0082880

SAF-RC-116
Columbia River Component of the RCBRA – Sediment
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 8/13/09
INITIAL/DATE

COMMENTS:

SDG K1526 SAF-RC-116

Rad only Chem only ☑ Rad & Chem

☑ Complete Partial

Sampling Location:
WP-8SSD
WP-7SSD
WP-9SSD
WP-6SSD
WP-1SSD
WP-3SSD
WP-4SSD

EBERLINE SERVICES

EBERLINE ANALYTICAL CORPORATION
2030 Wright Avenue
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March 12, 2009

RECEIVED
MAR 2009

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

Reference: **P.O. #S00W235A00**
Eberline Analytical R9-02-011-7300, SDG K1526

Dear Ms. Kessner:

Enclosed is a data report for eight solid (other solid) samples designated under SAF No. RC-116 received at Eberline Analytical on February 6, 2009. The samples were analyzed according to the accompanying chain-of-custody documents.

Please call if you have any questions concerning this report.

Sincerely,

N. Joseph Verville
Senior Program Manager

NJV/ljb

Enclosure: Data Package

1.0 GENERAL

Washington Closure Hanford (WCH) Sample Delivery Group K1526 was composed of eight solid (other solid) samples designated under SAF No. RC-116 with a Project Designation of: Columbia River Component of the RCBRA – Sediment.

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 sent to WCH via e-mail March 12, 2009.

2.0 ANALYSIS NOTES

2.1 Carbon-14 Analysis

No problems were encountered during the course of the analyses.

2.2 Strontium-90 Analysis

No problems were encountered during the course of the analyses.

2.3 Technetium-99 Analysis

The Technetium-99m tracer yield for the QC LCS was 108%, greater than the control limit of 105%. No problems were encountered during the course of the analyses.

2.4 Isotopic Thorium 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."

N. Joseph Verville
Senior Program Manager

3/13/09
Date

E B E R L I N E A N A L T Y I C A L / R I C H M O N D
SAMPLE DELIVERY GROUP K1526

SDG	7300
Contact	N. Joseph Verville

Client	Hanford
Contract	No. S00W235A00
Case no	SDG_K1526

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	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

SDG 7300
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1526

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 03/13/09

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 ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

SDG 7300
Contact N. Joseph Verville

LAB SAMPLE SUMMARY

Client Hanford
Contract No. S00W235A00
Case no SDG K1526

LAB SAMPLE ID	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAF NO	CHAIN OF CUSTODY	COLLECTED
R902011-01	J186C0	WP-8SSD	SOLID		RC-116	RC-116-846	02/04/09 12:00
R902011-02	J186C1	WP-7SSD	SOLID		RC-116	RC-116-847	02/04/09 11:35
R902011-03	J186C2	WP-9SSD	SOLID		RC-116	RC-116-848	02/04/09 13:15
R902011-04	J186C3	WP-6SSD	SOLID		RC-116	RC-116-849	02/04/09 11:00
R902011-05	J186C5	WP-2SSD	SOLID		RC-116	RC-116-851	02/04/09 11:20
R902011-06	J186C6	WP-1SSD	SOLID		RC-116	RC-116-852	02/04/09 10:55
R902011-07	J186C7	WP-3SSD	SOLID		RC-116	RC-116-853	02/04/09 11:45
R902011-08	J186C8	WP-4SSD	SOLID		RC-116	RC-116-854	02/04/09 12:00
R902011-09	Lab Control Sample		SOLID		RC-116		
R902011-10	Method Blank		SOLID		RC-116		
R902011-11	Duplicate (R902011-01)	WP-8SSD	SOLID		RC-116		02/04/09 12:00

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LS
Version 3.06
Report date 03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

SDG 7300
Contact N. Joseph Verville

QC SUMMARY

Client Hanford
Contract No. S00W235A00
Case no SDG K1526

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
7300	RC-116-846	J186C0	SOLID	100.0	1856 g		02/06/09	2	R902011-01	7300-001
	RC-116-847	J186C1	SOLID	100.0	2344 g		02/06/09	2	R902011-02	7300-002
	RC-116-848	J186C2	SOLID	100.0	2575 g		02/06/09	2	R902011-03	7300-003
	RC-116-849	J186C3	SOLID	100.0	2091 g		02/06/09	2	R902011-04	7300-004
	RC-116-851	J186C5	SOLID	100.0	2081 g		02/06/09	2	R902011-05	7300-005
	RC-116-852	J186C6	SOLID	100.0	1831 g		02/06/09	2	R902011-06	7300-006
	RC-116-853	J186C7	SOLID	100.0	1868 g		02/06/09	2	R902011-07	7300-007
	RC-116-854	J186C8	SOLID	100.0	2029 g		02/06/09	2	R902011-08	7300-008
		Method Blank	SOLID						R902011-10	7300-010
		Lab Control Sample	SOLID						R902011-09	7300-009
		Duplicate (R902011-01)	SOLID	100.0	1856 g		02/06/09	2	R902011-11	7300-011

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-QS
Version 3.06
Report date 03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

SDG 7300
Contact N. Joseph Verville

PREP BATCH SUMMARY

Client Hanford
Contract No. S00W235A00
Case no SDG K1526

TEST	MATRIX	METHOD	PREPARATION ERROR BATCH	2σ %	PLANCHETS ANALYZED CLIENT	MORE	RE	BLANK	LCS	DUP/ORIG	MS/ORIG	QUALIFIERS
Alpha Spectroscopy												
PU	SOLID	Plutonium, Isotopic in Solids	6172-076	8.0	8			1	1	1/1		
TH	SOLID	Thorium, Isotopic in Solids	6172-076	8.0	8			1	1	1/1		
U	SOLID	Uranium, Isotopic in Solids	6172-076	8.0	8			1	1	1/1		
Beta Counting												
SR	SOLID	Total Strontium in Solids	6172-076	10.4	8			1	1	1/1		
TC	SOLID	Technetium 99 in Solids	6172-076	13.2	8			1	1	1/1		
Gamma Spectroscopy												
GAM	SOLID	Gamma Scan	6172-076	7.0	8			1	1	1/1		
Liquid Scintillation Counting												
C	SOLID	Carbon 14 in Solids	6172-076	10.0	8			1	1	1/1		

Duplicates and Matrix Spikes are those with original (Client) sample in this Sample Delivery Group.
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 03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

SDG 7300
Contact N. Joseph Verville

LAB WORK SUMMARY

Client Hanford
Contract No. S00W235A00
Case no SDG K1526

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
R902011-01	J186C0			7300-001	C		03/05/09	03/09/09	BW	Carbon 14 in Solids
02/04/09	WP-8SSD		SOLID	7300-001	GAM		02/17/09	02/19/09	CSS	Gamma Scan
02/06/09	RC-116-846	RC-116		7300-001	PU		02/28/09	03/02/09	BW	Plutonium, Isotopic in Solids
				7300-001	SR		02/25/09	02/26/09	BW	Total Strontium in Solids
				7300-001	TC		02/28/09	03/02/09	BW	Technetium 99 in Solids
				7300-001	TH		03/11/09	03/12/09	MWT	Thorium, Isotopic in Solids
				7300-001	U		03/09/09	03/11/09	BW	Uranium, Isotopic in Solids
R902011-02	J186C1			7300-002	C		03/05/09	03/09/09	BW	Carbon 14 in Solids
02/04/09	WP-7SSD		SOLID	7300-002	GAM		02/17/09	02/19/09	CSS	Gamma Scan
02/06/09	RC-116-847	RC-116		7300-002	PU		02/28/09	03/02/09	BW	Plutonium, Isotopic in Solids
				7300-002	SR		02/25/09	02/26/09	BW	Total Strontium in Solids
				7300-002	TC		02/27/09	03/02/09	BW	Technetium 99 in Solids
				7300-002	TH		03/11/09	03/12/09	MWT	Thorium, Isotopic in Solids
				7300-002	U		03/09/09	03/11/09	BW	Uranium, Isotopic in Solids
R902011-03	J186C2			7300-003	C		03/05/09	03/09/09	BW	Carbon 14 in Solids
02/04/09	WP-9SSD		SOLID	7300-003	GAM		02/17/09	02/19/09	CSS	Gamma Scan
02/06/09	RC-116-848	RC-116		7300-003	PU		02/28/09	03/02/09	BW	Plutonium, Isotopic in Solids
				7300-003	SR		02/25/09	02/26/09	BW	Total Strontium in Solids
				7300-003	TC		02/28/09	03/02/09	BW	Technetium 99 in Solids
				7300-003	TH		03/11/09	03/12/09	MWT	Thorium, Isotopic in Solids
				7300-003	U		03/09/09	03/11/09	BW	Uranium, Isotopic in Solids
R902011-04	J186C3			7300-004	C		03/05/09	03/09/09	BW	Carbon 14 in Solids
02/04/09	WP-6SSD		SOLID	7300-004	GAM		02/17/09	02/19/09	CSS	Gamma Scan
02/06/09	RC-116-849	RC-116		7300-004	PU		02/28/09	03/02/09	BW	Plutonium, Isotopic in Solids
				7300-004	SR		02/25/09	02/26/09	BW	Total Strontium in Solids
				7300-004	TC		02/27/09	03/02/09	BW	Technetium 99 in Solids
				7300-004	TH		03/11/09	03/12/09	MWT	Thorium, Isotopic in Solids
				7300-004	U		03/09/09	03/11/09	BW	Uranium, Isotopic in Solids
R902011-05	J186C5			7300-005	C		03/05/09	03/09/09	BW	Carbon 14 in Solids
02/04/09	WP-2SSD		SOLID	7300-005	GAM		02/17/09	02/19/09	CSS	Gamma Scan
02/06/09	RC-116-851	RC-116		7300-005	PU		02/28/09	03/02/09	BW	Plutonium, Isotopic in Solids
				7300-005	SR		02/25/09	02/26/09	BW	Total Strontium in Solids
				7300-005	TC		03/02/09	03/02/09	BW	Technetium 99 in Solids
				7300-005	TH		03/11/09	03/12/09	MWT	Thorium, Isotopic in Solids
				7300-005	U		03/09/09	03/11/09	BW	Uranium, Isotopic in Solids

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

SDG 7300
Contact N. Joseph Verville

WORK SUMMARY, cont.

Client Hanford
Contract No. S00W235A00
Case no SDG K1526

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
R902011-06	J186C6			7300-006	C		03/05/09	03/09/09	BW	Carbon 14 in Solids
02/04/09	WP-1SSD		SOLID	7300-006	GAM		02/17/09	02/19/09	CSS	Gamma Scan
02/06/09	RC-116-852	RC-116		7300-006	PU		02/28/09	03/02/09	BW	Plutonium, Isotopic in Solids
				7300-006	SR		02/25/09	02/26/09	BW	Total Strontium in Solids
				7300-006	TC		02/28/09	03/02/09	BW	Technetium 99 in Solids
				7300-006	TH		03/11/09	03/12/09	MWT	Thorium, Isotopic in Solids
				7300-006	U		03/09/09	03/11/09	BW	Uranium, Isotopic in Solids
R902011-07	J186C7			7300-007	C		03/05/09	03/09/09	BW	Carbon 14 in Solids
02/04/09	WP-3SSD		SOLID	7300-007	GAM		02/17/09	02/19/09	CSS	Gamma Scan
02/06/09	RC-116-853	RC-116		7300-007	PU		02/28/09	03/02/09	BW	Plutonium, Isotopic in Solids
				7300-007	SR		02/25/09	02/26/09	BW	Total Strontium in Solids
				7300-007	TC		02/27/09	03/02/09	BW	Technetium 99 in Solids
				7300-007	TH		03/11/09	03/12/09	MWT	Thorium, Isotopic in Solids
				7300-007	U		03/10/09	03/11/09	BW	Uranium, Isotopic in Solids
R902011-08	J186C8			7300-008	C		03/05/09	03/09/09	BW	Carbon 14 in Solids
02/04/09	WP-4SSD		SOLID	7300-008	GAM		02/17/09	02/19/09	CSS	Gamma Scan
02/06/09	RC-116-854	RC-116		7300-008	PU		02/28/09	03/02/09	BW	Plutonium, Isotopic in Solids
				7300-008	SR		02/25/09	02/26/09	BW	Total Strontium in Solids
				7300-008	TC		02/27/09	03/02/09	BW	Technetium 99 in Solids
				7300-008	TH		03/11/09	03/12/09	MWT	Thorium, Isotopic in Solids
				7300-008	U		03/10/09	03/11/09	BW	Uranium, Isotopic in Solids
R902011-09	Lab Control Sample			7300-009	C		03/05/09	03/09/09	BW	Carbon 14 in Solids
			SOLID	7300-009	GAM		02/18/09	02/19/09	CSS	Gamma Scan
		RC-116		7300-009	PU		02/28/09	03/02/09	BW	Plutonium, Isotopic in Solids
				7300-009	SR		02/25/09	02/26/09	BW	Total Strontium in Solids
				7300-009	TC		02/27/09	03/02/09	BW	Technetium 99 in Solids
				7300-009	TH		03/11/09	03/12/09	MWT	Thorium, Isotopic in Solids
				7300-009	U		03/10/09	03/11/09	BW	Uranium, Isotopic in Solids
R902011-10	Method Blank			7300-010	C		03/05/09	03/09/09	BW	Carbon 14 in Solids
			SOLID	7300-010	GAM		02/18/09	02/19/09	CSS	Gamma Scan
		RC-116		7300-010	PU		02/28/09	03/02/09	BW	Plutonium, Isotopic in Solids
				7300-010	SR		02/25/09	02/26/09	BW	Total Strontium in Solids
				7300-010	TC		02/28/09	03/02/09	BW	Technetium 99 in Solids
				7300-010	TH		03/11/09	03/12/09	MWT	Thorium, Isotopic in Solids
				7300-010	U		03/10/09	03/11/09	BW	Uranium, Isotopic in Solids

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

SDG 7300
Contact N. Joseph Verville

WORK SUMMARY, cont.

Client Hanford
Contract No. S00W235A00
Case no SDG K1526

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
R902011-11	Duplicate (R902011-01)			7300-011	C		03/05/09	03/09/09	BW	Carbon 14 in Solids
02/04/09	WP-8SSD		SOLID	7300-011	GAM		02/18/09	02/19/09	CSS	Gamma Scan
02/06/09		RC-116		7300-011	PU		02/28/09	03/02/09	BW	Plutonium, Isotopic in Solids
				7300-011	SR		02/25/09	02/26/09	BW	Total Strontium in Solids
				7300-011	TC		03/02/09	03/02/09	BW	Technetium 99 in Solids
				7300-011	TH		03/11/09	03/12/09	MWT	Thorium, Isotopic in Solids
				7300-011	U		03/11/09	03/11/09	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-116	Carbon 14 in Solids	C14_COX_LSC	8			1	1	1	11
GAM	RC-116	Gamma Scan	GAMMA_GS	8			1	1	1	11
PU	RC-116	Plutonium, Isotopic in Solids	PUISO_PLATE_AEA	8			1	1	1	11
SR	RC-116	Total Strontium in Solids	SRTOT_SEP_PRECIP_GPC	8			1	1	1	11
TC	RC-116	Technetium 99 in Solids	TC99_TR_SEP_GPC	8			1	1	1	11
TH	RC-116	Thorium, Isotopic in Solids	THISO_IE_PLATE_AEA	8			1	1	1	11
U	RC-116	Uranium, Isotopic in Solids	UISO_PLATE_AEA	8			1	1	1	11
TOTALS				56			7	7	7	77

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

7300-010 **Method Blank**

METHOD BLANK

SDG	7300	Client/Case no	Hanford	SDG K1526	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R902011-10	Client sample id	Method Blank		
Dept sample id	7300-010	Material/Matrix		SOLID	
		SAF No	RC-116		

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Carbon 14	14762-75-5	-0.664	2.1	3.56	50.0	U	C
Total Strontium	SR-RAD	-0.080	0.13	0.290	1.00	U	SR
Technetium 99	14133-76-7	0.046	0.16	0.337	15.0	U	TC
Thorium 228	14274-82-9	0	0.22	0.442	1.00	U	TH
Thorium 230	14269-63-7	0.178	0.21	0.272	1.00	U	TH
Thorium 232	TH-232	0	0.071	0.272	1.00	U	TH
Uranium 233/234	U-233/234	0.070	0.093	0.178	1.00	U	U
Uranium 235	15117-96-1	0	0.056	0.215	1.00	U	U
Uranium 238	U-238	0	0.046	0.178	1.00	U	U
Plutonium 238	13981-16-3	0.045	0.089	0.213	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.045	0.171	1.00	U	PU
Potassium 40	13966-00-2	U		0.126		U	GAM
Cobalt 60	10198-40-0	U		0.006	0.050	U	GAM
Cesium 137	10045-97-3	U		0.006	0.100	U	GAM
Radium 226	13982-63-3	U		0.015	0.100	U	GAM
Radium 228	15262-20-1	U		0.032	0.200	U	GAM
Europium 152	14683-23-9	U		0.021	0.100	U	GAM
Europium 154	15585-10-1	U		0.018	0.100	U	GAM
Europium 155	14391-16-3	U		0.021	0.100	U	GAM
Thorium 228	14274-82-9	U		0.012		U	GAM
Thorium 232	TH-232	U		0.032		U	GAM
Uranium 235	15117-96-1	U		0.032		U	GAM
Uranium 238	U-238	U		0.754		U	GAM
Americium 241	14596-10-2	U		0.025		U	GAM
Beryllium 7	13966-02-4	U		0.048		U	GAM
Ruthenium 106	13967-48-1	U		0.050		U	GAM
Antimony 125	14234-35-6	U		0.016		U	GAM
Cesium 134	13967-70-9	U		0.007		U	GAM

ColumbiaRiverComp.ofRCBRA-Sediment

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

7300-010 **Method Blank**

BLANK, cont.

SDG	7300	Client/Case no	Hanford	SDG K1526	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R902011-10	Client sample id	Method Blank		
Dept sample id	7300-010	Material/Matrix		SOLID	
		SAF No	RC-116		

QC-BLANK #68945

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

7300-009 Lab Control Sample

LAB CONTROL SAMPLE

SDG 7300 Client/Case no Hanford SDG K1526
Contact N. Joseph Verville Contract No. S00W235A00

Lab sample id R902011-09 Client sample id Lab Control Sample
Dept sample id 7300-009 Material/Matrix SOLID
SAF No RC-116

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
Carbon 14	1750	15	3.60	50.0		C	1600	64	109	82-118	80-120
Total Strontium	9.26	0.64	0.329	1.00		SR	9.16	0.37	101	80-120	80-120
Technetium 99	105	2.6	0.356	15.0		TC	109	4.4	96	80-120	80-120
Thorium 230	18.6	2.3	0.280	1.00		TH	18.9	0.76	98	77-123	80-120
Uranium 233/234	8.93	1.1	0.596	1.00		U	9.28	0.37	96	78-122	80-120
Uranium 235	6.81	0.98	0.191	1.00		U	7.54	0.30	90	77-123	80-120
Uranium 238	9.73	1.2	0.560	1.00		U	10.1	0.40	96	78-122	80-120
Plutonium 238	5.21	0.75	0.160	1.00		PU	5.82	0.23	90	77-123	80-120
Plutonium 239/240	5.69	0.76	0.160	1.00		PU	6.60	0.26	86	79-121	80-120
Cobalt 60	0.251	0.019	0.013	0.050		GAM	0.263	0.011	95	84-116	80-120
Cesium 137	0.319	0.017	0.011	0.100		GAM	0.307	0.012	104	85-115	80-120

ColumbiaRiverComp.ofRCBRA-Sediment

QC-LCS #68944

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LCS
Version 3.06
Report date 03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

7300-011 J186C0

DUPLICATE

SDG	7300			Client/Case no	Hanford SDG K1526
Contact	N. Joseph Verville			Contract	No. S00W235A00
DUPLICATE		ORIGINAL			
Lab sample id	R902011-11	Lab sample id	R902011-01	Client sample id	J186C0
Dept sample id	7300-011	Dept sample id	7300-001	Location/Matrix	WP-8SSD SOLID
		Received	02/06/09	Collected/Weight	02/04/09 12:00 1856 g
% solids	100.0	% solids	100.0	Custody/SAF No	RC-116-846 RC-116

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
Carbon 14	-0.525	1.9	3.31	50.0	U	C	-0.665	2.0	3.40	U	-		0.1
Total Strontium	-0.029	0.14	0.298	1.00	U	SR	-0.079	0.20	0.384	U	-		0.4
Technetium 99	0.077	0.18	0.372	15.0	U	TC	0.137	0.22	0.341	U	-		0.4
Thorium 228	0.315	0.25	0.348	1.00	U	TH	0.212	0.43	0.678	U	-		0.4
Thorium 230	0.156	0.19	0.238	1.00	U	TH	0.350	0.42	0.536	U	-		0.8
Thorium 232	0.405	0.25	0.238	1.00		TH	0.280	0.28	0.536	U	36	165	0.7
Uranium 233/234	0.259	0.16	0.198	1.00		U	0.312	0.060	0.039		19	91	0.6
Uranium 235	0	0.063	0.240	1.00	U	U	0.016	0.020	0.025	U	-		0.5
Uranium 238	0.415	0.21	0.198	1.00		U	0.304	0.060	0.030		31	93	1.0
Plutonium 238	-0.026	0.11	0.252	1.00	U	PU	-0.024	0.094	0.225	U	-		0
Plutonium 239/240	0	0.053	0.201	1.00	U	PU	0	0.047	0.180	U	-		0
Potassium 40	11.5	0.55	0.266			GAM	10.5	0.86	0.165		9	20	1.3
Cobalt 60	U		0.024	0.050	U	GAM	U		0.019	U	-		0.3
Cesium 137	U		0.021	0.100	U	GAM	U		0.025	U	-		0.2
Radium 226	0.310	0.046	0.048	0.100		GAM	0.305	0.044	0.039		2	34	0.1
Radium 228	0.521	0.10	0.105	0.200		GAM	0.489	0.094	0.087		6	43	0.4
Europium 152	U		0.059	0.100	U	GAM	U		0.050	U	-		0.2
Europium 154	U		0.086	0.100	U	GAM	U		0.063	U	-		0.4
Europium 155	U		0.071	0.100	U	GAM	U		0.063	U	-		0.2
Thorium 228	0.494	0.032	0.032			GAM	0.422	0.029	0.025		16	21	2.3
Thorium 232	0.521	0.10	0.105			GAM	0.489	0.094	0.087		6	43	0.4
Uranium 235	U		0.095		U	GAM	U		0.083	U	-		0.2
Uranium 238	U		2.76		U	GAM	U		2.29	U	-		0.3
Americium 241	U		0.187		U	GAM	U		0.081	U	-		1.0
Beryllium 7	U		0.175		U	GAM	U		0.133	U	-		0.4
Ruthenium 106	U		0.187		U	GAM	U		0.143	U	-		0.4
Antimony 125	U		0.051		U	GAM	U		0.040	U	-		0.3
Cesium 134	U		0.030		U	GAM	U		0.046	U	-		0.6

ColumbiaRiverComp.ofRCBRA-Sediment

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DUP
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

7300-011 J186C0

DUPLICATE, cont.

SDG	7300			Client/Case no	Hanford SDG K1526
Contact	N. Joseph Verville			Contract	No. S00W235A00
	DUPLICATE		ORIGINAL		
Lab sample id	R902011-11	Lab sample id	R902011-01	Client sample id	J186C0
Dept sample id	7300-011	Dept sample id	7300-001	Location/Matrix	WP-8SSD SOLID
		Received	02/06/09	Collected/Weight	02/04/09 12:00 1856 g
% solids	100.0	% solids	100.0	Custody/SAF No	RC-116-846 RC-116

QC-DUP#1 68946

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DUP
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

7300-001 **J186C0**

DATA SHEET

SDG	7300	Client/Case no	Hanford	SDG_K1526	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R902011-01	Client sample id	J186C0		
Dept sample id	7300-001	Location/Matrix	WP-8SSD	SOLID	
Received	02/06/09	Collected/Weight	02/04/09 12:00	1856 g	
% solids	100.0	Custody/SAF No	RC-116-846	RC-116	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Carbon 14	14762-75-5	-0.665	2.0	3.40	50.0	U	C
Total Strontium	SR-RAD	-0.079	0.20	0.384	1.00	U	SR
Technetium 99	14133-76-7	0.137	0.22	0.341	15.0	U	TC
Thorium 228	14274-82-9	0.212	0.43	0.678	1.00	U	TH
Thorium 230	14269-63-7	0.350	0.42	0.536	1.00	U	TH
Thorium 232	TH-232	0.280	0.28	0.536	1.00	U	TH
Uranium 233/234	U-233/234	0.312	0.060	0.039	1.00		U
Uranium 235	15117-96-1	0.016	0.020	0.025	1.00	U	U
Uranium 238	U-238	0.304	0.060	0.030	1.00		U
Plutonium 238	13981-16-3	-0.024	0.094	0.225	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.047	0.180	1.00	U	PU
Potassium 40	13966-00-2	10.5	0.86	0.165			GAM
Cobalt 60	10198-40-0	U		0.019	0.050	U	GAM
Cesium 137	10045-97-3	U		0.025	0.100	U	GAM
Radium 226	13982-63-3	0.305	0.044	0.039	0.100		GAM
Radium 228	15262-20-1	0.489	0.094	0.087	0.200		GAM
Europium 152	14683-23-9	U		0.050	0.100	U	GAM
Europium 154	15585-10-1	U		0.063	0.100	U	GAM
Europium 155	14391-16-3	U		0.063	0.100	U	GAM
Thorium 228	14274-82-9	0.422	0.029	0.025			GAM
Thorium 232	TH-232	0.489	0.094	0.087			GAM
Uranium 235	15117-96-1	U		0.083		U	GAM
Uranium 238	U-238	U		2.29		U	GAM
Americium 241	14596-10-2	U		0.081		U	GAM
Beryllium 7	13966-02-4	U		0.133		U	GAM
Ruthenium 106	13967-48-1	U		0.143		U	GAM
Antimony 125	14234-35-6	U		0.040		U	GAM
Cesium 134	13967-70-9	U		0.046		U	GAM

ColumbiaRiverComp.ofRCBRA-Sediment

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

7300-002 J186C1

DATA SHEET

SDG	7300	Client/Case no	Hanford	SDG K1526	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R902011-02	Client sample id	J186C1		
Dept sample id	7300-002	Location/Matrix	WP-7SSD	SOLID	
Received	02/06/09	Collected/Weight	02/04/09 11:35	2344 g	
% solids	100.0	Custody/SAF No	RC-116-847	RC-116	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Carbon 14	14762-75-5	-0.724	1.9	3.23	50.0	U	C
Total Strontium	SR-RAD	-0.052	0.15	0.312	1.00	U	SR
Technetium 99	14133-76-7	0.051	0.17	0.338	15.0	U	TC
Thorium 228	14274-82-9	0.513	0.17	0.165	1.00		TH
Thorium 230	14269-63-7	0.718	0.19	0.123	1.00		TH
Thorium 232	TH-232	0.553	0.15	0.070	1.00		TH
Uranium 233/234	U-233/234	0.369	0.069	0.041	1.00		U
Uranium 235	15117-96-1	0.003	0.014	0.033	1.00	U	U
Uranium 238	U-238	0.366	0.069	0.043	1.00		U
Plutonium 238	13981-16-3	0	0.12	0.276	1.00	U	PU
Plutonium 239/240	PU-239/240	0.029	0.058	0.220	1.00	U	PU
Potassium 40	13966-00-2	10.6	0.17	0.054			GAM
Cobalt 60	10198-40-0	U		0.005	0.050	U	GAM
Cesium 137	10045-97-3	U		0.008	0.100	U	GAM
Radium 226	13982-63-3	0.328	0.014	0.012	0.100		GAM
Radium 228	15262-20-1	0.582	0.025	0.020	0.200		GAM
Europium 152	14683-23-9	U		0.018	0.100	U	GAM
Europium 154	15585-10-1	U		0.020	0.100	U	GAM
Europium 155	14391-16-3	U		0.040	0.100	U	GAM
Thorium 228	14274-82-9	0.548	0.011	0.010			GAM
Thorium 232	TH-232	0.582	0.025	0.020			GAM
Uranium 235	15117-96-1	U		0.033		U	GAM
Uranium 238	U-238	U		0.741		U	GAM
Americium 241	14596-10-2	U		0.030		U	GAM
Beryllium 7	13966-02-4	U		0.094		U	GAM
Ruthenium 106	13967-48-1	U		0.045		U	GAM
Antimony 125	14234-35-6	U		0.015		U	GAM
Cesium 134	13967-70-9	U		0.009		U	GAM

ColumbiaRiverComp.ofRCBRA-Sediment

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

7300-003 J186C2

DATA SHEET

SDG	7300	Client/Case no	Hanford	SDG_K1526	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R902011-03	Client sample id	J186C2		
Dept sample id	7300-003	Location/Matrix	WP-9SSD	SOLID	
Received	02/06/09	Collected/Weight	02/04/09 13:15	2575 g	
% solids	100.0	Custody/SAF No	RC-116-848	RC-116	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Carbon 14	14762-75-5	-1.40	2.0	3.42	50.0	U	C
Total Strontium	SR RAD	-0.081	0.14	0.312	1.00	U	SR
Technetium 99	14133-76-7	0.065	0.24	0.353	15.0	U	TC
Thorium 228	14274-82-9	0.696	0.35	0.416	1.00		TH
Thorium 230	14269-63-7	0.172	0.26	0.329	1.00	U	TH
Thorium 232	TH-232	0.344	0.26	0.329	1.00		TH
Uranium 233/234	U-233/234	0.349	0.065	0.026	1.00		U
Uranium 235	15117-96-1	0.010	0.013	0.025	1.00	U	U
Uranium 238	U-238	0.298	0.060	0.021	1.00		U
Plutonium 238	13981-16-3	0.046	0.092	0.175	1.00	U	PU
Plutonium 239/240	PU-239/240	0.023	0.092	0.175	1.00	U	PU
Potassium 40	13966-00-2	8.53	0.56	0.162			GAM
Cobalt 60	10198-40-0	U		0.018	0.050	U	GAM
Cesium 137	10045-97-3	U		0.026	0.100	U	GAM
Radium 226	13982-63-3	0.306	0.046	0.031	0.100		GAM
Radium 228	15262-20-1	0.464	0.072	0.066	0.200		GAM
Europium 152	14683-23-9	U		0.047	0.100	U	GAM
Europium 154	15585-10-1	U		0.062	0.100	U	GAM
Europium 155	14391-16-3	U		0.055	0.100	U	GAM
Thorium 228	14274-82-9	0.468	0.027	0.024			GAM
Thorium 232	TH-232	0.464	0.072	0.066			GAM
Uranium 235	15117-96-1	U		0.075		U	GAM
Uranium 238	U-238	U		2.09		U	GAM
Americium 241	14596-10-2	U		0.024		U	GAM
Beryllium 7	13966-02-4	U		0.140		U	GAM
Ruthenium 106	13967-48-1	U		0.143		U	GAM
Antimony 125	14234-35-6	U		0.041		U	GAM
Cesium 134	13967-70-9	U		0.023		U	GAM

ColumbiaRiverComp.ofRCBRA-Sediment

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

7300-004 **J186C3**

DATA SHEET

SDG	7300	Client/Case no	Hanford	SDG K1526	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R902011-04	Client sample id	J186C3		
Dept sample id	7300-004	Location/Matrix	WP-6SSD	SOLID	
Received	02/06/09	Collected/Weight	02/04/09 11:00	2091 g	
% solids	100.0	Custody/SAF No	RC-116-849	RC-116	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Carbon 14	14762-75-5	0.683	2.0	3.33	50.0	U	C
Total Strontium	SR-RAD	0.097	0.15	0.284	1.00	U	SR
Technetium 99	14133-76-7	0.082	0.13	0.351	15.0	U	TC
Thorium 228	14274-82-9	0.266	0.23	0.364	1.00	U	TH
Thorium 230	14269-63-7	0.226	0.30	0.415	1.00	U	TH
Thorium 232	TH-232	0.413	0.30	0.360	1.00		TH
Uranium 233/234	U-233/234	0.272	0.057	0.029	1.00		U
Uranium 235	15117-96-1	0.013	0.019	0.024	1.00	U	U
Uranium 238	U-238	0.318	0.058	0.020	1.00		U
Plutonium 238	13981-16-3	-0.022	0.088	0.210	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.044	0.168	1.00	U	PU
Potassium 40	13966-00-2	12.2	0.45	0.180			GAM
Cobalt 60	10198-40-0	U		0.019	0.050	U	GAM
Cesium 137	10045-97-3	U		0.019	0.100	U	GAM
Radium 226	13982-63-3	0.341	0.040	0.036	0.100		GAM
Radium 228	15262-20-1	0.617	0.095	0.087	0.200		GAM
Europium 152	14683-23-9	U		0.046	0.100	U	GAM
Europium 154	15585-10-1	U		0.067	0.100	U	GAM
Europium 155	14391-16-3	U		0.046	0.100	U	GAM
Thorium 228	14274-82-9	0.714	0.037	0.035			GAM
Thorium 232	TH-232	0.617	0.095	0.087			GAM
Uranium 235	15117-96-1	U		0.077		U	GAM
Uranium 238	U-238	U		2.27		U	GAM
Americium 241	14596-10-2	U		0.029		U	GAM
Beryllium 7	13966-02-4	U		0.148		U	GAM
Ruthenium 106	13967-48-1	U		0.145		U	GAM
Antimony 125	14234-35-6	U		0.039		U	GAM
Cesium 134	13967-70-9	U		0.025		U	GAM

ColumbiaRiverComp.ofRCBRA-Sediment

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

7300-005 **J186C5**

DATA SHEET

SDG	7300	Client/Case no	Hanford	SDG_K1526	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R902011-05	Client sample id	J186C5		
Dept sample id	7300-005	Location/Matrix	WP-2SSD	SOLID	
Received	02/06/09	Collected/Weight	02/04/09 11:20	2081 g	
% solids	100.0	Custody/SAF No	RC-116-851	RC-116	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Carbon 14	14762-75-5	0.114	1.8	3.05	50.0	U	C
Total Strontium	SR-RAD	-0.004	0.14	0.293	1.00	U	SR
Technetium 99	14133-76-7	0.131	0.19	0.396	15.0	U	TC
Thorium 228	14274-82-9	1.17	0.45	0.405	1.00		TH
Thorium 230	14269-63-7	0.399	0.29	0.277	1.00		TH
Thorium 232	TH-232	1.27	0.45	0.277	1.00		TH
Uranium 233/234	U-233/234	0.518	0.072	0.029	1.00		U
Uranium 235	15117-96-1	0.037	0.023	0.022	1.00		U
Uranium 238	U-238	0.468	0.067	0.018	1.00		U
Plutonium 238	13981-16-3	0.022	0.090	0.214	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.045	0.171	1.00	U	PU
Potassium 40	13966-00-2	13.0	0.65	0.206			GAM
Cobalt 60	10198-40-0	U		0.018	0.050	U	GAM
Cesium 137	10045-97-3	0.039	0.018	0.021	0.100		GAM
Radium 226	13982-63-3	0.832	0.044	0.037	0.100		GAM
Radium 228	15262-20-1	1.60	0.091	0.076	0.200		GAM
Europium 152	14683-23-9	U		0.052	0.100	U	GAM
Europium 154	15585-10-1	U		0.058	0.100	U	GAM
Europium 155	14391-16-3	U		0.073	0.100	U	GAM
Thorium 228	14274-82-9	1.55	0.034	0.028			GAM
Thorium 232	TH-232	1.60	0.091	0.076			GAM
Uranium 235	15117-96-1	U		0.099		U	GAM
Uranium 238	U-238	U		1.96		U	GAM
Americium 241	14596-10-2	U		0.127		U	GAM
Beryllium 7	13966-02-4	U		0.148		U	GAM
Ruthenium 106	13967-48-1	U		0.152		U	GAM
Antimony 125	14234-35-6	U		0.043		U	GAM
Cesium 134	13967-70-9	U		0.027		U	GAM

ColumbiaRiverComp.ofRCBRA-Sediment

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

7300-006 J186C6

DATA SHEET

SDG	7300	Client/Case no	Hanford	SDG_K1526	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R902011-06	Client sample id	J186C6		
Dept sample id	7300-006	Location/Matrix	WP-1SSD	SOLID	
Received	02/06/09	Collected/Weight	02/04/09 10:55	1831 g	
% solids	100.0	Custody/SAF No	RC-116-852	RC-116	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Carbon 14	14762-75-5	-0.734	1.9	3.28	50.0	U	C
Total Strontium	SR-RAD	-0.086	0.13	0.289	1.00	U	SR
Technetium 99	14133-76-7	0.149	0.13	0.388	15.0	U	TC
Thorium 228	14274-82-9	0.699	0.38	0.446	1.00		TH
Thorium 230	14269-63-7	0.092	0.18	0.353	1.00	U	TH
Thorium 232	TH-232	0.507	0.28	0.353	1.00		TH
Uranium 233/234	U-233/234	0.375	0.059	0.030	1.00		U
Uranium 235	15117-96-1	0.033	0.022	0.026	1.00		U
Uranium 238	U-238	0.353	0.059	0.025	1.00		U
Plutonium 238	13981-16-3	-0.025	0.098	0.235	1.00	U	PU
Plutonium 239/240	PU-239/240	-0.025	0.049	0.188	1.00	U	PU
Potassium 40	13966-00-2	14.0	0.30	0.141			GAM
Cobalt 60	10198-40-0	U		0.014	0.050	U	GAM
Cesium 137	10045-97-3	0.031	0.009	0.012	0.100		GAM
Radium 226	13982-63-3	0.511	0.026	0.026	0.100		GAM
Radium 228	15262-20-1	0.826	0.057	0.053	0.200		GAM
Europium 152	14683-23-9	U		0.035	0.100	U	GAM
Europium 154	15585-10-1	U		0.045	0.100	U	GAM
Europium 155	14391-16-3	U		0.040	0.100	U	GAM
Thorium 228	14274-82-9	0.800	0.018	0.016			GAM
Thorium 232	TH-232	0.826	0.057	0.053			GAM
Uranium 235	15117-96-1	U		0.060		U	GAM
Uranium 238	U-238	U		1.58		U	GAM
Americium 241	14596-10-2	U		0.119		U	GAM
Beryllium 7	13966-02-4	U		0.102		U	GAM
Ruthenium 106	13967-48-1	U		0.099		U	GAM
Antimony 125	14234-35-6	U		0.029		U	GAM
Cesium 134	13967-70-9	U		0.016		U	GAM

ColumbiaRiverComp.ofRCBRA-Sediment

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

7300-007 **J186C7**

DATA SHEET

SDG	7300	Client/Case no	Hanford	SDG K1526	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R902011-07	Client sample id	J186C7		
Dept sample id	7300-007	Location/Matrix	WP-3SSD	SOLID	
Received	02/06/09	Collected/Weight	02/04/09 11:45	1868 g	
% solids	100.0	Custody/SAF No	RC-116-853	RC-116	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Carbon 14	14762-75-5	0.426	1.9	3.26	50.0	U	C
Total Strontium	SR-RAD	-0.089	0.15	0.317	1.00	U	SR
Technetium 99	14133-76-7	0.097	0.26	0.363	15.0	U	TC
Thorium 228	14274-82-9	0.918	0.37	0.281	1.00		TH
Thorium 230	14269-63-7	0.145	0.22	0.278	1.00	U	TH
Thorium 232	TH-232	0.545	0.29	0.278	1.00		TH
Uranium 233/234	U-233/234	0.606	0.25	0.186	1.00		U
Uranium 235	15117-96-1	0.029	0.059	0.225	1.00	U	U
Uranium 238	U-238	0.485	0.25	0.186	1.00		U
Plutonium 238	13981-16-3	0.030	0.30	0.565	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.12	0.283	1.00	U	PU
Potassium 40	13966-00-2	13.9	0.22	0.092			GAM
Cobalt 60	10198-40-0	U		0.009	0.050	U	GAM
Cesium 137	10045-97-3	0.027	0.010	0.011	0.100		GAM
Radium 226	13982-63-3	0.502	0.021	0.017	0.100		GAM
Radium 228	15262-20-1	0.847	0.042	0.038	0.200		GAM
Europium 152	14683-23-9	U		0.024	0.100	U	GAM
Europium 154	15585-10-1	U		0.032	0.100	U	GAM
Europium 155	14391-16-3	U		0.037	0.100	U	GAM
Thorium 228	14274-82-9	0.850	0.015	0.013			GAM
Thorium 232	TH-232	0.847	0.042	0.038			GAM
Uranium 235	15117-96-1	U		0.054		U	GAM
Uranium 238	U-238	U		1.10		U	GAM
Americium 241	14596-10-2	U		0.015		U	GAM
Beryllium 7	13966-02-4	U		0.072		U	GAM
Ruthenium 106	13967-48-1	U		0.069		U	GAM
Antimony 125	14234-35-6	U		0.020		U	GAM
Cesium 134	13967-70-9	U		0.013		U	GAM

ColumbiaRiverComp.ofRCBRA-Sediment

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

7300-008 J186C8

DATA SHEET

SDG	7300	Client/Case no	Hanford	SDG K1526	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R902011-08	Client sample id	J186C8		
Dept sample id	7300-008	Location/Matrix	WP-4SSD	SOLID	
Received	02/06/09	Collected/Weight	02/04/09 12:00	2029 g	
% solids	100.0	Custody/SAF No	RC-116-854	RC-116	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Carbon 14	14762-75-5	0.389	1.9	3.20	50.0	U	C
Total Strontium	SR-RAD	0.116	0.24	0.412	1.00	U	SR
Technetium 99	14133-76-7	0.107	0.17	0.341	15.0	U	TC
Thorium 228	14274-82-9	0	0.15	0.368	1.00	U	TH
Thorium 230	14269-63-7	-0.038	0.076	0.290	1.00	U	TH
Thorium 232	TH-232	0	0.076	0.290	1.00	U	TH
Uranium 233/234	U-233/234	0.856	0.28	0.172	1.00	.	U
Uranium 235	15117-96-1	0	0.055	0.209	1.00	U	U
Uranium 238	U-238	0.743	0.28	0.172	1.00		U
Plutonium 238	13981-16-3	0.030	0.12	0.287	1.00	U	PU
Plutonium 239/240	PU-239/240	0.030	0.060	0.229	1.00	U	PU
Potassium 40	13966-00-2	12.3	0.56	0.101			GAM
Cobalt 60	10198-40-0	U		0.009	0.050	U	GAM
Cesium 137	10045-97-3	U		0.014	0.100	U	GAM
Radium 226	13982-63-3	0.941	0.027	0.019	0.100		GAM
Radium 228	15262-20-1	2.06	0.056	0.042	0.200		GAM
Europium 152	14683-23-9	U		0.028	0.100	U	GAM
Europium 154	15585-10-1	U		0.029	0.100	U	GAM
Europium 155	14391-16-3	U		0.100	0.100	U	GAM
Thorium 228	14274-82-9	1.95	0.021	0.015			GAM
Thorium 232	TH-232	2.06	0.056	0.042			GAM
Uranium 235	15117-96-1	U		0.092		U	GAM
Uranium 238	U-238	U		1.92		U	GAM
Americium 241	14596-10-2	U		0.071		U	GAM
Beryllium 7	13966-02-4	U		0.080		U	GAM
Ruthenium 106	13967-48-1	U		0.080		U	GAM
Antimony 125	14234-35-6	U		0.023		U	GAM
Cesium 134	13967-70-9	U		0.015		U	GAM

ColumbiaRiverComp.ofRCBRA-Sediment

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

Test	PU
Matrix	SOLID
SDG	7300
Contact	N. Joseph Verville

LAB METHOD SUMMARY

PLUTONIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client	Hanford
Contract	No. S00W235A00
Contract	SDG K1526

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Plutonium 238		Plutonium 239/240	
Preparation batch 6172-076								
R902011-01			7300-001	J186C0	U		U	
R902011-02			7300-002	J186C1	U		U	
R902011-03			7300-003	J186C2	U		U	
R902011-04			7300-004	J186C3	U		U	
R902011-05			7300-005	J186C5	U		U	
R902011-06			7300-006	J186C6	U		U	
R902011-07			7300-007	J186C7	U		U	
R902011-08			7300-008	J186C8	U		U	
R902011-09			7300-009	Lab Control Sample	ok		ok	
R902011-10			7300-010	Method Blank	U		U	
R902011-11			7300-011	Duplicate (R902011-01)	-	U	-	U
Nominal values and limits from method ColumbiaRiverComp.ofRCBRA-Sediment				RDLs (pCi/g)	1.00		1.00	

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 6172-076			2σ prep error 8.0 %	Reference Lab Notebook #6172, pg.76												
R902011-01			J186C0	0.225	0.500			70		135			24	02/28/09	02/28	SS-027
R902011-02			J186C1	0.276	0.500			69		135			24	02/28/09	02/28	SS-028
R902011-03			J186C2	0.175	0.500			75		165			24	02/28/09	02/28	SS-031
R902011-04			J186C3	0.210	0.500			77		165			24	02/28/09	02/28	SS-032
R902011-05			J186C5	0.214	0.500			68		165			24	02/28/09	02/28	SS-033
R902011-06			J186C6	0.235	0.500			70		166			24	02/28/09	02/28	SS-034
R902011-07			J186C7	0.565	0.500			24		402			24	02/28/09	02/28	SS-035
R902011-08			J186C8	0.287	0.500			56		165			24	02/28/09	02/28	SS-042
R902011-09			Lab Control Sample	0.160	0.500			75		163				02/28/09	02/28	SS-051
R902011-10			Method Blank	0.213	0.500			69		164				02/28/09	02/28	SS-052
R902011-11			Duplicate (R902011-01)	0.252	0.500			71		164			24	02/28/09	02/28	SS-053
Nominal values and limits from method				1.00	0.500			20-105		100	100		180			

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

Test	PU
Matrix	SOLID
SDG	7300
Contact	N. Joseph Verville

LAB METHOD SUMMARY, cont.

PLUTONIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client	Hanford
Contract	No. S00W235A00
Contract	SDG K1526

PROCEDURES	REFERENCE	PUISO_PLATE_AEA
	SPP-071	Soil Dissolution, > 1.0g Aliquot, rev 5
	CP-941	Plutonium in Water and Dissolved Samples by Extraction Chromatography, rev 3
	CP-008	Heavy Element Electroplating, rev 12

AVERAGES ± 2 SD	MDA	0.256	±	0.219
FOR 11 SAMPLES	YIELD	66	±	30

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

Test	TH
Matrix	SOLID
SDG	7300
Contact	N. Joseph Verville

LAB METHOD SUMMARY

THORIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client	Hanford
Contract	No. S00W235A00
Contract	SDG K1526

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Thorium 230
Preparation batch 6172-076					
R902011-01			7300-001	J186C0	U
R902011-02			7300-002	J186C1	0.718
R902011-03			7300-003	J186C2	U
R902011-04			7300-004	J186C3	U
R902011-05			7300-005	J186C5	0.399
R902011-06			7300-006	J186C6	U
R902011-07			7300-007	J186C7	U
R902011-08			7300-008	J186C8	U
R902011-09			7300-009	Lab Control Sample	ok
R902011-10			7300-010	Method Blank	U
R902011-11			7300-011	Duplicate (R902011-01)	- U

Nominal values and limits from method RDLs (pCi/g) 1.00
ColumbiaRiverComp.ofRCBRA-Sediment

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 6172-076			2σ prep error 8.0 %	Reference Lab Notebook #6172, pg.76												
R902011-01			J186C0	0.678	0.250			50		151			35	03/10/09	03/11	SS-028
R902011-02			J186C1	0.165	0.250			76		753			35	03/10/09	03/11	SS-028
R902011-03			J186C2	0.416	0.250			87		151			35	03/10/09	03/11	SS-031
R902011-04			J186C3	0.415	0.250			94		151			35	03/10/09	03/11	SS-032
R902011-05			J186C5	0.405	0.250			91		151			35	03/10/09	03/11	SS-033
R902011-06			J186C6	0.446	0.250			81		152			35	03/10/09	03/11	SS-034
R902011-07			J186C7	0.281	0.250			101		152			35	03/10/09	03/11	SS-042
R902011-08			J186C8	0.368	0.250			92		152			35	03/10/09	03/11	SS-055
R902011-09			Lab Control Sample	0.280	0.250			95		152				03/10/09	03/11	SS-057
R902011-10			Method Blank	0.442	0.250			81		158				03/10/09	03/11	SS-061
R902011-11			Duplicate (R902011-01)	0.348	0.250			94		158			35	03/10/09	03/11	SS-062
Nominal values and limits from method				1.00	0.250			20-105		150			180			

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

Test	TH
Matrix	SOLID
SDG	7300
Contact	N. Joseph Verville

LAB METHOD SUMMARY, cont.

THORIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client	Hanford
Contract	No. S00W235A00
Contract	SDG K1526

PROCEDURES	REFERENCE	THISO_IE_PLATE_AEA
	SPP-071	Soil Dissolution, > 1.0g Aliquot, rev 5
	CP-900	Thorium in Water and Dissolved Solid Samples by Extraction Chromatography, rev 1
	CP-008	Heavy Element Electroplating, rev 12

AVERAGES ± 2 SD	MDA	0.386	±	0.258
FOR 11 SAMPLES	YIELD	86	±	28

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

Test U	Matrix SOLID
SDG 7300	
Contact N. Joseph Verville	

LAB METHOD SUMMARY

URANIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client Hanford	
Contract No. S00W235A00	
Contract SDG K1526	

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 6172-076											
R902011-01			7300-001	J186C0	0.312	U	0.304	103	28	5	7
R902011-02			7300-002	J186C1	0.369	U	0.366	101	27	1	4
R902011-03			7300-003	J186C2	0.349	U	0.298	117	32	3	4
R902011-04			7300-004	J186C3	0.272	U	0.318	86	24	4	6
R902011-05			7300-005	J186C5	0.518	0.037	0.468	111	22	8	5
R902011-06			7300-006	J186C6	0.375	0.033	0.353	106	24	9	6
R902011-07			7300-007	J186C7	0.606	U	0.485	125	82	6	13
R902011-08			7300-008	J186C8	0.856	U	0.743	115	57	0	7
R902011-09			7300-009	Lab Control Sample	ok	ok	ok				
R902011-10			7300-010	Method Blank	U	U	U				
R902011-11			7300-011	Duplicate (R902011-01)	ok	- U	ok	62	50	0	15
Nominal values and limits from method				RDLs (pCi/g)	1.00	1.00	1.00	100		4	
ColumbiaRiverComp.ofRCBRA-Sediment							Averages	103		4	

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 6172-076			2σ prep error 8.0 %		Reference Lab Notebook #6172, pg.76											
R902011-01			J186C0	0.039	0.500			69		1303			33	03/06/09	03/09	SS-052
R902011-02			J186C1	0.043	0.500			70		1373			33	03/06/09	03/09	SS-039
R902011-03			J186C2	0.026	0.500			69		1373			33	03/06/09	03/09	SS-058
R902011-04			J186C3	0.029	0.500			78		1302			33	03/06/09	03/09	SS-059
R902011-05			J186C5	0.029	0.500			73		1302			33	03/06/09	03/09	SS-060
R902011-06			J186C6	0.030	0.500			78		1302			33	03/06/09	03/09	SS-066
R902011-07			J186C7	0.225	0.500			74		150			34	03/06/09	03/10	SS-039
R902011-08			J186C8	0.209	0.500			82		150			34	03/06/09	03/10	SS-042
R902011-09			Lab Control Sample	0.596	0.500			86		140				03/06/09	03/10	SS-051
R902011-10			Method Blank	0.215	0.500			74		140				03/06/09	03/10	SS-052
R902011-11			Duplicate (R902011-01)	0.240	0.500			69		151			35	03/06/09	03/11	SS-039
Nominal values and limits from method				1.00	0.500			20-105		100	100		180			

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

Test	U
Matrix	SOLID
SDG	7300
Contact	N. Joseph Verville

LAB METHOD SUMMARY, cont.

URANIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client	Hanford
Contract	No. S00W235A00
Contract	SDG K1526

PROCEDURES	REFERENCE	UISO_PLATE_AEA
	SPP-071	Soil Dissolution, > 1.0g Aliquot, rev 5
	CP-921	Uranium in Water and Dissolved Samples by Extraction Chromatography, rev 1
	CP-008	Heavy Element Electroplating, rev 12

AVERAGES ± 2 SD	MDA	0.153	±	0.348
FOR 11 SAMPLES	YIELD	75	±	11

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

Test SR	Matrix SOLID
SDG 7300	
Contact N. Joseph Verville	

LAB METHOD SUMMARY

TOTAL STRONTIUM IN SOLIDS

BETA COUNTING

Client Hanford	
Contract No. S00W235A00	
Contract SDG K1526	

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Total Strontium
Preparation batch 6172-076					
R902011-01			7300-001	J186C0	U
R902011-02			7300-002	J186C1	U
R902011-03			7300-003	J186C2	U
R902011-04			7300-004	J186C3	U
R902011-05			7300-005	J186C5	U
R902011-06			7300-006	J186C6	U
R902011-07			7300-007	J186C7	U
R902011-08			7300-008	J186C8	U
R902011-09			7300-009	Lab Control Sample	ok
R902011-10			7300-010	Method Blank	U
R902011-11			7300-011	Duplicate (R902011-01)	- U

Nominal values and limits from method RDLs (pCi/g) 1.00
ColumbiaRiverComp.ofRCBRA-Sediment

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 6172-076			2σ prep error 10.4 % Reference Lab Notebook #6172, pg.76													
R902011-01			J186C0	0.384	1.00			98		100			21	02/25/09	02/25	GRB-206
R902011-02			J186C1	0.312	1.00			98		100			21	02/25/09	02/25	GRB-207
R902011-03			J186C2	0.312	1.00			94		100			21	02/25/09	02/25	GRB-221
R902011-04			J186C3	0.284	1.00			99		100			21	02/25/09	02/25	GRB-222
R902011-05			J186C5	0.293	1.00			99		100			21	02/25/09	02/25	GRB-223
R902011-06			J186C6	0.289	1.00			99		100			21	02/25/09	02/25	GRB-224
R902011-07			J186C7	0.317	1.00			98		100			21	02/25/09	02/25	GRB-225
R902011-08			J186C8	0.412	1.00			92		100			21	02/25/09	02/25	GRB-226
R902011-09			Lab Control Sample	0.329	1.00			72		100				02/25/09	02/25	GRB-218
R902011-10			Method Blank	0.290	1.00			97		100				02/25/09	02/25	GRB-228
R902011-11			Duplicate (R902011-01)	0.298	1.00			99		100			21	02/25/09	02/25	GRB-230
Nominal values and limits from method				1.00	1.00			30-105		100			180			

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

Test SR Matrix SOLID
SDG 7300
Contact N. Joseph Verville

LAB METHOD SUMMARY, cont.

TOTAL STRONTIUM IN SOLIDS

BETA COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1526

PROCEDURES	REFERENCE	SRTOT_SEP_PRECIP_GPC
	SPP-071	Soil Dissolution, > 1.0g Aliquot, rev 5
	CP-383	Strontium in Dissolved Solid of < 5.0g Aliquot, rev 1

AVERAGES ± 2 SD	MDA	0.320	±	0.083
FOR 11 SAMPLES	YIELD	95	±	16

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

Test	TC
Matrix	SOLID
SDG	7300
Contact	N. Joseph Verville

LAB METHOD SUMMARY

TECHNETIUM 99 IN SOLIDS

BETA COUNTING

Client	Hanford
Contract	No. S00W235A00
Contract	SDG K1526

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Technetium 99	
Preparation batch 6172-076						
R902011-01			7300-001	J186C0	U	
R902011-02			7300-002	J186C1	U	
R902011-03			7300-003	J186C2	U	
R902011-04			7300-004	J186C3	U	
R902011-05			7300-005	J186C5	U	
R902011-06			7300-006	J186C6	U	
R902011-07			7300-007	J186C7	U	
R902011-08			7300-008	J186C8	U	
R902011-09			7300-009	Lab Control Sample	ok	
R902011-10			7300-010	Method Blank	U	
R902011-11			7300-011	Duplicate (R902011-01)	-	U
Nominal values and limits from method ColumbiaRiverComp.ofRCBRA-Sediment				RDLs (pCi/g)	15.0	

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 6172-076			2σ prep error 13.2 % Reference Lab Notebook #6172, pg.76													
R902011-01			J186C0	0.341	1.00			104		100			24	02/24/09	02/28	GRB-218
R902011-02			J186C1	0.338	1.00			104		100			23	02/24/09	02/27	GRB-222
R902011-03			J186C2	0.353	1.00			99		100			24	02/24/09	02/28	GRB-222
R902011-04			J186C3	0.351	1.00			100		100			23	02/24/09	02/27	GRB-224
R902011-05			J186C5	0.396	1.00			89		100			26	02/24/09	03/02	GRB-228
R902011-06			J186C6	0.388	1.00			99		100			24	02/24/09	02/28	GRB-225
R902011-07			J186C7	0.363	1.00			101		100			23	02/24/09	02/27	GRB-227
R902011-08			J186C8	0.341	1.00			103		100			23	02/24/09	02/27	GRB-228
R902011-09			Lab Control Sample	0.356	1.00			108		100				02/24/09	02/27	GRB-229
R902011-10			Method Blank	0.337	1.00			104		100				02/24/09	02/28	GRB-228
R902011-11			Duplicate (R902011-01)	0.372	1.00			99		100			26	02/24/09	03/02	GRB-221
Nominal values and limits from method				15.0	1.00			20-105		50			180			

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

Test	TC
Matrix	SOLID
SDG	7300
Contact	N. Joseph Verville

LAB METHOD SUMMARY, cont.

