0082761

SAF-RC-118
Columbia River Component of the RCBRA – Tissues
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 8/3/09
INITIAL/DATE

COMMENTS:

SDG K1579 **SAF-RC-118**

Rad only Chem only ☑ Rad & Chem

☑ Complete Partial

Sampling Location: **UPRIVER SA-WF1 - 5 – LIV/KID**
100SA-WF1 - 5, LIV/KID
300SA-WF1 – 5, LIV/KID
LWSA-WF1 – 5, LIV/KID

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EBERLINE SERVICES

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May 26, 2009

RECEIVED
MAY 2009

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

Reference: **P.O. #S00W235A00**
Eberline Analytical R9-04-018-7351, SDG K1579

Dear Ms. Kessner:

Enclosed is a data report for ten solid (other solid) samples designated under SAF No. RC-118 received at Eberline Analytical on April 3, 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
Client Services Manager

NJV/jag

Enclosure: Data Package

1.0 GENERAL

Washington Closure Hanford (WCH) Sample Delivery Group K1579 was composed of ten solid (other solid) samples designated under SAF No. RC-118 with a Project Designation of: Columbia River Component of the RCBRA – Tissues.

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 May 26, 2009.

2.0 ANALYSIS NOTES

2.1 Carbon-14 Analysis

No problems were encountered during the course of the analyses.

2.1 Tritium 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

No problems were encountered during the course of the analyses.

2.4 Isotopic Thorium Analysis

Thorium-230 activity at 0.495 +/- 0.27 pCi/g was observed in the QC blank, greater than the sample MDA of 0.252 pCi/g, but less than the RDL of 1.0 pCi/g. No other 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
Client Services Manager

5/27/09
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 K1579

SDG	7351
Contact	N. Joseph Verville

Client	Hanford
Contract	No. S00W235A00
Case no	SDG K1579

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	05/26/09

SDG 7351
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1579

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 05/26/09

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 K1579

SDG 7351
Contact N. Joseph Verville

LAB SAMPLE SUMMARY

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

LAB SAMPLE ID	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAF NO	CHAIN OF CUSTODY	COLLECTED
R904018-01	J18J59	UPRIVER SA-WF1, LIV/KID	SOLID		RC-118	RC-118-16	04/01/09 11:55
R904018-02	J18J60	UPRIVER SA-WF2, LIV/KID	SOLID		RC-118	RC-118-17	04/01/09 12:00
R904018-03	J18J61	UPRIVER SA-WF3, LIV/KID	SOLID		RC-118	RC-118-18	04/01/09 12:05
R904018-04	J18J62	UPRIVER SA-WF4, LIV/KID	SOLID		RC-118	RC-118-19	04/01/09 12:15
R904018-05	J18J63	UPRIVER SA-WF5, LIV/KID	SOLID		RC-118	RC-118-20	04/01/09 12:20
R904018-06	J18K11	100SA-WF1, LIV/KID	SOLID		RC-118	RC-118-56	04/01/09 11:00
R904018-07	J18K12	100SA-WF2, LIV/KID	SOLID		RC-118	RC-118-57	04/01/09 11:05
R904018-08	J18K13	100SA-WF3, LIV/KID	SOLID		RC-118	RC-118-58	04/01/09 11:12
R904018-09	J18K14	100SA-WF4, LIV/KID	SOLID		RC-118	RC-118-59	04/01/09 11:18
R904018-10	J18K15	100SA-WF5, LIV/KID	SOLID		RC-118	RC-118-60	04/01/09 11:21
R904018-11	Lab Control Sample		SOLID		RC-118		
R904018-12	Method Blank		SOLID		RC-118		
R904018-13	Duplicate (R904018-01)	UPRIVER SA-WF1, LIV/KID	SOLID		RC-118		04/01/09 11:55

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LS
Version 3.06
Report date 05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

SDG 7351
Contact N. Joseph Verville

QC SUMMARY

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

! 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
51	RC-118-16	J18J59	SOLID	100.0	40.4 g		04/03/09	2	R904018-01	7351-001
	RC-118-17	J18J60	SOLID	100.0	19.8 g		04/03/09	2	R904018-02	7351-002
	RC-118-18	J18J61	SOLID	100.0	10.1 g		04/03/09	2	R904018-03	7351-003
	RC-118-19	J18J62	SOLID	100.0	11.3 g		04/03/09	2	R904018-04	7351-004
	RC-118-20	J18J63	SOLID	100.0	14.5 g		04/03/09	2	R904018-05	7351-005
	RC-118-56	J18K11	SOLID	100.0	64.8 g		04/03/09	2	R904018-06	7351-006
	RC-118-57	J18K12	SOLID	100.0	46.2 g		04/03/09	2	R904018-07	7351-007
	RC-118-58	J18K13	SOLID	100.0	47.1 g		04/03/09	2	R904018-08	7351-008
	RC-118-59	J18K14	SOLID	100.0	42.7 g		04/03/09	2	R904018-09	7351-009
	RC-118-60	J18K15	SOLID	100.0	55.7 g		04/03/09	2	R904018-10	7351-010
		Method Blank	SOLID						R904018-12	7351-012
		Lab Control Sample	SOLID						R904018-11	7351-011
		Duplicate (R904018-01)	SOLID	100.0	40.4 g		04/03/09	2	R904018-13	7351-013

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-QS
Version 3.06
Report date 05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

SDG 7351
Contact N. Joseph Verville

PREP BATCH SUMMARY

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

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	7200-084	8.0	10			1	1	1/1		
TH	SOLID	Thorium, Isotopic in Solids	7200-084	8.0	10			1	1	1/1		
U	SOLID	Uranium, Isotopic in Solids	7200-084	8.0	10			1	1	1/1		
Beta Counting												
SR	SOLID	Total Strontium in Solids	7200-084	10.4	10			1	1	1/1		
TC	SOLID	Technetium 99 in Solids	7200-084	13.2	10			1	1	1/1		
Gamma Spectroscopy												
GAM	SOLID	Gamma Scan	7200-084	7.0	10			1	1	1/1		
Liquid Scintillation Counting												
C	SOLID	Carbon 14 in Solids	7200-084	10.0	10			1	1	1/1		
H	SOLID	Tritium in Solids	7200-084	10.0	10			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 05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

SDG 7351
Contact N. Joseph Verville

LAB WORK SUMMARY

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
904018-01	J18J59			7351-001	C		05/24/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	UPRIVER SA-WF1,	LIV/KID	SOLID	7351-001	GAM		04/14/09	04/28/09	BW	Gamma Scan
04/03/09	RC-118-16	RC-118		7351-001	H		05/25/09	05/26/09	BW	Tritium in Solids
				7351-001	PU		05/18/09	05/19/09	BW	Plutonium, Isotopic in Solids
				7351-001	SR		05/04/09	05/07/09	BW	Total Strontium in Solids
				7351-001	TC		05/06/09	05/14/09	BW	Technetium 99 in Solids
				7351-001	TH		05/15/09	05/18/09	BW	Thorium, Isotopic in Solids
				7351-001	U		05/12/09	05/12/09	BW	Uranium, Isotopic in Solids
904018-02	J18J60			7351-002	C		05/24/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	UPRIVER SA-WF2,	LIV/KID	SOLID	7351-002	GAM		04/14/09	04/28/09	BW	Gamma Scan
04/03/09	RC-118-17	RC-118		7351-002	H		05/25/09	05/26/09	BW	Tritium in Solids
				7351-002	PU		05/18/09	05/19/09	BW	Plutonium, Isotopic in Solids
				7351-002	SR		05/04/09	05/07/09	BW	Total Strontium in Solids
				7351-002	TC		05/13/09	05/14/09	BW	Technetium 99 in Solids
				7351-002	TH		05/15/09	05/18/09	BW	Thorium, Isotopic in Solids
				7351-002	U		05/08/09	05/12/09	BW	Uranium, Isotopic in Solids
904018-03	J18J61			7351-003	C		05/24/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	UPRIVER SA-WF3,	LIV/KID	SOLID	7351-003	GAM		04/14/09	04/28/09	BW	Gamma Scan
04/03/09	RC-118-18	RC-118		7351-003	H		05/25/09	05/26/09	BW	Tritium in Solids
				7351-003	PU		05/18/09	05/19/09	BW	Plutonium, Isotopic in Solids
				7351-003	SR		05/04/09	05/07/09	BW	Total Strontium in Solids
				7351-003	TC		05/12/09	05/14/09	BW	Technetium 99 in Solids
				7351-003	TH		05/15/09	05/18/09	BW	Thorium, Isotopic in Solids
				7351-003	U		05/08/09	05/12/09	BW	Uranium, Isotopic in Solids
904018-04	J18J62			7351-004	C		05/24/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	UPRIVER SA-WF4,	LIV/KID	SOLID	7351-004	GAM		04/14/09	04/28/09	BW	Gamma Scan
04/03/09	RC-118-19	RC-118		7351-004	H		05/25/09	05/26/09	BW	Tritium in Solids
				7351-004	PU		05/18/09	05/19/09	BW	Plutonium, Isotopic in Solids
				7351-004	SR		05/04/09	05/07/09	BW	Total Strontium in Solids
				7351-004	TC		05/11/09	05/14/09	BW	Technetium 99 in Solids
				7351-004	TH		05/15/09	05/18/09	BW	Thorium, Isotopic in Solids
				7351-004	U		05/08/09	05/12/09	BW	Uranium, Isotopic in Solids

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

SDG 7351
Contact N. Joseph Verville

WORK SUMMARY, cont.

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

B SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
04018-05	J18J63			7351-005	C		05/24/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	UPRIVER SA-WF5, LIV/KID		SOLID	7351-005	GAM		04/17/09	04/28/09	BW	Gamma Scan
04/03/09	RC-118-20	RC-118		7351-005	H		05/25/09	05/26/09	BW	Tritium in Solids
				7351-005	PU		05/18/09	05/19/09	BW	Plutonium, Isotopic in Solids
				7351-005	SR		05/04/09	05/07/09	BW	Total Strontium in Solids
				7351-005	TC		05/06/09	05/14/09	BW	Technetium 99 in Solids
				7351-005	TH		05/15/09	05/18/09	BW	Thorium, Isotopic in Solids
				7351-005	U		05/08/09	05/12/09	BW	Uranium, Isotopic in Solids
904018-06	J18K11			7351-006	C		05/24/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	100SA-WF1, LIV/KID		SOLID	7351-006	GAM		04/14/09	04/28/09	BW	Gamma Scan
04/03/09	RC-118-56	RC-118		7351-006	H		05/25/09	05/26/09	BW	Tritium in Solids
				7351-006	PU		05/18/09	05/19/09	BW	Plutonium, Isotopic in Solids
				7351-006	SR		05/04/09	05/07/09	BW	Total Strontium in Solids
				7351-006	TC		05/11/09	05/14/09	BW	Technetium 99 in Solids
				7351-006	TH		05/15/09	05/18/09	BW	Thorium, Isotopic in Solids
				7351-006	U		05/08/09	05/12/09	BW	Uranium, Isotopic in Solids
904018-07	J18K12			7351-007	C		05/24/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	100SA-WF2, LIV/KID		SOLID	7351-007	GAM		04/15/09	04/28/09	BW	Gamma Scan
04/03/09	RC-118-57	RC-118		7351-007	H		05/25/09	05/26/09	BW	Tritium in Solids
				7351-007	PU		05/18/09	05/19/09	BW	Plutonium, Isotopic in Solids
				7351-007	SR		05/04/09	05/07/09	BW	Total Strontium in Solids
				7351-007	TC		05/13/09	05/14/09	BW	Technetium 99 in Solids
				7351-007	TH		05/15/09	05/18/09	BW	Thorium, Isotopic in Solids
				7351-007	U		05/11/09	05/12/09	BW	Uranium, Isotopic in Solids
904018-08	J18K13			7351-008	C		05/24/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	100SA-WF3, LIV/KID		SOLID	7351-008	GAM		04/15/09	04/28/09	BW	Gamma Scan
04/03/09	RC-118-58	RC-118		7351-008	H		05/25/09	05/26/09	BW	Tritium in Solids
				7351-008	PU		05/18/09	05/19/09	BW	Plutonium, Isotopic in Solids
				7351-008	SR		05/04/09	05/07/09	BW	Total Strontium in Solids
				7351-008	TC		05/11/09	05/14/09	BW	Technetium 99 in Solids
				7351-008	TH		05/15/09	05/18/09	BW	Thorium, Isotopic in Solids
				7351-008	U		05/08/09	05/12/09	BW	Uranium, Isotopic in Solids

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

SDG 7351
Contact N. Joseph Verville

WORK SUMMARY, cont.

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

AB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
904018-09	J18K14			7351-009	C		05/24/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	100SA-WF4, LIV/KID		SOLID	7351-009	GAM		04/15/09	04/28/09	BW	Gamma Scan
04/03/09	RC-118-59	RC-118		7351-009	H		05/25/09	05/26/09	BW	Tritium in Solids
				7351-009	PU		05/18/09	05/19/09	BW	Plutonium, Isotopic in Solids
				7351-009	SR		05/04/09	05/07/09	BW	Total Strontium in Solids
				7351-009	TC		05/11/09	05/14/09	BW	Technetium 99 in Solids
				7351-009	TH		05/16/09	05/18/09	BW	Thorium, Isotopic in Solids
				7351-009	U		05/08/09	05/12/09	BW	Uranium, Isotopic in Solids
904018-10	J18K15			7351-010	C		05/24/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	100SA-WF5, LIV/KID		SOLID	7351-010	GAM		04/17/09	04/28/09	BW	Gamma Scan
04/03/09	RC-118-60	RC-118		7351-010	H		05/25/09	05/26/09	BW	Tritium in Solids
				7351-010	PU		05/18/09	05/19/09	BW	Plutonium, Isotopic in Solids
				7351-010	SR		05/04/09	05/07/09	BW	Total Strontium in Solids
				7351-010	TC		05/13/09	05/14/09	BW	Technetium 99 in Solids
				7351-010	TH		05/15/09	05/18/09	BW	Thorium, Isotopic in Solids
				7351-010	U		05/11/09	05/12/09	BW	Uranium, Isotopic in Solids
904018-11	Lab Control Sample			7351-011	C		05/25/09	05/26/09	BW	Carbon 14 in Solids
			SOLID	7351-011	GAM		04/23/09	04/28/09	BW	Gamma Scan
		RC-118		7351-011	H		05/25/09	05/26/09	BW	Tritium in Solids
				7351-011	PU		05/18/09	05/19/09	BW	Plutonium, Isotopic in Solids
				7351-011	SR		05/04/09	05/07/09	BW	Total Strontium in Solids
				7351-011	TC		05/14/09	05/14/09	BW	Technetium 99 in Solids
				7351-011	TH		05/14/09	05/18/09	BW	Thorium, Isotopic in Solids
				7351-011	U		05/11/09	05/12/09	BW	Uranium, Isotopic in Solids
904018-12	Method Blank			7351-012	C		05/24/09	05/26/09	BW	Carbon 14 in Solids
			SOLID	7351-012	GAM		04/23/09	04/28/09	BW	Gamma Scan
		RC-118		7351-012	H		05/25/09	05/26/09	BW	Tritium in Solids
				7351-012	PU		05/18/09	05/19/09	BW	Plutonium, Isotopic in Solids
				7351-012	SR		05/04/09	05/07/09	BW	Total Strontium in Solids
				7351-012	TC		05/13/09	05/14/09	BW	Technetium 99 in Solids
				7351-012	TH		05/15/09	05/18/09	BW	Thorium, Isotopic in Solids
				7351-012	U		05/11/09	05/12/09	BW	Uranium, Isotopic in Solids

Lab id EBRLNE
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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

SDG 7351
Contact N. Joseph Verville

WORK SUMMARY, cont.

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

B SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
04018-13	Duplicate (R904018-01)			7351-013	C		05/24/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	UPRIVER SA-WF1, LIV/KID		SOLID	7351-013	GAM		04/20/09	04/28/09	BW	Gamma Scan
04/03/09		RC-118		7351-013	H		05/25/09	05/26/09	BW	Tritium in Solids
				7351-013	PU		05/18/09	05/19/09	BW	Plutonium, Isotopic in Solids
				7351-013	SR		05/04/09	05/07/09	BW	Total Strontium in Solids
				7351-013	TC		05/12/09	05/14/09	BW	Technetium 99 in Solids
				7351-013	TH		05/15/09	05/18/09	BW	Thorium, Isotopic in Solids
				7351-013	U		05/12/09	05/12/09	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-118	Carbon 14 in Solids	C14_COX_LSC	10			1	1	1	13
GAM	RC-118	Gamma Scan	GAMMA_GS	10			1	1	1	13
H	RC-118	Tritium in Solids	TRITIUM_COX_LSC	10			1	1	1	13
PU	RC-118	Plutonium, Isotopic in Solids	PUISO_PLATE_AEA	10			1	1	1	13
SR	RC-118	Total Strontium in Solids	SRTOT_SEP_PRECIP_GPC	10			1	1	1	13
TC	RC-118	Technetium 99 in Solids	TC99_TR_SEP_GPC	10			1	1	1	13
TH	RC-118	Thorium, Isotopic in Solids	THISO_IE_PLATE_AEA	10			1	1	1	13
U	RC-118	Uranium, Isotopic in Solids	UISO_PLATE_AEA	10			1	1	1	13
TOTALS				80			8	8	8	104

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
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Version 3.06
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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7351-012 Method Blank

METHOD BLANK

SDG	7351	Client/Case no	Hanford SDG K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00
Lab sample id	R904018-12	Client sample id	Method Blank
Dept sample id	7351-012	Material/Matrix	SOLID
		SAF No	RC-118

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-2.16	4.5	7.90	400	U	H
Carbon 14	14762-75-5	1.61	4.0	6.62	50.0	U	C
Total Strontium	SR-RAD	-0.021	0.10	0.221	1.00	U	SR
Technetium 99	14133-76-7	-0.126	0.14	0.432	15.0	U	TC
Thorium 228	14274-82-9	0.033	0.13	0.253	1.00	U	TH
Thorium 230	14269-63-7	0.495	0.27	0.252	1.00		TH
Thorium 232	TH-232	0	0.066	0.252	1.00	U	TH
Uranium 233/234	U-233/234	-0.023	0.046	0.174	1.00	U	U
Uranium 235	15117-96-1	0	0.055	0.211	1.00	U	U
Uranium 238	U-238	0	0.046	0.174	1.00	U	U
Plutonium 238	13981-16-3	0.017	0.068	0.162	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.034	0.129	1.00	U	PU
Potassium 40	13966-00-2	U		2.78		U	GAM
Cobalt 60	10198-40-0	U		0.230	0.050	U	GAM
Cesium 137	10045-97-3	U		0.227	0.100	U	GAM
Radium 226	13982-63-3	U		0.485	0.100	U	GAM
Radium 228	15262-20-1	U		1.00	0.200	U	GAM
Europium 152	14683-23-9	U		0.520	0.100	U	GAM
Europium 154	15585-10-1	U		0.768	0.100	U	GAM
Europium 155	14391-16-3	U		0.350	0.100	U	GAM
Thorium 228	14274-82-9	U		0.304		U	GAM
Thorium 232	TH-232	U		1.00		U	GAM
Uranium 235	15117-96-1	U		0.849		U	GAM
Uranium 238	U-238	U		30.3		U	GAM
Americium 241	14596-10-2	U		0.204		U	GAM
Beryllium 7	13966-02-4	U		1.49		U	GAM
Ruthenium 106	13967-48-1	U		1.91		U	GAM
Antimony 125	14234-35-6	U		0.524		U	GAM
Cesium 134	13967-70-9	U		0.284		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7351-012 Method Blank

BLANK, cont.

SDG	7351	Client/Case no	Hanford	SDG_K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00	
Lab sample id	R904018-12	Client sample id	Method Blank	
Dept sample id	7351-012	Material/Matrix		SOLID
		SAF No	RC-118	

QC-BLANK #69518

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7351-011

Lab Control Sample

LAB CONTROL SAMPLE

SDG 7351

Contact N. Joseph Verville

Client/Case no Hanford SDG K1579

Contract No. S00W235A00

Lab sample id R904018-11

Dept sample id 7351-011

Client sample id Lab Control Sample

Material/Matrix SOLID

SAF No RC-118

ANALYTE	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST	ADDED pCi/g	2σ ERR pCi/g	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS
Tritium	1010	22	7.42	400		H	1160	46	87	85-115	80-120
Carbon 14	3170	30	6.94	50.0		C	3190	130	99	84-116	80-120
Total Strontium	10.4	0.60	0.245	1.00		SR	10.0	0.40	104	80-120	80-120
Technetium 99	135	1.8	0.459	15.0		TC	120	4.8	112	77-123	80-120
Thorium 230	22.3	2.5	0.331	1.00	B	TH	22.7	0.91	98	79-121	80-120
Uranium 233/234	6.52	0.98	0.518	1.00		U	5.94	0.24	110	71-129	80-120
Uranium 235	4.33	0.76	0.216	1.00		U	4.84	0.19	89	73-127	80-120
Uranium 238	6.12	0.92	0.491	1.00		U	6.44	0.26	95	75-125	80-120
Plutonium 238	6.96	0.88	0.233	1.00		PU	6.96	0.28	100	77-123	80-120
Plutonium 239/240	7.89	0.95	0.161	1.00		PU	7.92	0.32	100	78-122	80-120
Cobalt 60	22.1	1.0	0.698	0.050		GAM	22.4	0.90	99	86-114	80-120
Cesium 137	27.7	0.87	0.667	0.100		GAM	27.5	1.1	101	87-113	80-120

ColumbiaRiverComp.ofRCBRA-Tissues

QC-LCS #69517

Lab id EBRLNE

Protocol Hanford1

Version Ver 1.0

Form DVD-LCS

Version 3.06

Report date 05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7351-013 J18J59

DUPLICATE

SDG	7351			Client/Case no	Hanford SDG K1579
Contact	N. Joseph Verville			Contract	No. S00W235A00
	DUPLICATE		ORIGINAL		
Lab sample id	R904018-13	Lab sample id	R904018-01	Client sample id	J18J59
Dept sample id	7351-013	Dept sample id	7351-001	Location/Matrix	UPRIVER SA-WF1, LIV/KID SOLID
		Received	04/03/09	Collected/Weight	04/01/09 11:55 40.4 g
% solids	100.0	% solids	100.0	Custody/SAF No	RC-118-16 RC-118

ANALYTE	DUPLICATE pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST	ORIGINAL pCi/g	2σ ERR (COUNT)	MDA pCi/g	QUALI-FIERS	RPD %	3σ TOT	DER σ
Tritium	-0.672	3.6	6.33	400	U	H	-0.694	4.4	7.62	U	-		0
Carbon 14	2.05	3.3	5.48	50.0	U	C	2.04	3.8	6.32	U	-		0
Total Strontium	0.013	0.12	0.243	1.00	U	SR	-0.049	0.11	0.241	U	-		0.8
Technetium 99	-0.058	0.15	0.401	15.0	U	TC	0.048	0.15	0.401	U	-		1.0
Thorium 228	0.145	0.15	0.277	1.00	U	TH	-0.149	0.12	0.399	U	-		3.0
Thorium 230	0.613	0.29	0.276	1.00	B	TH	0.682	0.30	0.284	B	11	98	0.3
Thorium 232	0	0.072	0.276	1.00	U	TH	0.030	0.059	0.227	U	-		0.6
Uranium 233/234	0.110	0.094	0.120	1.00	U	U	0	0.037	0.140	U	-		2.2
Uranium 235	0.038	0.038	0.145	1.00	U	U	0.022	0.044	0.170	U	-		0.5
Uranium 238	0.016	0.031	0.120	1.00	U	U	0	0.037	0.140	U	-		0.7
Plutonium 238	-0.024	0.096	0.230	1.00	U	PU	0	0.064	0.245	U	-		0.4
Plutonium 239/240	0.024	0.048	0.184	1.00	U	PU	0.032	0.064	0.244	U	-		0.2
Potassium 40	2.94	0.69	0.575			GAM	2.58	1.1	1.07		13	72	0.5
Cobalt 60	U		0.060	0.050	U	GAM	U		0.102	U	-		0.7
Cesium 137	U		0.059	0.100	U	GAM	U		0.089	U	-		0.6
Radium 226	U		0.116	0.100	U	GAM	U		0.186	U	-		0.6
Radium 228	U		0.253	0.200	U	GAM	U		0.375	U	-		0.5
Europium 152	U		0.140	0.100	U	GAM	U		0.215	U	-		0.6
Europium 154	U		0.167	0.100	U	GAM	U		0.302	U	-		0.8
Europium 155	U		0.097	0.100	U	GAM	U		0.159	U	-		0.7
Thorium 228	U		0.077		U	GAM	U		0.115	U	-		0.5
Thorium 232	U		0.253		U	GAM	U		0.375	U	-		0.5
Uranium 235	U		0.239		U	GAM	U		0.371	U	-		0.6
Uranium 238	U		7.37		U	GAM	U		11.5	U	-		0.6
Americium 241	U		0.055		U	GAM	U		0.075	U	-		0.4
Beryllium 7	U		0.484		U	GAM	U		0.669	U	-		0.4
Ruthenium 106	U		0.531		U	GAM	U		0.730	U	-		0.4
Antimony 125	U		0.123		U	GAM	U		0.199	U	-		0.6

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DUP
Version	3.06
Report date	05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7351-013 J18J59

DUPLICATE, cont.

