10	pH Units	1	L207165	07/26/2012	07/26/2012	SW846 9045D

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/27/2012 10:34

Wet Chemistry
Lionville Laboratory

Analyte	Result and Qualifier		LOD	LOQ	Units	Dilution	Batch	Prepared	Analyzed	Method
J1PVL4 (1207048-03) Soil										
%Solids	**96.2**			0.1	% by Weight	1	L207136	07/23/2012	07/23/2012	SM2540G
Bromide	1.0	U	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Chloride	**2.2**	B	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Fluoride	1.0	U	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate	**13.2**		1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrite	1.0	U	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Orthophosphate	2.0	U	2.0	10.2	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Sulfate	**37.4**		1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate/Nitrite as N	**3.24**		0.10	0.51	mg/kg dry	1	L207169	07/25/2012	07/26/2012	EPA 353.2
Hexavalent Chromium	0.21	U	0.21	0.52	mg/kg dry	1	L207129	07/23/2012	07/23/2012	SW846 7196A
pH	**9.08**		0.10	0.10	pH Units	1	L207165	07/26/2012	07/26/2012	SW846 9045D
J1PVL5 (1207048-04) Soil										
%Solids	**96.4**			0.1	% by Weight	1	L207136	07/23/2012	07/23/2012	SM2540G
Bromide	1.0	U	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Chloride	**1.4**	B	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Fluoride	1.0	U	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate	**9.1**		1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrite	1.0	U	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Orthophosphate	**2.9**	B	2.0	10.2	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Sulfate	**11.9**		1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate/Nitrite as N	**2.20**		0.10	0.51	mg/kg dry	1	L207169	07/25/2012	07/26/2012	EPA 353.2
Hexavalent Chromium	0.21	U	0.21	0.52	mg/kg dry	1	L207129	07/23/2012	07/23/2012	SW846 7196A
pH	**9.10**		0.10	0.10	pH Units	1	L207165	07/26/2012	07/26/2012	SW846 9045D

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WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/27/2012 10:34

Wet Chemistry
Lionville Laboratory

Analyte	Result and Qualifier		LOD	LOQ	Units	Dilution	Batch	Prepared	Analyzed	Method
J1PVL6 (1207048-05) Soil										
%Solids	**95.4**			0.1	% by Weight	1	L207136	07/23/2012	07/23/2012	SM2540G
Bromide	1.0	U	1.0	5.2	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Chloride	**28.8**		1.0	5.2	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Fluoride	1.0	U	1.0	5.2	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate	**9.2**		1.0	5.2	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrite	1.0	U	1.0	5.2	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Orthophosphate	**3.8**	B	2.1	10.3	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Sulfate	**14.1**		1.0	5.2	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate/Nitrite as N	**2.16**		0.10	0.52	mg/kg dry	1	L207169	07/25/2012	07/26/2012	EPA 353.2
Hexavalent Chromium	0.21	U	0.21	0.52	mg/kg dry	1	L207129	07/23/2012	07/23/2012	SW846 7196A
pH	**9.07**		0.10	0.10	pH Units	1	L207165	07/26/2012	07/26/2012	SW846 9045D
J1PVL7 (1207048-06) Soil										
%Solids	**96.3**			0.1	% by Weight	1	L207136	07/23/2012	07/23/2012	SM2540G
Bromide	1.0	U	1.0	4.9	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Chloride	1.0	U	1.0	4.9	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Fluoride	1.0	U	1.0	4.9	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate	**37.6**		1.0	4.9	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrite	**1.0**	B	1.0	4.9	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Orthophosphate	**3.3**	B	1.9	9.7	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Sulfate	**7.6**		1.0	4.9	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate/Nitrite as N	**8.93**		0.10	0.49	mg/kg dry	1	L207169	07/25/2012	07/26/2012	EPA 353.2
Hexavalent Chromium	0.21	U	0.21	0.52	mg/kg dry	1	L207129	07/23/2012	07/23/2012	SW846 7196A
pH	**8.76**		0.10	0.10	pH Units	1	L207165	07/26/2012	07/26/2012	SW846 9045D