TECHNETIUM 99 IN SOLIDS

BETA COUNTING

Client	Hanford
Contract	No. S00W235A00
Contract	SDG K1526

PROCEDURES	REFERENCE	TC99_TR_SEP_GPC
	SPP-062	Sample Aliquoting, rev 0
	CP-021	Preparation of Tc-99m Tracer, rev 4
	CP-431	Technetium-99 Purification of Soil or Resin by Extraction Chromatography, rev 2
	CP-008	Heavy Element Electroplating, rev 12

AVERAGES ± 2 SD	MDA	0.358	±	0.040
FOR 11 SAMPLES	YIELD	101	±	10

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

Test	GAM
Matrix	SOLID
SDG	7300
Contact	N. Joseph Verville

LAB METHOD SUMMARY

GAMMA SCAN

GAMMA SPECTROSCOPY

Client	Hanford
Contract	No. S00W235A00
Contract	SDG K1526

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Cobalt 60	Cesium 137
Preparation batch 6172-076						
R902011-01			7300-001	J186C0	U	U
R902011-02			7300-002	J186C1	U	U
R902011-03			7300-003	J186C2	U	U
R902011-04			7300-004	J186C3	U	U
R902011-05			7300-005	J186C5	U	0.039
R902011-06			7300-006	J186C6	U	0.031
R902011-07			7300-007	J186C7	U	0.027
R902011-08			7300-008	J186C8	U	U
R902011-09			7300-009	Lab Control Sample	ok	ok
R902011-10			7300-010	Method Blank	U	U
R902011-11			7300-011	Duplicate (R902011-01)	- U	- U
Nominal values and limits from method ColumbiaRiverComp.ofRCBRA-Sediment				RDLs (pCi/g)	0.050	0.100

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 6172-076			2σ prep error 7.0 %	Reference Lab Notebook #6172, pg.76												
R902011-01			J186C0	3.93	757					202			13	02/16/09	02/17	02,04,00
R902011-02			J186C1	1.10	913					771			13	02/16/09	02/17	02,02,00
R902011-03			J186C2	3.77	980					202			13	02/16/09	02/17	MB,06,00
R902011-04			J186C3	3.63	750					202			13	02/16/09	02/17	MB,07,00
R902011-05			J186C5	4.33	971					202			13	02/16/09	02/17	MB,08,00
R902011-06			J186C6	3.06	912					772			13	02/16/09	02/17	MB,05,00
R902011-07			J186C7	1.89	925					772			13	02/16/09	02/17	MB,07,00
R902011-08			J186C8	2.28	984					771			13	02/16/09	02/17	MB,08,00
R902011-09			Lab Control Sample	0.013	750					213				02/16/09	02/18	01,01,00
R902011-10			Method Blank	1.38	750					213				02/16/09	02/18	01,02,00
R902011-11			Duplicate (R902011-01)	4.51	757					222			14	02/16/09	02/18	MB,05,00
Nominal values and limits from method				0.050	750					100			180			

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

Test	GAM
Matrix	SOLID
SDG	7300
Contact	N. Joseph Verville

LAB METHOD SUMMARY, cont.

GAMMA SCAN

GAMMA SPECTROSCOPY

Client	Hanford
Contract	No. S00W235A00
Contract	SDG K1526

PROCEDURES	REFERENCE	GAMMA_GS
	SPP-100	Ge(Li) Preparation for Commercial Samples, rev 7

AVERAGES ± 2 SD	MDA	2.72	±	2.96
FOR 11 SAMPLES	YIELD		±	

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

Test	C
Matrix	SOLID
SDG	7300
Contact	N. Joseph Verville

LAB METHOD SUMMARY

CARBON 14 IN SOLIDS

LIQUID SCINTILLATION COUNTING

Client	Hanford
Contract	No. S00W235A00
Contract	SDG K1526

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Carbon 14	
Preparation batch 6172-076						
R902011-01			7300-001	J186C0	U	
R902011-02			7300-002	J186C1	U	
R902011-03			7300-003	J186C2	U	
R902011-04			7300-004	J186C3	U	
R902011-05			7300-005	J186C5	U	
R902011-06			7300-006	J186C6	U	
R902011-07			7300-007	J186C7	U	
R902011-08			7300-008	J186C8	U	
R902011-09			7300-009	Lab Control Sample	ok	
R902011-10			7300-010	Method Blank	U	
R902011-11			7300-011	Duplicate (R902011-01)	-	U

Nominal values and limits from method RDLs (pCi/g) 50.0
ColumbiaRiverComp.ofRCBRA-Sediment

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 6172-076			2σ prep error 10.0 % Reference Lab Notebook #6172, pg.76													
R902011-01			J186C0	3.40	0.425			100		50			29	03/04/09	03/05	LSC-004
R902011-02			J186C1	3.23	0.450			100		50			29	03/04/09	03/05	LSC-004
R902011-03			J186C2	3.42	0.411			100		50			29	03/04/09	03/05	LSC-004
R902011-04			J186C3	3.33	0.435			100		50			29	03/04/09	03/05	LSC-004
R902011-05			J186C5	3.05	0.474			100		50			29	03/04/09	03/05	LSC-004
R902011-06			J186C6	3.28	0.440			100		50			29	03/04/09	03/05	LSC-004
R902011-07			J186C7	3.26	0.432			100		50			29	03/04/09	03/05	LSC-004
R902011-08			J186C8	3.20	0.449			100		50			29	03/04/09	03/05	LSC-004
R902011-09			Lab Control Sample	3.60	0.400			100		50				03/04/09	03/05	LSC-004
R902011-10			Method Blank	3.56	0.400			100		50				03/04/09	03/05	LSC-004
R902011-11			Duplicate (R902011-01)	3.31	0.429			100		50			29	03/04/09	03/05	LSC-004
Nominal values and limits from method				50.0	0.400					10			180			

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

Test C	Matrix SOLID
SDG 7300	
Contact N. Joseph Verville	

LAB METHOD SUMMARY, cont.

CARBON 14 IN SOLIDS

LIQUID SCINTILLATION COUNTING

Client Hanford	
Contract No. S00W235A00	
Contract SDG K1526	

PROCEDURES	REFERENCE	C14_COX_LSC
	CP-251	Tritium/Carbon-14 Oxidation, rev 8

AVERAGES ± 2 SD	MDA	3.33	±	0.317
FOR 11 SAMPLES	YIELD	100	±	0

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	03/13/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1526

SDG	7300
Contact	N. Joseph Verville

REPORT GUIDE

Client	Hanford
Contract	No. S00W235A00
Case no	SDG K1526

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	03/13/09

SDG 7300
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1526

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.

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/13/09

SDG 7300
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG K1526

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.

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/13/09

SDG 7300
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1526

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).

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-RG
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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.

SDG 7300
Contact N. Joseph Verville

GUIDE, cont.

Client Hanford
Contract No. S00W235A00
Case no SDG_K1526

DATA SHEET

* 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.

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/13/09

SDG 7300
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1526

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.

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-RG
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Report date 03/13/09

SDG 7300
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG K1526

DUPLICATE

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.

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/13/09

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.

SDG 7300
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1526

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

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/13/09

SDG 7300
Contact N. Joseph Verville

GUIDE, cont.

Client Hanford
Contract No. S00W235A00
Case no SDG K1526

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.

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/13/09

SDG 7300
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1526

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 03/13/09

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-116-846	Page 1 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688 K1526	Project Coordinator: WEISS, RL
Price Code: ~~9K~~ 9N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- ~~8~~ SSD 7300		SAF No.: RC-116
Ice Chest No.: WCH-08-058	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 7973 1320 4940

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C0	OTHER SOLID	2/4/09	1200	X	X	X	X						

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: B Mayer BM	2/4/09 1500	Frig A	2/4/09 1500
Relinquished By/Removed From: Frig A	2/5/09 0830	D. Heidelberg	2/5/09 0830
Relinquished By/Removed From: D. Heidelberg	2/5/09 1000	Fedex	2/5/09 1000
Relinquished By/Removed From: FED EX		R. E. Mathusman	02/06/09 09:15
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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-116-847	Page 1 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688 K1526	Project Coordinator: WEISS, RL
Price Code: ~~9K~~ 9N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 7 SSD 7300		SAF No.: RC-116
Ice Chest No.: WCH-08-054	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 7973132049 40

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C1	OTHER SOLID	2/4/09	1135	X	X	X	X						

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: B Mayer	2/4/09 1500	Received By/Stored In: Fry A	2/4/09 1500
Relinquished By/Removed From: Fry A	2/5/09 0830	Received By/Stored In: D. Heidelberg	2/5/09 0830
Relinquished By/Removed From: D. Heidelberg	2/5/09 1000	Received By/Stored In: Fedex	2/5/09 1000
Relinquished By/Removed From: FED EX		Received By/Stored In: R.F. MATHUATHSU	02/06/09 09:15
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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-116-848	Page 1 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: ~~9K~~ 9N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 9 SSD K1562 (7300)		SAF No.: RC-116
Ice Chest No.: WCH-08-058	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 797313204948

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C2	OTHER SOLID	2/4/09	1315	X	X	X	X						

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	B Martin	2/4/09 1500	Fedex	2/4/09 1500
Relinquished By/Removed From	Fedex	2/5/09 0830	D. Heidelberg	2/5/09 0830
Relinquished By/Removed From	D. Heidelberg	2/5/09 1000	Fedex	2/5/09 1000
Relinquished By/Removed From	FED EX		Received By/Stored In: L.F. MATADAMAN	02/06/09 09:15
Relinquished By/Removed From			Received By/Stored In	
Relinquished By/Removed From			Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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-116-849	Page 1 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: ~~9K~~ 9N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 6 SSD K1526 (7300)	SAF No.: RC-116	
Ice Chest No.: WCH-08-054	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: 7973132049 40	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C3	OTHER SOLID	2/4/09	1100	X	X	X	X						

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: B Mayer BM	2/4/09 1500	Received By/Stored In: Fritz A	2/4/09 1500
Relinquished By/Removed From: Ruf A	2/5/09 0830	Received By/Stored In: D. Heidelberg	2/5/09 0830
Relinquished By/Removed From: D. Heidelberg	2/5/09 1000	Received By/Stored In: Fedex	2/5/09 1000
Relinquished By/Removed From: FED EX		Received By/Stored In: R.F. WATANABE	02/06/09 09:15
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wl=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-116-851	Page 1 of 2

Collector L Stratton	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator WEISS, RL	Price Code ~~9K~~ 9N	Data Turnaround 45 Days
Project Designation Columbia River Component of the RCBRA - Sediment	Sampling Location WP- 2 SSD K1526 (7300)		SAF No. RC-116		
Ice Chest No. WCH-08-058	Field Logbook No. EL-1631/-1	COA BESCRC6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES LIONVILLE	Offsite Property No. N/A		Bill of Lading/Air Bill No. 797313204940		

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C5	OTHER SOLID	2/4/09	1120	X	X	X	X						

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From [illegible]	2-4-09 1515	Received By/Stored In [illegible]	2-4-09 1515
Relinquished By/Removed From Bet. B	2/5/09 0830	Received By/Stored In D Heidelberg	2/5/09 0830
Relinquished By/Removed From D Heidelberg	2/5/09 1000	Received By/Stored In Fedex	2/5/09 1000
Relinquished By/Removed From FED EX		Received By/Stored In N.F. WATANATAN	02/06/09 09:15
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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-116-852	Page 1 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: ~~9K~~ 9N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 1 SSD K1502-6 (7300)	SAF No.: RC-116	
Ice Chest No.	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: 797313204940	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C6	OTHER SOLID	2/4/09	1055	X	X	X	X						

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [signature]	2.4.09 / 1515	Received By/Stored In: Ref B	2.4.09 / 1515
Relinquished By/Removed From: Ref. B	215109 0830	Received By/Stored In: D. Heidelberg	215109 0830
Relinquished By/Removed From: D. Heidelberg	215109 1000	Received By/Stored In: Fedex	215109 1000
Relinquished By/Removed From: FED EX		Received By/Stored In: R.F. MATHWATHAN	02/06/09 09:15
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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-116-853	Page 1 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: ~~9K~~ 9N (3/13)	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP-3 SSD K1526 (7300)	SAF No.: RC-116	
Ice Chest No.: WCH-08-058	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: 797313204940	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C7	OTHER SOLID	2/4/09	1145	X	X	X	X						

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: J Hadson	2.4.09 / 1515	Received By/Stored In: Frig. A	2/4/09 1515
Relinquished By/Removed From: Frig A	2/5/09 0830	Received By/Stored In: D. Heidelberg	2/5/09 0830
Relinquished By/Removed From: D. Heidelberg	2/5/09 1000	Received By/Stored In: Fedex	2/5/09 1000
Relinquished By/Removed From: FED EX		Received By/Stored In: N.F. Mathwarren	02/06/09 09:15
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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-116-854	Page 1 of 2

Collector: LStallion	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: ~~9K~~ 9N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 4 SSD K1526 (7300)	SAF No.: RC-116	
Ice Chest No.: WCH-08-058	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: 7973132049 40	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C8	OTHER SOLID	2/4/09	1200	X	X	X	X						

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Other	2.4.09 / 1515	Ref B	2.4.09 / 1515
Relinquished By/Removed From: Ref. B	2/5/09 0830	D. Heidelberg	2/5/09 0830
Relinquished By/Removed From: D. Heidelberg	2/5/09 1000	FedEx	2/5/09 1000
Relinquished By/Removed From: FED EX		R.F. WITKOWSKI	02/06/09 09:15
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

EBERLINE SERVICES

RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

Jk 2/06/09

Client: W.C. HANFORD City RICHLAND State WA

Date/Time received 02/06/09 09:15 CoC No. RC-116-846,847,848,849,851,852,853,854

Container I.D. No. WCH-08-058 Requested TAT (Days) 45 P.O. Received Yes [ ] No [X]

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: 8 Sample Matrix X SOLID
7. Number of containers per sample: 4 (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 [ ] Appropriate sample labels [X]
11. Samples are: In good condition [X] Leaking [ ] Broken Container [ ] Missing [ ]
12. Samples are: Preserved [ ] Not preserved [ ] pH ____ Preservative ____
13. Describe any anomalies:
14. Was P.M. notified of any anomalies? Yes [ ] No [ ] Date ____
15. Inspected by [signature] Date: 02/06/09 Time: 10:45

Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	Wipe	Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	wipe
All Samples	<60						

Ion Chamber Ser. No. ____ Calibration date ____

Alpha Meter Ser. No. ____ Calibration date ____

Beta/Gamma Meter Ser. No. 100482 Calibration date 10 Jul 08

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

18 May 2009

RECEIVED
MAY 2009

Joan Kessner
WC-Hanford, Inc.
2620 Fermi Avenue
MSIN H9-03
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 #	0902020
SDG #	K1526
SAF #	RC-116
Date Received	2/6/09
# Samples	~~50~~ 10 5/18/09
Matrix	SOIL
Volatiles	X
Semivolatiles	X
Pest/PCB	X
Glycols	
DRO/KRO/GRO	
GC Alcohols	
Herbicides	
Metals	X
Inorganics	X

The electronic data deliverable (EDD) will be emailed shortly. 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

LVL
LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

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

RECEIVED
MAY 2009

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-116 Project Number: [none] K1526 VOA Project Manager: Joan Kessner	Reported: 04/01/2009 12:33

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
J186C0	0902020-01	Solid	02/04/2009 12:00	02/06/2009 09:30
J186C1	0902020-02	Solid	02/04/2009 11:35	02/06/2009 09:30
J186C2	0902020-03	Solid	02/04/2009 13:15	02/06/2009 09:30
J186C3	0902020-04	Solid	02/04/2009 11:00	02/06/2009 09:30
J186C5	0902020-05	Solid	02/04/2009 11:20	02/06/2009 09:30
J186C6	0902020-06	Solid	02/04/2009 10:55	02/06/2009 09:30
J186C7	0902020-07	Solid	02/04/2009 11:45	02/06/2009 09:30
J186C8	0902020-08	Solid	02/04/2009 12:00	02/06/2009 09:30
J17W09	0902020-09	Solid	02/04/2009 07:30	02/06/2009 09:30
J17W11	0902020-10	Solid	02/04/2009 07:30	02/06/2009 09:30

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-116 K1526
LVL #: 0902020
SDG/SAF # RC-116

W.O. #: 60049-001-001-0001-00
Date Received: 02-06-2009

GC/MS VOLATILE

Ten (10) solid samples were collected on 02-04-2009.

The samples and associated QC samples were analyzed according to criteria set forth in Lionville Laboratory SOPs based on SW 846 Method 8260B and Soil Method 5030A for TCL Volatile target compounds on 02-10,12,-2009.

The following is a summary of QC results accompanying the sample results. All samples are reported on a wet weight basis. Lionville Laboratory (LvL) certifies that all test results meet the requirements of NELAC except as noted below:

1. Samples were analyzed within hold time.
2. Non-target compounds were not detected in these samples.
3. All surrogate recoveries were within acceptance criteria.
4. Seven 97) of sixty-eight (68) matrix spike recoveries were outside acceptance criteria.
5. All blank spike recoveries were within acceptance criteria.
6. The method blanks were below the reporting limit for all target analytes.
7. All internal standard area and retention time criteria were met.
8. Manual integrations are performed according to SOP QA-125 to produce quality data with 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").
9. 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

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 62 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
Laboratory Manager
Lionville Laboratory

4/2/09
Date

LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

264 Welsh Pool Ro
Exton, PA 193
Phone: 610-280-30
Fax: 610-280-30

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/01/2009 12:33

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).
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
RPD	Relative Percent Difference

LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

264 Welsh Pool Roa
Exton, PA 1934
Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-116 Project Number: [none] Project Manager: Joan Kessner	**Reported:** 04/01/2009 12:33

J186C0
0902020-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Lionville Laboratory									
Volatile Organic Compounds by SW846 8260B									
1,1,1-Trichloroethane	ND	4.81	ug/kg wet	1	L903032	02/10/2009	02/10/2009	8260B	U
1,1,2,2-Tetrachloroethane	ND	4.81	"	"	"	"	"	"	U
1,1,2-Trichloroethane	ND	4.81	"	"	"	"	"	"	U
1,1-Dichloroethane	ND	4.81	"	"	"	"	"	"	U
1,1-Dichloroethene	ND	4.81	"	"	"	"	"	"	U
1,2-Dichloroethane	ND	5.77	"	"	"	"	"	"	U
1,2-Dichloropropane	ND	4.81	"	"	"	"	"	"	U
2-Butanone	ND	11.5	"	"	"	"	"	"	U
2-Hexanone	ND	11.5	"	"	"	"	"	"	U
4-Methyl-2-pentanone	ND	11.5	"	"	"	"	"	"	U
Acetone	ND	11.5	"	"	"	"	"	"	U
Benzene	ND	4.81	"	"	"	"	"	"	U
Bromodichloromethane	ND	5.77	"	"	"	"	"	"	U
Bromoform	ND	4.81	"	"	"	"	"	"	U
Bromomethane	ND	9.62	"	"	"	"	"	"	U
Carbon Disulfide	ND	4.81	"	"	"	"	"	"	U
Carbon Tetrachloride	ND	4.81	"	"	"	"	"	"	U
Chlorobenzene	ND	4.81	"	"	"	"	"	"	U
Chloroethane	ND	9.62	"	"	"	"	"	"	U
Chloroform	ND	4.81	"	"	"	"	"	"	U
Chloromethane	ND	9.62	"	"	"	"	"	"	U
cis-1,3-Dichloropropene	ND	4.81	"	"	"	"	"	"	U
Dibromochloromethane	ND	4.81	"	"	"	"	"	"	U
Ethylbenzene	ND	4.81	"	"	"	"	"	"	U
Methylene Chloride	ND	5.77	"	"	"	"	"	"	U
Styrene	ND	4.81	"	"	"	"	"	"	U
Tetrachloroethene	ND	4.81	"	"	"	"	"	"	U
Toluene	ND	4.81	"	"	"	"	"	"	U
trans-1,3-Dichloropropene	ND	4.81	"	"	"	"	"	"	U
Trichloroethene	ND	4.81	"	"	"	"	"	"	U
Vinyl chloride	ND	9.62	"	"	"	"	"	"	U
Xylenes, total	ND	5.77	"	"	"	"	"	"	U
cis-1,2-Dichloroethene	ND	4.81	"	"	"	"	"	"	U
trans-1,2-Dichloroethene	ND	4.81	"	"	"	"	"	"	U

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Exton, PA 1934
Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/01/2009 12:33

J186C0

0902020-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Lionville Laboratory									
Volatile Organic Compounds by SW846 8260B									
Tentatively Identified Compound	0.00		ug/kg wet	1	L903032	02/10/2009	02/10/2009	8260B	U
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*63-151*		"	"	"	"	
Surrogate: Toluene-d8		*102 %*	*68-140*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*115 %*	*66-122*		"	"	"	"	

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Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/01/2009 12:33

J186C1
0902020-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Lionville Laboratory									
Volatile Organic Compounds by SW846 8260B									
1,1,1-Trichloroethane	ND	4.39	ug/kg wet	1	L903032	02/10/2009	02/10/2009	8260B	U
1,1,2,2-Tetrachloroethane	ND	4.39	"	"	"	"	"	"	U
1,1,2-Trichloroethane	ND	4.39	"	"	"	"	"	"	U
1,1-Dichloroethane	ND	4.39	"	"	"	"	"	"	U
1,1-Dichloroethene	ND	4.39	"	"	"	"	"	"	U
1,2-Dichloroethane	ND	5.26	"	"	"	"	"	"	U
1,2-Dichloropropane	ND	4.39	"	"	"	"	"	"	U
2-Butanone	ND	10.5	"	"	"	"	"	"	U
2-Hexanone	ND	10.5	"	"	"	"	"	"	U
4-Methyl-2-pentanone	ND	10.5	"	"	"	"	"	"	U
Acetone	ND	10.5	"	"	"	"	"	"	U
Benzene	ND	4.39	"	"	"	"	"	"	U
Bromodichloromethane	ND	5.26	"	"	"	"	"	"	U
Bromoform	ND	4.39	"	"	"	"	"	"	U
Bromomethane	ND	8.77	"	"	"	"	"	"	U
Carbon Disulfide	ND	4.39	"	"	"	"	"	"	U
Carbon Tetrachloride	ND	4.39	"	"	"	"	"	"	U
Chlorobenzene	ND	4.39	"	"	"	"	"	"	U
Chloroethane	ND	8.77	"	"	"	"	"	"	U
Chloroform	ND	4.39	"	"	"	"	"	"	U
Chloromethane	ND	8.77	"	"	"	"	"	"	U
cis-1,3-Dichloropropene	ND	4.39	"	"	"	"	"	"	U
Dibromochloromethane	ND	4.39	"	"	"	"	"	"	U
Ethylbenzene	ND	4.39	"	"	"	"	"	"	U
Methylene Chloride	ND	5.26	"	"	"	"	"	"	U
Styrene	ND	4.39	"	"	"	"	"	"	U
Tetrachloroethene	ND	4.39	"	"	"	"	"	"	U
Toluene	ND	4.39	"	"	"	"	"	"	U
trans-1,3-Dichloropropene	ND	4.39	"	"	"	"	"	"	U
Trichloroethene	ND	4.39	"	"	"	"	"	"	U
Vinyl chloride	ND	8.77	"	"	"	"	"	"	U
Xylenes, total	ND	5.26	"	"	"	"	"	"	U
cis-1,2-Dichloroethene	ND	4.39	"	"	"	"	"	"	U
trans-1,2-Dichloroethene	ND	4.39	"	"	"	"	"	"	U

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Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/01/2009 12:33

J186C1

0902020-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Lionville Laboratory									
Volatile Organic Compounds by SW846 8260B									
Tentatively Identified Compound	0.00		ug/kg wet	1	L903032	02/10/2009	02/10/2009	8260B	U
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*63-151*		"	"	"	"	
Surrogate: Toluene-d8		*104 %*	*68-140*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*66-122*		"	"	"	"	

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Exton, PA 1934
Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/01/2009 12:33

J186C2
0902020-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Lionville Laboratory									
Volatile Organic Compounds by SW846 8260B									
1,1,1-Trichloroethane	ND	3.79	ug/kg wet	1	L902090	02/12/2009	02/12/2009	8260B	U
1,1,2,2-Tetrachloroethane	ND	3.79	"	"	"	"	"	"	U
1,1,2-Trichloroethane	ND	3.79	"	"	"	"	"	"	U
1,1-Dichloroethane	ND	3.79	"	"	"	"	"	"	U
1,1-Dichloroethene	ND	3.79	"	"	"	"	"	"	U
1,2-Dichloroethane	ND	4.55	"	"	"	"	"	"	U
1,2-Dichloropropane	ND	3.79	"	"	"	"	"	"	U
2-Butanone	ND	9.09	"	"	"	"	"	"	U
2-Hexanone	ND	9.09	"	"	"	"	"	"	U
4-Methyl-2-pentanone	ND	9.09	"	"	"	"	"	"	U
Acetone	ND	9.09	"	"	"	"	"	"	U
Benzene	ND	3.79	"	"	"	"	"	"	U
Bromodichloromethane	ND	4.55	"	"	"	"	"	"	U
Bromoform	ND	3.79	"	"	"	"	"	"	U
Bromomethane	ND	7.58	"	"	"	"	"	"	U
Carbon Disulfide	ND	3.79	"	"	"	"	"	"	U
Carbon Tetrachloride	ND	3.79	"	"	"	"	"	"	U
Chlorobenzene	ND	3.79	"	"	"	"	"	"	U
Chloroethane	ND	7.58	"	"	"	"	"	"	U
Chloroform	ND	3.79	"	"	"	"	"	"	U
Chloromethane	ND	7.58	"	"	"	"	"	"	U
cis-1,3-Dichloropropene	ND	3.79	"	"	"	"	"	"	U
Dibromochloromethane	ND	3.79	"	"	"	"	"	"	U
Ethylbenzene	ND	3.79	"	"	"	"	"	"	U
Methylene Chloride	**3.83**	4.55	"	"	"	"	"	"	
Styrene	ND	3.79	"	"	"	"	"	"	U
Tetrachloroethene	ND	3.79	"	"	"	"	"	"	U
Toluene	ND	3.79	"	"	"	"	"	"	U
trans-1,3-Dichloropropene	ND	3.79	"	"	"	"	"	"	U
Trichloroethene	ND	3.79	"	"	"	"	"	"	U
Vinyl chloride	ND	7.58	"	"	"	"	"	"	U
Xylenes, total	ND	4.55	"	"	"	"	"	"	U
cis-1,2-Dichloroethene	ND	3.79	"	"	"	"	"	"	U
trans-1,2-Dichloroethene	ND	3.79	"	"	"	"	"	"	U

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Exton, PA 1934
Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-116 Project Number: [none] Project Manager: Joan Kessner	**Reported:** 04/01/2009 12:33

J186C2
0902020-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Lionville Laboratory									
Volatile Organic Compounds by SW846 8260B									
Tentatively Identified Compound	0.00		ug/kg wet	1	L902090	02/12/2009	02/12/2009	8260B	I
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*63-151*		"	"	"	"	
Surrogate: Toluene-d8		*99 %*	*68-140*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*66-122*		"	"	"	"	

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Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-116 Project Number: [none] Project Manager: Joan Kessner	**Reported:** 04/01/2009 12:33

J186C3
0902020-04 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
			Lionville Laboratory						
Volatile Organic Compounds by SW846 8260B									
1,1,1-Trichloroethane	ND	4.17	ug/kg wet	1	L902090	02/12/2009	02/12/2009	8260B	U
1,1,2,2-Tetrachloroethane	ND	4.17	"	"	"	"	"	"	U
1,1,2-Trichloroethane	ND	4.17	"	"	"	"	"	"	U
1,1-Dichloroethane	ND	4.17	"	"	"	"	"	"	U
1,1-Dichloroethene	ND	4.17	"	"	"	"	"	"	U
1,2-Dichloroethane	ND	5.00	"	"	"	"	"	"	U
1,2-Dichloropropane	ND	4.17	"	"	"	"	"	"	U
2-Butanone	ND	10.0	"	"	"	"	"	"	U
2-Hexanone	ND	10.0	"	"	"	"	"	"	U
4-Methyl-2-pentanone	ND	10.0	"	"	"	"	"	"	U
Acetone	ND	10.0	"	"	"	"	"	"	U
Benzene	ND	4.17	"	"	"	"	"	"	U
Bromodichloromethane	ND	5.00	"	"	"	"	"	"	U
Bromoform	ND	4.17	"	"	"	"	"	"	U
Bromomethane	ND	8.33	"	"	"	"	"	"	U
Carbon Disulfide	ND	4.17	"	"	"	"	"	"	U
Carbon Tetrachloride	ND	4.17	"	"	"	"	"	"	U
Chlorobenzene	ND	4.17	"	"	"	"	"	"	U
Chloroethane	ND	8.33	"	"	"	"	"	"	U
Chloroform	ND	4.17	"	"	"	"	"	"	U
Chloromethane	ND	8.33	"	"	"	"	"	"	U
cis-1,3-Dichloropropene	ND	4.17	"	"	"	"	"	"	U
Dibromochloromethane	ND	4.17	"	"	"	"	"	"	U
Ethylbenzene	ND	4.17	"	"	"	"	"	"	U
Methylene Chloride	**3.28**	5.00	"	"	"	"	"	"	
Styrene	ND	4.17	"	"	"	"	"	"	U
Tetrachloroethene	ND	4.17	"	"	"	"	"	"	U
Toluene	ND	4.17	"	"	"	"	"	"	U
trans-1,3-Dichloropropene	ND	4.17	"	"	"	"	"	"	U
Trichloroethene	ND	4.17	"	"	"	"	"	"	U
Vinyl chloride	ND	8.33	"	"	"	"	"	"	U
Xylenes, total	ND	5.00	"	"	"	"	"	"	U
cis-1,2-Dichloroethene	ND	4.17	"	"	"	"	"	"	U
trans-1,2-Dichloroethene	ND	4.17	"	"	"	"	"	"	U

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Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-116 Project Number: [none] Project Manager: Joan Kessner	**Reported:** 04/01/2009 12:33

J186C3

0902020-04 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Lionville Laboratory									
Volatile Organic Compounds by SW846 8260B									
Tentatively Identified Compound	0.00		ug/kg wet	1	L902090	02/12/2009	02/12/2009	8260B	U
Surrogate: 1,2-Dichloroethane-d4		*108 %*	*63-151*		"	"	"	"	
Surrogate: Toluene-d8		*95 %*	*68-140*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*116 %*	*66-122*		"	"	"	"	

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264 Welsh Pool Roa
Exton, PA 1934
Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/01/2009 12:33

J186C5
0902020-05 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
			Lionville Laboratory						
Volatile Organic Compounds by SW846 8260B									
1,1,1-Trichloroethane	ND	3.97	ug/kg wet	1	L902090	02/12/2009	02/12/2009	8260B	1
1,1,2,2-Tetrachloroethane	ND	3.97	"	"	"	"	"	"	1
1,1,2-Trichloroethane	ND	3.97	"	"	"	"	"	"	1
1,1-Dichloroethane	ND	3.97	"	"	"	"	"	"	1
1,1-Dichloroethene	ND	3.97	"	"	"	"	"	"	1
1,2-Dichloroethane	ND	4.76	"	"	"	"	"	"	1
1,2-Dichloropropane	ND	3.97	"	"	"	"	"	"	1
2-Butanone	ND	9.52	"	"	"	"	"	"	1
2-Hexanone	ND	9.52	"	"	"	"	"	"	1
4-Methyl-2-pentanone	ND	9.52	"	"	"	"	"	"	1
Acetone	ND	9.52	"	"	"	"	"	"	
Benzene	ND	3.97	"	"	"	"	"	"	
Bromodichloromethane	ND	4.76	"	"	"	"	"	"	
Bromoform	ND	3.97	"	"	"	"	"	"	
Bromomethane	ND	7.94	"	"	"	"	"	"	
Carbon Disulfide	ND	3.97	"	"	"	"	"	"	
Carbon Tetrachloride	ND	3.97	"	"	"	"	"	"	
Chlorobenzene	ND	3.97	"	"	"	"	"	"	
Chloroethane	ND	7.94	"	"	"	"	"	"	
Chloroform	ND	3.97	"	"	"	"	"	"	
Chloromethane	ND	7.94	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	3.97	"	"	"	"	"	"	
Dibromochloromethane	ND	3.97	"	"	"	"	"	"	
Ethylbenzene	ND	3.97	"	"	"	"	"	"	
Methylene Chloride	**4.16**	4.76	"	"	"	"	"	"	
Styrene	ND	3.97	"	"	"	"	"	"	
Tetrachloroethene	ND	3.97	"	"	"	"	"	"	
Toluene	ND	3.97	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	3.97	"	"	"	"	"	"	
Trichloroethene	ND	3.97	"	"	"	"	"	"	
Vinyl chloride	ND	7.94	"	"	"	"	"	"	
Xylenes, total	ND	4.76	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	3.97	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	3.97	"	"	"	"	"	"	

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A division of Eberline Analytical Corporation

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

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/01/2009 12:33

J186C5
0902020-05 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Lionville Laboratory									
Volatile Organic Compounds by SW846 8260B									
Tentatively Identified Compound	0.00		ug/kg wet	1	L902090	02/12/2009	02/12/2009	8260B	U
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*63-151*		"	"	"	"	
Surrogate: Toluene-d8		*97 %*	*68-140*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*107 %*	*66-122*		"	"	"	"	

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264 Welsh Pool Roa
Exton, PA 1934
Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/01/2009 12:33

J186C6
0902020-06 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Lionville Laboratory									
Volatile Organic Compounds by SW846 8260B									
1,1,1-Trichloroethane	ND	4.72	ug/kg wet	1	L902090	02/12/2009	02/12/2009	8260B	U
1,1,2,2-Tetrachloroethane	ND	4.72	"	"	"	"	"	"	U
1,1,2-Trichloroethane	ND	4.72	"	"	"	"	"	"	U
1,1-Dichloroethane	ND	4.72	"	"	"	"	"	"	U
1,1-Dichloroethene	ND	4.72	"	"	"	"	"	"	U
1,2-Dichloroethane	ND	5.66	"	"	"	"	"	"	U
1,2-Dichloropropane	ND	4.72	"	"	"	"	"	"	U
2-Butanone	ND	11.3	"	"	"	"	"	"	U
2-Hexanone	ND	11.3	"	"	"	"	"	"	U
4-Methyl-2-pentanone	ND	11.3	"	"	"	"	"	"	U
Acetone	ND	11.3	"	"	"	"	"	"	U
Benzene	ND	4.72	"	"	"	"	"	"	U
Bromodichloromethane	ND	5.66	"	"	"	"	"	"	U
Bromoform	ND	4.72	"	"	"	"	"	"	U
Bromomethane	ND	9.43	"	"	"	"	"	"	U
Carbon Disulfide	ND	4.72	"	"	"	"	"	"	U
Carbon Tetrachloride	ND	4.72	"	"	"	"	"	"	U
Chlorobenzene	ND	4.72	"	"	"	"	"	"	U
Chloroethane	ND	9.43	"	"	"	"	"	"	U
Chloroform	ND	4.72	"	"	"	"	"	"	U
Chloromethane	ND	9.43	"	"	"	"	"	"	U
cis-1,3-Dichloropropene	ND	4.72	"	"	"	"	"	"	U
Dibromochloromethane	ND	4.72	"	"	"	"	"	"	U
Ethylbenzene	ND	4.72	"	"	"	"	"	"	U
Methylene Chloride	**3.97**	5.66	"	"	"	"	"	"	
Styrene	ND	4.72	"	"	"	"	"	"	U
Tetrachloroethene	ND	4.72	"	"	"	"	"	"	U
Toluene	ND	4.72	"	"	"	"	"	"	U
trans-1,3-Dichloropropene	ND	4.72	"	"	"	"	"	"	U
Trichloroethene	ND	4.72	"	"	"	"	"	"	U
Vinyl chloride	ND	9.43	"	"	"	"	"	"	U
Xylenes, total	ND	5.66	"	"	"	"	"	"	U
cis-1,2-Dichloroethene	ND	4.72	"	"	"	"	"	"	U
trans-1,2-Dichloroethene	ND	4.72	"	"	"	"	"	"	U

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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/01/2009 12:33

J186C6
0902020-06 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Lionville Laboratory									
Volatile Organic Compounds by SW846 8260B									
Tentatively Identified Compound	0.00		ug/kg wet	1	L902090	02/12/2009	02/12/2009	8260B	U
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*63-151*		"	"	"	"	
Surrogate: Toluene-d8		*97 %*	*68-140*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*113 %*	*66-122*		"	"	"	"	

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-116 Project Number: [none] Project Manager: Joan Kessner	**Reported:** 04/01/2009 12:33

J186C7
0902020-07 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Lionville Laboratory									
Volatile Organic Compounds by SW846 8260B									
1,1,1-Trichloroethane	ND	5.00	ug/kg wet	1	L903032	02/10/2009	02/10/2009	8260B	U
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	U
1,1,2-Trichloroethane	ND	5.00	"	"	"	"	"	"	U
1,1-Dichloroethane	ND	5.00	"	"	"	"	"	"	U
1,1-Dichloroethene	ND	5.00	"	"	"	"	"	"	U
1,2-Dichloroethane	ND	6.00	"	"	"	"	"	"	U
1,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	U
2-Butanone	ND	12.0	"	"	"	"	"	"	U
2-Hexanone	ND	12.0	"	"	"	"	"	"	U
4-Methyl-2-pentanone	ND	12.0	"	"	"	"	"	"	U
Acetone	ND	12.0	"	"	"	"	"	"	U
Benzene	ND	5.00	"	"	"	"	"	"	U
Bromodichloromethane	ND	6.00	"	"	"	"	"	"	U
Bromoform	ND	5.00	"	"	"	"	"	"	U
Bromomethane	ND	10.0	"	"	"	"	"	"	U
Carbon Disulfide	ND	5.00	"	"	"	"	"	"	U
Carbon Tetrachloride	ND	5.00	"	"	"	"	"	"	U
Chlorobenzene	ND	5.00	"	"	"	"	"	"	U
Chloroethane	ND	10.0	"	"	"	"	"	"	U
Chloroform	ND	5.00	"	"	"	"	"	"	U
Chloromethane	ND	10.0	"	"	"	"	"	"	U
cis-1,3-Dichloropropene	ND	5.00	"	"	"	"	"	"	U
Dibromochloromethane	ND	5.00	"	"	"	"	"	"	U
Ethylbenzene	ND	5.00	"	"	"	"	"	"	U
Methylene Chloride	ND	6.00	"	"	"	"	"	"	U
Styrene	ND	5.00	"	"	"	"	"	"	U
Tetrachloroethene	ND	5.00	"	"	"	"	"	"	U
Toluene	ND	5.00	"	"	"	"	"	"	U
trans-1,3-Dichloropropene	ND	5.00	"	"	"	"	"	"	U
Trichloroethene	ND	5.00	"	"	"	"	"	"	U
Vinyl chloride	ND	10.0	"	"	"	"	"	"	U
Xylenes, total	ND	6.00	"	"	"	"	"	"	U
cis-1,2-Dichloroethene	ND	5.00	"	"	"	"	"	"	U
trans-1,2-Dichloroethene	ND	5.00	"	"	"	"	"	"	U

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Fax: 610-280-304

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/01/2009 12:33

J186C7
0902020-07 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Lionville Laboratory									
Volatile Organic Compounds by SW846 8260B									
Tentatively Identified Compound	0.00		ug/kg wet	1	L903032	02/10/2009	02/10/2009	8260B	U
Surrogate: 1,2-Dichloroethane-d4		*114 %*	*63-151*		"	"	"	"	
Surrogate: Toluene-d8		*100 %*	*68-140*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*120 %*	*66-122*		"	"	"	"	

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Fax: 610-280-304

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/01/2009 12:33

J186C8
0902020-08 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Lionville Laboratory									
Volatile Organic Compounds by SW846 8260B									
1,1,1-Trichloroethane	ND	4.10	ug/kg wet	1	L903032	02/10/2009	02/10/2009	8260B	L
1,1,2,2-Tetrachloroethane	ND	4.10	"	"	"	"	"	"	L
1,1,2-Trichloroethane	ND	4.10	"	"	"	"	"	"	L
1,1-Dichloroethane	ND	4.10	"	"	"	"	"	"	L
1,1-Dichloroethene	ND	4.10	"	"	"	"	"	"	L
1,2-Dichloroethane	ND	4.92	"	"	"	"	"	"	L
1,2-Dichloropropane	ND	4.10	"	"	"	"	"	"	L
2-Butanone	ND	9.84	"	"	"	"	"	"	L
2-Hexanone	ND	9.84	"	"	"	"	"	"	L
4-Methyl-2-pentanone	ND	9.84	"	"	"	"	"	"	L
Acetone	ND	9.84	"	"	"	"	"	"	L
Benzene	ND	4.10	"	"	"	"	"	"	L
Bromodichloromethane	ND	4.92	"	"	"	"	"	"	L
Bromoform	ND	4.10	"	"	"	"	"	"	L
Bromomethane	ND	8.20	"	"	"	"	"	"	L
Carbon Disulfide	ND	4.10	"	"	"	"	"	"	L
Carbon Tetrachloride	ND	4.10	"	"	"	"	"	"	L
Chlorobenzene	ND	4.10	"	"	"	"	"	"	L
Chloroethane	ND	8.20	"	"	"	"	"	"	L
Chloroform	ND	4.10	"	"	"	"	"	"	L
Chloromethane	ND	8.20	"	"	"	"	"	"	L
cis-1,3-Dichloropropene	ND	4.10	"	"	"	"	"	"	L
Dibromochloromethane	ND	4.10	"	"	"	"	"	"	L
Ethylbenzene	ND	4.10	"	"	"	"	"	"	L
Methylene Chloride	ND	4.92	"	"	"	"	"	"	L
Styrene	ND	4.10	"	"	"	"	"	"	L
Tetrachloroethene	ND	4.10	"	"	"	"	"	"	L
Toluene	ND	4.10	"	"	"	"	"	"	L
trans-1,3-Dichloropropene	ND	4.10	"	"	"	"	"	"	L
Trichloroethene	ND	4.10	"	"	"	"	"	"	L
Vinyl chloride	ND	8.20	"	"	"	"	"	"	L
Xylenes, total	ND	4.92	"	"	"	"	"	"	L
cis-1,2-Dichloroethene	ND	4.10	"	"	"	"	"	"	L
trans-1,2-Dichloroethene	ND	4.10	"	"	"	"	"	"	L

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-116 Project Number: [none] Project Manager: Joan Kessner	**Reported:** 04/01/2009 12:33

J186C8

0902020-08 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Lionville Laboratory									
Volatile Organic Compounds by SW846 8260B									
Tentatively Identified Compound	0.00		ug/kg wet	1	L903032	02/10/2009	02/10/2009	8260B	U
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*63-151*		"	"	"	"	
Surrogate: Toluene-d8		*99 %*	*68-140*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*119 %*	*66-122*		"	"	"	"	

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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/01/2009 12:33

J17W09
0902020-09 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Lionville Laboratory									
Volatile Organic Compounds by SW846 8260B									
1,1,1-Trichloroethane	ND	4.72	ug/kg wet	1	L902090	02/12/2009	02/12/2009	8260B	1
1,1,2,2-Tetrachloroethane	ND	4.72	"	"	"	"	"	"	1
1,1,2-Trichloroethane	ND	4.72	"	"	"	"	"	"	1
1,1-Dichloroethane	ND	4.72	"	"	"	"	"	"	1
1,1-Dichloroethene	ND	4.72	"	"	"	"	"	"	1
1,2-Dichloroethane	ND	5.66	"	"	"	"	"	"	1
1,2-Dichloropropane	ND	4.72	"	"	"	"	"	"	1
2-Butanone	ND	11.3	"	"	"	"	"	"	1
2-Hexanone	ND	11.3	"	"	"	"	"	"	1
4-Methyl-2-pentanone	ND	11.3	"	"	"	"	"	"	1
Acetone	**4.95**	11.3	"	"	"	"	"	"	
Benzene	ND	4.72	"	"	"	"	"	"	1
Bromodichloromethane	ND	5.66	"	"	"	"	"	"	1
Bromoform	ND	4.72	"	"	"	"	"	"	1
Bromomethane	ND	9.43	"	"	"	"	"	"	1
Carbon Disulfide	ND	4.72	"	"	"	"	"	"	1
Carbon Tetrachloride	ND	4.72	"	"	"	"	"	"	1
Chlorobenzene	ND	4.72	"	"	"	"	"	"	1
Chloroethane	ND	9.43	"	"	"	"	"	"	1
Chloroform	ND	4.72	"	"	"	"	"	"	1
Chloromethane	ND	9.43	"	"	"	"	"	"	1
cis-1,3-Dichloropropene	ND	4.72	"	"	"	"	"	"	1
Dibromochloromethane	ND	4.72	"	"	"	"	"	"	1
Ethylbenzene	ND	4.72	"	"	"	"	"	"	1
Methylene Chloride	ND	5.66	"	"	"	"	"	"	1
Styrene	ND	4.72	"	"	"	"	"	"	1
Tetrachloroethene	ND	4.72	"	"	"	"	"	"	1
Toluene	ND	4.72	"	"	"	"	"	"	1
trans-1,3-Dichloropropene	ND	4.72	"	"	"	"	"	"	1
Trichloroethene	ND	4.72	"	"	"	"	"	"	1
Vinyl chloride	ND	9.43	"	"	"	"	"	"	1
Xylenes, total	ND	5.66	"	"	"	"	"	"	1
cis-1,2-Dichloroethene	ND	4.72	"	"	"	"	"	"	1
trans-1,2-Dichloroethene	ND	4.72	"	"	"	"	"	"	1

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Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/01/2009 12:33

J17W09
0902020-09 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Lionville Laboratory									
Volatile Organic Compounds by SW846 8260B									
Tentatively Identified Compound	0.00		ug/kg wet	1	L902090	02/12/2009	02/12/2009	8260B	U
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*63-151*		"	"	"	"	
Surrogate: Toluene-d8		*99 %*	*68-140*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*115 %*	*66-122*		"	"	"	"	

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Fax: 610-280-304

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/01/2009 12:33

J17W11
0902020-10 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
			Lionville Laboratory						
Volatile Organic Compounds by SW846 8260B									
1,1,1-Trichloroethane	ND	4.63	ug/kg wet	1	L902090	02/12/2009	02/12/2009	8260B	U
1,1,2,2-Tetrachloroethane	ND	4.63	"	"	"	"	"	"	U
1,1,2-Trichloroethane	ND	4.63	"	"	"	"	"	"	U
1,1-Dichloroethane	ND	4.63	"	"	"	"	"	"	U
1,1-Dichloroethene	ND	4.63	"	"	"	"	"	"	U
1,2-Dichloroethane	ND	5.56	"	"	"	"	"	"	U
1,2-Dichloropropane	ND	4.63	"	"	"	"	"	"	U
2-Butanone	ND	11.1	"	"	"	"	"	"	U
2-Hexanone	ND	11.1	"	"	"	"	"	"	U
4-Methyl-2-pentanone	ND	11.1	"	"	"	"	"	"	U
Acetone	**6.31**	11.1	"	"	"	"	"	"	
Benzene	ND	4.63	"	"	"	"	"	"	U
Bromodichloromethane	ND	5.56	"	"	"	"	"	"	U
Bromoform	ND	4.63	"	"	"	"	"	"	U
Bromomethane	ND	9.26	"	"	"	"	"	"	U
Carbon Disulfide	ND	4.63	"	"	"	"	"	"	U
Carbon Tetrachloride	ND	4.63	"	"	"	"	"	"	U
Chlorobenzene	ND	4.63	"	"	"	"	"	"	U
Chloroethane	ND	9.26	"	"	"	"	"	"	U
Chloroform	ND	4.63	"	"	"	"	"	"	U
Chloromethane	ND	9.26	"	"	"	"	"	"	U
cis-1,3-Dichloropropene	ND	4.63	"	"	"	"	"	"	U
Dibromochloromethane	ND	4.63	"	"	"	"	"	"	U
Ethylbenzene	ND	4.63	"	"	"	"	"	"	U
Methylene Chloride	**1.99**	5.56	"	"	"	"	"	"	
Styrene	ND	4.63	"	"	"	"	"	"	U
Tetrachloroethene	ND	4.63	"	"	"	"	"	"	U
Toluene	ND	4.63	"	"	"	"	"	"	U
trans-1,3-Dichloropropene	ND	4.63	"	"	"	"	"	"	U
Trichloroethene	ND	4.63	"	"	"	"	"	"	U
Vinyl chloride	ND	9.26	"	"	"	"	"	"	U
Xylenes, total	ND	5.56	"	"	"	"	"	"	U
cis-1,2-Dichloroethene	ND	4.63	"	"	"	"	"	"	U
trans-1,2-Dichloroethene	ND	4.63	"	"	"	"	"	"	U

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Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/01/2009 12:33

J17W11
0902020-10 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Lionville Laboratory									
Volatile Organic Compounds by SW846 8260B									
Tentatively Identified Compound	0.00		ug/kg wet	1	L902090	02/12/2009	02/12/2009	8260B	I
Surrogate: 1,2-Dichloroethane-d4		*109 %*	*63-151*		"	"	"	"	
Surrogate: Toluene-d8		*102 %*	*68-140*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*120 %*	*66-122*		"	"	"	"	

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Fax: 610-280-304

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/01/2009 12:33

Volatile Organic Compounds by SW846 8260B - Quality Control

Lionville Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L902090 - SW 5035										
Blank (L902090-BLK1)				Prepared & Analyzed: 02/12/2009						
1,1,1-Trichloroethane	ND	5.00	ug/kg wet							U
1,1,2,2-Tetrachloroethane	ND	5.00	"							U
1,1,2-Trichloroethane	ND	5.00	"							U
1,1-Dichloroethane	ND	5.00	"							U
1,1-Dichloroethene	ND	5.00	"							U
1,2-Dichloroethane	ND	6.00	"							U
1,2-Dichloropropane	ND	5.00	"							U
2-Butanone	ND	12.0	"							U
2-Hexanone	ND	12.0	"							U
4-Methyl-2-pentanone	ND	12.0	"							U
Acetone	ND	12.0	"							U
Benzene	ND	5.00	"							U
Bromodichloromethane	ND	6.00	"							U
Bromoform	ND	5.00	"							U
Bromomethane	ND	10.0	"							U
Carbon Disulfide	ND	5.00	"							U
Carbon Tetrachloride	ND	5.00	"							U
Chlorobenzene	ND	5.00	"							U
Chloroethane	ND	10.0	"							U
Chloroform	ND	5.00	"							U
Chloromethane	ND	10.0	"							U
cis-1,3-Dichloropropene	ND	5.00	"							U
Dibromochloromethane	ND	5.00	"							U
Ethylbenzene	ND	5.00	"							U
Methylene Chloride	ND	6.00	"							U
Styrene	ND	5.00	"							U
Tetrachloroethene	ND	5.00	"							U
Toluene	ND	5.00	"							U
trans-1,3-Dichloropropene	ND	5.00	"							U
Trichloroethene	ND	5.00	"							U
Vinyl chloride	ND	10.0	"							U
Xylenes, total	ND	6.00	"							U
cis-1,2-Dichloroethene	ND	5.00	"							U
trans-1,2-Dichloroethene	ND	5.00	"							U
Tentatively Identified Compound	0.00		"							
Surrogate: 1,2-Dichloroethane-d4	*49.2*		*"*	*50.000*		*98*	*63-151*			
Surrogate: Toluene-d8	*51.7*		*"*	*50.000*		*103*	*68-140*			

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264 Welsh Pool Roa
Exton, PA 1934
Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-116 Project Number: [none] Project Manager: Joan Kessner	**Reported:** 04/01/2009 12:33

Volatile Organic Compounds by SW846 8260B - Quality Control

Lionville Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L902090 - SW 5035										
Blank (L902090-BLK1)				Prepared & Analyzed: 02/12/2009						
Surrogate: 4-Bromofluorobenzene	*54.6*		*ug/kg wet*	*50.000*		*109*	*66-122*			
LCS (L902090-BS1)				Prepared & Analyzed: 02/12/2009						
1,1,1-Trichloroethane	45.6	5.00	ug/kg wet	50.000		91	60-140			
1,1,2,2-Tetrachloroethane	41.9	5.00	"	50.000		84	70-130			
1,1,2-Trichloroethane	43.3	5.00	"	50.000		87	70-130			
1,1-Dichloroethane	47.9	5.00	"	50.000		96	60-140			
1,1-Dichloroethene	48.1	5.00	"	50.000		96	60-130			
1,2-Dichloroethane	41.6	6.00	"	50.000		83	60-140			
1,2-Dichloropropane	46.9	5.00	"	50.000		94	70-130			
2-Butanone	64.3	12.0	"	50.000		129	20-200			
2-Hexanone	52.9	12.0	"	50.000		106	20-200			
4-Methyl-2-pentanone	39.7	12.0	"	50.000		79	50-150			
Acetone	66.9	12.0	"	50.000		134	20-200			
Benzene	46.0	5.00	"	50.000		92	70-130			
Bromodichloromethane	44.9	6.00	"	50.000		90	60-140			
Bromoform	36.5	5.00	"	50.000		73	60-140			
Bromomethane	43.2	10.0	"	50.000		86	50-180			
Carbon Disulfide	52.0	5.00	"	50.000		104	60-140			
Carbon Tetrachloride	50.6	5.00	"	50.000		101	60-140			
Chlorobenzene	44.3	5.00	"	50.000		89	70-130			
Chloroethane	54.0	10.0	"	50.000		108	50-180			
Chloroform	45.8	5.00	"	50.000		92	60-140			
Chloromethane	44.9	10.0	"	50.000		90	50-180			
cis-1,3-Dichloropropene	45.7	5.00	"	50.000		91	70-130			
Dibromochloromethane	41.8	5.00	"	50.000		84	70-130			
Ethylbenzene	46.2	5.00	"	50.000		92	70-130			
Methylene Chloride	49.0	6.00	"	50.000		98	50-180			
Styrene	45.1	5.00	"	50.000		90	70-130			
Tetrachloroethene	43.8	5.00	"	50.000		88	60-140			
Toluene	47.5	5.00	"	50.000		95	70-130			
trans-1,3-Dichloropropene	43.5	5.00	"	50.000		87	70-130			
Trichloroethene	44.4	5.00	"	50.000		89	70-130			
Vinyl chloride	50.2	10.0	"	50.000		100	50-180			
Xylenes, total	141	6.00	"	150.00		94	70-130			
cis-1,2-Dichloroethene	43.3	5.00	"	50.000		87	60-140			
trans-1,2-Dichloroethene	47.4	5.00	"	50.000		95	60-140			

LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

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

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/01/2009 12:33

Volatile Organic Compounds by SW846 8260B - Quality Control

Lionville Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L902090 - SW 5035										
LCS (L902090-BS1)				Prepared & Analyzed: 02/12/2009						
Surrogate: 1,2-Dichloroethane-d4	*43.4*		*ug/kg wet*	*50.000*		*87*	*63-151*			
Surrogate: Toluene-d8	*49.5*		*"*	*50.000*		*99*	*68-140*			
Surrogate: 4-Bromofluorobenzene	*51.5*		*"*	*50.000*		*103*	*66-122*			
Matrix Spike (L902090-MS1)		**Source: 0902020-06**		Prepared & Analyzed: 02/12/2009						
1,1,1-Trichloroethane	46.7	4.55	ug/kg wet	45.455	ND	103	60-140			
1,1,2,2-Tetrachloroethane	64.4	4.55	"	45.455	ND	142	70-130			
1,1,2-Trichloroethane	54.9	4.55	"	45.455	ND	121	70-130			
1,1-Dichloroethane	49.4	4.55	"	45.455	ND	109	60-140			
1,1-Dichloroethene	48.3	4.55	"	45.455	ND	106	60-130			
1,2-Dichloroethane	52.9	5.45	"	45.455	ND	116	60-140			
1,2-Dichloropropane	53.3	4.55	"	45.455	ND	117	70-130			
2-Butanone	118	10.9	"	45.455	ND	260	20-200 *			
2-Hexanone	95.4	10.9	"	45.455	ND	210	20-200 *			
4-Methyl-2-pentanone	68.6	10.9	"	45.455	ND	151	50-150			
Acetone	122	10.9	"	45.455	ND	268	20-200 *			
Benzene	48.4	4.55	"	45.455	ND	107	70-130			
Bromodichloromethane	50.3	5.45	"	45.455	ND	111	60-140			
Bromoform	50.2	4.55	"	45.455	ND	110	60-140			
Bromomethane	44.0	9.09	"	45.455	ND	97	50-180			
Carbon Disulfide	51.3	4.55	"	45.455	ND	113	60-140			
Carbon Tetrachloride	47.8	4.55	"	45.455	ND	105	60-140			
Chlorobenzene	45.2	4.55	"	45.455	ND	99	70-130			
Chloroethane	53.7	9.09	"	45.455	ND	118	50-180			
Chloroform	50.4	4.55	"	45.455	ND	111	60-140			
Chloromethane	41.8	9.09	"	45.455	ND	92	50-180			
cis-1,3-Dichloropropene	49.2	4.55	"	45.455	ND	108	70-130			
Dibromochloromethane	51.8	4.55	"	45.455	ND	114	70-130			
Ethylbenzene	44.9	4.55	"	45.455	ND	99	70-130			
Methylene Chloride	50.6	5.45	"	45.455	3.97	103	50-180			
Styrene	46.5	4.55	"	45.455	ND	102	70-130			
Tetrachloroethene	39.8	4.55	"	45.455	ND	87	60-140			
Toluene	47.7	4.55	"	45.455	ND	105	70-130			
trans-1,3-Dichloropropene	53.9	4.55	"	45.455	ND	119	70-130			
Trichloroethene	44.1	4.55	"	45.455	ND	97	70-130			
Vinyl chloride	44.9	9.09	"	45.455	ND	99	50-180			
Xylenes, total	141	5.45	"	136.36	ND	103	70-130			
cis-1,2-Dichloroethene	45.4	4.55	"	45.455	ND	100	60-140			

B4/1/09

LIONVILLE LABORATORY
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264 Welsh Pool Roa
Exton, PA 1934
Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-116 Project Number: [none] Project Manager: Joan Kessner	**Reported:** 04/01/2009 12:33