SDG	7351			Client/Case no	Hanford SDG K1579
Contact	N. Joseph Verville			Contract	No. S00W235A00
	DUPLICATE		ORIGINAL		
Lab sample id	R904018-13	Lab sample id	R904018-01	Client sample id	J18J59
Dept sample id	7351-013	Dept sample id	7351-001	Location/Matrix	UPRIVER SA-WF1, LIV/KID SOLID
		Received	04/03/09	Collected/Weight	04/01/09 11:55 40.4 g
% solids	100.0	% solids	100.0	Custody/SAF No	RC-118-16 RC-118

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
Cesium 134	U		0.072		U	GAM	U		0.121	U	-		0.7

ColumbiaRiverComp.ofRCBRA-Tissues

QC-DUP#1 69519

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DUP
Version	3.06
Report date	05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7351-001 J18J59

DATA SHEET

SDG	7351	Client/Case no	Hanford SDG K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00
Lab sample id	R904018-01	Client sample id	J18J59
Dept sample id	7351-001	Location/Matrix	UPRIVER SA-WF1, LIV/KID SOLID
Received	04/03/09	Collected/Weight	04/01/09 11:55 40.4 g
% solids	100.0	Custody/SAF No	RC-118-16 RC-118

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-0.694	4.4	7.62	400	U	H
Carbon 14	14762-75-5	2.04	3.8	6.32	50.0	U	C
Total Strontium	SR-RAD	-0.049	0.11	0.241	1.00	U	SR
Technetium 99	14133-76-7	0.048	0.15	0.401	15.0	U	TC
Thorium 228	14274-82-9	-0.149	0.12	0.399	1.00	U	TH
Thorium 230	14269-63-7	0.682	0.30	0.284	1.00	B	TH
Thorium 232	TH-232	0.030	0.059	0.227	1.00	U	TH
Uranium 233/234	U-233/234	0	0.037	0.140	1.00	U	U
Uranium 235	15117-96-1	0.022	0.044	0.170	1.00	U	U
Uranium 238	U-238	0	0.037	0.140	1.00	U	U
Plutonium 238	13981-16-3	0	0.064	0.245	1.00	U	PU
Plutonium 239/240	PU-239/240	0.032	0.064	0.244	1.00	U	PU
Potassium 40	13966-00-2	2.58	1.1	1.07			GAM
Cobalt 60	10198-40-0	U		0.102	0.050	U	GAM
Cesium 137	10045-97-3	U		0.089	0.100	U	GAM
Radium 226	13982-63-3	U		0.186	0.100	U	GAM
Radium 228	15262-20-1	U		0.375	0.200	U	GAM
Europium 152	14683-23-9	U		0.215	0.100	U	GAM
Europium 154	15585-10-1	U		0.302	0.100	U	GAM
Europium 155	14391-16-3	U		0.159	0.100	U	GAM
Thorium 228	14274-82-9	U		0.115		U	GAM
Thorium 232	TH-232	U		0.375		U	GAM
Uranium 235	15117-96-1	U		0.371		U	GAM
Uranium 238	U-238	U		11.5		U	GAM
Americium 241	14596-10-2	U		0.075		U	GAM
Beryllium 7	13966-02-4	U		0.669		U	GAM
Ruthenium 106	13967-48-1	U		0.730		U	GAM
Antimony 125	14234-35-6	U		0.199		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7351-001 J18J59

DATA SHEET, cont

SDG	7351	Client/Case no	Hanford	SDG K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00	
Lab sample id	R904018-01	Client sample id	J18J59	
Dept sample id	7351-001	Location/Matrix	UPRIVER SA-WF1, LIV/KID	SOLID
Received	04/03/09	Collected/Weight	04/01/09 11:55	40.4 g
% solids	100.0	Custody/SAF No	RC-118-16	RC-118

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Cesium 134	13967-70-9	U		0.121		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

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

SAMPLE DELIVERY GROUP K1579

7351-002 J18J60

DATA SHEET

SDG	7351	Client/Case no	Hanford	SDG K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904018-02	Client sample id	J18J60		
Dept sample id	7351-002	Location/Matrix	UPRIVER SA-WF2, LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 12:00	19.8 g	
% solids	100.0	Custody/SAF No	RC-118-17	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-0.937	4.4	7.72	400	U	H
Carbon 14	14762-75-5	4.01	3.9	6.39	50.0	U	C
Total Strontium	SR-RAD	0.068	0.14	0.276	1.00	U	SR
Technetium 99	14133-76-7	0.187	0.15	0.406	15.0	U	TC
Thorium 228	14274-82-9	0.100	0.20	0.410	1.00	U	TH
Thorium 230	14269-63-7	0.166	0.20	0.318	1.00	U	TH
Thorium 232	TH-232	0.066	0.067	0.254	1.00	U	TH
Uranium 233/234	U-233/234	0.051	0.051	0.195	1.00	U	U
Uranium 235	15117-96-1	0	0.062	0.236	1.00	U	U
Uranium 238	U-238	0	0.051	0.195	1.00	U	U
Plutonium 238	13981-16-3	0.031	0.12	0.235	1.00	U	PU
Plutonium 239/240	PU-239/240	0.031	0.061	0.235	1.00	U	PU
Potassium 40	13966-00-2	U		6.63		U	GAM
Cobalt 60	10198-40-0	U		0.226	0.050	U	GAM
Cesium 137	10045-97-3	U		0.204	0.100	U	GAM
Radium 226	13982-63-3	U		0.455	0.100	U	GAM
Radium 228	15262-20-1	U		1.06	0.200	U	GAM
Europium 152	14683-23-9	U		0.521	0.100	U	GAM
Europium 154	15585-10-1	U		0.717	0.100	U	GAM
Europium 155	14391-16-3	U		0.412	0.100	U	GAM
Thorium 228	14274-82-9	U		0.257		U	GAM
Thorium 232	TH-232	U		1.06		U	GAM
Uranium 235	15117-96-1	U		0.939		U	GAM
Uranium 238	U-238	U		25.3		U	GAM
Americium 241	14596-10-2	U		0.551		U	GAM
Beryllium 7	13966-02-4	U		1.70		U	GAM
Ruthenium 106	13967-48-1	U		1.72		U	GAM
Antimony 125	14234-35-6	U		0.452		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7351-002 J18J60

DATA SHEET, cont

SDG	7351	Client/Case no	Hanford		SDG K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904018-02	Client sample id	J18J60		
Dept sample id	7351-002	Location/Matrix	UPRIVER SA-WF2, LIV/KID		SOLID
Received	04/03/09	Collected/Weight	04/01/09 12:00	19.8 g	
% solids	100.0	Custody/SAF No	RC-118-17	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Cesium 134	13967-70-9	U		0.288		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7351-003 J18J61

DATA SHEET

SDG	7351	Client/Case no	Hanford SDG K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00
Lab sample id	R904018-03	Client sample id	J18J61
Dept sample id	7351-003	Location/Matrix	UPRIVER SA-WF3, LIV/KID SOLID
Received	04/03/09	Collected/Weight	04/01/09 12:05 10.1 g
% solids	100.0	Custody/SAF No	RC-118-18 RC-118

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	0	4.6	7.95	400	U	H
Carbon 14	14762-75-5	5.15	4.1	6.61	50.0	U	C
Total Strontium	SR-RAD	-0.132	0.11	0.256	1.00	U	SR
Technetium 99	14133-76-7	-0.064	0.11	0.387	15.0	U	TC
Thorium 228	14274-82-9	0.061	0.24	0.467	1.00	U	TH
Thorium 230	14269-63-7	0.670	0.49	0.466	1.00	B	TH
Thorium 232	TH-232	0.061	0.12	0.466	1.00	U	TH
Uranium 233/234	U-233/234	0	0.044	0.170	1.00	U	U
Uranium 235	15117-96-1	0.027	0.054	0.206	1.00	U	U
Uranium 238	U-238	0	0.044	0.170	1.00	U	U
Plutonium 238	13981-16-3	0.035	0.14	0.267	1.00	U	PU
Plutonium 239/240	PU-239/240	0.035	0.070	0.267	1.00	U	PU
Potassium 40	13966-00-2	U		13.5		U	GAM
Cobalt 60	10198-40-0	U		0.472	0.050	U	GAM
Cesium 137	10045-97-3	U		0.528	0.100	U	GAM
Radium 226	13982-63-3	U		1.05	0.100	U	GAM
Radium 228	15262-20-1	U		2.18	0.200	U	GAM
Europium 152	14683-23-9	U		1.33	0.100	U	GAM
Europium 154	15585-10-1	U		1.39	0.100	U	GAM
Europium 155	14391-16-3	U		1.07	0.100	U	GAM
Thorium 228	14274-82-9	U		0.722		U	GAM
Thorium 232	TH-232	U		2.18		U	GAM
Uranium 235	15117-96-1	U		2.27		U	GAM
Uranium 238	U-238	U		56.4		U	GAM
Americium 241	14596-10-2	U		1.70		U	GAM
Beryllium 7	13966-02-4	U		3.85		U	GAM
Ruthenium 106	13967-48-1	U		3.93		U	GAM
Antimony 125	14234-35-6	U		1.07		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7351-003 J18J61

DATA SHEET, cont

SDG	7351	Client/Case no	Hanford	SDG K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00	
Lab sample id	R904018-03	Client sample id	J18J61	
Dept sample id	7351-003	Location/Matrix	UPRIVER SA-WF3, LIV/KID	SOLID
Received	04/03/09	Collected/Weight	04/01/09 12:05	10.1 g
% solids	100.0	Custody/SAF No	RC-118-18	RC-118

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Cesium 134	13967-70-9	U		0.610		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7351-004 J18J62

DATA SHEET

SDG	7351	Client/Case no	Hanford	SDG K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00	
Lab sample id	R904018-04	Client sample id	J18J62	
Dept sample id	7351-004	Location/Matrix	UPRIVER SA-WF4, LIV/KID	SOLID
Received	04/03/09	Collected/Weight	04/01/09 12:15	11.3 g
% solids	100.0	Custody/SAF No	RC-118-19	RC-118

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-0.968	4.6	7.98	400	U	H
Carbon 14	14762-75-5	3.15	4.0	6.63	50.0	U	C
Total Strontium	SR-RAD	0.023	0.12	0.246	1.00	U	SR
Technetium 99	14133-76-7	0.008	0.12	0.407	15.0	U	TC
Thorium 228	14274-82-9	0.066	0.13	0.315	1.00	U	TH
Thorium 230	14269-63-7	0.295	0.26	0.250	1.00	B	TH
Thorium 232	TH-232	0.065	0.066	0.250	1.00	U	TH
Uranium 233/234	U-233/234	0	0.048	0.183	1.00	U	U
Uranium 235	15117-96-1	0	0.058	0.222	1.00	U	U
Uranium 238	U-238	0	0.048	0.183	1.00	U	U
Plutonium 238	13981-16-3	0	0.055	0.210	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.055	0.210	1.00	U	PU
Potassium 40	13966-00-2	U		15.8		U	GAM
Cobalt 60	10198-40-0	U		0.597	0.050	U	GAM
Cesium 137	10045-97-3	U		0.575	0.100	U	GAM
Radium 226	13982-63-3	U		1.20	0.100	U	GAM
Radium 228	15262-20-1	U		2.63	0.200	U	GAM
Europium 152	14683-23-9	U		1.52	0.100	U	GAM
Europium 154	15585-10-1	U		1.80	0.100	U	GAM
Europium 155	14391-16-3	U		1.05	0.100	U	GAM
Thorium 228	14274-82-9	U		0.856		U	GAM
Thorium 232	TH-232	U		2.63		U	GAM
Uranium 235	15117-96-1	U		2.74		U	GAM
Uranium 238	U-238	U		65.8		U	GAM
Americium 241	14596-10-2	U		0.445		U	GAM
Beryllium 7	13966-02-4	U		4.38		U	GAM
Ruthenium 106	13967-48-1	U		4.94		U	GAM
Antimony 125	14234-35-6	U		1.23		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

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

SAMPLE DELIVERY GROUP K1579

7351-004 J18J62

DATA SHEET, cont

SDG	7351	Client/Case no	Hanford	SDG K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904018-04	Client sample id	J18J62		
Dept sample id	7351-004	Location/Matrix	UPRIVER SA-WF4, LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 12:15	11.3 g	
% solids	100.0	Custody/SAF No	RC-118-19	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Cesium 134	13967-70-9	U		0.799		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7351-005 J18J63

DATA SHEET

SDG	7351	Client/Case no	Hanford SDG K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00
Lab sample id	R904018-05	Client sample id	J18J63
Dept sample id	7351-005	Location/Matrix	UPRIVER SA-WF5, LIV/KID SOLID
Received	04/03/09	Collected/Weight	04/01/09 12:20 14.5 g
% solids	100.0	Custody/SAF No	RC-118-20 RC-118

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	2.16	4.7	7.92	400	U	H
Carbon 14	14762-75-5	0.864	3.9	6.57	50.0	U	C
Total Strontium	SR-RAD	-0.029	0.11	0.233	1.00	U	SR
Technetium 99	14133-76-7	-0.053	0.11	0.389	15.0	U	TC
Thorium 228	14274-82-9	-0.057	0.057	0.272	1.00	U	TH
Thorium 230	14269-63-7	0.538	0.29	0.217	1.00	B	TH
Thorium 232	TH-232	0	0.057	0.217	1.00	U	TH
Uranium 233/234	U-233/234	0.021	0.043	0.164	1.00	U	U
Uranium 235	15117-96-1	0	0.052	0.199	1.00	U	U
Uranium 238	U-238	0	0.043	0.164	1.00	U	U
Plutonium 238	13981-16-3	0.080	0.16	0.254	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.053	0.203	1.00	U	PU
Potassium 40	13966-00-2	2.22	1.9	1.88			GAM
Cobalt 60	10198-40-0	U		0.168	0.050	U	GAM
Cesium 137	10045-97-3	U		0.225	0.100	U	GAM
Radium 226	13982-63-3	U		0.306	0.100	U	GAM
Radium 228	15262-20-1	U		0.592	0.200	U	GAM
Europium 152	14683-23-9	U		0.338	0.100	U	GAM
Europium 154	15585-10-1	U		0.469	0.100	U	GAM
Europium 155	14391-16-3	U		0.257	0.100	U	GAM
Thorium 228	14274-82-9	U		0.197		U	GAM
Thorium 232	TH-232	U		0.592		U	GAM
Uranium 235	15117-96-1	U		0.616		U	GAM
Uranium 238	U-238	U		19.0		U	GAM
Americium 241	14596-10-2	U		0.128		U	GAM
Beryllium 7	13966-02-4	U		1.18		U	GAM
Ruthenium 106	13967-48-1	U		1.25		U	GAM
Antimony 125	14234-35-6	U		0.323		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

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

SAMPLE DELIVERY GROUP K1579

7351-005 J18J63

DATA SHEET, cont

SDG	7351	Client/Case no	Hanford		SDG_K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904018-05	Client sample id	J18J63		
Dept sample id	7351-005	Location/Matrix	UPRIVER SA-WF5, LIV/KID		SOLID
Received	04/03/09	Collected/Weight	04/01/09 12:20	14.5 g	
% solids	100.0	Custody/SAF No	RC-118-20	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Cesium 134	13967-70-9	U		0.199		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

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

SAMPLE DELIVERY GROUP K1579

7351-006 J18K11

DATA SHEET

SDG	7351	Client/Case no	Hanford	SDG K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904018-06	Client sample id	J18K11		
Dept sample id	7351-006	Location/Matrix	100SA-WF1, LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 11:00	64.8 g	
% solids	100.0	Custody/SAF No	RC-118-56	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	1.25	4.1	6.88	400	U	H
Carbon 14	14762-75-5	2.78	3.6	5.97	50.0	U	C
Total Strontium	SR-RAD	-0.057	0.11	0.237	1.00	U	SR
Technetium 99	14133-76-7	-0.130	0.17	0.409	15.0	U	TC
Thorium 228	14274-82-9	-0.041	0.25	0.508	1.00	U	TH
Thorium 230	14269-63-7	0.247	0.25	0.314	1.00	U	TH
Thorium 232	TH-232	0	0.082	0.314	1.00	U	TH
Uranium 233/234	U-233/234	0.044	0.044	0.169	1.00	U	U
Uranium 235	15117-96-1	0	0.053	0.204	1.00	U	U
Uranium 238	U-238	0	0.044	0.169	1.00	U	U
Plutonium 238	13981-16-3	0.026	0.11	0.202	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.053	0.201	1.00	U	PU
Potassium 40	13966-00-2	3.02	0.87	0.606			GAM
Cobalt 60	10198-40-0	U		0.073	0.050	U	GAM
Cesium 137	10045-97-3	U		0.072	0.100	U	GAM
Radium 226	13982-63-3	U		0.131	0.100	U	GAM
Radium 228	15262-20-1	U		0.266	0.200	U	GAM
Europium 152	14683-23-9	U		0.152	0.100	U	GAM
Europium 154	15585-10-1	U		0.197	0.100	U	GAM
Europium 155	14391-16-3	U		0.113	0.100	U	GAM
Thorium 228	14274-82-9	U		0.086		U	GAM
Thorium 232	TH-232	U		0.266		U	GAM
Uranium 235	15117-96-1	U		0.278		U	GAM
Uranium 238	U-238	U		8.49		U	GAM
Americium 241	14596-10-2	U		0.060		U	GAM
Beryllium 7	13966-02-4	U		0.531		U	GAM
Ruthenium 106	13967-48-1	U		0.495		U	GAM
Antimony 125	14234-35-6	U		0.130		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

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

SAMPLE DELIVERY GROUP K1579

7351-006 J18K11

DATA SHEET, cont

SDG	7351	Client/Case no	Hanford	SDG_K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904018-06	Client sample id	J18K11		
Dept sample id	7351-006	Location/Matrix	100SA-WF1, LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 11:00	64.8 g	
% solids	100.0	Custody/SAF No	RC-118-56	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Cesium 134	13967-70-9	U		0.086		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

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

SAMPLE DELIVERY GROUP K1579

7351-007 J18K12

DATA SHEET

SDG	7351	Client/Case no	Hanford	SDG K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904018-07	Client sample id	J18K12		
Dept sample id	7351-007	Location/Matrix	100SA-WF2, LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 11:05	46.2 g	
% solids	100.0	Custody/SAF No	RC-118-57	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	2.09	3.7	6.27	400	U	H
Carbon 14	14762-75-5	2.74	3.2	5.20	50.0	U	C
Total Strontium	SR-RAD	0.392	0.17	0.251	1.00		SR
Technetium 99	14133-76-7	-0.056	0.15	0.453	15.0	U	TC
Thorium 228	14274-82-9	0	0.11	0.405	1.00	U	TH
Thorium 230	14269-63-7	0.791	0.43	0.403	1.00	B	TH
Thorium 232	TH-232	1.00	0.001	0.403	1.00		TH
Uranium 233/234	U-233/234	0.084	0.11	0.215	1.00	U	U
Uranium 235	15117-96-1	0	0.068	0.261	1.00	U	U
Uranium 238	U-238	0	0.056	0.215	1.00	U	U
Plutonium 238	13981-16-3	0.023	0.091	0.217	1.00	U	PU
Plutonium 239/240	PU-239/240	0.023	0.045	0.173	1.00	U	PU
Potassium 40	13966-00-2	2.78	0.89	0.759			GAM
Cobalt 60	10198-40-0	U		0.079	0.050	U	GAM
Cesium 137	10045-97-3	U		0.078	0.100	U	GAM
Radium 226	13982-63-3	U		0.148	0.100	U	GAM
Radium 228	15262-20-1	U		0.277	0.200	U	GAM
Europium 152	14683-23-9	U		0.159	0.100	U	GAM
Europium 154	15585-10-1	U		0.238	0.100	U	GAM
Europium 155	14391-16-3	U		0.126	0.100	U	GAM
Thorium 228	14274-82-9	U		0.101		U	GAM
Thorium 232	TH-232	U		0.277		U	GAM
Uranium 235	15117-96-1	U		0.309		U	GAM
Uranium 238	U-238	U		9.31		U	GAM
Americium 241	14596-10-2	U		0.064		U	GAM
Beryllium 7	13966-02-4	U		0.524		U	GAM
Ruthenium 106	13967-48-1	U		0.586		U	GAM
Antimony 125	14234-35-6	U		0.154		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

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

SAMPLE DELIVERY GROUP K1579

7351-007 J18K12

DATA SHEET, cont

SDG	7351	Client/Case no	Hanford	SDG_K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904018-07	Client sample id	J18K12		
Dept sample id	7351-007	Location/Matrix	100SA-WF2, LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 11:05	46.2 g	
% solids	100.0	Custody/SAF No	RC-118-57	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Cesium 134	13967-70-9	U		0.089		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7351-008 J18K13

DATA SHEET

SDG	7351	Client/Case no	Hanford	SDG_K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904018-08	Client sample id	J18K13		
Dept sample id	7351-008	Location/Matrix	100SA-WF3, LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 11:12	47.1 g	
% solids	100.0	Custody/SAF No	RC-118-58	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-2.47	4.4	7.76	400	U	H
Carbon 14	14762-75-5	1.63	3.9	6.45	50.0	U	C
Total Strontium	SR-RAD	0.018	0.15	0.286	1.00	U	SR
Technetium 99	14133-76-7	-0.004	0.19	0.420	15.0	U	TC
Thorium 228	14274-82-9	-0.037	0.15	0.351	1.00	U	TH
Thorium 230	14269-63-7	0.365	0.29	0.280	1.00	B	TH
Thorium 232	TH-232	0	0.073	0.280	1.00	U	TH
Uranium 233/234	U-233/234	0.128	0.086	0.163	1.00	U	U
Uranium 235	15117-96-1	0.026	0.052	0.198	1.00	U	U
Uranium 238	U-238	0	0.043	0.163	1.00	U	U
Plutonium 238	13981-16-3	0.027	0.11	0.205	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.054	0.205	1.00	U	PU
Potassium 40	13966-00-2	U		2.66		U	GAM
Cobalt 60	10198-40-0	U		0.090	0.050	U	GAM
Cesium 137	10045-97-3	U		0.089	0.100	U	GAM
Radium 226	13982-63-3	U		0.191	0.100	U	GAM
Radium 228	15262-20-1	U		0.400	0.200	U	GAM
Europium 152	14683-23-9	U		0.216	0.100	U	GAM
Europium 154	15585-10-1	U		0.290	0.100	U	GAM
Europium 155	14391-16-3	U		0.146	0.100	U	GAM
Thorium 228	14274-82-9	U		0.100		U	GAM
Thorium 232	TH-232	U		0.400		U	GAM
Uranium 235	15117-96-1	U		0.365		U	GAM
Uranium 238	U-238	U		10.1		U	GAM
Americium 241	14596-10-2	U		0.167		U	GAM
Beryllium 7	13966-02-4	U		0.949		U	GAM
Ruthenium 106	13967-48-1	U		0.732		U	GAM
Antimony 125	14234-35-6	U		0.187		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
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SAMPLE DELIVERY GROUP K1579

7351-008 J18K13

DATA SHEET, cont

SDG	7351	Client/Case no	Hanford	SDG_K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00	
Lab sample id	R904018-08	Client sample id	J18K13	
Dept sample id	7351-008	Location/Matrix	100SA-WF3, LIV/KID	SOLID
Received	04/03/09	Collected/Weight	04/01/09 11:12	47.1 g
% solids	100.0	Custody/SAF No	RC-118-58	RC-118

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Cesium 134	13967-70-9	U		0.118		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7351-009 J18K14

DATA SHEET

SDG	7351	Client/Case no	Hanford	SDG K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904018-09	Client sample id	J18K14		
Dept sample id	7351-009	Location/Matrix	100SA-WF4, LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 11:18	42.7 g	
% solids	100.0	Custody/SAF No	RC-118-59	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	0	4.1	7.00	400	U	H
Carbon 14	14762-75-5	2.63	3.5	5.78	50.0	U	C
Total Strontium	SR-RAD	-0.049	0.12	0.258	1.00	U	SR
Technetium 99	14133-76-7	0.023	0.18	0.415	15.0	U	TC
Thorium 228	14274-82-9	0.050	0.30	0.549	1.00	U	TH
Thorium 230	14269-63-7	0.297	0.30	0.378	1.00	U	TH
Thorium 232	TH-232	0	0.099	0.378	1.00	U	TH
Uranium 233/234	U-233/234	0.051	0.10	0.196	1.00	U	U
Uranium 235	15117-96-1	0	0.062	0.237	1.00	U	U
Uranium 238	U-238	-0.026	0.051	0.196	1.00	U	U
Plutonium 238	13981-16-3	-0.025	0.050	0.192	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.050	0.192	1.00	U	PU
Potassium 40	13966-00-2	U		3.93		U	GAM
Cobalt 60	10198-40-0	U		0.144	0.050	U	GAM
Cesium 137	10045-97-3	U		0.144	0.100	U	GAM
Radium 226	13982-63-3	U		0.301	0.100	U	GAM
Radium 228	15262-20-1	U		0.613	0.200	U	GAM
Europium 152	14683-23-9	U		0.385	0.100	U	GAM
Europium 154	15585-10-1	U		0.454	0.100	U	GAM
Europium 155	14391-16-3	U		0.283	0.100	U	GAM
Thorium 228	14274-82-9	U		0.223		U	GAM
Thorium 232	TH-232	U		0.613		U	GAM
Uranium 235	15117-96-1	U		0.725		U	GAM
Uranium 238	U-238	U		16.8		U	GAM
Americium 241	14596-10-2	U		0.120		U	GAM
Beryllium 7	13966-02-4	U		1.11		U	GAM
Ruthenium 106	13967-48-1	U		1.19		U	GAM
Antimony 125	14234-35-6	U		0.314		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7351-009 J18K14

DATA SHEET, cont

SDG	7351	Client/Case no	Hanford		SDG K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904018-09	Client sample id	J18K14		
Dept sample id	7351-009	Location/Matrix	100SA-WF4, LIV/KID		SOLID
Received	04/03/09	Collected/Weight	04/01/09 11:18	42.7 g	
% solids	100.0	Custody/SAF No	RC-118-59	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Cesium 134	13967-70-9	U		0.191		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7351-010 J18K15

DATA SHEET

SDG	7351	Client/Case no	Hanford	SDG K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904018-10	Client sample id	J18K15		
Dept sample id	7351-010	Location/Matrix	100SA-WF5, LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 11:21	55.7 g	
% solids	100.0	Custody/SAF No	RC-118-60	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	0.968	3.8	6.38	400	U	H
Carbon 14	14762-75-5	-0.214	3.1	5.28	50.0	U	C
Total Strontium	SR-RAD	0.058	0.12	0.235	1.00	U	SR
Technetium 99	14133-76-7	-0.088	0.16	0.381	15.0	U	TC
Thorium 228	14274-82-9	-0.072	0.072	0.342	1.00	U	TH
Thorium 230	14269-63-7	0.677	0.36	0.272	1.00	B	TH
Thorium 232	TH-232	0.071	0.071	0.272	1.00	U	TH
Uranium 233/234	U-233/234	0	0.049	0.187	1.00	U	U
Uranium 235	15117-96-1	0	0.059	0.226	1.00	U	U
Uranium 238	U-238	0	0.049	0.187	1.00	U	U
Plutonium 238	13981-16-3	0	0.055	0.209	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.055	0.209	1.00	U	PU
Potassium 40	13966-00-2	2.03	0.67	0.494			GAM
Cobalt 60	10198-40-0	U		0.043	0.050	U	GAM
Cesium 137	10045-97-3	U		0.036	0.100	U	GAM
Radium 226	13982-63-3	U		0.074	0.100	U	GAM
Radium 228	15262-20-1	U		0.164	0.200	U	GAM
Europium 152	14683-23-9	U		0.094	0.100	U	GAM
Europium 154	15585-10-1	U		0.109	0.100	U	GAM
Europium 155	14391-16-3	U		0.058	0.100	U	GAM
Thorium 228	14274-82-9	U		0.052		U	GAM
Thorium 232	TH-232	U		0.164		U	GAM
Uranium 235	15117-96-1	U		0.158		U	GAM
Uranium 238	U-238	U		4.30		U	GAM
Americium 241	14596-10-2	U		0.038		U	GAM
Beryllium 7	13966-02-4	U		0.310		U	GAM
Ruthenium 106	13967-48-1	U		0.322		U	GAM
Antimony 125	14234-35-6	U		0.081		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7351-010 J18K15