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 10:34

Wet Chemistry
Lionville Laboratory

Analyte	Result and Qualifier	LOD	LOQ	Units	Dilution	Batch	Prepared	Analyzed	Method
J1PVL8 (1207048-07) Soil									
%Solids	**96.3**		0.1	% by Weight	1	L207136	07/23/2012	07/23/2012	SM2540G
Bromide	1.0 U	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Chloride	1.0 U	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Fluoride	1.0 U	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate	**4.9** B	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrite	1.0 U	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Orthophosphate	2.0 U	2.0	10.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Sulfate	**4.7** B	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate/Nitrite as N	**1.40**	0.10	0.51	mg/kg dry	1	L207169	07/25/2012	07/26/2012	EPA 353.2
Hexavalent Chromium	0.21 U	0.21	0.52	mg/kg dry	1	L207129	07/23/2012	07/23/2012	SW846 7196A
pH	**9.04**	0.10	0.10	pH Units	1	L207165	07/26/2012	07/26/2012	SW846 9045D
J1PVL9 (1207048-08) Soil									
%Solids	**97.7**		0.1	% by Weight	1	L207136	07/23/2012	07/23/2012	SM2540G
Bromide	1.0 U	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Chloride	1.0 U	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Fluoride	1.0 U	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate	**11.2**	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrite	1.0 U	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Orthophosphate	**3.3** B	2.0	10.2	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Sulfate	**2.8** B	1.0	5.1	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate/Nitrite as N	**2.82**	0.10	0.51	mg/kg dry	1	L207169	07/25/2012	07/26/2012	EPA 353.2
Hexavalent Chromium	0.20 U	0.20	0.51	mg/kg dry	1	L207129	07/23/2012	07/23/2012	SW846 7196A
pH	**8.94**	0.10	0.10	pH Units	1	L207165	07/26/2012	07/26/2012	SW846 9045D

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Exton, PA 19341
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Fax: 610-280-3041

WC-Hanford, Inc.	Project: RC-075	
2620 Fermi Avenue	Project Number: KP0114	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/27/2012 10:34

Wet Chemistry
Lionville Laboratory

Analyte	Result and Qualifier	LOD	LOQ	Units	Dilution	Batch	Prepared	Analyzed	Method
J1PVM0 (1207048-09) Soil									
%Solids	**95.7**		0.1	% by Weight	1	L207136	07/23/2012	07/23/2012	SM2540G
Bromide	1.0 U	1.0	5.0	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Chloride	1.0 B, U	1.0	5.0	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Fluoride	1.0 U	1.0	5.0	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate	**7.0**	1.0	5.0	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrite	1.0 U	1.0	5.0	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Orthophosphate	**3.1** B	2.0	10.0	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Sulfate	**4.2** B	1.0	5.0	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate/Nitrite as N	**1.75**	0.10	0.50	mg/kg dry	1	L207169	07/25/2012	07/26/2012	EPA 353.2
Hexavalent Chromium	0.21 U	0.21	0.52	mg/kg dry	1	L207129	07/23/2012	07/23/2012	SW846 7196A
pH	**8.68**	0.10	0.10	pH Units	1	L207165	07/26/2012	07/26/2012	SW846 9045D
J1PVM1 (1207048-10) Soil									
%Solids	**91.1**		0.1	% by Weight	1	L207136	07/23/2012	07/23/2012	SM2540G
Bromide	1.1 U	1.1	5.4	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Chloride	**1.5** B	1.1	5.4	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Fluoride	1.1 U	1.1	5.4	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate	**2.7** B	1.1	5.4	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrite	1.1 U	1.1	5.4	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Orthophosphate	2.2 U	2.2	10.8	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Sulfate	**22.5**	1.1	5.4	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate/Nitrite as N	**0.80**	0.11	0.54	mg/kg dry	1	L207169	07/25/2012	07/26/2012	EPA 353.2
Hexavalent Chromium	0.22 U	0.22	0.55	mg/kg dry	1	L207129	07/23/2012	07/23/2012	SW846 7196A
pH	**8.75**	0.10	0.10	pH Units	1	L207165	07/26/2012	07/26/2012	SW846 9045D

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Exton, PA 19341
Phone: 610-280-3000
Fax: 610-280-3041