Volatile Organic Compounds by SW846 8260B - Quality Control

Lionville Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L902090 - SW 5035										
Matrix Spike (L902090-MS1)		**Source: 0902020-06**		Prepared & Analyzed: 02/12/2009						
trans-1,2-Dichloroethene	47.5	4.55	ug/kg wet	45.455	ND	105	60-140			
Surrogate: 1,2-Dichloroethane-d4	*48.5*		"	*45.455*		*107*	*63-151*			
Surrogate: Toluene-d8	*43.8*		"	*45.455*		*96*	*68-140*			
Surrogate: 4-Bromofluorobenzene	*48.3*		"	*45.455*		*106*	*66-122*			
Matrix Spike Dup (L902090-MSD1)		**Source: 0902020-06**		Prepared & Analyzed: 02/12/2009						
1,1,1-Trichloroethane	41.4	4.17	ug/kg wet	41.667	ND	99	60-140	12	20	
1,1,2,2-Tetrachloroethane	46.8	4.17	"	41.667	ND	112	70-130	32	20	
1,1,2-Trichloroethane	45.0	4.17	"	41.667	ND	108	70-130	20	20	
1,1-Dichloroethane	44.6	4.17	"	41.667	ND	107	60-140	10	20	
1,1-Dichloroethene	43.7	4.17	"	41.667	ND	105	60-130	10	20	
1,2-Dichloroethane	43.3	5.00	"	41.667	ND	104	60-140	20	20	
1,2-Dichloropropane	46.2	4.17	"	41.667	ND	111	70-130	14	20	
2-Butanone	83.9	10.0	"	41.667	ND	201	20-200 *	34	20	
2-Hexanone	71.3	10.0	"	41.667	ND	171	20-200	29	20	
4-Methyl-2-pentanone	52.1	10.0	"	41.667	ND	125	50-150	27	20	
Acetone	85.9	10.0	"	41.667	ND	206	20-200 *	35	20	
Benzene	42.7	4.17	"	41.667	ND	102	70-130	13	20	
Bromodichloromethane	43.5	5.00	"	41.667	ND	104	60-140	14	20	
Bromoform	41.6	4.17	"	41.667	ND	100	60-140	19	20	
Bromomethane	42.3	8.33	"	41.667	ND	102	50-180	4	20	
Carbon Disulfide	46.1	4.17	"	41.667	ND	111	60-140	11	20	
Carbon Tetrachloride	43.6	4.17	"	41.667	ND	105	60-140	9	20	
Chlorobenzene	41.8	4.17	"	41.667	ND	100	70-130	8	20	
Chloroethane	49.3	8.33	"	41.667	ND	118	50-180	9	20	
Chloroform	43.0	4.17	"	41.667	ND	103	60-140	16	20	
Chloromethane	38.0	8.33	"	41.667	ND	91	50-180	10	20	
cis-1,3-Dichloropropene	43.3	4.17	"	41.667	ND	104	70-130	13	20	
Dibromochloromethane	43.6	4.17	"	41.667	ND	105	70-130	17	20	
Ethylbenzene	41.0	4.17	"	41.667	ND	98	70-130	9	20	
Methylene Chloride	47.3	5.00	"	41.667	3.97	104	50-180	7	20	
Styrene	44.4	4.17	"	41.667	ND	107	70-130	5	20	
Tetrachloroethene	38.3	4.17	"	41.667	ND	92	60-140	4	20	
Toluene	44.1	4.17	"	41.667	ND	106	70-130	8	20	
trans-1,3-Dichloropropene	44.1	4.17	"	41.667	ND	106	70-130	20	20	
Trichloroethene	39.4	4.17	"	41.667	ND	95	70-130	11	20	
Vinyl chloride	43.0	8.33	"	41.667	ND	103	50-180	4	20	
Xylenes, total	132	5.00	"	125.00	ND	106	70-130	6	20	

4/1/09

LIONVILLE LABORATORY
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264 Welsh Pool Roa
Exton, PA 1934
Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/01/2009 12:33

Volatile Organic Compounds by SW846 8260B - Quality Control

Lionville Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L902090 - SW 5035										
Matrix Spike Dup (L902090-MSD1)		**Source: 0902020-06**		Prepared & Analyzed: 02/12/2009						
cis-1,2-Dichloroethene	39.6	4.17	ug/kg wet	41.667	ND	95	60-140	14	20	
trans-1,2-Dichloroethene	43.6	4.17	"	41.667	ND	105	60-140	8	20	
Surrogate: 1,2-Dichloroethane-d4	*41.6*		"	*41.667*		*100*	*63-151*			
Surrogate: Toluene-d8	*40.8*		"	*41.667*		*98*	*68-140*			
Surrogate: 4-Bromofluorobenzene	*42.3*		"	*41.667*		*101*	*66-122*			
Batch L903032 - SW 5030B										
Blank (L903032-BLK1)				Prepared & Analyzed: 02/10/2009						
1,1,1-Trichloroethane	ND	5.00	ug/kg wet							
1,1,2,2-Tetrachloroethane	ND	5.00	"							
1,1,2-Trichloroethane	ND	5.00	"							
1,1-Dichloroethane	ND	5.00	"							
1,1-Dichloroethene	ND	5.00	"							
1,2-Dichloroethane	ND	6.00	"							
1,2-Dichloropropane	ND	5.00	"							
2-Butanone	ND	12.0	"							
2-Hexanone	ND	12.0	"							
4-Methyl-2-pentanone	ND	12.0	"							
Acetone	ND	12.0	"							
Benzene	ND	5.00	"							
Bromodichloromethane	ND	6.00	"							
Bromoform	ND	5.00	"							
Bromomethane	ND	10.0	"							
Carbon Disulfide	ND	5.00	"							
Carbon Tetrachloride	ND	5.00	"							
Chlorobenzene	ND	5.00	"							
Chloroethane	ND	10.0	"							
Chloroform	ND	5.00	"							
Chloromethane	ND	10.0	"							
cis-1,3-Dichloropropene	ND	5.00	"							
Dibromochloromethane	ND	5.00	"							
Ethylbenzene	ND	5.00	"							
Methylene Chloride	2.14	6.00	"							
Styrene	ND	5.00	"							
Tetrachloroethene	ND	5.00	"							
Toluene	ND	5.00	"							
trans-1,3-Dichloropropene	ND	5.00	"							

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264 Welsh Pool Roa
Exton, PA 1934
Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/01/2009 12:33

Volatile Organic Compounds by SW846 8260B - Quality Control

Lionville Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L903032 - SW 5030B										
Blank (L903032-BLK1)				Prepared & Analyzed: 02/10/2009						
Trichloroethene	ND	5.00	ug/kg wet							U
Vinyl chloride	ND	10.0	"							U
Xylenes, total	ND	6.00	"							U
cis-1,2-Dichloroethene	ND	5.00	"							U
trans-1,2-Dichloroethene	ND	5.00	"							U
Tentatively Identified Compound	0.00		"							U
Surrogate: 1,2-Dichloroethane-d4	*46.0*		"	*50.000*		*92*	*63-151*			
Surrogate: Toluene-d8	*49.0*		"	*50.000*		*98*	*68-140*			
Surrogate: 4-Bromofluorobenzene	*55.6*		"	*50.000*		*111*	*66-122*			
LCS (L903032-BS1)				Prepared & Analyzed: 02/10/2009						
1,1,1-Trichloroethane	51.3	5.00	ug/kg wet	50.000		103	60-140			
1,1,2,2-Tetrachloroethane	53.4	5.00	"	50.000		107	70-130			
1,1,2-Trichloroethane	48.8	5.00	"	50.000		98	70-130			
1,1-Dichloroethane	52.4	5.00	"	50.000		105	60-140			
1,1-Dichloroethene	52.9	5.00	"	50.000		106	60-130			
1,2-Dichloroethane	48.9	6.00	"	50.000		98	60-140			
1,2-Dichloropropane	52.1	5.00	"	50.000		104	70-130			
2-Butanone	90.4	12.0	"	50.000		181	20-200			
2-Hexanone	75.2	12.0	"	50.000		150	20-200			
4-Methyl-2-pentanone	55.7	12.0	"	50.000		111	50-150			
Acetone	92.7	12.0	"	50.000		185	20-200			
Benzene	50.4	5.00	"	50.000		101	70-130			
Bromodichloromethane	50.5	6.00	"	50.000		101	60-140			
Bromoform	47.2	5.00	"	50.000		94	60-140			
Bromomethane	44.4	10.0	"	50.000		89	50-180			
Carbon Disulfide	56.2	5.00	"	50.000		112	60-140			
Carbon Tetrachloride	54.6	5.00	"	50.000		109	60-140			
Chlorobenzene	50.0	5.00	"	50.000		100	70-130			
Chloroethane	55.8	10.0	"	50.000		112	50-180			
Chloroform	50.9	5.00	"	50.000		102	60-140			
Chloromethane	45.2	10.0	"	50.000		90	50-180			
cis-1,3-Dichloropropene	51.8	5.00	"	50.000		104	70-130			
Dibromochloromethane	49.0	5.00	"	50.000		98	70-130			
Ethylbenzene	50.7	5.00	"	50.000		101	70-130			
Methylene Chloride	52.8	6.00	"	50.000		106	50-180			
Styrene	50.3	5.00	"	50.000		101	70-130			
Tetrachloroethene	47.4	5.00	"	50.000		95	60-140			

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Phone: 610-280-3000
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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/01/2009 12:33

Volatile Organic Compounds by SW846 8260B - Quality Control

Lionville Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L903032 - SW 5030B										
LCS (L903032-BS1)				Prepared & Analyzed: 02/10/2009						
Toluene	53.3	5.00	ug/kg wet	50.000		107	70-130			
trans-1,3-Dichloropropene	51.5	5.00	"	50.000		103	70-130			
Trichloroethene	48.5	5.00	"	50.000		97	70-130			
Vinyl chloride	50.4	10.0	"	50.000		101	50-180			
Xylenes, total	159	6.00	"	150.00		106	70-130			
cis-1,2-Dichloroethene	48.1	5.00	"	50.000		96	60-140			
trans-1,2-Dichloroethene	51.9	5.00	"	50.000		104	60-140			
Surrogate: 1,2-Dichloroethane-d4	*47.7*		"	*50.000*		*95*	*63-151*			
Surrogate: Toluene-d8	*50.8*		"	*50.000*		*102*	*68-140*			
Surrogate: 4-Bromofluorobenzene	*56.8*		"	*50.000*		*114*	*66-122*			

Lionville Laboratory Use Only

0902020

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client: WC Hanford SAF# RC-116

Est. Final Proj. Sampling Date:

Project#: 60049-001-001-0001-00

Project Contact/Phone#:

Lionville Laboratory Project Manager: Arlette Johnson

QC: SW846 Del: STO TAT: 30 days

Date Rec'd: 2-6-09 Date Due: 3-8-09

	A	B	C		D			E		F		G			
Refrigerator #	Vac	2	2		2			2		2					
#/Type Container (Liquid & ~~Text~~ / Solid 2oz)	1aal	1aal	1aal		1aal			1pl		1aal		1pl			
Volume (Liquid 25 / Solid)	250	250	125		250			250		125		1L			
Preservatives	–	–	–		–			–		–		–			
ANALYSES REQUESTED	ORGANIC: VOA	BNA	Pest/~~PCB~~	Herb	PCBs			INORG: (5) Metal	CN	TOC		Particle Size			
Lionville Laboratory Use Only	06024H	06025H	06008H		OPCB			MetQ		IOCT		ISCB			

MATRIX CODES:
S- Soil
SE- Sediment
SO- Solid
SL- Sludge
W- Water
O- Oil
A- Air
DS- Drum Solids
DL- Drum Liquids
L- EP/TCLP Leachate
WI- Wipe
K- Other
F- Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	VOA	BNA	Pest/~~PCB~~	Herb	PCBs			Metal	CN	TOC		Particle Size			
001	J186C0			SO	2-4-09	1200	X	X	X		X			X		X		X			
002	J186C1					1135	X	X	X		X			X		X		X			
003	J186C2					1315	X	X	X		X			X		X		X			
004	J186C3					1100	X	X	X		X			X		X		X			
005	J186C5					1120	X	X	X		X			X		X		X			
006	J186C6					1055	X	X	X		X			X		X		X			
007	J186C7					1145	X	X	X		X			X		X		X			
008	J186C8					1200	X	X	X		X			X		X		X			
009	J17W09					0730	X														
010	J17W11					0730	X														

Special Instructions:

MetQ = HSL + B, Bi, Li, Mo, Sr, Si, Sn, U, P

Special Instructions:

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

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	2-6-09	0930

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
ORIGINAL REWRITTEN		"COMPOSITE WASTE"	

0000000032

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-846	Page 1 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 8 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C0	OTHER SOLID	2/4/09	1200					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: BMyhr BMyhr	2/4/09 1500	Received By/Stored In: Fri A	2/4/09 1500
Relinquished By/Removed From: Ref A	2/5/09 0830	Received By/Stored In: BWoodward	2/5/09 0830
Relinquished By/Removed From: BWoodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2.6.09 0930	Received By/Stored In: [illegible]	2.6.09 0930
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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-116-846	Page 2 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL	Price Code: 9K	Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 8 SSD		SAF No.: RC-116		
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX		
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760		

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No. / Matrix * / Sample Date / Sample Time												
J186C0 / OTHER SOLID / 2/4/09 / 1200	X											

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Mayer BMayer	2/4/09 1500	Fed A	2/4/09 1500
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Ref A	2/5/09 0830	B Woodward	2/5/09 0830
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Woodward	2/5/09 1000	Fed Ex	2/5/09 1000
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Fed Ex	2.6.09 / 0930	W/Smith	2.6.09/0930
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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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-116-847	Page 1 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP-7 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C1	OTHER SOLID	2/4/09	1135					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Maylor B Feigl	2/4/09 1500	Fed A	2/4/09 1500
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Fed A	2/5/09 0830	B Woodward	2/5/09 0830
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Woodward	2/5/09 1000	Fed Ex	2/5/09 1000
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Fed Ex	2-6-09 0930	[illegible]	2-6-09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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-116-847	Page 2 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 7 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No. / Matrix * / Sample Date / Sample Time												
J186C1 / OTHER SOLID / 2/4/09 / 1135	X											

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: BM	2/4/09 1700	Received By/Stored In: Fritz A	2/4/09 1700
Relinquished By/Removed From: Ret A	2/5/09 0830	Received By/Stored In: BWoodward	2/5/09 0830
Relinquished By/Removed From: BWoodward	2/5/09 1000	Received By/Stored In: FedEx	2/5/09 1000
Relinquished By/Removed From: FedEx	2.6.09 0930	Received By/Stored In: [illegible]	2.6.09 0930
Relinquished By/Removed From:		Received By/Stored In:	
Relinquished By/Removed From:		Received By/Stored In:	

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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-110-840

Collector BM	**Company Contact** JOAN KESSNER	**Telephone No.** 375-4688	**Project Coordinator** WEISS, RL
Price Code 9K	**Data Turnaround** 45 Days		
Project Designation Columbia River Component of the RCBRA - Sediment	**Sampling Location** WP- 9 SSD		**SAF No.** RC-116
Ice Chest No. WLH-08-011	**Field Logbook No.** EL-1631/-1	**COA** BESCRC6520	**Method of Shipment** FED EX
Shipped To EBERLINE SERVICES LIONVILLE	**Offsite Property No.** N/A		**Bill of Lading/Air Bill No.** 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C2	OTHER SOLID	2/4/09	1315					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	B Maynor	2/4/09 1500	Fed A	2/4/09 1500
Relinquished By/Removed From	Ref A	2/5/09 0830	Bluewound	2/5/09 0830
Relinquished By/Removed From	Bluewound	2/5/09 1000	FedEx	2/5/09 1000
Relinquished By/Removed From	FedEx	2.6.09 1030	W. Jones	2.6.09 1030
Relinquished By/Removed From			Received By/Stored In	
Relinquished By/Removed From			Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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-116-848	Page 2 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 9 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										
Sample No.	Matrix *	Sample Date	Sample Time								
J186C2	OTHER SOLID	2/4/09	1315	X							

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS
Relinquished By/Removed From: B Mayhew / BM — Date/Time: 2/4/09 1500	Received By/Stored In: Fed A — Date/Time: 2/4/09 1500	Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.
Relinquished By/Removed From: Ref A — Date/Time: 2/5/09 0830	Received By/Stored In: B Woodward — Date/Time: 2/5/09 0830	
Relinquished By/Removed From: B Woodward — Date/Time: 2/5/09 1000	Received By/Stored In: FedEx — Date/Time: 2/5/09 1000	
Relinquished By/Removed From: FedEx — Date/Time: 2-6-09 0930	Received By/Stored In: [illegible] — Date/Time: 2-6-09 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:	

Matrix *
- S=Soil
- SE=Sediment
- SO=Solid
- Sl=Sludge
- W = Water
- O=Oil
- A=Air
- DS=Drum Solids
- DL=Drum Liquids
- T=Tissue
- Wt=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-116-849	Page 1 of 2
Collector: B.M	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL	Price Code: 9K — Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 6 SSD		SAF No.: RC-116	
Ice Chest No.: WCH-OR-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time									
J186C3	OTHER SOLID	2/4/09	1100				X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: B. Mayle Betty L	2/4/09 1300	Received By/Stored In: Fay A	2/4/09 1320
Relinquished By/Removed From: Ref A	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2.6.09 0930	Received By/Stored In: D. Smith	2.6.09 0930
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

...anford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-849	Page 2 of 2

...signation ...umbia River Component of the RCBRA - Sediment	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator WEISS, RL	Price Code 9K	Data Turnaround 45 Days
	Sampling Location WP- 6 SSD		SAF No. RC-116		
Ice Chest No. LVCH-08-11	Field Logbook No. EL-1631/-1	COA BESCRC6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES / LIONVILLE	Offsite Property No. N/A		Bill of Lading/Air Bill No. 796316779760		

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										

Sample No.	Matrix *	Sample Date	Sample Time										
J186C3	OTHER SOLID	2/4/09	1100	X									

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: B Mayhew BM AC	2/4/09 1500	Received By/Stored In: Fig A	2/4/09 1500
Relinquished By/Removed From: Ref A 2/5/09	0830	Received By/Stored In: Bluedwland 2/5/09	0830
Relinquished By/Removed From: Bluedwland 2/5/09	1000	Received By/Stored In: Fed Ex 2/5/09	1000
Relinquished By/Removed From: Fed Ex 2.6.09	10930	Received By/Stored In: [illegible] 2.6.09	10930
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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wl=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-116-851	Page 1 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 2 SSD		SAF No.: RC-116
Ice Chest No.: WLH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C5	OTHER SOLID	2/4/09	1120					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [illegible]	2-4-09 1515	Received By/Stored In: Ref B	2-4-09 1515
Relinquished By/Removed From: Ref B	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: FedEx	2/5/09 1000
Relinquished By/Removed From: FedEx	2-6-09 0930	Received By/Stored In: [illegible]	2-6-09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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-116-851	Page 2 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 2 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No.	Matrix *	Sample Date	Sample Time									
J186C5	OTHER SOLID	2/4/09	1120	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: [signature]	2-4-09 1515	Received By/Stored In: Ref B	2-4-09 1515
Relinquished By/Removed From: Ref B	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2-6-09 0930	Received By/Stored In: D J Smith	2-6-09 0930
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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-116-852	Page 1 of 2

Collector: L. Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- / SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 7963167 9760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C6	OTHER SOLID	2/4/09	1055					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[signature]	2-4-09 1515	Ref B	2-4-09 1515
Ref B	2/5/09 0830	B Woodward	2/5/09 0830
B Woodward	2/5/09 1000	Fed Ex	2/5/09 1000
Fed Ex	2-6-09 0930	[signature]	2-6-09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-852	Page 2 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL	Price Code: 9K	Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- / SSD		SAF No.: RC-116		
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX		
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760		

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										
Sample No.	Matrix *	Sample Date	Sample Time								
J186C6	OTHER SOLID	9/4/09	1055	X							

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By/Removed From — Date/Time: 2.4.09 1515	Received By/Stored In — Date/Time: 2.4.09 1515	Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.	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
Relinquished By/Removed From: Ret B — Date/Time: 2/5/09 0830	Received By/Stored In: B Woodward — Date/Time: 2/5/09 0830		
Relinquished By/Removed From: B Woodward — Date/Time: 2/5/09 1000	Received By/Stored In: FedEx — Date/Time: 2/5/09 1000		
Relinquished By/Removed From: FedEx — Date/Time: 2.6.09 0930	Received By/Stored In: [illegible] — Date/Time: 2.6.09 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		

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-116-833

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 3 SSD		SAF No.: RC-116
Ice Chest No.: ~~WCH-08-058~~ 2/5 WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760 ~~797313204940~~ 2/5

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C7	OTHER SOLID	2/4/09	1145					X	X	X	X	X	X

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[signature]	2-4-09 1515	[signature]	2-4-09 1515
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Ref. B	2/5/09 0830	D. Heidelberg	2/5/09 0830
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
D. Heidelberg	2/5/09 1000	Fedex	2/5/09 1000
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
FedEx	2-6-09 0930	[signature]	2-6-09 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-853	Page 2 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP-3 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 7963167797 60

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										
Sample No.	Matrix *	Sample Date	Sample Time								
J186C7	OTHER SOLID	2/4/09	1145	X							

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From	2.4.09 / 1515	Received By/Stored In	2.4.09 / 1515
Relinquished By/Removed From	2/5/09 0830	Received By/Stored In	2/5/09 0830
Relinquished By/Removed From	2/5/09 1000	Received By/Stored In	Fed Ex 2/5/09 1000
Relinquished By/Removed From	2.6.09 / 0930	Received By/Stored In	2.6.09 / 0930
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-854	Page 1 of 2

Collector: J Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 4 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 79631677976 0

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C8	OTHER SOLID	2/4/09	1200					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [signature]	2.4.09 / 1515	Received By/Stored In: Ref B	2.4.09 / 1515
Relinquished By/Removed From: Ref B	2/5/09 0830	Received By/Stored In: Bloodsworth	2/5/09 0830
Relinquished By/Removed From: Bloodsworth	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: [signature]	2.6.09 0930	Received By/Stored In: [signature]	2.6.09 / 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-116-854	Page 2 of 2
Collector J Stratton	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator WEISS, RL	Price Code 9K / Data Turnaround 45 Days
Project Designation Columbia River Component of the RCBRA - Sediment	Sampling Location WP- 4 SSD		SAF No. RC-116	
Ice Chest No. WLH-08-011	Field Logbook No. EL-1631/-1	COA BESCRC6520	Method of Shipment FED EX	
Shipped To EBERLINE SERVICES LIONVILLE	Offsite Property No. N/A		Bill of Lading/Air Bill No. 796316779760	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										

Sample No.	Matrix *	Sample Date	Sample Time										
J186C8	OTHER SOLID	2/4/09	1200	X									

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[signature]	2.4.09 1515	Ref B	2.4.09 1515
Ref B	2/5/09 0830	B Woodward	2/5/09 0830
B Woodward	2/5/09 1000	Fed Ex	2/5/09 1000
Fed Ex	2.6.09 0930	[signature]	2.6.09 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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-116-121	Page 1 of 1

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: TRIP BLANK		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	Cool 4C											
Type of Container	G											
No. of Container(s)	1											
Volume	250g											
SAMPLE ANALYSIS	See item (1) in Special Instructions.											
Sample No.	Matrix *	Sample Date	Sample Time									
J17W09	OTHER SOLID	2/4/09	0720	X								

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By/Removed From	Date/Time 2.4.09/1500	Received By/Stored In	Date/Time 2.4.09/1500
Relinquished By/Removed From Kel B 2/5/09	Date/Time 0830	Received By/Stored In Buddelmund 2/5/09	Date/Time 0830
Relinquished By/Removed From Buddelmund 2/5/09	Date/Time 1000	Received By/Stored In FedEx 2/5/09	Date/Time 1000
Relinquished By/Removed From FedEx 2.6.09	Date/Time 10930	Received By/Stored In	Date/Time 2.6.09/0930
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) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropene, Trichloroethene, Vinyl chloride, Xylenes (total)}

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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SI=Sludge
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O=Oil
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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-116-123	Page 1 of 1

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: TRIP BLANK		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	Cool 4C											
Type of Container	G											
No. of Container(s)	1											
Volume	250g											
SAMPLE ANALYSIS	See item (1) in Special Instructions.											
Sample No.	Matrix *	Sample Date	Sample Time									
J17W11	OTHER SOLID	2/4/08	730	X								

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
BMayer BMayer	2/4/08 1500	Bay A	2/4/08 (XX)
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Rit A	2/5/09 0830	BWoodward	2/5/09 0830
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
BWoodward	2/5/09 1000	FedEx	2/5/09 1000
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
FedEx	2.6.09 0930	[illegible]	2.6.09 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) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropene, Trichloroethene, Vinyl chloride, Xylenes (total)}

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *
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O=Oil
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DS=Drum Solids
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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

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: WC Hanford Date: 2.6.09

Project/SAF/SOW/Release #: RC-116

LvLI Batch #: 0902020 Sample Custodian: [illegible]

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier FedEx		Airbill # 7963 1677 9760
2. Custody Seals on coolers or shipping containers intact, signed & dated?	☑ Yes	☐ No	☐ No Seals
3. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	Comments:
4. All expected paperwork received (coc & other client specific information) sealed in plactic bag and easily accessible?	☑ Yes	☐ No	
5. Samples received cooled or ambient?	Temp 2.3	°C	Cooler # WCH.08.011
How was the temperature taken?	☑ IR	☐ Temp. Blank	☐ Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	☑ Yes	☐ No	
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7. COC (Client & LvLI) 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 LvLI 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 _____	

LVLI LIONVILLE LABORATORIES INC.

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

RECEIVED
MAY 2009

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-116 Project Number: [none] K1526 PLB Project Manager: Joan Kessner	**Reported:** 03/06/2009 15:16

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
J186C0	0902020-01	Solid	02/04/2009 12:00	02/06/2009 09:30
J186C1	0902020-02	Solid	02/04/2009 11:35	02/06/2009 09:30
J186C2	0902020-03	Solid	02/04/2009 13:15	02/06/2009 09:30
J186C3	0902020-04	Solid	02/04/2009 11:00	02/06/2009 09:30
J186C5	0902020-05	Solid	02/04/2009 11:20	02/06/2009 09:30
J186C6	0902020-06	Solid	02/04/2009 10:55	02/06/2009 09:30
J186C7	0902020-07	Solid	02/04/2009 11:45	02/06/2009 09:30
J186C8	0902020-08	Solid	02/04/2009 12:00	02/06/2009 09:30

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-116 K1526
LVL #: 0902020
SDG/SAF # RC-116/

W.O. #: 60049-001-001-0001-00
Date Received: 02-06-2009

PCBs

Eight (8) solid samples were collected on 02-04-2009.

The samples and associated QC samples were extracted on 02-18-2009 and analyzed according to Lionville Laboratory SOPs based on SW846, 3rd Edition procedure on 02-24,25-2009. The extraction procedure was based on method 3550B and the extracts were analyzed based on method 8082.

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

1. All required holding times for extraction and analysis have been met.
2. The samples and their associated QC samples received Copper-Sulfur and Sulfuric Acid cleanups according to Lionville Laboratory SOPs based on SW846 methods 3660A and 3665A respectively.
3. The method blank was below the reporting limits for all target compounds.
4. All obtainable surrogate recoveries were within acceptance criteria.
5. All blank spike recoveries were within acceptance criteria.
6. All matrix spike recoveries were within acceptance criteria.
7. All initial calibrations associated with this data set were within acceptance criteria.
8. All continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.

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.

9. 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.

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
Laboratory Manager
Lionville Laboratory

3/10/05
Date

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.
.1	=	Indicates an interference on one analytical column only. Result is reported from remaining analytical column.

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.
P	=	This flag is used for an PESTICIDE/PCB target analyte when there is greater than 25% difference for detected concentrations between the two GC columns (see Form X). The lower of the two values is reported on Form I and flagged with a "P".
D	=	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
C	=	This flag applies to a compound that has been confirmed by GC/MS.

LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

264 Welsh Pool Roa
Exton, PA 1934
Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	03/06/2009 15:16

J186C0
0902020-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
			Lionville Laboratory						
Polychlorinated Biphenyls by EPA Method 8082									
Aroclor 1016	ND	13.3	ug/kg wet	1	L902124	02/18/2009	02/24/2009	SW846 8082	1
Aroclor 1221	ND	13.3	"	"	"	"	"	"	1
Aroclor 1232	ND	13.3	"	"	"	"	"	"	1
Aroclor 1242	ND	13.3	"	"	"	"	"	"	1
Aroclor 1248	ND	13.3	"	"	"	"	"	"	
Aroclor 1254	ND	13.3	"	"	"	"	"	"	
Aroclor 1260	ND	13.3	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*83 %*	*43-144*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*78 %*	*52-141*		"	"	"	"	

264 Welsh Pool Ro
Exton, PA 1934
Phone: 610-280-30
Fax: 610-280-30

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	03/06/2009 15:16

J186C1
0902020-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not
Lionville Laboratory									
Polychlorinated Biphenyls by EPA Method 8082									
Aroclor 1016	ND	13.3	ug/kg wet	1	L902124	02/18/2009	02/24/2009	SW846 8082	
Aroclor 1221	ND	13.3	"	"	"	"	"	"	
Aroclor 1232	ND	13.3	"	"	"	"	"	"	
Aroclor 1242	ND	13.3	"	"	"	"	"	"	
Aroclor 1248	ND	13.3	"	"	"	"	"	"	
Aroclor 1254	ND	13.3	"	"	"	"	"	"	
Aroclor 1260	ND	13.3	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*96 %*	*43-144*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*84 %*	*52-141*		"	"	"	"	

264 Welsh Pool Ro
Exton, PA 193
Phone: 610-280-30
Fax: 610-280-30

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	03/06/2009 15:16

J186C2
0902020-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not
			Lionville Laboratory						
Polychlorinated Biphenyls by EPA Method 8082									
Aroclor 1016	ND	13.3	ug/kg wet	1	L902124	02/18/2009	02/24/2009	SW846 8082	
Aroclor 1221	ND	13.3	"	"	"	"	"	"	
Aroclor 1232	ND	13.3	"	"	"	"	"	"	
Aroclor 1242	ND	13.3	"	"	"	"	"	"	
Aroclor 1248	ND	13.3	"	"	"	"	"	"	
Aroclor 1254	ND	13.3	"	"	"	"	"	"	
Aroclor 1260	ND	13.3	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*77 %*	*43-144*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*75 %*	*52-141*		"	"	"	"	

264 Welsh Pool Roa
Exton, PA 1934
Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	03/06/2009 15:16

J186C3
0902020-04 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Lionville Laboratory									
Polychlorinated Biphenyls by EPA Method 8082									
Aroclor 1016	ND	13.3	ug/kg wet	1	L902124	02/18/2009	02/24/2009	SW846 8082	1
Aroclor 1221	ND	13.3	"	"	"	"	"	"	
Aroclor 1232	ND	13.3	"	"	"	"	"	"	
Aroclor 1242	ND	13.3	"	"	"	"	"	"	
Aroclor 1248	ND	13.3	"	"	"	"	"	"	
Aroclor 1254	ND	13.3	"	"	"	"	"	"	
Aroclor 1260	ND	13.3	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*74 %*	*43-144*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*75 %*	*52-141*		"	"	"	"	

264 Welsh Pool Roa
Exton, PA 1934
Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	03/06/2009 15:16

J186C5
0902020-05 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Lionville Laboratory									
Polychlorinated Biphenyls by EPA Method 8082									
Aroclor 1016	ND	13.3	ug/kg wet	1	L902124	02/18/2009	02/24/2009	SW846 8082	
Aroclor 1221	ND	13.3	"	"	"	"	"	"	
Aroclor 1232	ND	13.3	"	"	"	"	"	"	
Aroclor 1242	ND	13.3	"	"	"	"	"	"	
Aroclor 1248	ND	13.3	"	"	"	"	"	"	
Aroclor 1254	ND	13.3	"	"	"	"	"	"	
Aroclor 1260	ND	13.3	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*70 %*	*43-144*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*73 %*	*52-141*		"	"	"	"	

264 Welsh Pool Roa
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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	03/06/2009 15:16

J186C6
0902020-06 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Lionville Laboratory									
Polychlorinated Biphenyls by EPA Method 8082									
Aroclor 1016	ND	13.3	ug/kg wet	1	L902124	02/18/2009	02/24/2009	SW846 8082	
Aroclor 1221	ND	13.3	"	"	"	"	"	"	
Aroclor 1232	ND	13.3	"	"	"	"	"	"	
Aroclor 1242	ND	13.3	"	"	"	"	"	"	
Aroclor 1248	ND	13.3	"	"	"	"	"	"	
Aroclor 1254	ND	13.3	"	"	"	"	"	"	
Aroclor 1260	ND	13.3	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*80 %*	*43-144*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*76 %*	*52-141*		"	"	"	"	

264 Welsh Pool Roa
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Fax: 610-280-304

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	03/06/2009 15:16

J186C7
0902020-07 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Lionville Laboratory									
Polychlorinated Biphenyls by EPA Method 8082									
Aroclor 1016	ND	13.3	ug/kg wet	1	L902124	02/18/2009	02/25/2009	SW846 8082	1
Aroclor 1221	ND	13.3	"	"	"	"	"	"	1
Aroclor 1232	ND	13.3	"	"	"	"	"	"	1
Aroclor 1242	ND	13.3	"	"	"	"	"	"	1
Aroclor 1248	ND	13.3	"	"	"	"	"	"	1
Aroclor 1254	ND	13.3	"	"	"	"	"	"	1
Aroclor 1260	ND	13.3	"	"	"	"	"	"	1
Surrogate: Decachlorobiphenyl		*77 %*	*43-144*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*70 %*	*52-141*		"	"	"	"	

264 Welsh Pool Roa
Exton, PA 1934
Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	03/06/2009 15:16

J186C8

0902020-08 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Lionville Laboratory									
Polychlorinated Biphenyls by EPA Method 8082									
Aroclor 1016	ND	13.3	ug/kg wet	1	L902124	02/18/2009	02/25/2009	SW846 8082	1
Aroclor 1221	ND	13.3	"	"	"	"	"	"	1
Aroclor 1232	ND	13.3	"	"	"	"	"	"	1
Aroclor 1242	ND	13.3	"	"	"	"	"	"	1
Aroclor 1248	ND	13.3	"	"	"	"	"	"	1
Aroclor 1254	ND	13.3	"	"	"	"	"	"	1
Aroclor 1260	ND	13.3	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*71 %*	*43-144*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*76 %*	*52-141*		"	"	"	"	

264 Welsh Pool Roa
Exton, PA 1934
Phone: 610-280-300
Fax: 610-280-304

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	03/06/2009 15:16

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

Lionville Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L902124 - SW 3550B										
Blank (L902124-BLK2)				Prepared: 02/18/2009 Analyzed: 02/24/2009						
Aroclor 1016	ND	13.3	ug/kg wet							
Aroclor 1221	ND	13.3	"							
Aroclor 1232	ND	13.3	"							
Aroclor 1242	ND	13.3	"							
Aroclor 1248	ND	13.3	"							
Aroclor 1254	ND	13.3	"							
Aroclor 1260	ND	13.3	"							
Surrogate: Decachlorobiphenyl	*29.0*		"	*33.333*		*87*	*43-144*			
Surrogate: Tetrachloro-meta-xylene	*26.3*		"	*33.337*		*79*	*52-141*			
LCS (L902124-BS2)				Prepared: 02/18/2009 Analyzed: 02/24/2009						
Aroclor 1016	128	13.3	ug/kg wet	166.67		77	50-138			
Aroclor 1260	155	13.3	"	166.67		93	50-148			
Surrogate: Decachlorobiphenyl	*31.0*		"	*33.333*		*93*	*43-144*			
Surrogate: Tetrachloro-meta-xylene	*26.4*		"	*33.337*		*79*	*52-141*			
Matrix Spike (L902124-MS3)		**Source: 0902020-02**		Prepared: 02/18/2009 Analyzed: 02/24/2009						
Aroclor 1016	127	13.3	ug/kg wet	166.67	ND	76	50-138			
Aroclor 1260	153	13.3	"	166.67	ND	92	50-148			
Surrogate: Decachlorobiphenyl	*31.7*		"	*33.333*		*95*	*43-144*			
Surrogate: Tetrachloro-meta-xylene	*25.8*		"	*33.337*		*77*	*52-141*			
Matrix Spike Dup (L902124-MSD3)		**Source: 0902020-02**		Prepared: 02/18/2009 Analyzed: 02/24/2009						
Aroclor 1016	125	13.3	ug/kg wet	166.67	ND	75	50-138	1	40	
Aroclor 1260	142	13.3	"	166.67	ND	85	50-148	8	40	
Surrogate: Decachlorobiphenyl	*27.4*		"	*33.333*		*82*	*43-144*			
Surrogate: Tetrachloro-meta-xylene	*27.9*		"	*33.337*		*84*	*52-141*			

PREPARATION BENCH SHEET

L902124

Lionville Laboratory

Pg 1 of 2 Printed: 2/24/2009 9:16:26AM

Matrix: Solid **Prepared using: GC - SW 3550B** **Surrogate used: 0900186**

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
0902020-01	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-01	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-02	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-02	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-03	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-03	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-04	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-04	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-05	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-05	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-06	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-06	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-07	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-07	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-08	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-08	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-01	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-01	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-02	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-02	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-05	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-05	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-06	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	

Spiking Witnessed By Date

Preparation Reviewed By 2/24/09 1010 Date

Extracts Received By 2/24/09 1010 Date

PREPARATION BENCH SHEET

L902124

Pg 2 of 2

Lionville Laboratory

rinted: 2/24/2009 9:16:26AM

Matrix: Solid **Prepared using: GC - SW 3550B** **Surrogate used: 0900186**

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
0902023-06	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-07	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-07	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-08	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-08	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-09	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-09	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
L902124-BLK1	QC	02/18/2009 11:45	30	10				250		608
L902124-BLK2	QC	02/18/2009 11:45	30	10				250		PCB
L902124-BS1	QC	02/18/2009 11:45	30	10	0800160		250	250		608
L902124-BS2	QC	02/18/2009 11:45	30	10	0900099		250	250		PCB
L902124-MS1	QC	02/18/2009 11:45	30	10	0800160	0902020-02	250	250		608
L902124-MS2	QC	02/18/2009 11:45	30	10	0800160	0902023-09	250	250		608
L902124-MS3	QC	02/18/2009 11:45	30	10	0900099	0902020-02	250	250		PCB
L902124-MS4	QC	02/18/2009 11:45	30	10	0900099	0902023-09	250	250		PCB
L902124-MSD1	QC	02/18/2009 11:45	30	10	0800160	0902020-02	250	250		608
L902124-MSD2	QC	02/18/2009 11:45	30	10	0800160	0902023-09	250	250		608
L902124-MSD3	QC	02/18/2009 11:45	30	10	0900099	0902020-02	250	250		PCB
L902124-MSD4	QC	02/18/2009 11:45	30	10	0900099	0902023-09	250	250		PCB

Spiking Witnessed By Date

Preparation Reviewed By 2/24/09 10:10 Date

Shaw 2/24/09 0:10 Extracts Received By Date

onville Laboratory Use Only

0902020

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

ent WC Hanford SAF# RC-116

L. Final Proj. Sampling Date

ject# 60049-001-001-0001-00

ject Contact/Phone#

onville Laboratory Project Manager Arlette Johnson

SW846 Del STO TAT 30 days

te Rec'd 2.6.09 Date Due 3-8-09

	A	B	C		D			E		F		G			
Refrigerator #	Vaa	2	2		2			2		2					
#/Type Container (Liquid / Solid)	~~1aal~~ 2aal	1aal	1aal		1aal			1pl		1aal		1pl			
Volume (Solid)	250	250	125		250			250		125		1L			
Preservatives	–	–	–		–			–		–		–			
ANALYSES REQUESTED	ORGANIC: VOA	BNA	Pest/PCB	Herb	PCBs			INORG: (3) Metal	CN	TOC		Particle Size			
Lionville Laboratory Use Only	0624H	0625H	0608H		OPCB			MetO		TOCT		ISUB			

MATRIX CODES: Soil, Sediment, Solid, Sludge, Water, Oil, Air, Drum Solids, Drum Liquids, EP/TCLP Leachate, Wipe, Other, Fish

omit lead zero 3/10/09

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	0624H	0625H	0608H		OPCB			MetO		TOCT		ISUB			
001	J186C0			SO	2.4.09	1200	X	X	X		X			X		X		X			
002	J186C1					1135	X	X	X		X			X		X		X			
003	J186C2					1315	X	X	X		X			X		X		X			
004	J186C3					1100	X	X	X		X			X		X		X			
005	J186C5					1120	X	X	X		X			X		X		X			
006	J186C6					1055	X	X	X		X			X		X		X			
007	J186C7					1145	X	X	X		X			X		X		X			
008	J186C8					1200	X	X	X		X			X		X		X			
009	J17W09					0730	X														
010	J17W11					0730	X														

Special Instructions:

MetO = HSL + B, Bi, Li, Mo, Sr, Si, Sn, U, P

Special Instructions:

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

Relinquished by	Received by	Date	Time
FedEx	[signature]	2.6.09	0930

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
ORIGINAL REWRITTEN		COMPOSITE WASTE	

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-116-040

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 8 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1
Sample No. / Matrix * / Sample Date / Sample Time										
186C0 / OTHER SOLID / 2/4/09 / 1200					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Mayhew BMayhew	2/4/09 1500	Fig A	2/4/09 1500
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Cef A	2/5/09 0830	B Woodward	2/5/09 0830
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Woodward	2/5/09 1000	Fed Ex	2/5/09 1000
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Fed Ex	2-6-09 0930	N Johnson	2-6-09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

/CH-EE-011

00000017

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

ollector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
olect Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 8 SSD		SAF No.: RC-116
e Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
hipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No.	Matrix *	Sample Date	Sample Time									
186C0	OTHER SOLID	2/4/09	1200	X								

CHAIN OF POSSESSION	Sign/Print Names		
elinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Meyer BMeyer	2/4/09 1500	Fry A	2/4/09 1500
elinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Pet A 2/5/09	0830	B Woodlund	2/5/09 0830
elinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Woodlund 2/5/09	1000	Fed Ex 2/5/09	1000
elinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Fed Ex	2.6.09/0930	[illegible]	2.6.09/0930
elinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
elinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

VCH-EE-011

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-116-847 | Page 1 of 2

llector BM	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator WEISS, RL
Price Code 9K	Data Turnaround 45 Days		
oject Designation Columbia River Component of the RCBRA - Sediment	Sampling Location WP- 7 SSD		SAF No. RC-116
e Chest No. WCH-08-011	Field Logbook No. EL-1631/-1	COA BESCRC6520	Method of Shipment FED EX
ipped To EBERLINE SERVICES/ LIONVILLE	Offsite Property No. N/A		Bill of Lading/Air Bill No. 796316779760

'OSSIBLE SAMPLE HAZARDS/REMARKS

'pecial Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1
186C1	OTHER SOLID	2/4/09	1135					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
linquished By/Removed From B Maylor BMaylor	2/4/09 1500	Roy A	2/4/09 1500
linquished By/Removed From RofA	2/5/09 0830	B Woodward	2/5/09 0830
linquished By/Removed From B Woodward	2/5/09 1000	Fed Ex	2/5/09 1000
linquished By/Removed From Fed Ex	2-6-09 0930	D. Mc	2-6-09 0930
linquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
linquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

ABORATORY SECTION	Received By	Title	Date/Time
INAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

CH-EE-011

8888888019

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP-7 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No. / Matrix * / Sample Date / Sample Time												
186C1 / OTHER SOLID / 2/4/09 / 1135	X											

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
BM [illegible]	2/4/09 1700	Fritz A	2/4/09 1700
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Fritz A	2/5/09 0830	BWoodward	2/5/09 0830
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
BWoodward	2/5/09 1000	FedEx	2/5/09 1000
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
FedEx	2-6-09 10930	[illegible]	2-6-09 10930
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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

VCH-EE-011

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

llector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
olect Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 9 SSD		SAF No.: RC-116
e Chest No.: WLH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
ipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

'OSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time									
186C2	OTHER SOLID	2/4/09	1315					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Sign/Print Names		
elinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[illegible]	2/4/09 1570	[illegible]	2/4/09 1500
elinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Pet A	2/5/09 0830	Bwoodward	2/5/09 0830
elinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Bwoodward	2/5/09 1000	Fed Ex	2/5/09 1000
elinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Fed Ex	2.6.09 1030	[illegible]	2.6.09 1030
elinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
elinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

Matrix *

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

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

VCH-EE-011

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

ollector BM	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator WEISS, RL
Price Code 9K	Data Turnaround 45 Days		
olect Designation Columbia River Component of the RCBRA - Sediment	Sampling Location WP- 9 SSD		SAF No. RC-116
e Chest No. WCH-08-011	Field Logbook No. EL-1631/-1	COA BESCRC6520	Method of Shipment FED EX
hipped To EBERLINE SERVICES LIONVILLE	Offsite Property No. N/A		Bill of Lading/Air Bill No. 79631677976 0

OSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										
Sample No. / Matrix * / Sample Date / Sample Time											
186C2 / OTHER SOLID / 2/4/09 / 1015	X										

CHAIN OF POSSESSION	Sign/Print Names		
elinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Maylum	2/4/09 1500	Fry A	2/4/09 1500
elinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Fry A	2/5/09 0830	B Woodward	2/5/09 0830
elinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Woodward	2/5/09 1000	FedEx	2/5/09 1000
elinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
FedEx	2-6-09 0930	D Johnson	2-6-09 0930
elinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
elinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

VCH-EE-011

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: B.M	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 6 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 7963167797 60

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time									
1186C3	OTHER SOLID	2/4/09	1100					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: B.M. [illegible]	2/4/09 1300	Received By/Stored In: Fed A	2/4/09 1320
Relinquished By/Removed From: Ref A	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2.6.09 0930	Received By/Stored In: D. Smith	2.6.09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

..anford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-116-849 | Page 2 of 2

2M

..signation ..umbia River Component of the RCBRA - Sediment	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator WEISS, RL
	Sampling Location WP- 6 SSD		SAF No. RC-116
e Chest No. WCH-08-11	Field Logbook No. EL-1631/-1	COA BESCRC6520	Method of Shipment FED EX
..ipped To EBERLINE SERVICES / LIONVILLE	Offsite Property No. N/A		Bill of Lading/Air Bill No. 79631677976 0

Price Code 9K

Data Turnaround 45 Days

'OSSIBLE SAMPLE HAZARDS/REMARKS

'pecial Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										
Sample No. / Matrix * / Sample Date / Sample Time											
86C3 / OTHER SOLID / 2/4/09 / 1100	X										

CHAIN OF POSSESSION		Sign/Print Names	
inquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
3 Mayhew BH AC	2/4/09 1500	Fig A	2/4/09 1500
inquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
et A 2/5/09	0830	BWoodward	2/5/09 0830
inquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
BWoodward 2/5/09	1000	Fed Ex	2/5/09 1000
inquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Fed Ex	2.6.09 0930	[illegible]	2.6.09 0930
inquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
inquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

ABORATORY SECTION	Received By	Title	Date/Time
NAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

CH-EE-011

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-116-831

llector L Stratton	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator WEISS, RL
Price Code 9K	Data Turnaround 45 Days		
olect Designation Columbia River Component of the RCBRA - Sediment	Sampling Location WP- 2 SSD		SAF No. RC-116
e Chest No. WLH-08-011	Field Logbook No. EL-1631/-1	COA BESCRC6520	Method of Shipment FED EX
ipped To EBERLINE SERVICES LIONVILLE	Offsite Property No. N/A		Bill of Lading/Air Bill No. 796316779760

'OSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1
Sample No. / Matrix * / Sample Date / Sample Time										
186C5 / OTHER SOLID / 2/4/09 / 1120					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
linquished By/Removed From	2.4.09 1515	Received By/Stored In	2.4.09 1515
linquished By/Removed From	2/5/09 0830	Received By/Stored In	2/5/09 0830
linquished By/Removed From	2/5/09 1000	Received By/Stored In FedEx	2/5/09 1000
linquished By/Removed From FedEx	2.6.09 0930	Received By/Stored In	2.6.09 0930
linquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
linquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

CH-EE-011

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-116-051

llector L Stratton	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator WEISS, RL
Price Code 9K	Data Turnaround 45 Days		
oject Designation Columbia River Component of the RCBRA - Sediment	Sampling Location WP- 2 SSD		SAF No. RC-116
Chest No. W6H-08-011	Field Logbook No. EL-1631/-1	COA BESCRC6520	Method of Shipment FED EX
ipped To EBERLINE SERVICES LIONVILLE	Offsite Property No. N/A		Bill of Lading/Air Bill No. 79631677976 0

OSSIBLE SAMPLE HAZARDS/REMARKS

pecial Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No. / Matrix * / Sample Date / Sample Time												
186C5 / OTHER SOLID / 2/4/09 / 1120	X											

CHAIN OF POSSESSION	Sign/Print Names		
linquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[illegible]	2-4-09 1515	Ref B	2-4-09 1515
linquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Ref B	2/5/09 0830	Bluddwund	2/5/09 0830
linquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Bluddwund	2/5/09 1000	Fed Ex	2/5/09 1000
linquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Fed Ex	2-6-09 0930	D J Smith	2-6-09 0930
linquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
linquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

ABORATORY SECTION	Received By	Title	Date/Time
INAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

CH-EE-011

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-116-852

ollector: L. Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
oject Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- / SSD		SAF No.: RC-116
e Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
hipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 79631677976 0

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1
186C6	OTHER SOLID	2/4/09	1055					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[illegible]	2-4-09 / 1515	Ref B	2-4-09 / 1515
Ref B	2/5/09 0830	B Woodward	2/5/09 0830
B Woodward	2/5/09 1000	Fed Ex	2/5/09 1000
Fed Ex	2-6-09 / 0930	[illegible]	2-6-09 / 0930

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

/CH-EE-011

Washington Closure Hanford | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | RC-116 852

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- / SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No.	Matrix *	Sample Date	Sample Time									
186C6	OTHER SOLID	2/4/09	1055	X								

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[illegible]	2.4.09 1515	[illegible]	2.4.09 1515
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Ref. B	2/5/09 0830	B Woodward	2/5/09 0830
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Woodward	2/5/09 1000	FedEx	2/5/09 1000
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
FedEx	2.6.09 0930	[illegible]	2.6.09 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 3 SSD		SAF No.: RC-116
Ice Chest No.: ~~WCH-08-058~~ DH 2/5 WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760 ~~797313204940~~ DH 2/5

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1
Sample No. / Matrix * / Sample Date / Sample Time										
186C7 / OTHER SOLID / 2/4/09 / 1145					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[illegible]	2-4-09 / 1515	[illegible]	2-4-09 / 1515
[illegible]	2/5/09 0830	D. Heidelberg	2/5/09 0830
D. Heidelberg	2/5/09 1000	Fedex	2/5/09 1000
Fedex	2-6-09 / 0930	[illegible]	2-6-09 / 0930

Sign/Print Names

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

VCH-EE-011

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 3 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No.	Matrix *	Sample Date	Sample Time									
186C7	OTHER SOLID	2/4/09	1145	X								

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[illegible]	2-4-09 1515	Kel B	2-4-09 1515
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kel B	2/5/09 0830	B Woodward	2/5/09 0830
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Woodward	2/5/09 1000	Fed Ex	2/5/09 1000
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Fed Ex	2-6-09 0930	[illegible]	2-6-09 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

Collector: J Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 4 SSD		SAF No.: RC-116
Ice Chest No.: WLH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 79631677976 0

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
186C8	OTHER SOLID	2/4/09	1200					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By/Removed From: [signature] Date/Time: 2.4.09 / 1515	Received By/Stored In: Ref B Date/Time: 2.4.09 / 1515	
Relinquished By/Removed From: Ref B 2/5/09 Date/Time: 0836	Received By/Stored In: Blumchwund Date/Time: 2/5/09 0830	
Relinquished By/Removed From: Blumchwund 2/5/09 Date/Time: 1000	Received By/Stored In: Fed Ex 2/5/09 Date/Time: 1000	
Relinquished By/Removed From: [signature] Date/Time: 2.6.09 10930	Received By/Stored In: [signature] Date/Time: 2.6.09 / 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

CH-EE-011

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-116-034

ollector: J Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
oject Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 4 SSD		SAF No.: RC-116
e Chest No.: WLH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
ipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

OSSIBLE SAMPLE HAZARDS/REMARKS

pecial Handling and/or Storage

Preservation	None
Type of Container	G/P
No. of Container(s)	1
Volume	1000g
Particle Size (Dry Sieve) - D422	

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Particle Size (Dry Sieve) - D422
86C8	OTHER SOLID	2/4/09	1200	X

CHAIN OF POSSESSION	Sign/Print Names		
inquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[illegible]	2.4.09 1515	Ref B	2.4.09 1515
inquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Ref B	2/5/09 0830	B Woodward	2/5/09 0830
inquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Woodward	2/5/09 1000	Fed Ex	2/5/09 1000
inquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Fed Ex	2.6.09 0930	[illegible]	2.6.09 0930
inquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
inquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

ABORATORY SECTION	Received By	Title	Date/Time
NAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

CH-EE-011

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-116-121

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: TRIP BLANK		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	Cool 4C											
Type of Container	G											
No. of Container(s)	1											
Volume	250g											
SAMPLE ANALYSIS	See item (1) in Special Instructions.											
Sample No.	Matrix *	Sample Date	Sample Time									
J17W09	OTHER SOLID	2/4/09	0720	X								

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time 2.4.09/1500	Received By/Stored In	Date/Time 2.4.09 1500
Relinquished By/Removed From	Date/Time Ref B 2/5/09 0830	Received By/Stored In	Date/Time Bluedlund 2/5/09 0830
Relinquished By/Removed From	Date/Time Bluedlund 2/5/09 1000	Received By/Stored In	Date/Time FedEx 2/5/09 1000
Relinquished By/Removed From	Date/Time 2.6.09 1030	Received By/Stored In	Date/Time 2.6.09 1030
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) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropene, Trichloroethene, Vinyl chloride, Xylenes (total)}

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-123	Page 1 of 1

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: TRIP BLANK		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	Cool 4C											
Type of Container	G											
No. of Container(s)	1											
Volume	250g											
SAMPLE ANALYSIS	See item (1) in Special Instructions.											

Sample No.	Matrix *	Sample Date	Sample Time										
J17W11	OTHER SOLID	2/4/08	730	X									

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Mayer BMyl	2/4/08 1500	Bmy A	2/4/08 (XX)
Rel A	2/5/09 0830	Blackburn	2/5/09 0830
Blackburn	2/5/09 1000	FedEx	2/5/09 1000
FedEx	2.6.09 0930	[illegible]	2.6.09 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) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropene, Trichloroethene, Vinyl chloride, Xylenes (total)}

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

VCH-EE-011

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: WC Hanford

Project/SAF/SOW/Release #: RC-116

Date: 2.6.09

LvLI Batch #: 0902020

Sample Custodian: [illegible]

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier FedEx		Airbill # 7963 1677 9760
2. Custody Seals on coolers or shipping containers intact, signed & dated?	☑ Yes	☐ No	☐ No Seals
3. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	*Comments:*
4. All expected paperwork received (coc & other client specific information) sealed in plactic bag and easily accessible?	☑ Yes	☐ No	
5. Samples received cooled or ambient?	Temp 2.3	°C	Cooler # WCH.08.011
How was the temperature taken?	☑ IR	☐ Temp. Blank	☐ Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	☑ Yes	☐ No	
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7. COC (Client & LvLI) 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 LvLI 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 _____

LVLI

LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

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

RECEIVED
MAY 2009

Case Narrative

Client: WC-HANFORD RC-116
LVL #: 0902020
SDG# K1526 **SAF#** RC-116

W.O. #: 60049-001-001-0001-00
Date Received: 02-06-2009

SEMIVOLATILE

Eight (8) solid samples were collected on 02-04-2009.

The samples and their associated QC samples were extracted according to Lionville Laboratory SOPs based on SW 846 method 3550B on 02-17-2009 and analyzed according to criteria set forth in Lionville Laboratory SOPs based on SW 846 Method 8270C for TCL Semivolatile target compounds on 02-22,23,24,25-2009.

All solid samples are reported on a wet weight basis. The following is a summary of QC results accompanying the sample results. Lionville Laboratory (LVL) certifies that all test results meet the requirements of NELAC except as noted below:

1. All results presented in this report are derived from samples that met LvL's sample acceptance policy.
2. Samples were extracted and analyzed within the recommended holding time.
3. Non-target compounds were detected in these samples.
4. All obtainable surrogate recoveries were within acceptance criteria.
5. Thirty-one (31) of one hundred twenty-eight (128) matrix spike recoveries were outside acceptance criteria. A copy of the Sample Discrepancy Report (SDR# 09MS065) has been enclosed.
6. One (1) of sixty-four (64) blank spike recoveries was outside acceptance criteria. A copy of the Sample Discrepancy Report (SDR# 09MS065) has been enclosed.
7. The method blank was below the reporting limit for all target compounds.
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. Internal standard area criteria were not met for sample L902010-MSD1. The GC/MS instrument was inspected for possible malfunction and was judged to be functioning properly and all surrogate recoveries were within QC limits; consequently, the sample was not reanalyzed.

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 61 pages.

11. 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").

12. 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.

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 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

4/10/09
Date

Lionville Laboratory Sample Discrepancy Report (SDR)

SDR #: 09M5065

Initiator: Robert Carden
Date: 4/3/09
Client: WW Hanford Rollo

Batch: 0902020
Samples: MS/MSD
Method: SW846/MCAWW/CLP/

Parameter: 8625H
Matrix: Solid
Prep Batch: C902115

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)

Several spike recoveries outside QC acceptance criteria in MS/MSD (BS ok). All surrogates within acceptance criteria.

2. Known or Probable Causes(s) Possible loss during sample concentration on steam bath possible due to a funnel/glass/glass joint btn receiver tube/KD. All spike recoveries and surrogates within same range.

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: 4/6/09

✓ 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: 4/7/09 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

DATA QUALIFIERS

U = 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 quan modifications or integrations 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 quan modifications:

MP - Missed Peak: manually added peak not found by automatic quan program.

PA - Peak Assignment: quan 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 signal, or other interference.

PI - Proper Integration: a peak with poor or inconsistent integration (e.g., excessive tail) was properly integrated manually.