DATA SHEET, cont

SDG	7351	Client/Case no	Hanford	SDG_K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00	
Lab sample id	R904018-10	Client sample id	J18K15	
Dept sample id	7351-010	Location/Matrix	100SA-WF5, LIV/KID	SOLID
Received	04/03/09	Collected/Weight	04/01/09 11:21	55.7 g
% solids	100.0	Custody/SAF No	RC-118-60	RC-118

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Cesium 134	13967-70-9	U		0.047		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test PU Matrix SOLID
SDG 7351
Contact N. Joseph Verville

LAB METHOD SUMMARY

PLUTONIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ESULTS

ıB AMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Plutonium 238		Plutonium 239/240	
:eparation batch 7200-084								
›04018-01			7351-001	J18J59	U		U	
›04018-02			7351-002	J18J60	U		U	
›04018-03			7351-003	J18J61	U		U	
›04018-04			7351-004	J18J62	U		U	
›04018-05			7351-005	J18J63	U		U	
›04018-06			7351-006	J18K11	U		U	
›04018-07			7351-007	J18K12	U		U	
›04018-08			7351-008	J18K13	U		U	
›04018-09			7351-009	J18K14	U		U	
›04018-10			7351-010	J18K15	U		U	
›04018-11			7351-011	Lab Control Sample	ok		ok	
›04018-12			7351-012	Method Blank	U		U	
›04018-13			7351-013	Duplicate (R904018-01)	-	U	-	U
›minal values and limits from method ›lumbiaRiverComp.ofRCBRA-Tissues				RDLs (pCi/g)	1.00		1.00	

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test PU Matrix SOLID
SDG 7351
Contact N. Joseph Verville

LAB METHOD SUMMARY

PLUTONIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ETHOD PERFORMANCE

JB MPLE 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
:eparation batch 7200-084			2σ prep error 8.0 % Reference Lab Notebook No. 7200 pg.084													
)04018-01			J18J59	0.245	0.500			83		104			47	05/15/09	05/18	SS-055
)04018-02			J18J60	0.235	0.500			84		105			47	05/15/09	05/18	SS-057
)04018-03			J18J61	0.267	0.500			72		105			47	05/15/09	05/18	SS-058
)04018-04			J18J62	0.210	0.500			80		104			47	05/15/09	05/18	SS-059
)04018-05			J18J63	0.254	0.500			86		104			47	05/15/09	05/18	SS-061
)04018-06			J18K11	0.202	0.500			85		104			47	05/15/09	05/18	SS-062
)04018-07			J18K12	0.217	0.500			80		160			47	05/15/09	05/18	SS-031
)04018-08			J18K13	0.205	0.500			87		105			47	05/15/09	05/18	SS-065
)04018-09			J18K14	0.192	0.500			90		105			47	05/15/09	05/18	SS-066
)04018-10			J18K15	0.209	0.500			82		104			47	05/15/09	05/18	SS-063
)04018-11			Lab Control Sample	0.233	0.500			74		160				05/15/09	05/18	SS-033
)04018-12			Method Blank	0.162	0.500			77		201				05/15/09	05/18	SS-058
)04018-13			Duplicate (R904018-01)	0.230	0.500			75		160			47	05/15/09	05/18	SS-034
)minal values and limits from method				1.00	0.500			20-105		100	100		180			

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 8
	CP-008	Heavy Element Electroplating, rev 13

AVERAGES ± 2 SD FOR 13 SAMPLES
MDA 0.220 ± 0.056
YIELD 81 ± 11

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test TH Matrix SOLID
SDG 7351
Contact N. Joseph Verville

LAB METHOD SUMMARY

THORIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

.ESULTS

AB AMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Thorium 230
:eparation batch 7200-084					
)04018-01			7351-001	J18J59	0.682
)04018-02			7351-002	J18J60	U
)04018-03			7351-003	J18J61	0.670
)04018-04			7351-004	J18J62	0.295
)04018-05			7351-005	J18J63	0.538
)04018-06			7351-006	J18K11	U
)04018-07			7351-007	J18K12	0.791
)04018-08			7351-008	J18K13	0.365
)04018-09			7351-009	J18K14	U
)04018-10			7351-010	J18K15	0.677
)04018-11			7351-011	Lab Control Sample	ok
)04018-12			7351-Q12	Method Blank	0.495
)04018-13			7351-013	Duplicate (R904018-01)	ok

)minal values and limits from method RDLs (pCi/g) 1.00
)lumbiaRiverComp.ofRCBRA-Tissues

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test TH Matrix SOLID
SDG 7351
Contact N. Joseph Verville

LAB METHOD SUMMARY

THORIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ETHOD PERFORMANCE

ıB AMPLE 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
:eparation batch 7200-084			2σ prep error 8.0 %		Reference Lab Notebook No. 7200 pg.084											
)04018-01			J18J59	0.399	0.250			91		175			44	05/14/09	05/15	SS-061
)04018-02			J18J60	0.410	0.250			87		163			44	05/14/09	05/15	SS-062
)04018-03			J18J61	0.467	0.250			68		165			44	05/14/09	05/15	SS-064
)04018-04			J18J62	0.315	0.250			88		166			44	05/14/09	05/15	SS-065
)04018-05			J18J63	0.272	0.250			90		173			44	05/14/09	05/15	SS-053
)04018-06			J18K11	0.508	0.250			65		175			44	05/14/09	05/15	SS-062
)04018-07			J18K12	0.405	0.250			83		161			44	05/14/09	05/15	SS-064
)04018-08			J18K13	0.351	0.250			83		161			44	05/14/09	05/15	SS-065
)04018-09			J18K14	0.549	0.250			69		154			45	05/14/09	05/16	SS-040
)04018-10			J18K15	0.342	0.250			87		175			44	05/14/09	05/15	SS-057
)04018-11			Lab Control Sample	0.331	0.250			85		160				05/14/09	05/14	SS-062
)04018-12			Method Blank	0.253	0.250			91		175				05/14/09	05/15	SS-058
)04018-13			Duplicate (R904018-01)	0.277	0.250			73		174			44	05/14/09	05/15	SS-059
ɔminal values and limits from method				1.00	0.250			20-105		150			180			

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 13

AVERAGES ± 2 SD	MDA	0.375	±	0.184
FOR 13 SAMPLES	YIELD	82	±	19

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test U Matrix SOLID
SDG 7351
Contact N. Joseph Verville

LAB METHOD SUMMARY

URANIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ESULTS

ıB ıMPLE 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
:eparation batch 7200-084											
)04018-01			7351-001	J18J59	U	U	U				
)04018-02			7351-002	J18J60	U	U	U				
)04018-03			7351-003	J18J61	U	U	U				
)04018-04			7351-004	J18J62	U	U	U				
)04018-05			7351-005	J18J63	U	U	U				
)04018-06			7351-006	J18K11	U	U	U				
)04018-07			7351-007	J18K12	U	U	U				
)04018-08			7351-008	J18K13	U	U	U				
)04018-09			7351-009	J18K14	U	U	U				
)04018-10			7351-010	J18K15	U	U	U				
)04018-11			7351-011	Lab Control Sample	ok	ok	ok				
)04018-12			7351-012	Method Blank	U	U	U				
)04018-13			7351-013	Duplicate (R904018-01)	- U	- U	- U				
ɔminal values and limits from method				RDLs (pCi/g)	1.00	1.00	1.00	100		4	
ɔlumbiaRiverComp.ofRCBRA-Tissues								Averages			

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test U Matrix SOLID
SDG 7351
Contact N. Joseph Verville

LAB METHOD SUMMARY

URANIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ETHOD PERFORMANCE

AB AMPLE 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
:eparation batch 7200-084			2σ prep error 8.0 % Reference Lab Notebook No. 7200 pg.084													
)04018-01			J18J59	0.170	0.500			84		152			41	05/07/09	05/12	SS-063
)04018-02			J18J60	0.236	0.500			84		120			37	05/07/09	05/08	SS-059
)04018-03			J18J61	0.206	0.500			86		120			37	05/07/09	05/08	SS-060
)04018-04			J18J62	0.222	0.500			80		120			37	05/07/09	05/08	SS-061
)04018-05			J18J63	0.199	0.500			90		121			37	05/07/09	05/08	SS-062
)04018-06			J18K11	0.204	0.500			85		121			37	05/07/09	05/08	SS-063
)04018-07			J18K12	0.261	0.500			79		118			40	05/07/09	05/11	SS-056
)04018-08			J18K13	0.198	0.500			90		121			37	05/07/09	05/08	SS-065
)04018-09			J18K14	0.237	0.500			90		121			37	05/07/09	05/08	SS-039
)04018-10			J18K15	0.226	0.500			88		123			40	05/07/09	05/11	SS-056
)04018-11			Lab Control Sample	0.518	0.500			89		120				05/07/09	05/11	SS-052
)04018-12			Method Blank	0.211	0.500			88		120				05/07/09	05/11	SS-054
)04018-13			Duplicate (R904018-01)	0.145	0.500			99		152			41	05/07/09	05/12	SS-066
)minal values and limits from method				1.00	0.500			20-105		100	100		180			

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 13

AVERAGES ± 2 SD FOR 13 SAMPLES
MDA 0.233 ± 0.181
YIELD 87 ± 10

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test	SR
Matrix	SOLID
SDG	7351
Contact	N. Joseph Verville

LAB METHOD SUMMARY

TOTAL STRONTIUM IN SOLIDS

BETA COUNTING

Client	Hanford
Contract	No. S00W235A00
Contract	SDG K1579

.ESULTS

ıB AMPLE ID	RAW TEST	SUF- FIX	PLANCHET	CLIENT SAMPLE ID	Total Strontium
:eparation batch 7200-084					
›04018-01			7351-001	J18J59	U
›04018-02			7351-002	J18J60	U
›04018-03			7351-003	J18J61	U
›04018-04			7351-004	J18J62	U
›04018-05			7351-005	J18J63	U
›04018-06			7351-006	J18K11	U
›04018-07			7351-007	J18K12	0.392
›04018-08			7351-008	J18K13	U
›04018-09			7351-009	J18K14	U
›04018-10			7351-010	J18K15	U
›04018-11			7351-011	Lab Control Sample	ok
›04018-12			7351-012	Method Blank	U
›04018-13			7351-013	Duplicate (R904018-01)	- U

›minal values and limits from method RDLs (pCi/g) 1.00
›lumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test	SR
Matrix	SOLID
SDG	7351
Contact	N. Joseph Verville

LAB METHOD SUMMARY

TOTAL STRONTIUM IN SOLIDS

BETA COUNTING

Client	Hanford
Contract	No. S00W235A00
Contract	SDG K1579

ETHOD PERFORMANCE

ıB ıMPLE 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
:eparation batch 7200-084			2σ prep error 10.4 % Reference Lab Notebook No. 7200 pg.084													
›04018-01			J18J59	0.241	1.01			88		100			33	05/04/09	05/04	GRB-204
›04018-02			J18J60	0.276	1.01			84		100			33	05/04/09	05/04	GRB-230
›04018-03			J18J61	0.256	1.01			86		100			33	05/04/09	05/04	GRB-207
›04018-04			J18J62	0.246	1.01			86		100			33	05/04/09	05/04	GRB-221
›04018-05			J18J63	0.233	1.00			87		100			33	05/04/09	05/04	GRB-222
›04018-06			J18K11	0.237	1.03			86		100			33	05/04/09	05/04	GRB-223
›04018-07			J18K12	0.251	1.03			81		100			33	05/04/09	05/04	GRB-225
›04018-08			J18K13	0.286	1.00			78		100			33	05/04/09	05/04	GRB-225
›04018-09			J18K14	0.258	1.01			84		100			33	05/04/09	05/04	GRB-227
›04018-10			J18K15	0.235	1.01			87		100			33	05/04/09	05/04	GRB-228
›04018-11			Lab Control Sample	0.245	1.00			91		86				05/04/09	05/04	GRB-218
›04018-12			Method Blank	0.221	1.00			92		100				05/04/09	05/04	GRB-218
›04018-13			Duplicate (R904018-01)	0.243	1.01			88		100			33	05/04/09	05/04	GRB-230
›minal values and limits from method				1.00	1.00			30-105		100			180			

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	0.248	±	0.035
FOR 13 SAMPLES	YIELD	86	±	7

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test TC Matrix SOLID
SDG 7351
Contact N. Joseph Verville

LAB METHOD SUMMARY

TECHNETIUM 99 IN SOLIDS

BETA COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ESULTS

ıB AMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Technetium 99	
:eparation batch 7200-084						
)04018-01			7351-001	J18J59	U	
)04018-02			7351-002	J18J60	U	
)04018-03			7351-003	J18J61	U	
)04018-04			7351-004	J18J62	U	
)04018-05			7351-005	J18J63	U	
)04018-06			7351-006	J18K11	U	
)04018-07			7351-007	J18K12	U	
)04018-08			7351-008	J18K13	U	
)04018-09			7351-009	J18K14	U	
)04018-10			7351-010	J18K15	U	
)04018-11			7351-011	Lab Control Sample	ok	
)04018-12			7351-012	Method Blank	U	
)04018-13			7351-013	Duplicate (R904018-01)	-	U

ɔminal values and limits from method RDLs (pCi/g) 15.0
ɔlumbiaRiverComp.ofRCBRA-Tissues

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test TC Matrix SOLID
SDG 7351
Contact N. Joseph Verville

LAB METHOD SUMMARY

TECHNETIUM 99 IN SOLIDS

BETA COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

:ETHOD PERFORMANCE

ıB AMPLE 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
:eparation batch 7200-084			2σ prep error 13.2 % Reference Lab Notebook No. 7200 pg.084													
904018-01			J18J59	0.401	1.03			86		100			35	05/06/09	05/06	GRB-223
904018-02			J18J60	0.406	1.00			85		100			42	05/06/09	05/13	GRB-222
904018-03			J18J61	0.387	1.02			89		100			41	05/06/09	05/12	GRB-228
904018-04			J18J62	0.407	1.00			90		100			40	05/06/09	05/11	GRB-230
904018-05			J18J63	0.389	1.01			89		100			35	05/06/09	05/06	GRB-228
904018-06			J18K11	0.409	1.01			93		100			40	05/06/09	05/11	GRB-225
904018-07			J18K12	0.453	1.00			80		100			42	05/06/09	05/13	GRB-221
904018-08			J18K13	0.420	1.01			88		100			40	05/06/09	05/11	GRB-227
904018-09			J18K14	0.415	1.03			82		100			40	05/06/09	05/11	GRB-228
904018-10			J18K15	0.381	1.01			93		100			42	05/06/09	05/13	GRB-223
904018-11			Lab Control Sample	0.459	1.00			83		100				05/06/09	05/14	GRB-207
904018-12			Method Blank	0.432	1.00			82		100				05/06/09	05/13	GRB-224
904018-13			Duplicate (R904018-01)	0.401	1.03			90		100			41	05/06/09	05/12	GRB-232
ominal values and limits from method				15.0	1.00			20-105		50			180			

PROCEDURES	REFERENCE	TC99_TR_SEP_GPC
	SPP-062	Sample Aliquoting, rev 1
	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 13

AVERAGES ± 2 SD FOR 13 SAMPLES				
MDA	0.412	±	0.048
YIELD	87	±	9

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test GAM Matrix SOLID
SDG 7351
Contact N. Joseph Verville

LAB METHOD SUMMARY

GAMMA SCAN

GAMMA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

.ESULTS

AB AMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Cobalt 60		Cesium 137	
reparation batch 7200-084								
904018-01			7351-001	J18J59	U		U	
904018-02			7351-002	J18J60	U		U	
904018-03			7351-003	J18J61	U		U	
904018-04			7351-004	J18J62	U		U	
904018-05			7351-005	J18J63	U		U	
904018-06			7351-006	J18K11	U		U	
904018-07			7351-007	J18K12	U		U	
904018-08			7351-008	J18K13	U		U	
904018-09			7351-009	J18K14	U		U	
904018-10			7351-010	J18K15	U		U	
904018-11			7351-011	Lab Control Sample	ok		ok	
904018-12			7351-012	Method Blank	U		U	
904018-13			7351-013	Duplicate (R904018-01)	-	U	-	U
ominal values and limits from method				RDLs (pCi/g)	0.050		0.100	
olumbiaRiverComp.ofRCBRA-Tissues								

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test GAM Matrix SOLID
SDG 7351
Contact N. Joseph Verville

LAB METHOD SUMMARY

GAMMA SCAN

GAMMA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

:ETHOD PERFORMANCE

ıB AMPLE 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
:eparation batch 7200-084			2σ prep error 7.0 %	Reference Lab Notebook No. 7200 pg.084												
ɔ04018-01			J18J59	24.9	40.4					402			13	04/13/09	04/14	PD,01,00
ɔ04018-02			J18J60	51.7	19.8					402			13	04/13/09	04/14	PD,04,00
ɔ04018-03			J18J61	135	10.1					402			13	04/13/09	04/14	PD,08,00
ɔ04018-04			J18J62	146	11.4					402			13	04/13/09	04/14	PD,06,00
ɔ04018-05			J18J63	38.0	14.5					1007			16	04/13/09	04/17	PD,01,00
ɔ04018-06			J18K11	15.2	52.2					402			13	04/13/09	04/14	PD,07,00
ɔ04018-07			J18K12	19.8	46.3					431			14	04/13/09	04/15	PD,01,00
ɔ04018-08			J18K13	20.5	47.2					432			14	04/13/09	04/15	PD,04,00
ɔ04018-09			J18K14	37.6	42.7					432			14	04/13/09	04/15	PD,06,00
ɔ04018-10			J18K15	9.90	55.7					1007			16	04/13/09	04/17	PD,07,00
904018-11			Lab Control Sample	0.698	10.0					868				04/13/09	04/23	PD,06,00
904018-12			Method Blank	63.7	10.0					853				04/13/09	04/23	PD,01,00
904018-13			Duplicate (R904018-01)	15.7	40.4					889			19	04/13/09	04/20	PD,01,00
ɔminal values and limits from method				0.050	10.0					100			180			

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

AVERAGES ± 2 SD FOR 13 SAMPLES
MDA 44.5 ± 92.0
YIELD ____ ± ____

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test C Matrix SOLID
SDG 7351
Contact N. Joseph Verville

LAB METHOD SUMMARY

CARBON 14 IN SOLIDS

LIQUID SCINTILLATION COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ESULTS

.B .MPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Carbon 14	
:eparation batch 7200-084						
›04018-01			7351-001	J18J59	U	
›04018-02			7351-002	J18J60	U	
›04018-03			7351-003	J18J61	U	
›04018-04			7351-004	J18J62	U	
›04018-05			7351-005	J18J63	U	
›04018-06			7351-006	J18K11	U	
›04018-07			7351-007	J18K12	U	
›04018-08			7351-008	J18K13	U	
›04018-09			7351-009	J18K14	U	
›04018-10			7351-010	J18K15	U	
›04018-11			7351-011	Lab Control Sample	ok	
›04018-12			7351-012	Method Blank	U	
›04018-13			7351-013	Duplicate (R904018-01)	-	U

›minal values and limits from method RDLs (pCi/g) 50.0
›lumbiaRiverComp.ofRCBRA-Tissues

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test C Matrix SOLID
SDG 7351
Contact N. Joseph Verville

LAB METHOD SUMMARY

CARBON 14 IN SOLIDS

LIQUID SCINTILLATION COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ETHOD PERFORMANCE

B MPLE 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
:eparation batch 7200-084			2σ prep error 10.0 % Reference Lab Notebook No. 7200 pg.084													
)04018-01			J18J59	6.32	0.209			100		50			53	05/22/09	05/24	LSC-004
)04018-02			J18J60	6.39	0.207			100		50			53	05/22/09	05/24	LSC-004
)04018-03			J18J61	6.61	0.200			100		50			53	05/22/09	05/24	LSC-004
)04018-04			J18J62	6.63	0.200			100		50			53	05/22/09	05/24	LSC-004
)04018-05			J18J63	6.57	0.201			100		50			53	05/22/09	05/24	LSC-004
)04018-06			J18K11	5.97	0.232			100		50			53	05/22/09	05/24	LSC-004
)04018-07			J18K12	5.20	0.254			100		50			53	05/22/09	05/24	LSC-004
)04018-08			J18K13	6.45	0.206			100		50			53	05/22/09	05/24	LSC-004
)04018-09			J18K14	5.78	0.229			100		50			53	05/22/09	05/24	LSC-004
)04018-10			J18K15	5.28	0.250			100		50			53	05/22/09	05/24	LSC-004
)04018-11			Lab Control Sample	6.94	0.200			100		50				05/22/09	05/25	LSC-004
)04018-12			Method Blank	6.62	0.200			100		50				05/22/09	05/24	LSC-004
)04018-13			Duplicate (R904018-01)	5.48	0.252			100		50			53	05/22/09	05/24	LSC-004
ɔminal values and limits from method				50.0	0.200					10			180			

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

AVERAGES ± 2 SD MDA 6.17 ± 1.14
FOR 13 SAMPLES YIELD 100 ± 0

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test H Matrix SOLID
SDG 7351
Contact N. Joseph Verville

LAB METHOD SUMMARY

TRITIUM IN SOLIDS

LIQUID SCINTILLATION COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ESULTS

AB AMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Tritium	
:eparation batch 7200-084						
904018-01			7351-001	J18J59	U	
904018-02			7351-002	J18J60	U	
904018-03			7351-003	J18J61	U	
904018-04			7351-004	J18J62	U	
904018-05			7351-005	J18J63	U	
904018-06			7351-006	J18K11	U	
904018-07			7351-007	J18K12	U	
904018-08			7351-008	J18K13	U	
904018-09			7351-009	J18K14	U	
904018-10			7351-010	J18K15	U	
904018-11			7351-011	Lab Control Sample	ok	
904018-12			7351-012	Method Blank	U	
904018-13			7351-013	Duplicate (R904018-01)	-	U

ominal values and limits from method RDLs (pCi/g) 400
olumbiaRiverComp.ofRCBRA-Tissues

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test H Matrix SOLID
SDG 7351
Contact N. Joseph Verville

LAB METHOD SUMMARY

TRITIUM IN SOLIDS

LIQUID SCINTILLATION COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ETHOD PERFORMANCE

ıB AMPLE 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
:eparation batch 7200-084			2σ prep error 10.0 % Reference Lab Notebook No. 7200 pg.084													
)04018-01			J18J59	7.62	0.209			100		50			54	05/22/09	05/25	LSC-004
)04018-02			J18J60	7.72	0.207			100		50			54	05/22/09	05/25	LSC-004
)04018-03			J18J61	7.95	0.200			100		50			54	05/22/09	05/25	LSC-004
)04018-04			J18J62	7.98	0.200			100		50			54	05/22/09	05/25	LSC-004
)04018-05			J18J63	7.92	0.201			100		50			54	05/22/09	05/25	LSC-004
)04018-06			J18K11	6.88	0.232			100		50			54	05/22/09	05/25	LSC-004
)04018-07			J18K12	6.27	0.254			100		50			54	05/22/09	05/25	LSC-004
)04018-08			J18K13	7.76	0.206			100		50			54	05/22/09	05/25	LSC-004
)04018-09			J18K14	7.00	0.229			100		50			54	05/22/09	05/25	LSC-004
)04018-10			J18K15	6.38	0.250			100		50			54	05/22/09	05/25	LSC-004
)04018-11			Lab Control Sample	7.42	0.200			100		50				05/22/09	05/25	LSC-004
)04018-12			Method Blank	7.90	0.200			100		50				05/22/09	05/25	LSC-004
)04018-13			Duplicate (R904018-01)	6.33	0.252			100		50			54	05/22/09	05/25	LSC-004
ɔminal values and limits from method				400	0.200					25			180			

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

AVERAGES ± 2 SD FOR 13 SAMPLES				
MDA	7.32	±	1.32
YIELD	100	±	0

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/26/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

SDG 7351
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

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 05/26/09

SDG 7351
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1579

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 05/26/09

SDG 7351
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

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 05/26/09

SDG 7351
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1579

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
Version 3.06
Report date 05/26/09

DATA SHEET

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

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

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

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

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

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

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

P The RESULT is 'preliminary'.

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

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

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

The following values are underlined to indicate possible problems:

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

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GUIDE, cont.

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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.

SDG 7351
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1579

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
Version 3.06
Report date 05/26/09

SDG 7351
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1579

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.

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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.

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Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1579

MATRIX SPIKE

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

The following notes apply to this report:

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

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

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

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

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

* The first, computed limits for the recovery reflect:

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

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

  2. The error of ADDED.

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

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

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MATRIX SPIKE

for the recovery.

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

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

SDG 7351
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

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'

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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-118-16	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ 9N Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF1, LIV/KID	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: N/A K1579 (7351)	Bill of Lading/Air Bill No.: Fdx# 796485004446	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG				
No. of Container(s)	1	0	0	0	0	0	0				
Volume	750g	2g	25g	5g	5g	15g	50g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081				
Sample No. / Matrix * / Sample Date / Sample Time											
J18J59 / OTHER SOLID / 4/1/09 / 11:55 hrs	X	X	X	X	X	X	X				

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Cranna	4/1/09 1158	EAS Locked Storage	4/1/09 1158
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	Fdx# 796485004446	
FED EX		RF MATHWATSON	04/03/09 09 30
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

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-17	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ 9N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF2, LIV/KID K1579 (7351)		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fax# 796485004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			

Sample No.	Matrix *	Sample Date	Sample Time										
J18J60	OTHER SOLID	4/1/09	1200hrs	X	X	X	X	X	X	X			

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Cranna	4/1/09 12:03	EAS Locked Storage	4/1/09 12:07
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	Fax# 796485004446	
FED EX		R.F. MATAUSCHAN	04/03/09 0930

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-18	Page 1 of 1

Collector Kevin Cranna	**Company Contact** JOAN KESSNER **Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH	**Price Code** ~~9K~~ 9N Qr 4/3/9 **Data Turnaround** 45 Days
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** UPRIVER SA-WF3, LIV/KID K1579 (7351)	**SAF No.** RC-118	
Ice Chest No. AFS-04-017	**Field Logbook No.** 1633 **COA** BESCRC6520	**Method of Shipment** FED EX	
Shipped To EBERLINE SERVICES / LIONVILLE	**Offsite Property No.** N/A	**Bill of Lading/Air Bill No.** Fax# 796485004446	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage
COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
Sample No. / Matrix * / Sample Date / Sample Time										
J18J61 / OTHER SOLID / 4/1/09 / 1205 hrs	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Cranna	4/1/09 1207	EAS locked storage	4/1/09 1207
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	FAX# 796485004446	
FED EX		L.F. MATHUPATHAN	04/03/09 0930

SPECIAL INSTRUCTIONS
Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09.