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 10:34

Wet Chemistry
Lionville Laboratory

Analyte	Result and Qualifier		LOD	LOQ	Units	Dilution	Batch	Prepared	Analyzed	Method
J1PVM2 (1207048-11) Soil										
%Solids	**83.8**			0.1	% by Weight	1	L207136	07/23/2012	07/23/2012	SM2540G
Bromide	1.1	U	1.1	5.5	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Chloride	**1.6**	B	1.1	5.5	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Fluoride	1.1	U	1.1	5.5	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate	**3.9**	B	1.1	5.5	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrite	1.1	U	1.1	5.5	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Orthophosphate	**8.8**	B	2.2	10.9	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Sulfate	**4.3**	B	1.1	5.5	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate/Nitrite as N	**1.03**		0.11	0.55	mg/kg dry	1	L207169	07/25/2012	07/26/2012	EPA 353.2
Hexavalent Chromium	0.24	U	0.24	0.60	mg/kg dry	1	L207129	07/23/2012	07/23/2012	SW846 7196A
pH	**8.45**		0.10	0.10	pH Units	1	L207165	07/26/2012	07/26/2012	SW846 9045D
J1PVM3 (1207048-12) Soil										
%Solids	**80.0**			0.1	% by Weight	1	L207136	07/23/2012	07/23/2012	SM2540G
Bromide	1.3	U	1.3	6.3	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Chloride	1.3	U	1.3	6.3	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Fluoride	1.3	U	1.3	6.3	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate	**5.5**	B	1.3	6.3	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrite	1.3	U	1.3	6.3	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Orthophosphate	2.5	U	2.5	12.5	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Sulfate	**6.3**		1.3	6.3	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate/Nitrite as N	**1.45**		0.13	0.63	mg/kg dry	1	L207169	07/25/2012	07/26/2012	EPA 353.2
Hexavalent Chromium	0.25	U	0.25	0.63	mg/kg dry	1	L207129	07/23/2012	07/23/2012	SW846 7196A
pH	**8.61**		0.10	0.10	pH Units	1	L207165	07/26/2012	07/26/2012	SW846 9045D

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Exton, PA 19341
Phone: 610-280-3000
Fax: 610-280-3041

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 10:34

Wet Chemistry
Lionville Laboratory

Analyte	Result and Qualifier		LOD	LOQ	Units	Dilution	Batch	Prepared	Analyzed	Method
J1PVM4 (1207048-13) Soil										
%Solids	**97.2**			0.1	% by Weight	1	L207136	07/23/2012	07/23/2012	SM2540G
Bromide	1.0	U	1.0	4.8	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Chloride	**1.0**	B	1.0	4.8	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Fluoride	1.0	U	1.0	4.8	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate	**4.3**	B	1.0	4.8	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrite	1.0	U	1.0	4.8	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Orthophosphate	**2.3**	B	1.9	9.5	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Sulfate	**5.0**		1.0	4.8	mg/kg dry	1	L207160	07/25/2012	07/25/2012	EPA 300.0 (1993)
Nitrate/Nitrite as N	**1.16**		0.10	0.48	mg/kg dry	1	L207169	07/25/2012	07/26/2012	EPA 353.2
Hexavalent Chromium	0.21	U	0.21	0.51	mg/kg dry	1	L207129	07/23/2012	07/23/2012	SW846 7196A
pH	**9.10**		0.10	0.10	pH Units	1	L207165	07/26/2012	07/26/2012	SW846 9045D
J1PVM5 (1207048-14) Soil										
%Solids	**100**			0.1	% by Weight	1	L207136	07/23/2012	07/23/2012	SM2540G

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-075 Project Number: KP0114 Project Manager: Joan Kessner	**Reported:** 07/27/2012 10:34

Wet Chemistry - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers	LOD	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L207129 - Default Prep GenChem										
Blank (L207129-BLK1)				Prepared & Analyzed: 07/23/2012						
Hexavalent Chromium	0.20 U	0.20	0.50	mg/kg wet						
LCS (L207129-BS1)				Prepared & Analyzed: 07/23/2012						
Hexavalent Chromium	4.17	0.20	0.50	mg/kg wet	4.0000		104	80-120		
LCS (L207129-BS2)				Prepared & Analyzed: 07/23/2012						
Hexavalent Chromium	1040 D	20.0	50.0	mg/kg wet	1075.5		96	80-120		
Duplicate (L207129-DUP1)	**Source: 1207048-01**			Prepared & Analyzed: 07/23/2012						
Hexavalent Chromium	0.21 U	0.21	0.53	mg/kg dry		0.21 U				20
Matrix Spike (L207129-MS1)	**Source: 1207048-01**			Prepared & Analyzed: 07/23/2012						
Hexavalent Chromium	4.07	0.21	0.53	mg/kg dry	4.2397	0.21 U	96	75-125		
Matrix Spike (L207129-MS2)	**Source: 1207048-01**			Prepared & Analyzed: 07/23/2012						
Hexavalent Chromium	1270 D	21.2	53.0	mg/kg dry	1215.0	0.21 U	105	75-125		
Batch L207136 - % Solids										
Duplicate (L207136-DUP1)	**Source: 1207048-01**			Prepared & Analyzed: 07/23/2012						
%Solids	99.6		0.1	% by Weight		94.3			5	20
Batch L207160 - Default Prep GenChem										
Blank (L207160-BLK1)				Prepared & Analyzed: 07/25/2012						
Fluoride	1.0 U	1.0	5.0	mg/kg wet						
Chloride	1.0 U	1.0	5.0	mg/kg wet						
Bromide	1.0 U	1.0	5.0	mg/kg wet						
Orthophosphate	2.0 U	2.0	10.0	mg/kg wet						
Sulfate	1.0 U	1.0	5.0	mg/kg wet						
Nitrate	1.0 U	1.0	5.0	mg/kg wet						
Nitrite	1.0 U	1.0	5.0	mg/kg wet						