ORGANIC ANALYSIS DATA SHEET
8270C

J186C0

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-01	File ID:	C022115.D
Sampled:	02/04/09 12:00	Prepared:	02/17/09 18:19	Analyzed:	02/22/09 03:34
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL

Batch: L902115 Sequence: 9030125 Calibration: 0903033 Instrument: HP5972C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
108-95-2	Phenol	1	330	U
111-44-4	Bis(2-chloroethyl) ether	1	330	U
95-57-8	2-Chlorophenol	1	330	U
541-73-1	1,3-Dichlorobenzene	1	330	U
106-46-7	1,4-Dichlorobenzene	1	330	U
95-50-1	1,2-Dichlorobenzene	1	330	U
95-48-7	2-Methylphenol	1	330	U
108-60-1	Bis(2-chloroisopropyl) ether	1	330	U
106-44-5	4-Methylphenol	1	330	U
621-64-7	N-Nitrosodi-n-propylamine	1	330	U
67-72-1	Hexachloroethane	1	330	U
98-95-3	Nitrobenzene	1	330	U
78-59-1	Isophorone	1	330	U
88-75-5	2-Nitrophenol	1	330	U
105-67-9	2,4-Dimethylphenol	1	330	U
111-91-1	Bis(2-chloroethoxy) methane	1	330	U
120-83-2	2,4-Dichlorophenol	1	330	U
120-82-1	1,2,4-Trichlorobenzene	1	330	U
91-20-3	Naphthalene	1	330	U
106-47-8	4-Chloroaniline	1	330	U
87-68-3	Hexachlorobutadiene	1	330	U
59-50-7	4-Chloro-3-methylphenol	1	330	U
91-57-6	2-Methylnaphthalene	1	330	U
77-47-4	Hexachlorocyclopentadiene	1	330	U
88-06-2	2,4,6-Trichlorophenol	1	330	U
95-95-4	2,4,5-Trichlorophenol	1	330	U
91-58-7	2-Chloronaphthalene	1	330	U
88-74-4	2-Nitroaniline	1	1650	U
131-11-3	Dimethyl Phthalate	1	330	U
606-20-2	2,6-Dinitrotoluene	1	330	U
208-96-8	Acenaphthylene	1	330	U
99-09-2	3-Nitroaniline	1	1650	U
83-32-9	Acenaphthene	1	330	U
51-28-5	2,4-Dinitrophenol	1	1650	U
100-02-7	4-Nitrophenol	1	1650	U
132-64-9	Dibenzofuran	1	330	U
121-14-2	2,4-Dinitrotoluene	1	330	U
84-66-2	Diethyl Phthalate	1	330	U
7005-72-3	4-Chlorophenyl Phenyl Ether	1	330	U
86-73-7	Fluorene	1	330	U

ORGANIC ANALYSIS DATA SHEET
8270C

J186C0

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-01	File ID:	C022115.D
Sampled:	02/04/09 12:00	Prepared:	02/17/09 18:19	Analyzed:	02/22/09 03:34
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Batch:	L902115	Sequence: 9030125	Calibration:	0903033	Instrument: HP5972C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
100-01-6	4-Nitroaniline	1	1650	U
534-52-1	4,6-Dinitro-2-methylphenol	1	330	U
86-30-6	N-Nitrosodiphenylamine	1	330	U
101-55-3	4-Bromophenyl Phenyl Ether	1	330	U
118-74-1	Hexachlorobenzene	1	330	U
87-86-5	Pentachlorophenol	1	1650	U
85-01-8	Phenanthrene	1	330	U
120-12-7	Anthracene	1	330	U
86-74-8	Carbazole	1	330	U
84-74-2	Di-n-butyl Phthalate	1	330	U
206-44-0	Fluoranthene	1	330	U
129-00-0	Pyrene	1	330	U
85-68-7	Butyl Benzyl Phthalate	1	330	U
117-81-7	Bis(2-ethylhexyl) phthalate	1	330	U
91-94-1	3,3'-Dichlorobenzidine	1	660	U
56-55-3	Benz[a]anthracene	1	330	U
218-01-9	Chrysene	1	330	U
117-84-0	Di-n-octyl Phthalate	1	330	U
205-99-2	Benzo[b] fluoranthene	1	330	U
207-08-9	Benzo[k] fluoranthene	1	330	U
50-32-8	Benzo[a] pyrene	1	330	U
193-39-5	Indeno[1,2,3-cd]pyrene	1	330	U
53-70-3	Dibenz[a,h]anthracene	1	330	U
191-24-2	Benzo[g,h,i] perylene	1	330	U

CAS NO.	TENTATIVELY IDENTIFIED COMPOUND	RT	EST. CONC. (ug/kg wet)	Q
NA	TIC: Unknown 2	6.03	199	JB
79-34-5	TIC:1,1,2,2-tetrachloroethane	8.278	393	J N
79-00-5	TIC:1,1,2-trichloroethane	5.591	247	J N
NA	TIC:Unknown 1	6.908	18200	JB

SYSTEM MONITORING COMPOUND	ADDED (ug/kg wet)	CONC (ug/kg wet)	% REC	QC LIMITS	Q
2-Fluorophenol	2500.0	1560	62	25 - 121	
Phenol-d5	2500.0	1550	62	24 - 113	
Nitrobenzene-d5	1666.7	999	60	23 - 120	
2-Fluorobiphenyl	1666.7	1100	66	30 - 115	
2,4,6-Tribromophenol	2500.0	1280	51	19 - 122	
p-Terphenyl-d14	1666.7	1170	70	18 - 137	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4	319348	10.198	312653	10.199	

ORGANIC ANALYSIS DATA SHEET
8270C

J186C0

Laboratory:	Lionville Laboratory			SDG:	
Client:	WC-Hanford, Inc.			Project:	RC-116
Matrix:	Solid	Laboratory ID:	0902020-01	File ID:	C022115.D
Sampled:	02/04/09 12:00	Prepared:	02/17/09 18:19	Analyzed:	02/22/09 03:34
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Batch:	L902115	Sequence:	9030125	Calibration:	0903033
Instrument:	HP5972C				

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Naphthalene-d8	1088507	13.246	1100800	13.256	
Acenaphthene-d10	498857	17.69	506709	17.692	
Phenanthrene-d10	619746	21.066	610766	21.067	
Chrysene-d12	464798	26.121	378062	26.123	
Perylene-d12	366767	31.934	281454	31.918	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
8270C

J186C1

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-02	File ID:	C022309.D
Sampled:	02/04/09 11:35	Prepared:	02/17/09 18:19	Analyzed:	02/23/09 22:10
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Batch:	L902115	Sequence: 9030126	Calibration:	0903032	Instrument: HP5972C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
108-95-2	Phenol	1	330	U
111-44-4	Bis(2-chloroethyl) ether	1	330	U
95-57-8	2-Chlorophenol	1	330	U
541-73-1	1,3-Dichlorobenzene	1	330	U
106-46-7	1,4-Dichlorobenzene	1	330	U
95-50-1	1,2-Dichlorobenzene	1	330	U
95-48-7	2-Methylphenol	1	330	U
108-60-1	Bis(2-chloroisopropyl) ether	1	330	U
106-44-5	4-Methylphenol	1	330	U
621-64-7	N-Nitrosodi-n-propylamine	1	330	U
67-72-1	Hexachloroethane	1	330	U
98-95-3	Nitrobenzene	1	330	U
78-59-1	Isophorone	1	330	U
88-75-5	2-Nitrophenol	1	330	U
105-67-9	2,4-Dimethylphenol	1	330	U
111-91-1	Bis(2-chloroethoxy) methane	1	330	U
120-83-2	2,4-Dichlorophenol	1	330	U
120-82-1	1,2,4-Trichlorobenzene	1	330	U
91-20-3	Naphthalene	1	330	U
106-47-8	4-Chloroaniline	1	330	U
87-68-3	Hexachlorobutadiene	1	330	U
59-50-7	4-Chloro-3-methylphenol	1	330	U
91-57-6	2-Methylnaphthalene	1	330	U
77-47-4	Hexachlorocyclopentadiene	1	330	U
88-06-2	2,4,6-Trichlorophenol	1	330	U
95-95-4	2,4,5-Trichlorophenol	1	330	U
91-58-7	2-Chloronaphthalene	1	330	U
88-74-4	2-Nitroaniline	1	1650	U
131-11-3	Dimethyl Phthalate	1	330	U
606-20-2	2,6-Dinitrotoluene	1	330	U
208-96-8	Acenaphthylene	1	330	U
99-09-2	3-Nitroaniline	1	1650	U
83-32-9	Acenaphthene	1	330	U
51-28-5	2,4-Dinitrophenol	1	1650	U
100-02-7	4-Nitrophenol	1	1650	U
132-64-9	Dibenzofuran	1	330	U
121-14-2	2,4-Dinitrotoluene	1	330	U
84-66-2	Diethyl Phthalate	1	330	U
7005-72-3	4-Chlorophenyl Phenyl Ether	1	330	U
86-73-7	Fluorene	1	330	U

ORGANIC ANALYSIS DATA SHEET
8270C

J186C1

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-02	File ID:	C022309.D
Sampled:	02/04/09 11:35	Prepared:	02/17/09 18:19	Analyzed:	02/23/09 22:10
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Batch:	L902115	Sequence: 9030126	Calibration:	0903032	Instrument: HP5972C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
100-01-6	4-Nitroaniline	1	1650	U
534-52-1	4,6-Dinitro-2-methylphenol	1	330	U
86-30-6	N-Nitrosodiphenylamine	1	330	U
101-55-3	4-Bromophenyl Phenyl Ether	1	330	U
118-74-1	Hexachlorobenzene	1	330	U
87-86-5	Pentachlorophenol	1	1650	U
85-01-8	Phenanthrene	1	330	U
120-12-7	Anthracene	1	330	U
86-74-8	Carbazole	1	330	U
84-74-2	Di-n-butyl Phthalate	1	330	U
206-44-0	Fluoranthene	1	330	U
129-00-0	Pyrene	1	330	U
85-68-7	Butyl Benzyl Phthalate	1	330	U
117-81-7	Bis(2-ethylhexyl) phthalate	1	330	U
91-94-1	3,3'-Dichlorobenzidine	1	660	U
56-55-3	Benz[a]anthracene	1	330	U
218-01-9	Chrysene	1	330	U
117-84-0	Di-n-octyl Phthalate	1	330	U
205-99-2	Benzo[b] fluoranthene	1	330	U
207-08-9	Benzo[k] fluoranthene	1	330	U
50-32-8	Benzo[a] pyrene	1	330	U
193-39-5	Indeno[1,2,3-cd]pyrene	1	330	U
53-70-3	Dibenz[a,h]anthracene	1	330	U
191-24-2	Benzo[g,h,i] perylene	1	330	U

CAS NO.	TENTATIVELY IDENTIFIED COMPOUND	RT	EST. CONC. (ug/kg wet)	Q
NA	TIC: Aldol Condensate 1	3.938	216	J A
NA	TIC: Aldol Condensate 2	8.089	134	J A
NA	TIC: Unknown 1	6.823	15000	JB
79-34-5	TIC:1,1,2,2-tetrachloroethane	8.192	395	J N
79-00-5	TIC:1,1,2-trichloroethane	5.514	247	J N

SYSTEM MONITORING COMPOUND	ADDED (ug/kg wet)	CONC (ug/kg wet)	% REC	QC LIMITS	Q
2-Fluorophenol	2500.0	1500	60	25 - 121	
Phenol-d5	2500.0	1520	61	24 - 113	
Nitrobenzene-d5	1666.7	966	58	23 - 120	
2-Fluorobiphenyl	1666.7	996	60	30 - 115	
2,4,6-Tribromophenol	2500.0	1670	67	19 - 122	
p-Terphenyl-d14	1666.7	1140	69	18 - 137	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q

ORGANIC ANALYSIS DATA SHEET
8270C

J186C1

Laboratory:	Lionville Laboratory			SDG:	
Client:	WC-Hanford, Inc.			Project:	RC-116
Matrix:	Solid	Laboratory ID:	0902020-02	File ID:	C022309.D
Sampled:	02/04/09 11:35	Prepared:	02/17/09 18:19	Analyzed:	02/23/09 22:10
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL

Batch: L902115 Sequence: 9030126 Calibration: 0903032 Instrument: HP5972C

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4	324612	10.103	299028	10.124	
Naphthalene-d8	1113257	13.152	1053988	13.173	
Acenaphthene-d10	526934	17.587	490646	17.599	
Phenanthrene-d10	710107	20.98	623685	20.992	
Chrysene-d12	463118	25.984	406228	25.996	
Perylene-d12	345520	31.65	285341	31.671	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
8270C

J186C2

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-03	File ID:	C022310.D
Sampled:	02/04/09 13:15	Prepared:	02/17/09 18:19	Analyzed:	02/23/09 23:00
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Batch:	L902115	Sequence: 9030126	Calibration:	0903032	Instrument: HP5972C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
108-95-2	Phenol	1	330	U
111-44-4	Bis(2-chloroethyl) ether	1	330	U
95-57-8	2-Chlorophenol	1	330	U
541-73-1	1,3-Dichlorobenzene	1	330	U
106-46-7	1,4-Dichlorobenzene	1	330	U
95-50-1	1,2-Dichlorobenzene	1	330	U
95-48-7	2-Methylphenol	1	330	U
108-60-1	Bis(2-chloroisopropyl) ether	1	330	U
106-44-5	4-Methylphenol	1	330	U
621-64-7	N-Nitrosodi-n-propylamine	1	330	U
67-72-1	Hexachloroethane	1	330	U
98-95-3	Nitrobenzene	1	330	U
78-59-1	Isophorone	1	330	U
88-75-5	2-Nitrophenol	1	330	U
105-67-9	2,4-Dimethylphenol	1	330	U
111-91-1	Bis(2-chloroethoxy) methane	1	330	U
120-83-2	2,4-Dichlorophenol	1	330	U
120-82-1	1,2,4-Trichlorobenzene	1	330	U
91-20-3	Naphthalene	1	330	U
106-47-8	4-Chloroaniline	1	330	U
87-68-3	Hexachlorobutadiene	1	330	U
59-50-7	4-Chloro-3-methylphenol	1	330	U
91-57-6	2-Methylnaphthalene	1	330	U
77-47-4	Hexachlorocyclopentadiene	1	330	U
88-06-2	2,4,6-Trichlorophenol	1	330	U
95-95-4	2,4,5-Trichlorophenol	1	330	U
91-58-7	2-Chloronaphthalene	1	330	U
88-74-4	2-Nitroaniline	1	1650	U
131-11-3	Dimethyl Phthalate	1	330	U
606-20-2	2,6-Dinitrotoluene	1	330	U
208-96-8	Acenaphthylene	1	330	U
99-09-2	3-Nitroaniline	1	1650	U
83-32-9	Acenaphthene	1	330	U
51-28-5	2,4-Dinitrophenol	1	1650	U
100-02-7	4-Nitrophenol	1	1650	U
132-64-9	Dibenzofuran	1	330	U
121-14-2	2,4-Dinitrotoluene	1	330	U
84-66-2	Diethyl Phthalate	1	330	U
7005-72-3	4-Chlorophenyl Phenyl Ether	1	330	U
86-73-7	Fluorene	1	330	U

ORGANIC ANALYSIS DATA SHEET
8270C

J186C2

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-03	File ID:	C022310.D
Sampled:	02/04/09 13:15	Prepared:	02/17/09 18:19	Analyzed:	02/23/09 23:00
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL

Batch: L902115 Sequence: 9030126 Calibration: 0903032 Instrument: HP5972C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
100-01-6	4-Nitroaniline	1	1650	U
534-52-1	4,6-Dinitro-2-methylphenol	1	330	U
86-30-6	N-Nitrosodiphenylamine	1	330	U
101-55-3	4-Bromophenyl Phenyl Ether	1	330	U
118-74-1	Hexachlorobenzene	1	330	U
87-86-5	Pentachlorophenol	1	1650	U
85-01-8	Phenanthrene	1	330	U
120-12-7	Anthracene	1	330	U
86-74-8	Carbazole	1	330	U
84-74-2	Di-n-butyl Phthalate	1	330	U
206-44-0	Fluoranthene	1	330	U
129-00-0	Pyrene	1	330	U
85-68-7	Butyl Benzyl Phthalate	1	330	U
117-81-7	Bis(2-ethylhexyl) phthalate	1	330	U
91-94-1	3,3'-Dichlorobenzidine	1	660	U
56-55-3	Benz[a]anthracene	1	330	U
218-01-9	Chrysene	1	330	U
117-84-0	Di-n-octyl Phthalate	1	330	U
205-99-2	Benzo[b] fluoranthene	1	330	U
207-08-9	Benzo[k] fluoranthene	1	330	U
50-32-8	Benzo[a] pyrene	1	330	U
193-39-5	Indeno[1,2,3-cd]pyrene	1	330	U
53-70-3	Dibenz[a,h]anthracene	1	330	U
191-24-2	Benzo[g,h,i] perylene	1	330	U

CAS NO.	TENTATIVELY IDENTIFIED COMPOUND	RT	EST. CONC. (ug/kg wet)	Q
NA	TIC: Aldol Condensate 1	3.929	306	J A
NA	TIC: Unknown 1	3.628	659	J
NA	TIC: Unknown 2	6.831	18600	JB
79-34-5	TIC:1,1,2,2-tetrachloroethane	8.192	412	J N
79-00-5	TIC:1,1,2-trichloroethane	5.514	226	J N

SYSTEM MONITORING COMPOUND	ADDED (ug/kg wet)	CONC (ug/kg wet)	% REC	QC LIMITS	Q
2-Fluorophenol	2500.0	1800	72	25 - 121	
Phenol-d5	2500.0	1870	75	24 - 113	
Nitrobenzene-d5	1666.7	1120	67	23 - 120	
2-Fluorobiphenyl	1666.7	1080	65	30 - 115	
2,4,6-Tribromophenol	2500.0	2180	87	19 - 122	
p-Terphenyl-d14	1666.7	1350	81	18 - 137	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q

ORGANIC ANALYSIS DATA SHEET
8270C

J186C2

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-03	File ID:	C022310.D
Sampled:	02/04/09 13:15	Prepared:	02/17/09 18:19	Analyzed:	02/23/09 23:00
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Batch:	L902115	Sequence:	9030126	Calibration:	0903032
Instrument:	HP5972C				

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4	300951	10.103	299028	10.124	
Naphthalene-d8	1034510	13.152	1053988	13.173	
Acenaphthene-d10	488701	17.579	490646	17.599	
Phenanthrene-d10	587802	20.98	623685	20.992	
Chrysene-d12	404024	25.984	406228	25.996	
Perylene-d12	317739	31.642	285341	31.671	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
8270C

J186C3

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-04	File ID:	C022311.D
Sampled:	02/04/09 11:00	Prepared:	02/17/09 18:19	Analyzed:	02/23/09 23:51
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Batch:	L902115	Sequence: 9030126	Calibration:	0903032	Instrument: HP5972C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
108-95-2	Phenol	1	330	U
111-44-4	Bis(2-chloroethyl) ether	1	330	U
95-57-8	2-Chlorophenol	1	330	U
541-73-1	1,3-Dichlorobenzene	1	330	U
106-46-7	1,4-Dichlorobenzene	1	330	U
95-50-1	1,2-Dichlorobenzene	1	330	U
95-48-7	2-Methylphenol	1	330	U
108-60-1	Bis(2-chloroisopropyl) ether	1	330	U
106-44-5	4-Methylphenol	1	330	U
621-64-7	N-Nitrosodi-n-propylamine	1	330	U
67-72-1	Hexachloroethane	1	330	U
98-95-3	Nitrobenzene	1	330	U
78-59-1	Isophorone	1	330	U
88-75-5	2-Nitrophenol	1	330	U
105-67-9	2,4-Dimethylphenol	1	330	U
111-91-1	Bis(2-chloroethoxy) methane	1	330	U
120-83-2	2,4-Dichlorophenol	1	330	U
120-82-1	1,2,4-Trichlorobenzene	1	330	U
91-20-3	Naphthalene	1	330	U
106-47-8	4-Chloroaniline	1	330	U
87-68-3	Hexachlorobutadiene	1	330	U
59-50-7	4-Chloro-3-methylphenol	1	330	U
91-57-6	2-Methylnaphthalene	1	330	U
77-47-4	Hexachlorocyclopentadiene	1	330	U
88-06-2	2,4,6-Trichlorophenol	1	330	U
95-95-4	2,4,5-Trichlorophenol	1	330	U
91-58-7	2-Chloronaphthalene	1	330	U
88-74-4	2-Nitroaniline	1	1650	U
131-11-3	Dimethyl Phthalate	1	330	U
606-20-2	2,6-Dinitrotoluene	1	330	U
208-96-8	Acenaphthylene	1	330	U
99-09-2	3-Nitroaniline	1	1650	U
83-32-9	Acenaphthene	1	330	U
51-28-5	2,4-Dinitrophenol	1	1650	U
100-02-7	4-Nitrophenol	1	1650	U
132-64-9	Dibenzofuran	1	330	U
121-14-2	2,4-Dinitrotoluene	1	330	U
84-66-2	Diethyl Phthalate	1	330	U
7005-72-3	4-Chlorophenyl Phenyl Ether	1	330	U
86-73-7	Fluorene	1	330	U

ORGANIC ANALYSIS DATA SHEET
8270C

J186C3

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-04	File ID:	C022311.D
Sampled:	02/04/09 11:00	Prepared:	02/17/09 18:19	Analyzed:	02/23/09 23:51
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Batch:	L902115	Sequence: 9030126	Calibration:	0903032	Instrument: HP5972C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
100-01-6	4-Nitroaniline	1	1650	U
534-52-1	4,6-Dinitro-2-methylphenol	1	330	U
86-30-6	N-Nitrosodiphenylamine	1	330	U
101-55-3	4-Bromophenyl Phenyl Ether	1	330	U
118-74-1	Hexachlorobenzene	1	330	U
87-86-5	Pentachlorophenol	1	1650	U
85-01-8	Phenanthrene	1	330	U
120-12-7	Anthracene	1	330	U
86-74-8	Carbazole	1	330	U
84-74-2	Di-n-butyl Phthalate	1	330	U
206-44-0	Fluoranthene	1	330	U
129-00-0	Pyrene	1	330	U
85-68-7	Butyl Benzyl Phthalate	1	330	U
117-81-7	Bis(2-ethylhexyl) phthalate	1	330	U
91-94-1	3,3'-Dichlorobenzidine	1	660	U
56-55-3	Benz[a]anthracene	1	330	U
218-01-9	Chrysene	1	330	U
117-84-0	Di-n-octyl Phthalate	1	330	U
205-99-2	Benzo[b] fluoranthene	1	330	U
207-08-9	Benzo[k] fluoranthene	1	330	U
50-32-8	Benzo[a] pyrene	1	330	U
193-39-5	Indeno[1,2,3-cd]pyrene	1	330	U
53-70-3	Dibenz[a,h]anthracene	1	330	U
191-24-2	Benzo[g,h,i] perylene	1	330	U

CAS NO.	TENTATIVELY IDENTIFIED COMPOUND	RT	EST. CONC. (ug/kg wet)	Q
NA	TIC: Aldol Condensate 1	3.94	151	J A
NA	TIC: Unknown 1	6.807	13200	JB
79-34-5	TIC:1,1,2,2-tetrachloroethane	8.185	307	J N
79-00-5	TIC:1,1,2-trichloroethane	5.516	192	J N

SYSTEM MONITORING COMPOUND	ADDED (ug/kg wet)	CONC (ug/kg wet)	% REC	QC LIMITS	Q
2-Fluorophenol	2500.0	1430	57	25 - 121	
Phenol-d5	2500.0	1440	58	24 - 113	
Nitrobenzene-d5	1666.7	954	57	23 - 120	
2-Fluorobiphenyl	1666.7	1020	61	30 - 115	
2,4,6-Tribromophenol	2500.0	1560	62	19 - 122	
p-Terphenyl-d14	1666.7	1190	71	18 - 137	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4	289007	10.097	299028	10.124	

ORGANIC ANALYSIS DATA SHEET
8270C

J186C3

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-04	File ID:	C022311.D
Sampled:	02/04/09 11:00	Prepared:	02/17/09 18:19	Analyzed:	02/23/09 23:51
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Batch:	L902115	Sequence:	9030126	Calibration:	0903032
Instrument:	HP5972C				

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Naphthalene-d8	984902	13.145	1053988	13.173	
Acenaphthene-d10	447107	17.58	490646	17.599	
Phenanthrene-d10	532136	20.982	623685	20.992	
Chrysene-d12	336309	25.977	406228	25.996	
Perylene-d12	271970	31.644	285341	31.671	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
8270C

J186C5

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-05	File ID:	C022312.D
Sampled:	02/04/09 11:20	Prepared:	02/17/09 18:19	Analyzed:	02/24/09 00:41
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL

Batch: L902115 Sequence: 9030126 Calibration: 0903032 Instrument: HP5972C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
108-95-2	Phenol	1	330	U
111-44-4	Bis(2-chloroethyl) ether	1	330	U
95-57-8	2-Chlorophenol	1	330	U
541-73-1	1,3-Dichlorobenzene	1	330	U
106-46-7	1,4-Dichlorobenzene	1	330	U
95-50-1	1,2-Dichlorobenzene	1	330	U
95-48-7	2-Methylphenol	1	330	U
108-60-1	Bis(2-chloroisopropyl) ether	1	330	U
106-44-5	4-Methylphenol	1	330	U
621-64-7	N-Nitrosodi-n-propylamine	1	330	U
67-72-1	Hexachloroethane	1	330	U
98-95-3	Nitrobenzene	1	330	U
78-59-1	Isophorone	1	330	U
88-75-5	2-Nitrophenol	1	330	U
105-67-9	2,4-Dimethylphenol	1	330	U
111-91-1	Bis(2-chloroethoxy) methane	1	330	U
120-83-2	2,4-Dichlorophenol	1	330	U
120-82-1	1,2,4-Trichlorobenzene	1	330	U
91-20-3	Naphthalene	1	330	U
106-47-8	4-Chloroaniline	1	330	U
87-68-3	Hexachlorobutadiene	1	330	U
59-50-7	4-Chloro-3-methylphenol	1	330	U
91-57-6	2-Methylnaphthalene	1	330	U
77-47-4	Hexachlorocyclopentadiene	1	330	U
88-06-2	2,4,6-Trichlorophenol	1	330	U
95-95-4	2,4,5-Trichlorophenol	1	330	U
91-58-7	2-Chloronaphthalene	1	330	U
88-74-4	2-Nitroaniline	1	1650	U
131-11-3	Dimethyl Phthalate	1	330	U
606-20-2	2,6-Dinitrotoluene	1	330	U
208-96-8	Acenaphthylene	1	330	U
99-09-2	3-Nitroaniline	1	1650	U
83-32-9	Acenaphthene	1	330	U
51-28-5	2,4-Dinitrophenol	1	1650	U
100-02-7	4-Nitrophenol	1	1650	U
132-64-9	Dibenzofuran	1	330	U
121-14-2	2,4-Dinitrotoluene	1	330	U
84-66-2	Diethyl Phthalate	1	330	U
7005-72-3	4-Chlorophenyl Phenyl Ether	1	330	U
86-73-7	Fluorene	1	330	U

ORGANIC ANALYSIS DATA SHEET
8270C

J186C5

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-05	File ID:	C022312.D
Sampled:	02/04/09 11:20	Prepared:	02/17/09 18:19	Analyzed:	02/24/09 00:41
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Batch:	L902115	Sequence: 9030126	Calibration:	0903032	Instrument: HP5972C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
100-01-6	4-Nitroaniline	1	1650	U
534-52-1	4,6-Dinitro-2-methylphenol	1	330	U
86-30-6	N-Nitrosodiphenylamine	1	330	U
101-55-3	4-Bromophenyl Phenyl Ether	1	330	U
118-74-1	Hexachlorobenzene	1	330	U
87-86-5	Pentachlorophenol	1	1650	U
85-01-8	Phenanthrene	1	330	U
120-12-7	Anthracene	1	330	U
86-74-8	Carbazole	1	330	U
84-74-2	Di-n-butyl Phthalate	1	330	U
206-44-0	Fluoranthene	1	330	U
129-00-0	Pyrene	1	330	U
85-68-7	Butyl Benzyl Phthalate	1	330	U
117-81-7	Bis(2-ethylhexyl) phthalate	1	330	U
91-94-1	3,3'-Dichlorobenzidine	1	660	U
56-55-3	Benz[a]anthracene	1	330	U
218-01-9	Chrysene	1	330	U
117-84-0	Di-n-octyl Phthalate	1	330	U
205-99-2	Benzo[b] fluoranthene	1	330	U
207-08-9	Benzo[k] fluoranthene	1	330	U
50-32-8	Benzo[a] pyrene	1	330	U
193-39-5	Indeno[1,2,3-cd]pyrene	1	330	U
53-70-3	Dibenz[a,h]anthracene	1	330	U
191-24-2	Benzo[g,h,i] perylene	1	330	U

CAS NO.	TENTATIVELY IDENTIFIED COMPOUND	RT	EST. CONC. (ug/kg wet)	Q
NA	TIC: Aldol Condensate 1	3.935	202	J A
NA	TIC: Unknown 1	5.951	189	JB
NA	TIC: Unknown 2	6.829	19300	JB
79-34-5	TIC:1,1,2,2-tetrachloroethane	8.19	215	J N
79-00-5	TIC:1,1,2-trichloroethane	5.511	147	J N

SYSTEM MONITORING COMPOUND	ADDED (ug/kg wet)	CONC (ug/kg wet)	% REC	QC LIMITS	Q
2-Fluorophenol	2500.0	1670	67	25 - 121	
Phenol-d5	2500.0	1690	68	24 - 113	
Nitrobenzene-d5	1666.7	1060	64	23 - 120	
2-Fluorobiphenyl	1666.7	1030	62	30 - 115	
2,4,6-Tribromophenol	2500.0	1770	71	19 - 122	
p-Terphenyl-d14	1666.7	1230	74	18 - 137	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q

00000026

ORGANIC ANALYSIS DATA SHEET
8270C

J186C5

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-05	File ID:	C022312.D
Sampled:	02/04/09 11:20	Prepared:	02/17/09 18:19	Analyzed:	02/24/09 00:41
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Batch:	L902115	Sequence:	9030126	Calibration:	0903032
Instrument:	HP5972C				

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4	313392	10.101	299028	10.124	
Naphthalene-d8	1086446	13.15	1053988	13.173	
Acenaphthene-d10	511850	17.585	490646	17.599	
Phenanthrene-d10	635913	20.978	623685	20.992	
Chrysene-d12	401895	25.981	406228	25.996	
Perylene-d12	316763	31.648	285341	31.671	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
8270C

J186C6

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-06	File ID:	C022313.D
Sampled:	02/04/09 10:55	Prepared:	02/17/09 18:19	Analyzed:	02/24/09 01:32
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Batch:	L902115	Sequence: 9030126	Calibration:	0903032	Instrument: HP5972C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
108-95-2	Phenol	1	330	U
111-44-4	Bis(2-chloroethyl) ether	1	330	U
95-57-8	2-Chlorophenol	1	330	U
541-73-1	1,3-Dichlorobenzene	1	330	U
106-46-7	1,4-Dichlorobenzene	1	330	U
95-50-1	1,2-Dichlorobenzene	1	330	U
95-48-7	2-Methylphenol	1	330	U
108-60-1	Bis(2-chloroisopropyl) ether	1	330	U
106-44-5	4-Methylphenol	1	330	U
621-64-7	N-Nitrosodi-n-propylamine	1	330	U
67-72-1	Hexachloroethane	1	330	U
98-95-3	Nitrobenzene	1	330	U
78-59-1	Isophorone	1	330	U
88-75-5	2-Nitrophenol	1	330	U
105-67-9	2,4-Dimethylphenol	1	330	U
111-91-1	Bis(2-chloroethoxy) methane	1	330	U
120-83-2	2,4-Dichlorophenol	1	330	U
120-82-1	1,2,4-Trichlorobenzene	1	330	U
91-20-3	Naphthalene	1	330	U
106-47-8	4-Chloroaniline	1	330	U
87-68-3	Hexachlorobutadiene	1	330	U
59-50-7	4-Chloro-3-methylphenol	1	330	U
91-57-6	2-Methylnaphthalene	1	330	U
77-47-4	Hexachlorocyclopentadiene	1	330	U
88-06-2	2,4,6-Trichlorophenol	1	330	U
95-95-4	2,4,5-Trichlorophenol	1	330	U
91-58-7	2-Chloronaphthalene	1	330	U
88-74-4	2-Nitroaniline	1	1650	U
131-11-3	Dimethyl Phthalate	1	330	U
606-20-2	2,6-Dinitrotoluene	1	330	U
208-96-8	Acenaphthylene	1	330	U
99-09-2	3-Nitroaniline	1	1650	U
83-32-9	Acenaphthene	1	330	U
51-28-5	2,4-Dinitrophenol	1	1650	U
100-02-7	4-Nitrophenol	1	1650	U
132-64-9	Dibenzofuran	1	330	U
121-14-2	2,4-Dinitrotoluene	1	330	U
84-66-2	Diethyl Phthalate	1	330	U
7005-72-3	4-Chlorophenyl Phenyl Ether	1	330	U
86-73-7	Fluorene	1	330	U

ORGANIC ANALYSIS DATA SHEET
8270C

J186C6

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-06	File ID:	C022313.D
Sampled:	02/04/09 10:55	Prepared:	02/17/09 18:19	Analyzed:	02/24/09 01:32
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL

Batch: L902115 Sequence: 9030126 Calibration: 0903032 Instrument: HP5972C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
100-01-6	4-Nitroaniline	1	1650	U
534-52-1	4,6-Dinitro-2-methylphenol	1	330	U
86-30-6	N-Nitrosodiphenylamine	1	330	U
101-55-3	4-Bromophenyl Phenyl Ether	1	330	U
118-74-1	Hexachlorobenzene	1	330	U
87-86-5	Pentachlorophenol	1	1650	U
85-01-8	Phenanthrene	1	330	U
120-12-7	Anthracene	1	330	U
86-74-8	Carbazole	1	330	U
84-74-2	Di-n-butyl Phthalate	1	330	U
206-44-0	Fluoranthene	1	330	U
129-00-0	Pyrene	1	330	U
85-68-7	Butyl Benzyl Phthalate	1	330	U
117-81-7	Bis(2-ethylhexyl) phthalate	1	330	U
91-94-1	3,3'-Dichlorobenzidine	1	660	U
56-55-3	Benz[a]anthracene	1	330	U
218-01-9	Chrysene	1	330	U
117-84-0	Di-n-octyl Phthalate	1	330	U
205-99-2	Benzo[b] fluoranthene	1	330	U
207-08-9	Benzo[k] fluoranthene	1	330	U
50-32-8	Benzo[a] pyrene	1	330	U
193-39-5	Indeno[1,2,3-cd]pyrene	1	330	U
53-70-3	Dibenz[a,h]anthracene	1	330	U
191-24-2	Benzo[g,h,i] perylene	1	330	U

CAS NO.	TENTATIVELY IDENTIFIED COMPOUND	RT	EST. CONC. (ug/kg wet)	Q
NA	TIC: Aldol Condensate 1	3.936	177	J A
NA	TIC: Unknown 1	5.951	151	JB
NA	TIC: Unknown 2	6.821	16100	JB
79-34-5	TIC:1,1,2,2-tetrachloroethane	8.19	238	J N
79-00-5	TIC:1,1,2-trichloroethane	5.512	175	J N

SYSTEM MONITORING COMPOUND	ADDED (ug/kg wet)	CONC (ug/kg wet)	% REC	QC LIMITS	Q
2-Fluorophenol	2500.0	1510	60	25 - 121	
Phenol-d5	2500.0	1510	60	24 - 113	
Nitrobenzene-d5	1666.7	923	55	23 - 120	
2-Fluorobiphenyl	1666.7	923	55	30 - 115	
2,4,6-Tribromophenol	2500.0	1510	60	19 - 122	
p-Terphenyl-d14	1666.7	1150	69	18 - 137	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q

ORGANIC ANALYSIS DATA SHEET
8270C

J186C6

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-06	File ID:	C022313.D
Sampled:	02/04/09 10:55	Prepared:	02/17/09 18:19	Analyzed:	02/24/09 01:32
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Batch:	L902115	Sequence:	9030126	Calibration:	0903032
Instrument:	HP5972C				

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4	311099	10.102	299028	10.124	
Naphthalene-d8	1096914	13.15	1053988	13.173	
Acenaphthene-d10	522395	17.577	490646	17.599	
Phenanthrene-d10	673296	20.978	623685	20.992	
Chrysene-d12	410065	25.982	406228	25.996	
Perylene-d12	303013	31.649	285341	31.671	

* Values outside of QC limits

000000024

ORGANIC ANALYSIS DATA SHEET
8270C

J186C7

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-07	File ID:	C022314.D
Sampled:	02/04/09 11:45	Prepared:	02/17/09 18:19	Analyzed:	02/24/09 02:22
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Batch:	L902115	Sequence: 9030126	Calibration:	0903032	Instrument: HP5972C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
108-95-2	Phenol	1	330	U
111-44-4	Bis(2-chloroethyl) ether	1	330	U
95-57-8	2-Chlorophenol	1	330	U
541-73-1	1,3-Dichlorobenzene	1	330	U
106-46-7	1,4-Dichlorobenzene	1	330	U
95-50-1	1,2-Dichlorobenzene	1	330	U
95-48-7	2-Methylphenol	1	330	U
108-60-1	Bis(2-chloroisopropyl) ether	1	330	U
106-44-5	4-Methylphenol	1	330	U
621-64-7	N-Nitrosodi-n-propylamine	1	330	U
67-72-1	Hexachloroethane	1	330	U
98-95-3	Nitrobenzene	1	330	U
78-59-1	Isophorone	1	330	U
88-75-5	2-Nitrophenol	1	330	U
105-67-9	2,4-Dimethylphenol	1	330	U
111-91-1	Bis(2-chloroethoxy) methane	1	330	U
120-83-2	2,4-Dichlorophenol	1	330	U
120-82-1	1,2,4-Trichlorobenzene	1	330	U
91-20-3	Naphthalene	1	330	U
106-47-8	4-Chloroaniline	1	330	U
87-68-3	Hexachlorobutadiene	1	330	U
59-50-7	4-Chloro-3-methylphenol	1	330	U
91-57-6	2-Methylnaphthalene	1	330	U
77-47-4	Hexachlorocyclopentadiene	1	330	U
88-06-2	2,4,6-Trichlorophenol	1	330	U
95-95-4	2,4,5-Trichlorophenol	1	330	U
91-58-7	2-Chloronaphthalene	1	330	U
88-74-4	2-Nitroaniline	1	1650	U
131-11-3	Dimethyl Phthalate	1	330	U
606-20-2	2,6-Dinitrotoluene	1	330	U
208-96-8	Acenaphthylene	1	330	U
99-09-2	3-Nitroaniline	1	1650	U
83-32-9	Acenaphthene	1	330	U
51-28-5	2,4-Dinitrophenol	1	1650	U
100-02-7	4-Nitrophenol	1	1650	U
132-64-9	Dibenzofuran	1	330	U
121-14-2	2,4-Dinitrotoluene	1	330	U
84-66-2	Diethyl Phthalate	1	330	U
7005-72-3	4-Chlorophenyl Phenyl Ether	1	330	U
86-73-7	Fluorene	1	330	U

ORGANIC ANALYSIS DATA SHEET
8270C

J186C7

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-07	File ID:	C022314.D
Sampled:	02/04/09 11:45	Prepared:	02/17/09 18:19	Analyzed:	02/24/09 02:22
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Batch:	L902115	Sequence: 9030126	Calibration:	0903032	Instrument: HP5972C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
100-01-6	4-Nitroaniline	1	1650	U
534-52-1	4,6-Dinitro-2-methylphenol	1	330	U
86-30-6	N-Nitrosodiphenylamine	1	330	U
101-55-3	4-Bromophenyl Phenyl Ether	1	330	U
118-74-1	Hexachlorobenzene	1	330	U
87-86-5	Pentachlorophenol	1	1650	U
85-01-8	Phenanthrene	1	330	U
120-12-7	Anthracene	1	330	U
86-74-8	Carbazole	1	330	U
84-74-2	Di-n-butyl Phthalate	1	52.0	J
206-44-0	Fluoranthene	1	330	U
129-00-0	Pyrene	1	330	U
85-68-7	Butyl Benzyl Phthalate	1	330	U
117-81-7	Bis(2-ethylhexyl) phthalate	1	330	U
91-94-1	3,3'-Dichlorobenzidine	1	660	U
56-55-3	Benz[a]anthracene	1	330	U
218-01-9	Chrysene	1	330	U
117-84-0	Di-n-octyl Phthalate	1	330	U
205-99-2	Benzo[b] fluoranthene	1	330	U
207-08-9	Benzo[k] fluoranthene	1	330	U
50-32-8	Benzo[a] pyrene	1	330	U
193-39-5	Indeno[1,2,3-cd]pyrene	1	330	U
53-70-3	Dibenz[a,h]anthracene	1	330	U
191-24-2	Benzo[g,h,i] perylene	1	330	U

CAS NO.	TENTATIVELY IDENTIFIED COMPOUND	RT	EST. CONC. (ug/kg wet)	Q
NA	TIC: Aldol Condensate 1	3.95	240	J A
NA	TIC: Unknown 1	5.597	250	JB
NA	TIC: Unknown 2	6.844	24100	JB
79-34-5	TIC:1,1,2,2-tetrachloroethane	8.187	292	J N
79-00-5	TIC:1,1,2-trichloroethane	5.518	206	J N

SYSTEM MONITORING COMPOUND	ADDED (ug/kg wet)	CONC (ug/kg wet)	% REC	QC LIMITS	Q
2-Fluorophenol	2500.0	1700	68	25 - 121	
Phenol-d5	2500.0	1700	68	24 - 113	
Nitrobenzene-d5	1666.7	1160	70	23 - 120	
2-Fluorobiphenyl	1666.7	1120	67	30 - 115	
2,4,6-Tribromophenol	2500.0	1990	80	19 - 122	
p-Terphenyl-d14	1666.7	1340	80	18 - 137	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q

000000026

ORGANIC ANALYSIS DATA SHEET
8270C

J186C7

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-07	File ID:	C022314.D
Sampled:	02/04/09 11:45	Prepared:	02/17/09 18:19	Analyzed:	02/24/09 02:22
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Batch:	L902115	Sequence:	9030126	Calibration:	0903032
Instrument:	HP5972C				

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4	324092	10.099	299028	10.124	
Naphthalene-d8	1077061	13.147	1053988	13.173	
Acenaphthene-d10	518631	17.582	490646	17.599	
Phenanthrene-d10	650444	20.975	623685	20.992	
Chrysene-d12	386515	25.979	406228	25.996	
Perylene-d12	299836	31.646	285341	31.671	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
8270C

J186C8

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-08	File ID:	C022315.D
Sampled:	02/04/09 12:00	Prepared:	02/17/09 18:19	Analyzed:	02/24/09 03:12
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Batch:	L902115	Sequence: 9030126	Calibration:	0903032	Instrument: HP5972C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
108-95-2	Phenol	1	330	U
111-44-4	Bis(2-chloroethyl) ether	1	330	U
95-57-8	2-Chlorophenol	1	330	U
541-73-1	1,3-Dichlorobenzene	1	330	U
106-46-7	1,4-Dichlorobenzene	1	330	U
95-50-1	1,2-Dichlorobenzene	1	330	U
95-48-7	2-Methylphenol	1	330	U
108-60-1	Bis(2-chloroisopropyl) ether	1	330	U
106-44-5	4-Methylphenol	1	330	U
621-64-7	N-Nitrosodi-n-propylamine	1	330	U
67-72-1	Hexachloroethane	1	330	U
98-95-3	Nitrobenzene	1	330	U
78-59-1	Isophorone	1	330	U
88-75-5	2-Nitrophenol	1	330	U
105-67-9	2,4-Dimethylphenol	1	330	U
111-91-1	Bis(2-chloroethoxy) methane	1	330	U
120-83-2	2,4-Dichlorophenol	1	330	U
120-82-1	1,2,4-Trichlorobenzene	1	330	U
91-20-3	Naphthalene	1	330	U
106-47-8	4-Chloroaniline	1	330	U
87-68-3	Hexachlorobutadiene	1	330	U
59-50-7	4-Chloro-3-methylphenol	1	330	U
91-57-6	2-Methylnaphthalene	1	330	U
77-47-4	Hexachlorocyclopentadiene	1	330	U
88-06-2	2,4,6-Trichlorophenol	1	330	U
95-95-4	2,4,5-Trichlorophenol	1	330	U
91-58-7	2-Chloronaphthalene	1	330	U
88-74-4	2-Nitroaniline	1	1650	U
131-11-3	Dimethyl Phthalate	1	330	U
606-20-2	2,6-Dinitrotoluene	1	330	U
208-96-8	Acenaphthylene	1	330	U
99-09-2	3-Nitroaniline	1	1650	U
83-32-9	Acenaphthene	1	330	U
51-28-5	2,4-Dinitrophenol	1	1650	U
100-02-7	4-Nitrophenol	1	1650	U
132-64-9	Dibenzofuran	1	330	U
121-14-2	2,4-Dinitrotoluene	1	330	U
84-66-2	Diethyl Phthalate	1	330	U
7005-72-3	4-Chlorophenyl Phenyl Ether	1	330	U
86-73-7	Fluorene	1	330	U

ORGANIC ANALYSIS DATA SHEET
8270C

J186C8

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-08	File ID:	C022315.D
Sampled:	02/04/09 12:00	Prepared:	02/17/09 18:19	Analyzed:	02/24/09 03:12
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL

Batch: L902115 Sequence: 9030126 Calibration: 0903032 Instrument: HP5972C

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
100-01-6	4-Nitroaniline	1	1650	U
534-52-1	4,6-Dinitro-2-methylphenol	1	330	U
86-30-6	N-Nitrosodiphenylamine	1	330	U
101-55-3	4-Bromophenyl Phenyl Ether	1	330	U
118-74-1	Hexachlorobenzene	1	330	U
87-86-5	Pentachlorophenol	1	1650	U
85-01-8	Phenanthrene	1	330	U
120-12-7	Anthracene	1	330	U
86-74-8	Carbazole	1	330	U
84-74-2	Di-n-butyl Phthalate	1	330	U
206-44-0	Fluoranthene	1	330	U
129-00-0	Pyrene	1	330	U
85-68-7	Butyl Benzyl Phthalate	1	330	U
117-81-7	Bis(2-ethylhexyl) phthalate	1	330	U
91-94-1	3,3'-Dichlorobenzidine	1	660	U
56-55-3	Benz[a]anthracene	1	330	U
218-01-9	Chrysene	1	330	U
117-84-0	Di-n-octyl Phthalate	1	330	U
205-99-2	Benzo[b] fluoranthene	1	330	U
207-08-9	Benzo[k] fluoranthene	1	330	U
50-32-8	Benzo[a] pyrene	1	330	U
193-39-5	Indeno[1,2,3-cd]pyrene	1	330	U
53-70-3	Dibenz[a,h]anthracene	1	330	U
191-24-2	Benzo[g,h,i] perylene	1	330	U

CAS NO.	TENTATIVELY IDENTIFIED COMPOUND	RT	EST. CONC. (ug/kg wet)	Q
NA	TIC: Aldol Condensate 1	3.938	235	J A
NA	TIC: Unknown 1	5.953	235	JB
NA	TIC: Unknown 2	6.84	21800	JB
79-34-5	TIC:1,1,2,2-tetrachloroethane	8.192	411	J N
79-00-5	TIC:1,1,2-trichloroethane	5.513	273	J N

SYSTEM MONITORING COMPOUND	ADDED (ug/kg wet)	CONC (ug/kg wet)	% REC	QC LIMITS	Q
2-Fluorophenol	2500.0	1410	56	25 - 121	
Phenol-d5	2500.0	1450	58	24 - 113	
Nitrobenzene-d5	1666.7	939	56	23 - 120	
2-Fluorobiphenyl	1666.7	960	58	30 - 115	
2,4,6-Tribromophenol	2500.0	1380	55	19 - 122	
p-Terphenyl-d14	1666.7	1110	67	18 - 137	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q

ORGANIC ANALYSIS DATA SHEET
8270C

J186C8

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	0902020-08	File ID:	C022315.D
Sampled:	02/04/09 12:00	Prepared:	02/17/09 18:19	Analyzed:	02/24/09 03:12
Solids:		Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Batch:	L902115	Sequence:	9030126	Calibration:	0903032
Instrument:	HP5972C				

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4	314571	10.103	299028	10.124	
Naphthalene-d8	1047698	13.152	1053988	13.173	
Acenaphthene-d10	479688	17.578	490646	17.599	
Phenanthrene-d10	589151	20.98	623685	20.992	
Chrysene-d12	369135	25.975	406228	25.996	
Perylene-d12	293046	31.65	285341	31.671	

* Values outside of QC limits

METHOD BLANK DATA SHEET
8270C

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	L902115-BLK1	File ID:	C022114.D
Prepared:	02/17/09 18:19	Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Analyzed:	02/22/09 02:44	Instrument:	HP5972C		
Batch:	L902115	Sequence:	9030125	Calibration:	0903033

CAS NO.	COMPOUND	CONC. (ug/kg wet)	Q
108-95-2	Phenol	330	U
111-44-4	Bis(2-chloroethyl) ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	Bis(2-chloroisopropyl) ether	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitrosodi-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	Bis(2-chloroethoxy) methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	330	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	1650	U
131-11-3	Dimethyl Phthalate	330	U
606-20-2	2,6-Dinitrotoluene	330	U

METHOD BLANK DATA SHEET
8270C

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	L902115-BLK1	File ID:	C022114.D
Prepared:	02/17/09 18:19	Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Analyzed:	02/22/09 02:44	Instrument:	HP5972C		
Batch:	L902115	Sequence:	9030125	Calibration:	0903033

CAS NO.	COMPOUND	CONC. (ug/kg wet)	Q
208-96-8	Acenaphthylene	330	U
99-09-2	3-Nitroaniline	1650	U
83-32-9	Acenaphthene	330	U
51-28-5	2,4-Dinitrophenol	1650	U
100-02-7	4-Nitrophenol	1650	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethyl Phthalate	330	U
7005-72-3	4-Chlorophenyl Phenyl Ether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	1650	U
534-52-1	4,6-Dinitro-2-methylphenol	330	U
86-30-6	N-Nitrosodiphenylamine	330	U
101-55-3	4-Bromophenyl Phenyl Ether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	1650	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-n-butyl Phthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butyl Benzyl Phthalate	330	U
117-81-7	Bis(2-ethylhexyl) phthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	660	U
56-55-3	Benz[a]anthracene	330	U
218-01-9	Chrysene	330	U
117-84-0	Di-n-octyl Phthalate	330	U
205-99-2	Benzo[b] fluoranthene	330	U
207-08-9	Benzo[k] fluoranthene	330	U

000000032

METHOD BLANK DATA SHEET
8270C

Laboratory:	Lionville Laboratory		SDG:		
Client:	WC-Hanford, Inc.		Project:	RC-116	
Matrix:	Solid	Laboratory ID:	L902115-BLK1	File ID:	C022114.D
Prepared:	02/17/09 18:19	Preparation:	SW 3550B	Initial/Final:	30 g / 1 mL
Analyzed:	02/22/09 02:44	Instrument:	HP5972C		
Batch:	L902115	Sequence:	9030125	Calibration:	0903033

CAS NO.	COMPOUND	CONC. (ug/kg wet)	Q
50-32-8	Benzo[a] pyrene	330	U
193-39-5	Indeno[1,2,3-cd]pyrene	330	U
53-70-3	Dibenz[a,h]anthracene	330	U
191-24-2	Benzo[g,h,i] perylene	330	U

CAS NO.	TENTATIVELY IDENTIFIED COMPOUND	RT	EST. CONC. (ug/kg wet)	Q
NA	TIC: Aldol Condensate 1	6.418	136	J A
NA	TIC:Alkane 1	5.695	139	J
NA	TIC:Unknown 1	6.031	354	J
NA	TIC:Unknown 2	6.926	23200	J

SYSTEM MONITORING COMPOUND	ADDED (ug/kg wet)	CONC (ug/kg wet)	% REC	QC LIMITS	Q
2-Fluorophenol	2500.0	1550	62	25 - 121	
Phenol-d5	2500.0	1500	60	24 - 113	
Nitrobenzene-d5	1666.7	1010	61	23 - 120	
2-Fluorobiphenyl	1666.7	1090	65	30 - 115	
2,4,6-Tribromophenol	2500.0	1440	58	19 - 122	
p-Terphenyl-d14	1666.7	1190	71	18 - 137	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4	375304	10.198	312653	10.199	
Naphthalene-d8	1234530	13.247	1100800	13.256	
Acenaphthene-d10	568437	17.691	506709	17.692	
Phenanthrene-d10	704887	21.066	610766	21.067	
Chrysene-d12	507072	26.113	378062	26.123	
Perylene-d12	386455	31.926	281454	31.918	

LCS / LCS DUPLICATE RECOVERY
8270C

Laboratory: Lionville Laboratory
SDG:
Client: WC-Hanford, Inc.
Project: RC-116
Matrix: Solid
Batch: L902115
Laboratory ID: L902115-BS1
Preparation: SW 3550B
Initial/Final: 30 g / 1 mL

COMPOUND	SPIKE ADDED (ug/mL)	LCS CONCENTRATION (ug/mL)	LCS % REC. #	QC LIMITS REC.
Phenol	2000.0	1720	86	50 - 130
Bis(2-chloroethyl) ether	2000.0	1750	88	50 - 130
2-Chlorophenol	2000.0	1630	82	50 - 130
1,3-Dichlorobenzene	2000.0	1570	79	50 - 110
1,4-Dichlorobenzene	2000.0	1580	79	50 - 120
1,2-Dichlorobenzene	2000.0	1610	81	50 - 110
2-Methylphenol	2000.0	1670	84	60 - 120
Bis(2-chloroisopropyl) ether	2000.0	1780	89	50 - 120
4-Methylphenol	2000.0	1780	89	60 - 130
N-Nitrosodi-n-propylamine	2000.0	1810	90	50 - 130
Hexachloroethane	2000.0	1590	79	50 - 110
Nitrobenzene	2000.0	1260	63	50 - 110
Isophorone	2000.0	1200	60	60 - 120
2-Nitrophenol	2000.0	1280	64	50 - 130
2,4-Dimethylphenol	2000.0	1380	69	50 - 120
Bis(2-chloroethoxy) methane	2000.0	1480	74	40 - 140
2,4-Dichlorophenol	2000.0	1360	68	45 - 110
1,2,4-Trichlorobenzene	2000.0	1270	64	60 - 120
Naphthalene	2000.0	1330	67	40 - 130
4-Chloroaniline	2000.0	952	48	20 - 120
Hexachlorobutadiene	2000.0	1360	68	40 - 130
4-Chloro-3-methylphenol	2000.0	1450	72	60 - 130
2-Methylnaphthalene	2000.0	1330	66	60 - 100
Hexachlorocyclopentadiene	2000.0	2100	105 *	20 - 100
2,4,6-Trichlorophenol	2000.0	1710	85	50 - 110
2,4,5-Trichlorophenol	2000.0	1770	89	50 - 110
2-Chloronaphthalene	2000.0	1630	82	50 - 130
2-Nitroaniline	2000.0	1720	86	60 - 130
1,2-Dinitrobenzene NT	2000.0	1790	89	0 - 200
1,2-Diphenylhydrazine NT	2000.0	1590	80	0 - 200

LCS / LCS DUPLICATE RECOVERY
8270C

Laboratory: Lionville Laboratory
SDG:
Client: WC-Hanford, Inc.
Project: RC-116
Matrix: Solid
Batch: L902115
Laboratory ID: L902115-BS1
Preparation: SW 3550B
Initial/Final: 30 g / 1 mL

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	LCS % REC. #	QC LIMITS REC.
Dimethyl Phthalate	2000.0	1910	95	50 - 140
1,3-Dinitrobenzene NT	2000.0	1790	89	0 - 200
2,6-Dinitrotoluene	2000.0	1760	88	50 - 140
Acenaphthylene	2000.0	1670	84	60 - 110
1,4-Dinitrobenzene NT	2000.0	1860	93	0 - 200
3-Nitroaniline	2000.0	1690	85	40 - 130
Acenaphthene	2000.0	1610	80	60 - 130
1-Methylnaphthalene NT	2000.0	1290	65	0 - 200
2,4-Dinitrophenol	2000.0	1970	98	20 - 120
4-Nitrophenol	2000.0	1990	99	40 - 140
Dibenzofuran	2000.0	1710	85	60 - 130
2,3,5,6-Tetrachlorophenol NT	2000.0	1810	91	50 - 110
2,4-Dinitrotoluene	2000.0	1800	90	60 - 130
2,3,4,6-Tetrachlorophenol NT	2000.0	1680	84	50 - 110
Diethyl Phthalate	2000.0	1930	96	50 - 130
4-Chlorophenyl Phenyl Ether	2000.0	1880	94	50 - 120
Fluorene	2000.0	1740	87	60 - 130
4-Nitroaniline	2000.0	1630	82	50 - 120
4,6-Dinitro-2-methylphenol	2000.0	1990	99	40 - 140
N-Nitrosodiphenylamine	2000.0	1550	78	50 - 130
Acetophenone NT	2000.0	1470	74	0 - 200
Aniline NT	2000.0	924	46	0 - 200
4-Bromophenyl Phenyl Ether	2000.0	1680	84	50 - 120
Benzidine NT	2000.0	ND		0 - 200
Hexachlorobenzene	2000.0	1690	85	60 - 130
Benzoic Acid NT	2000.0	1220	61	0 - 200
Pentachlorophenol	2000.0	2140	107	30 - 130
Benzyl alcohol NT	2000.0	1980	99	0 - 200
Bis(2-ethylhexyl) adipate NT	2000.0	1590	79	40 - 140
Phenanthrene	2000.0	1710	86	60 - 130

LCS / LCS DUPLICATE RECOVERY
8270C

Laboratory: Lionville Laboratory
SDG:
Client: WC-Hanford, Inc.
Project: RC-116
Matrix: Solid
Batch: L902115
Laboratory ID: L902115-BS1
Preparation: SW 3550B
Initial/Final: 30 g / 1 mL

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	LCS % REC. #	QC LIMITS REC.
Anthracene	2000.0	1660	83	60 - 130
Carbazole	2000.0	1690	85	60 - 120
Di-n-butyl Phthalate	2000.0	1870	93	40 - 150
Fluoranthene	2000.0	1810	91	50 - 130
Pyrene	2000.0	1510	75	50 - 140
Butyl Benzyl Phthalate	2000.0	1880	94	50 - 150
Bis(2-ethylhexyl) phthalate	2000.0	1960	98	50 - 150
N-Nitrosodimethylamine NT	2000.0	1750	88	0 - 200
3,3'-Dichlorobenzidine	2000.0	1180	59	20 - 140
Benz[a]anthracene	2000.0	1730	87	50 - 130
Chrysene	2000.0	1750	87	50 - 130
Di-n-octyl Phthalate	2000.0	1730	87	50 - 150
Benzo[b] fluoranthene	2000.0	1600	80	60 - 130
Benzo[k] fluoranthene	2000.0	1670	83	50 - 130
Benzo[a] pyrene	2000.0	1640	82	50 - 130
Indeno[1,2,3-cd]pyrene	2000.0	1730	87	60 - 140
Dibenz[a,h]anthracene	2000.0	1790	90	50 - 140
Benzo[g,h,i] perylene	2000.0	1740	87	60 - 140
Pyridine NT	2000.0	1190	59	0 - 200

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY
8270C

J186C0

Laboratory: Lionville Laboratory
SDG:
Client: WC-Hanford, Inc.
Project: RC-116
Matrix: Solid
Batch: L902115
Laboratory ID: L902115-MS1
Preparation: SW 3550B
Initial/Final: 30 g / 1 mL
Source Sample Name: J186C0