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-118-19	Page 1 of 1

Collector	**Company Contact** JOAN KESSNER **Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH	**Price Code** ~~9K~~ 9N 4/3/9 **Data Turnaround** 45 Days
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** UPRIVER SA-WF4, LIV/KID K1579 (7351)	**SAF No.** RC-118	
Ice Chest No. AFS-04-017	**Field Logbook No.** 1633 / **COA** BESCRC6520	**Method of Shipment** FED EX	
Shipped To EBERLINE SERVICES / LIONVILLE	**Offsite Property No.** N/A	**Bill of Lading/Air Bill No.** Fax# 796485004446	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage
COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			

Sample No.	Matrix *	Sample Date	Sample Time										
J18J62	OTHER SOLID	4/1/09	1215hrs	X	X	X	X	X	X	X			

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Cramer	4/1/09 1216	EAS locked storage	4/1/09 1218
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	Fax# 796485004446	
FED EX		R.F. MATAWATON	04/03/09 0930

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-20	Page 1 of 1

Collector Kevin Cameron	**Company Contact** JOAN KESSNER **Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH	**Price Code** ~~9K~~ 9N **Data Turnaround** 45 Days
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** UPRIVER SA-WF5, LIV/KID K1579 (7351)	**SAF No.** RC-118	4/3/09
Ice Chest No. AFS-04-017	**Field Logbook No.** 1633 **COA** BESCRC6520	**Method of Shipment** FED EX	
Shipped To EBERLINE SERVICES LIONVILLE	**Offsite Property No.** N/A	**Bill of Lading/Air Bill No.** Fax# 796485004446	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage
COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
Sample No. / **Matrix *** / **Sample Date** / **Sample Time**										
J18J63 / OTHER SOLID / 4/1/09 / 1220hrs	X	X	X	X	X	X	X			

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Cameron	4/1/09 1222	EAS locked storage	4/1/09 1222
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	Fax# 796485004446	
FED EX		R F MATHEWS MAN	04/03/09 0930

SPECIAL INSTRUCTIONS
Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-56	Page 1 of 1
Collector: Kevin Cranna	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ 9N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WF1, LIV/KID; K1579	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633; COA: BESCRC6520 (7351)	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: Fdx# 796485004446	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
J18K11	OTHER SOLID	4/1/09	1100hrs	X	X	X	X	X	X	X			

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Cranna	4/1/09 1102	EAS locked storage	4/1/09 1102
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	Fdx# 796485004446	
FED EX		R.F. WATANABAN	04/03/09 0930

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-57	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ 9N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WF2, LIV/KID K1579 (7351)		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fdx# 796485004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
Sample No. / Matrix * / Sample Date / Sample Time										
J18K12 / OTHER SOLID / 4/1/09 / 1105 hrs	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Cranna	4/1/09 1107	EAS locked storage	4/1/09 1107
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1110	Fdx# 796485004446	
FED EX		RF-WA Fowler	04/03/09 0930

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-58	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ 9N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WF3, LIV/KID K1579 (7351)	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill: Fdx# 796485004446	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG				
No. of Container(s)	1	0	0	0	0	0	0				
Volume	750g	2g	25g	5g	5g	15g	50g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081				
Sample No. / Matrix * / Sample Date / Sample Time											
J18K13 / OTHER SOLID / 4/1/09 / 1112	X	X	X	X	X	X	X				

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Cranna	4/1/09 1115	EAS locked storage	4/1/09 1115
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	Fdx# 796485004446	
Fed Ex		M.F. Matsuoka	04/03/09 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

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09.

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-118-59	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ 9N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WF4, LIV/KID K1579 (7351)		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fdx# 796485004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
Sample No. / Matrix * / Sample Date / Sample Time										
J18K14 / OTHER SOLID / 4/1/09 / 1118hrs	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Cranna	4/1/09 1120	EAS locked storage	4/1/09 1120
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	Fdx# 796485004446	
FED EX		RF NETWORKING	04/03/09 0930

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09.

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-118-60	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ 9N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WF5, LIV/KID K1579 (7351)		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fdx# 796485004443

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			

Sample No.	Matrix *	Sample Date	Sample Time									
J18K15	OTHER SOLID	4/1/09	1121 hrs	X	X	X	X	X	X	X		

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By/Removed From: Kevin Cranna	Date/Time: 4/1/09 1123	Received By/Stored In: EAS locked storage	Date/Time: 4/1/09 1123
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 4/2/09 1100	Received By/Stored In: Fdx# 796485004446	Date/Time:
Relinquished By/Removed From: FEDEX	Date/Time:	Received By/Stored In: [illegible]	Date/Time: 04/03/09 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

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09.

Matrix *

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

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

WCH-EE-011

EBERLINE SERVICES

RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

JK 4/3/09

Client: W.C. HANFORD City RICHLAND State WA

Date/Time received 04/03/09 0930 CoC No. RC-118-16,17,18,19,20,56,57,58,59,60,96,97,98,99,100,131,132,133,134,135

Container I.D. No. AFS-04-017 Requested TAT (Days) 45 P.O. Received Yes [ ] No [ ]

INSPECTION

1. Custody seals on shipping container intact? Yes [X] No [ ] N/A [ ]
2. Custody seals on shipping container dated & signed? Yes [X] No [ ] N/A [ ]
3. Custody seals on sample containers intact? Yes [X] No [ ] N/A [ ]
4. Custody seals on sample containers dated & signed? Yes [X] No [ ] N/A [ ]
5. Packing material is: split by 10 Wet [ ] Dry [X]
6. Number of samples in shipping container: 20 Sample Matrix X SOLID
7. Number of containers per sample: 1 (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: 04/03/09 Time: 11:00

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 Jun 08

Form SCP-02, 07-30-07

"over 55 years of quality nuclear services"

EBERLINE SERVICES

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

RECEIVED
MAY 2009

May 27, 2009

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

Reference: **P.O. #S00W235A00**
Eberline Analytical R9-04-019-7352, SDG K1579

Dear Ms. Kessner:

Enclosed is a data report for ten solid (other solid) samples designated under SAF No. RC-118 received at Eberline Analytical on April 3, 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
Client Services Manager

NJV/ljb

Enclosure: Data Package

1.0 GENERAL

Washington Closure Hanford (WCH) Sample Delivery Group K1579 was composed of ten solid (other solid) samples designated under SAF No. RC-118 with a Project Designation of: Columbia River Component of the RCBRA – Tissues.

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 May 26, 2009.

2.0 ANALYSIS NOTES

2.1 Carbon-14 Analysis

No problems were encountered during the course of the analyses.

2.2 Tritium Analysis

No problems were encountered during the course of the analyses.

2.3 Strontium-90 Analysis

No problems were encountered during the course of the analyses.

2.4 Technetium-99 Analysis

No problems were encountered during the course of the analyses.

2.5 Isotopic Thorium Analysis

Th-230 activity was detected in the blank at 0.292+/- 0.22 pCi/g, greater than the sample specific MDA of 0.280 pCi/g, but less than the RDL of 1.0 pCi/g. No other problems were encountered during the course of the analyses.

2.6 Isotopic Uranium Analysis

No problems were encountered during the course of the analyses.

2.7 Isotopic Plutonium Analysis

No problems were encountered during the course of the analyses.

2.8 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
Client Services Manager

5/27/09
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 K1579

SDG	7352
Contact	N. Joseph Verville

Client	Hanford
Contract	No. S00W235A00
Case no	SDG K1579

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

About this section	1
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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	05/27/09

SDG 7352
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

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.

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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 K1579

SDG 7352
Contact N. Joseph Verville

LAB SAMPLE SUMMARY

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

LAB SAMPLE ID	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAF NO	CHAIN OF CUSTODY	COLLECTED
R904019-01	J18K52	300SA-WF1,LIV/KID	SOLID		RC-118	RC-118-96	04/01/09 09:53
R904019-02	J18K53	300SA-WF2,LIV/KID	SOLID		RC-118	RC-118-97	04/01/09 10:00
R904019-03	J18K54	300SA-WF3,LIV/KID	SOLID		RC-118	RC-118-98	04/01/09 10:05
R904019-04	J18K55	300SA-WF4,LIV/KID	SOLID		RC-118	RC-118-99	04/01/09 10:10
R904019-05	J18K56	300SA-WF5,LIV/KID	SOLID		RC-118	RC-118-100	04/01/09 10:18
R904019-06	J18KD3	LWSA-WF1,LIV/KID	SOLID		RC-118	RC-118-131	04/01/09 08:55
R904019-07	J18KD4	LWSA-WF2,LIV/KID	SOLID		RC-118	RC-118-132	04/01/09 09:03
R904019-08	J18KD5	LWSA-WF3,LIV/KID	SOLID		RC-118	RC-118-133	04/01/09 09:12
R904019-09	J18KD6	LWSA-WF4,LIV/KID	SOLID		RC-118	RC-118-134	04/01/09 09:17
R904019-10	J18KD7	LWSA-WF5,LIV/KID	SOLID		RC-118	RC-118-135	04/01/09 09:25
R904019-11	Lab Control Sample		SOLID		RC-118		
R904019-12	Method Blank		SOLID		RC-118		
R904019-13	Duplicate (R904019-01)	300SA-WF1,LIV/KID	SOLID		RC-118		04/01/09 09:53

Lab id EBRLNE
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Form DVD-LS
Version 3.06
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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

SDG 7352
Contact N. Joseph Verville

QC SUMMARY

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

: 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
·52	RC-118-100	J18K56	SOLID	100.0	21 g		04/03/09	2	R904019-05	7352-005
	RC-118-131	J18KD3	SOLID	100.0	60 g		04/03/09	2	R904019-06	7352-006
	RC-118-132	J18KD4	SOLID	100.0	50 g		04/03/09	2	R904019-07	7352-007
	RC-118-133	J18KD5	SOLID	100.0	42 g		04/03/09	2	R904019-08	7352-008
	RC-118-134	J18KD6	SOLID	100.0	41 g		04/03/09	2	R904019-09	7352-009
	RC-118-135	J18KD7	SOLID	100.0	62 g		04/03/09	2	R904019-10	7352-010
	RC-118-96	J18K52	SOLID	100.0	51 g		04/03/09	2	R904019-01	7352-001
	RC-118-97	J18K53	SOLID	100.0	45 g		04/03/09	2	R904019-02	7352-002
	RC-118-98	J18K54	SOLID	100.0	36 g		04/03/09	2	R904019-03	7352-003
	RC-118-99	J18K55	SOLID	100.0	46 g		04/03/09	2	R904019-04	7352-004
		Method Blank	SOLID						R904019-12	7352-012
		Lab Control Sample	SOLID						R904019-11	7352-011
		Duplicate (R904019-01)	SOLID	100.0	51 g		04/03/09	2	R904019-13	7352-013

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-QS
Version 3.06
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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

SDG 7352
Contact N. Joseph Verville

PREP BATCH SUMMARY

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

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	7200-089	8.0	10			1	1	1/1		
TH	SOLID	Thorium, Isotopic in Solids	7200-089	8.0	10			1	1	1/1		
U	SOLID	Uranium, Isotopic in Solids	7200-089	8.0	10			1	1	1/1		
Beta Counting												
SR	SOLID	Total Strontium in Solids	7200-089	10.4	10			1	1	1/1		
TC	SOLID	Technetium 99 in Solids	7200-089	13.2	10			1	1	1/1		
Gamma Spectroscopy												
GAM	SOLID	Gamma Scan	7200-089	7.0	10			1	1	1/1		
Liquid Scintillation Counting												
C	SOLID	Carbon 14 in Solids	7200-089	10.0	10			1	1	1/1		
H	SOLID	Tritium in Solids	7200-089	10.0	10			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.

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Form DVD-PBS
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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

SDG 7352
Contact N. Joseph Verville

LAB WORK SUMMARY

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

LB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
904019-01	J18K52			7352-001	C		05/25/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	300SA-WF1,LIV/KID		SOLID	7352-001	GAM		04/15/09	04/30/09	MWT	Gamma Scan
04/03/09	RC-118-96	RC-118		7352-001	H		05/25/09	05/26/09	BW	Tritium in Solids
				7352-001	PU		05/14/09	05/15/09	BW	Plutonium, Isotopic in Solids
				7352-001	SR		05/05/09	05/11/09	BW	Total Strontium in Solids
				7352-001	TC		05/12/09	05/13/09	BW	Technetium 99 in Solids
				7352-001	TH		05/15/09	05/20/09	BW	Thorium, Isotopic in Solids
				7352-001	U		05/18/09	05/19/09	BW	Uranium, Isotopic in Solids
904019-02	J18K53			7352-002	C		05/25/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	300SA-WF2,LIV/KID		SOLID	7352-002	GAM		04/15/09	04/30/09	MWT	Gamma Scan
04/03/09	RC-118-97	RC-118		7352-002	H		05/25/09	05/26/09	BW	Tritium in Solids
				7352-002	PU		05/14/09	05/15/09	BW	Plutonium, Isotopic in Solids
				7352-002	SR		05/05/09	05/11/09	BW	Total Strontium in Solids
				7352-002	TC		05/12/09	05/13/09	BW	Technetium 99 in Solids
				7352-002	TH		05/16/09	05/20/09	BW	Thorium, Isotopic in Solids
				7352-002	U		05/18/09	05/19/09	BW	Uranium, Isotopic in Solids
904019-03	J18K54			7352-003	C		05/25/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	300SA-WF3,LIV/KID		SOLID	7352-003	GAM		04/16/09	04/30/09	MWT	Gamma Scan
04/03/09	RC-118-98	RC-118		7352-003	H		05/25/09	05/26/09	BW	Tritium in Solids
				7352-003	PU		05/14/09	05/15/09	BW	Plutonium, Isotopic in Solids
				7352-003	SR		05/05/09	05/11/09	BW	Total Strontium in Solids
				7352-003	TC		05/08/09	05/13/09	BW	Technetium 99 in Solids
				7352-003	TH		05/16/09	05/20/09	BW	Thorium, Isotopic in Solids
				7352-003	U		05/18/09	05/19/09	BW	Uranium, Isotopic in Solids
904019-04	J18K55			7352-004	C		05/25/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	300SA-WF4,LIV/KID		SOLID	7352-004	GAM		04/17/09	04/30/09	MWT	Gamma Scan
04/03/09	RC-118-99	RC-118		7352-004	H		05/25/09	05/26/09	BW	Tritium in Solids
				7352-004	PU		05/14/09	05/15/09	BW	Plutonium, Isotopic in Solids
				7352-004	SR		05/05/09	05/11/09	BW	Total Strontium in Solids
				7352-004	TC		05/09/09	05/13/09	BW	Technetium 99 in Solids
				7352-004	TH		05/16/09	05/20/09	BW	Thorium, Isotopic in Solids
				7352-004	U		05/18/09	05/19/09	BW	Uranium, Isotopic in Solids

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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

SDG 7352
Contact N. Joseph Verville

WORK SUMMARY, cont.

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

B SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
904019-05	J18K56			7352-005	C		05/25/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	300SA-WF5,LIV/KID		SOLID	7352-005	GAM		04/16/09	04/30/09	MWT	Gamma Scan
04/03/09	RC-118-100	RC-118		7352-005	H		05/25/09	05/26/09	BW	Tritium in Solids
				7352-005	PU		05/14/09	05/15/09	BW	Plutonium, Isotopic in Solids
				7352-005	SR		05/05/09	05/11/09	BW	Total Strontium in Solids
				7352-005	TC		05/08/09	05/13/09	BW	Technetium 99 in Solids
				7352-005	TH		05/16/09	05/20/09	BW	Thorium, Isotopic in Solids
				7352-005	U		05/18/09	05/19/09	BW	Uranium, Isotopic in Solids
904019-06	J18KD3			7352-006	C		05/25/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	LWSA-WF1,LIV/KID		SOLID	7352-006	GAM		04/17/09	04/30/09	MWT	Gamma Scan
04/03/09	RC-118-131	RC-118		7352-006	H		05/25/09	05/26/09	BW	Tritium in Solids
				7352-006	PU		05/14/09	05/15/09	BW	Plutonium, Isotopic in Solids
				7352-006	SR		05/05/09	05/11/09	BW	Total Strontium in Solids
				7352-006	TC		05/09/09	05/13/09	BW	Technetium 99 in Solids
				7352-006	TH		05/16/09	05/20/09	BW	Thorium, Isotopic in Solids
				7352-006	U		05/18/09	05/19/09	BW	Uranium, Isotopic in Solids
904019-07	J18KD4			7352-007	C		05/25/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	LWSA-WF2,LIV/KID		SOLID	7352-007	GAM		04/16/09	04/30/09	MWT	Gamma Scan
04/03/09	RC-118-132	RC-118		7352-007	H		05/25/09	05/26/09	BW	Tritium in Solids
				7352-007	PU		05/14/09	05/15/09	BW	Plutonium, Isotopic in Solids
				7352-007	SR		05/05/09	05/11/09	BW	Total Strontium in Solids
				7352-007	TC		05/09/09	05/13/09	BW	Technetium 99 in Solids
				7352-007	TH		05/16/09	05/20/09	BW	Thorium, Isotopic in Solids
				7352-007	U		05/18/09	05/19/09	BW	Uranium, Isotopic in Solids
904019-08	J18KD5			7352-008	C		05/25/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	LWSA-WF3,LIV/KID		SOLID	7352-008	GAM		04/16/09	04/30/09	MWT	Gamma Scan
04/03/09	RC-118-133	RC-118		7352-008	H		05/25/09	05/26/09	BW	Tritium in Solids
				7352-008	PU		05/14/09	05/15/09	BW	Plutonium, Isotopic in Solids
				7352-008	SR		05/05/09	05/11/09	BW	Total Strontium in Solids
				7352-008	TC		05/08/09	05/13/09	BW	Technetium 99 in Solids
				7352-008	TH		05/16/09	05/20/09	BW	Thorium, Isotopic in Solids
				7352-008	U		05/18/09	05/19/09	BW	Uranium, Isotopic in Solids

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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

SDG 7352
Contact N. Joseph Verville

WORK SUMMARY, cont.

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

LB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
904019-09	J18KD6			7352-009	C		05/25/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	LWSA-WF4,LIV/KID		SOLID	7352-009	GAM		04/16/09	04/30/09	MWT	Gamma Scan
04/03/09	RC-118-134	RC-118		7352-009	H		05/25/09	05/26/09	BW	Tritium in Solids
				7352-009	PU		05/15/09	05/15/09	BW	Plutonium, Isotopic in Solids
				7352-009	SR		05/05/09	05/11/09	BW	Total Strontium in Solids
				7352-009	TC		05/09/09	05/13/09	BW	Technetium 99 in Solids
				7352-009	TH		05/16/09	05/20/09	BW	Thorium, Isotopic in Solids
				7352-009	U		05/18/09	05/19/09	BW	Uranium, Isotopic in Solids
904019-10	J18KD7			7352-010	C		05/25/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	LWSA-WF5,LIV/KID		SOLID	7352-010	GAM		04/17/09	04/30/09	MWT	Gamma Scan
04/03/09	RC-118-135	RC-118		7352-010	H		05/25/09	05/26/09	BW	Tritium in Solids
				7352-010	PU		05/14/09	05/15/09	BW	Plutonium, Isotopic in Solids
				7352-010	SR		05/05/09	05/11/09	BW	Total Strontium in Solids
				7352-010	TC		05/09/09	05/13/09	BW	Technetium 99 in Solids
				7352-010	TH		05/18/09	05/20/09	BW	Thorium, Isotopic in Solids
				7352-010	U		05/18/09	05/19/09	BW	Uranium, Isotopic in Solids
904019-11	Lab Control Sample			7352-011	C		05/26/09	05/26/09	BW	Carbon 14 in Solids
			SOLID	7352-011	GAM		04/29/09	04/30/09	MWT	Gamma Scan
		RC-118		7352-011	H		05/25/09	05/26/09	BW	Tritium in Solids
				7352-011	PU		05/14/09	05/15/09	BW	Plutonium, Isotopic in Solids
				7352-011	SR		05/05/09	05/11/09	BW	Total Strontium in Solids
				7352-011	TC		05/08/09	05/13/09	BW	Technetium 99 in Solids
				7352-011	TH		05/16/09	05/20/09	BW	Thorium, Isotopic in Solids
				7352-011	U		05/18/09	05/19/09	BW	Uranium, Isotopic in Solids
904019-12	Method Blank			7352-012	C		05/25/09	05/26/09	BW	Carbon 14 in Solids
			SOLID	7352-012	GAM		04/27/09	04/30/09	MWT	Gamma Scan
		RC-118		7352-012	H		05/25/09	05/26/09	BW	Tritium in Solids
				7352-012	PU		05/14/09	05/15/09	BW	Plutonium, Isotopic in Solids
				7352-012	SR		05/05/09	05/11/09	BW	Total Strontium in Solids
				7352-012	TC		05/09/09	05/13/09	BW	Technetium 99 in Solids
				7352-012	TH		05/16/09	05/20/09	BW	Thorium, Isotopic in Solids
				7352-012	U		05/18/09	05/19/09	BW	Uranium, Isotopic in Solids

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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

SDG 7352
Contact N. Joseph Verville

WORK SUMMARY, cont.

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
904019-13	Duplicate (R904019-01)			7352-013	C		05/25/09	05/26/09	BW	Carbon 14 in Solids
04/01/09	300SA-WF1,LIV/KID		SOLID	7352-013	GAM		04/20/09	04/30/09	MWT	Gamma Scan
04/03/09		RC-118		7352-013	H		05/25/09	05/26/09	BW	Tritium in Solids
				7352-013	PU		05/14/09	05/15/09	BW	Plutonium, Isotopic in Solids
				7352-013	SR		05/05/09	05/11/09	BW	Total Strontium in Solids
				7352-013	TC		05/09/09	05/13/09	BW	Technetium 99 in Solids
				7352-013	TH		05/16/09	05/20/09	BW	Thorium, Isotopic in Solids
				7352-013	U		05/18/09	05/19/09	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-118	Carbon 14 in Solids	C14_COX_LSC	10			1	1	1	13
GAM	RC-118	Gamma Scan	GAMMA_GS	10			1	1	1	13
H	RC-118	Tritium in Solids	TRITIUM_COX_LSC	10			1	1	1	13
PU	RC-118	Plutonium, Isotopic in Solids	PUISO_PLATE_AEA	10			1	1	1	13
SR	RC-118	Total Strontium in Solids	SRTOT_SEP_PRECIP_GPC	10			1	1	1	13
TC	RC-118	Technetium 99 in Solids	TC99_TR_SEP_GPC	10			1	1	1	13
TH	RC-118	Thorium, Isotopic in Solids	THISO_IE_PLATE_AEA	10			1	1	1	13
U	RC-118	Uranium, Isotopic in Solids	UISO_PLATE_AEA	10			1	1	1	13
TOTALS				80			8	8	8	104

Lab id EBRLNE
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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7352-012 Method Blank

METHOD BLANK

SDG	7352	Client/Case no	Hanford	SDG K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904019-12	Client sample id	Method Blank		
Dept sample id	7352-012	Material/Matrix		SOLID	
		SAF No	RC-118		

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-1.02	4.1	7.18	400	U	H
Carbon 14	14762-75-5	1.11	3.1	5.20	50.0	U	C
Total Strontium	SR-RAD	0.034	0.11	0.223	1.00	U	SR
Technetium 99	14133-76-7	0.226	0.27	0.368	15.0	U	TC
Thorium 228	14274-82-9	0.073	0.15	0.281	1.00	U	TH
Thorium 230	14269-63-7	0.292	0.22	0.280	1.00		TH
Thorium 232	TH-232	0	0.073	0.280	1.00	U	TH
Uranium 233/234	U-233/234	0.026	0.053	0.201	1.00	U	U
Uranium 235	15117-96-1	0.032	0.064	0.243	1.00	U	U
Uranium 238	U-238	0	0.053	0.201	1.00	U	U
Plutonium 238	13981-16-3	0.051	0.081	0.142	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.030	0.062	1.00	U	PU
Potassium 40	13966-00-2	U		4.54		U	GAM
Cobalt 60	10198-40-0	U		0.149	0.050	U	GAM
Cesium 137	10045-97-3	U		0.133	0.100	U	GAM
Radium 226	13982-63-3	U		0.317	0.100	U	GAM
Radium 228	15262-20-1	U		0.705	0.200	U	GAM
Europium 152	14683-23-9	U		0.357	0.100	U	GAM
Europium 154	15585-10-1	U		0.470	0.100	U	GAM
Europium 155	14391-16-3	U		0.287	0.100	U	GAM
Thorium 228	14274-82-9	U		0.566		U	GAM
Thorium 232	TH-232	U		0.705		U	GAM
Uranium 235	15117-96-1	U		0.634		U	GAM
Uranium 238	U-238	U		16.5		U	GAM
Americium 241	14596-10-2	U		0.285		U	GAM
Beryllium 7	13966-02-4	U		0.928		U	GAM
Ruthenium 106	13967-48-1	U		1.09		U	GAM
Antimony 125	14234-35-6	U		0.289		U	GAM
Cesium 134	13967-70-9	U		0.196		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7352-012 Method Blank

BLANK, cont.