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Wet Chemistry - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers	LOD	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L207160 - Default Prep GenChem										
LCS (L207160-BS1)				Prepared & Analyzed: 07/25/2012						
Fluoride	48.8	1.0	5.0	mg/kg wet	50.000		97.6	80-120		
Chloride	46.2	1.0	5.0	mg/kg wet	50.000		92.4	80-120		
Bromide	47.9	1.0	5.0	mg/kg wet	50.000		95.8	80-120		
Orthophosphate	48.4	2.0	10.0	mg/kg wet	50.000		96.8	80-120		
Sulfate	48.3	1.0	5.0	mg/kg wet	50.000		96.6	80-120		
Nitrate	47.8	1.0	5.0	mg/kg wet	50.000		95.6	80-120		
Nitrite	47.6	1.0	5.0	mg/kg wet	50.000		95.2	80-120		
Duplicate (L207160-DUP2)	**Source: 1207048-01**			Prepared & Analyzed: 07/25/2012						
Fluoride	1.0 U	1.0	5.2	mg/kg dry		1.0 U				20
Chloride	1.0 U	1.0	5.2	mg/kg dry		1.0 U				20
Bromide	1.0 U	1.0	5.2	mg/kg dry		1.0 U				20
Orthophosphate	2.3 B	2.1	10.3	mg/kg dry		2.1 U				20
Sulfate	5.8	1.0	5.2	mg/kg dry		5.0			13.8	20
Nitrate	5.3	1.0	5.2	mg/kg dry		4.8			8.58	20
Nitrite	1.0 U	1.0	5.2	mg/kg dry		1.0 U				20
Matrix Spike (L207160-MS2)	**Source: 1207048-01**			Prepared & Analyzed: 07/25/2012						
Fluoride	52.0	1.0	5.2	mg/kg dry	52.489	1.0 U	99.0	75-125		
Chloride	52.0	1.0	5.2	mg/kg dry	52.489	1.0 U	99.0	75-125		
Bromide	50.9	1.0	5.2	mg/kg dry	52.489	1.0 U	97.0	75-125		
Orthophosphate	51.0	2.1	10.5	mg/kg dry	52.489	2.1 U	97.2	75-125		
Sulfate	57.0	1.0	5.2	mg/kg dry	52.489	5.0	99.0	75-125		
Nitrate	56.7	1.0	5.2	mg/kg dry	52.489	4.8	98.8	75-125		
Nitrite	51.3	1.0	5.2	mg/kg dry	52.489	1.0 U	97.8	75-125		
Batch L207165 - Default Prep GenChem										
Duplicate (L207165-DUP2)	**Source: 1207048-12**			Prepared & Analyzed: 07/26/2012						
pH	8.85	0.10	0.10	pH Units		8.61			2.75	20

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Wet Chemistry - Quality Control

Lionville Laboratory

Analyte	Result and Qualifiers	LOD	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L207165 - Default Prep GenChem										
Reference (L207165-SRM1)				Prepared & Analyzed: 07/26/2012						
pH	7.05	0.10	0.10	pH Units	7.0000		101	99-101		
Reference (L207165-SRM2)				Prepared & Analyzed: 07/26/2012						
pH	10.0	0.10	0.10	pH Units	10.000		100	99-101		
Batch L207169 - Default Prep GenChem										
Blank (L207169-BLK1)				Prepared: 07/25/2012 Analyzed: 07/26/2012						
Nitrate/Nitrite as N	0.10 U	0.10	0.50	mg/kg wet						
LCS (L207169-BS1)				Prepared: 07/25/2012 Analyzed: 07/26/2012						
Nitrate/Nitrite as N	4.94	0.10	0.50	mg/kg wet	5.0000		98.8	90-110		
Duplicate (L207169-DUP1)	**Source: 1207048-01**			Prepared: 07/25/2012 Analyzed: 07/26/2012						
Nitrate/Nitrite as N	1.27	0.10	0.52	mg/kg dry		1.34			5.11	20
Matrix Spike (L207169-MS1)	**Source: 1207048-01**			Prepared: 07/25/2012 Analyzed: 07/26/2012						
Nitrate/Nitrite as N	6.53	0.10	0.52	mg/kg dry	5.2489	1.34	99.0	75-125		