COMPOUND	SPIKE ADDED (ug/kg wet)	SAMPLE CONCENTRATION (ug/kg wet)	MS CONCENTRATION (ug/kg wet)	MS % REC. #	QC LIMITS REC.
Phenol	2000.0	ND	1040	52	50 - 130
Bis(2-chloroethyl) ether	2000.0	ND	1040	52	50 - 130
2-Chlorophenol	2000.0	ND	1000	50	50 - 130
1,3-Dichlorobenzene	2000.0	ND	925	46 *	50 - 110
1,4-Dichlorobenzene	2000.0	ND	939	47 *	50 - 120
1,2-Dichlorobenzene	2000.0	ND	965	48 *	50 - 110
2-Methylphenol	2000.0	ND	948	47 *	60 - 120
Bis(2-chloroisopropyl) ether	2000.0	ND	1060	53	50 - 120
4-Methylphenol	2000.0	ND	1010	50 *	60 - 130
N-Nitrosodi-n-propylamine	2000.0	ND	1030	51	50 - 130
Hexachloroethane	2000.0	ND	905	45 *	50 - 110
Nitrobenzene	2000.0	ND	850	42 *	50 - 110
Isophorone	2000.0	ND	796	40 *	60 - 120
2-Nitrophenol	2000.0	ND	861	43 *	50 - 130
2,4-Dimethylphenol	2000.0	ND	865	43 *	50 - 120
Bis(2-chloroethoxy) methane	2000.0	ND	1010	51	40 - 140
2,4-Dichlorophenol	2000.0	ND	939	47	45 - 110
1,2,4-Trichlorobenzene	2000.0	ND	871	44 *	60 - 120
Naphthalene	2000.0	ND	908	45	40 - 130
4-Chloroaniline	2000.0	ND	610	30	20 - 120
Hexachlorobutadiene	2000.0	ND	965	48	40 - 130
4-Chloro-3-methylphenol	2000.0	ND	970	48 *	60 - 130
2-Methylnaphthalene	2000.0	ND	946	47 *	60 - 100
Hexachlorocyclopentadiene	2000.0	ND	1080	54	20 - 100
2,4,6-Trichlorophenol	2000.0	ND	1120	56	50 - 110
2,4,5-Trichlorophenol	2000.0	ND	1140	57	50 - 110
2-Chloronaphthalene	2000.0	ND	1070	53	50 - 130
2-Nitroaniline	2000.0	ND	1110	55 *	60 - 130
Dimethyl Phthalate	2000.0	ND	1220	61	50 - 140
2,6-Dinitrotoluene	2000.0	ND	1110	55	50 - 140
Acenaphthylene	2000.0	ND	1090	55 *	60 - 110
3-Nitroaniline	2000.0	ND	1100	55	40 - 130

00000837

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY
8270C

J186C0

Laboratory: Lionville Laboratory
SDG:
Client: WC-Hanford, Inc.
Project: RC-116
Matrix: Solid
Batch: L902115
Laboratory ID: L902115-MS1
Preparation: SW 3550B
Initial/Final: 30 g / 1 mL
Source Sample Name: J186C0

COMPOUND	SPIKE ADDED (ug/kg wet)	SAMPLE CONCENTRATION (ug/kg wet)	MS CONCENTRATION (ug/kg wet)	MS % REC. #	QC LIMITS REC.
Acenaphthene	2000.0	ND	1070	53 *	60 - 130
2,4-Dinitrophenol	2000.0	ND	977	49	20 - 120
4-Nitrophenol	2000.0	ND	1510	75	40 - 140
Dibenzofuran	2000.0	ND	1090	54 *	60 - 130
2,4-Dinitrotoluene	2000.0	ND	1190	59 *	60 - 130
Diethyl Phthalate	2000.0	ND	1250	62	50 - 130
4-Chlorophenyl Phenyl Ether	2000.0	ND	1240	62	50 - 120
Fluorene	2000.0	ND	1110	55 *	60 - 130
4-Nitroaniline	2000.0	ND	1040	52	50 - 120
4,6-Dinitro-2-methylphenol	2000.0	ND	1200	60	40 - 140
N-Nitrosodiphenylamine	2000.0	ND	983	49 *	50 - 130
4-Bromophenyl Phenyl Ether	2000.0	ND	1070	53	50 - 120
Hexachlorobenzene	2000.0	ND	1100	55 *	60 - 130
Pentachlorophenol	2000.0	ND	1380	69	30 - 130
Phenanthrene	2000.0	ND	1100	55 *	60 - 130
Anthracene	2000.0	ND	1110	56 *	60 - 130
Carbazole	2000.0	ND	1060	53 *	60 - 120
Di-n-butyl Phthalate	2000.0	ND	1220	61	40 - 150
Fluoranthene	2000.0	ND	1200	60	50 - 130
Pyrene	2000.0	ND	865	43 *	50 - 140
Butyl Benzyl Phthalate	2000.0	ND	1070	53	50 - 150
Bis(2-ethylhexyl) phthalate	2000.0	ND	1150	57	50 - 150
3,3'-Dichlorobenzidine	2000.0	ND	821	41	20 - 140
Benz[a]anthracene	2000.0	ND	1070	53	50 - 130
Chrysene	2000.0	ND	1090	54	50 - 130
Di-n-octyl Phthalate	2000.0	ND	1030	51	50 - 150
Benzo[b] fluoranthene	2000.0	ND	1020	51 *	60 - 130
Benzo[k] fluoranthene	2000.0	ND	1040	52	50 - 130
Benzo[a] pyrene	2000.0	ND	1050	52	50 - 130
Indeno[1,2,3-cd]pyrene	2000.0	ND	1160	58 *	60 - 140
Dibenz[a,h]anthracene	2000.0	ND	1230	61	50 - 140
Benzo[g,h,i] perylene	2000.0	ND	1170	58 *	60 - 140

00000038

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY
8270C

J186C0

Laboratory: Lionville Laboratory
SDG:
Client: WC-Hanford, Inc.
Project: RC-116
Matrix: Solid
Batch: L902115
Laboratory ID: L902115-MS1
Preparation: SW 3550B
Initial/Final: 30 g / 1 mL
Source Sample Name: J186C0

COMPOUND	SPIKE ADDED (ug/kg wet)	MSD CONCENTRATION (ug/kg wet)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	2000.0	1440	72	32	40	50 - 130
Bis(2-chloroethyl) ether	2000.0	1460	73	34	40	50 - 130
2-Chlorophenol	2000.0	1330	67	28	40	50 - 130
1,3-Dichlorobenzene	2000.0	1270	63	31	40	50 - 110
1,4-Dichlorobenzene	2000.0	1300	65	32	40	50 - 120
1,2-Dichlorobenzene	2000.0	1350	68	34	40	50 - 110
2-Methylphenol	2000.0	1370	68	36	40	60 - 120
Bis(2-chloroisopropyl) ether	2000.0	1450	73	32	40	50 - 120
4-Methylphenol	2000.0	1440	72	35	40	60 - 130
N-Nitrosodi-n-propylamine	2000.0	1450	73	34	40	50 - 130
Hexachloroethane	2000.0	1320	66	37	40	50 - 110
Nitrobenzene	2000.0	1110	56	27	40	50 - 110
Isophorone	2000.0	1050	53 *	28	40	60 - 120
2-Nitrophenol	2000.0	1120	56	26	40	50 - 130
2,4-Dimethylphenol	2000.0	1180	59	31	40	50 - 120
Bis(2-chloroethoxy) methane	2000.0	1310	65	26	40	40 - 140
2,4-Dichlorophenol	2000.0	1230	61	27	40	45 - 110
1,2,4-Trichlorobenzene	2000.0	1160	58 *	29	40	60 - 120
Naphthalene	2000.0	1160	58	24	40	40 - 130
4-Chloroaniline	2000.0	908	45	39	40	20 - 120
Hexachlorobutadiene	2000.0	1260	63	26	40	40 - 130
4-Chloro-3-methylphenol	2000.0	1340	67	32	40	60 - 130
2-Methylnaphthalene	2000.0	1180	59 *	22	40	60 - 100
Hexachlorocyclopentadiene	2000.0	1890	95	55 *	40	20 - 100
2,4,6-Trichlorophenol	2000.0	1560	78	32	40	50 - 110
2,4,5-Trichlorophenol	2000.0	1590	80	33	40	50 - 110
2-Chloronaphthalene	2000.0	1430	71	29	40	50 - 130
2-Nitroaniline	2000.0	1590	80	36	40	60 - 130
Dimethyl Phthalate	2000.0	1670	84	32	40	50 - 140
2,6-Dinitrotoluene	2000.0	1560	78	34	40	50 - 140
Acenaphthylene	2000.0	1440	72	28	40	60 - 110
3-Nitroaniline	2000.0	1640	82	40	40	40 - 130

000000039

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY
8270C

J186C0

Laboratory: Lionville Laboratory
SDG:
Client: WC-Hanford, Inc.
Project: RC-116
Matrix: Solid
Batch: L902115
Laboratory ID: L902115-MSD1
Preparation: SW 3550B
Initial/Final: 30 g / 1 mL
Source Sample Name: J186C0

COMPOUND	SPIKE ADDED (ug/kg wet)	MSD CONCENTRATION (ug/kg wet)	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Acenaphthene	2000.0	1440	72	30	40	60 - 130
2,4-Dinitrophenol	2000.0	1730	86	56 *	40	20 - 120
4-Nitrophenol	2000.0	2220	111	39	40	40 - 140
Dibenzofuran	2000.0	1450	73	29	40	60 - 130
2,4-Dinitrotoluene	2000.0	1700	85	36	40	60 - 130
Diethyl Phthalate	2000.0	1730	86	32	40	50 - 130
4-Chlorophenyl Phenyl Ether	2000.0	1710	85	32	40	50 - 120
Fluorene	2000.0	1520	76	31	40	60 - 130
4-Nitroaniline	2000.0	1590	79	42 *	40	50 - 120
4,6-Dinitro-2-methylphenol	2000.0	1780	89	39	40	40 - 140
N-Nitrosodiphenylamine	2000.0	1320	66	29	40	50 - 130
4-Bromophenyl Phenyl Ether	2000.0	1490	75	33	40	50 - 120
Hexachlorobenzene	2000.0	1480	74	29	40	60 - 130
Pentachlorophenol	2000.0	2030	102	39	40	30 - 130
Phenanthrene	2000.0	1480	74	30	40	60 - 130
Anthracene	2000.0	1500	75	29	40	60 - 130
Carbazole	2000.0	1450	72	31	40	60 - 120
Di-n-butyl Phthalate	2000.0	1630	82	29	40	40 - 150
Fluoranthene	2000.0	1620	81	30	40	50 - 130
Pyrene	2000.0	1130	57	27	40	50 - 140
Butyl Benzyl Phthalate	2000.0	1390	70	27	40	50 - 150
Bis(2-ethylhexyl) phthalate	2000.0	1550	78	30	40	50 - 150
3,3'-Dichlorobenzidine	2000.0	1270	63	43 *	40	20 - 140
Benz[a]anthracene	2000.0	1450	72	30	40	50 - 130
Chrysene	2000.0	1470	73	30	40	50 - 130
Di-n-octyl Phthalate	2000.0	1390	70	30	40	50 - 150
Benzo[b] fluoranthene	2000.0	1410	71	33 *	20	60 - 130
Benzo[k] fluoranthene	2000.0	1420	71	31 *	20	50 - 130
Benzo[a] pyrene	2000.0	1480	74	34 *	20	50 - 130
Indeno[1,2,3-cd]pyrene	2000.0	1610	81	33	40	60 - 140
Dibenz[a,h]anthracene	2000.0	1740	87	34	40	50 - 140
Benzo[g,h,i] perylene	2000.0	1610	80	32 *	20	60 - 140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

000000641

Lionville Laboratory Use Only

0902020

Custody Transfer Record/Lab Work Request

Page 1 of 1

See SRC

LVLI

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client WC Hanford SAF# RC-116

Est. Final Proj. Sampling Date

Project# 60049-001-001-0001-00

Project Contact/Phone#

Lionville Laboratory Project Manager Arlette Johnson

QC SW846 Del STO TAT 30 days

Date Rec'd 2.6.09 Date Due 3-8-09

		A	B	C		D			E		F		G			
Refrigerator #		Van	2	2		2			2		2					
#/Type Container	Liquid	~~1aal~~														
	Solid	1aal	1aal	1aal		1aal			1pl		1aal		1pl			
Volume		25														
	Solid	250	250	125		250			250		125		1L			
Preservatives		–	–	–		–			–		–		–			
ANALYSES REQUESTED		ORGANIC							INORG							
		VOA	BNA	Pest/PCB	Herb	PCBs			37 Metal	CN	TOC		Particle Size			
		Lionville Laboratory Use Only														
		0624H	0625H	0608H		OPCB			Met(1)		TOCT		TSUB			

MATRIX CODES:
S- Soil
SE- Sediment
SO- Solid
SL- Sludge
W- Water
O- Oil
A- Air
DS- Drum Solids
DL- Drum Liquids
L- EP/TCLP Leachate
WI- Wipe
X- Other
F- Fish

omit lead zero 4/7/09

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	0624H	0625H	0608H		OPCB			Met(1)		TOCT		TSUB			
001	J186C0			SO	2.4.09	1200	X	X	X		X			X		X		X			
002	J186C1					1135	X	X	X		X			X		X		X			
003	J186C2					1315	X	X	X		X			X		X		X			
004	J186C3					1100	X	X	X		X			X		X		X			
005	J186C5					1120	X	X	X		X			X		X		X			
006	J186C6					1055	X	X	X		X			X		X		X			
007	J186C7					1145	X	X	X		X			X		X		X			
008	J186C8					1200	X	X	X		X			X		X		X			
009	J17W09					0730	X														
010	J17W11					0730	X														

Special Instructions:

Met(1) = HSL + B, Bi, Li, Mo, Sr, Si, Sn, U, P

Special Instructions:

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

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	2.6.09	0930

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
ORIGINAL REWRITTEN		"COMPOSITE WASTE"	

9999999942

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-846	Page 1 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 8 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C0	OTHER SOLID	2/4/09	1200					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: B Meyer BSFM	2/4/09 1500	Fed A	2/4/09 1500
Relinquished By/Removed From: Ref A	2/5/09 0830	B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2-6-09 0930	[illegible]	2-6-09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-846	Page 2 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 8 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										
Sample No.	Matrix *	Sample Date	Sample Time								
J186C0	OTHER SOLID	2/4/09	1200	X							

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: B Mayer BMayer	Date/Time: 2/4/09 1500	Received By/Stored In: Fed A	Date/Time: 2/4/09 1500
Relinquished By/Removed From: Ref A 2/5/09	Date/Time: 0830	Received By/Stored In: B Woodward 2/5/09	Date/Time: 0830
Relinquished By/Removed From: B Woodward 2/5/09	Date/Time: 1000	Received By/Stored In: Fed Ex 2/5/09	Date/Time: 1000
Relinquished By/Removed From: Fed Ex 2.6.09	Date/Time: 0930	Received By/Stored In: [illegible]	Date/Time: 2.6.09/0930
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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-847	Page 1 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 7 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C1	OTHER SOLID	2/4/09	1135					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Maylan BMaylan	2/4/09 1500	Ref A	2/4/09 1500
Ref A	2/5/09 0830	B Woodward	2/5/09 0830
B Woodward	2/5/09 1000	Fed Ex	2/5/09 1000
Fed Ex	2-6-09 0930	D. Johnson	2-6-09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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-116-847	Page 2 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 7 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 7963167797 60

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None
Type of Container	G/P
No. of Container(s)	1
Volume	1000g

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Particle Size (Dry Sieve) - D422
J186C1	OTHER SOLID	2/4/09	1125	X

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
BM [illegible] BM [illegible]	2/4/09 1700	Fritz A	2/4/09 1700
Ret A	2/5/09 0830	B Woodward	2/5/09 0830
B Woodward	2/5/09 1000	FedEx	2/5/09 1000
FedEx	2.6.09 0930	[illegible]	2.6.09 0930

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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-116-848	Page 1 of 2
Collector: BM	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: WEISS, RL	Price Code: 9K; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 9 SSD	SAF No.: RC-116	
Ice Chest No.: WLH-08-011	Field Logbook No.: EL-1631/-1; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: 796316779760	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C2	OTHER SOLID	2/4/09	1315					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: B Maylor	2/4/09 1500	Fed A	2/4/09 1500
Relinquished By/Removed From: Ref A	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2.6.09 1030	Received By/Stored In: [illegible]	2.6.09 1030
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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wl=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-116-848	Page 2 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 9 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No. / Matrix * / Sample Date / Sample Time												
J186C2 / OTHER SOLID / 2/4/09 / 1315	X											

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Maylum	2/4/09 1500	Fed A	2/4/09 1500
Ket A	2/5/09 0830	B Woodward	2/5/09 0830
B Woodward	2/5/09 1000	FedEx	2/5/09 1000
FedEx	2-6-09 0930	D Johnson	2-6-09 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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-116-849	Page 1 of 2

Collector: B.M	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 6 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 7963167797 60

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C3	OTHER SOLID	2/4/09	1100					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	B. Maybee Betty L	2/4/09 1300	Fed Ex A	2/4/09 1320
Relinquished By/Removed From	Ref A	2/5/09 0830	B Woodward	2/5/09 0830
Relinquished By/Removed From	B Woodward	2/5/09 1000	Fed Ex	2/5/09 1000
Relinquished By/Removed From	Fed Ex	2.6.09 0930	N. Smith	2.6.09 0930
Relinquished By/Removed From			Received By/Stored In	
Relinquished By/Removed From			Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

...anford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-849	Page 2 of 2
2M	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: WEISS, RL	Price Code: 9K; Data Turnaround: 45 Days
...signation: ...umbia River Component of the RCBRA - Sediment	Sampling Location: WP- 6 SSD	SAF No.: RC-116	

Ice Chest No.	Field Logbook No.	COA	Method of Shipment
WCH-08-11	EL-1631/-1	BESCRC6520	FED EX

Shipped To	Offsite Property No.	Bill of Lading/Air Bill No.
EBERLINE SERVICES / LIONVILLE	N/A	796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										

Sample No.	Matrix *	Sample Date	Sample Time										
J186C3	OTHER SOLID	2/4/09	1100	X									

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: B Mayhew BM	2/4/09	Received By/Stored In: Fig A	2/4/09 1500
Relinquished By/Removed From: Ref A	2/4/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2.6.09 0930	Received By/Stored In: [illegible]	2.6.09 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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-116-851	Page 1 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 2 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C5	OTHER SOLID	2/4/09	1120					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [illegible]	2.4.09 1515	Received By/Stored In: [illegible]	2.4.09 1515
Relinquished By/Removed From: [illegible]	2/5/09 0830	Received By/Stored In: [illegible] Woodward	2/5/09 0830
Relinquished By/Removed From: [illegible] Woodward	2/5/09 1000	Received By/Stored In: FedEx	2/5/09 1000
Relinquished By/Removed From: FedEx	2.6.09 0930	Received By/Stored In: [illegible]	2.6.09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wl=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

00000051

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-851	Page 2 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 2 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No. / Matrix * / Sample Date / Sample Time												
J186C5 / OTHER SOLID / 2/4/09 / 1120	X											

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [illegible]	2-4-09 1515	Ref B	2-4-09 1515
Relinquished By/Removed From: Ref B	2/5/09 0830	B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2.6.09 0930	D J Smith	2.6.09 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *

S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wl=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

2508000009

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-852	Page 1 of 2

Collector: L. Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- / SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C6	OTHER SOLID	2/4/09	1055					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [illegible]	2-4-09	Received By/Stored In: [illegible]	2-4-09 1515
Relinquished By/Removed From: Ref B	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2.6.09 0930	Received By/Stored In: [illegible]	2.6.09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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-116-852	Page 2 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: WEISS, RL	Price Code: 9K Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- / SSD	SAF No.: RC-116	
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: 796316779760	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										

Sample No.	Matrix *	Sample Date	Sample Time										
J186C6	OTHER SOLID	2/4/09	1055	X									

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By/Removed From: [signature] Date/Time: 2.4.09 1515	Received By/Stored In: [signature] Date/Time: 2.4.09 1515	Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.	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
Relinquished By/Removed From: Ret B Date/Time: 2/5/09 0830	Received By/Stored In: R Woodward Date/Time: 2/5/09 0830		
Relinquished By/Removed From: R Woodward Date/Time: 2/5/09 1000	Received By/Stored In: FedEx Date/Time: 2/5/09 1000		
Relinquished By/Removed From: FedEx Date/Time: 2.6.09 0930	Received By/Stored In: [signature] Date/Time: 2.6.09 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:		

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-116-853	Page 1 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 3 SSD		SAF No.: RC-116
Ice Chest No.: ~~WCH-08-058~~ DH 2/5 WCH-08-01	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 7963167797 60 ~~7973132049 40~~ DH 2/5

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C7	OTHER SOLID	2/4/09	1145					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [signature]	2-4-09 1515	Received By/Stored In: [signature]	2-4-09 1515
Relinquished By/Removed From: [signature]	2/5/09 0830	Received By/Stored In: D. Heidelberg [signature]	2/5/09 0830
Relinquished By/Removed From: D. Heidelberg [signature]	2/5/09 1000	Received By/Stored In: Fedex	2/5/09 1000
Relinquished By/Removed From: Fedex	2-6-09 0930	Received By/Stored In: [signature]	2-6-09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wl=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

00000855

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-853	Page 2 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL	Price Code: 9K	Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP-7 SSD		SAF No.: RC-116		
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX		
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760		

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No. / Matrix * / Sample Date / Sample Time												
J186C7 / OTHER SOLID / 2/4/09 / 1145	X											

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From	2.4.09 / 1515	Received By/Stored In	2.4.09 / 1515
Relinquished By/Removed From	2/5/09 0830	Received By/Stored In	2/5/09 0830
Relinquished By/Removed From	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2.6.09 / 0930	Received By/Stored In	2.6.09 / 0930
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wl=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

9C0080056

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-854	Page 1 of 2

Collector: J Stratton	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: WEISS, RL	Price Code: 9K Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 4 SSD	SAF No.: RC-116	
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: 7963167797 60	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C8	OTHER SOLID	2/4/09	1200					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [illegible]	2.4.09 / 1515	Reg B	2.4.09 / 1515
Relinquished By/Removed From: Reg B	2/5/09 0830	Bloodwund	2/5/09 0830
Relinquished By/Removed From: Bloodwund	2/5/09 1000	FedEx	2/5/09 1000
Relinquished By/Removed From: FedEx	2.6.09 0930	[illegible]	2.6.09 / 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-854	Page 2 of 2

Collector: J Stratton	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: WEISS, RL	Price Code: 9K Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 4 SSD	SAF No.: RC-116	
Ice Chest No.: WLH-08-011	Field Logbook No.: EL-1631/-1 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: 796316779760	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No.	Matrix *	Sample Date	Sample Time									
J186C8	OTHER SOLID	2/4/09	1200	X								

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By/Removed From: [signature] Date/Time: 2.4.09 1515	Received By/Stored In: Ref B Date/Time: 2.4.09 1515	Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.	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
Relinquished By/Removed From: Ref B 2/5/09 Date/Time: 0830	Received By/Stored In: B Woodward Date/Time: 2/5/09 0830		
Relinquished By/Removed From: B Woodward Date/Time: 2/5/09 1000	Received By/Stored In: FedEx Date/Time: 2/5/09 1000		
Relinquished By/Removed From: FedEx Date/Time: 2.6.09 0930	Received By/Stored In: [signature] Date/Time: 2.6.09 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:		

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-116-121	Page 1 of 1

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: TRIP BLANK		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	Cool 4C											
Type of Container	G											
No. of Container(s)	1											
Volume	250g											
SAMPLE ANALYSIS	See item (1) in Special Instructions.											

Sample No.	Matrix *	Sample Date	Sample Time										
J17W09	OTHER SOLID	2/4/09	0720	X									

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From	2.4.09/1500	Received By/Stored In: Ref B	2.4.09 /1500
Relinquished By/Removed From: Ref B	2/5/09 0830	Received By/Stored In: BWoodward	2/5/09 0830
Relinquished By/Removed From: BWoodward	2/5/09 1000	Received By/Stored In: FedEx	2/5/09 1000
Relinquished By/Removed From: FedEx	2.6.09 1030	Received By/Stored In: [illegible]	2.6.09 1030
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) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropene, Trichloroethene, Vinyl chloride, Xylenes (total)}

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

65000000

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-123	Page 1 of 1

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: TRIP BLANK		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	Cool 4C										
Type of Container	G										
No. of Container(s)	1										
Volume	250g										
SAMPLE ANALYSIS	See item (1) in Special Instructions.										

Sample No.	Matrix *	Sample Date	Sample Time										
J17W11	OTHER SOLID	2/4/08	730	X									

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: BMaylor BMaylor	2/4/08 1500	Received By/Stored In: BM A	2/4/08 (SX)
Relinquished By/Removed From: Rot A	2/5/09 0830	Received By/Stored In: BWoodward	2/5/09 0830
Relinquished By/Removed From: BWoodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2.6.09 0930	Received By/Stored In: [illegible]	2.6.09 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) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropene, Trichloroethene, Vinyl chloride, Xylenes (total)}

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: WC Hanford Date: 2-6-09

Project/SAF/SOW/Release #: RC-116

LvLI Batch #: 0902020 Sample Custodian: [illegible]

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier FedEx		Airbill # 7963 1677 9760
2. Custody Seals on coolers or shipping containers intact, signed & dated?	☑ Yes	☐ No	☐ No Seals
3. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	*Comments:*
4. All expected paperwork received (coc & other client specific information) sealed in plactic bag and easily accessible?	☑ Yes	☐ No	
5. Samples received cooled or ambient?	Temp 2.3	°C	Cooler # WCH-08-011
How was the temperature taken?	☑ IR	☐ Temp. Blank	☐ Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	☑ Yes	☐ No	
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7. COC (Client & LvLI) 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 LvLI 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 _____	

LVLI LIONVILLE LABORATORIES INC.

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

RECEIVED
MAY 2009

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-116 Project Number: [none] K1526 WET Project Manager: Joan Kessner	**Reported:** 04/23/2009 14:15

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
J186C0	0902020-01	Solid	02/04/2009 12:00	02/06/2009 09:30
J186C1	0902020-02	Solid	02/04/2009 11:35	02/06/2009 09:30
J186C2	0902020-03	Solid	02/04/2009 13:15	02/06/2009 09:30
J186C3	0902020-04	Solid	02/04/2009 11:00	02/06/2009 09:30
J186C5	0902020-05	Solid	02/04/2009 11:20	02/06/2009 09:30
J186C6	0902020-06	Solid	02/04/2009 10:55	02/06/2009 09:30
J186C7	0902020-07	Solid	02/04/2009 11:45	02/06/2009 09:30
J186C8	0902020-08	Solid	02/04/2009 12:00	02/06/2009 09:30

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Nicki Perrone For Orlette Johnson, Project Manager

00000001

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-116
LVL#: 0902020 K1526

W.O.#: 60049-001-001-0001-00
Date Received: 02-06-09

INORGANIC NARRATIVE

1. This narrative covers the analysis of 8 solid samples.

2. The samples were prepared and analyzed in accordance with the method indicated in the date summary report.

   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.

4. The results presented in this report are derived from samples that met LvL's sample acceptance policy.

5. The method blank was within the method criteria.

6. The Laboratory Control Sample (LCS) was within the laboratory control limits.

7. The matrix spike recovery was within the 75-125% control limits.

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

9. Total Organic Carbon samples are dried prior to analysis.

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.

Judy Stone
for Iain Daniels
Laboratory Manager
Lionville Laboratory

4/23/09
Date

njp\i02-020

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 25 pages.

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

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/23/2009 14:15

Notes and Definitions

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
RPD	Relative Percent Difference

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

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/23/2009 14:15

Wet Chemistry
Lionville Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
J186C0 (0902020-01) Solid	**Sampled: 02/04/2009 12:00**	**Received: 02/06/2009 09:30**							
Total Organic Carbon	**66.76**	20.00	mg/kg	1	L902182	02/10/200	02/10/200	EPA 415.1	
J186C1 (0902020-02) Solid	**Sampled: 02/04/2009 11:35**	**Received: 02/06/2009 09:30**							
Total Organic Carbon	**322.76**	20.00	mg/kg	1	L902182	02/10/200	02/10/200	EPA 415.1	
J186C2 (0902020-03) Solid	**Sampled: 02/04/2009 13:15**	**Received: 02/06/2009 09:30**							
Total Organic Carbon	**345.49**	20.00	mg/kg	1	L902182	02/10/200	02/10/200	EPA 415.1	
J186C3 (0902020-04) Solid	**Sampled: 02/04/2009 11:00**	**Received: 02/06/2009 09:30**							
Total Organic Carbon	**315.47**	20.00	mg/kg	1	L902182	02/10/200	02/10/200	EPA 415.1	
J186C5 (0902020-05) Solid	**Sampled: 02/04/2009 11:20**	**Received: 02/06/2009 09:30**							
Total Organic Carbon	**229.66**	20.00	mg/kg	1	L902182	02/10/200	02/10/200	EPA 415.1	
J186C6 (0902020-06) Solid	**Sampled: 02/04/2009 10:55**	**Received: 02/06/2009 09:30**							
Total Organic Carbon	**270.47**	20.00	mg/kg	1	L902182	02/10/200	02/10/200	EPA 415.1	
J186C7 (0902020-07) Solid	**Sampled: 02/04/2009 11:45**	**Received: 02/06/2009 09:30**							
Total Organic Carbon	**452.85**	20.00	mg/kg	1	L902182	02/10/200	02/10/200	EPA 415.1	
J186C8 (0902020-08) Solid	**Sampled: 02/04/2009 12:00**	**Received: 02/06/2009 09:30**							
Total Organic Carbon	**814.07**	20.00	mg/kg	1	L902182	02/10/200	02/10/200	EPA 415.1	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Nicki Perrone For Orlette Johnson, Project Manager

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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-116 Project Number: [none] Project Manager: Joan Kessner	**Reported:** 04/23/2009 14:15

Wet Chemistry - Quality Control

Lionville Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L902182 - Default Prep GenChem										
Blank (L902182-BLK1)				Prepared & Analyzed: 02/10/2009						
Total Organic Carbon	6.50	20.00	mg/kg							
LCS (L902182-BS1)				Prepared & Analyzed: 02/10/2009						
Total Organic Carbon	385.66	20.00	mg/kg	400.00		96.4	80-120			
Duplicate (L902182-DUP1)		**Source: 0902020-03**		Prepared & Analyzed: 02/10/2009						
Total Organic Carbon	366.93	20.00	mg/kg		345.49			6.02	20	
Matrix Spike (L902182-MS1)		**Source: 0902020-03**		Prepared & Analyzed: 02/10/2009						
Total Organic Carbon	5799.4	20.00	mg/kg	5555.6	345.49	98.2	75-125			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Nicki Perrone For Orlette Johnson, Project Manager

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Lionville Laboratory Use Only

0902020

Custody Transfer Record/Lab Work Request

Page 1 of 1

See SRC

LVLI

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client WC Hanford SAF# RC-116

Est. Final Proj. Sampling Date

Project# 60049-001-001-0001-00

Project Contact/Phone#

Lionville Laboratory Project Manager Arlette Johnson

QC SW846 Del STO TAT 30 days

Date Rec'd 2-6-09 Date Due 3-8-09

		A	B	C		D			E		F		G			
Refrigerator #		Van	2	2		2			2		2					
#/Type Container	Liquid	~~1qt~~ 8oz														
	Solid	1qgl	1qgl	1qgl		1qgl			1pl		1qgl		1pl			
Volume		25														
	Solid	250	250	125		250			250		125		1L			
Preservatives		—	—	—		—			—		—		—			
ANALYSES REQUESTED		ORGANIC							INORG							
		VOA	BNA	Pest/PCB	Herb	PCBs			(5) Metal	CN	TOC		Particle Size			
		Lionville Laboratory Use Only														
		062 4H	062 5H	060 8H		OPCB			Met O		TOC		PSUB			

MATRIX CODES:
S- Soil
SE- Sediment
SO- Solid
SL- Sludge
W- Water
O- Oil
A- Air
DS- Drum Solids
DL- Drum Liquids
E- EP/TCLP Leachate
WI- Wipe
O- Other
F- Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	VOA	BNA	Pest/PCB	Herb	PCBs			Met O	CN	TOC		PSUB			
001	J186C0			SO	2-4-09	1200	X	X	X		X			X		X		X			
002	J186C1					1135	X	X	X		X			X		X		X			
003	J186C2					1315	X	X	X		X			X		X		X			
004	J186C3					1100	X	X	X		X			X		X		X			
005	J186C5					1120	X	X	X		X			X		X		X			
006	J186C6					1055	X	X	X		X			X		X		X			
007	J186C7					1145	X	X	X		X			X		X		X			
008	J186C8					1200	X	X	X		X			X		X		X			
009	J17W09					0730	X														
010	J17W11					0730	X														

Special Instructions:

Met O = HSL + B, Bi, Li, Mo, Sr, Si, Sn, U, P

Special Instructions:

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

Relinquished by	Received by	Date	Time
FedEx	[signature]	2-6-09	0930

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
ORIGINAL REWRITTEN		COMPOSITE WASTE	

0000000066

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-846	Page 1 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 8 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C0	OTHER SOLID	2/4/09	1200					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: B Meyer BHM	2/4/09	Received By/Stored In: Fig A	2/4/09 1500
Relinquished By/Removed From: Ref A	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2.6.09 0930	Received By/Stored In: [illegible]	2.6.09 0930
Relinquished By/Removed From:		Received By/Stored In:	
Relinquished By/Removed From:		Received By/Stored In:	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-846	Page 2 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 8 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										
Sample No.	Matrix *	Sample Date	Sample Time								
J186C0	OTHER SOLID	2/4/09	1200	X							

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: B Mayer B Mayer	Date/Time: 2/4/09 1500	Received By/Stored In: Fry A	Date/Time: 2/4/09 1500
Relinquished By/Removed From: Ref A 2/5/09	Date/Time: 0830	Received By/Stored In: B Woodward 2/5/09	Date/Time: 0830
Relinquished By/Removed From: B Woodward 2/5/09	Date/Time: 1000	Received By/Stored In: Fed Ex 2/5/09	Date/Time: 1000
Relinquished By/Removed From: Fed Ex 2.6.09	Date/Time: 0930	Received By/Stored In: [illegible] 2.6.09	Date/Time: 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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-116-847	Page 1 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 7 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C1	OTHER SOLID	2/4/09	1135					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: B Maylor	2/4/09 1500	Received By/Stored In: Ref A	2/4/09 1500
Relinquished By/Removed From: Ref A	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2-6-09 0930	Received By/Stored In: D. Johnson	2-6-09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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-116-847	Page 2 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 7 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No.	Matrix *	Sample Date	Sample Time									
J186C1	OTHER SOLID	2/4/09	1135	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: BM [illegible]	2/4/09 1700	Received By/Stored In: Fritz A	2/4/09 1700
Relinquished By/Removed From: Ret A	2/5/09 0830	Received By/Stored In: BWoodward	2/5/09 0830
Relinquished By/Removed From: BWoodward	2/5/09 1000	Received By/Stored In: FedEx	2/5/09 1000
Relinquished By/Removed From: FedEx	2.6.09 10930	Received By/Stored In: [illegible]	2.6.09 10970
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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-848	Page 1 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 9 SSD		SAF No.: RC-116
Ice Chest No.: WLH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C2	OTHER SOLID	2/4/09	1315					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Mayhew	2/4/09 1500	Fed A	2/4/09 1500
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Fed A	2/5/09 0830	Bluewound	2/5/09 0830
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Bluewound	2/5/09 1000	Fed Ex	2/5/09 1000
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Fed Ex	2.6.09 1030	[illegible]	2.6.09 1030
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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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-116-848	Page 2 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 9 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None
Type of Container	G/P
No. of Container(s)	1
Volume	1000g

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Particle Size (Dry Sieve) - D422
J186C2	OTHER SOLID	2/4/09	1015	X

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Maylum	2/4/09 1500	Fed A	2/4/09 1500
Fed A	2/5/09 0830	B Woodward	2/5/09 0830
B Woodward	2/5/09 1000	Fed Ex	2/5/09 1000
Fed Ex	2-6-09 1030		2-6-09 1030
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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-849	Page 1 of 2

Collector: B.M	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 6 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 7963167797 60

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1
J186C3	OTHER SOLID	2/4/09	1100					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: B.M. [illegible]	2/4/09 1500	Received By/Stored In: [illegible]	2/4/09 1500
Relinquished By/Removed From: Ref A	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2.6.09 0930	Received By/Stored In: [illegible]	2.6.09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

..anford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-849	Page 2 of 2
2M	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: WEISS, RL	Price Code: 9K; Data Turnaround: 45 Days
..gnation: ..umbia River Component of the RCBRA - Sediment	Sampling Location: WP- 6 SSD	SAF No.: RC-116	

Ice Chest No.	Field Logbook No.	COA	Method of Shipment
WCH-08-11	EL-1631/-1	BESCRC6520	FED EX

Shipped To	Offsite Property No.	Bill of Lading/Air Bill No.
EBERLINE SERVICES / LIONVILLE	N/A	796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										
Sample No. / Matrix * / Sample Date / Sample Time											
J186C3 / OTHER SOLID / 2/4/09 / 1100	X										

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By/Removed From: B Murphy / JC; Date/Time: 2/4/09 1500	Received By/Stored In: Fig A; Date/Time: 2/4/09 1500	Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.	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
Relinquished By/Removed From: Ref A 2/5/09; Date/Time: 0830	Received By/Stored In: B Woodward; Date/Time: 2/5/09 0830		
Relinquished By/Removed From: B Woodward 2/5/09; Date/Time: 1000	Received By/Stored In: Fed Ex; Date/Time: 2/5/09 1000		
Relinquished By/Removed From: Fed Ex 2.6.09; Date/Time: 0930	Received By/Stored In: [illegible] 2.6.09; Date/Time: 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		

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-116-851	Page 1 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 2 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C5	OTHER SOLID	2/4/09	1120					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [illegible]	2.4.09 1515	Received By/Stored In: [illegible]	2.4.09 1515
Relinquished By/Removed From: Ret B	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: FedEx	2/5/09 1000
Relinquished By/Removed From: FedEx	2.6.09 0930	Received By/Stored In: [illegible]	2.6.09 0930
Relinquished By/Removed From:		Received By/Stored In:	
Relinquished By/Removed From:		Received By/Stored In:	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-851	Page 2 of 2

Collector: L Gratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 2 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No.	Matrix *	Sample Date	Sample Time									
J186C5	OTHER SOLID	2/4/09	1120	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [illegible]	2-4-09 1515	Ref B	2-4-09 1515
Relinquished By/Removed From: Ref B	2/5/09 0830	Bwoodward	2/5/09 0830
Relinquished By/Removed From: Bwoodward	2/5/09 1000	Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2.6.09 0930	[illegible] Smith	2.6.09 0930
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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-116-852	Page 1 of 2

Collector: L. Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- / SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 79631677976 0

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C6	OTHER SOLID	2/4/09	1055					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [illegible]	2-4-09	Received By/Stored In: Reg B	2-4-09 1515
Relinquished By/Removed From: Reg B	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2-6-09 0930	Received By/Stored In: [illegible]	2-6-09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wl=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-116-852	Page 2 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL	Price Code: 9K	Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- / SSD		SAF No.: RC-116		
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX		
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760		

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										

Sample No.	Matrix *	Sample Date	Sample Time										
J186C6	OTHER SOLID	2/4/09	1055	X									

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By/Removed From: [signature] Date/Time: 2.4.09 1515	Received By/Stored In: [signature] Date/Time: 2.4.09 1515	Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.	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
Relinquished By/Removed From: Ret B Date/Time: 2/5/09 0830	Received By/Stored In: B Woodward Date/Time: 2/5/09 0830		
Relinquished By/Removed From: B Woodward Date/Time: 2/5/09 1000	Received By/Stored In: FedEx Date/Time: 2/5/09 1000		
Relinquished By/Removed From: FedEx Date/Time: 2.6.09 0930	Received By/Stored In: [signature] Date/Time: 2.6.09 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:		

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-116-853	Page 1 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL	Price Code: 9K	Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 3 SSD		SAF No.: RC-116		
Ice Chest No.: ~~WCH-08-058~~ DH 2/5 WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX		
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 7963167797 60 ~~7973132049 40~~ DH 2/5		

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C7	OTHER SOLID	2/4/09	1145					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [signature]	2-4-09 1515	Received By/Stored In: [signature]	2-4-09 1515
Relinquished By/Removed From: Ref. B	2/5/09 0830	Received By/Stored In: D. Heidelberg	2/5/09 0830
Relinquished By/Removed From: D. Heidelberg	2/5/09 1000	Received By/Stored In: Fedex	2/5/09 1000
Relinquished By/Removed From: FedEx	2-6-09 0930	Received By/Stored In: [signature]	2-6-09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wl=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

0080066 15

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-853	Page 2 of 2

Collector: L Stallin	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL	Price Code: 9K	Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 7 SSD		SAF No.: RC-116		
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX		
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760		

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No.	Matrix *	Sample Date	Sample Time									
J186C7	OTHER SOLID	2/4/09	1145	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From	2.4.09 / 1515	Received By/Stored In: Kef B	2-4-09 / 1515
Relinquished By/Removed From: R.F.B	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2.6.09 / 0930	Received By/Stored In: D. J. Mitchell	2.6.09 / 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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-116-854	Page 1 of 2

Collector: J Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL	Price Code: 9K	Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 4 SSD		SAF No.: RC-116		
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX		
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 7963167797 60		

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C8	OTHER SOLID	2/4/09	1200					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: J Stratton	2.4.09 / 1515	Rep B	2.4.09 / 1515
Relinquished By/Removed From: Rep B	2/5/09 0830	Blundelwand	2/5/09 0830
Relinquished By/Removed From: Blundelwand	2/5/09 1000	Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2.6.09 0930	[illegible]	2.6.09 / 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wl=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

00005667 1

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-854	Page 2 of 2

Collector: J Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 4 SSD		SAF No.: RC-116
Ice Chest No.: WLH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No. / Matrix * / Sample Date / Sample Time												
J186C8 / OTHER SOLID / 2/4/09 / 1200	X											

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [illegible]	2.4.09 / 1515	Received By/Stored In: Ref B	2.4.09 / 1515
Relinquished By/Removed From: Ref B	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: FedEx	2/5/09 1000
Relinquished By/Removed From: FedEx	2.6.09 / 0930	Received By/Stored In: [illegible]	2.6.09 / 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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-116-121	Page 1 of 1

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: TRIP BLANK		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	Cool 4C											
Type of Container	G											
No. of Container(s)	1											
Volume	250g											
SAMPLE ANALYSIS	See item (1) in Special Instructions.											
Sample No.	Matrix *	Sample Date	Sample Time									
J17W09	OTHER SOLID	2/4/09	0720	X								

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time 2-4-09/1500	Received By/Stored In	Date/Time 2-4-09 /1500
Relinquished By/Removed From	Date/Time 2/5/09 0830	Received By/Stored In	Date/Time 2/5/09 0830
Relinquished By/Removed From	Date/Time 2/5/09 1000	Received By/Stored In	Date/Time 2/5/09 1000
Relinquished By/Removed From	Date/Time 2-6-09 0930	Received By/Stored In	Date/Time 2-6-09 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) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropene, Trichloroethene, Vinyl chloride, Xylenes (total)}

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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-116-123	Page 1 of 1

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: TRIP BLANK		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	Cool 4C										
Type of Container	G										
No. of Container(s)	1										
Volume	250g										
SAMPLE ANALYSIS	See item (1) in Special Instructions.										

Sample No.	Matrix *	Sample Date	Sample Time										
J17W11	OTHER SOLID	2/4/08	730	X									

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: BMayer BMA	2/4/08 1500	Received By/Stored In: BMA	2/4/08 (RX)
Relinquished By/Removed From: RL A	2/5/09	0830	Received By/Stored In: BWoodward 2/5/09 0830
Relinquished By/Removed From: BWoodward	2/5/09	1000	Received By/Stored In: FedEx 2/5/09 1000
Relinquished By/Removed From: FedEx	2.6.09	0930	Received By/Stored In: [illegible] 2.6.09 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) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropene, Trichloroethene, Vinyl chloride, Xylenes (total)}

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: WC Hanford
Project/SAF/SOW/Release #: RC-116

Date: 2-6-09

LvLI Batch #: 0902020

Sample Custodian: [illegible]

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier FedEx		Airbill # 7963 1677 9760
2. Custody Seals on coolers or shipping containers intact, signed & dated?	☑ Yes	☐ No	☐ No Seals
3. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	*Comments:*
4. All expected paperwork received (coc & other client specific information) sealed in plactic bag and easily accessible?	☑ Yes	☐ No	
5. Samples received cooled or ambient?	Temp 2.3	°C	Cooler # WCH-08-011
How was the temperature taken?	☑ IR	☐ Temp. Blank	☐ Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	☑ Yes	☐ No	
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7. COC (Client & LvLI) 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 LvLI 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 _____

LVLI LIONVILLE LABORATORIES INC.

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

RECEIVED
MAY 2009

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-116 Project Number: [none] K1526 Project Manager: Joan Kessner MET	**Reported:** 04/23/2009 15:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
J186C0	0902020-01	Solid	02/04/2009 12:00	02/06/2009 09:30
J186C1	0902020-02	Solid	02/04/2009 11:35	02/06/2009 09:30
J186C2	0902020-03	Solid	02/04/2009 13:15	02/06/2009 09:30
J186C3	0902020-04	Solid	02/04/2009 11:00	02/06/2009 09:30
J186C5	0902020-05	Solid	02/04/2009 11:20	02/06/2009 09:30
J186C6	0902020-06	Solid	02/04/2009 10:55	02/06/2009 09:30
J186C7	0902020-07	Solid	02/04/2009 11:45	02/06/2009 09:30
J186C8	0902020-08	Solid	02/04/2009 12:00	02/06/2009 09:30

LIONVILLE LABORATORY
A division of Liberline Analytical Corporation

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

Case Narrative

Client: WC-HANFORD RC-116
LVL#: 0902020 K1526

W.O.#: 60049-001-001-0001-00
Date Received: 02-06-09

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.

The soil sample was 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 8 solid samples.

2. The samples were prepared and analyzed in accordance with methods checked on the attached glossary. The samples were reported on a wet weight, 'as-received' basis.

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

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

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

6. All preparation/method blanks (MB) were within method criteria {less than the Limit of Quantitation (3-10X the LOD), MB value less than 5% of the RCRA limit, or samples greater than 20X MB value}.

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

8. All Standard Reference Material (SRM) analytes were within the Prediction Interval control limits with the exception of Arsenic (215%). The sample results may be slightly biased high.

9. The matrix spike (MS) recoveries for 4 analytes were outside the 75-125% control limits.

10. 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 following analytes:

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 40 pages.

Sample ID	Element	PDS Concentration (ppb)	PDS % Recovery
J186C8	Aluminum	20,000	94.4
	Antimony	100	99.4
	Iron	42,000	98.7
	Silicon	2,600	91.1

11. The duplicate analysis for 1 analyte was outside the 20% Relative Percent Difference (RPD) control limits.

12. For the purposes of this report, the data has 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.

13. 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.

14. 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.

Judy Stone

for Iain Daniels
Laboratory Manager
Lionville Laboratory

5/1/09
Date

alm/m02-020

METALS METHOD GLOSSARY

The following methods are used as reference for the digestion and analysis of samples contained within this Lot#: 0902020

Leaching Procedure: __1310 __1311 __1312 __Other:_____

CLP Metals __ Digestion and __ Analysis Methods: __ILM03.0 __ILM04.0

Metals Digestion Methods: __3005A __3010A __3015 __3020A ✓3050B __3051 __200.7 __SS17
__Other: _____

Metals Analysis Methods

	SW846		EPA		STD MTD	EPA OSWR	USATHAMA
Aluminum	__6010B		__200.7				__99
Antimony	__6010B	__7041 [5]	__200.7	__204.2			__99
Arsenic	__6010B	__7060A [5]	__200.7	__206.2	__3113B		__99
Barium	__6010B		__200.7				__99
Beryllium	__6010B		__200.7				__99
Bismuth	✓6010B [1]		__200.7 [1]			__1620	__99
Boron	✓6010B		__200.7				__99
Cadmium	__6010B	__7131A [5]	__200.7	__213.2			__99
Calcium	__6010B		__200.7				__99
Chromium	__6010B	__7191 [5]	__200.7	__218.2			__SS17
Cobalt	__6010B		__200.7				__99
Copper	__6010B	__7211 [5]	__200.7	__220.2			__99
Iron	__6010B		__200.7				__99
Lead	__6010B	__7421 [5]	__200.7	__239.2	__3113B		__99
Lithium	✓6010B	__7430 [4]	__200.7			__1620	__99
Magnesium	__6010B		__200.7				__99
Manganese	__6010B		__200.7				__99
Mercury	__7470A [3]	__7471A [3]	__245.1 [2]	__245.5 [2]			__99
Molybdenum	✓6010B		__200.7				__99
Nickel	__6010B		__200.7				__99
Potassium	__6010B	__7610 [4]	__200.7	__258.1 [4]			__99
Rare Earths	__6010B [1]		__200.7 [1]			__1620	__99
Selenium	__6010B	__7740 [5]	__200.7	__270.2	__3113B		__99
Silicon	✓6010B [1]		__200.7			__1620	__99
Silica	__6010B		__200.7			__1620	__99
Silver	__6010B	__7761 [5]	__200.7	__272.2			__99
Sodium	__6010B	__7770 [4]	__200.7	__273.1 [4]			__99
Strontium	✓6010B		__200.7				__99
Thallium	__6010B	__7841 [5]	__200.7	__279.2 __200.9			__99
Tin	✓6010B		__200.7				__99
Titanium	__6010B		__200.7				__99
Uranium	✓6010B [1]		__200.7 [1]			__1620	__99
Vanadium	__6010B		__200.7				__99
Zinc	__6010B		__200.7				__99
Zirconium	__6010B [1]		__200.7 [1]			__1620	__99

Other: Phosphorous Method: 6010B

L-W[illegible]4

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-116 Project Number: [none] Project Manager: Joan Kessner	**Reported:** 04/23/2009 15:44

Notes and Definitions

U	Analyte included in the analysis, but not detected
B	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
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
RPD	Relative Percent Difference

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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/23/2009 15:44

J186C0

0902020-01 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	**6210**	3.42		mg/kg	1	L903198	03/23/2009	03/25/2009	6010B
Antimony	0.411	0.411	U	"	"	"	"	"	"
Arsenic	**2.81**	0.685		"	"	"	"	"	"
Barium	**44.7**	0.342		"	"	"	"	"	"
Beryllium	**0.180**	0.137		"	"	"	"	"	"
Bismuth	6.85	6.85	U	"	"	"	"	"	"
Boron	**1.01**	1.37	B	"	"	"	"	"	"
Cadmium	**0.194**	0.137		"	"	"	"	"	"
Calcium	**2790**	68.5		"	"	"	"	"	"
Chromium	**16.3**	0.137		"	"	"	"	"	"
Cobalt	**3.59**	1.37		"	"	"	"	"	"
Copper	**8.23**	0.685		"	"	"	"	"	"
Iron	**13200**	13.7		"	"	"	"	"	"
Lead	**2.32**	0.342		"	"	"	"	"	"
Lithium	**6.92**	1.71		"	"	"	"	"	"
Magnesium	**5090**	51.4		"	"	"	"	"	"
Manganese	**247**	3.42		"	"	"	"	"	"
Molybdenum	**0.194**	1.37	B	"	"	"	"	"	"
Nickel	**18.9**	2.74		"	"	"	"	"	"
Phosphorus	**384**	34.2		"	"	"	"	"	"
Potassium	**580**	274		"	"	"	"	"	"
Selenium	0.685	0.685	U	"	"	"	"	"	"
Silicon	**256**	1.37		"	"	"	"	"	"
Silver	0.137	0.137	U	"	"	"	"	"	"
Sodium	**125**	34.2		"	"	"	"	"	"
Strontium	**16.1**	0.685		"	"	"	"	"	"
Thallium	0.342	0.342	U	"	"	"	"	"	"
Tin	6.85	6.85	U	"	"	"	"	"	"
Uranium	13.7	13.7	U	"	"	"	"	"	"
Vanadium	**27.7**	1.71		"	"	"	"	"	"
Zinc	**39.5**	6.85		"	"	"	"	"	"
Mercury	0.0290	0.0290	U	mg/kg wet	"	L902183	02/25/2009	02/26/2009	7471A

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

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/23/2009 15:44

J186C1
0902020-02 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
				Lionville Laboratory					
Metals by SW846 6000/7000 series									
Aluminum	**5360**	4.17		mg/kg	1	L903198	03/23/2009	03/25/2009	6010B
Antimony	0.500	0.500	U	"	"	"	"	"	"
Arsenic	**2.76**	0.833		"	"	"	"	"	"
Barium	**39.4**	0.417		"	"	"	"	"	"
Beryllium	**0.163**	0.167	B	"	"	"	"	"	"
Bismuth	8.33	8.33	U	"	"	"	"	"	"
Boron	**0.796**	1.67	B	"	"	"	"	"	"
Cadmium	**0.171**	0.167		"	"	"	"	"	"
Calcium	**2700**	83.3		"	"	"	"	"	"
Chromium	**14.0**	0.167		"	"	"	"	"	"
Cobalt	**3.07**	1.67		"	"	"	"	"	"
Copper	**6.02**	0.833		"	"	"	"	"	"
Iron	**12600**	16.7		"	"	"	"	"	"
Lead	**2.02**	0.417		"	"	"	"	"	"
Lithium	**6.25**	2.08		"	"	"	"	"	"
Magnesium	**3930**	62.5		"	"	"	"	"	"
Manganese	**224**	4.17		"	"	"	"	"	"
Molybdenum	**0.210**	1.67	B	"	"	"	"	"	"
Nickel	**12.8**	3.33		"	"	"	"	"	"
Phosphorus	**367**	41.7		"	"	"	"	"	"
Potassium	**545**	333		"	"	"	"	"	"
Selenium	0.833	0.833	U	"	"	"	"	"	"
Silicon	**364**	1.67		"	"	"	"	"	"
Silver	0.167	0.167	U	"	"	"	"	"	"
Sodium	**108**	41.7		"	"	"	"	"	"
Strontium	**13.2**	0.833		"	"	"	"	"	"
Thallium	0.417	0.417	U	"	"	"	"	"	"
Tin	8.33	8.33	U	"	"	"	"	"	"
Uranium	16.7	16.7	U	"	"	"	"	"	"
Vanadium	**30.4**	2.08		"	"	"	"	"	"
Zinc	**33.5**	8.33		"	"	"	"	"	"
Mercury	0.0265	0.0265	U	mg/kg wet	"	L902183	02/25/2009	02/26/2009	7471A

264 Welsh Pool Road
Exton, PA 19341
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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/23/2009 15:44

J186C2

0902020-03 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	**5190**	3.73		mg/kg	1	L903198	03/23/2009	03/25/2009	6010B
Antimony	**0.396**	0.448	B	"	"	"	"	"	"
Arsenic	**2.50**	0.746		"	"	"	"	"	"
Barium	**49.7**	0.373		"	"	"	"	"	"
Beryllium	**0.148**	0.149		"	"	"	"	"	"
Bismuth	7.46	7.46	U	"	"	"	"	"	"
Boron	**15.4**	1.49		"	"	"	"	"	"
Cadmium	**0.183**	0.149		"	"	"	"	"	"
Calcium	**3050**	74.6		"	"	"	"	"	"
Chromium	**12.0**	0.149		"	"	"	"	"	"
Cobalt	**3.44**	1.49		"	"	"	"	"	"
Copper	**6.32**	0.746		"	"	"	"	"	"
Iron	**13800**	14.9		"	"	"	"	"	"
Lead	**2.38**	0.373		"	"	"	"	"	"
Lithium	**6.31**	1.87		"	"	"	"	"	"
Magnesium	**4230**	56.0		"	"	"	"	"	"
Manganese	**239**	3.73		"	"	"	"	"	"
Molybdenum	**0.213**	1.49	B	"	"	"	"	"	"
Nickel	**15.6**	2.99		"	"	"	"	"	"
Phosphorus	**470**	37.3		"	"	"	"	"	"
Potassium	**455**	299		"	"	"	"	"	"
Selenium	0.746	0.746	U	"	"	"	"	"	"
Silicon	**338**	1.49		"	"	"	"	"	"
Silver	0.149	0.149	U	"	"	"	"	"	"
Sodium	**131**	37.3		"	"	"	"	"	"
Strontium	**14.4**	0.746		"	"	"	"	"	"
Thallium	0.373	0.373	U	"	"	"	"	"	"
Tin	7.46	7.46	U	"	"	"	"	"	"
Uranium	14.9	14.9	U	"	"	"	"	"	"
Vanadium	**35.4**	1.87		"	"	"	"	"	"
Zinc	**38.9**	7.46		"	"	"	"	"	"
Mercury	0.0290	0.0290	U	mg/kg wet	"	L902183	02/25/2009	02/26/2009	7471A

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

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/23/2009 15:44

J186C3

0902020-04 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
				Lionville Laboratory					
Metals by SW846 6000/7000 series									
Aluminum	**4970**	3.62		mg/kg	1	L903198	03/23/2009	03/25/2009	6010B
Antimony	0.435	0.435	U	"	"	"	"	"	"
Arsenic	**2.48**	0.725		"	"	"	"	"	"
Barium	**34.3**	0.362		"	"	"	"	"	"
Beryllium	**0.176**	0.145		"	"	"	"	"	"
Bismuth	7.25	7.25	U	"	"	"	"	"	"
Boron	**0.800**	1.45	B	"	"	"	"	"	"
Cadmium	**0.136**	0.145		"	"	"	"	"	"
Calcium	**2430**	72.5		"	"	"	"	"	"
Chromium	**14.5**	0.145		"	"	"	"	"	"
Cobalt	**3.06**	1.45		"	"	"	"	"	"
Copper	**7.02**	0.725		"	"	"	"	"	"
Iron	**10400**	14.5		"	"	"	"	"	"
Lead	**2.40**	0.362		"	"	"	"	"	"
Lithium	**5.89**	1.81		"	"	"	"	"	"
Magnesium	**3770**	54.3		"	"	"	"	"	"
Manganese	**183**	3.62		"	"	"	"	"	"
Molybdenum	**0.302**	1.45	B	"	"	"	"	"	"
Nickel	**14.7**	2.90		"	"	"	"	"	"
Phosphorus	**342**	36.2		"	"	"	"	"	"
Potassium	**479**	290		"	"	"	"	"	"
Selenium	0.725	0.725	U	"	"	"	"	"	"
Silicon	**379**	1.45		"	"	"	"	"	"
Silver	0.145	0.145	U	"	"	"	"	"	"
Sodium	**94.1**	36.2		"	"	"	"	"	"
Strontium	**12.7**	0.725		"	"	"	"	"	"
Thallium	0.362	0.362	U	"	"	"	"	"	"
Tin	7.25	7.25	U	"	"	"	"	"	"
Uranium	14.5	14.5	U	"	"	"	"	"	"
Vanadium	**21.6**	1.81		"	"	"	"	"	"
Zinc	**27.1**	7.25		"	"	"	"	"	"
Mercury	**0.0107**	0.0300	B	mg/kg wet	"	L902183	02/25/2009	02/26/2009	7471A

264 Welsh Pool Road
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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/23/2009 15:44