SDG	7352	Client/Case no	Hanford	SDG K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904019-12	Client sample id	Method Blank		
Dept sample id	7352-012	Material/Matrix		SOLID	
		SAF No	RC-118		

QC-BLANK #69521

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7352-011

Lab Control Sample

LAB CONTROL SAMPLE

SDG 7352

Contact N. Joseph Verville

Client/Case no Hanford SDG K1579

Contract No. S00W235A00

Lab sample id R904019-11

Dept sample id 7352-011

Client sample id Lab Control Sample

Material/Matrix SOLID

SAF No RC-118

ANALYTE	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST	ADDED pCi/g	2σ ERR pCi/g	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS
Tritium	977	23	7.78	400		H	1050	42	93	84-116	80-120
Carbon 14	2940	89	17.2	50.0		C	2900	120	101	83-117	80-120
Total Strontium	9.30	0.52	0.217	1.00		SR	9.12	0.36	102	81-119	80-120
Technetium 99	124	2.0	0.384	15.0		TC	109	4.4	114	77-123	80-120
Thorium 230	18.5	2.3	0.300	1.00		TH	18.9	0.76	98	77-123	80-120
Uranium 233/234	6.12	1.1	0.666	1.00		U	5.58	0.22	110	67-133	80-120
Uranium 235	5.15	1.0	0.294	1.00		U	4.52	0.18	114	64-136	80-120
Uranium 238	6.53	1.1	0.627	1.00		U	6.04	0.24	108	69-131	80-120
Plutonium 238	5.68	0.43	0.098	1.00		PU	5.80	0.23	98	83-117	80-120
Plutonium 239/240	6.43	0.47	0.071	1.00		PU	6.60	0.26	97	83-117	80-120
Cobalt 60	11.2	0.78	0.391	0.050		GAM	9.60	0.38	117	82-118	80-120
Cesium 137	13.3	0.67	0.406	0.100		GAM	11.4	0.46	117	84-116	80-120

ColumbiaRiverComp.ofRCBRA-Tissues

QC-LCS #69520

Lab id EBRLNE

Protocol Hanford1

Version Ver 1.0

Form DVD-LCS

Version 3.06

Report date 05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7352-013 J18K52

DUPLICATE

SDG	7352			Client/Case no	Hanford SDG K1579
Contact	N. Joseph Verville			Contract	No. S00W235A00
	DUPLICATE		ORIGINAL		
Lab sample id	R904019-13	Lab sample id	R904019-01	Client sample id	J18K52
Dept sample id	7352-013	Dept sample id	7352-001	Location/Matrix	300SA-WF1,LIV/KID SOLID
		Received	04/03/09	Collected/Weight	04/01/09 09:53 51 g
% solids	100.0	% solids	100.0	Custody/SAF No	RC-118-96 RC-118

ANALYTE	DUPLICATE pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST	ORIGINAL pCi/g	2σ ERR (COUNT)	MDA pCi/g	QUALI-FIERS	RPD %	3σ TOT	DER σ
Tritium	-1.36	3.6	6.41	400	U	H	1.74	4.4	7.53	U	-		1.1
Carbon 14	0.638	2.7	4.61	50.0	U	C	0.676	2.9	4.88	U	-		0
Total Strontium	0.062	0.13	0.243	1.00	U	SR	-0.036	0.14	0.306	U	-		1.0
Technetium 99	0.017	0.21	0.374	15.0	U	TC	0.109	0.28	0.395	U	-		0.5
Thorium 228	0.034	0.14	0.260	1.00	U	TH	0.089	0.18	0.426	U	-		0.5
Thorium 230	0.338	0.27	0.258	1.00	B	TH	0.621	0.36	0.339		59	142	1.2
Thorium 232	0.068	0.068	0.258	1.00	U	TH	0.044	0.089	0.339	U	-		0.4
Uranium 233/234	0.055	0.055	0.210	1.00	U	U	0.055	0.055	0.211	U	-		0
Uranium 235	0	0.066	0.254	1.00	U	U	0.033	0.067	0.255	U	-		0.7
Uranium 238	0	0.055	0.210	1.00	U	U	0	0.055	0.211	U	-		0
Plutonium 238	0.021	0.053	0.105	1.00	U	PU	0.008	0.066	0.134	U	-		0.3
Plutonium 239/240	-0.005	0.021	0.059	1.00	U	PU	0.008	0.033	0.063	U	-		0.7
Potassium 40	3.02	0.68	0.459			GAM	4.12	0.85	0.446		31	48	1.9
Cobalt 60	U		0.051	0.050	U	GAM	U		0.066	U	-		0.4
Cesium 137	U		0.041	0.100	U	GAM	U		0.067	U	-		0.7
Radium 226	U		0.085	0.100	U	GAM	U		0.126	U	-		0.5
Radium 228	U		0.196	0.200	U	GAM	U		0.263	U	-		0.4
Europium 152	U		0.104	0.100	U	GAM	U		0.164	U	-		0.6
Europium 154	U		0.135	0.100	U	GAM	U		0.182	U	-		0.4
Europium 155	U		0.079	0.100	U	GAM	U		0.100	U	-		0.3
Thorium 228	U		0.062		U	GAM	U		0.089	U	-		0.5
Thorium 232	U		0.196		U	GAM	U		0.263	U	-		0.4
Uranium 235	U		0.185		U	GAM	U		0.278	U	-		0.6
Uranium 238	U		5.27		U	GAM	U		7.97	U	-		0.6
Americium 241	U		0.044		U	GAM	U		0.064	U	-		0.5
Beryllium 7	U		0.380		U	GAM	U		0.494	U	-		0.4
Ruthenium 106	U		0.408		U	GAM	U		0.520	U	-		0.3
Antimony 125	U		0.095		U	GAM	U		0.144	U	-		0.6

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DUP
Version	3.06
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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7352-013 J18K52

DUPLICATE, cont.

SDG	7352			Client/Case no	Hanford SDG K1579
Contact	N. Joseph Verville			Contract	No. S00W235A00
	DUPLICATE		ORIGINAL		
Lab sample id	R904019-13	Lab sample id	R904019-01	Client sample id	J18K52
Dept sample id	7352-013	Dept sample id	7352-001	Location/Matrix	300SA-WF1,LIV/KID SOLID
		Received	04/03/09	Collected/Weight	04/01/09 09:53 51 g
% solids	100.0	% solids	100.0	Custody/SAF No	RC-118-96 RC-118

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
Cesium 134	U		0.058		U	GAM	U		0.071	U	-		0.3

ColumbiaRiverComp.ofRCBRA-Tissues

QC-DUP#1 69522

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DUP
Version	3.06
Report date	05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7352-001 J18K52

DATA SHEET

SDG	7352	Client/Case no	Hanford	SDG K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904019-01	Client sample id	J18K52		
Dept sample id	7352-001	Location/Matrix	300SA-WF1,LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 09:53	51 g	
% solids	100.0	Custody/SAF No	RC-118-96	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	1.74	4.4	7.53	400	U	H
Carbon 14	14762-75-5	0.676	2.9	4.88	50.0	U	C
Total Strontium	SR-RAD	-0.036	0.14	0.306	1.00	U	SR
Technetium 99	14133-76-7	0.109	0.28	0.395	15.0	U	TC
Thorium 228	14274-82-9	0.089	0.18	0.426	1.00	U	TH
Thorium 230	14269-63-7	0.621	0.36	0.339	1.00		TH
Thorium 232	TH-232	0.044	0.089	0.339	1.00	U	TH
Uranium 233/234	U-233/234	0.055	0.055	0.211	1.00	U	U
Uranium 235	15117-96-1	0.033	0.067	0.255	1.00	U	U
Uranium 238	U-238	0	0.055	0.211	1.00	U	U
Plutonium 238	13981-16-3	0.008	0.066	0.134	1.00	U	PU
Plutonium 239/240	PU-239/240	0.008	0.033	0.063	1.00	U	PU
Potassium 40	13966-00-2	4.12	0.85	0.446			GAM
Cobalt 60	10198-40-0	U		0.066	0.050	U	GAM
Cesium 137	10045-97-3	U		0.067	0.100	U	GAM
Radium 226	13982-63-3	U		0.126	0.100	U	GAM
Radium 228	15262-20-1	U		0.263	0.200	U	GAM
Europium 152	14683-23-9	U		0.164	0.100	U	GAM
Europium 154	15585-10-1	U		0.182	0.100	U	GAM
Europium 155	14391-16-3	U		0.100	0.100	U	GAM
Thorium 228	14274-82-9	U		0.089		U	GAM
Thorium 232	TH-232	U		0.263		U	GAM
Uranium 235	15117-96-1	U		0.278		U	GAM
Uranium 238	U-238	U		7.97		U	GAM
Americium 241	14596-10-2	U		0.064		U	GAM
Beryllium 7	13966-02-4	U		0.494		U	GAM
Ruthenium 106	13967-48-1	U		0.520		U	GAM
Antimony 125	14234-35-6	U		0.144		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7352-001 J18K52

DATA SHEET, cont

SDG	7352	Client/Case no	Hanford	SDG K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904019-01	Client sample id	J18K52		
Dept sample id	7352-001	Location/Matrix	300SA-WF1,LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 09:53	51 g	
% solids	100.0	Custody/SAF No	RC-118-96	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Cesium 134	13967-70-9	U		0.071		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

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

SAMPLE DELIVERY GROUP K1579

7352-002 J18K53

DATA SHEET

SDG	7352	Client/Case no	Hanford	SDG_K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00	
Lab sample id	R904019-02	Client sample id	J18K53	
Dept sample id	7352-002	Location/Matrix	300SA-WF2,LIV/KID	SOLID
Received	04/03/09	Collected/Weight	04/01/09 10:00	45 g
% solids	100.0	Custody/SAF No	RC-118-97	RC-118

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	3.53	4.2	6.86	400	U	H
Carbon 14	14762-75-5	0.828	2.8	4.70	50.0	U	C
Total Strontium	SR-RAD	-0.111	0.094	0.230	1.00	U	SR
Technetium 99	14133-76-7	0.180	0.25	0.384	15.0	U	TC
Thorium 228	14274-82-9	0.036	0.22	0.396	1.00	U	TH
Thorium 230	14269-63-7	0.464	0.29	0.273	1.00	B	TH
Thorium 232	TH-232	0	0.071	0.273	1.00	U	TH
Uranium 233/234	U-233/234	0.100	0.080	0.153	1.00	U	U
Uranium 235	15117-96-1	0.024	0.049	0.186	1.00	U	U
Uranium 238	U-238	0	0.040	0.153	1.00	U	U
Plutonium 238	13981-16-3	0	0.038	0.086	1.00	U	PU
Plutonium 239/240	PU-239/240	0.013	0.026	0.061	1.00	U	PU
Potassium 40	13966-00-2	U		3.42		U	GAM
Cobalt 60	10198-40-0	U		0.107	0.050	U	GAM
Cesium 137	10045-97-3	U		0.121	0.100	U	GAM
Radium 226	13982-63-3	U		0.247	0.100	U	GAM
Radium 228	15262-20-1	U		0.838	0.200	U	GAM
Europium 152	14683-23-9	U		0.309	0.100	U	GAM
Europium 154	15585-10-1	U		0.311	0.100	U	GAM
Europium 155	14391-16-3	U		0.256	0.100	U	GAM
Thorium 228	14274-82-9	U		0.174		U	GAM
Thorium 232	TH-232	U		0.838		U	GAM
Uranium 235	15117-96-1	U		0.552		U	GAM
Uranium 238	U-238	U		13.4		U	GAM
Americium 241	14596-10-2	U		0.388		U	GAM
Beryllium 7	13966-02-4	U		0.920		U	GAM
Ruthenium 106	13967-48-1	U		0.892		U	GAM
Antimony 125	14234-35-6	U		0.245		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

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

SAMPLE DELIVERY GROUP K1579

7352-002 J18K53

DATA SHEET, cont

SDG	7352	Client/Case no	Hanford		SDG_K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904019-02	Client sample id	J18K53		
Dept sample id	7352-002	Location/Matrix	300SA-WF2,LIV/KID		SOLID
Received	04/03/09	Collected/Weight	04/01/09 10:00	45 g	
% solids	100.0	Custody/SAF No	RC-118-97	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Cesium 134	13967-70-9	U		0.136		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7352-003 J18K54

DATA SHEET

SDG	7352	Client/Case no	Hanford	SDG K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904019-03	Client sample id	J18K54		
Dept sample id	7352-003	Location/Matrix	300SA-WF3,LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 10:05	36 g	
% solids	100.0	Custody/SAF No	RC-118-98	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-2.32	3.8	6.88	400	U	H
Carbon 14	14762-75-5	0.395	2.6	4.48	50.0	U	C
Total Strontium	SR-RAD	-0.049	0.11	0.235	1.00	U	SR
Technetium 99	14133-76-7	0.022	0.20	0.359	15.0	U	TC
Thorium 228	14274-82-9	-0.033	0.13	0.316	1.00	U	TH
Thorium 230	14269-63-7	0.492	0.26	0.251	1.00	B	TH
Thorium 232	TH-232	0.033	0.066	0.251	1.00	U	TH
Uranium 233/234	U-233/234	0	0.058	0.222	1.00	U	U
Uranium 235	15117-96-1	0	0.070	0.269	1.00	U	U
Uranium 238	U-238	0.029	0.058	0.222	1.00	U	U
Plutonium 238	13981-16-3	0.006	0.034	0.069	1.00	U	PU
Plutonium 239/240	PU-239/240	0.011	0.022	0.053	1.00	U	PU
Potassium 40	13966-00-2	U		4.06		U	GAM
Cobalt 60	10198-40-0	U		0.159	0.050	U	GAM
Cesium 137	10045-97-3	U		0.145	0.100	U	GAM
Radium 226	13982-63-3	U		0.306	0.100	U	GAM
Radium 228	15262-20-1	U		0.667	0.200	U	GAM
Europium 152	14683-23-9	U		0.394	0.100	U	GAM
Europium 154	15585-10-1	U		0.468	0.100	U	GAM
Europium 155	14391-16-3	U		0.270	0.100	U	GAM
Thorium 228	14274-82-9	U		0.215		U	GAM
Thorium 232	TH-232	U		0.667		U	GAM
Uranium 235	15117-96-1	U		0.684		U	GAM
Uranium 238	U-238	U		17.3		U	GAM
Americium 241	14596-10-2	U		0.116		U	GAM
Beryllium 7	13966-02-4	U		1.19		U	GAM
Ruthenium 106	13967-48-1	U		1.23		U	GAM
Antimony 125	14234-35-6	U		0.323		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7352-003 J18K54

DATA SHEET, cont

SDG	7352	Client/Case no	Hanford	SDG K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00	
Lab sample id	R904019-03	Client sample id	J18K54	
Dept sample id	7352-003	Location/Matrix	300SA-WF3,LIV/KID	SOLID
Received	04/03/09	Collected/Weight	04/01/09 10:05	36 g
% solids	100.0	Custody/SAF No	RC-118-98	RC-118

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Cesium 134	13967-70-9	U		0.198		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7352-004 J18K55

DATA SHEET

SDG	7352	Client/Case no	Hanford SDG K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00
Lab sample id	R904019-04	Client sample id	J18K55
Dept sample id	7352-004	Location/Matrix	300SA-WF4,LIV/KID SOLID
Received	04/03/09	Collected/Weight	04/01/09 10:10 46 g
% solids	100.0	Custody/SAF No	RC-118-99 RC-118

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-0.609	3.9	6.88	400	U	H
Carbon 14	14762-75-5	0.720	2.8	4.77	50.0	U	C
Total Strontium	SR-RAD	-0.085	0.10	0.234	1.00	U	SR
Technetium 99	14133-76-7	0.033	0.21	0.354	15.0	U	TC
Thorium 228	14274-82-9	0	0.22	0.532	1.00	U	TH
Thorium 230	14269-63-7	0.774	0.45	0.423	1.00		TH
Thorium 232	TH-232	0	0.11	0.423	1.00	U	TH
Uranium 233/234	U-233/234	0.033	0.065	0.249	1.00	U	U
Uranium 235	15117-96-1	0	0.079	0.302	1.00	U	U
Uranium 238	U-238	0	0.065	0.249	1.00	U	U
Plutonium 238	13981-16-3	-0.012	0.046	0.092	1.00	U	PU
Plutonium 239/240	PU-239/240	-0.004	0.008	0.029	1.00	U	PU
Potassium 40	13966-00-2	3.15	0.68	0.403			GAM
Cobalt 60	10198-40-0	U		0.051	0.050	U	GAM
Cesium 137	10045-97-3	0.358	0.053	0.052	0.100		GAM
Radium 226	13982-63-3	U		0.099	0.100	U	GAM
Radium 228	15262-20-1	U		0.220	0.200	U	GAM
Europium 152	14683-23-9	U		0.135	0.100	U	GAM
Europium 154	15585-10-1	U		0.140	0.100	U	GAM
Europium 155	14391-16-3	U		0.109	0.100	U	GAM
Thorium 228	14274-82-9	U		0.069		U	GAM
Thorium 232	TH-232	U		0.220		U	GAM
Uranium 235	15117-96-1	U		0.247		U	GAM
Uranium 238	U-238	U		6.28		U	GAM
Americium 241	14596-10-2	U		0.225		U	GAM
Beryllium 7	13966-02-4	U		0.449		U	GAM
Ruthenium 106	13967-48-1	U		0.416		U	GAM
Antimony 125	14234-35-6	U		0.120		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7352-004 J18K55

DATA SHEET, cont

SDG	7352	Client/Case no	Hanford	SDG_K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904019-04	Client sample id	J18K55		
Dept sample id	7352-004	Location/Matrix	300SA-WF4,LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 10:10	46 g	
% solids	100.0	Custody/SAF No	RC-118-99	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Cesium 134	13967-70-9	U		0.059		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7352-005 J18K56

DATA SHEET

SDG	7352	Client/Case no	Hanford	SDG K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904019-05	Client sample id	J18K56		
Dept sample id	7352-005	Location/Matrix	300SA-WF5,LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 10:18	21 g	
% solids	100.0	Custody/SAF No	RC-118-100	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	1.78	4.0	6.71	400	U	H
Carbon 14	14762-75-5	0.607	2.6	4.38	50.0	U	C
Total Strontium	SR-RAD	-0.094	0.11	0.251	1.00	U	SR
Technetium 99	14133-76-7	0.147	0.25	0.359	15.0	U	TC
Thorium 228	14274-82-9	0.084	0.17	0.321	1.00	U	TH
Thorium 230	14269-63-7	0.918	0.42	0.319	1.00		TH
Thorium 232	TH-232	0	0.083	0.319	1.00	U	TH
Uranium 233/234	U-233/234	-0.035	0.070	0.269	1.00	U	U
Uranium 235	15117-96-1	0	0.085	0.325	1.00	U	U
Uranium 238	U-238	0.070	0.071	0.269	1.00	U	U
Plutonium 238	13981-16-3	0.004	0.043	0.088	1.00	U	PU
Plutonium 239/240	PU-239/240	-0.009	0.017	0.048	1.00	U	PU
Potassium 40	13966-00-2	U		5.05		U	GAM
Cobalt 60	10198-40-0	U		0.178	0.050	U	GAM
Cesium 137	10045-97-3	U		0.164	0.100	U	GAM
Radium 226	13982-63-3	U		0.359	0.100	U	GAM
Radium 228	15262-20-1	U		0.824	0.200	U	GAM
Europium 152	14683-23-9	U		0.408	0.100	U	GAM
Europium 154	15585-10-1	U		0.551	0.100	U	GAM
Europium 155	14391-16-3	U		0.276	0.100	U	GAM
Thorium 228	14274-82-9	U		0.199		U	GAM
Thorium 232	TH-232	U		0.824		U	GAM
Uranium 235	15117-96-1	U		0.675		U	GAM
Uranium 238	U-238	U		20.4		U	GAM
Americium 241	14596-10-2	U		0.317		U	GAM
Beryllium 7	13966-02-4	U		1.30		U	GAM
Ruthenium 106	13967-48-1	U		1.29		U	GAM
Antimony 125	14234-35-6	U		0.359		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

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SAMPLE DELIVERY GROUP K1579

7352-005 J18K56

DATA SHEET, cont

SDG	7352	Client/Case no	Hanford	SDG K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904019-05	Client sample id	J18K56		
Dept sample id	7352-005	Location/Matrix	300SA-WF5,LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 10:18	21 g	
% solids	100.0	Custody/SAF No	RC-118-100	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Cesium 134	13967-70-9	U		0.220		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7352-006 J18KD3

DATA SHEET

SDG	7352	Client/Case no	Hanford	SDG_K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904019-06	Client sample id	J18KD3		
Dept sample id	7352-006	Location/Matrix	LWSA-WF1,LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 08:55	60 g	
% solids	100.0	Custody/SAF No	RC-118-131	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	0.248	4.0	6.99	400	U	H
Carbon 14	14762-75-5	0.667	2.8	4.81	50.0	U	C
Total Strontium	SR-RAD	-0.025	0.12	0.244	1.00	U	SR
Technetium 99	14133-76-7	0.098	0.25	0.402	15.0	U	TC
Thorium 228	14274-82-9	0	0.078	0.299	1.00	U	TH
Thorium 230	14269-63-7	0.544	0.31	0.298	1.00		TH
Thorium 232	TH-232	0	0.078	0.298	1.00	U	TH
Uranium 233/234	U-233/234	0.032	0.063	0.241	1.00	U	U
Uranium 235	15117-96-1	0	0.076	0.292	1.00	U	U
Uranium 238	U-238	0	0.063	0.241	1.00	U	U
Plutonium 238	13981-16-3	0.045	0.12	0.203	1.00	U	PU
Plutonium 239/240	PU-239/240	-0.015	0.030	0.116	1.00	U	PU
Potassium 40	13966-00-2	2.62	0.82	0.684			GAM
Cobalt 60	10198-40-0	U		0.068	0.050	U	GAM
Cesium 137	10045-97-3	U		0.064	0.100	U	GAM
Radium 226	13982-63-3	U		0.123	0.100	U	GAM
Radium 228	15262-20-1	U		0.263	0.200	U	GAM
Europium 152	14683-23-9	U		0.150	0.100	U	GAM
Europium 154	15585-10-1	U		0.194	0.100	U	GAM
Europium 155	14391-16-3	U		0.110	0.100	U	GAM
Thorium 228	14274-82-9	U		0.086		U	GAM
Thorium 232	TH-232	U		0.263		U	GAM
Uranium 235	15117-96-1	U		0.260		U	GAM
Uranium 238	U-238	U		7.46		U	GAM
Americium 241	14596-10-2	U		0.054		U	GAM
Beryllium 7	13966-02-4	U		0.470		U	GAM
Ruthenium 106	13967-48-1	U		0.518		U	GAM
Antimony 125	14234-35-6	U		0.142		U	GAM

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Protocol	Hanford1
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SAMPLE DELIVERY GROUP K1579

7352-006 J18KD3

DATA SHEET, cont

SDG	7352	Client/Case no	Hanford	SDG_K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00	
Lab sample id	R904019-06	Client sample id	J18KD3	
Dept sample id	7352-006	Location/Matrix	LWSA-WF1,LIV/KID	SOLID
Received	04/03/09	Collected/Weight	04/01/09 08:55	60 g
% solids	100.0	Custody/SAF No	RC-118-131	RC-118

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Cesium 134	13967-70-9	U		0.079		U	GAM

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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7352-007 J18KD4

DATA SHEET

SDG	7352	Client/Case no	Hanford	SDG_K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904019-07	Client sample id	J18KD4		
Dept sample id	7352-007	Location/Matrix	LWSA-WF2,LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 09:03	50 g	
% solids	100.0	Custody/SAF No	RC-118-132	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	2.13	4.2	7.08	400	U	H
Carbon 14	14762-75-5	2.61	2.8	4.61	50.0	U	C
Total Strontium	SR-RAD	-0.016	0.10	0.218	1.00	U	SR
Technetium 99	14133-76-7	0.071	0.19	0.379	15.0	U	TC
Thorium 228	14274-82-9	0.136	0.18	0.348	1.00	U	TH
Thorium 230	14269-63-7	1.04	0.46	0.346	1.00		TH
Thorium 232	TH-232	0	0.090	0.346	1.00	U	TH
Uranium 233/234	U-233/234	0	0.080	0.306	1.00	U	U
Uranium 235	15117-96-1	0	0.097	0.370	1.00	U	U
Uranium 238	U-238	0	0.080	0.306	1.00	U	U
Plutonium 238	13981-16-3	0.024	0.061	0.107	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.012	0.046	1.00	U	PU
Potassium 40	13966-00-2	U		13.2		U	GAM
Cobalt 60	10198-40-0	U		0.079	0.050	U	GAM
Cesium 137	10045-97-3	U		0.094	0.100	U	GAM
Radium 226	13982-63-3	U		0.199	0.100	U	GAM
Radium 228	15262-20-1	U		0.409	0.200	U	GAM
Europium 152	14683-23-9	U		0.242	0.100	U	GAM
Europium 154	15585-10-1	U		0.236	0.100	U	GAM
Europium 155	14391-16-3	U		0.205	0.100	U	GAM
Thorium 228	14274-82-9	U		0.322		U	GAM
Thorium 232	TH-232	U		0.409		U	GAM
Uranium 235	15117-96-1	U		0.449		U	GAM
Uranium 238	U-238	U		9.47		U	GAM
Americium 241	14596-10-2	U		0.312		U	GAM
Beryllium 7	13966-02-4	U		0.717		U	GAM
Ruthenium 106	13967-48-1	U		0.728		U	GAM
Antimony 125	14234-35-6	U		0.198		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

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SAMPLE DELIVERY GROUP K1579

7352-007 J18KD4

DATA SHEET, cont

SDG	7352	Client/Case no	Hanford		SDG_K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904019-07	Client sample id	J18KD4		
Dept sample id	7352-007	Location/Matrix	LWSA-WF2,LIV/KID		SOLID
Received	04/03/09	Collected/Weight	04/01/09 09:03	50 g	
% solids	100.0	Custody/SAF No	RC-118-132	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Cesium 134	13967-70-9	U		0.105		U	GAM

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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7352-008 J18KD5