J186C5

0902020-05 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	**4690**	3.38		mg/kg	1	L903198	03/23/2009	03/25/2009	6010B
Antimony	0.405	0.405	U	"	"	"	"	"	"
Arsenic	**2.83**	0.676		"	"	"	"	"	"
Barium	**33.0**	0.338		"	"	"	"	"	"
Beryllium	**0.150**	0.135		"	"	"	"	"	"
Bismuth	6.76	6.76	U	"	"	"	"	"	"
Boron	**1.02**	1.35	B	"	"	"	"	"	"
Cadmium	**0.221**	0.135		"	"	"	"	"	"
Calcium	**2670**	67.6		"	"	"	"	"	"
Chromium	**13.9**	0.135		"	"	"	"	"	"
Cobalt	**2.99**	1.35		"	"	"	"	"	"
Copper	**10.7**	0.676		"	"	"	"	"	"
Iron	**15300**	13.5		"	"	"	"	"	"
Lead	**9.45**	0.338		"	"	"	"	"	"
Lithium	**5.73**	1.69		"	"	"	"	"	"
Magnesium	**2870**	50.7		"	"	"	"	"	"
Manganese	**138**	3.38		"	"	"	"	"	"
Molybdenum	**0.325**	1.35	B	"	"	"	"	"	"
Nickel	**8.97**	2.70		"	"	"	"	"	"
Phosphorus	**475**	33.8		"	"	"	"	"	"
Potassium	**609**	270		"	"	"	"	"	"
Selenium	0.676	0.676	U	"	"	"	"	"	"
Silicon	**530**	1.35		"	"	"	"	"	"
Silver	0.135	0.135	U	"	"	"	"	"	"
Sodium	**139**	33.8		"	"	"	"	"	"
Strontium	**18.6**	0.676		"	"	"	"	"	"
Thallium	0.338	0.338	U	"	"	"	"	"	"
Tin	6.76	6.76	U	"	"	"	"	"	"
Uranium	13.5	13.5	U	"	"	"	"	"	"
Vanadium	**36.4**	1.69		"	"	"	"	"	"
Zinc	**86.1**	6.76		"	"	"	"	"	"
Mercury	0.0243	0.0243	U	mg/kg wet	"	L902183	02/25/2009	02/26/2009	7471A

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

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/23/2009 15:44

J186C6

0902020-06 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	**5020**	3.73		mg/kg	1	L903198	03/23/2009	03/25/2009	6010B
Antimony	0.448	0.448	U	"	"	"	"	"	"
Arsenic	**2.91**	0.746		"	"	"	"	"	"
Barium	**38.3**	0.373		"	"	"	"	"	"
Beryllium	**0.175**	0.149		"	"	"	"	"	"
Bismuth	7.46	7.46	U	"	"	"	"	"	"
Boron	**0.731**	1.49	B	"	"	"	"	"	"
Cadmium	**0.201**	0.149		"	"	"	"	"	"
Calcium	**2580**	74.6		"	"	"	"	"	"
Chromium	**12.0**	0.149		"	"	"	"	"	"
Cobalt	**3.10**	1.49		"	"	"	"	"	"
Copper	**10.2**	0.746		"	"	"	"	"	"
Iron	**12500**	14.9		"	"	"	"	"	"
Lead	**9.98**	0.373		"	"	"	"	"	"
Lithium	**6.00**	1.87		"	"	"	"	"	"
Magnesium	**3050**	56.0		"	"	"	"	"	"
Manganese	**137**	3.73		"	"	"	"	"	"
Molybdenum	**0.291**	1.49	B	"	"	"	"	"	"
Nickel	**9.51**	2.99		"	"	"	"	"	"
Phosphorus	**456**	37.3		"	"	"	"	"	"
Potassium	**655**	299		"	"	"	"	"	"
Selenium	0.746	0.746	U	"	"	"	"	"	"
Silicon	**574**	1.49		"	"	"	"	"	"
Silver	0.149	0.149	U	"	"	"	"	"	"
Sodium	**135**	37.3		"	"	"	"	"	"
Strontium	**18.9**	0.746		"	"	"	"	"	"
Thallium	0.373	0.373	U	"	"	"	"	"	"
Tin	7.46	7.46	U	"	"	"	"	"	"
Uranium	14.9	14.9	U	"	"	"	"	"	"
Vanadium	**27.9**	1.87		"	"	"	"	"	"
Zinc	**92.8**	7.46		"	"	"	"	"	"
Mercury	0.0265	0.0265	U	mg/kg wet	"	L902183	02/25/2009	02/26/2009	7471A

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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/23/2009 15:44

J186C7

0902020-07 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	**5640**	3.29		mg/kg	1	L903198	03/23/2009	03/25/2009	6010B
Antimony	0.395	0.395	U	"	"	"	"	"	"
Arsenic	**2.63**	0.658		"	"	"	"	"	"
Barium	**39.6**	0.329		"	"	"	"	"	"
Beryllium	**0.192**	0.132		"	"	"	"	"	"
Bismuth	6.58	6.58	U	"	"	"	"	"	"
Boron	**0.639**	1.32	B	"	"	"	"	"	"
Cadmium	**0.213**	0.132		"	"	"	"	"	"
Calcium	**2660**	65.8		"	"	"	"	"	"
Chromium	**12.8**	0.132		"	"	"	"	"	"
Cobalt	**3.03**	1.32		"	"	"	"	"	"
Copper	**6.62**	0.658		"	"	"	"	"	"
Iron	**12500**	13.2		"	"	"	"	"	"
Lead	**3.58**	0.329		"	"	"	"	"	"
Lithium	**6.91**	1.64		"	"	"	"	"	"
Magnesium	**3370**	49.3		"	"	"	"	"	"
Manganese	**165**	3.29		"	"	"	"	"	"
Molybdenum	**0.198**	1.32	B	"	"	"	"	"	"
Nickel	**10.1**	2.63		"	"	"	"	"	"
Phosphorus	**489**	32.9		"	"	"	"	"	"
Potassium	**728**	263		"	"	"	"	"	"
Selenium	0.658	0.658	U	"	"	"	"	"	"
Silicon	**601**	1.32		"	"	"	"	"	"
Silver	0.132	0.132	U	"	"	"	"	"	"
Sodium	**132**	32.9		"	"	"	"	"	"
Strontium	**22.3**	0.658		"	"	"	"	"	"
Thallium	0.329	0.329	U	"	"	"	"	"	"
Tin	6.58	6.58	U	"	"	"	"	"	"
Uranium	13.2	13.2	U	"	"	"	"	"	"
Vanadium	**27.0**	1.64		"	"	"	"	"	"
Zinc	**47.2**	6.58		"	"	"	"	"	"
Mercury	0.0300	0.0300	U	mg/kg wet	"	L902183	02/25/2009	02/26/2009	7471A

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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/23/2009 15:44

J186C8
0902020-08 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	**4710**	3.79		mg/kg	1	L903198	03/23/2009	03/25/2009	6010B
Antimony	0.455	0.455	U	"	"	"	"	"	"
Arsenic	**3.13**	0.758		"	"	"	"	"	"
Barium	**32.8**	0.379		"	"	"	"	"	"
Beryllium	**0.171**	0.152		"	"	"	"	"	"
Bismuth	7.58	7.58	U	"	"	"	"	"	"
Boron	**0.688**	1.52	B	"	"	"	"	"	"
Cadmium	**0.149**	0.152		"	"	"	"	"	"
Calcium	**2860**	75.8		"	"	"	"	"	"
Chromium	**19.6**	0.152		"	"	"	"	"	"
Cobalt	**3.21**	1.52		"	"	"	"	"	"
Copper	**5.81**	0.758		"	"	"	"	"	"
Iron	**20100**	15.2		"	"	"	"	"	"
Lead	**3.19**	0.379		"	"	"	"	"	"
Lithium	**5.48**	1.89		"	"	"	"	"	"
Magnesium	**3190**	56.8		"	"	"	"	"	"
Manganese	**167**	3.79		"	"	"	"	"	"
Molybdenum	**0.232**	1.52	B	"	"	"	"	"	"
Nickel	**9.95**	3.03		"	"	"	"	"	"
Phosphorus	**551**	37.9		"	"	"	"	"	"
Potassium	**546**	303		"	"	"	"	"	"
Selenium	**0.538**	0.758	B	"	"	"	"	"	"
Silicon	**542**	1.52		"	"	"	"	"	"
Silver	0.152	0.152	U	"	"	"	"	"	"
Sodium	**100**	37.9		"	"	"	"	"	"
Strontium	**19.3**	0.758		"	"	"	"	"	"
Thallium	0.379	0.379	U	"	"	"	"	"	"
Tin	7.58	7.58	U	"	"	"	"	"	"
Uranium	15.2	15.2	U	"	"	"	"	"	"
Vanadium	**50.0**	1.89		"	"	"	"	"	"
Zinc	**31.9**	7.58		"	"	"	"	"	"
Mercury	0.0300	0.0300	U	mg/kg wet	"	L902183	02/25/2009	02/26/2009	7471A

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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/23/2009 15:44

Metals by SW846 6000/7000 series - Quality Control

Lionville Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L902183 - SW 7471A Prep										
Blank (L902183-BLK1)				Prepared: 02/25/2009 Analyzed: 02/26/2009						
Mercury	ND	0.0300	mg/kg wet							U
Duplicate (L902183-DUP1)		**Source: 0902020-01**		Prepared: 02/25/2009 Analyzed: 02/26/2009						
Mercury	ND	0.0265	mg/kg wet		ND				20	U
Matrix Spike (L902183-MS1)		**Source: 0902020-01**		Prepared: 02/25/2009 Analyzed: 02/26/2009						
Mercury	0.165	0.0290	mg/kg wet	0.16129	ND	102	75-125			
Reference (L902183-SRM1)				Prepared: 02/25/2009 Analyzed: 02/26/2009						
Mercury	4.92	0.154	mg/kg wet	4.7000		105	80-120			
Batch L903198 - SW 3050B										
Blank (L903198-BLK1)				Prepared: 03/23/2009 Analyzed: 03/25/2009						
Aluminum	ND	4.63	mg/kg							U
Antimony	ND	0.556	"							U
Arsenic	ND	0.926	"							U
Barium	ND	0.463	"							U
Beryllium	ND	0.185	"							U
Bismuth	ND	9.26	"							U
Boron	ND	1.85	"							U
Cadmium	ND	0.185	"							U
Calcium	ND	92.6	"							U
Chromium	ND	0.185	"							U
Cobalt	ND	1.85	"							U
Copper	ND	0.926	"							U
Iron	ND	18.5	"							U
Lead	ND	0.463	"							U
Lithium	ND	2.31	"							U
Magnesium	ND	69.4	"							U
Manganese	ND	4.63	"							U
Molybdenum	ND	1.85	"							U
Nickel	ND	3.70	"							U
Phosphorus	ND	46.3	"							U
Potassium	ND	370	"							U
Selenium	ND	0.926	"							U
Silicon	ND	1.85	"							U
Silver	ND	0.185	"							U
Sodium	ND	46.3	"							U
Strontium	ND	0.926	"							U
Thallium	ND	0.463	"							U
Tin	0.992	9.26	"							B
Uranium	ND	18.5	"							U
Vanadium	ND	2.31	"							U
Zinc	ND	9.26	"							U

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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/23/2009 15:44

Metals by SW846 6000/7000 series - Quality Control

Lionville Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L903198 - SW 3050B										
Duplicate (L903198-DUP1)		**Source: 0902020-08**		Prepared: 03/23/2009 Analyzed: 03/25/2009						
Aluminum	4770	3.73	mg/kg		4710			1	20	
Antimony	0.432	0.448	"		ND				20	B
Arsenic	2.85	0.746	"		3.13			9	20	
Barium	37.4	0.373	"		32.8			13	20	
Beryllium	0.176	0.149	"		0.171			3	20	
Bismuth	ND	7.46	"		ND				20	U
Boron	0.643	1.49	"		0.688			7	20	B
Cadmium	0.139	0.149	"		0.149			7	20	B
Calcium	3010	74.6	"		2860			5	20	
Chromium	18.4	0.149	"		19.6			6	20	
Cobalt	3.35	1.49	"		3.21			4	20	
Copper	7.39	0.746	"		5.81			24	20	
Iron	20900	14.9	"		20100			4	20	
Lead	2.76	0.373	"		3.19			14	20	
Lithium	5.84	1.87	"		5.48			6	20	
Magnesium	3270	56.0	"		3190			2	20	
Manganese	178	3.73	"		167			6	20	
Molybdenum	0.245	1.49	"		0.232			5	20	B
Nickel	9.70	2.99	"		9.95			2	20	
Phosphorus	587	37.3	"		551			6	20	
Potassium	557	299	"		546			2	20	
Selenium	ND	0.746	"		0.538				20	B, U
Silicon	506	1.49	"		542			7	20	
Silver	ND	0.149	"		ND				20	U
Sodium	112	37.3	"		100			11	20	
Strontium	19.0	0.746	"		19.3			2	20	
Thallium	ND	0.373	"		ND				20	U
Tin	ND	7.46	"		ND				20	U
Uranium	ND	14.9	"		ND				20	U
Vanadium	52.3	1.87	"		50.0			5	20	
Zinc	32.4	7.46	"		31.9			1	20	

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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/23/2009 15:44

Metals by SW846 6000/7000 series - Quality Control

Lionville Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L903198 - SW 3050B										
Matrix Spike (L903198-MS1)		**Source: 0902020-08**		Prepared: 03/23/2009 Analyzed: 03/25/2009						
Aluminum	5120	3.62	mg/kg	144.93	4710	279	75-125			
Antimony	18.7	0.435	"	36.232	ND	52	75-125			
Arsenic	139	0.725	"	144.93	3.13	94	75-125			
Barium	178	0.362	"	144.93	32.8	100	75-125			
Beryllium	3.75	0.145	"	3.6232	0.171	99	75-125			
Bismuth	342	7.25	"	362.32	ND	94	75-125			
Boron	65.6	1.45	"	72.464	0.688	90	75-125			
Cadmium	3.50	0.145	"	3.6232	0.149	93	75-125			
Calcium	4880	72.5	"	1811.6	2860	112	75-125			
Chromium	32.9	0.145	"	14.493	19.6	92	75-125			
Cobalt	37.1	1.45	"	36.232	3.21	94	75-125			
Copper	21.8	0.725	"	18.116	5.81	88	75-125			
Iron	19700	14.5	"	72.464	20100	NR	75-125			
Lead	35.9	0.362	"	36.232	3.19	90	75-125			
Lithium	75.1	1.81	"	72.464	5.48	96	75-125			
Magnesium	4920	54.3	"	1811.6	3190	95	75-125			
Manganese	198	3.62	"	36.232	167	85	75-125			
Molybdenum	70.0	1.45	"	72.464	0.232	96	75-125			
Nickel	43.8	2.90	"	36.232	9.95	93	75-125			
Phosphorus	894	36.2	"	362.32	551	95	75-125			
Potassium	2230	290	"	1811.6	546	93	75-125			
Selenium	133	0.725	"	144.93	0.538	91	75-125			
Silicon	738	1.45	"	72.464	542	270	75-125			
Silver	3.30	0.145	"	3.6232	ND	91	75-125			
Sodium	1900	36.2	"	1811.6	100	99	75-125			
Strontium	91.6	0.725	"	72.464	19.3	100	75-125			
Thallium	130	0.362	"	144.93	ND	90	75-125			
Tin	65.8	7.25	"	72.464	ND	91	75-125			
Uranium	340	14.5	"	362.32	ND	94	75-125			
Vanadium	85.1	1.81	"	36.232	50.0	97	75-125			
Zinc	65.2	7.25	"	36.232	31.9	92	75-125			

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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/23/2009 15:44

Metals by SW846 6000/7000 series - Quality Control

Lionville Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L903198 - SW 3050B										
Reference (L903198-SRM1)				Prepared: 03/23/2009 Analyzed: 03/25/2009						
Aluminum	2780	4.81	mg/kg	2725.2		102	30.8-169.3			
Antimony	8700	27.7	"	4954.8		176	0-264.8			
Arsenic	53.4	0.962	"	24.800		215	0-205.6			
Barium	605	0.481	"	586.40		103	83.9-116.1			
Cadmium	1.30	0.192	"	1.2000		108	).083-183.:			
Calcium	5590	96.2	"	5426.5		103	70.1-129.9			
Chromium	12.6	0.192	"	10.700		118	0-205.6			
Cobalt	2.88	1.92	"	2.7000		107	0-1000			
Copper	4090	0.962	"	4792.4		85	52.2-147.8			
Iron	9320	19.2	"	6481.4		144	15.8-184.5			
Lead	110000	23.1	"	144740		76	0-1000			
Magnesium	2580	72.1	"	2367.4		109	0-1000			
Manganese	191	4.81	"	174.20		109	63.1-136.6			
Nickel	12.9	3.85	"	12.600		102	63.8-136.2			
Potassium	1070	385	"	1005.8		106	62.1-137.8			
Silver	7.09	0.192	"	6.5000		109	36.9-169.2			
Sodium	309	48.1	"	380.00		81	25-175			
Thallium	ND	0.481	"	0.60000			0-1000			U
Tin	353	9.62	"	304.10		116	0-1000			
Vanadium	14.8	2.40	"	8.7000		170	0-1000			
Zinc	498	9.62	"	546.40		91	64.6-135.4			

Lionville Laboratory Incorporated Logbook #: 537

SAMPLE DIGESTION RECORD

SOP: L-SPI-3020 Rev. 00

Digestion Batch #: L903198
Date/Time Initiated: 3/23/09 1700
Date/Time Completed: 3/24/09 1145
Analyst(s): MW
Matrix: Soil Water Other:
Instr. Type: AA ICP
Parameters: HSL + B-, Bi, Li, Mg, P-, Si, Sr, Sn, U-

Digested / Undigested (circle one)
Balance #: B20
Balance Cal Verif: Y NA
Hot Plate Temp: 95°

Method: SW (circle)
3005A
3010A
3015
3020A
7060A (As/Se)
7760A (Ag)
~~3050B~~
3051
CLP ILMO3.0
ILMO4.0

DW 200.7 (1994)
200.9
3113B
MCAWW 200.7 (1982)
200 (AA)
206.2 (As/Se)
SM 3030C (NC)
Other

WC Hanford

COC Batch #	Spike Vol(s) (mL)	Initial Wt/Vol (g/mL)	Final Vol (mL)	pH <2	Type: To/So/TC	Texture	Color/Appearance	Artifact	Turb
0902012-021		0.67gm	50ml	<2	TO	fine	brown reddish	water	
0902070-01		0.73gm				not fine	brown, tan, granular red.		
02		0.60gm						N/A	
03		0.67gm							
04		0.69gm					brown red.		
05		0.74gm							
06		0.67gm							
07		0.76gm							
08		0.66gm							
L903198-DUP1		0.67gm							
MS1	0.5ml *	0.69gm							
BLK1		0.54gm				coarse	broken chips		
SRM1	*	0.52gm				fine	dirty brown soil		

MW 3/23/09

Spiking IDs:
MS #: 8100-04-04
05
06
6072-080-16
LCS #: * 6072-077-06

Reagent IDs:
HNO_3 G44029
HCL G36A01
H_2O_2 G34A19
1:1 HNO_3 9789-094-08
1:1 HCL

File ID#: done in Rosemin MW 3/30/09
LIMS Transfer: Y N
Data Review By/Date:

* also 0.25ml 6072-080-10 (Bi)
0.25ml 6072-079-14 (P-)
0.25ml 6072-080-12 (U-)

L-SPI-3020-A-0601

00000018

Lionville Laboratory Incorporated

MERCURY PREPARATION

Logbook # 600 TETA 2/25/09

Analyst: TEO
Date 2/25/09
Start Time/Temp: 1905 | 93°
End Time/Temp: 1935 | 94°

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

Prep Batch: L902183
Worksheet: HG022601
SOP No. ME-HgCVAA, Rev. 02

pH < 2 for Liquids? __ Yes NA No (If no: designate affected samples in Comments column, and initiate an SDR)

NOTE: The Inital/Final Volume for water samples = 33mL, unless otherwise noted.
The Final volume for soil samples = 50mL, unless otherwise noted.

LvLI Batch #	Container Number	Spike Volume (mL)	Spike Conc. (µg/L)	Initial Wt. or Volume (g or mL)	Final Sample Volume (mL)	Comments, % Solids, etc.
Blank	ID ON TUBE			10mL	50mL	
0.2 ug/L		0.100				
1.0		0.500				
2.0		1.000				
5.0		2.500				
10.0		5.000				
ICV		0.125	2.5			
CCV		0.250	5.0			
ICB/CCB						
MB1				0.30		L902183-BLK1
LC1		*	*	0.35		L902183-SRM1
WCH 0902020-01				0.31		
01R				0.34		
01S		0.500	1.0	0.31		
02				0.34		
03				0.31		
04				0.30		
05				0.37		
06				0.34		
07				0.30		
08				0.30		
WCH 0902012-021				0.30		
WCH 0902041-01				0.36		
01R				0.32		
01S		0.500	1.0	0.36		
04				0.34		
05				0.31		

Standard:	ID	Prep Date/Time
ICAL/MS	R1 6022-050-14B	2/25/09 1410
ICV/CCV/LCS	IV 6022-050-15B	

Reviewed By/Date: [signature] 3/2/09

see book # 9368 for std traceability information

Soil LCS =US Metals in soil No.3; True Value = 4.70 mg/Kg
Catalogue #1RM-021, Lot # E021

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

A

ME-HgCVAA-Prep1007

Page #:

Lionville Laboratory Incorporated

MERCURY PREPARATION

Logbook # 600

Analyst: TLD
Date 2/25/09
Start Time/Temp: See page 003
End Time/Temp:

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

Prep Batch: L902183
Worksheet: HG022609
SOP No. ME-HgCVAA, Rev. 02

pH < 2 for Liquids? __ Yes NA No (If no: designate affected samples in Comments column, and initiate an SDR)

NOTE: The Inital/Final Volume for water samples = 33mL, unless otherwise noted.
The Final volume for soil samples = 50mL, unless otherwise noted.

LvLI Batch #	Container Number	Spike Volume (mL)	Spike Conc. (µg/L)	Initial Wt. or Volume (g or mL)	Final Sample Volume (mL)	Comments, % Solids, etc.
0902041-07	ID on tube			0.38	50mL	

TLD 2/25/09

Standard:	ID	Prep Date/Time
ICAL/MS	See page 003	
ICV/CCV/LCS		

A

Reviewed By/Date: [signature] 3/2/09

see book # 9368 for std traceability information

Soil LCS =US Metals in soil No.3; True Value = 4.70 mg/Kg
Catalogue #1RM-021, Lot # E021

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

ME-HgCVAA-Prep1007

Page #:

00000020

Sub SRC

Lionville Laboratory Use Only: 0902020

Custody Transfer Record/Lab Work Request

Page 1 of 1

LVLI

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client: WC Hanford SAF# RC-116

Est. Final Proj. Sampling Date:

Project#: 60049-001-001-0001-00

Project Contact/Phone#:

Lionville Laboratory Project Manager: Arlette Johnson

QC: SW846 Del: STO TAT: 30 days

Date Rec'd: 2.6.09 Date Due: 3-8-09

		A	B	C		D			E		F		G			
Refrigerator #		Van	2	2		2			2		2					
#/Type Container	Liquid	~~1qt~~														
	Solid	1qgl	1qgl	1qgl		1qgl			1pl		1qgl		1pl			
Volume	Solid	250	250	125		250			250		125		1L			
Preservatives		—	—	—		—			—		—		—			
ANALYSES REQUESTED		VOA	BNA	Pest/PCB	Herb	PCBs			Metal	CN	TOC		Particle Size			
			ORGANIC						INORG							
		Lionville Laboratory Use Only														
		8260H	8270H	8081H		OPCB			MetO		TOCT		TSUB			

MATRIX CODES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	A	B	C		D			E		F		G			
S- Soil SE- Sediment SO- Solid SL- Sludge W- Water O- Oil A- Air DS- Drum Solids DL- Drum Liquids L- EP/TCLP Leachate WI- Wipe X- Other F- Fish	001	J186C0			SO	2.4.09	1200	X	X	X		X			X		X		X			
	002	J186C1					1135	X	X	X		X			X		X		X			
	003	J186C2					1315	X	X	X		X			X		X		X			
	004	J186C3					1100	X	X	X		X			X		X		X			
	005	J186C5					1120	X	X	X		X			X		X		X			
	006	J186C6					1055	X	X	X		X			X		X		X			
	007	J186C7					1145	X	X	X		X			X		X		X			
	008	J186C8					1200	X	X	X		X			X		X		X			
	009	J17W09					0730	X														
	010	J17W11					0730	X														

Special Instructions:

MetO = HSL + B, Bi, Li, Mo, Sr, Si, Sn, U, P

Special Instructions:

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

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	2.6.09	0930

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
ORIGINAL REWRITTEN		COMPOSITE WASTE	

12000000271

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-846	Page 1 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 8 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C0	OTHER SOLID	2/4/09	1200					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: B Meyer BMM	2/4/09	Received By/Stored In: Fig A	2/4/09 1500
Relinquished By/Removed From: Ref A	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2.6.09 0930	Received By/Stored In: W Johnson	2.6.09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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-116-846	Page 2 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 8 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No.	Matrix *	Sample Date	Sample Time									
J186C0	OTHER SOLID	2/4/09	1200	X								

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: B Mayer BMayer	Date/Time: 2/4/09 1500	Received By/Stored In: Fry A	Date/Time: 2/4/09 1500
Relinquished By/Removed From: Ref A 2/5/09	Date/Time: 0830	Received By/Stored In: BWoodward 2/5/09	Date/Time: 0830
Relinquished By/Removed From: BWoodward 2/5/09	Date/Time: 1000	Received By/Stored In: Fed Ex 2/5/09	Date/Time: 1000
Relinquished By/Removed From: Fed Ex 2.6.09	Date/Time: 0930	Received By/Stored In: [illegible]	Date/Time: 2.6.09/0930
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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

E2B0000823

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-847	Page 1 of 2

Collector BM	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator WEISS, RL	Price Code 9K	Data Turnaround 45 Days
Project Designation Columbia River Component of the RCBRA - Sediment	Sampling Location WP- 7 SSD		SAF No. RC-116		
Ice Chest No. WCH-08-011	Field Logbook No. EL-1631/-1	COA BESCRC6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES LIONVILLE	Offsite Property No. N/A		Bill of Lading/Air Bill No. 796316779760		

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C1	OTHER SOLID	2/4/09	1135					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Maylan BMaylan	2/4/09 1500	Fed A	2/4/09 1500
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Fed A	2/5/09 0830	B Woodward	2/5/09 0830
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Woodward	2/5/09 1000	Fed Ex	2/5/09 1000
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Fed Ex	2-6-09 0930	D. Johnson	2-6-09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

92000000

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-847	Page 2 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 7 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										
Sample No.	Matrix *	Sample Date	Sample Time								
J186C1	OTHER SOLID	2/4/09	1125	X							

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS
Relinquished By/Removed From: BM Date/Time: 2/4/09 1700	Received By/Stored In: Fritz A Date/Time: 2/4/09 1700	Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.
Relinquished By/Removed From: Ret A 2/5/09 Date/Time: 0830	Received By/Stored In: B Woodward 2/5/09 Date/Time: 0830	
Relinquished By/Removed From: B Woodward 2/5/09 Date/Time: 1000	Received By/Stored In: FedEx 2/5/09 Date/Time: 1000	
Relinquished By/Removed From: FedEx 2-6-09 Date/Time: 0930	Received By/Stored In: [illegible] 2-6-09 Date/Time: 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:	

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-848	Page 1 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 9 SSD		SAF No.: RC-116
Ice Chest No.: WLH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C2	OTHER SOLID	2/4/09	1315					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	B Maylan	2/4/09 1500	Fed A	2/4/09 1500
Relinquished By/Removed From	Ref A	2/5/09 0830	Received By/Stored In: Bluedlewand	2/5/09 0830
Relinquished By/Removed From	Bluedlewand	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From	Fed Ex	2-6-09 1030	Received By/Stored In	2-6-09 1030
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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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-116-848	Page 2 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP-9 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 79631677976 0

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										
Sample No.	Matrix *	Sample Date	Sample Time								
J186C2	OTHER SOLID	2/4/09	1315	X							

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Maynor BM	2/4/09 1500	Fed A	2/4/09 1500
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kel A	2/5/09 0880	R Woodward	2/5/09 0830
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
R Woodward	2/5/09 1000	FedEx	2/5/09 1000
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
FedEx	2.6.09 10930	[illegible]	2.6.09 10930
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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-849	Page 1 of 2

Collector: B.M	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 6 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 7963167797 60

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C3	OTHER SOLID	2/4/09	1100					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: B. Mayer / Bethel	2/4/09 1300	Received By/Stored In: Fong A	2/4/09 1320
Relinquished By/Removed From: Ref A	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: FedEx	2/5/09 1000
Relinquished By/Removed From: FedEx	2.6.09 0930	Received By/Stored In: D. Smith	2.6.09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

...anford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-849	Page 2 of 2

2M	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
...gnation: ...umbia River Component of the RCBRA - Sediment	Sampling Location: WP- 6 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-11	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No.	Matrix *	Sample Date	Sample Time									
J186C3	OTHER SOLID	2/4/09	1100	X								

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Mayhew BM	2/4/09 1500	Fig A	2/4/09 1500
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Ret A 2/5/09	0830	B Woodward	2/5/09 0830
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Woodward 2/5/09	1000	Fed Ex	2/5/09 1000
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Fed Ex	2.6.09 1093	[illegible]	2.6.09 1093
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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

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Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-851	Page 1 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 2 SSD		SAF No.: RC-116
Ice Chest No.: WCH-09-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C5	OTHER SOLID	2/4/09	1120					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From	2.4.09 1515	Received By/Stored In	2.4.09 1545
Relinquished By/Removed From	2/5/09 0830	Received By/Stored In	2/5/09 0830
Relinquished By/Removed From	2/5/09 1000	Received By/Stored In	2/5/09 1000
Relinquished By/Removed From	2.6.09 0930	Received By/Stored In	2.6.09 0930
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-851	Page 2 of 2

Collector: L Gratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 2 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										
Sample No.	Matrix *	Sample Date	Sample Time								
J186C5	OTHER SOLID	2/4/09	1120	X							

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[illegible]	2-4-09 1515	Ref B	2-4-09 1515
Ref B	2/5/09 0830	R Woodward	2/5/09 0830
R Woodward	2/5/09 1000	Fed Ex	2/5/09 1000
Fed Ex	2-6-09 0930	D J Smith	2-6-09 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

15000000

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-852	Page 1 of 2

Collector: L. Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- / SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 7963167 9760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time									
J186C6	OTHER SOLID	2/4/09	1055					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From	2-4-09 1515	Received By/Stored In	2-4-09 1515
Relinquished By/Removed From: Ret B	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2-6-09 0930	Received By/Stored In	2-6-09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wl=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-116-852	Page 2 of 2
Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL	Price Code: 9K — Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- / SSD		SAF No.: RC-116	
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										
Sample No.	Matrix *	Sample Date	Sample Time								
J186C6	OTHER SOLID	2/4/09	1055	X							

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[signature]	2.4.09 1515	[signature]	2.4.09 1515
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Ret. B	2/5/09 0830	B Woodlawn	2/5/09 0830
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Woodlawn	2/5/09 1000	FedEx	2/5/09 1000
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
FedEx	2.6.09 0930	[signature]	2.6.09 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-853	Page 1 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL	Price Code: 9K	Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 3 SSD		SAF No.: RC-116		
Ice Chest No.: ~~WCH-08-058~~ 2/5 WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX		
Shipped To: EBERLINE SERVICES/LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 7963167797 60 ~~7973132049 40~~ 2/5		

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C7	OTHER SOLID	2/4/09	1145					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [illegible]	2-4-09 1515	Received By/Stored In: [illegible]	2-4-09 1515
Relinquished By/Removed From: [illegible]	2/5/09 0830	Received By/Stored In: D. Heidelberg	2/5/09 0830
Relinquished By/Removed From: D. Heidelberg	2/5/09 1000	Received By/Stored In: Fedex	2/5/09 1000
Relinquished By/Removed From: Fedex	2-6-09 0930	Received By/Stored In: [illegible]	2-6-09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-853	Page 2 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP-7 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No.	Matrix *	Sample Date	Sample Time									
J186C7	OTHER SOLID	2/4/09	1145	X								

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS
Relinquished By/Removed From: [illegible] Date/Time: 2-4-09 / 1515	Received By/Stored In: Kelly B Date/Time: 2-4-09 / 1515	Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.
Relinquished By/Removed From: R. F. B Date/Time: 2/5/09 0830	Received By/Stored In: B Woodward Date/Time: 2/5/09 0830	
Relinquished By/Removed From: B Woodward Date/Time: 2/5/09 1000	Received By/Stored In: Fed Ex Date/Time: 2/5/09 1000	
Relinquished By/Removed From: Fed Ex Date/Time: 2-6-09 / 0930	Received By/Stored In: D. J. Smith Date/Time: 2-6-09 / 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:	

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

00000035

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-854	Page 1 of 2

Collector: J Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL	Price Code: 9K	Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 4 SSD		SAF No.: RC-116		
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX		
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 7963167797 60		

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1
J186C8	OTHER SOLID	2/4/09	12.00					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: [illegible]	2.4.09 / 1515	Received By/Stored In: Reg B	2.4.09 / 1515
Relinquished By/Removed From: Reg B	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2.6.09 0930	Received By/Stored In: [illegible]	2.6.09 / 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-854	Page 2 of 2

Collector: J Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 4 SSD		SAF No.: RC-116
Ice Chest No.: WLH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										

Sample No.	Matrix *	Sample Date	Sample Time										
J186C8	OTHER SOLID	2/4/09	1200	X									

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [illegible]	2.4.09 1515	Received By/Stored In: Ref B	2.4.09 1515
Relinquished By/Removed From: Ref B	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: FedEx	2/5/09 1000
Relinquished By/Removed From: FedEx	2.6.09 0930	Received By/Stored In: [illegible]	2.6.09 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

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Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-121	Page 1 of 1

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: TRIP BLANK		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	Cool 4C											
Type of Container	G											
No. of Container(s)	1											
Volume	250g											
SAMPLE ANALYSIS	See item (1) in Special Instructions.											
Sample No.	Matrix *	Sample Date	Sample Time									
J17W09	OTHER SOLID	2/4/09	0720	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From	2.4.09/1600	Received By/Stored In: Ref B	2.4.09/1500
Relinquished By/Removed From: Ref B	2/5/09 0830	Received By/Stored In: BWoodward	2/5/09 0830
Relinquished By/Removed From: BWoodward	2/5/09 1000	Received By/Stored In: FedEx	2/5/09 1000
Relinquished By/Removed From: FedEx	2.6.09 1030	Received By/Stored In: [illegible]	2.6.09 1030
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) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropene, Trichloroethene, Vinyl chloride, Xylenes (total)}

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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-116-123	Page 1 of 1

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: TRIP BLANK		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	Cool 4C										
Type of Container	G										
No. of Container(s)	1										
Volume	250g										
SAMPLE ANALYSIS	See item (1) in Special Instructions.										
Sample No.	Matrix *	Sample Date	Sample Time								
J17W11	OTHER SOLID	2/4/08	730	X							

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
BMayle BMayle	2/4/08 1500	Bry A	2/4/08 (SX)
Kit A	2/5/09 0830	Blwoodward	2/5/09 0830
Blwoodward	2/5/09 1000	FedEx	2/5/09 1000
FedEx	2.6.09 0930	[illegible]	2.6.09 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) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropene, Trichloroethene, Vinyl chloride, Xylenes (total)}

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: WC Hanford
Project/SAF/SOW/Release #: RC-116

Date: 2-6-09

LvLI Batch #: 0902020

Sample Custodian: D. [illegible]

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier FedEx		Airbill # 7963 1677 9760
2. Custody Seals on coolers or shipping containers intact, signed & dated?	☑ Yes	☐ No	☐ No Seals
3. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	*Comments:*
4. All expected paperwork received (coc & other client specific information) sealed in plactic bag and easily accessible?	☑ Yes	☐ No	
5. Samples received cooled or ambient?	Temp 2.3	°C	Cooler # WCH-08-011
How was the temperature taken?	☑ IR	☐ Temp. Blank	☐ Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	☑ Yes	☐ No	
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7. COC (Client & LvLI) 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 LvLI 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 _____

LVLI LIONVILLE LABORATORY INC.

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

RECEIVED
MAY 2009

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-116 PST Project Number: [none] K1526 Project Manager: Joan Kessner	**Reported:** 04/14/2009 13:33

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
J186C0	0902020-01	Solid	02/04/2009 12:00	02/06/2009 09:30
J186C1	0902020-02	Solid	02/04/2009 11:35	02/06/2009 09:30
J186C2	0902020-03	Solid	02/04/2009 13:15	02/06/2009 09:30
J186C3	0902020-04	Solid	02/04/2009 11:00	02/06/2009 09:30
J186C5	0902020-05	Solid	02/04/2009 11:20	02/06/2009 09:30
J186C6	0902020-06	Solid	02/04/2009 10:55	02/06/2009 09:30
J186C7	0902020-07	Solid	02/04/2009 11:45	02/06/2009 09:30
J186C8	0902020-08	Solid	02/04/2009 12:00	02/06/2009 09:30

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-116
LVL #: 0902020
SDG/SAF # K1526/RC-116

W.O. #: 60049-001-001-0001-00
Date Received: 02-06-2009

CHLORINATED PESTICIDES

Eight (8) solid samples were collected on 02-04-2009.

The samples and associated QC samples were extracted on 02-18-2009 and 03-14-2009 and analyzed according to Lionville Laboratory SOPs based on SW846, 3rd Edition procedure on 02-27-2009 and 03-12,13,18,19-2009. The extraction procedure was based on method 3540C and the extracts were analyzed based on method 8081A.

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

1. Samples were originally extracted within the holding time. Due to no spike recoveries in the original blank spike, matrix spike and matrix spike duplicate, the samples were reextracted outside of the recommended holding time. Both the original and the reextracted results have been reported. A copy of the Sample Discrepancy Report (SDR) #09GC024.

2. The method blanks were below the reporting limits for all target compounds.

3. Three (3) of forty-eight (48) surrogate recoveries were outside acceptance criteria. A copy of the SDR #09GC050 is enclosed.

4. Twenty (20) of forty (40) blank spike recoveries were outside acceptance criteria. A copy of SDRs #09GC046 and #09GC024 are enclosed.

5. All samples required a 4-fold instrument dilution due to matrix.

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

7. All continuing calibration standards analyzed prior to sample extracts 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 55 pages.

8. 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.

9. 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.

Judy Stone

for Iain Daniels
Laboratory Manager
Lionville Laboratory

4/23/09
Date

Lionville Laboratory Sample Discrepancy Report (SDR)

SDR #: 0900050

Initiator: CAC
Date: 04/13/09
Client: WC Hanford

Batch: 0902020
Samples: 006
Method: SW846/MCAWW/CLP/

Parameter: Pest
Matrix: Solid
Prep Batch: L903118

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)

sample has double surrogate recoveries

2. Known or Probable Causes(s)

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:

Sample has no analyte hits, so potential high bias does not impact the data
NARRATE JD.

4. Project Manager Instructions...signature/date: gli 4/23/09
✓ 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: CM for JS 5/7/09

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

Lionville Laboratory Sample Discrepancy Report (SDR)

SDR #: 096C046

Initiator: CAL
Date: 04/09/09
Client: WC Hanford

Batch: 0902030
Samples: All
Method: SW846/MCAWW/CLP/

Parameter: Pest
Matrix: Solid
Prep Batch: L903118

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)

Recovery of methoxychlor is high in MS/MSD

2. Known or Probable Causes(s)

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:

No methoxychlor in any samples, so potential high bias has no impact on the data.
NARRATE JD.

4. Project Manager Instructions...signature/date: JL 4/23/09

__ 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: [illegible] 5/7/09

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

Lionville Laboratory Sample Discrepancy Report (SDR)

SDR #: 0960024

Initiator: Svetlana Zak
Date: 03/09/2009
Client: TN4 WC Hanford

Batch: 0902020, 0902023
Samples: BS
Method: SW846/MCAWW/CLP/

Parameter: 608 pesticides Only
Matrix: soil
Prep Batch: L902124

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)

L0902124-BS Not Spiked
L902124-MS1, MSD1
L902124-MS2, MSD2

2. Known or Probable Causes(s)

Since surrogates in the BS/MS/MSD are good, it is 100% certain that the analyst forgot to add the spikes. JD.

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:

Reextract and report both sets of data. JD.

4. Project Manager Instructions...signature/date: JH 4/23/09

✓ 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: _____

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

Other Explanation:

reextracted in batch L903118

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

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

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

QA-139-A-0208

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

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

Notes and Definitions

U	Analyte included in the analysis, but not detected
I-01	Due to matrix interference, the sample cannot be accurately quantified. The reported result is qualitative.
D	Data reported from a dilution
B	Analyte is found in the associated blank as well as in the sample (CLP B-flag).
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
RPD	Relative Percent Difference

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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

J186C0
0902020-01 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.33	1.33	U	ug/kg wet	4	L902124	02/18/2009	03/13/2009	8081A
gamma-BHC	1.33	1.33	U	"	"	"	"	"	"
beta-BHC	1.33	1.33	U	"	"	"	"	"	"
delta-BHC	1.33	1.33	U	"	"	"	"	"	"
Heptachlor	1.33	1.33	U	"	"	"	"	"	"
Aldrin	1.33	1.33	U	"	"	"	"	"	"
Heptachlor epoxide	1.33	1.33	U	"	"	"	"	"	"
gamma-Chlordane	1.33	1.33	U	"	"	"	"	"	"
alpha-Chlordane	1.33	1.33	U	"	"	"	"	"	"
Endosulfan I	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDE	1.33	1.33	U	"	"	"	"	"	"
Dieldrin	1.33	1.33	U	"	"	"	"	"	"
Endrin	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDD	1.33	1.33	U	"	"	"	"	"	"
Endosulfan II	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDT	1.33	1.33	U	"	"	"	"	"	"
Endrin aldehyde	1.33	1.33	U	"	"	"	"	"	"
Endosulfan sulfate	1.33	1.33	U	"	"	"	"	"	"
Methoxychlor	1.33	1.33	U	"	"	"	"	"	"
Endrin ketone	1.33	1.33	U	"	"	"	"	"	"
Toxaphene	20.0	20.0	U	"	"	"	"	"	"
Surrogate: Tetrachloro-meta-xylene		*125 %*			*28-166*	"	"	"	"
Surrogate: Decachlorobiphenyl		*143 %*			*37-153*	"	"	"	"

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Fax: 610-280-3041

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

J186C0

0902020-01RE1 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.33	1.33	U	ug/kg wet	4	L903118	03/14/2009	03/19/2009	8081A
gamma-BHC	1.33	1.33	U	"	"	"	"	"	"
beta-BHC	1.33	1.33	U	"	"	"	"	"	"
delta-BHC	1.33	1.33	U	"	"	"	"	"	"
Heptachlor	1.33	1.33	U	"	"	"	"	"	"
Aldrin	1.33	1.33	U	"	"	"	"	"	"
Heptachlor epoxide	1.33	1.33	U	"	"	"	"	"	"
gamma-Chlordane	1.33	1.33	U	"	"	"	"	"	"
alpha-Chlordane	1.33	1.33	U	"	"	"	"	"	"
Endosulfan I	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDE	1.33	1.33	U	"	"	"	"	"	"
Dieldrin	1.33	1.33	U	"	"	"	"	"	"
Endrin	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDD	1.33	1.33	U	"	"	"	"	"	"
Endosulfan II	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDT	1.33	1.33	U	"	"	"	"	"	"
Endrin aldehyde	1.33	1.33	U	"	"	"	"	"	"
Endosulfan sulfate	1.33	1.33	U	"	"	"	"	"	"
Methoxychlor	1.33	1.33	U	"	"	"	"	"	"
Endrin ketone	1.33	1.33	U	"	"	"	"	"	"
Toxaphene	20.0	20.0	U	"	"	"	"	"	"
Surrogate: Tetrachloro-meta-xylene		*120 %*			*28-166*	"	"	"	"
Surrogate: Decachlorobiphenyl		*107 %*			*37-153*	"	"	"	"

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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

J186C1
0902020-02 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.33	1.33	U	ug/kg wet	4	L902124	02/18/2009	03/12/2009	8081A
gamma-BHC	1.33	1.33	U	"	"	"	"	"	"
beta-BHC	1.33	1.33	U	"	"	"	"	"	"
delta-BHC	1.33	1.33	U	"	"	"	"	"	"
Heptachlor	1.33	1.33	U	"	"	"	"	"	"
Aldrin	1.33	1.33	U	"	"	"	"	"	"
Heptachlor epoxide	1.33	1.33	U	"	"	"	"	"	"
gamma-Chlordane	1.33	1.33	U	"	"	"	"	"	"
alpha-Chlordane	1.33	1.33	U	"	"	"	"	"	"
Endosulfan I	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDE	1.33	1.33	U	"	"	"	"	"	"
Dieldrin	1.33	1.33	U	"	"	"	"	"	"
Endrin	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDD	1.33	1.33	U	"	"	"	"	"	"
Endosulfan II	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDT	1.33	1.33	U	"	"	"	"	"	"
Endrin aldehyde	1.33	1.33	U	"	"	"	"	"	"
Endosulfan sulfate	1.33	1.33	U	"	"	"	"	"	"
Methoxychlor	1.33	1.33	U	"	"	"	"	"	"
Endrin ketone	1.33	1.33	U	"	"	"	"	"	"
Toxaphene	20.0	20.0	U	"	"	"	"	"	"
Surrogate: Tetrachloro-meta-xylene		*140 %*			*28-166*	"	"	"	"
Surrogate: Decachlorobiphenyl		* *158 %*			*37-153*	"	"	"	"

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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

J186C1
0902020-02RE1 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.33	1.33	U	ug/kg wet	4	L903118	03/14/2009	03/19/2009	8081A
gamma-BHC	1.33	1.33	U	"	"	"	"	"	"
beta-BHC	1.33	1.33	U	"	"	"	"	"	"
delta-BHC	1.33	1.33	U	"	"	"	"	"	"
Heptachlor	1.33	1.33	U	"	"	"	"	"	"
Aldrin	1.33	1.33	U	"	"	"	"	"	"
Heptachlor epoxide	1.33	1.33	U	"	"	"	"	"	"
gamma-Chlordane	1.33	1.33	U	"	"	"	"	"	"
alpha-Chlordane	1.33	1.33	U	"	"	"	"	"	"
Endosulfan I	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDE	1.33	1.33	U	"	"	"	"	"	"
Dieldrin	1.33	1.33	U	"	"	"	"	"	"
Endrin	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDD	1.33	1.33	U	"	"	"	"	"	"
Endosulfan II	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDT	1.33	1.33	U	"	"	"	"	"	"
Endrin aldehyde	1.33	1.33	U	"	"	"	"	"	"
Endosulfan sulfate	1.33	1.33	U	"	"	"	"	"	"
Methoxychlor	1.33	1.33	U	"	"	"	"	"	"
Endrin ketone	1.33	1.33	U	"	"	"	"	"	"
Toxaphene	20.0	20.0	U	"	"	"	"	"	"
Surrogate: Tetrachloro-meta-xylene		*97.9 %*			*28-166*	"	"	"	"
Surrogate: Decachlorobiphenyl		*102 %*			*37-153*	"	"	"	"

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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

J186C2
0902020-03 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.33	1.33	U	ug/kg wet	4	L902124	02/18/2009	03/13/2009	8081A
gamma-BHC	1.33	1.33	U	"	"	"	"	"	"
beta-BHC	1.33	1.33	U	"	"	"	"	"	"
delta-BHC	1.33	1.33	U	"	"	"	"	"	"
Heptachlor	1.33	1.33	U	"	"	"	"	"	"
Aldrin	1.33	1.33	U	"	"	"	"	"	"
Heptachlor epoxide	1.33	1.33	U	"	"	"	"	"	"
gamma-Chlordane	1.33	1.33	U	"	"	"	"	"	"
alpha-Chlordane	1.33	1.33	U	"	"	"	"	"	"
Endosulfan I	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDE	1.33	1.33	U	"	"	"	"	"	"
Dieldrin	1.33	1.33	U	"	"	"	"	"	"
Endrin	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDD	1.33	1.33	U	"	"	"	"	"	"
Endosulfan II	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDT	1.33	1.33	U	"	"	"	"	"	"
Endrin aldehyde	1.33	1.33	U	"	"	"	"	"	"
Endosulfan sulfate	1.33	1.33	U	"	"	"	"	"	"
Methoxychlor	1.33	1.33	U	"	"	"	"	"	"
Endrin ketone	1.33	1.33	U	"	"	"	"	"	"
Toxaphene	20.0	20.0	U	"	"	"	"	"	"
Surrogate: Tetrachloro-meta-xylene		*120 %*			*28-166*	"	"	"	"
Surrogate: Decachlorobiphenyl		*141 %*			*37-153*	"	"	"	"

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

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

J186C2
0902020-03RE1 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.33	1.33	U	ug/kg wet	4	L903118	03/14/2009	03/19/2009	8081A
gamma-BHC	1.33	1.33	U	"	"	"	"	"	"
beta-BHC	1.33	1.33	U	"	"	"	"	"	"
delta-BHC	1.33	1.33	U	"	"	"	"	"	"
Heptachlor	1.33	1.33	U	"	"	"	"	"	"
Aldrin	1.33	1.33	U	"	"	"	"	"	"
Heptachlor epoxide	1.33	1.33	U	"	"	"	"	"	"
gamma-Chlordane	1.33	1.33	U	"	"	"	"	"	"
alpha-Chlordane	1.33	1.33	U	"	"	"	"	"	"
Endosulfan I	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDE	1.33	1.33	U	"	"	"	"	"	"
Dieldrin	1.33	1.33	U	"	"	"	"	"	"
Endrin	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDD	1.33	1.33	U	"	"	"	"	"	"
Endosulfan II	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDT	1.33	1.33	U	"	"	"	"	"	"
Endrin aldehyde	1.33	1.33	U	"	"	"	"	"	"
Endosulfan sulfate	1.33	1.33	U	"	"	"	"	"	"
Methoxychlor	1.33	1.33	U	"	"	"	"	"	"
Endrin ketone	1.33	1.33	U	"	"	"	"	"	"
Toxaphene	20.0	20.0	U	"	"	"	"	"	"
Surrogate: Tetrachloro-meta-xylene		*113 %*			*28-166*	"	"	"	"
Surrogate: Decachlorobiphenyl		*122 %*			*37-153*	"	"	"	"

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Fax: 610-280-3041

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

J186C3
0902020-04 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.33	1.33	U	ug/kg wet	4	L902124	02/18/2009	03/13/2009	8081A
gamma-BHC	1.33	1.33	U	"	"	"	"	"	"
beta-BHC	1.33	1.33	U	"	"	"	"	"	"
delta-BHC	1.33	1.33	U	"	"	"	"	"	"
Heptachlor	1.33	1.33	U	"	"	"	"	"	"
Aldrin	1.33	1.33	U	"	"	"	"	"	"
Heptachlor epoxide	1.33	1.33	U	"	"	"	"	"	"
gamma-Chlordane	1.33	1.33	U	"	"	"	"	"	"
alpha-Chlordane	1.33	1.33	U	"	"	"	"	"	"
Endosulfan I	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDE	1.33	1.33	U	"	"	"	"	"	"
Dieldrin	1.33	1.33	U	"	"	"	"	"	"
Endrin	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDD	1.33	1.33	U	"	"	"	"	"	"
Endosulfan II	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDT	1.33	1.33	U	"	"	"	"	"	"
Endrin aldehyde	1.33	1.33	U	"	"	"	"	"	"
Endosulfan sulfate	1.33	1.33	U	"	"	"	"	"	"
Methoxychlor	1.33	1.33	U	"	"	"	"	"	"
Endrin ketone	1.33	1.33	U	"	"	"	"	"	"
Toxaphene	20.0	20.0	U	"	"	"	"	"	"
Surrogate: Tetrachloro-meta-xylene		*116 %*			*28-166*	"	"	"	"
Surrogate: Decachlorobiphenyl		*128 %*			*37-153*	"	"	"	"

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

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

J186C3
0902020-04RE1 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.33	1.33	U	ug/kg wet	4	L903118	03/14/2009	03/19/2009	8081A
gamma-BHC	1.33	1.33	U	"	"	"	"	"	"
beta-BHC	1.33	1.33	U	"	"	"	"	"	"
delta-BHC	1.33	1.33	U	"	"	"	"	"	"
Heptachlor	1.33	1.33	U	"	"	"	"	"	"
Aldrin	1.33	1.33	U	"	"	"	"	"	"
Heptachlor epoxide	1.33	1.33	U	"	"	"	"	"	"
gamma-Chlordane	1.33	1.33	U	"	"	"	"	"	"
alpha-Chlordane	1.33	1.33	U	"	"	"	"	"	"
Endosulfan I	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDE	1.33	1.33	U	"	"	"	"	"	"
Dieldrin	1.33	1.33	U	"	"	"	"	"	"
Endrin	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDD	1.33	1.33	U	"	"	"	"	"	"
Endosulfan II	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDT	1.33	1.33	U	"	"	"	"	"	"
Endrin aldehyde	1.33	1.33	U	"	"	"	"	"	"
Endosulfan sulfate	1.33	1.33	U	"	"	"	"	"	"
Methoxychlor	1.33	1.33	U	"	"	"	"	"	"
Endrin ketone	1.33	1.33	U	"	"	"	"	"	"
Toxaphene	20.0	20.0	U	"	"	"	"	"	"
Surrogate: Tetrachloro-meta-xylene		*115 %*			*28-166*	"	"	"	"
Surrogate: Decachlorobiphenyl		*122 %*			*37-153*	"	"	"	"

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Fax: 610-280-3041

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

J186C5

0902020-05 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.33	1.33	U	ug/kg wet	4	L902124	02/18/2009	03/13/2009	8081A
gamma-BHC	1.33	1.33	U	"	"	"	"	"	"
beta-BHC	1.33	1.33	U	"	"	"	"	"	"
delta-BHC	1.33	1.33	U	"	"	"	"	"	"
Heptachlor	1.33	1.33	U	"	"	"	"	"	"
Aldrin	1.33	1.33	U	"	"	"	"	"	"
Heptachlor epoxide	1.33	1.33	U	"	"	"	"	"	"
gamma-Chlordane	1.33	1.33	U	"	"	"	"	"	"
alpha-Chlordane	1.33	1.33	U	"	"	"	"	"	"
Endosulfan I	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDE	1.33	1.33	U	"	"	"	"	"	"
Dieldrin	1.33	1.33	U	"	"	"	"	"	"
Endrin	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDD	1.33	1.33	U	"	"	"	"	"	"
Endosulfan II	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDT	1.33	1.33	U	"	"	"	"	"	"
Endrin aldehyde	1.33	1.33	U	"	"	"	"	"	"
Endosulfan sulfate	1.33	1.33	U	"	"	"	"	"	"
Methoxychlor	1.33	1.33	U	"	"	"	"	"	"
Endrin ketone	1.33	1.33	U	"	"	"	"	"	"
Toxaphene	20.0	20.0	U	"	"	"	"	"	"
Surrogate: Tetrachloro-meta-xylene		*101 %*			*28-166*	"	"	"	"
Surrogate: Decachlorobiphenyl		*121 %*			*37-153*	"	"	"	"

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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

J186C5
0902020-05RE1 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.33	1.33	U	ug/kg wet	4	L903118	03/14/2009	03/19/2009	8081A
gamma-BHC	1.33	1.33	U	"	"	"	"	"	"
beta-BHC	1.33	1.33	U	"	"	"	"	"	"
delta-BHC	1.33	1.33	U	"	"	"	"	"	"
Heptachlor	1.33	1.33	U	"	"	"	"	"	"
Aldrin	1.33	1.33	U	"	"	"	"	"	"
Heptachlor epoxide	1.33	1.33	U	"	"	"	"	"	"
gamma-Chlordane	1.33	1.33	U	"	"	"	"	"	"
alpha-Chlordane	1.33	1.33	U	"	"	"	"	"	"
Endosulfan I	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDE	1.33	1.33	U	"	"	"	"	"	"
Dieldrin	1.33	1.33	U	"	"	"	"	"	"
Endrin	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDD	1.33	1.33	U	"	"	"	"	"	"
Endosulfan II	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDT	1.33	1.33	U	"	"	"	"	"	"
Endrin aldehyde	1.33	1.33	U	"	"	"	"	"	"
Endosulfan sulfate	1.33	1.33	U	"	"	"	"	"	"
Methoxychlor	1.33	1.33	U	"	"	"	"	"	"
Endrin ketone	1.33	1.33	U	"	"	"	"	"	"
Toxaphene	20.0	20.0	U	"	"	"	"	"	"
Surrogate: Tetrachloro-meta-xylene		*104 %*			*28-166*	"	"	"	"
Surrogate: Decachlorobiphenyl		*118 %*			*37-153*	"	"	"	"

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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

J186C6
0902020-06 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.33	1.33	U	ug/kg wet	4	L902124	02/18/2009	03/13/2009	8081A
gamma-BHC	1.33	1.33	U	"	"	"	"	"	"
beta-BHC	1.33	1.33	U	"	"	"	"	"	"
delta-BHC	1.33	1.33	U	"	"	"	"	"	"
Heptachlor	1.33	1.33	U	"	"	"	"	"	"
Aldrin	1.33	1.33	U	"	"	"	"	"	"
Heptachlor epoxide	1.33	1.33	U	"	"	"	"	"	"
gamma-Chlordane	1.33	1.33	U	"	"	"	"	"	"
alpha-Chlordane	1.33	1.33	U	"	"	"	"	"	"
Endosulfan I	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDE	1.33	1.33	U	"	"	"	"	"	"
Dieldrin	1.33	1.33	U	"	"	"	"	"	"
Endrin	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDD	1.33	1.33	U	"	"	"	"	"	"
Endosulfan II	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDT	1.33	1.33	U	"	"	"	"	"	"
Endrin aldehyde	1.33	1.33	U	"	"	"	"	"	"
Endosulfan sulfate	1.33	1.33	U	"	"	"	"	"	"
Methoxychlor	1.33	1.33	U	"	"	"	"	"	"
Endrin ketone	1.33	1.33	U	"	"	"	"	"	"
Toxaphene	20.0	20.0	U	"	"	"	"	"	"
Surrogate: Tetrachloro-meta-xylene		*110 %*			*28-166*	"	"	"	"
Surrogate: Decachlorobiphenyl		*128 %*			*37-153*	"	"	"	"

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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