DATA SHEET

SDG	7352	Client/Case no	Hanford	SDG K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904019-08	Client sample id	J18KD5		
Dept sample id	7352-008	Location/Matrix	LWSA-WF3,LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 09:12	42 g	
% solids	100.0	Custody/SAF No	RC-118-133	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	2.33	3.7	6.26	400	U	H
Carbon 14	14762-75-5	0.272	2.5	4.32	50.0	U	C
Total Strontium	SR-RAD	-0.003	0.11	0.230	1.00	U	SR
Technetium 99	14133-76-7	0.047	0.19	0.356	15.0	U	TC
Thorium 228	14274-82-9	0	0.21	0.436	1.00	U	TH
Thorium 230	14269-63-7	0.423	0.28	0.270	1.00	B	TH
Thorium 232	TH-232	0.035	0.071	0.270	1.00	U	TH
Uranium 233/234	U-233/234	0.034	0.14	0.259	1.00	U	U
Uranium 235	15117-96-1	0	0.082	0.314	1.00	U	U
Uranium 238	U-238	0.034	0.068	0.259	1.00	U	U
Plutonium 238	13981-16-3	-0.023	0.034	0.087	1.00	U	PU
Plutonium 239/240	PU-239/240	0.006	0.023	0.043	1.00	U	PU
Potassium 40	13966-00-2	2.44	0.84	0.698			GAM
Cobalt 60	10198-40-0	U		0.073	0.050	U	GAM
Cesium 137	10045-97-3	U		0.072	0.100	U	GAM
Radium 226	13982-63-3	U		0.135	0.100	U	GAM
Radium 228	15262-20-1	U		0.259	0.200	U	GAM
Europium 152	14683-23-9	U		0.150	0.100	U	GAM
Europium 154	15585-10-1	U		0.207	0.100	U	GAM
Europium 155	14391-16-3	U		0.116	0.100	U	GAM
Thorium 228	14274-82-9	U		0.090		U	GAM
Thorium 232	TH-232	U		0.259		U	GAM
Uranium 235	15117-96-1	U		0.266		U	GAM
Uranium 238	U-238	U		8.81		U	GAM
Americium 241	14596-10-2	U		0.058		U	GAM
Beryllium 7	13966-02-4	U		0.500		U	GAM
Ruthenium 106	13967-48-1	U		0.534		U	GAM
Antimony 125	14234-35-6	U		0.149		U	GAM

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SAMPLE DELIVERY GROUP K1579

7352-008 J18KD5

DATA SHEET, cont

SDG	7352	Client/Case no	Hanford		SDG_K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904019-08	Client sample id	J18KD5		
Dept sample id	7352-008	Location/Matrix	LWSA-WF3,LIV/KID		SOLID
Received	04/03/09	Collected/Weight	04/01/09 09:12	42 g	
% solids	100.0	Custody/SAF No	RC-118-133	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Cesium 134	13967-70-9	U		0.087		U	GAM

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SAMPLE DELIVERY GROUP K1579

7352-009 J18KD6

DATA SHEET

SDG	7352	Client/Case no	Hanford	SDG K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904019-09	Client sample id	J18KD6		
Dept sample id	7352-009	Location/Matrix	LWSA-WF4,LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 09:17	41 g	
% solids	100.0	Custody/SAF No	RC-118-134	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	0.787	3.7	6.34	400	U	H
Carbon 14	14762-75-5	1.38	2.6	4.40	50.0	U	C
Total Strontium	SR-RAD	0.206	0.13	0.227	1.00	U	SR
Technetium 99	14133-76-7	0.095	0.23	0.375	15.0	U	TC
Thorium 228	14274-82-9	0	0.19	0.512	1.00	U	TH
Thorium 230	14269-63-7	0.276	0.28	0.353	1.00	U	TH
Thorium 232	TH-232	0.046	0.092	0.353	1.00	U	TH
Uranium 233/234	U-233/234	0.053	0.053	0.201	1.00	U	U
Uranium 235	15117-96-1	0	0.064	0.243	1.00	U	U
Uranium 238	U-238	0.026	0.053	0.201	1.00	U	U
Plutonium 238	13981-16-3	0.066	0.13	0.318	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.066	0.254	1.00	U	PU
Potassium 40	13966-00-2	3.11	1.1	0.744			GAM
Cobalt 60	10198-40-0	U		0.081	0.050	U	GAM
Cesium 137	10045-97-3	U		0.070	0.100	U	GAM
Radium 226	13982-63-3	U		0.124	0.100	U	GAM
Radium 228	15262-20-1	U		0.255	0.200	U	GAM
Europium 152	14683-23-9	U		0.161	0.100	U	GAM
Europium 154	15585-10-1	U		0.206	0.100	U	GAM
Europium 155	14391-16-3	U		0.099	0.100	U	GAM
Thorium 228	14274-82-9	U		0.094		U	GAM
Thorium 232	TH-232	U		0.255		U	GAM
Uranium 235	15117-96-1	U		0.252		U	GAM
Uranium 238	U-238	U		8.01		U	GAM
Americium 241	14596-10-2	U		0.069		U	GAM
Beryllium 7	13966-02-4	U		0.525		U	GAM
Ruthenium 106	13967-48-1	U		0.604		U	GAM
Antimony 125	14234-35-6	U		0.144		U	GAM

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SAMPLE DELIVERY GROUP K1579

7352-009 J18KD6

DATA SHEET, cont

SDG	7352	Client/Case no	Hanford	SDG K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904019-09	Client sample id	J18KD6		
Dept sample id	7352-009	Location/Matrix	LWSA-WF4,LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 09:17	41 g	
% solids	100.0	Custody/SAF No	RC-118-134	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Cesium 134	13967-70-9	U		0.075		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7352-010 J18KD7

DATA SHEET

SDG	7352	Client/Case no	Hanford	SDG K1579	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R904019-10	Client sample id	J18KD7		
Dept sample id	7352-010	Location/Matrix	LWSA-WF5,LIV/KID	SOLID	
Received	04/03/09	Collected/Weight	04/01/09 09:25	62 g	
% solids	100.0	Custody/SAF No	RC-118-135	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-0.764	4.1	7.18	400	U	H
Carbon 14	14762-75-5	0.750	2.9	4.96	50.0	U	C
Total Strontium	SR-RAD	-0.049	0.094	0.212	1.00	U	SR
Technetium 99	14133-76-7	0.241	0.22	0.355	15.0	U	TC
Thorium 228	14274-82-9	-0.056	0.11	0.425	1.00	U	TH
Thorium 230	14269-63-7	0.552	0.34	0.422	1.00		TH
Thorium 232	TH-232	0	0.11	0.422	1.00	U	TH
Uranium 233/234	U-233/234	0.051	0.051	0.193	1.00	U	U
Uranium 235	15117-96-1	0	0.061	0.234	1.00	U	U
Uranium 238	U-238	0.076	0.10	0.193	1.00	U	U
Plutonium 238	13981-16-3	0.019	0.048	0.091	1.00	U	PU
Plutonium 239/240	PU-239/240	0.005	0.019	0.036	1.00	U	PU
Potassium 40	13966-00-2	2.92	0.82	0.577			GAM
Cobalt 60	10198-40-0	U		0.064	0.050	U	GAM
Cesium 137	10045-97-3	U		0.056	0.100	U	GAM
Radium 226	13982-63-3	U		0.117	0.100	U	GAM
Radium 228	15262-20-1	U		0.271	0.200	U	GAM
Europium 152	14683-23-9	U		0.147	0.100	U	GAM
Europium 154	15585-10-1	U		0.184	0.100	U	GAM
Europium 155	14391-16-3	U		0.101	0.100	U	GAM
Thorium 228	14274-82-9	U		0.082		U	GAM
Thorium 232	TH-232	U		0.271		U	GAM
Uranium 235	15117-96-1	U		0.255		U	GAM
Uranium 238	U-238	U		6.31		U	GAM
Americium 241	14596-10-2	U		0.053		U	GAM
Beryllium 7	13966-02-4	U		0.487		U	GAM
Ruthenium 106	13967-48-1	U		0.500		U	GAM
Antimony 125	14234-35-6	U		0.131		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

7352-010 J18KD7

DATA SHEET, cont

SDG	7352	Client/Case no	Hanford	SDG_K1579
Contact	N. Joseph Verville	Contract	No. S00W235A00	
Lab sample id	R904019-10	Client sample id	J18KD7	
Dept sample id	7352-010	Location/Matrix	LWSA-WF5,LIV/KID	SOLID
Received	04/03/09	Collected/Weight	04/01/09 09:25	62 g
% solids	100.0	Custody/SAF No	RC-118-135	RC-118

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Cesium 134	13967-70-9	U		0.070		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissues

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test PU Matrix SOLID
SDG 7352
Contact N. Joseph Verville

LAB METHOD SUMMARY

PLUTONIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

.ESULTS

ıB AMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Plutonium 238		Plutonium 239/240	
:eparation batch 7200-089								
904019-01			7352-001	J18K52	U		U	
904019-02			7352-002	J18K53	U		U	
904019-03			7352-003	J18K54	U		U	
904019-04			7352-004	J18K55	U		U	
904019-05			7352-005	J18K56	U		U	
904019-06			7352-006	J18KD3	U		U	
904019-07			7352-007	J18KD4	U		U	
904019-08			7352-008	J18KD5	U		U	
904019-09			7352-009	J18KD6	U		U	
904019-10			7352-010	J18KD7	U		U	
904019-11			7352-011	Lab Control Sample	ok		ok	
904019-12			7352-012	Method Blank	U		U	
904019-13			7352-013	Duplicate (R904019-01)	-	U	-	U
ominal values and limits from method				RDLs (pCi/g)	1.00		1.00	
olumbiaRiverComp.ofRCBRA-Tissues								

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test PU Matrix SOLID
SDG 7352
Contact N. Joseph Verville

LAB METHOD SUMMARY

PLUTONIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ETHOD PERFORMANCE

ıB AMPLE 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
:eparation batch 7200-089			2σ prep error 8.0 % Reference Lab Notebook No. 7200 pg.089													
)04019-01			J18K52	0.134	0.500			44		753			43	05/14/09	05/14	SS-055
)04019-02			J18K53	0.086	0.500			56		754			43	05/14/09	05/14	SS-057
)04019-03			J18K54	0.069	0.500			63		754			43	05/14/09	05/14	SS-058
)04019-04			J18K55	0.092	0.500			82		752			43	05/14/09	05/14	SS-061
)04019-05			J18K56	0.088	0.500			72		753			43	05/14/09	05/14	SS-062
)04019-06			J18KD3	0.203	0.500			30		750			43	05/14/09	05/14	SS-064
)04019-07			J18KD4	0.107	0.500			53		750			43	05/14/09	05/14	SS-065
)04019-08			J18KD5	0.087	0.500			68		753			43	05/14/09	05/14	SS-031
)04019-09			J18KD6	0.318	0.500			78		101			44	05/14/09	05/15	SS-040
)04019-10			J18KD7	0.091	0.500			70		753			43	05/14/09	05/14	SS-033
)04019-11			Lab Control Sample	0.098	0.500			61		753				05/14/09	05/14	SS-034
)04019-12			Method Blank	0.142	0.500			77		751				05/14/09	05/14	SS-035
)04019-13			Duplicate (R904019-01)	0.105	0.500			66		751			43	05/14/09	05/14	SS-040
ɔminal values and limits from method				1.00	0.500			20-105		100	100		180			

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 8
	CP-008	Heavy Element Electroplating, rev 13

AVERAGES ± 2 SD	MDA	0.125 ±	0.135
FOR 13 SAMPLES	YIELD	63 ±	29

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test TH Matrix SOLID
SDG 7352
Contact N. Joseph Verville

LAB METHOD SUMMARY

THORIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ESULTS

.B .MPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Thorium 230
:eparation batch 7200-089					
)04019-01			7352-001	J18K52	0.621
)04019-02			7352-002	J18K53	0.464
)04019-03			7352-003	J18K54	0.492
)04019-04			7352-004	J18K55	0.774
)04019-05			7352-005	J18K56	0.918
)04019-06			7352-006	J18KD3	0.544
)04019-07			7352-007	J18KD4	1.04
)04019-08			7352-008	J18KD5	0.423
)04019-09			7352-009	J18KD6	U
)04019-10			7352-010	J18KD7	0.552
)04019-11			7352-011	Lab Control Sample	ok
)04019-12			7352-012	Method Blank	0.292
)04019-13			7352-013	Duplicate (R904019-01)	ok

:ominal values and limits from method RDLs (pCi/g) 1.00
:olumbiaRiverComp.ofRCBRA-Tissues

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test TH Matrix SOLID
SDG 7352
Contact N. Joseph Verville

LAB METHOD SUMMARY

THORIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ETHOD PERFORMANCE

LB AMPLE 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
eparation batch 7200-089			2σ prep error 8.0 %	Reference Lab Notebook No. 7200 pg.089												
904019-01			J18K52	0.426	0.250			66		161			44	05/14/09	05/15	SS-066
904019-02			J18K53	0.396	0.250			84		156			45	05/14/09	05/16	SS-062
904019-03			J18K54	0.316	0.250			88		153			45	05/14/09	05/16	SS-053
904019-04			J18K55	0.532	0.250			65		154			45	05/14/09	05/16	SS-055
904019-05			J18K56	0.321	0.250			84		154			45	05/14/09	05/16	SS-057
904019-06			J18KD3	0.299	0.250			88		154			45	05/14/09	05/16	SS-058
904019-07			J18KD4	0.348	0.250			66		153			45	05/14/09	05/16	SS-059
904019-08			J18KD5	0.436	0.250			88		153			45	05/14/09	05/16	SS-061
904019-09			J18KD6	0.512	0.250			67		153			45	05/14/09	05/16	SS-062
904019-10			J18KD7	0.425	0.250			84		152			47	05/14/09	05/18	SS-064
904019-11			Lab Control Sample	0.300	0.250			81		154				05/14/09	05/16	SS-065
904019-12			Method Blank	0.281	0.250			84		154				05/14/09	05/16	SS-066
904019-13			Duplicate (R904019-01)	0.260	0.250			87		154			45	05/14/09	05/16	SS-042
ominal values and limits from method				1.00	0.250			20-105		150			180			

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 13

AVERAGES ± 2 SD FOR 13 SAMPLES
MDA 0.373 ± 0.176
YIELD 79 ± 19

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test U Matrix SOLID
SDG 7352
Contact N. Joseph Verville

LAB METHOD SUMMARY

URANIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ESULTS

ıB AMPLE 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
:eparation batch 7200-089											
)04019-01			7352-001	J18K52	U	U	U				
)04019-02			7352-002	J18K53	U	U	U				
)04019-03			7352-003	J18K54	U	U	U				
)04019-04			7352-004	J18K55	U	U	U				
)04019-05			7352-005	J18K56	U	U	U				
)04019-06			7352-006	J18KD3	U	U	U				
)04019-07			7352-007	J18KD4	U	U	U				
)04019-08			7352-008	J18KD5	U	U	U				
)04019-09			7352-009	J18KD6	U	U	U				
)04019-10			7352-010	J18KD7	U	U	U				
)04019-11			7352-011	Lab Control Sample	ok	ok	ok				
)04019-12			7352-012	Method Blank	U	U	U				
)04019-13			7352-013	Duplicate (R904019-01)	- U	- U	- U				
ominal values and limits from method olumbiaRiverComp.ofRCBRA-Tissues				RDLs (pCi/g)	1.00	1.00	1.00	100		4	
							Averages				

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test U Matrix SOLID
SDG 7352
Contact N. Joseph Verville

LAB METHOD SUMMARY

URANIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ETHOD PERFORMANCE

JB MPLE 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
:eparation batch 7200-089			2σ prep error 8.0 % Reference Lab Notebook No. 7200 pg.089													
)04019-01			J18K52	0.255	0.500			83		104			47	05/16/09	05/18	SS-036
)04019-02			J18K53	0.186	0.500			78		151			47	05/16/09	05/18	SS-063
)04019-03			J18K54	0.269	0.500			80		101			47	05/16/09	05/18	SS-062
)04019-04			J18K55	0.302	0.500			88		100			47	05/16/09	05/18	SS-031
)04019-05			J18K56	0.325	0.500			77		101			47	05/16/09	05/18	SS-032
)04019-06			J18KD3	0.292	0.500			78		101			47	05/16/09	05/18	SS-033
)04019-07			J18KD4	0.370	0.500			72		101			47	05/16/09	05/18	SS-034
)04019-08			J18KD5	0.314	0.500			85		101			47	05/16/09	05/18	SS-035
)04019-09			J18KD6	0.243	0.500			89		101			47	05/16/09	05/18	SS-036
)04019-10			J18KD7	0.234	0.500			95		102			47	05/16/09	05/18	SS-038
)04019-11			Lab Control Sample	0.666	0.500			72		100				05/16/09	05/18	SS-059
)04019-12			Method Blank	0.243	0.500			83		101				05/16/09	05/18	SS-060
)04019-13			Duplicate (R904019-01)	0.254	0.500			85		101			47	05/16/09	05/18	SS-061
)minal values and limits from method				1.00	0.500			20-105		100	100		180			

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 13

AVERAGES ± 2 SD	MDA	0.304	±	0.237
FOR 13 SAMPLES	YIELD	82	±	13

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test SR Matrix SOLID
SDG 7352
Contact N. Joseph Verville

LAB METHOD SUMMARY

TOTAL STRONTIUM IN SOLIDS

BETA COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ESULTS

ıB ıMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Total Strontium
:eparation batch 7200-089					
)04019-01			7352-001	J18K52	U
)04019-02			7352-002	J18K53	U
)04019-03			7352-003	J18K54	U
)04019-04			7352-004	J18K55	U
)04019-05			7352-005	J18K56	U
)04019-06			7352-006	J18KD3	U
)04019-07			7352-007	J18KD4	U
)04019-08			7352-008	J18KD5	U
)04019-09			7352-009	J18KD6	U
)04019-10			7352-010	J18KD7	U
)04019-11			7352-011	Lab Control Sample	ok
)04019-12			7352-012	Method Blank	U
)04019-13			7352-013	Duplicate (R904019-01)	- U

ɔminal values and limits from method RDLs (pCi/g) 1.00
ɔlumbiaRiverComp.ofRCBRA-Tissues

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test SR Matrix SOLID
SDG 7352
Contact N. Joseph Verville

LAB METHOD SUMMARY

TOTAL STRONTIUM IN SOLIDS

BETA COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ETHOD PERFORMANCE

AB AMPLE 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
:eparation batch 7200-089			2σ prep error 10.4 % Reference Lab Notebook No. 7200 pg.089													
904019-01			J18K52	0.306	1.03			80		100			34	05/05/09	05/05	GRB-231
904019-02			J18K53	0.230	1.03			84		100			34	05/05/09	05/05	GRB-222
904019-03			J18K54	0.235	1.01			88		100			34	05/05/09	05/05	GRB-223
904019-04			J18K55	0.234	1.02			87		100			34	05/05/09	05/05	GRB-224
904019-05			J18K56	0.251	1.03			86		100			34	05/05/09	05/05	GRB-225
904019-06			J18KD3	0.244	1.03			87		100			34	05/05/09	05/05	GRB-227
904019-07			J18KD4	0.218	1.03			91		100			34	05/05/09	05/05	GRB-228
904019-08			J18KD5	0.230	1.02			95		100			34	05/05/09	05/05	GRB-201
904019-09			J18KD6	0.227	1.00			91		100			34	05/05/09	05/05	GRB-202
904019-10			J18KD7	0.212	1.02			95		100			34	05/05/09	05/05	GRB-203
904019-11			Lab Control Sample	0.217	1.00			91		100				05/05/09	05/05	GRB-230
904019-12			Method Blank	0.223	1.00			93		100				05/05/09	05/05	GRB-221
904019-13			Duplicate (R904019-01)	0.243	1.03			89		100			34	05/05/09	05/05	GRB-231
ominal values and limits from method				1.00	1.00			30-105		100			180			

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 FOR 13 SAMPLES
MDA 0.236 ± 0.048
YIELD 89 ± 9

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test TC Matrix SOLID
SDG 7352
Contact N. Joseph Verville

LAB METHOD SUMMARY

TECHNETIUM 99 IN SOLIDS

BETA COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ESULTS

ıB AMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Technetium 99	
:eparation batch 7200-089						
›04019-01			7352-001	J18K52	U	
›04019-02			7352-002	J18K53	U	
›04019-03			7352-003	J18K54	U	
›04019-04			7352-004	J18K55	U	
›04019-05			7352-005	J18K56	U	
›04019-06			7352-006	J18KD3	U	
›04019-07			7352-007	J18KD4	U	
›04019-08			7352-008	J18KD5	U	
›04019-09			7352-009	J18KD6	U	
›04019-10			7352-010	J18KD7	U	
›04019-11			7352-011	Lab Control Sample	ok	
904019-12			7352-012	Method Blank	U	
904019-13			7352-013	Duplicate (R904019-01)	-	U

ominal values and limits from method RDLs (pCi/g) 15.0
olumbiaRiverComp.ofRCBRA-Tissues

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test TC Matrix SOLID
SDG 7352
Contact N. Joseph Verville

LAB METHOD SUMMARY

TECHNETIUM 99 IN SOLIDS

BETA COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ETHOD PERFORMANCE

AB AMPLE 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
:eparation batch 7200-089			2σ prep error 13.2 % Reference Lab Notebook No. 7200 pg.089													
)04019-01			J18K52	0.395	1.00			92		100			41	05/05/09	05/12	GRB-221
)04019-02			J18K53	0.384	1.00			90		100			41	05/05/09	05/12	GRB-222
)04019-03			J18K54	0.359	1.00			96		100			37	05/05/09	05/08	GRB-222
)04019-04			J18K55	0.354	1.00			99		100			38	05/05/09	05/09	GRB-228
)04019-05			J18K56	0.359	1.04			95		100			37	05/05/09	05/08	GRB-224
)04019-06			J18KD3	0.402	1.01			93		100			38	05/05/09	05/09	GRB-207
)04019-07			J18KD4	0.379	1.04			94		100			38	05/05/09	05/09	GRB-217
)04019-08			J18KD5	0.356	1.04			94		100			37	05/05/09	05/08	GRB-228
)04019-09			J18KD6	0.375	1.00			96		100			38	05/05/09	05/09	GRB-221
)04019-10			J18KD7	0.355	1.04			93		100			38	05/05/09	05/09	GRB-222
)04019-11			Lab Control Sample	0.384	1.00			91		100				05/05/09	05/08	GRB-203
)04019-12			Method Blank	0.368	1.00			97		100				05/05/09	05/09	GRB-223
)04019-13			Duplicate (R904019-01)	0.374	1.00			95		100			38	05/05/09	05/09	GRB-224
ɔminal values and limits from method				15.0	1.00			20-105		50			180			

PROCEDURES	REFERENCE	TC99_TR_SEP_GPC
	SPP-062	Sample Aliquoting, rev 1
	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 13

AVERAGES ± 2 SD FOR 13 SAMPLES
MDA 0.373 ± 0.032
YIELD 94 ± 5

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test GAM Matrix SOLID
SDG 7352
Contact N. Joseph Verville

LAB METHOD SUMMARY

GAMMA SCAN

GAMMA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ESULTS

AB AMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Cobalt 60	Cesium 137
:eparation batch 7200-089						
904019-01			7352-001	J18K52	U	U
904019-02			7352-002	J18K53	U	U
904019-03			7352-003	J18K54	U	U
904019-04			7352-004	J18K55	U	0.358
904019-05			7352-005	J18K56	U	U
904019-06			7352-006	J18KD3	U	U
904019-07			7352-007	J18KD4	U	U
904019-08			7352-008	J18KD5	U	U
904019-09			7352-009	J18KD6	U	U
904019-10			7352-010	J18KD7	U	U
904019-11			7352-011	Lab Control Sample	ok	HIGH
904019-12			7352-012	Method Blank	U	U
904019-13			7352-013	Duplicate (R904019-01)	- U	- U
ominal values and limits from method olumbiaRiverComp.ofRCBRA-Tissues				RDLs (pCi/g)	0.050	0.100

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test GAM Matrix SOLID
SDG 7352
Contact N. Joseph Verville

LAB METHOD SUMMARY

GAMMA SCAN

GAMMA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ETHOD PERFORMANCE

ıB ıMPLE 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
:eparation batch 7200-089			2σ prep error 7.0 %	Reference Lab Notebook No. 7200 pg.089												
›04019-01			J18K52	18.4	50.9					431			14	04/14/09	04/15	PD,07,00
›04019-02			J18K53	30.4	44.9					431			14	04/14/09	04/15	PD,08,00
›04019-03			J18K54	37.5	35.7					610			15	04/14/09	04/16	PD,06,00
›04019-04			J18K55	11.8	46.5					1007			16	04/14/09	04/17	PD,05,00
›04019-05			J18K56	38.5	21.0					609			15	04/14/09	04/16	PD,04,00
›04019-06			J18KD3	16.1	51.7					479			16	04/14/09	04/17	PD,01,00
›04019-07			J18KD4	22.7	49.6					609			15	04/14/09	04/16	PD,08,00
›04019-08			J18KD5	18.5	41.9					608			15	04/14/09	04/16	PD,01,00
›04019-09			J18KD6	17.4	41.1					609			15	04/14/09	04/16	PD,07,00
›04019-10			J18KD7	14.8	52.6					479			16	04/14/09	04/17	PD,07,00
904019-11			Lab Control Sample	0.391	20.0					228				04/14/09	04/29	PD,07,00
904019-12			Method Blank	32.7	20.0					1015				04/14/09	04/27	PD,04,00
904019-13			Duplicate (R904019-01)	12.7	50.9					890			19	04/14/09	04/20	PD,07,00
ominal values and limits from method				0.050	20.0					100			180			

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

AVERAGES ± 2 SD FOR 13 SAMPLES
MDA 20.9 ± 22.2
YIELD ____ ± ____

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test C Matrix SOLID
SDG 7352
Contact N. Joseph Verville

LAB METHOD SUMMARY

CARBON 14 IN SOLIDS

LIQUID SCINTILLATION COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ESULTS

AB AMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Carbon 14	
:eparation batch 7200-089						
)04019-01			7352-001	J18K52	U	
)04019-02			7352-002	J18K53	U	
)04019-03			7352-003	J18K54	U	
)04019-04			7352-004	J18K55	U	
)04019-05			7352-005	J18K56	U	
)04019-06			7352-006	J18KD3	U	
)04019-07			7352-007	J18KD4	U	
)04019-08			7352-008	J18KD5	U	
)04019-09			7352-009	J18KD6	U	
)04019-10			7352-010	J18KD7	U	
)04019-11			7352-011	Lab Control Sample	ok	
)04019-12			7352-012	Method Blank	U	
)04019-13			7352-013	Duplicate (R904019-01)	-	U

:ominal values and limits from method RDLs (pCi/g) 50.0
olumbiaRiverComp.ofRCBRA-Tissues

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test C Matrix SOLID
SDG 7352
Contact N. Joseph Verville