J186C6
0902020-06RE1 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.33	1.33	U	ug/kg wet	4	L903118	03/14/2009	03/19/2009	8081A
gamma-BHC	1.33	1.33	U	"	"	"	"	"	"
beta-BHC	1.33	1.33	U	"	"	"	"	"	"
delta-BHC	1.33	1.33	U	"	"	"	"	"	"
Heptachlor	1.33	1.33	U	"	"	"	"	"	"
Aldrin	1.33	1.33	U	"	"	"	"	"	"
Heptachlor epoxide	1.33	1.33	U	"	"	"	"	"	"
gamma-Chlordane	1.33	1.33	U	"	"	"	"	"	"
alpha-Chlordane	1.33	1.33	U	"	"	"	"	"	"
Endosulfan I	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDE	1.33	1.33	U	"	"	"	"	"	"
Dieldrin	1.33	1.33	U	"	"	"	"	"	"
Endrin	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDD	1.33	1.33	U	"	"	"	"	"	"
Endosulfan II	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDT	1.33	1.33	U	"	"	"	"	"	"
Endrin aldehyde	1.33	1.33	U	"	"	"	"	"	"
Endosulfan sulfate	1.33	1.33	U	"	"	"	"	"	"
Methoxychlor	1.33	1.33	U	"	"	"	"	"	"
Endrin ketone	1.33	1.33	U	"	"	"	"	"	"
Toxaphene	20.0	20.0	U	"	"	"	"	"	"
Surrogate: Tetrachloro-meta-xylene		* *190 %*			*28-166*	"	"	"	"
Surrogate: Decachlorobiphenyl		* *195 %*			*37-153*	"	"	"	"

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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

J186C7
0902020-07 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.33	1.33	U	ug/kg wet	4	L902124	02/18/2009	03/13/2009	8081A
gamma-BHC	1.33	1.33	U	"	"	"	"	"	"
beta-BHC	1.33	1.33	U	"	"	"	"	"	"
delta-BHC	1.33	1.33	U	"	"	"	"	"	"
Heptachlor	1.33	1.33	U	"	"	"	"	"	"
Aldrin	1.33	1.33	U	"	"	"	"	"	"
Heptachlor epoxide	1.33	1.33	U	"	"	"	"	"	"
gamma-Chlordane	1.33	1.33	U	"	"	"	"	"	"
alpha-Chlordane	1.33	1.33	U	"	"	"	"	"	"
Endosulfan I	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDE	1.33	1.33	U	"	"	"	"	"	"
Dieldrin	1.33	1.33	U	"	"	"	"	"	"
Endrin	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDD	1.33	1.33	U	"	"	"	"	"	"
Endosulfan II	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDT	1.33	1.33	U	"	"	"	"	"	"
Endrin aldehyde	1.33	1.33	U	"	"	"	"	"	"
Endosulfan sulfate	1.33	1.33	U	"	"	"	"	"	"
Methoxychlor	1.33	1.33	U	"	"	"	"	"	"
Endrin ketone	1.33	1.33	U	"	"	"	"	"	"
Toxaphene	20.0	20.0	U	"	"	"	"	"	"
Surrogate: Tetrachloro-meta-xylene		*102 %*			*28-166*	"	"	"	"
Surrogate: Decachlorobiphenyl		*127 %*			*37-153*	"	"	"	"

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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

J186C7
0902020-07RE1 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.33	1.33	U	ug/kg wet	4	L903118	03/14/2009	03/19/2009	8081A
gamma-BHC	1.33	1.33	U	"	"	"	"	"	"
beta-BHC	1.33	1.33	U	"	"	"	"	"	"
delta-BHC	1.33	1.33	U	"	"	"	"	"	"
Heptachlor	1.33	1.33	U	"	"	"	"	"	"
Aldrin	1.33	1.33	U	"	"	"	"	"	"
Heptachlor epoxide	1.33	1.33	U	"	"	"	"	"	"
gamma-Chlordane	1.33	1.33	U	"	"	"	"	"	"
alpha-Chlordane	1.33	1.33	U	"	"	"	"	"	"
Endosulfan I	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDE	1.33	1.33	U	"	"	"	"	"	"
Dieldrin	1.33	1.33	U	"	"	"	"	"	"
Endrin	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDD	1.33	1.33	U	"	"	"	"	"	"
Endosulfan II	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDT	1.33	1.33	U	"	"	"	"	"	"
Endrin aldehyde	1.33	1.33	U	"	"	"	"	"	"
Endosulfan sulfate	1.33	1.33	U	"	"	"	"	"	"
Methoxychlor	1.33	1.33	U	"	"	"	"	"	"
Endrin ketone	1.33	1.33	U	"	"	"	"	"	"
Toxaphene	20.0	20.0	U	"	"	"	"	"	"
Surrogate: Tetrachloro-meta-xylene		*115 %*			*28-166*	"	"	"	"
Surrogate: Decachlorobiphenyl		*124 %*			*37-153*	"	"	"	"

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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

J186C8
0902020-08 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.33	1.33	U	ug/kg wet	4	L902124	02/18/2009	03/13/2009	8081A
gamma-BHC	1.33	1.33	U	"	"	"	"	"	"
beta-BHC	1.33	1.33	U	"	"	"	"	"	"
delta-BHC	1.33	1.33	U	"	"	"	"	"	"
Heptachlor	1.33	1.33	U	"	"	"	"	"	"
Aldrin	1.33	1.33	U	"	"	"	"	"	"
Heptachlor epoxide	1.33	1.33	U	"	"	"	"	"	"
gamma-Chlordane	1.33	1.33	U	"	"	"	"	"	"
alpha-Chlordane	1.33	1.33	U	"	"	"	"	"	"
Endosulfan I	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDE	1.33	1.33	U	"	"	"	"	"	"
Dieldrin	1.33	1.33	U	"	"	"	"	"	"
Endrin	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDD	1.33	1.33	U	"	"	"	"	"	"
Endosulfan II	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDT	1.33	1.33	U	"	"	"	"	"	"
Endrin aldehyde	1.33	1.33	U	"	"	"	"	"	"
Endosulfan sulfate	1.33	1.33	U	"	"	"	"	"	"
Methoxychlor	1.33	1.33	U	"	"	"	"	"	"
Endrin ketone	1.33	1.33	U	"	"	"	"	"	"
Toxaphene	20.0	20.0	U	"	"	"	"	"	"
Surrogate: Tetrachloro-meta-xylene		*108 %*			*28-166*	"	"	"	"
Surrogate: Decachlorobiphenyl		*118 %*			*37-153*	"	"	"	"

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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

J186C8

0902020-08RE1 (Solid)

Analyte	Result	Reporting Limit	Qualifier	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	1.33	1.33	U	ug/kg wet	4	L903118	03/14/2009	03/19/2009	8081A
gamma-BHC	1.33	1.33	U	"	"	"	"	"	"
beta-BHC	1.33	1.33	U	"	"	"	"	"	"
delta-BHC	1.33	1.33	U	"	"	"	"	"	"
Heptachlor	1.33	1.33	U	"	"	"	"	"	"
Aldrin	1.33	1.33	U	"	"	"	"	"	"
Heptachlor epoxide	1.33	1.33	U	"	"	"	"	"	"
gamma-Chlordane	1.33	1.33	U	"	"	"	"	"	"
alpha-Chlordane	1.33	1.33	U	"	"	"	"	"	"
Endosulfan I	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDE	1.33	1.33	U	"	"	"	"	"	"
Dieldrin	1.33	1.33	U	"	"	"	"	"	"
Endrin	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDD	1.33	1.33	U	"	"	"	"	"	"
Endosulfan II	1.33	1.33	U	"	"	"	"	"	"
4,4'-DDT	1.33	1.33	U	"	"	"	"	"	"
Endrin aldehyde	1.33	1.33	U	"	"	"	"	"	"
Endosulfan sulfate	1.33	1.33	U	"	"	"	"	"	"
Methoxychlor	1.33	1.33	U	"	"	"	"	"	"
Endrin ketone	1.33	1.33	U	"	"	"	"	"	"
Toxaphene	20.0	20.0	U	"	"	"	"	"	"
Surrogate: Tetrachloro-meta-xylene		*124 %*			*28-166*	"	"	"	"
Surrogate: Decachlorobiphenyl		*127 %*			*37-153*	"	"	"	"

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-116 Project Number: [none] Project Manager: Joan Kessner	**Reported:** 04/21/2009 07:24

Organochlorine Pesticides by SW846 8081A - Quality Control

Lionville Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L902124 - SW 3550B										
Blank (L902124-BLK1)				Prepared: 02/18/2009 Analyzed: 02/27/2009						
alpha-BHC	ND	0.333	ug/kg wet							U
gamma-BHC	ND	0.333	"							U
beta-BHC	ND	0.333	"							U
delta-BHC	ND	0.333	"							U
Heptachlor	ND	0.333	"							U
Aldrin	ND	0.333	"							U
Heptachlor epoxide	ND	0.333	"							U
gamma-Chlordane	ND	0.333	"							U
alpha-Chlordane	ND	0.333	"							U
Endosulfan I	ND	0.333	"							U
4,4'-DDE	ND	0.333	"							U
Dieldrin	ND	0.333	"							U
Endrin	ND	0.333	"							U
4,4'-DDD	ND	0.333	"							U
Endosulfan II	ND	0.333	"							U
4,4'-DDT	ND	0.333	"							U
Endrin aldehyde	ND	0.333	"							U
Endosulfan sulfate	ND	0.333	"							U
Methoxychlor	ND	0.333	"							U
Endrin ketone	ND	0.333	"							U
Toxaphene	ND	5.00	"							U
Surrogate: Tetrachloro-meta-xylene	*39.3*		"	*33.337*		*118*	*28-166*			
Surrogate: Decachlorobiphenyl	*35.3*		"	*33.333*		*106*	*37-153*			
LCS (L902124-BS1)				Prepared: 02/18/2009 Analyzed: 02/27/2009						
alpha-BHC	ND	0.333	ug/kg wet	33.333			61-142			U
gamma-BHC	ND	0.333	"	33.333			65-142			U
beta-BHC	ND	0.333	"	33.333			71-134			U
delta-BHC	ND	0.333	"	33.333			53-144			U
Heptachlor	ND	0.333	"	33.333			70-138			U
Aldrin	1.00	0.333	"	33.333		3.00	70-143			I-01
Heptachlor epoxide	ND	0.333	"	33.333			72-140			U
gamma-Chlordane	ND	0.333	"	33.333			74-140			U
alpha-Chlordane	ND	0.333	"	33.333			74-138			U
Endosulfan I	ND	0.333	"	33.333			81-141			U
4,4'-DDE	ND	0.333	"	33.333			82-145			U
Dieldrin	ND	0.333	"	33.333			79-144			U
Endrin	ND	0.333	"	33.333			73-147			U
4,4'-DDD	ND	0.333	"	33.333			77-148			U
Endosulfan II	ND	0.333	"	33.333			80-140			U
4,4'-DDT	ND	0.333	"	33.333			82-142			U
Endrin aldehyde	ND	0.333	"	33.333			59-133			U
Endosulfan sulfate	ND	0.333	"	33.333			77-135			U
Methoxychlor	ND	0.333	"	33.333			77-136			U

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Fax: 610-280-3041

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

Organochlorine Pesticides by SW846 8081A - Quality Control

Lionville Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L902124 - SW 3550B										
LCS (L902124-BS1)				Prepared: 02/18/2009 Analyzed: 02/27/2009						
Endrin ketone	ND	0.333	ug/kg wet	33.333			85-134			U
Surrogate: Tetrachloro-meta-xylene	*44.0*		"	*33.337*		*132*	*28-166*			
Surrogate: Decachlorobiphenyl	*40.0*		"	*33.333*		*120*	*37-153*			
Matrix Spike (L902124-MS1)		**Source: 0902020-02**		Prepared: 02/18/2009 Analyzed: 03/12/2009						
alpha-BHC	ND	0.333	ug/kg wet	33.333	ND		61-142			U
gamma-BHC	ND	0.333	"	33.333	ND		65-142			U
beta-BHC	ND	0.333	"	33.333	ND		71-134			U
delta-BHC	ND	0.333	"	33.333	ND		53-144			U
Heptachlor	ND	0.333	"	33.333	ND		70-138			U
Aldrin	ND	0.333	"	33.333	ND		70-143			U
Heptachlor epoxide	ND	0.333	"	33.333	ND		72-140			U
gamma-Chlordane	ND	0.333	"	33.333	ND		74-140			U
alpha-Chlordane	ND	0.333	"	33.333	ND		74-138			U
Endosulfan I	ND	0.333	"	33.333	ND		81-141			U
4,4'-DDE	ND	0.333	"	33.333	ND		82-145			U
Dieldrin	ND	0.333	"	33.333	ND		79-144			U
Endrin	ND	0.333	"	33.333	ND		73-147			U
4,4'-DDD	ND	0.333	"	33.333	ND		77-148			U
Endosulfan II	ND	0.333	"	33.333	ND		80-140			U
4,4'-DDT	ND	0.333	"	33.333	ND		82-142			U
Endrin aldehyde	ND	0.333	"	33.333	ND		59-133			U
Endosulfan sulfate	ND	0.333	"	33.333	ND		77-135			U
Methoxychlor	ND	0.333	"	33.333	ND		77-136			U
Endrin ketone	ND	0.333	"	33.333	ND		85-134			U
Surrogate: Tetrachloro-meta-xylene	*41.0*		"	*33.337*		*123*	*28-166*			
Surrogate: Decachlorobiphenyl	*47.7*		"	*33.333*		*143*	*37-153*			

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

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

Organochlorine Pesticides by SW846 8081A - Quality Control

Lionville Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L902124 - SW 3550B										
Matrix Spike Dup (L902124-MSD1)		**Source: 0902020-02**		Prepared: 02/18/2009 Analyzed: 03/12/2009						
alpha-BHC	ND	0.333	ug/kg wet	33.333	ND		61-142		40	U
gamma-BHC	ND	0.333	"	33.333	ND		65-142		40	U
beta-BHC	ND	0.333	"	33.333	ND		71-134		40	U
delta-BHC	ND	0.333	"	33.333	ND		53-144		40	U
Heptachlor	ND	0.333	"	33.333	ND		70-138		40	U
Aldrin	ND	0.333	"	33.333	ND		70-143		40	U
Heptachlor epoxide	ND	0.333	"	33.333	ND		72-140		40	U
gamma-Chlordane	ND	0.333	"	33.333	ND		74-140		40	U
alpha-Chlordane	ND	0.333	"	33.333	ND		74-138		40	U
Endosulfan I	ND	0.333	"	33.333	ND		81-141		40	U
4,4'-DDE	ND	0.333	"	33.333	ND		82-145		40	U
Dieldrin	ND	0.333	"	33.333	ND		79-144		40	U
Endrin	ND	0.333	"	33.333	ND		73-147		40	U
4,4'-DDD	ND	0.333	"	33.333	ND		77-148		40	U
Endosulfan II	ND	0.333	"	33.333	ND		80-140		40	U
4,4'-DDT	ND	0.333	"	33.333	ND		82-142		40	U
Endrin aldehyde	ND	0.333	"	33.333	ND		59-133		40	U
Endosulfan sulfate	ND	0.333	"	33.333	ND		77-135		40	U
Methoxychlor	ND	0.333	"	33.333	ND		77-136		40	U
Endrin ketone	ND	0.333	"	33.333	ND		85-134		40	U
Surrogate: Tetrachloro-meta-xylene	*39.6*		"	*33.337*		*119*	*28-166*			
Surrogate: Decachlorobiphenyl	*46.5*		"	*33.333*		*140*	*37-153*			
Batch L903118 - SW 3540C										
Blank (L903118-BLK1)				Prepared: 03/14/2009 Analyzed: 03/18/2009						
alpha-BHC	ND	0.333	ug/kg wet							U
gamma-BHC	ND	0.333	"							U
beta-BHC	ND	0.333	"							U
delta-BHC	ND	0.333	"							U
Heptachlor	ND	0.333	"							U
Aldrin	0.367	0.333	"							
Heptachlor epoxide	ND	0.333	"							U
gamma-Chlordane	ND	0.333	"							U
alpha-Chlordane	ND	0.333	"							U
Endosulfan I	ND	0.333	"							U
4,4'-DDE	ND	0.333	"							U
Dieldrin	ND	0.333	"							U
Endrin	ND	0.333	"							U
4,4'-DDD	ND	0.333	"							U
Endosulfan II	ND	0.333	"							U
4,4'-DDT	ND	0.333	"							U
Endrin aldehyde	ND	0.333	"							U
Endosulfan sulfate	ND	0.333	"							U
Methoxychlor	ND	0.333	"							U

264 Welsh Pool Road
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Fax: 610-280-3041

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

Organochlorine Pesticides by SW846 8081A - Quality Control

Lionville Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L903118 - SW 3540C										
Blank (L903118-BLK1)				Prepared: 03/14/2009 Analyzed: 03/18/2009						
Endrin ketone	ND	0.333	ug/kg wet							U
Toxaphene	ND	5.00	"							U
Surrogate: Tetrachloro-meta-xylene	*31.0*		"	*33.337*		*93.0*	*28-166*			
Surrogate: Decachlorobiphenyl	*31.1*		"	*33.333*		*93.4*	*37-153*			
LCS (L903118-BS1)				Prepared: 03/14/2009 Analyzed: 03/18/2009						
alpha-BHC	33.4	0.333	ug/kg wet	33.333		100	61-142			
gamma-BHC	34.2	0.333	"	33.333		103	65-142			
beta-BHC	32.0	0.333	"	33.333		96.0	71-134			
delta-BHC	21.9	0.333	"	33.333		65.7	53-144			
Heptachlor	33.3	0.333	"	33.333		99.8	70-138			
Aldrin	33.6	0.333	"	33.333		101	70-143			B
Heptachlor epoxide	33.1	0.333	"	33.333		99.3	72-140			
gamma-Chlordane	33.9	0.333	"	33.333		102	74-140			
alpha-Chlordane	33.0	0.333	"	33.333		99.1	74-138			
Endosulfan I	33.7	0.333	"	33.333		101	81-141			
4,4'-DDE	38.0	0.333	"	33.333		114	82-145			
Dieldrin	35.3	0.333	"	33.333		106	79-144			
Endrin	35.9	0.333	"	33.333		108	73-147			
4,4'-DDD	40.5	0.333	"	33.333		122	77-148			
Endosulfan II	33.4	0.333	"	33.333		100	80-140			
4,4'-DDT	37.3	0.333	"	33.333		112	82-142			
Endrin aldehyde	32.2	0.333	"	33.333		96.5	59-133			
Endosulfan sulfate	30.3	0.333	"	33.333		90.8	77-135			
Methoxychlor	43.7	0.333	"	33.333		131	77-136			
Endrin ketone	34.5	0.333	"	33.333		103	85-134			
Surrogate: Tetrachloro-meta-xylene	*30.7*		"	*33.337*		*92.0*	*28-166*			
Surrogate: Decachlorobiphenyl	*32.2*		"	*33.333*		*96.5*	*37-153*			

264 Welsh Pool Road
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WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

Organochlorine Pesticides by SW846 8081A - Quality Control

Lionville Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L903118 - SW 3540C										
Matrix Spike (L903118-MS1)		**Source: 0902020-01RE1**	Prepared: 03/14/2009 Analyzed: 03/19/2009							
alpha-BHC	36.0	1.33	ug/kg wet	33.333	ND	108	61-142			D
gamma-BHC	37.6	1.33	"	33.333	ND	113	65-142			D
beta-BHC	41.2	1.33	"	33.333	ND	124	71-134			D
delta-BHC	22.4	1.33	"	33.333	ND	67.1	53-144			D
Heptachlor	40.4	1.33	"	33.333	ND	121	70-138			D
Aldrin	37.4	1.33	"	33.333	ND	112	70-143			B, D
Heptachlor epoxide	39.8	1.33	"	33.333	ND	120	72-140			D
gamma-Chlordane	39.2	1.33	"	33.333	ND	118	74-140			D
alpha-Chlordane	40.1	1.33	"	33.333	ND	120	74-138			D
Endosulfan I	40.4	1.33	"	33.333	ND	121	81-141			D
4,4'-DDE	41.5	1.33	"	33.333	ND	124	82-145			D
Dieldrin	40.3	1.33	"	33.333	ND	121	79-144			D
Endrin	41.9	1.33	"	33.333	ND	126	73-147			D
4,4'-DDD	46.6	1.33	"	33.333	ND	140	77-148			D
Endosulfan II	40.3	1.33	"	33.333	ND	121	80-140			D
4,4'-DDT	40.7	1.33	"	33.333	ND	122	82-142			D
Endrin aldehyde	39.6	1.33	"	33.333	ND	119	59-133			D
Endosulfan sulfate	34.8	1.33	"	33.333	ND	104	77-135			D
Methoxychlor	54.4	1.33	"	33.333	ND	163	77-136			D
Endrin ketone	41.4	1.33	"	33.333	ND	124	85-134			D
Surrogate: Tetrachloro-meta-xylene	*41.9*		*"*	*33.337*		*126*	*28-166*			
Surrogate: Decachlorobiphenyl	*41.3*		*"*	*33.333*		*124*	*37-153*			
Matrix Spike Dup (L903118-MSD1)		**Source: 0902020-01RE1**	Prepared: 03/14/2009 Analyzed: 03/19/2009							
alpha-BHC	37.2	1.33	ug/kg wet	33.333	ND	112	61-142	3.28	40	D
gamma-BHC	38.8	1.33	"	33.333	ND	116	65-142	3.05	40	D
beta-BHC	41.8	1.33	"	33.333	ND	126	71-134	1.61	40	D
delta-BHC	23.1	1.33	"	33.333	ND	69.4	53-144	3.37	40	D
Heptachlor	41.6	1.33	"	33.333	ND	125	70-138	3.01	40	D
Aldrin	38.6	1.33	"	33.333	ND	116	70-143	2.98	40	D, B
Heptachlor epoxide	41.2	1.33	"	33.333	ND	124	72-140	3.37	40	D
gamma-Chlordane	40.1	1.33	"	33.333	ND	120	74-140	2.35	40	D
alpha-Chlordane	40.8	1.33	"	33.333	ND	122	74-138	1.81	40	D
Endosulfan I	41.3	1.33	"	33.333	ND	124	81-141	2.20	40	D
4,4'-DDE	43.9	1.33	"	33.333	ND	132	82-145	5.62	40	D
Dieldrin	41.2	1.33	"	33.333	ND	124	79-144	2.21	40	D
Endrin	42.7	1.33	"	33.333	ND	128	73-147	1.89	40	D
4,4'-DDD	48.3	1.33	"	33.333	ND	145	77-148	3.58	40	D
Endosulfan II	41.1	1.33	"	33.333	ND	123	80-140	1.88	40	D
4,4'-DDT	42.1	1.33	"	33.333	ND	126	82-142	3.30	40	D
Endrin aldehyde	40.3	1.33	"	33.333	ND	121	59-133	1.84	40	D
Endosulfan sulfate	35.9	1.33	"	33.333	ND	108	77-135	3.02	40	D
Methoxychlor	57.4	1.33	"	33.333	ND	172	77-136	5.42	40	D
Endrin ketone	42.3	1.33	"	33.333	ND	127	85-134	2.15	40	D

264 Welsh Pool Road
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Phone: 610-280-3000
Fax: 610-280-3041

WC-Hanford, Inc.	Project: RC-116	
2620 Fermi Avenue	Project Number: [none]	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	04/21/2009 07:24

Organochlorine Pesticides by SW846 8081A - Quality Control

Lionville Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L903118 - SW 3540C										
Matrix Spike Dup (L903118-MSD1)			**Source: 0902020-01RE1**	Prepared: 03/14/2009 Analyzed: 03/19/2009						
Surrogate: Tetrachloro-meta-xylene	*42.3*		*ug/kg wet*	*33.337*		*127*	*28-166*			
Surrogate: Decachlorobiphenyl	*42.0*		*"*	*33.333*		*126*	*37-153*			

PREPARATION BENCH SHEET

L903118

Lionville Laboratory

rinted: 3/18/2009 12:21:20PM

Matrix: Solid **Prepared using: Extraction - SW 3540C** **Surrogate used: 0900465**

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
0902020-01RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-02RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-03RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-04RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-05RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-06RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				500	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-07RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-08RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-01RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-02RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-05RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-06RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-07RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-08RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-09RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
L903118-BLK1	QC	03/14/2009 16:44	30	10				250		
L903118-BS1	QC	03/14/2009 16:44	30	10	0800160		250	250		
L903118-MS1	QC	03/14/2009 16:44	30	10	0800160	902020-01RE	250	250		
L903118-MS2	QC	03/14/2009 16:44	30	10	0800160	902023-02RE	250	250		
L903118-MSD1	QC	03/14/2009 16:44	30	10	0800160	902020-01RE	250	250		
L903118-MSD2	QC	03/14/2009 16:44	30	10	0800160	902023-02RE	250	250		

From L902124 on 3/14/2009 by MLF

Spiking Witnessed By Date

Preparation Reviewed By 3/18/09 Date

S Zak 3/18/09 12:45
Extracts Received By Date

PREPARATION BENCH SHEET

L903118

Lionville Laboratory

'rinted: 4/10/2009 1:16:01PM

Matrix: Solid **Prepared using: GC - SW 3540C** **Surrogate used: 0900465**

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
0902020-01RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-02RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-03RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-04RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-05RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-06RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-07RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-08RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-01RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-02RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-05RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-06RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-07RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-08RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-09RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
L903118-BLK1	QC	03/14/2009 16:44	30	10				250		
L903118-BS1	QC	03/14/2009 16:44	30	10	0800160		250	250		
L903118-MS1	QC	03/14/2009 16:44	30	10	0800160	902020-01RE	250	250		
L903118-MS2	QC	03/14/2009 16:44	30	10	0800160	902023-02RE	250	250		
L903118-MSD1	QC	03/14/2009 16:44	30	10	0800160	902020-01RE	250	250		
L903118-MSD2	QC	03/14/2009 16:44	30	10	0800160	902023-02RE	250	250		

From L902124 on 3/14/2009 by MLF

Spiking Witnessed By Date

Preparation Reviewed By Date

Extracts Received By Date

PREPARATION BENCH SHEET

L903118

Lionville Laboratory

'rinted: 4/10/2009 1:16:01PM

Matrix: Solid **Prepared using: GC - SW 3540C** **Surrogate used: 0900465**

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
0902020-01RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-02RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-03RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-04RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-05RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-06RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-07RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-08RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-01RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-02RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-05RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-06RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-07RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-08RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-09RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
L903118-BLK1	QC	03/14/2009 16:44	30	10				250		
L903118-BS1	QC	03/14/2009 16:44	30	10	0800160		250	250		
L903118-MS1	QC	03/14/2009 16:44	30	10	0800160	902020-01RE	250	250		
L903118-MS2	QC	03/14/2009 16:44	30	10	0800160	902023-02RE	250	250		
L903118-MSD1	QC	03/14/2009 16:44	30	10	0800160	902020-01RE	250	250		
L903118-MSD2	QC	03/14/2009 16:44	30	10	0800160	902023-02RE	250	250		

From L902124 on 3/14/2009 by MLF

Spiking Witnessed By Date

Preparation Reviewed By Date

Extracts Received By Date

PREPARATION BENCH SHEET

L903118

Lionville Laboratory

rinted: 3/18/2009 12:21:20PM

Matrix: Solid **Prepared using: Extraction - SW 3540C** **Surrogate used: 0900465**

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
0902020-01RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-02RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-03RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-04RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-05RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-06RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				500	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-07RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902020-08RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-01RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-02RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-05RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-06RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-07RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-08RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
0902023-09RE1	8081A TCL Pesticides	03/14/2009 16:44	30	10				250	WC-Hanford, Inc.	From L902124 by MLF on 03/14/2
L903118-BLK1	QC	03/14/2009 16:44	30	10				250		
L903118-BS1	QC	03/14/2009 16:44	30	10	0800160		250	250		
L903118-MS1	QC	03/14/2009 16:44	30	10	0800160	902020-01RE	250	250		
L903118-MS2	QC	03/14/2009 16:44	30	10	0800160	902023-02RE	250	250		
L903118-MSD1	QC	03/14/2009 16:44	30	10	0800160	902020-01RE	250	250		
L903118-MSD2	QC	03/14/2009 16:44	30	10	0800160	902023-02RE	250	250		

From L902124 on 3/14/2009 by MLF

Spiking Witnessed By Date

Preparation Reviewed By 3/18/09 Date

S Zak 3/18/09 12:45
Extracts Received By Date

PREPARATION BENCH SHEET

L902124

Pg 2 of 2

Lionville Laboratory

rinted: 2/24/2009 9:16:26AM

Matrix: Solid **Prepared using: GC - SW 3550B** **Surrogate used: 0900186**

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
0902023-06	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-07	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-07	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-08	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-08	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-09	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-09	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
L902124-BLK1	QC	02/18/2009 11:45	30	10				250		608
L902124-BLK2	QC	02/18/2009 11:45	30	10				250		PCB
L902124-BS1	QC	02/18/2009 11:45	30	10	0800160		250	250		608
L902124-BS2	QC	02/18/2009 11:45	30	10	0900099		250	250		PCB
L902124-MS1	QC	02/18/2009 11:45	30	10	0800160	0902020-02	250	250		608
L902124-MS2	QC	02/18/2009 11:45	30	10	0800160	0902023-09	250	250		608
L902124-MS3	QC	02/18/2009 11:45	30	10	0900099	0902020-02	250	250		PCB
L902124-MS4	QC	02/18/2009 11:45	30	10	0900099	0902023-09	250	250		PCB
L902124-MSD1	QC	02/18/2009 11:45	30	10	0800160	0902020-02	250	250		608
L902124-MSD2	QC	02/18/2009 11:45	30	10	0800160	0902023-09	250	250		608
L902124-MSD3	QC	02/18/2009 11:45	30	10	0900099	0902020-02	250	250		PCB
L902124-MSD4	QC	02/18/2009 11:45	30	10	0900099	0902023-09	250	250		PCB

Spiking Witnessed By Date

Preparation Reviewed By 2/24/09 10:10 Date

Extracts Received By 2/24/09 0:10 Date

PREPARATION BENCH SHEET

L902124

Lionville Laboratory

Pg 1 of 2

Printed: 2/24/2009 9:16:26AM

Matrix: Solid

Prepared using: GC - SW 3550B

Surrogate used: 0900186

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
0902020-01	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-01	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-02	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-02	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-03	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-03	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-04	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-04	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-05	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-05	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-06	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-06	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-07	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-07	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-08	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902020-08	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-01	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-01	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-02	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-02	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-05	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-05	8082 PCBs	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	
0902023-06	8081A TCL Pesticides	02/18/2009 11:45	30	10				250	WC-Hanford, Inc.	

Spiking Witnessed By — Date

Preparation Reviewed By — Date 2/24/09 1010

Extracts Received By — Date 2/24/09 1010

See SRC

Lionville Laboratory Use Only

0902020

Custody Transfer Record/Lab Work Request

Page 1 of 1

LVLI

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client WC Hanford SAF# RC-116

Est. Final Proj. Sampling Date

Project# 60049-001-001-0001-00

Project Contact/Phone#

Lionville Laboratory Project Manager Arlette Johnson

QC SW846 Del 570 TAT 30 days

Date Rec'd 2-6-09 Date Due 3-8-09

		A	B	C		D			E		F		G			
Refrigerator #		Vaa	2	2		2			2		2					
#/Type Container	Liquid	~~1aal~~														
	Solid	1aal	1aal	1aal		1aal			1pl		1aal		1pl			
Volume	Solid	~~25~~ 250	250	125		250			250		125		1L			
Preservatives		–	–	–		–			–		–		–			
ANALYSES REQUESTED →		ORGANIC: VOA	BNA	Pest/~~PCB~~	Herb	PCBs			INORG: (3) Metal	CN	TOC		Particle Size			
		Lionville Laboratory Use Only: 0624H	0625H	0608H		OPCB			MetO		TOCT		PSub			

MATRIX CODES:
S- Soil
SE- Sediment
SO- Solid
SL- Sludge
W- Water
O- Oil
A- Air
DS- Drum Solids
DL- Drum Liquids
L- EP/TCLP Leachate
WI- Wipe
X- Other
F- Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	VOA	BNA	Pest/~~PCB~~	Herb	PCBs			Metal	CN	TOC		Particle Size			
001	J186C0			SO	2-4-09	1200	X	X	X		X			X		X		X			
002	J186C1					1135	X	X	X		X			X		X		X			
003	J186C2					1315	X	X	X		X			X		X		X			
004	J186C3					1100	X	X	X		X			X		X		X			
005	J186C5					1120	X	X	X		X			X		X		X			
006	J186C6					1055	X	X	X		X			X		X		X			
007	J186C7					1145	X	X	X		X			X		X		X			
008	J186C8					1200	X	X	X		X			X		X		X			
009	J17W09					0730	X														
010	J17W11					0730	X														

Special Instructions:

MetO = HSL + B, Bi, Li, Mo, Sr, Si, Sn, U, P

Special Instructions:

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

Relinquished by	Received by	Date	Time
Jack	[signature]	2-6-09	0930

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
ORIGINAL REWRITTEN		COMPOSITE WASTE	

0809000336

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-846	Page 1 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 8 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C0	OTHER SOLID	2/4/09	1200					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: B Meyer BMJ	2/4/09 1500	Received By/Stored In: Fritz A	2/4/09 1500
Relinquished By/Removed From: Ref A	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2.6.09 0930	Received By/Stored In: [illegible]	2.6.09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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-116-846	Page 2 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 8 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No.	Matrix *	Sample Date	Sample Time									
J186C0	OTHER SOLID	2/4/09	1200	X								

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: B Mayer BMayer	Date/Time: 2/4/09 1500	Received By/Stored In: Fry A	Date/Time: 2/4/09 1500
Relinquished By/Removed From: Ret A 2/5/09	Date/Time: 0830	Received By/Stored In: B Woodward 2/5/09	Date/Time: 0830
Relinquished By/Removed From: B Woodward 2/5/09	Date/Time: 1000	Received By/Stored In: Fed Ex 2/5/09	Date/Time: 1000
Relinquished By/Removed From: Fed Ex 2.6.09	Date/Time: 0930	Received By/Stored In: [illegible] 2.6.09	Date/Time: 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-847	Page 1 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 7 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1
J186C1	OTHER SOLID	2/4/09	1135					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: B Maylon B Haigh	2/4/09 1500	Received By/Stored In: Rog A	2/4/09 1500
Relinquished By/Removed From: Rog A	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2-6-09 0930	Received By/Stored In: D. [illegible]	2-6-09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

0909063339

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-847	Page 2 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 7 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										

Sample No.	Matrix *	Sample Date	Sample Time										
J186C1	OTHER SOLID	2/4/09	1125	X									

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
BM [illegible]	2/4/09 1700	Fritz A	2/4/09 1700
Ref A 2/5/09	0830	BWoodward	2/5/09 0830
BWoodward 2/5/09	1000	FedEx	2/5/09 1000
FedEx 2.6.09	0930	[illegible]	2.6.09 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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-116-848	Page 1 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 9 SSD		SAF No.: RC-116
Ice Chest No.: WLH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C2	OTHER SOLID	2/4/09	1315					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: B Maylum	2/4/09 1500	Fed A	2/4/09 1500
Relinquished By/Removed From: Ref A	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2.6.09 1030	Received By/Stored In: W. Jones	2.6.09 1030
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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wl=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-116-848	Page 2 of 2

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 9 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No. / Matrix * / Sample Date / Sample Time												
J186C2 / OTHER SOLID / 2/4/09 / 1315	X											

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Maylum	2/4/09 1500	Fry A	2/4/09 1500
Rot A	2/5/09 0830	Blumdlund	2/5/09 0830
Blumdlund	2/5/09 1000	FedEx	2/5/09 1000
FedEx	2.6.09 0930	[illegible]	2.6.09 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

2790000969

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-849	Page 1 of 2

Collector: B.M	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 6 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 7963167797 60

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

SAMPLE ANALYSIS												
Preservation				None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container				G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)				1	1	1	1	1	1	1	1	1	1
Volume				1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
				See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1
Sample No.	Matrix *	Sample Date	Sample Time										
J186C3	OTHER SOLID	2/4/09	1100					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: B.M. Betty L	2/4/09 1300	Received By/Stored In: Fay A	2/4/09 1320
Relinquished By/Removed From: Ref A	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: FedEx	2/5/09 1000
Relinquished By/Removed From: FedEx	2.6.09 0930	Received By/Stored In: D Smith	2.6.09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wl=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

..anford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-849	Page 2 of 2
2M	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: WEISS, RL	Price Code: 9K; Data Turnaround: 45 Days
..gnation: ..umbia River Component of the RCBRA - Sediment	Sampling Location: WP- 6 SSD	SAF No.: RC-116	

Ice Chest No.	Field Logbook No.	COA	Method of Shipment
WCH-08-11	EL-1631/-1	BESCRC6520	FED EX

Shipped To	Offsite Property No.	Bill of Lading/Air Bill No.
EBERLINE SERVICES / LIONVILLE	N/A	796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										

Sample No.	Matrix *	Sample Date	Sample Time										
J186C3	OTHER SOLID	2/4/09	1100	X									

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
B M...	2/4/09 1500	Fig A	2/4/09 1500
Ret A	2/5/09 0830	B Woodward	2/5/09 0830
B Woodward	2/5/09 1000	Fed Ex	2/5/09 1000
Fed Ex	2.6.09 0930	D J Smith	2.6.09 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-851	Page 1 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 2 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C5	OTHER SOLID	2/4/09	1120					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [illegible]	2.4.09 1515	Received By/Stored In: [illegible]	2.4.09 1515
Relinquished By/Removed From: Rot B	2/5/09 0830	Received By/Stored In: Bloodwand	2/5/09 0830
Relinquished By/Removed From: Bloodwand	2/5/09 1000	Received By/Stored In: FedEx	2/5/09 1000
Relinquished By/Removed From: FedEx	2.6.09 0930	Received By/Stored In: [illegible]	2.6.09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wl=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

00000645

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-851	Page 2 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 2 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No.	Matrix *	Sample Date	Sample Time									
J186C5	OTHER SOLID	2/4/09	1120	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [illegible]	2-4-09 1515	Received By/Stored In: Ref B	2-4-09 1515
Relinquished By/Removed From: Ref B	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2-6-09 0930	Received By/Stored In: [illegible] Smith	2-6-09 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wl=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-116-852	Page 1 of 2

Collector: L. Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- / SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 7963167976 0

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C6	OTHER SOLID	2/4/09	1055					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [illegible]	2-4-09 / 1515	Received By/Stored In: Reg B	2-4-09 / 1515
Relinquished By/Removed From: Reg B	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: FedEx	2/5/09 1000
Relinquished By/Removed From: FedEx	2-6-09 0930	Received By/Stored In: [illegible]	2-6-09 / 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-852	Page 2 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- / SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No.	Matrix *	Sample Date	Sample Time									
J186C6	OTHER SOLID	2/4/09	1055	X								

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From		2.4.09 1515		2.4.09 1515
Relinquished By/Removed From	Rel B	2/5/09 0830	Received By/Stored In	2/5/09 0830
Relinquished By/Removed From		2/5/09 1000	Received By/Stored In	2/5/09 1000
Relinquished By/Removed From		2.6.09 0930	Received By/Stored In	2.6.09 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-853	Page 1 of 2

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL	Price Code: 9K	Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 3 SSD		SAF No.: RC-116		
Ice Chest No.: ~~WCH-08-058~~ 215 WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX		
Shipped To: EBERLINE SERVICES/LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760 ~~797313204940~~ 215		

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1
J186C7	OTHER SOLID	2/4/09	1145					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[illegible]	2-4-09 1515	[illegible]	2-4-09 1515
[illegible]	2/5/09 0830	D. Heidelberg	2/5/09 0830
D. Heidelberg	2/5/09 1000	Fedex	2/5/09 1000
Fedex	2-6-09 0930	[illegible]	2-6-09 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-853	Page 2 of 2

Collector: L Stillman	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: WEISS, RL	Price Code: 9K Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP-7 SSD	SAF No.: RC-116	
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: 796316779760	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	G/P										
No. of Container(s)	1										
Volume	1000g										
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422										

Sample No.	Matrix *	Sample Date	Sample Time										
J186C7	OTHER SOLID	2/4/09	1145	X									

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [illegible]	2.4.09 / 1515	Received By/Stored In: Kel B	2.4.09 / 1515
Relinquished By/Removed From: R. F B	2/5/09 0830	Received By/Stored In: B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	Received By/Stored In: Fed Ex	2/5/09 1000
Relinquished By/Removed From: Fed Ex	2.6.09 / 0930	Received By/Stored In: [illegible]	2.6.09 / 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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-116-854	Page 1 of 2

Collector: J Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 4 SSD		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	aG	aG	G	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	1500g	100g	10g	10g	250g	250g	125g	250g	250g	125g
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Technetium-99	See item (2) in Special Instructions.	See item (3) in Special Instructions.	PCBs - 8082	Pesticides - 8081	Semi-VOA - 8270A (TCL)	See item (4) in Special Instructions.	TOC - 415.1

Sample No.	Matrix *	Sample Date	Sample Time										
J186C8	OTHER SOLID	2/4/09	1200					X	X	X	X	X	X

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: [signature]	2.4.09 / 1515	Rey B	2.4.09 / 1515
Relinquished By/Removed From: Kel B	2/5/09 0836	B Woodward	2/5/09 0830
Relinquished By/Removed From: B Woodward	2/5/09 1000	FedEx	2/5/09 1000
Relinquished By/Removed From: FedEx	2.6.09 0930	[signature]	2.6.09 / 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) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(4) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene

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

15000000051

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-854	Page 2 of 2

Collector: J Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: WP- 4 SSD		SAF No.: RC-116
Ice Chest No.: WLH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None											
Type of Container	G/P											
No. of Container(s)	1											
Volume	1000g											
SAMPLE ANALYSIS	Particle Size (Dry Sieve) - D422											
Sample No. / Matrix * / Sample Date / Sample Time												
J186C8 / OTHER SOLID / 2/4/09 / 1200	X											

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: J Stratton	2.4.09 / 1515	Received By/Stored In: Ref B	2.4.09 / 1515
Relinquished By/Removed From: Ref B	2/5/09 / 0830	Received By/Stored In: B Woodward	2/5/09 / 0830
Relinquished By/Removed From: B Woodward	2/5/09 / 1000	Received By/Stored In: FedEx	2/5/09 / 1000
Relinquished By/Removed From: FedEx	2.6.09 / 0930	Received By/Stored In: [illegible]	2.6.09 / 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *

S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wl=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

25888888

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-121	Page 1 of 1

Collector: L Stratton	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: TRIP BLANK		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 7963167976 0

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	Cool 4C											
Type of Container	G											
No. of Container(s)	1											
Volume	250g											
SAMPLE ANALYSIS	See item (1) in Special Instructions.											
Sample No.	Matrix *	Sample Date	Sample Time									
J17W09	OTHER SOLID	2/4/09	0720	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From	2.4.09 1400	Received By/Stored In	2.4.09 1500
Relinquished By/Removed From: Ref B	2/5/09 0830	Received By/Stored In: Buddelund	2/5/09 0830
Relinquished By/Removed From: Buddelund	2/5/09 1000	Received By/Stored In: FedEx	2/5/09 1000
Relinquished By/Removed From: FedEx	2.6.09 0930	Received By/Stored In: [illegible]	2.6.09 0930
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropene, Trichloroethene, Vinyl chloride, Xylenes (total)}

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

00008553

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-116-123	Page 1 of 1

Collector: BM	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: WEISS, RL
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Sediment	Sampling Location: TRIP BLANK		SAF No.: RC-116
Ice Chest No.: WCH-08-011	Field Logbook No.: EL-1631/-1	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 796316779760

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation			Cool 4C									
Type of Container			G									
No. of Container(s)			1									
Volume			250g									
SAMPLE ANALYSIS			See item (1) in Special Instructions.									
Sample No.	Matrix *	Sample Date	Sample Time									
J17W11	OTHER SOLID	2/4/08	730	X								

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
BMayer BMyl	2/4/08 1500	Bmy A	2/4/08 (SX)
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Ref A	2/5/09 0830	Blumbrunn	2/5/09 0830
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Blumbrunn	2/5/09 1000	FedEx	2/5/09 1000
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
FedEx	2.6.09 0930	[illegible]	2.6.09 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) VOA - 8260A (TCL) {1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2-Butanone, 2-Hexanone, 4-Methyl-2-Pentanone, Acetone, Benzene, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Dibromochloromethane, Ethylbenzene, Methylenechloride, Styrene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropene, Trichloroethene, Vinyl chloride, Xylenes (total)}

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wl=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

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: WC Hanford

Project/SAF/SOW/Release #: RC-116

Date: 2-6-09

LvLI Batch #: 0902020

Sample Custodian: [illegible]

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier FedEx		Airbill # 7963 1677 9760
2. Custody Seals on coolers or shipping containers intact, signed & dated?	☑ Yes	☐ No	☐ No Seals
3. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	*Comments:*
4. All expected paperwork received (coc & other client specific information) sealed in plactic bag and easily accessible?	☑ Yes	☐ No	
5. Samples received cooled or ambient?	Temp 2.3	°C	Cooler # WCH-08-011
How was the temperature taken?	☑ IR	☐ Temp. Blank	☐ Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	☑ Yes	☐ No	
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7. COC (Client & LvLI) 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 LvLI 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 _____

LVLI LIONVILLE LABORATORIES INC.

Enclosed is Particle Size data for SDG K1526, which includes sample numbers J186C0, J186C1, J186C2, J186C3, J186C5, J186C6, J186C7, and J186C8.

The entire data report, including chains of custody, is filed in SDG K1480.

Shaw™
Shaw Environmental & Infrastructure, Inc.

Geotechnical Laboratory
1570 Bear Creek Road
Kingston, TN 37763
(865) 482-6497

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CERTIFICATE OF ANALYSIS

June 16, 2009

Orlette Johnson
Lionville Laboratory
264 Welsh Pool Road
Exton, PA 19341

This is the Certificate of Analysis for the following samples:

Shaw Project ID:	Lionville – WC Hanford
Shaw Project Number:	135594.00110000
Date Received by Lab:	February 16, 2009
Number of Samples:	One hundred seventy-four (174)
Sample Type:	Soil

I. Introduction/Case Narrative

One hundred seventy-four soil samples were received by the Shaw Geotechnical Laboratory on February 16, 2009. All samples were submitted for determination of particle-size distribution.

Please see Appendix A, Sample Number Cross Reference List; Appendix B, Analysis Results; and Appendix C, Chain-of-Custody/Sample Receipt Records.

Reviewed and Approved:

Ralph Cole
Laboratory Manager, Geotechnical Services

Shaw Environmental
Geotechnical Laboratory
Kingston, TN 865.482.6497

II. Analytical Results/Methodology

REFERENCES: United Nations, Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, third ed. New York, 1999. United States Army Corps of Engineers (USACE), Engineer Manual 1110-2-1906, Laboratory Soils Testing, appendix II, 1970; United States Environmental Protection Agency, SW846, Test Methods for Examining Solid Waste, Physical/Chemical Methods, 3rd ed., Nov 1986 (EPA SW-846). Annual Book of ASTM Standards, Section 4, Construction, Volume 04.08, Soil and Rock (I), and Volume 04.09, Soil and Rock (II), 2009. Shaw Environmental and infrastructure, Standard Operating Procedures.

Particle-Size Distribution of Soils with hydrometer ..... ASTM D 422
Moisture Content of Soil and Rock..... ASTM D 2216

III. Quality Control

Quality control checks such as duplicates and spikes (QC samples), are not normally applicable to geotechnical testing. This is due largely to the inability of obtaining samples with known characteristics, the heterogeneous nature of the samples, and quality control procedures built-in to the analytical method.

QC measures to ensure accuracy and precision of test results include the following:

- 100% verification of all numerical results - raw data entries, transcriptions and calculations entered by lab technicians are checked, recalculated and verified. Most data calculations are performed by computer programs.

- Data validation through test reasonableness - summaries of all test results for individual reports are reviewed to determine the overall reasonableness of data and to determine the presence of any data that may be considered outliers.

- Quality control procedures are built into most standardized geotechnical procedures. For example, liquid limit and plastic limit analyses call for re-analyses and specify acceptance criteria.

- Routine instrument calibration - instruments, gauges and equipment used in testing are calibrated on a routine basis. All instrument calibration follows ASTM or manufacturer guidelines.

- Maintenance of all past calibration records - calibration records and certification documents of all instruments, gauges and equipment are updated routinely and maintained in the Quality Control Coordinators Quality/Operations files.

- Certified and trained personnel - all technicians are trained in the application of standard laboratory procedures for geotechnical analyses as well as the quality assurance measures implemented by Shaw.

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- Quantitative analyses frequently used in geotechnical/physical testing programs do not use QC tools common to wet chemistry or radiochemistry laboratories. Measures not employed in the analysis of samples reported in this report include: laboratory control samples (LCS), blanks, matrix spikes (MS), duplicate analyses, dilutions, digestions, correction factors, surrogate sample analyses, detection limit determinations, control charts, and/or tentatively identified compounds (TICs).

IV. Data Qualification

Particle-size testing by ASTM D 422 involves both sieve analyses and hydrometer (sedimentation) testing of fine particles. The data are assembled into a single graph for presentation purposes. In some cases the fine sieve analysis data and the early hydrometer results do not agree well. Usually this is caused by dissolved solids in the sedimentation flask, or density currents in the soil/water slurry or organic induced foam. Where these data do not agree, we have not shown the hydrometers results in favor of displaying the sieve data. Affected samples generally contain very small amounts of silt and clay material. Some samples contained shells, shell fragments, and some contained whole mollusks.

Appendix A
Sample Cross-Reference List

June 16, 2009
Orlette Johnson
Client: Lionville Laboratory
Shaw Project Name: Lionville
Shaw Project No. 135594.00110000

Shaw Environmental
Geotechnical Laboratory
Kingston, TN 865.482.6497

SAMPLE NUMBER CROSS-REFERENCE LIST

LAB SAMPLE NO.	CLIENT SAMPLE NO.	MATRIX
BC1616	J17WD3	Soil
BC1617	J17WD4	Soil
BC1618	J17W99	Soil
BC1619	J17WB1	Soil
BC1620	J17WF0	Soil
BC1621	J17VC5	Soil
BC1622	J17VC8	Soil
BC1623	J17VD1	Soil
BC1624	J17VC6	Soil
BC1625	J17VC7	Soil
BC1626	J17VC9	Soil
BC1627	J17VD0	Soil
BC1628	J17VN8	Soil
BC1629	J17WH6	Soil
BC1630	J17WH7	Soil
BC1631	J17WH8	Soil
BC1632	J17WH9	Soil
BC1633	J17W98	Soil
BC1634	J17WB0	Soil
BC1635	J17WJ0	Soil
BC1636	J17WJ2	Soil
BC1637	J17WJ3	Soil
BC1638	J17WJ5	Soil
BC1639	J17WB2	Soil
BC1640	J17WB4	Soil
BC1641	J17WB5	Soil
BC1642	J17WB6	Soil
BC1643	J17WB7	Soil
BC1644	J17WF1	Soil
BC1645	J188F7	Soil
BC1646	J188F8	Soil
BC1647	J188F9	Soil
BC1648	J188H0	Soil
BC1649	J188H1	Soil
BC1650	J188H2	Soil
BC1651	J188H3	Soil
BC1652	J188J5	Soil
BC1653	J188J6	Soil
BC1654	J188J7	Soil
BC1655	J188J8	Soil
BC1656	J188K1	Soil
BC1657	J188K2	Soil
BC1658	J188K4	Soil
BC1659	J17VP8	Soil
BC1660	J180B1	Soil

June 16, 2009
Orlette Johnson
Client: Lionville Laboratory
Shaw Project Name: Lionville
Shaw Project No. 135594.00110000

Shaw Environmental
Geotechnical Laboratory
Kingston, TN 865.482.6497

SAMPLE NUMBER CROSS-REFERENCE LIST

LAB SAMPLE NO.	CLIENT SAMPLE NO.	MATRIX
BC1661	J180B0	Soil
BC1662	J18030	Soil
BC1663	J18031	Soil
BC1664	J18092	Soil
BC1665	J18096	Soil
BC1666	J18098	Soil
BC1667	J18093	Soil
BC1668	J18094	Soil
BC1669	J18095	Soil
BC1670	J17VP2	Soil
BC1671	J18097	Soil
BC1672	J18032	Soil
BC1673	J17YW0	Soil
BC1674	J17VP1	Soil
BC1675	J17VP3	Soil
BC1676	J180T5	Soil
BC1677	J180T6	Soil
BC1678	J180T7	Soil
BC1679	J180T8	Soil
BC1680	J180T9	Soil
BC1681	J18157	Soil
BC1682	J18158	Soil
BC1683	J18159	Soil
BC1684	J18160	Soil
BC1685	J18177	Soil
BC1686	J18198	Soil
BC1687	J18199	Soil
BC1688	J181B0	Soil
BC1689	J181B1	Soil
BC1690	J181B2	Soil
BC1691	J181B3	Soil
BC1692	J17V87	Soil
BC1693	J17V88	Soil
BC1694	J17V89	Soil
BC1695	J17V90	Soil
BC1696	J17V91	Soil
BC1697	J17V92	Soil
BC1698	J17VP0	Soil
BC1699	J17VP5	Soil
BC1700	J180W8	Soil
BC1701	J180W9	Soil
BC1702	J17X12	Soil
BC1703	J17WJ1	Soil
BC1704	J17WJ4	Soil

June 16, 2009
Orlette Johnson
Client: Lionville Laboratory
Shaw Project Name: Lionville
Shaw Project No. 135594.00110000

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SAMPLE NUMBER CROSS-REFERENCE LIST

LAB SAMPLE NO.	CLIENT SAMPLE NO.	MATRIX
BC1705	J17YB4	Soil
BC1706	J17YB5	Soil
BC1707	J17X14	Soil
BC1708	J17X15	Soil
BC1709	J17X16	Soil
BC1710	J17X13	Soil
BC1711	J17Y96	Soil
BC1712	J17Y97	Soil
BC1713	J17Y99	Soil
BC1714	J17Y98	Soil
BC1715	J17VN7	Soil
BC1716	J17X01	Soil
BC1717	J17X02	Soil
BC1718	J18002	Soil
BC1719	J18003	Soil
BC1720	J18016	Soil
BC1721	J18017	Soil
BC1722	J17VN9	Soil
BC1723	J17YT4	Soil
BC1724	J17YT5	Soil
BC1725	J17YV8	Soil
BC1726	J17YV9	Soil
BC1727	J17XK6	Soil
BC1728	J17XK7	Soil
BC1729	J17XK8	Soil
BC1730	J17YW2	Soil
BC1731	J18004	Soil
BC1732	J18005	Soil
BC1733	J18006	Soil
BC1734	J186D2	Soil
BC1735	J18613	Soil
BC1736	J18928	Soil
BC1737	J18929	Soil
BC1738	J18930	Soil
BC1739	J18931	Soil
BC1740	J18932	Soil
BC1741	J18933	Soil
BC1742	J18934	Soil
BC1743	J18935	Soil
BC1744	J18936	Soil
BC1745	J18937	Soil
BC1746	J186C0	Soil
BC1747	J186C1	Soil
BC1748	J186C2	Soil
BC1749	J186C3	Soil
BC1750	J186C5	Soil

June 16, 2009
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SAMPLE NUMBER CROSS-REFERENCE LIST

LAB SAMPLE NO.	CLIENT SAMPLE NO.	MATRIX
BC1751	J186C6	Soil
BC1752	J186C7	Soil
BC1753	J186C8	Soil
BC1754	J18172	Soil
BC1755	J18173	Soil
BC1756	J18176	Soil
BC1757	J17XR5	Soil
BC1758	J17XR8	Soil
BC1759	J17XR9	Soil
BC1760	J18045	Soil
BC1761	J18046	Soil
BC1762	J18047	Soil
BC1763	J180H5	Soil
BC1764	J180H6	Soil
BC1765	J180H7	Soil
BC1766	J180N0	Soil
BC1767	J180N1	Soil
BC1768	J180N2	Soil
BC1769	J180P0	Soil
BC1770	J180P1	Soil
BC1771	J180P3	Soil
BC1772	J180P4	Soil
BC1773	J180R0	Soil
BC1774	J180R4	Soil
BC1775	J180R3	Soil
BC1776	J17XP7	Soil
BC1777	J18164	Soil
BC1778	J18165	Soil
BC1779	J18166	Soil
BC1780	J18167	Soil
BC1781	J18168	Soil
BC1782	J17YF2	Soil
BC1783	J17FY3	Soil
BC1784	J17XJ1	Soil
BC1785	J17XJ2	Soil
BC1786	J17XJ3	Soil
BC1787	J17XJ4	Soil
BC1788	J17XK5	Soil
BC1789	J17XK9	Soil

LAB SAMPLE NO.	CLIENT SAMPLE NO.	WEEK PERFORMED
BC1616	J17WD3	4/27/09
BC1617	J17WD4	4/27/09
BC1618	J17W99	4/27/09
BC1619	J17WB1	4/27/09
BC1620	J17WF0	4/27/09
BC1621	J17VC5	4/27/09
BC1622	J17VC8	4/27/09
BC1623	J17VD1	4/27/09
BC1624	J17VC6	4/27/09
BC1625	J17VC7	4/27/09
BC1626	J17VC9	4/27/09
BC1627	J17VD0	4/27/09
BC1628	J17VN8	4/27/09
BC1629	J17WH6	4/27/09
BC1630	J17WH7	4/27/09
BC1631	J17WH8	4/27/09
BC1632	J17WH9	4/27/09
BC1633	J17W98	4/27/09
BC1634	J17WB0	4/27/09
BC1635	J17WJ0	4/27/09
BC1636	J17WJ2	4/27/09
BC1637	J17WJ3	4/27/09
BC1638	J17WJ5	4/27/09
BC1639	J17WB2	4/27/09
BC1640	J17WB4	4/27/09
BC1641	J17WB5	4/27/09
BC1642	J17WB6	4/27/09
BC1643	J17WB7	4/27/09
BC1644	J17WF1	4/27/09
BC1645	J188F7	4/27/09
BC1646	J188F8	4/27/09
BC1647	J188F9	4/27/09
BC1648	J188H0	4/27/09
BC1649	J188H1	4/27/09
BC1650	J188H2	4/27/09
BC1651	J188H3	4/27/09
BC1652	J188J5	4/27/09
BC1653	J188J6	4/27/09
BC1654	J188J7	4/27/09
BC1655	J188J8	4/27/09
BC1656	J188K1	4/27/09
BC1657	J188K2	4/27/09
BC1658	J188K4	4/27/09
BC1659	J17VP8	4/27/09
BC1660	J180B1	4/27/09
BC1661	J180B0	4/27/09
BC1662	J18030	4/27/09
BC1663	J18031	4/27/09
BC1664	J18092	4/27/09
BC1665	J18096	4/27/09

LAB SAMPLE NO.	CLIENT SAMPLE NO.	WEEK PERFORMED
BC1666	J18098	4/27/09
BC1667	J18093	4/27/09
BC1668	J18094	4/27/09
BC1669	J18095	4/27/09
BC1670	J17VP2	5/4/09
BC1671	J18097	5/4/09
BC1672	J18032	5/4/09
BC1673	J17YW0	5/4/09
BC1674	J17VP1	5/4/09
BC1675	J17VP3	5/4/09
BC1676	J180T5	5/4/09
BC1677	J180T6	5/4/09
BC1678	J180T7	5/4/09
BC1679	J180T8	5/4/09
BC1680	J180T9	5/4/09
BC1681	J18157	5/4/09
BC1682	J18158	5/4/09
BC1683	J18159	5/4/09
BC1684	J18160	5/4/09
BC1685	J18177	5/4/09
BC1686	J18198	5/4/09
BC1687	J18199	5/4/09
BC1688	J181B0	5/4/09
BC1689	J181B1	5/4/09
BC1690	J181B2	5/4/09
BC1691	J181B3	5/4/09
BC1692	J17V87	5/4/09
BC1693	J17V88	5/4/09
BC1694	J17V89	5/4/09
BC1695	J17V90	5/4/09
BC1696	J17V91	5/4/09
BC1697	J17V92	5/4/09
BC1698	J17VP0	5/4/09
BC1699	J17VP5	5/4/09
BC1700	J180W8	5/4/09
BC1701	J180W9	5/4/09
BC1702	J17X12	5/4/09
BC1703	J17WJ1	5/4/09
BC1704	J17WJ4	5/4/09
BC1705	J17YB4	5/4/09
BC1706	J17YB5	5/11/09
BC1707	J17X14	5/11/09
BC1708	J17X15	5/11/09
BC1709	J17X16	5/11/09
BC1710	J17X13	5/11/09
BC1711	J17Y96	5/11/09
BC1712	J17Y97	5/11/09
BC1713	J17Y99	5/11/09
BC1714	J17Y98	5/18/09
BC1715	J17VN7	5/18/09

LAB SAMPLE NO.	CLIENT SAMPLE NO.	WEEK PERFORMED
BC1716	J17X01	5/18/09
BC1717	J17X02	5/18/09
BC1718	J18002	5/18/09
BC1719	J18003	5/18/09
BC1720	J18016	5/18/09
BC1721	J18017	5/18/09
BC1722	J17VN9	5/18/09
BC1723	J17YT4	5/18/09
BC1724	J17YT5	5/18/09
BC1725	J17YV8	5/18/09
BC1726	J17YV9	5/18/09
BC1727	J17XK6	5/18/09
BC1728	J17XK7	5/18/09
BC1729	J17XK8	5/18/09
BC1730	J17YW2	5/18/09
BC1731	J18004	5/18/09
BC1732	J18005	5/18/09
BC1733	J18006	5/18/09
BC1734	J186D2	5/18/09
BC1735	J18613	5/25/09
BC1736	J18928	5/25/09
BC1737	J18929	5/25/09
BC1738	J18930	5/25/09
BC1739	J18931	5/25/09
BC1740	J18932	5/25/09
BC1741	J18933	5/25/09
BC1742	J18934	5/25/09
BC1743	J18935	5/25/09
BC1744	J18936	6/1/09
BC1745	J18937	6/1/09
BC1746	J186C0	6/1/09
BC1747	J186C1	6/1/09
BC1748	J186C2	6/1/09
BC1749	J186C3	6/1/09
BC1750	J186C5	6/1/09
BC1751	J186C6	6/1/09
BC1752	J186C7	6/1/09
BC1753	J186C8	6/1/09
BC1754	J18172	6/1/09
BC1755	J18173	6/1/09
BC1756	J18176	6/1/09
BC1757	J17XR5	6/1/09
BC1758	J17XR8	6/1/09
BC1759	J17XR9	6/1/09
BC1760	J18045	6/1/09
BC1761	J18046	6/1/09
BC1762	J18047	6/1/09
BC1763	J180H5	6/1/09
BC1764	J180H6	6/1/09
BC1765	J180H7	6/1/09

LAB SAMPLE NO.	CLIENT SAMPLE NO.	WEEK PERFORMED
BC1766	J180N0	6/1/09
BC1767	J180N1	6/1/09
BC1768	J180N2	6/1/09
BC1769	J180P0	6/1/09
BC1770	J180P1	6/1/09
BC1771	J180P3	6/1/09
BC1772	J180P4	6/1/09
BC1773	J180R0	6/1/09
BC1774	J180R4	6/1/09
BC1775	J180R3	6/1/09
BC1776	J17XP7	6/8/09
BC1777	J18164	6/8/09
BC1778	J18165	6/8/09
BC1779	J18166	6/8/09
BC1780	J18167	6/8/09
BC1781	J18168	6/8/09
BC1782	J17YF2	6/8/09
BC1783	J17FY3	6/8/09
BC1784	J17XJ1	6/8/09
BC1785	J17XJ2	6/8/09
BC1786	J17XJ3	6/8/09
BC1787	J17XJ4	6/8/09
BC1788	J17XK5	6/8/09
BC1789	J17XK9	6/8/09
BC1855	J18612	6/8/09
BC1856	J18702	6/8/09
BC1857	J186D3	6/8/09
BC1858	J186D4	6/8/09
BC1859	J186D5	6/15/09
BC1860	J186D6	6/15/09
BC1861	J186F2	6/15/09
BC1862	J186X2	6/15/09
BC1863	J186X3	6/15/09
BC1864	J186X6	6/15/09
BC1865	J18600	6/15/09
BC1866	J187D3	6/15/09
BC1867	J18763	6/15/09
BC1868	J18766	6/15/09
BC1869	J18610	6/15/09
BC1870	J18764	6/15/09
BC1871	J18779	6/15/09
BC1872	J18794	6/15/09
BC1873	J18795	6/15/09
BC1874	J18796	6/15/09
BC1875	J18797	6/15/09
BC1876	J18798	6/15/09
BC1877	J18799	6/15/09
BC1878	J187B0	6/15/09
BC1879	J187D2	6/15/09
BC1880	J187D4	6/15/09

JD 8/12/09

LAB SAMPLE NO.	CLIENT SAMPLE NO.	WEEK PERFORMED
BC1881	J187D5	6/15/09
BC1882	J187D6	6/15/09
BC1883	J187D8	6/15/09
BC1884	J187D7	6/15/09
BC1885	J187D9	6/15/09
BC1886	J187F0	6/15/09
BC1887	J187F1	6/15/09
BC1888	J187K6	6/15/09
BC1889	J187K7	6/15/09
BC1890	J187K8	6/15/09
BC1891	J187K9	6/15/09
BC1892	J187L0	6/15/09
BC1893	J17X03	6/15/09
BC1894	J187Y2	6/15/09
BC1895	J187Y5	6/15/09
BC1896	J18902	6/15/09
BC1897	J18903	6/15/09
BC1898	J18905	6/15/09
BC1899	J18905	6/15/09
BC1900	J18906	6/15/09
BC1901	J18908	6/15/09
BC1902	J18909	6/15/09
BC1903	J18910	6/22/09
BC1904	J18911	6/22/09
BC1905	J18912	6/22/09
BC1906	J18913	6/22/09
BC1907	J18608	6/22/09
BC1908	J18614	6/22/09
BC1909	J187R2	6/22/09
BC1910	J187W8	6/22/09
BC1911	J187Y1	6/22/09
BC1912	J187P1	6/22/09
BC1913	J187P2	6/29/09
BC1914	J187P5	6/29/09
BC1915	J187P6	6/29/09
BC1916	J187P7	6/29/09
BC1917	J187P8	6/29/09
BC1918	J187P9	6/29/09
BC1919	J187R0	6/29/09
BC1920	J187R1	6/29/09
BC1921	J187R3	6/29/09
BC1922	J187Y3	6/29/09
BC1923	J187Y4	6/29/09
BC1924	J187Y6	6/29/09
BC1925	J187Y7	6/29/09
BC1926	J187Y8	6/29/09
BC1927	J188C4	6/29/09
BC1928	J18907	6/29/09
BC1929	J18807	6/29/09
BC1930	J18808	6/29/09

JD
8/12/09

LAB SAMPLE NO.	CLIENT SAMPLE NO.	WEEK PERFORMED
BC1931	J18809	6/29/09
BC1932	J18810	6/29/09
BC1933	J18827	6/29/09
BC1934	J18828	6/29/09
BC1935	J18829	6/29/09
BC1936	J18844	6/29/09
BC1937	J18845	6/29/09
BC1938	J18846	6/29/09
BC1939	J18847	6/29/09
BC1940	J18848	6/29/09
BC1941	J18849	6/29/09
BC1942	J18850	6/29/09
BC1943	J18851	6/29/09
BC1944	J18852	6/29/09
BC1945	J18864	6/29/09
BC1946	J18865	6/29/09
BC1947	J18867	7/6/09
BC1948	J17XP1	7/6/09
BC1949	J17XP2	7/6/09
BC1950	J17XP3	7/6/09
BC1951	J18607	7/6/09
BC1952	J188F0	7/6/09
BC1953	J188F1	7/6/09
BC1954	J17YT6	7/6/09
BC1955	J17YT7	7/6/09
BC1956	J17YT8	7/6/09
BC1957	J18884	7/6/09
BC1958	J18885	7/6/09
BC1959	J18886	7/6/09
BC1960	J18887	7/6/09
BC1961	J18888	7/6/09
BC1962	J18889	7/6/09
BC1963	J18890	7/13/09
BC1964	J18891	7/6/09
BC1965	J18965	7/6/09
BC1966	J18966	7/6/09
BC1967	J18968	7/6/09
BC1968	J18977	7/6/09
BC1969	J18978	7/13/09
BC1970	J18979	7/13/09
BC1971	J188B2	7/13/09
BC1972	J188B3	7/13/09
BC1973	J188B8	7/13/09
BC1974	J188B9	7/13/09
BC1975	J188C0	7/13/09
BC1976	J188C1	7/13/09
BC1977	J189D6	7/13/09
BC1978	J189D7	7/13/09
BC1979	J189D8	7/13/09
BC1980	J189F0	7/13/09

JD 8/12/09

LAB SAMPLE NO.	CLIENT SAMPLE NO.	WEEK PERFORMED
BC1981	J18985	7/13/09
BC1982	J18986	7/13/09
BC1983	J18987	7/13/09
BC1984	J18988	7/13/09
BC1985	J18990	7/13/09
BC1986	J18991	7/13/09
BC1987	J18992	7/13/09
BC1988	J189B5	7/13/09
BC1989	J189B6	7/13/09
BC1990	J189B7	7/13/09
BC1991	J189B8	7/13/09
BC1992	J189B9	7/13/09
BC1993	J189C0	7/13/09
BC1994	J189C1	7/13/09
BC1995	J189C3	7/20/09
BC1996	J189C4	7/20/09
BC1997	J189J9	7/20/09
BC1998	J189K2	7/20/09
BC1999	J189K4	7/20/09
BC2000	J189K5	7/20/09
BC2001	J18B37	7/20/09
BC2002	J18B38	7/20/09
BC2003	J18B39	7/20/09
BC2004	J18B40	7/20/09
BC2005	J18B41	7/20/09
BC2006	J189V8	7/20/09
BC2007	J189V9	7/20/09
BC2008	J18B10	7/20/09
BC2009	J18B11	7/20/09
BC2010	J18B12	7/20/09
BC2011	J18B13	7/20/09
BC2012	J18B14	7/20/09
BC2013	J18B20	7/20/09
BC2014	J18B21	7/20/09
BC2015	J18B22	7/20/09
BC2016	J18B23	7/20/09
BC2017	J18B24	7/20/09
BC2018	J18B25	7/20/09
BC2019	J18B27	7/20/09
BC2020	J18B28	7/20/09
BC2021	J18B29	7/20/09
BC2022	J18B32	7/27/09
BC2023	J18B33	7/27/09
BC2024	J18B34	7/27/09
BC2025	J18B35	7/27/09
BC2026	J18B36	7/27/09
BC2027	J189M8	7/27/09
BC2028	J18KH5	7/27/09
BC2029	J18KH7	7/27/09
BC2030	J18KH8	7/27/09

JD 8/12/09

LAB SAMPLE NO.	CLIENT SAMPLE NO.	WEEK PERFORMED
BC2031	J18KJ3	7/27/09
BC2032	J18KJ4	7/27/09
BC2033	J18KJ5	7/27/09
BC2034	J17XM1	7/27/09
BC2035	J17XM2	7/27/09
BC2036	J17XM3	7/27/09
BC2037	J17XM4	7/27/09
BC2038	J17XM5	7/27/09
BC2039	J18B26	7/27/09
BC2040	J189Y7	7/27/09
BC2124	J17YY6	7/27/09
BC2125	J17YY7	7/27/09
BC2126	J17YY8	7/27/09
BC2127	J189X0	7/27/09
BC2128	J189X1	7/27/09
BC2129	J189X2	7/27/09
BC2130	J189X3	7/27/09
BC2131	J189X4	7/27/09
BC2132	J189X5	7/27/09
BC2133	J189X6	7/27/09
BC2134	J189X7	7/27/09
BC2135	J189X8	7/27/09
BC2136	J189X9	7/27/09
BC2137	J189D9	7/27/09
BC2138	J18B00	7/27/09
BC2139	J18B01	7/27/09
BC2140	J18B02	7/27/09
BC2141	J18B03	7/27/09
BC2142	J18B04	7/27/09
BC2143	J18B05	7/27/09
BC2144	J18B06	7/27/09
BC2145	J18B07	7/27/09
BC2146	J18B08	7/27/09
BC2147	J18B09	7/27/09
BC2148	J18B15	7/27/09
BC2149	J18B16	7/27/09
BC2150	J18B17	7/27/09
BC2151	J18B18	7/27/09
BC2152	J18B19	7/27/09
BC2153	J18B47	7/27/09
BC2154	J18B48	7/27/09
BC2155	J18B49	7/27/09
BC2156	J18B50	7/27/09
BC2157	J18B51	7/27/09
BC2158	J18B52	7/27/09
BC2159	J18B53	7/27/09
BC2160	J18B54	8/3/09
BC2161	J18B55	8/3/09
BC2162	J18B56	8/3/09
BC2163	J18B57	8/3/09

JD 8/12/09

LAB SAMPLE NO.	CLIENT SAMPLE NO.	WEEK PERFORMED
BC2164	J18B58	8/3/09
BC2165	J18B59	8/3/09
BC2166	J18B60	8/3/09
BC2167	J18B61	8/3/09
BC2168	J18B62	8/3/09
BC2169	J18B64	8/3/09
BC2170	J18B65	8/3/09
BC2171	J18B63	8/3/09
BC2172	J18B66	8/3/09
BC2173	J189W0	8/3/09
BC2174	J189W1	8/3/09
BC2175	J189Y0	8/3/09
BC2176	J189Y1	8/3/09
BC2177	J189Y3	8/3/09
BC2178	J189Y4	8/3/09
BC2179	J189Y5	8/3/09
BC2180	J189Y6	8/3/09
BC2181	J189Y7	8/3/09
BC2182	J189Y8	8/3/09
BC2183	J189Y9	8/3/09
BC2224	J180K1	8/3/09
BC2225	J180K2	8/3/09
BC2226	J180K3	8/3/09
BC2227	J180K4	8/3/09
BC2228	J180K5	8/3/09
BC2229	J180K6	8/3/09
BC2230	J180K7	8/3/09
BC2231	J180K8	8/3/09
BC2232	J180K9	8/3/09
BC2233	J180K0	8/3/09
BC2234	J17V93	8/3/09
BC2235	J17V94	8/3/09
BC2236	J17V95	8/3/09
BC2237	J17V96	8/3/09
BC2238	J17VB7	8/3/09
BC2239	J17VB9	8/3/09
BC2240	J17VC0	8/3/09
BC2241	J17VC1	8/3/09
BC2242	J17VC2	8/3/09
BC2243	J17VC3	8/3/09
BC2244	J17VC4	8/3/09

JD 8/12/09

June 16, 2009
Orlette Johnson
Client: Lionville Laboratory
Shaw Project Name: Lionville
Shaw Project No. 135594.00110000

Shaw Environmental
Geotechnical Laboratory
Kingston TN (865) 482-6497

PARTICLE-SIZE ANALYSIS
ASTM D 422

Project Name
Lionville
Project No.
135594

Client Sample No.
J186C0
Lab Sample No.
BC1746

Specific Gravity = 2.65
assumed

Moisture Content = 7.1%
based on dry sample weight

SIEVE ANALYSIS

COARSE	Sieve No.	Diameter mm	Percent Finer
	3"	75.000	100.0%
	1.5"	37.500	100.0%
	0.75"	19.000	100.0%
	0.375"	9.500	100.0%
	#4	4.750	99.3%
	#10	2.000	97.4%

FINE	Sieve No.	Diameter mm	Percent Finer
	#20	0.850	89.2%
	#40	0.425	3.4%
	#60	0.250	0.7%
	#100	0.149	0.5%
	#140	0.106	0.4%
	#200	0.075	0.4%

HYDROMETER ANALYSIS

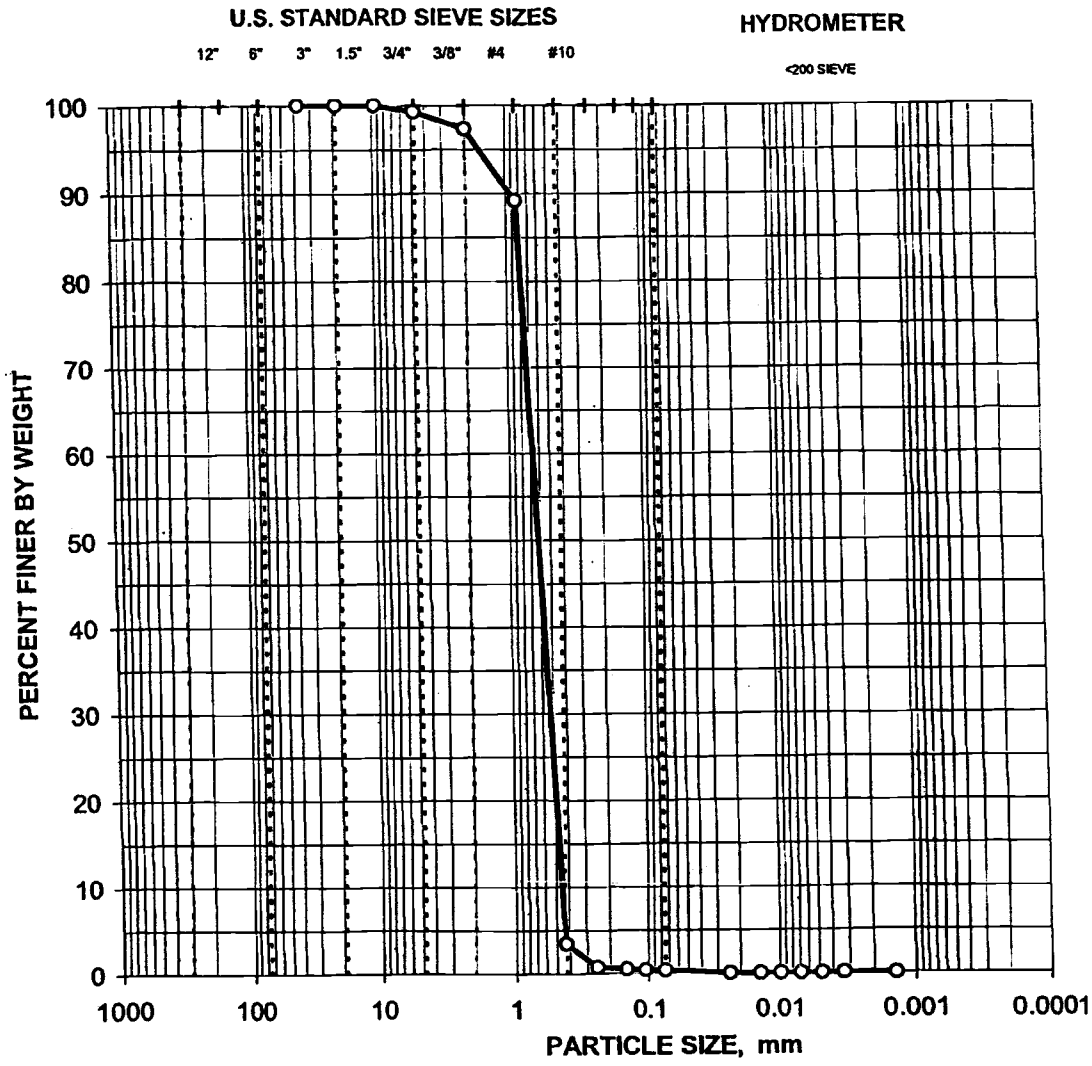
HYDROMETER	Diameter	Percent
	0.07726	0.0%
	0.05463	0.0%
	0.03816	0.0%
	0.02414	0.0%
	0.01393	0.0%
	0.00985	0.0%
	0.00688	0.0%
	0.00481	0.0%
	0.00329	0.0%
	0.00139	0.0%

0.7% Gravel 98.9% Sand 0.4% Silt/Clay

June 16, 2009
Orlette Johnson
Client: Lionville Laboratory
Shaw Project Name: Lionville
Shaw Project No. 135594.00110000

Shaw Environmental
Geotechnical Laboratory
Kingston TN (865) 482-6497

Lionville



CLIENT SAMPLE NO.: J186C0 LAB SAMPLE NO.: BC1746

BOULDERS	COBBLES	GRAVEL		SAND			Silt/Clay
		COARSE	FINE	COARSE	MEDIUM	FINE	

June 16, 2009
Orlette Johnson
Client: Lionville Laboratory
Shaw Project Name: Lionville
Shaw Project No. 135594.00110000

Shaw Environmental
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PARTICLE-SIZE ANALYSIS
ASTM D 422

Project Name
Lionville
Project No.
135594

Client Sample No.
J186C1
Lab Sample No.
BC1747

Specific Gravity = 2.65
assumed

Moisture Content = 19.2%
based on dry sample weight

SIEVE ANALYSIS

	Sieve No.	Diameter mm	Percent Finer
COARSE	3"	75.000	100.0%
	1.5"	37.500	100.0%
	0.75"	19.000	98.1%
	0.375"	9.500	94.1%
	#4	4.750	93.5%
	#10	2.000	92.5%

	Sieve No.	Diameter mm	Percent Finer
FINE	#20	0.850	87.3%
	#40	0.425	15.8%
	#60	0.250	5.3%
	#100	0.149	2.1%
	#140	0.106	0.6%
	#200	0.075	0.2%

HYDROMETER ANALYSIS

	Diameter	Percent
HYDROMETER		
	0.05388	0.5%
	0.03810	0.5%
	0.02414	0.0%
	0.01393	0.0%
	0.00985	0.0%
	0.00688	0.0%
	0.00481	0.0%
	0.00329	0.0%
	0.00139	0.0%

6.5% Gravel 93.3% Sand 0.2% Silt/Clay

June 16, 2009
Orlette Johnson
Client: Lionville Laboratory
Shaw Project Name: Lionville
Shaw Project No. 135594.00110000

Shaw Environmental
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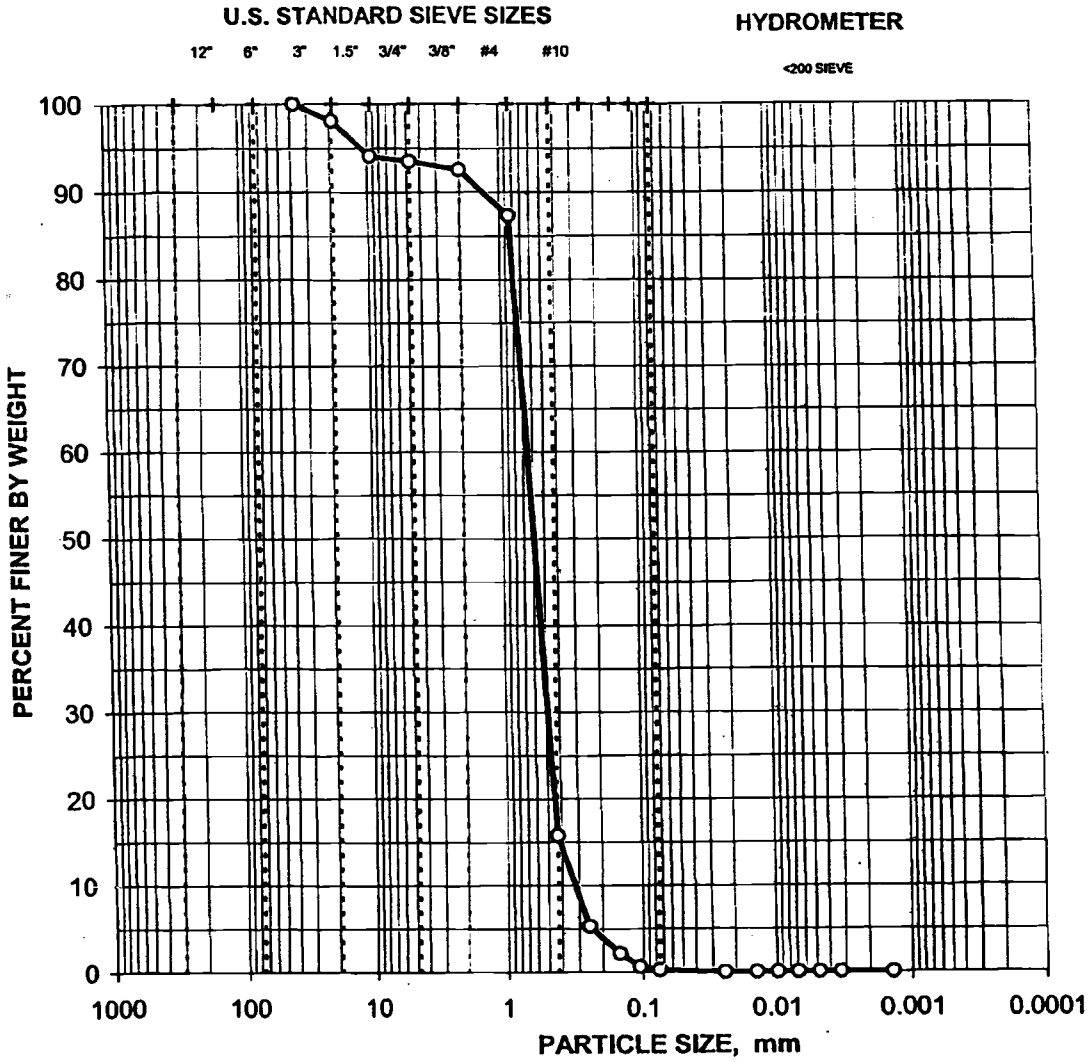
Lionville



CLIENT SAMPLE NO.: J186C1 **LAB SAMPLE NO.:** BC1747

BOULDERS	COBBLES	GRAVEL		SAND			Silt/Clay
		COARSE	FINE	COARSE	MEDIUM	FINE	

June 16, 2009
Orlette Johnson
Client: Lionville Laboratory
Shaw Project Name: Lionville
Shaw Project No. 135594.00110000

Shaw Environmental
Geotechnical Laboratory
Kingston TN (865) 482-6497

PARTICLE-SIZE ANALYSIS
ASTM D 422

Project Name
Lionville
Project No.
135594

Client Sample No.
J186C2
Lab Sample No.
BC1748

Specific Gravity = 2.65
assumed

Moisture Content = 21.2%
based on dry sample weight

SIEVE ANALYSIS

	Sieve No.	Diameter mm	Percent Finer
COARSE	3"	75.000	100.0%
	1.5"	37.500	100.0%
	0.75"	19.000	100.0%
	0.375"	9.500	100.0%
	#4	4.750	99.8%
	#10	2.000	99.1%

	Sieve No.	Diameter mm	Percent Finer
FINE	#20	0.850	93.0%
	#40	0.425	6.0%
	#60	0.250	1.3%
	#100	0.149	0.9%
	#140	0.106	0.4%
	#200	0.075	0.3%

HYDROMETER ANALYSIS

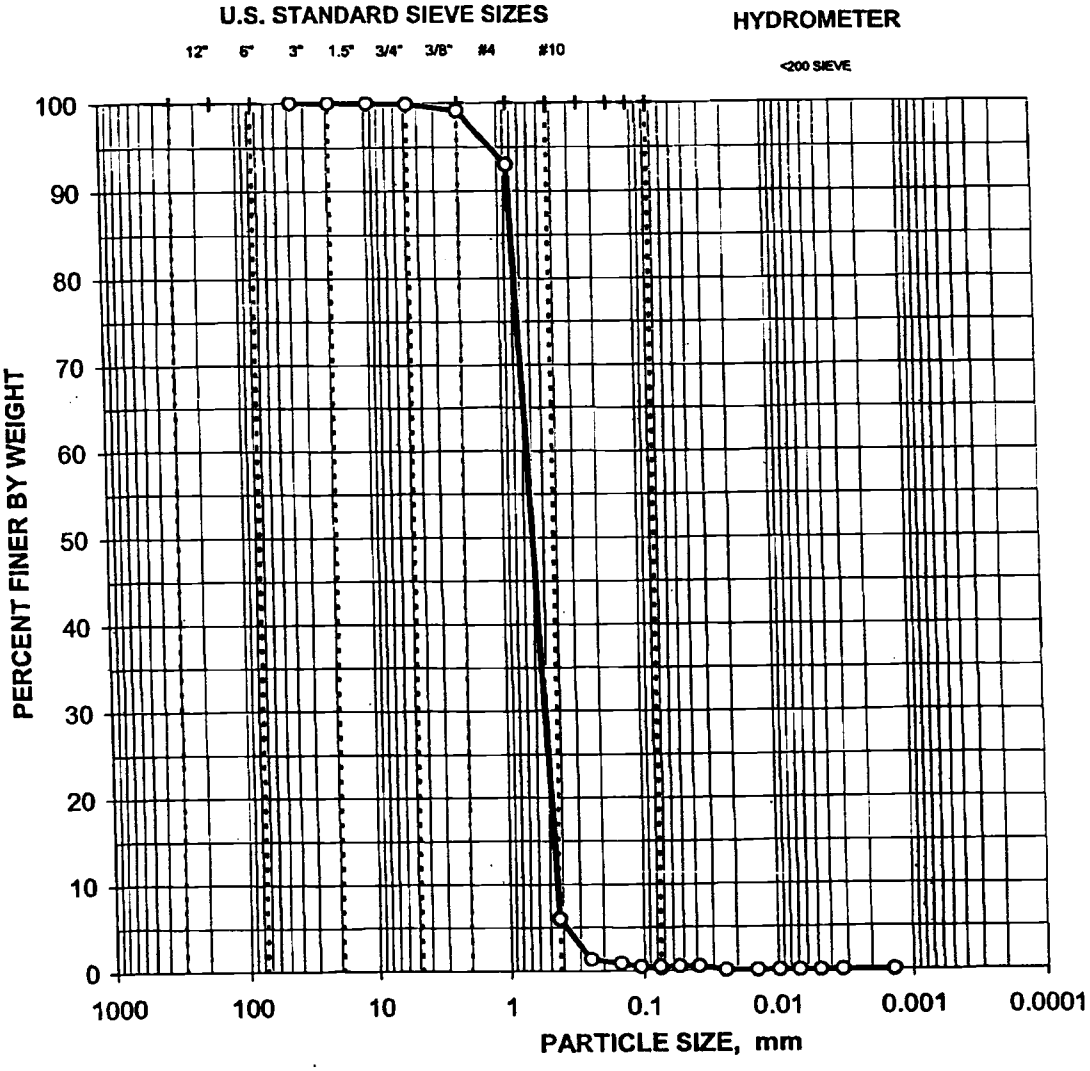
	Diameter	Percent
HYDROMETER	0.07620	0.5%
	0.05388	0.5%
	0.03810	0.5%
	0.02414	0.0%
	0.01393	0.0%
	0.00973	0.0%
	0.00688	0.0%
	0.00481	0.0%
	0.00329	0.0%
	0.00139	0.0%

0.2% Gravel 99.5% Sand 0.3% Silt/Clay

June 16, 2009
Orlette Johnson
Client: Lionville Laboratory
Shaw Project Name: Lionville
Shaw Project No. 135594.00110000

Shaw Environmental
Geotechnical Laboratory
Kingston TN (865) 482-6497

Lionville



CLIENT SAMPLE NO.: J186C2 **LAB SAMPLE NO.:** BC1748

BOULDERS	COBBLES	GRAVEL		SAND			Silt/Clay
		COARSE	FINE	COARSE	MEDIUM	FINE	

June 16, 2009
Orlette Johnson
Client: Lionville Laboratory
Shaw Project Name: Lionville
Shaw Project No. 135594.00110000

Shaw Environmental
Geotechnical Laboratory
Kingston TN (865) 482-6497

PARTICLE-SIZE ANALYSIS
ASTM D 422

Project Name
Lionville
Project No.
135594

Client Sample No.
J186C3
Lab Sample No.
BC1749

Specific Gravity = 2.65
assumed

Moisture Content = 13.4%
based on dry sample weight

SIEVE ANALYSIS

COARSE	Sieve No.	Diameter mm	Percent Finer
	3"	75.000	100.0%
	1.5"	37.500	100.0%
	0.75"	19.000	100.0%
	0.375"	9.500	100.0%
	#4	4.750	100.0%
	#10	2.000	100.0%

FINE	Sieve No.	Diameter mm	Percent Finer
	#20	0.850	99.2%
	#40	0.425	12.9%
	#60	0.250	1.9%
	#100	0.149	0.7%
	#140	0.106	0.1%
	#200	0.075	0.0%

HYDROMETER ANALYSIS

HYDROMETER	Diameter	Percent
	0.05397	0.0%
	0.03816	0.0%
	0.02414	0.0%
	0.01376	0.0%
	0.00973	0.0%
	0.00680	0.0%
	0.00481	0.0%
	0.00329	0.0%
	0.00139	0.0%

0.0% Gravel 100.0% Sand 0.0% Silt/Clay

June 16, 2009
Orlette Johnson
Client: Lionville Laboratory
Shaw Project Name: Lionville
Shaw Project No. 135594.00110000

Shaw Environmental
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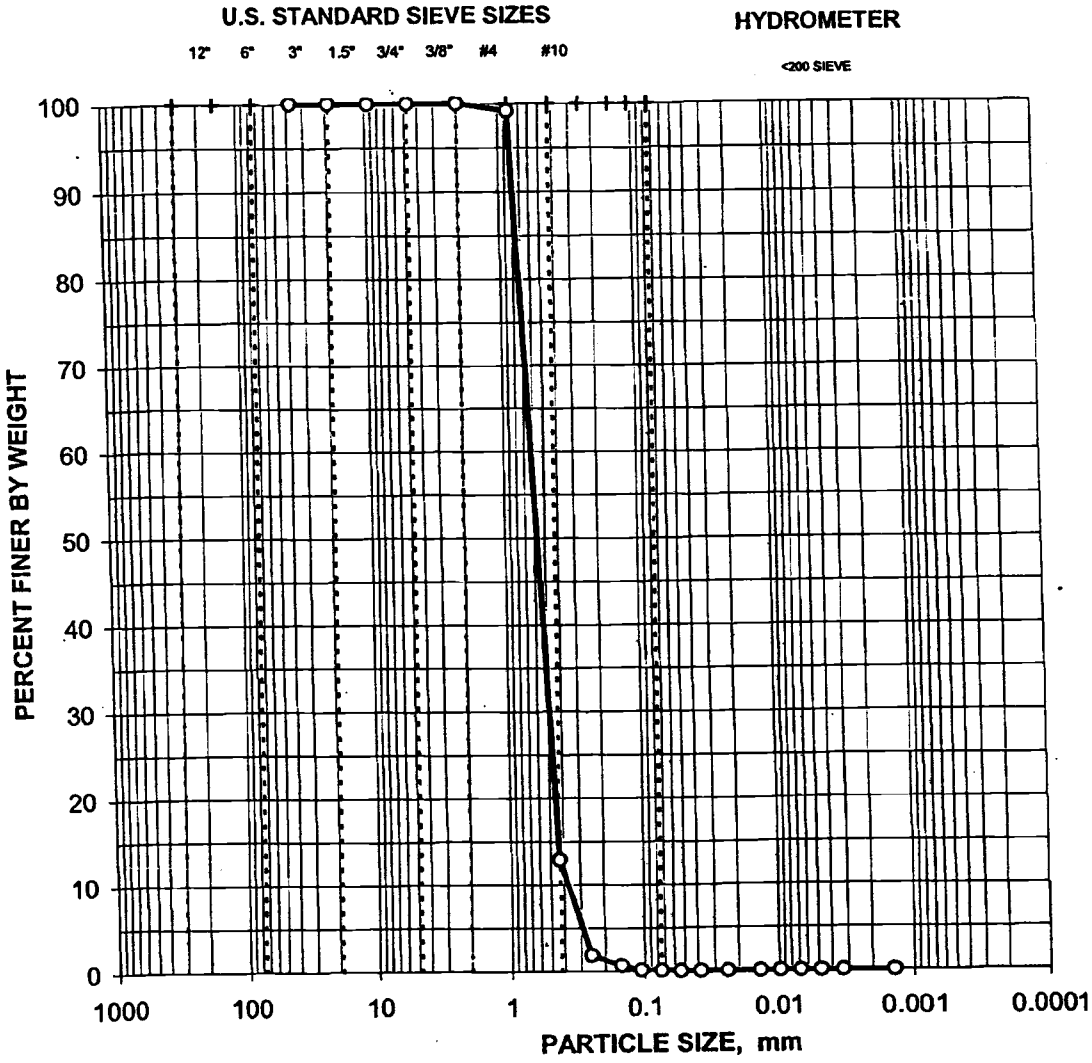
Lionville



CLIENT SAMPLE NO.: J186C3 **LAB SAMPLE NO.:** BC1749

BOULDERS	COBBLES	GRAVEL		SAND			Silt/Clay
		COARSE	FINE	COARSE	MEDIUM	FINE	

June 16, 2009
Orlette Johnson
Client: Lionville Laboratory
Shaw Project Name: Lionville
Shaw Project No. 135594.00110000

Shaw Environmental
Geotechnical Laboratory
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PARTICLE-SIZE ANALYSIS
ASTM D 422

Project Name
Lionville
Project No.
135594

Client Sample No.
J186C5
Lab Sample No.
BC1750

Specific Gravity = 2.65
assumed

Moisture Content = 27.2%
based on dry sample weight

SIEVE ANALYSIS

	Sieve No.	Diameter mm	Percent Finer
COARSE	3"	75.000	100.0%
	1.5"	37.500	100.0%
	0.75"	19.000	100.0%
	0.375"	9.500	100.0%
	#4	4.750	100.0%
	#10	2.000	99.7%

	Sieve No.	Diameter mm	Percent Finer
FINE	#20	0.850	99.5%
	#40	0.425	99.3%
	#60	0.250	89.4%
	#100	0.149	38.9%
	#140	0.106	13.2%
	#200	0.075	2.3%

HYDROMETER ANALYSIS

	Diameter	Percent
HYDROMETER		
	0.05304	1.0%
	0.03763	0.5%
	0.02380	0.5%
	0.01374	0.5%
	0.00972	0.5%
	0.00678	0.5%
	0.00481	0.0%
	0.00329	0.0%
	0.00139	0.0%

0.0% Gravel 97.7% Sand 2.3% Silt/Clay

June 16, 2009
Orlette Johnson
Client: Lionville Laboratory
Shaw Project Name: Lionville
Shaw Project No. 135594.00110000

Shaw Environmental
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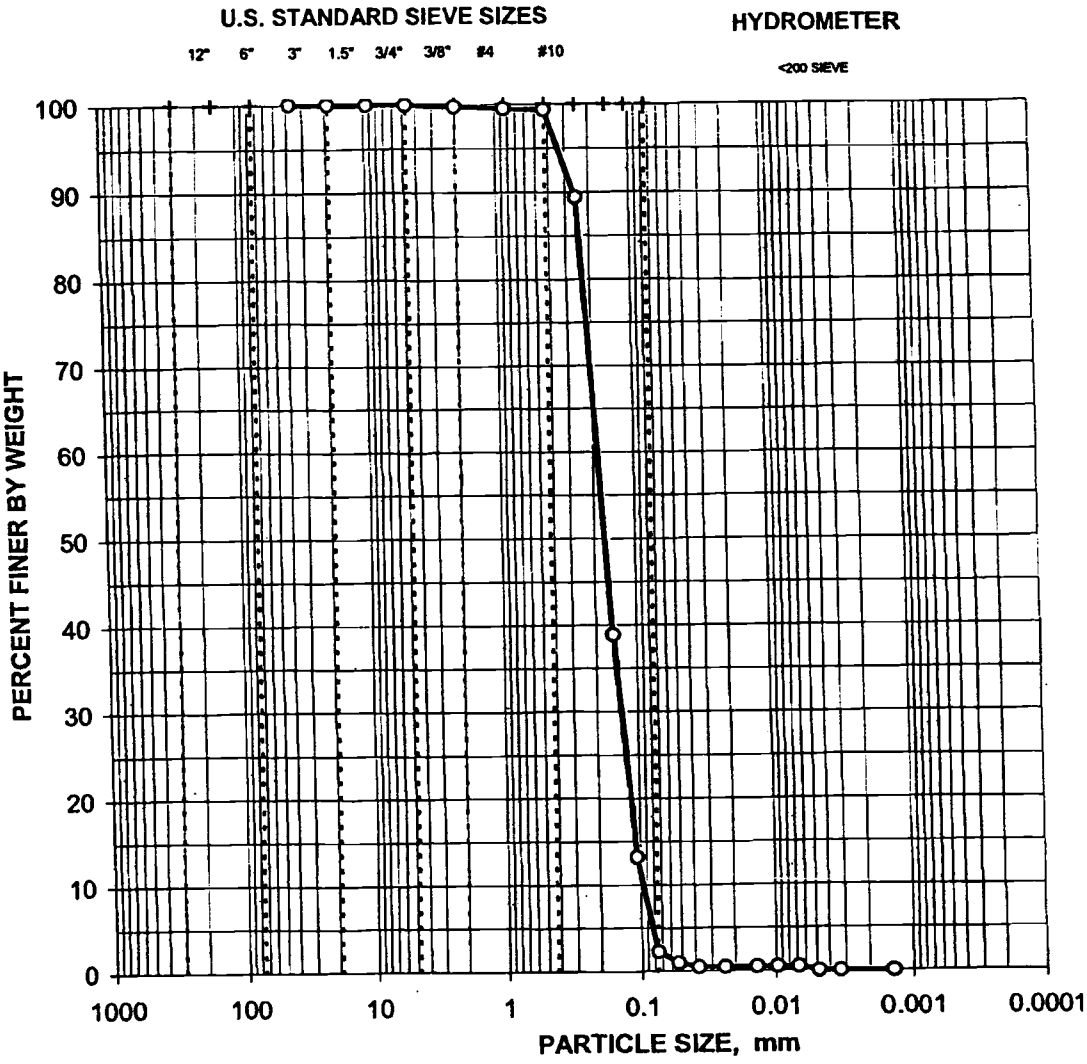
Lionville



CLIENT SAMPLE NO.: J186C5 **LAB SAMPLE NO.:** BC1750

BOULDERS	COBBLES	GRAVEL		SAND			Silt/Clay
		COARSE	FINE	COARSE	MEDIUM	FINE	

June 16, 2009
Orlette Johnson
Client: Lionville Laboratory
Shaw Project Name: Lionville
Shaw Project No. 135594.00110000

Shaw Environmental
Geotechnical Laboratory
Kingston TN (865) 482-6497

PARTICLE-SIZE ANALYSIS
ASTM D 422

Project Name
Lionville
Project No.
135594

Client Sample No.
J186C6
Lab Sample No.
BC1751

Specific Gravity = 2.65
assumed

Moisture Content = 27.9%
based on dry sample weight

SIEVE ANALYSIS

	Sieve No.	Diameter mm	Percent Finer
COARSE	3"	75.000	100.0%
	1.5"	37.500	100.0%
	0.75"	19.000	100.0%
	0.375"	9.500	100.0%
	#4	4.750	100.0%
	#10	2.000	100.0%

	Sieve No.	Diameter mm	Percent Finer
FINE	#20	0.850	100.0%
	#40	0.425	99.9%
	#60	0.250	95.2%
	#100	0.149	40.4%
	#140	0.106	13.0%
	#200	0.075	2.3%

HYDROMETER ANALYSIS

	Diameter	Percent
HYDROMETER	0.07476	1.6%
	0.05322	0.5%
	0.03763	0.5%
	0.02380	0.5%
	0.01374	0.5%
	0.00973	0.0%
	0.00680	0.0%
	0.00481	0.0%
	0.00329	0.0%
	0.00139	0.0%

0.0% Gravel 97.7% Sand 2.3% Silt/Clay

June 16, 2009
Orlette Johnson
Client: Lionville Laboratory
Shaw Project Name: Lionville
Shaw Project No. 135594.00110000

Shaw Environmental
Geotechnical Laboratory
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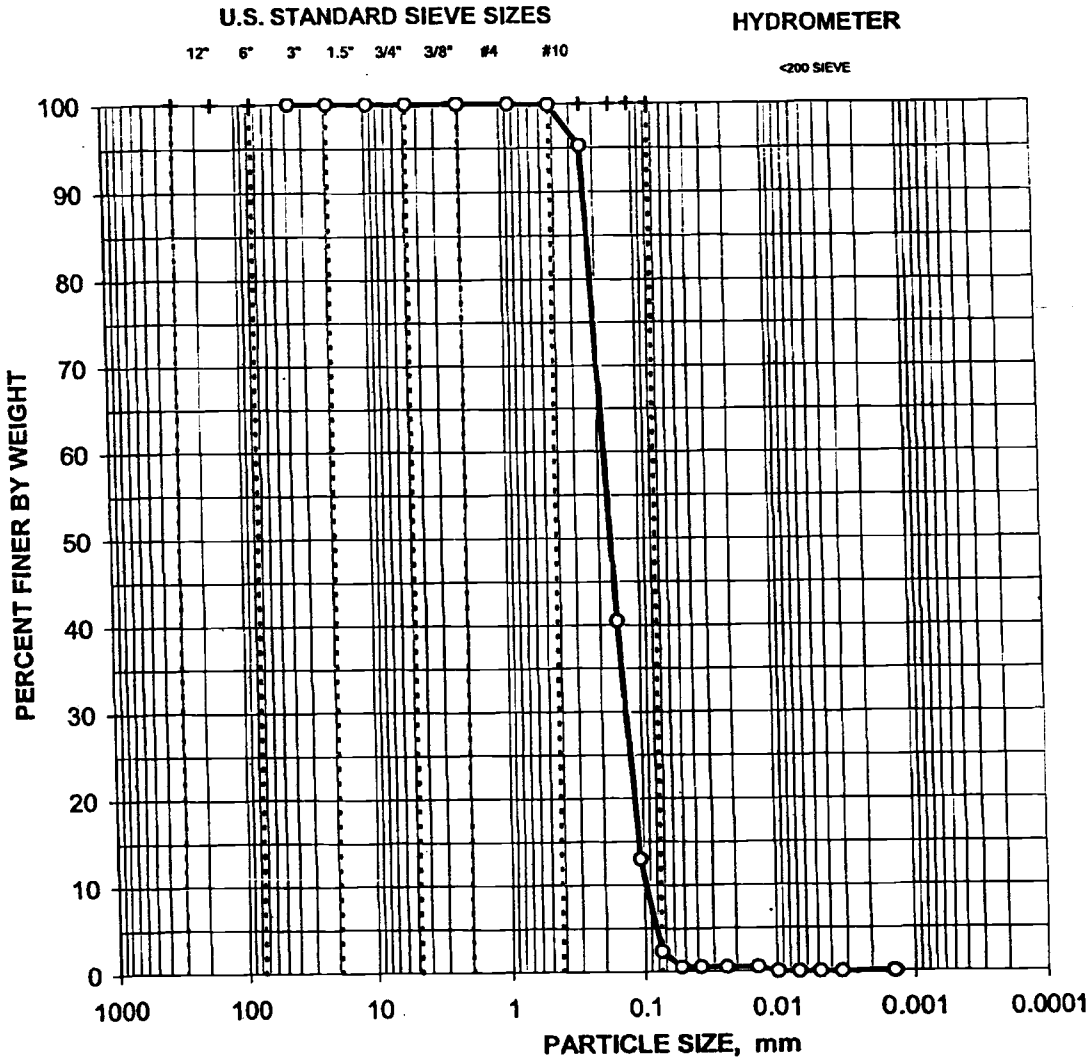
Lionville



CLIENT SAMPLE NO.: J186C6 **LAB SAMPLE NO.:** BC1751

BOULDERS	COBBLES	GRAVEL		SAND			Silt/Clay
		COARSE	FINE	COARSE	MEDIUM	FINE	

June 16, 2009
Orlette Johnson
Client: Lionville Laboratory
Shaw Project Name: Lionville
Shaw Project No. 135594.00110000

Shaw Environmental
Geotechnical Laboratory
Kingston TN (865) 482-6497

PARTICLE-SIZE ANALYSIS
ASTM D 422

Project Name
Lionville
Project No.
135594

Client Sample No.
J186C7
Lab Sample No.
BC1752

Specific Gravity = 2.65
assumed

Moisture Content = 26.7%
based on dry sample weight

SIEVE ANALYSIS

COARSE	Sieve No.	Diameter mm	Percent Finer
	3"	75.000	100.0%
	1.5"	37.500	100.0%
	0.75"	19.000	100.0%
	0.375"	9.500	100.0%
	#4	4.750	100.0%
	#10	2.000	99.9%

FINE	Sieve No.	Diameter mm	Percent Finer
	#20	0.850	99.5%
	#40	0.425	98.0%
	#60	0.250	87.7%
	#100	0.149	54.0%
	#140	0.106	26.5%
	#200	0.075	9.1%

HYDROMETER ANALYSIS

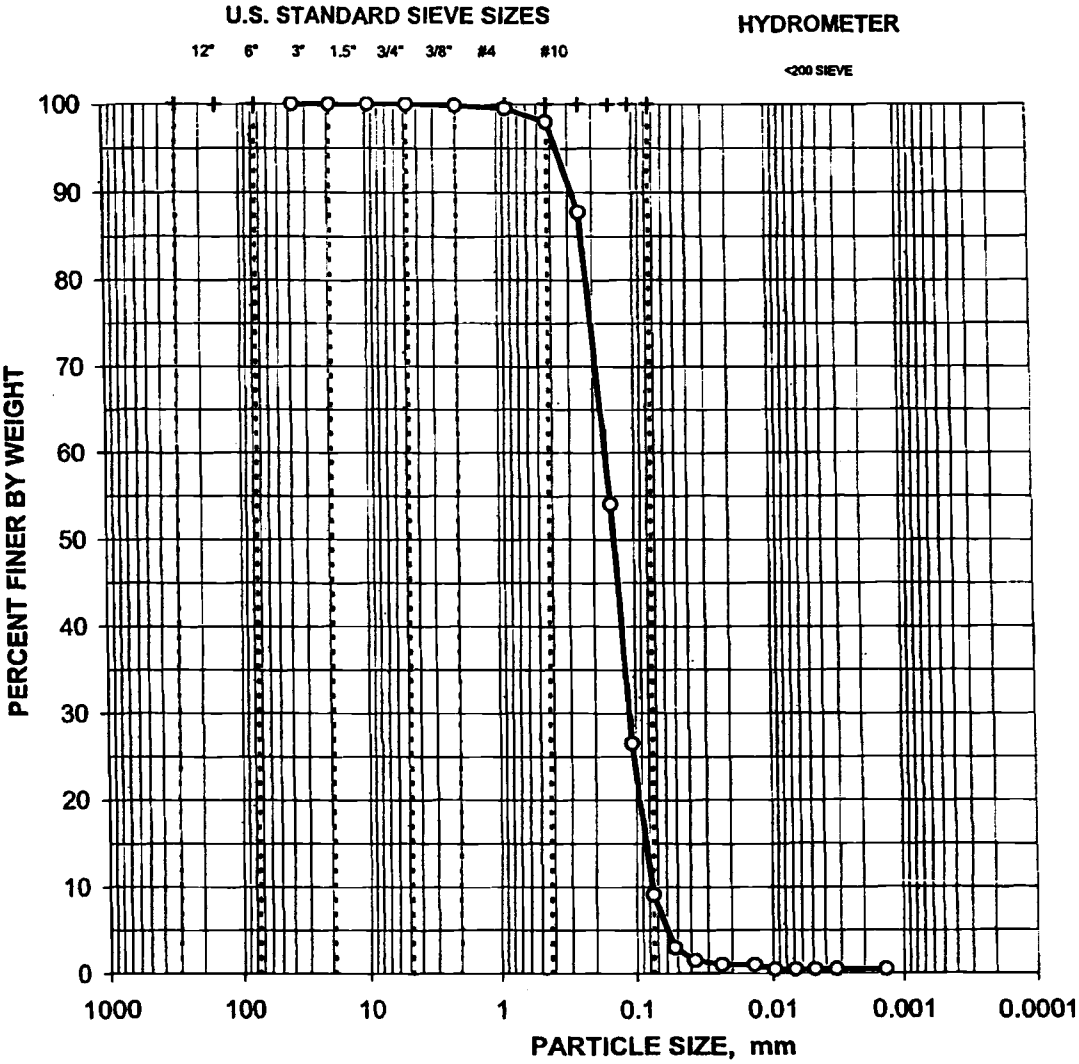
HYDROMETER	Diameter	Percent
	0.05242	3.0%
	0.03738	1.5%
	0.02372	1.0%
	0.01370	1.0%
	0.00972	0.5%
	0.00678	0.5%
	0.00480	0.5%
	0.00328	0.5%
	0.00137	0.5%

0.0% Gravel 90.9% Sand 9.1% Silt/Clay

June 16, 2009
Orlette Johnson
Client: Lionville Laboratory
Shaw Project Name: Lionville
Shaw Project No. 135594.00110000

Shaw Environmental
Geotechnical Laboratory
Kingston TN (865) 482-6497

Lionville



CLIENT SAMPLE NO.: J186C7 **LAB SAMPLE NO.:** BC1752

BOULDERS	COBBLES	GRAVEL		SAND			Silt/Clay
		COARSE	FINE	COARSE	MEDIUM	FINE	

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PARTICLE-SIZE ANALYSIS
ASTM D 422

Project Name
Lionville
Project No.
135594

Client Sample No.
J186C8
Lab Sample No.
BC1753

Specific Gravity = 2.65
assumed

Moisture Content = 21.6%
based on dry sample weight

SIEVE ANALYSIS

COARSE	Sieve No.	Diameter mm	Percent Finer
	3"	75.000	100.0%
	1.5"	37.500	100.0%
	0.75"	19.000	100.0%
	0.375"	9.500	99.2%
	#4	4.750	98.4%
	#10	2.000	96.8%

FINE	Sieve No.	Diameter mm	Percent Finer
	#20	0.850	95.8%
	#40	0.425	92.3%
	#60	0.250	62.0%
	#100	0.149	27.0%
	#140	0.106	11.4%
	#200	0.075	2.7%

HYDROMETER ANALYSIS

HYDROMETER	Diameter	Percent
	0.07476	1.5%
	0.05330	0.0%
	0.03769	0.0%
	0.02384	0.0%
	0.01376	0.0%
	0.00973	0.0%
	0.00680	0.0%
	0.00481	0.0%
	0.00329	0.0%
	0.00138	0.0%

1.6% Gravel 95.7% Sand 2.7% Silt/Clay

June 16, 2009
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Client: Lionville Laboratory
Shaw Project Name: Lionville
Shaw Project No. 135594.00110000

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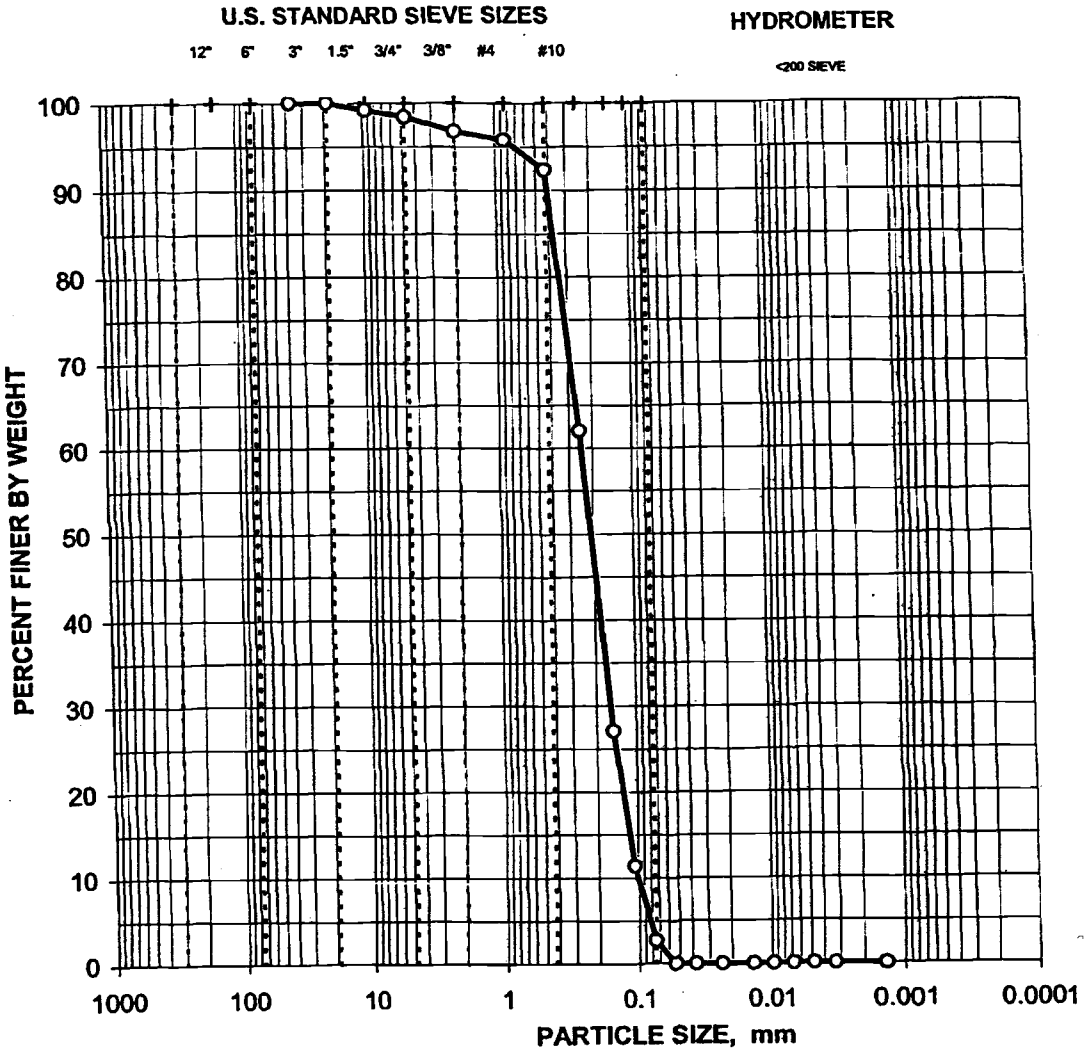
Lionville



CLIENT SAMPLE NO.: J186C8 **LAB SAMPLE NO.:** BC1753

BOULDERS	COBBLES	GRAVEL		SAND			Silt/Clay
		COARSE	FINE	COARSE	MEDIUM	FINE	