LAB METHOD SUMMARY

CARBON 14 IN SOLIDS

LIQUID SCINTILLATION COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ETHOD PERFORMANCE

JB AMPLE 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
:eparation batch 7200-089			2σ prep error 10.0 % Reference Lab Notebook No. 7200 pg.089													
)04019-01			J18K52	4.88	0.225			100		50			54	05/22/09	05/25	LSC-005
)04019-02			J18K53	4.70	0.233			100		50			54	05/22/09	05/25	LSC-005
)04019-03			J18K54	4.48	0.247			100		50			54	05/22/09	05/25	LSC-005
)04019-04			J18K55	4.77	0.230			100		50			54	05/22/09	05/25	LSC-005
)04019-05			J18K56	4.38	0.250			100		50			54	05/22/09	05/25	LSC-005
)04019-06			J18KD3	4.81	0.228			100		50			54	05/22/09	05/25	LSC-005
)04019-07			J18KD4	4.61	0.238			100		50			54	05/22/09	05/25	LSC-005
)04019-08			J18KD5	4.32	0.254			100		50			54	05/22/09	05/25	LSC-005
)04019-09			J18KD6	4.40	0.250			100		50			54	05/22/09	05/25	LSC-005
)04019-10			J18KD7	4.96	0.222			100		50			54	05/22/09	05/25	LSC-005
)04019-11			Lab Control Sample	17.2	0.220			100		4				05/22/09	05/26	LSC-005
)04019-12			Method Blank	5.20	0.220			100		50				05/22/09	05/25	LSC-005
)04019-13			Duplicate (R904019-01)	4.61	0.250			100		50			54	05/22/09	05/25	LSC-005
ominal values and limits from method				50.0	0.220					10			180			

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

AVERAGES ± 2 SD MDA 5.64 ± 6.96
FOR 13 SAMPLES YIELD 100 ± 0

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test H Matrix SOLID
SDG 7352
Contact N. Joseph Verville

LAB METHOD SUMMARY

TRITIUM IN SOLIDS

LIQUID SCINTILLATION COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ESULTS

AB AMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Tritium	
:eparation batch 7200-089						
)04019-01			7352-001	J18K52	U	
)04019-02			7352-002	J18K53	U	
)04019-03			7352-003	J18K54	U	
)04019-04			7352-004	J18K55	U	
)04019-05			7352-005	J18K56	U	
)04019-06			7352-006	J18KD3	U	
)04019-07			7352-007	J18KD4	U	
)04019-08			7352-008	J18KD5	U	
)04019-09			7352-009	J18KD6	U	
)04019-10			7352-010	J18KD7	U	
)04019-11			7352-011	Lab Control Sample	ok	
)04019-12			7352-012	Method Blank	U	
)04019-13			7352-013	Duplicate (R904019-01)	-	U

ominal values and limits from method RDLs (pCi/g) 400
olumbiaRiverComp.ofRCBRA-Tissues

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

Test H Matrix SOLID
SDG 7352
Contact N. Joseph Verville

LAB METHOD SUMMARY

TRITIUM IN SOLIDS

LIQUID SCINTILLATION COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1579

ETHOD PERFORMANCE

JB AMPLE 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
:eparation batch 7200-089			2σ prep error 10.0 % Reference Lab Notebook No. 7200 pg.089													
)04019-01			J18K52	7.53	0.225			100		50			54	05/22/09	05/25	LSC-005
)04019-02			J18K53	6.86	0.233			100		50			54	05/22/09	05/25	LSC-005
)04019-03			J18K54	6.88	0.247			100		50			54	05/22/09	05/25	LSC-005
)04019-04			J18K55	6.88	0.230			100		50			54	05/22/09	05/25	LSC-005
)04019-05			J18K56	6.71	0.250			100		50			54	05/22/09	05/25	LSC-005
)04019-06			J18KD3	6.99	0.228			100		50			54	05/22/09	05/25	LSC-005
)04019-07			J18KD4	7.08	0.238			100		50			54	05/22/09	05/25	LSC-005
)04019-08			J18KD5	6.26	0.254			100		50			54	05/22/09	05/25	LSC-005
)04019-09			J18KD6	6.34	0.250			100		50			54	05/22/09	05/25	LSC-005
)04019-10			J18KD7	7.18	0.222			100		50			54	05/22/09	05/25	LSC-005
904019-11			Lab Control Sample	7.78	0.220			100		50				05/22/09	05/25	LSC-005
904019-12			Method Blank	7.18	0.220			100		50				05/22/09	05/25	LSC-005
904019-13			Duplicate (R904019-01)	6.41	0.250			100		50			54	05/22/09	05/25	LSC-005
ominal values and limits from method				400	0.220					25			180			

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

AVERAGES ± 2 SD FOR 13 SAMPLES
MDA 6.93 ± 0.887
YIELD 100 ± 0

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/27/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1579

SDG 7352
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1579

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 05/27/09

SDG 7352
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

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 05/27/09

SDG 7352
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1579

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 05/27/09

SDG 7352
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1579

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
Version 3.06
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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 7352
Contact N. Joseph Verville

GUIDE, cont.

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

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 05/27/09

SDG 7352
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1579

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
Version 3.06
Report date 05/27/09

SDG 7352
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1579

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 05/27/09

SDG 7352
Contact N. Joseph Verville

GUIDE, cont.

Client Hanford
Contract No. S00W235A00
Case no SDG_K1579

DUPLICATE

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

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

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

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

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

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 05/27/09

SDG 7352
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1579

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 05/27/09

SDG 7352
Contact N. Joseph Verville

GUIDE, cont.

Client Hanford
Contract No. S00W235A00
Case no SDG K1579

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 05/27/09

SDG 7352
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1579

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 05/27/09

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-118-90

Collector Kevin Cranna	**Company Contact** JOAN KESSNER	**Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH
Price Code ~~9K~~ 9N 4/3/9	**Data Turnaround** 45 Days		
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** 300SA-WF1, LIV/KID K1579 (7352)		**SAF No.** RC-118
Ice Chest No. AFS-04-017	**Field Logbook No.** 1633	**COA** BESCRC6520	**Method of Shipment** FED EX
Shipped To EBERLINE SERVICES, LIONVILLE	**Offsite Property No.** N/A		**Bill of Lading/Air Bill No.** Fdx# 796485004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			

Sample No.	Matrix *	Sample Date	Sample Time									
J18K52	OTHER SOLID	4/1/09	~~1053 hrs~~ 0953 hrs RC 4/1/09	X	X	X	X	X	X	X		

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Cranna	4/1/09 0955	EAS locked storage	4/1/09 0955
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	Fdx# 796485004446	
FED EX			04/07/09 0930

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-97	Page 1 of 1
Collector: Kevin Cranna	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ 9N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WF2, LIV/KID K1579 (7352)	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: Fdx# 796485004446	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage
COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG				
No. of Container(s)	1	0	0	0	0	0	0				
Volume	750g	2g	25g	5g	5g	15g	50g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081				
Sample No. / Matrix * / Sample Date / Sample Time											
J18K53 / OTHER SOLID / 4/1/09 / 1000 hrs	X	X	X	X	X	X	X				

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Kevin Cranna	4/1/09 1002	EAS Locked Storage	4/1/09 1002
Relinquished By/Removed From	EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From	SHANNAN JOHNSON	4/2/09 1100	Received By/Stored In	Fdx# 796485004446
Relinquished By/Removed From	FED EX		Received By/Stored In	NF-MATRIX 4/03/09 0930
Relinquished By/Removed From			Received By/Stored In	
Relinquished By/Removed From			Received By/Stored In	

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-98	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ 9N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WF3, LIV/KID K1579 (7352)		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fdx# 796485004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG				
No. of Container(s)	1	0	0	0	0	0	0				
Volume	750g	2g	25g	5g	5g	15g	50g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081				
Sample No. / Matrix * / Sample Date / Sample Time											
J18K54 / OTHER SOLID / 4/1/09 / 1005	X	X	X	X	X	X	X				

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Cranna	4/1/09 1007	EAS locked storage	4/1/09 1007
EAS LOCKED STORAGE	4/2/09	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	Fdx# 796485004446	
FED EX		LF Beltzman	04/07/09 0970

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-99	Page 1 of 1

Collector: Kevin Cramna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ 9N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WF4, LIV/KID K1579 (7352)		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fdx# 796485004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			

Sample No.	Matrix *	Sample Date	Sample Time										
J18K55	OTHER SOLID	4/1/09	1010 hrs	X	X	X	X	X	X	X			

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By/Removed From: Kevin Cramna	Date/Time: 4/1/09 1013	Received By/Stored In: EAS locked storage	Date/Time: 4/1/09 1013
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 1100 4/2/09
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 1100 4/2/09	Received By/Stored In: Fdx# 796485004446	Date/Time:
Relinquished By/Removed From: FED EX	Date/Time:	Received By/Stored In: RF [illegible]	Date/Time: 04/03/09 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

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09.

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-118-100	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ 9N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WF5, LIV/KID K1579 (7352)		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fdx# 796485004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	nG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			

Sample No.	Matrix *	Sample Date	Sample Time										
J18K56	OTHER SOLID	4/1/09	1018hrs	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Kevin Cranna	4/1/09 1020	Received By/Stored In: EAS locked storage	4/1/09 1020
Relinquished By/Removed From: EAS LOCKED STORAGE	4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	4/2/09 1100	Received By/Stored In: Fdx# 796485004446	
Relinquished By/Removed From: FED EX		Received By/Stored In: RF WATKINS	04/07/09 0930
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-131	Page 1 of 1
Collector: Kevin Cranna	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K 9N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-WF1, LIV/KID; K1579 (7352)	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: Fdx# 796485004446	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG				
No. of Container(s)	1	0	0	0	0	0	0				
Volume	750g	2g	25g	5g	5g	15g	50g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081				
Sample No. / Matrix * / Sample Date / Sample Time											
J18KD3 / OTHER SOLID / 4/1/09 / 0855	X	X	X	X	X	X	X				

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Cranna	4/1/09 0900	EAS locked storage	4/1/09 0900
Shannan Johnson	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
EAS LOCKED STORAGE			
SHANNAN JOHNSON	4/2/09 1100	Fdx# 796485004446	
FED EX		RLF	04/07/09 0930

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-132	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ 9N gr 4/3/9
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-WF2, LIV/KID K1579 (7352)	SAF No.: RC-118	Data Turnaround: 45 Days
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: Fdx# 796485004445	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG				
No. of Container(s)	1	0	0	0	0	0	0				
Volume	750g	2g	25g	5g	5g	15g	50g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081				
Sample No. / Matrix * / Sample Date / Sample Time											
J18KD4 / OTHER SOLID / 4/1/09 / 0903	X	X	X	X	X	X	X				

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Cranna	4/1/09 0903	EAS storage (locked)	4/1/09 0905
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	Fdx# 796485004446	
FED EX		FLF MATHEW KOHAN	04/03/09 0930

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09.

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-118-133	Page 1 of 1
Collector: Kevin Cranna	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ 9N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-WF3, LIV/KID; K 1579 (7352)	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: Fdx# 796485004416	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			

Sample No.	Matrix *	Sample Date	Sample Time										
J18KD5	OTHER SOLID	4/1/09	0912	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Kevin Cranna	4/1/09 0915	Received By/Stored In: EAS locked Storage	4/1/09 0915
Relinquished By/Removed From: EAS LOCKED STORAGE	4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	4/2/09 1100	Received By/Stored In: Fdx# 796485004446	
Relinquished By/Removed From: FED EX		Received By/Stored In: L.F. Hutchinson	04/03/09 0970
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/3/09

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-118-134	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ GN	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-WF4, LIV/KID K1579 (7352)		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fdx# 796485004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
J18KD6	OTHER SOLID	4/1/09	0917	X	X	X	X	X	X	X			

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Cranna	4/1/09 0920	EAS locked storage	4/1/09 0920
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	FDX# 796485004446	
FED EX		RLF-LEKTA, [illegible]	04/03/09 0930

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-135	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ 9N Qn 4/3/09
Data Turnaround: 45 Days			
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-WF5, LIV/KID K 1579(7352)	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: Fdx# 796485004446	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG				
No. of Container(s)	1	0	0	0	0	0	0				
Volume	750g	2g	25g	5g	5g	15g	50g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081				
Sample No.	Matrix *	Sample Date	Sample Time								
J18KD7	OTHER SOLID	4/1/09	0925	X	X	X	X	X	X	X	

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Kevin Cranna	Date/Time: 4/1/09 0930	Received By/Stored In: EAS locked storage	Date/Time: 4/1/09 0930
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 4/2/09 1100	Received By/Stored In: Fdx# 796485004446	Date/Time:
Relinquished By/Removed From: FED EX	Date/Time:	Received By/Stored In: JF. MATTHUTMAN	Date/Time: 04/07/09 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

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

RICHMOND, CA LABORATORY

ICE CHEST RECEIPT LOG

Use one form per shipment. Refer to Thermometer Correction Log for correction factor.

Customer: W. C. HANFORD Date: 04/03/09

Ice chest # or description	AFS 04-017					
*Ice chest scanned for activity?	YES					
Custody seals on ice chest intact?	YES					
Custody seals dated?	YES					
Custody seals signed?	YES					
Thermometer number	6536					
Thermometer: time in	10:00					
Thermometer: time out	11:00					
Thermometer reading	7.5 °C					
Correction factor	+ 0.3 °C					
**Actual temperature	7.8 °C					
Custody seals on samples?	YES					
Custody seals dated?	YES					
Custody seals signed?	YES					

* = If activity indicated, perform wipe test and record alpha; beta/gamma reading in cpm.
** = Record temperature in degrees Celsius.

Technician: [signature]

Comments: NOTE: IN BLUE ICE

"over 55 years of quality nuclear services"

EBERLINE SERVICES

RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

JK 4/3/09

Client: W.C. HANFORD City: RICHLAND State: WA

Date/Time received: 04/03/09 0930 CoC No. RC-118-16,17,18,19,20,56,57,58,59,60,96,97,98,99,100,131,132,133,134,135

Container I.D. No. AFS-04-017 Requested TAT (Days) 45 P.O. Received Yes [ ] No [ ]

INSPECTION

1. Custody seals on shipping container intact? Yes [X] No [ ] N/A [ ]
2. Custody seals on shipping container dated & signed? Yes [X] No [ ] N/A [ ]
3. Custody seals on sample containers intact? Yes [X] No [ ] N/A [ ]
4. Custody seals on sample containers dated & signed? Yes [X] No [ ] N/A [ ]
5. Packing material is: Wet [ ] Dry [X]
6. Number of samples in shipping container: 20 Sample Matrix X SOLID
7. Number of containers per sample: 1 (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:

    split by 10

14. Was P.M. notified of any anomalies? Yes [ ] No [ ] Date ____
15. Inspected by [signature] Date: 04/03/09 Time: 11:00

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

RECEIVED
JUL 2009

21 July 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 #	0906033
SDG #	K1579
SAF #	RC-118
Date Received	06/11/09
# Samples	20
Matrix	OTHER SOLID
Volatiles	
Semivolatiles	
Pest/PCB	X
Glycols	
DRO/KRO/GRO	
GC Alcohols	
Herbicides	
Metals	X
Inorganics	

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

LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

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

RECEIVED
JUL 2009

WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

METALS

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
J18J59	0906033-01	Solid	04/01/2009 11:55	06/11/2009 09:55
J18J60	0906033-02	Solid	04/01/2009 12:00	06/11/2009 09:55
J18J61	0906033-03	Solid	04/01/2009 12:05	06/11/2009 09:55
J18J62	0906033-04	Solid	04/01/2009 12:15	06/11/2009 09:55
J18J63	0906033-05	Solid	04/01/2009 12:20	06/11/2009 09:55
J18K11	0906033-06	Solid	04/01/2009 11:00	06/11/2009 09:55
J18K12	0906033-07	Solid	04/01/2009 11:05	06/11/2009 09:55
J18K13	0906033-08	Solid	04/01/2009 11:12	06/11/2009 09:55
J18K14	0906033-09	Solid	04/01/2009 11:18	06/11/2009 09:55
J18K15	0906033-10	Solid	04/01/2009 11:21	06/11/2009 09:55
J18K52	0906033-11	Solid	04/01/2009 09:53	06/11/2009 09:55
J18K53	0906033-12	Solid	04/01/2009 10:00	06/11/2009 09:55
J18K54	0906033-13	Solid	04/01/2009 10:05	06/11/2009 09:55
J18K55	0906033-14	Solid	04/01/2009 10:10	06/11/2009 09:55
J18K56	0906033-15	Solid	04/01/2009 10:18	06/11/2009 09:55
J18KD3	0906033-16	Solid	04/01/2009 08:55	06/11/2009 09:55
J18KD4	0906033-17	Solid	04/01/2009 09:03	06/11/2009 09:55
J18KD5	0906033-18	Solid	04/01/2009 09:12	06/11/2009 09:55
J18KD6	0906033-19	Solid	04/01/2009 09:17	06/11/2009 09:55
J18KD7	0906033-20	Solid	04/01/2009 09:25	06/11/2009 09:55

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
LVL#: 0906033
SDG/SAF#: K1579/RC-118

W.O.#: 60049-001-001-0001-00
Date Received: 06-11-09

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.

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

1. This narrative covers the analyses of 20 solid samples. The solid samples were reported on a wet weight, 'as-received' basis.

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

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

4. All samples for Mercury analysis were received out of hold. All ICP analyses were performed within the required holding times.

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

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

7. The preparation/method blank for 2 analytes was outside method criteria. {less than the Limit of Quantitation (3-10X the LOD), or samples greater than 20X MB value}.

   a). The MB results for Calcium and Zinc were greater than the Limit of Quantitation (LOQ) {3-10x the (LOD) Limit of Detection} and all samples read less than 20 times the MB concentration. However, no corrective action criteria for MBs were provided in SW846 method 6010B. The sample results were reported herein "uncorrected" for the levels found in the MB.

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

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

9. All Standard Reference Material (SRM) results were within the Prediction Intervals supplied by the manufacturer.

10. The matrix spike (MS) recovery for 1 analyte was outside the 75-125% control limits.

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

Sample ID	Element	PDS Concentration (ppb)	PDS % Recovery
J18J59	Phosphorus	10,000	95.1

12. The duplicate analyses for 11 analytes were outside the 20% Relative Percent Difference (RPD) control limits.

13. 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.

14. LvL is NELAP accredited by the State of Pennsylvania. For a complete listing of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager.

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

Judy Stm

for Iain Daniels
Laboratory Manager
Lionville Laboratory

6/25/09
Date

tlb/m06-033

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

WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

Notes and Definitions

U	Analyte included in the analysis, but not detected
B	Analyte is found in the associated blank as well as in the sample (CLP B-flag).
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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Phone: 610-280-3000
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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

J18J59

0906033-01 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
			Lionville Laboratory						
Metals by SW846 6000/7000 series									
Aluminum	16.1	U	16.1	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Antimony	0.806	U	0.806	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Arsenic	0.806	U	0.806	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Barium	0.403	U	0.403	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Beryllium	0.161	U	0.161	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Bismuth	1.21	U	1.21	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Boron	1.61	U	1.61	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cadmium	**0.768**		0.202	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Calcium	**62.8**	B	16.1	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Chromium	0.806	U	0.806	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cobalt	2.42	U	2.42	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Copper	**1.67**		1.61	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Iron	**121**		16.1	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lead	0.806	U	0.806	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lithium	1.61	U	1.61	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Magnesium	**95.9**		4.03	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Manganese	**0.386**	B	0.806	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Molybdenum	0.806	U	0.806	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Nickel	2.02	U	2.02	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Phosphorus	**2110**		16.1	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Potassium	**1980**		80.6	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Selenium	**1.98**		0.806	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silicon	**1.98**	B	4.84	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silver	0.806	U	0.806	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Sodium	**928**		40.3	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Strontium	**0.0872**	B	0.403	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Thallium	**0.181**	B	0.806	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Tin	4.03	U	4.03	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Uranium	8.06	U	8.06	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Vanadium	0.806	U	0.806	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Zinc	**17.1**	B	2.42	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Mercury	**0.147**		0.0231	mg/kg wet	1	L906087	06/11/2009	06/12/2009	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1579 Project Manager: Joan Kessner	**Reported:** 06/23/2009 15:11

J18J60

0906033-02 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
			Lionville Laboratory						
Metals by SW846 6000/7000 series									
Aluminum	18.5	U	18.5	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Antimony	0.926	U	0.926	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Arsenic	0.926	U	0.926	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Barium	**0.173**	B	0.463	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Beryllium	0.185	U	0.185	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Bismuth	1.39	U	1.39	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Boron	1.85	U	1.85	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cadmium	**0.534**		0.231	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Calcium	**244**	B	18.5	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Chromium	**0.264**	B	0.926	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cobalt	2.78	U	2.78	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Copper	**2.10**		1.85	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Iron	**126**		18.5	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lead	0.926	U	0.926	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lithium	1.85	U	1.85	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Magnesium	**188**		4.63	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Manganese	**1.44**		0.926	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Molybdenum	0.926	U	0.926	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Nickel	2.31	U	2.31	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Phosphorus	**3480**		18.5	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Potassium	**3070**		92.6	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Selenium	**3.30**		0.926	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silicon	**3.89**	B	5.56	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silver	0.926	U	0.926	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Sodium	**1330**		46.3	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Strontium	**0.309**	B	0.463	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Thallium	**0.287**	B	0.926	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Tin	**1.22**	B	4.63	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Uranium	9.26	U	9.26	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Vanadium	**0.197**	B	0.926	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Zinc	**26.0**	B	2.78	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Mercury	**0.0576**		0.0257	mg/kg wet	1	L906087	06/11/2009	06/12/2009	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1579 Project Manager: Joan Kessner	**Reported:** 06/23/2009 15:11

J18J61

0906033-03 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Metals by SW846 6000/7000 series								
Aluminum	15.4 U	15.4	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Antimony	0.769 U	0.769	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Arsenic	**0.266** B	0.769	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Barium	0.385 U	0.385	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Beryllium	0.154 U	0.154	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Bismuth	1.15 U	1.15	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Boron	1.54 U	1.54	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cadmium	**0.411**	0.192	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Calcium	**148** B	15.4	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Chromium	**0.184** B	0.769	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cobalt	2.31 U	2.31	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Copper	**1.92**	1.54	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Iron	**116**	15.4	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lead	0.769 U	0.769	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lithium	1.54 U	1.54	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Magnesium	**114**	3.85	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Manganese	**0.506** B	0.769	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Molybdenum	0.769 U	0.769	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Nickel	1.92 U	1.92	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Phosphorus	**3570**	15.4	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Potassium	**3380**	76.9	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Selenium	**3.74**	0.769	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silicon	**3.30** B	4.62	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silver	0.769 U	0.769	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Sodium	**1320**	38.5	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Strontium	**0.151** B	0.385	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Thallium	**0.196** B	0.769	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Tin	**0.862** B	3.85	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Uranium	7.69 U	7.69	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Vanadium	0.769 U	0.769	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Zinc	**30.6** B	2.31	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Mercury	**0.0371**	0.0237	mg/kg wet	1	L906087	06/11/2009	06/12/2009	7471A

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

J18J62

0906033-04 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
			Lionville Laboratory						
Metals by SW846 6000/7000 series									
Aluminum	16.9	U	16.9	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Antimony	0.847	U	0.847	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Arsenic	0.847	U	0.847	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Barium	**0.110**	B	0.424	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Beryllium	0.169	U	0.169	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Bismuth	1.27	U	1.27	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Boron	1.69	U	1.69	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cadmium	**0.275**		0.212	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Calcium	**89.1**	B	16.9	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Chromium	0.847	U	0.847	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cobalt	2.54	U	2.54	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Copper	**1.73**		1.69	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Iron	**169**		16.9	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lead	0.847	U	0.847	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lithium	1.69	U	1.69	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Magnesium	**109**		4.24	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Manganese	**0.491**	B	0.847	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Molybdenum	0.847	U	0.847	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Nickel	2.12	U	2.12	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Phosphorus	**3130**		16.9	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Potassium	**2960**		84.7	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Selenium	**5.44**		0.847	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silicon	**3.28**	B	5.08	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silver	0.847	U	0.847	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Sodium	**1470**		42.4	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Strontium	**0.0992**	B	0.424	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Thallium	**0.213**	B	0.847	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Tin	**1.02**	B	4.24	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Uranium	8.47	U	8.47	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Vanadium	0.847	U	0.847	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Zinc	**23.1**	B	2.54	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Mercury	**0.0293**		0.0250	mg/kg wet	1	L906087	06/11/2009	06/12/2009	7471A

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

J18J63

0906033-05 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
			Lionville Laboratory						
Metals by SW846 6000/7000 series									
Aluminum	13.3	U	13.3	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Antimony	0.667	U	0.667	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Arsenic	0.667	U	0.667	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Barium	**0.112**	B	0.333	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Beryllium	0.133	U	0.133	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Bismuth	1.00	U	1.00	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Boron	1.33	U	1.33	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cadmium	**0.245**		0.167	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Calcium	**163**	B	13.3	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Chromium	**0.201**	B	0.667	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cobalt	2.00	U	2.00	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Copper	**1.76**		1.33	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Iron	**156**		13.3	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lead	0.667	U	0.667	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lithium	1.33	U	1.33	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Magnesium	**177**		3.33	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Manganese	**1.38**		0.667	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Molybdenum	0.667	U	0.667	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Nickel	1.67	U	1.67	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Phosphorus	**3270**		13.3	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Potassium	**3030**		66.7	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Selenium	**5.47**		0.667	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silicon	**2.60**	B	4.00	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silver	0.667	U	0.667	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Sodium	**1290**	B	33.3	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Strontium	**0.228**	B	0.333	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Thallium	**0.168**	B	0.667	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Tin	**0.807**	B	3.33	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Uranium	6.67	U	6.67	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Vanadium	0.667	U	0.667	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Zinc	**26.1**	B	2.00	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Mercury	**0.0336**		0.0281	mg/kg wet	1	L906087	06/11/2009	06/12/2009	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1579 Project Manager: Joan Kessner	**Reported:** 06/23/2009 15:11

J18K11
0906033-06 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
			Lionville Laboratory						
Metals by SW846 6000/7000 series									
Aluminum	18.2	U	18.2	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Antimony	0.909	U	0.909	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Arsenic	**0.305**	B	0.909	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Barium	**0.156**	B	0.455	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Beryllium	0.182	U	0.182	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Bismuth	1.36	U	1.36	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Boron	1.82	U	1.82	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cadmium	**2.02**		0.227	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Calcium	**113**	B	18.2	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Chromium	**0.407**	B	0.909	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cobalt	2.73	U	2.73	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Copper	**2.27**		1.82	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Iron	**125**		18.2	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lead	**0.515**	B	0.909	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lithium	1.82	U	1.82	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Magnesium	**140**		4.55	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Manganese	**0.669**	B	0.909	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Molybdenum	0.909	U	0.909	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Nickel	2.27	U	2.27	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Phosphorus	**3280**		18.2	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Potassium	**3090**		90.9	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Selenium	**3.35**		0.909	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silicon	**3.05**	B	5.45	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silver	0.909	U	0.909	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Sodium	**1320**		45.5	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Strontium	**0.121**	B	0.455	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Thallium	0.909	U	0.909	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Tin	**1.41**	B	4.55	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Uranium	9.09	U	9.09	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Vanadium	**0.211**	B	0.909	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Zinc	**22.7**	B	2.73	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Mercury	**0.136**		0.0225	mg/kg wet	1	L906087	06/11/2009	06/12/2009	7471A

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

J18K12

0906033-07 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
			Lionville Laboratory						
Metals by SW846 6000/7000 series									
Aluminum	**3.22**	B	12.7	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Antimony	0.633	U	0.633	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Arsenic	**0.276**	B	0.633	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Barium	**0.103**	B	0.316	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Beryllium	0.127	U	0.127	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Bismuth	0.949	U	0.949	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Boron	1.27	U	1.27	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cadmium	**1.31**		0.158	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Calcium	**88.6**	B	12.7	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Chromium	**0.328**	B	0.633	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cobalt	1.90	U	1.90	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Copper	**2.02**		1.27	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Iron	**93.3**		12.7	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lead	0.633	U	0.633	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lithium	1.27	U	1.27	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Magnesium	**139**		3.16	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Manganese	**1.01**		0.633	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Molybdenum	**0.156**	B	0.633	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Nickel	1.58	U	1.58	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Phosphorus	**3470**		152	mg/kg wet	12	L906090	06/12/2009	06/15/2009	6010B
Potassium	**3120**		63.3	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Selenium	**2.91**		0.633	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silicon	**4.35**		3.80	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silver	0.633	U	0.633	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Sodium	**1270**		31.6	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Strontium	**0.0670**	B	0.316	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Thallium	**0.168**	B	0.633	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Tin	**0.694**	B	3.16	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Uranium	6.33	U	6.33	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Vanadium	0.633	U	0.633	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Zinc	**24.4**	B	1.90	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Mercury	**0.149**		0.0231	mg/kg wet	1	L906087	06/11/2009	06/12/2009	7471A

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

J18K13

0906033-08 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Metals by SW846 6000/7000 series								
Aluminum	**5.25** B	14.3	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Antimony	0.714 U	0.714	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Arsenic	**0.308** B	0.714	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Barium	**0.193** B	0.357	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Beryllium	0.143 U	0.143	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Bismuth	1.07 U	1.07	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Boron	1.43 U	1.43	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cadmium	**2.25**	0.179	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Calcium	**112** B	14.3	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Chromium	0.714 U	0.714	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cobalt	2.14 U	2.14	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Copper	**2.93**	1.43	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Iron	**88.0**	14.3	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lead	0.714 U	0.714	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lithium	1.43 U	1.43	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Magnesium	**193**	3.57	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Manganese	**0.894**	0.714	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Molybdenum	0.714 U	0.714	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Nickel	1.79 U	1.79	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Phosphorus	**3340**	14.3	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Potassium	**3090**	71.4	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Selenium	**2.76**	0.714	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silicon	**3.49** B	4.29	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silver	0.714 U	0.714	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Sodium	**1570**	35.7	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Strontium	**0.0918** B	0.357	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Thallium	**0.165** B	0.714	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Tin	**0.871** B	3.57	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Uranium	7.14 U	7.14	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Vanadium	**0.221** B	0.714	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Zinc	**23.8** B	2.14	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Mercury	**0.107**	0.0231	mg/kg wet	1	L906087	06/11/2009	06/12/2009	7471A

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

J18K14

0906033-09 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
			Lionville Laboratory						
Metals by SW846 6000/7000 series									
Aluminum	**3.51**	B	13.0	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Antimony	0.649	U	0.649	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Arsenic	**0.217**	B	0.649	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Barium	**0.0862**	B	0.325	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Beryllium	0.130	U	0.130	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Bismuth	0.974	U	0.974	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Boron	1.30	U	1.30	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cadmium	**1.05**		0.162	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Calcium	**96.3**	B	13.0	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Chromium	**0.146**	B	0.649	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cobalt	1.95	U	1.95	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Copper	**2.12**		1.30	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Iron	**136**		13.0	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lead	0.649	U	0.649	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lithium	1.30	U	1.30	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Magnesium	**146**		3.25	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Manganese	**0.760**		0.649	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Molybdenum	0.649	U	0.649	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Nickel	1.62	U	1.62	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Phosphorus	**3170**		13.0	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Potassium	**2970**		64.9	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Selenium	**4.12**		0.649	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silicon	**2.38**	B	3.90	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silver	0.649	U	0.649	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Sodium	**1300**		32.5	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Strontium	0.325	U	0.325	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Thallium	**0.160**	B	0.649	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Tin	**0.790**	B	3.25	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Uranium	6.49	U	6.49	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Vanadium	**0.181**	B	0.649	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Zinc	**22.1**	B	1.95	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Mercury	**0.185**		0.0231	mg/kg wet	1	L906087	06/11/2009	06/12/2009	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1579 Project Manager: Joan Kessner	**Reported:** 06/23/2009 15:11

J18K15

0906033-10 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
			Lionville Laboratory						
Metals by SW846 6000/7000 series									
Aluminum	**4.46**	B	16.9	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Antimony	0.847	U	0.847	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Arsenic	**0.302**	B	0.847	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Barium	0.424	U	0.424	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Beryllium	0.169	U	0.169	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Bismuth	1.27	U	1.27	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Boron	1.69	U	1.69	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cadmium	**0.740**		0.212	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Calcium	**80.7**	B	16.9	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Chromium	0.847	U	0.847	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cobalt	2.54	U	2.54	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Copper	**2.51**		1.69	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Iron	**118**		16.9	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lead	0.847	U	0.847	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lithium	1.69	U	1.69	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Magnesium	**164**		4.24	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Manganese	**0.669**	B	0.847	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Molybdenum	0.847	U	0.847	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Nickel	2.12	U	2.12	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Phosphorus	**3300**		16.9	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Potassium	**3020**		84.7	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Selenium	**2.47**		0.847	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silicon	**6.07**		5.08	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silver	0.847	U	0.847	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Sodium	**1330**		42.4	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Strontium	**0.122**	B	0.424	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Thallium	0.847	U	0.847	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Tin	**0.974**	B	4.24	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Uranium	8.47	U	8.47	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Vanadium	0.847	U	0.847	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Zinc	**20.6**	B	2.54	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Mercury	**0.0583**		0.0281	mg/kg wet	1	L906087	06/11/2009	06/12/2009	7471A

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

WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

J18K52

0906033-11 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Metals by SW846 6000/7000 series								
Aluminum	**4.00** B	18.5	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Antimony	0.926 U	0.926	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Arsenic	**0.388** B	0.926	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Barium	**0.0932** B	0.463	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Beryllium	0.185 U	0.185	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Bismuth	1.39 U	1.39	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Boron	1.85 U	1.85	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cadmium	**2.43**	0.231	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Calcium	**123** B	18.5	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Chromium	**0.223** B	0.926	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cobalt	2.78 U	2.78	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Copper	**3.97**	1.85	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Iron	**111**	18.5	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lead	0.926 U	0.926	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lithium	1.85 U	1.85	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Magnesium	**171**	4.63	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Manganese	**0.769** B	0.926	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Molybdenum	0.926 U	0.926	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Nickel	2.31 U	2.31	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Phosphorus	**3400**	18.5	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Potassium	**3140**	92.6	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Selenium	**2.53**	0.926	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silicon	**3.95** B	5.56	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silver	0.926 U	0.926	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Sodium	**1380**	46.3	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Strontium	**0.132** B	0.463	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Thallium	**0.247** B	0.926	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Tin	**1.11** B	4.63	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Uranium	9.26 U	9.26	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Vanadium	**0.246** B	0.926	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Zinc	**22.9** B	2.78	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Mercury	**0.146**	0.0243	mg/kg wet	1	L906087	06/11/2009	06/12/2009	7471A

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

J18K53

0906033-12 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
			Lionville Laboratory						
Metals by SW846 6000/7000 series									
Aluminum	**4.21**	B	13.3	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Antimony	0.667	U	0.667	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Arsenic	**0.292**	B	0.667	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Barium	**0.121**	B	0.333	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Beryllium	0.133	U	0.133	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Bismuth	1.00	U	1.00	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Boron	1.33	U	1.33	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cadmium	**2.15**		0.167	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Calcium	**119**	B	13.3	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Chromium	**0.159**	B	0.667	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cobalt	2.00	U	2.00	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Copper	**2.29**		1.33	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Iron	**181**		13.3	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lead	0.667	U	0.667	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lithium	1.33	U	1.33	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Magnesium	**91.7**		3.33	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Manganese	**0.570**	B	0.667	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Molybdenum	**0.142**	B	0.667	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Nickel	1.67	U	1.67	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Phosphorus	**3150**		13.3	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Potassium	**2960**		66.7	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Selenium	**5.19**		0.667	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silicon	**4.89**		4.00	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silver	0.667	U	0.667	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Sodium	**1360**		33.3	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Strontium	**0.170**	B	0.333	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Thallium	**0.178**	B	0.667	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Tin	**0.829**	B	3.33	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Uranium	6.67	U	6.67	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Vanadium	**0.181**	B	0.667	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Zinc	**24.6**	B	2.00	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Mercury	**0.116**		0.0290	mg/kg wet	1	L906087	06/11/2009	06/12/2009	7471A

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

J18K54
0906033-13 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	17.2	U	17.2	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Antimony	0.862	U	0.862	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Arsenic	**0.280**	B	0.862	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Barium	0.431	U	0.431	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Beryllium	0.172	U	0.172	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Bismuth	1.29	U	1.29	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Boron	1.72	U	1.72	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cadmium	**1.94**		0.216	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Calcium	**145**	B	17.2	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Chromium	0.862	U	0.862	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cobalt	2.59	U	2.59	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Copper	**2.70**		1.72	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Iron	**123**		17.2	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lead	0.862	U	0.862	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lithium	1.72	U	1.72	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Magnesium	**181**		4.31	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Manganese	**0.568**	B	0.862	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Molybdenum	0.862	U	0.862	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Nickel	2.16	U	2.16	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Phosphorus	**3550**		17.2	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Potassium	**3240**		86.2	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Selenium	**3.46**		0.862	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silicon	**5.06**	B	5.17	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silver	0.862	U	0.862	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Sodium	**1420**		43.1	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Strontium	**0.123**	B	0.431	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Thallium	0.862	U	0.862	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Tin	**1.05**	B	4.31	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Uranium	8.62	U	8.62	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Vanadium	**0.205**	B	0.862	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Zinc	**25.5**	B	2.59	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Mercury	**0.0783**		0.0257	mg/kg wet	1	L906087	06/11/2009	06/12/2009	7471A

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

J18K55

0906033-14 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Metals by SW846 6000/7000 series								
Aluminum	15.4 U	15.4	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Antimony	0.769 U	0.769	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Arsenic	**0.340** B	0.769	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Barium	**0.145** B	0.385	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Beryllium	0.154 U	0.154	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Bismuth	1.15 U	1.15	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Boron	1.54 U	1.54	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cadmium	**2.76**	0.192	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Calcium	**114** B	15.4	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Chromium	0.769 U	0.769	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cobalt	2.31 U	2.31	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Copper	**3.89**	1.54	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Iron	**142**	15.4	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lead	0.769 U	0.769	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lithium	1.54 U	1.54	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Magnesium	**191**	3.85	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Manganese	**0.849**	0.769	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Molybdenum	0.769 U	0.769	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Nickel	1.92 U	1.92	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Phosphorus	**3300**	15.4	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Potassium	**3040**	76.9	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Selenium	**4.22**	0.769	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silicon	**3.83** B	4.62	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silver	0.769 U	0.769	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Sodium	**1480**	38.5	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Strontium	**0.113** B	0.385	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Thallium	0.769 U	0.769	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Tin	**0.894** B	3.85	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Uranium	7.69 U	7.69	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Vanadium	**0.175** B	0.769	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Zinc	**25.4** B	2.31	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Mercury	**0.0881**	0.0231	mg/kg wet	1	L906087	06/11/2009	06/12/2009	7471A

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

J18K56

0906033-15 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
			Lionville Laboratory						
Metals by SW846 6000/7000 series									
Aluminum	**2.82**	B	13.0	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Antimony	0.649	U	0.649	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Arsenic	0.649	U	0.649	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Barium	**0.286**	B	0.325	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Beryllium	0.130	U	0.130	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Bismuth	0.974	U	0.974	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Boron	1.30	U	1.30	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cadmium	**1.20**		0.162	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Calcium	**160**	B	13.0	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Chromium	**0.203**	B	0.649	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cobalt	1.95	U	1.95	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Copper	**4.06**		1.30	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Iron	**127**		13.0	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lead	0.649	U	0.649	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lithium	1.30	U	1.30	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Magnesium	**169**		3.25	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Manganese	**0.701**		0.649	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Molybdenum	**0.151**	B	0.649	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Nickel	1.62	U	1.62	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Phosphorus	**3440**		156	mg/kg wet	12	L906090	06/12/2009	06/15/2009	6010B
Potassium	**3150**		64.9	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Selenium	**5.02**		0.649	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silicon	**2.92**	B	3.90	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silver	0.649	U	0.649	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Sodium	**1360**		32.5	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Strontium	**0.159**	B	0.325	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Thallium	0.649	U	0.649	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Tin	**0.747**	B	3.25	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Uranium	6.49	U	6.49	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Vanadium	**0.157**	B	0.649	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Zinc	**26.2**	B	1.95	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Mercury	**0.0549**		0.0225	mg/kg wet	1	L906087	06/11/2009	06/12/2009	7471A

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

J18KD3

0906033-16 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
			Lionville Laboratory						
Metals by SW846 6000/7000 series									
Aluminum	**4.40**	B	15.6	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Antimony	0.781	U	0.781	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Arsenic	**0.239**	B	0.781	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Barium	**0.0896**	B	0.391	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Beryllium	0.156	U	0.156	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Bismuth	1.17	U	1.17	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Boron	1.56	U	1.56	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cadmium	**2.54**		0.195	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Calcium	**93.0**	B	15.6	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Chromium	**0.325**	B	0.781	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cobalt	2.34	U	2.34	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Copper	**3.08**		1.56	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Iron	**122**		15.6	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lead	0.781	U	0.781	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lithium	1.56	U	1.56	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Magnesium	**119**		3.91	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Manganese	**0.509**	B	0.781	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Molybdenum	0.781	U	0.781	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Nickel	1.95	U	1.95	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Phosphorus	**3170**		15.6	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Potassium	**3110**		78.1	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Selenium	**3.48**		0.781	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silicon	**4.96**		4.69	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silver	0.781	U	0.781	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Sodium	**1340**		39.1	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Strontium	**0.140**	B	0.391	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Thallium	0.781	U	0.781	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Tin	**0.924**	B	3.91	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Uranium	7.81	U	7.81	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Vanadium	**0.287**	B	0.781	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Zinc	**27.0**	B	2.34	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Mercury	**0.0801**		0.0225	mg/kg wet	1	L906087	06/11/2009	06/12/2009	7471A

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

J18KD4

0906033-17 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
			Lionville Laboratory						
Metals by SW846 6000/7000 series									
Aluminum	15.2	U	15.2	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Antimony	0.758	U	0.758	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Arsenic	**0.317**	B	0.758	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Barium	0.379	U	0.379	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Beryllium	0.152	U	0.152	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Bismuth	1.14	U	1.14	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Boron	1.52	U	1.52	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cadmium	**1.26**		0.189	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Calcium	**49.2**	B	15.2	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Chromium	**0.163**	B	0.758	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cobalt	2.27	U	2.27	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Copper	**2.09**		1.52	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Iron	**53.6**		15.2	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lead	0.758	U	0.758	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lithium	1.52	U	1.52	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Magnesium	**84.1**		3.79	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Manganese	**0.394**	B	0.758	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Molybdenum	0.758	U	0.758	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Nickel	1.89	U	1.89	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Phosphorus	**2490**		15.2	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Potassium	**2300**		75.8	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Selenium	**3.38**		0.758	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silicon	**3.10**	B	4.55	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silver	0.758	U	0.758	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Sodium	**1010**		37.9	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Strontium	**0.0795**	B	0.379	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Thallium	0.758	U	0.758	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Tin	3.79	U	3.79	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Uranium	7.58	U	7.58	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Vanadium	0.758	U	0.758	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Zinc	**17.3**	B	2.27	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Mercury	**0.0823**		0.0273	mg/kg wet	1	L906087	06/11/2009	06/12/2009	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1579 Project Manager: Joan Kessner	**Reported:** 06/23/2009 15:11

J18KD5

0906033-18 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
			Lionville Laboratory						
Metals by SW846 6000/7000 series									
Aluminum	**3.67**	B	16.1	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Antimony	0.806	U	0.806	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Arsenic	**0.285**	B	0.806	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Barium	**0.169**	B	0.403	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Beryllium	0.161	U	0.161	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Bismuth	1.21	U	1.21	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Boron	1.61	U	1.61	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cadmium	**2.52**		0.202	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Calcium	**104**	B	16.1	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Chromium	**0.190**	B	0.806	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cobalt	2.42	U	2.42	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Copper	**3.99**		1.61	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Iron	**83.5**		16.1	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lead	0.806	U	0.806	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lithium	1.61	U	1.61	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Magnesium	**121**		4.03	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Manganese	**0.537**	B	0.806	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Molybdenum	0.806	U	0.806	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Nickel	2.02	U	2.02	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Phosphorus	**3190**		16.1	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Potassium	**3030**		80.6	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Selenium	**3.47**		0.806	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silicon	**3.28**	B	4.84	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silver	0.806	U	0.806	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Sodium	**1190**		40.3	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Strontium	**0.116**	B	0.403	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Thallium	**0.220**	B	0.806	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Tin	**0.912**	B	4.03	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Uranium	**2.10**	B	8.06	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Vanadium	**0.300**	B	0.806	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Zinc	**24.6**	B	2.42	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Mercury	**0.0983**		0.0250	mg/kg wet	1	L906087	06/11/2009	06/12/2009	7471A

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

J18KD6

0906033-19 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	13.7	U	13.7	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Antimony	0.685	U	0.685	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Arsenic	**0.278**	B	0.685	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Barium	**0.0706**	B	0.342	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Beryllium	0.137	U	0.137	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Bismuth	1.03	U	1.03	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Boron	1.37	U	1.37	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cadmium	**2.50**		0.171	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Calcium	**89.3**	B	13.7	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Chromium	0.685	U	0.685	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cobalt	2.05	U	2.05	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Copper	**2.16**		1.37	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Iron	**75.0**		13.7	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lead	0.685	U	0.685	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lithium	1.37	U	1.37	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Magnesium	**114**		3.42	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Manganese	**0.461**	B	0.685	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Molybdenum	0.685	U	0.685	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Nickel	1.71	U	1.71	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Phosphorus	**2730**		13.7	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Potassium	**2630**		68.5	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Selenium	**3.19**		0.685	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silicon	**3.03**	B	4.11	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silver	0.685	U	0.685	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Sodium	**1230**		34.2	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Strontium	**0.111**	B	0.342	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Thallium	0.685	U	0.685	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Tin	**0.689**	B	3.42	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Uranium	6.85	U	6.85	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Vanadium	**0.152**	B	0.685	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Zinc	**21.0**	B	2.05	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Mercury	**0.0924**		0.0231	mg/kg wet	1	L906087	06/11/2009	06/12/2009	7471A

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

J18KD7

0906033-20 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
			Lionville Laboratory						
Metals by SW846 6000/7000 series									
Aluminum	**3.41**	B	12.7	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Antimony	0.633	U	0.633	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Arsenic	**0.361**	B	0.633	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Barium	**0.0946**	B	0.316	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Beryllium	0.127	U	0.127	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Bismuth	0.949	U	0.949	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Boron	1.27	U	1.27	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cadmium	**3.60**		0.158	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Calcium	**122**	B	12.7	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Chromium	**0.141**	B	0.633	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Cobalt	1.90	U	1.90	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Copper	**3.93**		1.27	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Iron	**116**		12.7	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lead	0.633	U	0.633	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Lithium	1.27	U	1.27	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Magnesium	**182**		3.16	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Manganese	**0.617**	B	0.633	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Molybdenum	0.633	U	0.633	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Nickel	1.58	U	1.58	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Phosphorus	**3090**		12.7	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Potassium	**2910**		63.3	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Selenium	**2.67**		0.633	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silicon	**3.84**		3.80	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Silver	0.633	U	0.633	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Sodium	**1330**		31.6	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Strontium	**0.128**	B	0.316	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Thallium	**0.176**	B	0.633	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Tin	**0.763**	B	3.16	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Uranium	6.33	U	6.33	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Vanadium	**0.274**	B	0.633	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Zinc	**24.2**	B	1.90	mg/kg wet	1	L906090	06/12/2009	06/13/2009	6010B
Mercury	**0.143**		0.0273	mg/kg wet	1	L906087	06/11/2009	06/12/2009	7471A

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

Metals by SW846 6000/7000 series - Quality Control

Lionville Laboratory

Analyte	Result and Qualifier	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L906087 - SW 7471A Prep									
Blank (L906087-BLK1)				Prepared: 06/11/2009 Analyzed: 06/12/2009					
Mercury	0.0300 U	0.0300	mg/kg wet						
Duplicate (L906087-DUP1)		Source: 0906033-01		Prepared: 06/11/2009 Analyzed: 06/12/2009					
Mercury	0.147	0.0290	mg/kg wet		0.147			0.0113	20
Matrix Spike (L906087-MS1)		Source: 0906033-01		Prepared: 06/11/2009 Analyzed: 06/12/2009					
Mercury	0.272	0.0231	mg/kg wet	0.12821	0.147	97.0	75-125		
Reference (L906087-SRM1)				Prepared: 06/11/2009 Analyzed: 06/12/2009					
Mercury	4.20	0.180	mg/kg wet	4.7000		89.4	80-120		
Batch L906090 - SW 3050B									
Blank (L906090-BLK1)				Prepared: 06/12/2009 Analyzed: 06/13/2009					
Aluminum	19.6 U	19.6	mg/kg wet						
Antimony	0.980 U	0.980	mg/kg wet						
Arsenic	0.980 U	0.980	mg/kg wet						
Barium	0.490 U	0.490	mg/kg wet						
Beryllium	0.196 U	0.196	mg/kg wet						
Bismuth	1.47 U	1.47	mg/kg wet						
Boron	1.96 U	1.96	mg/kg wet						
Cadmium	0.245 U	0.245	mg/kg wet						
Calcium	19.7	19.6	mg/kg wet						
Chromium	0.980 U	0.980	mg/kg wet						
Cobalt	2.94 U	2.94	mg/kg wet						
Copper	1.96 U	1.96	mg/kg wet						
Iron	19.6 U	19.6	mg/kg wet						
Lead	0.980 U	0.980	mg/kg wet						
Lithium	1.96 U	1.96	mg/kg wet						
Magnesium	3.03 B	4.90	mg/kg wet						
Manganese	0.980 U	0.980	mg/kg wet						
Molybdenum	0.980 U	0.980	mg/kg wet						
Nickel	2.45 U	2.45	mg/kg wet						
Phosphorus	19.6 U	19.6	mg/kg wet						
Potassium	98.0 U	98.0	mg/kg wet						
Selenium	0.408 B	0.980	mg/kg wet						
Silicon	5.88 U	5.88	mg/kg wet						
Silver	0.980 U	0.980	mg/kg wet						
Sodium	49.0 U	49.0	mg/kg wet						
Strontium	0.490 U	0.490	mg/kg wet						
Thallium	0.980 U	0.980	mg/kg wet						
Tin	1.08 B	4.90	mg/kg wet						
Uranium	* 2.04 B	9.80	mg/kg wet						
Vanadium	0.980 U	0.980	mg/kg wet						
Zinc	5.65	2.94	mg/kg wet						

* corrected Kay Tan 6/23/09

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

WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

Metals by SW846 6000/7000 series - Quality Control

Lionville Laboratory

Analyte	Result and Qualifier		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L906090 - SW 3050B										
Duplicate (L906090-DUP1)			**Source: 0906033-01**	Prepared: 06/12/2009 Analyzed: 06/13/2009						
Aluminum	3.80	B	15.6	mg/kg wet		15.6				20
Antimony	0.781	U	0.781	mg/kg wet		0.781				20
Arsenic	0.345	B	0.781	mg/kg wet		0.781				20
Barium	0.391	U	0.391	mg/kg wet		0.391				20
Beryllium	0.156	U	0.156	mg/kg wet		0.156				20
Bismuth	1.17	U	1.17	mg/kg wet		1.17				20
Boron	1.56	U	1.56	mg/kg wet		1.56				20
Cadmium	0.995		0.195	mg/kg wet		0.768			26*	20
Calcium	87.3	B	15.6	mg/kg wet		62.8			33*	20
Chromium	0.175	B	0.781	mg/kg wet		0.781				20
Cobalt	2.34	U	2.34	mg/kg wet		2.34				20
Copper	1.99		1.56	mg/kg wet		1.67			17	20
Iron	156		15.6	mg/kg wet		121			25*	20
Lead	0.781	U	0.781	mg/kg wet		0.781				20
Lithium	1.56	U	1.56	mg/kg wet		1.56				20
Magnesium	126		3.91	mg/kg wet		95.9			27*	20
Manganese	0.664	B	0.781	mg/kg wet		0.386			53*	20
Molybdenum	0.781	U	0.781	mg/kg wet		0.781				20
Nickel	1.95	U	1.95	mg/kg wet		1.95				20
Phosphorus	2730		15.6	mg/kg wet		2110			25*	20
Potassium	2620		78.1	mg/kg wet		1980			28*	20
Selenium	2.65		0.781	mg/kg wet		1.98			29*	20
Silicon	2.66	B	4.69	mg/kg wet		1.98			29*	20
Silver	0.781	U	0.781	mg/kg wet		0.781				20
Sodium	1220		39.1	mg/kg wet		928			27*	20
Strontium	0.391	U	0.391	mg/kg wet		0.0872				20
Thallium	0.174	B	0.781	mg/kg wet		0.181			4	20
Tin	3.91	U	3.91	mg/kg wet		3.91				20
Uranium	1.87	B	7.81	mg/kg wet		7.81				20
Vanadium	0.781	U	0.781	mg/kg wet		0.781				20
Zinc	21.9	B	2.34	mg/kg wet		17.1			24*	20

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Phone: 610-280-3000
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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

Metals by SW846 6000/7000 series - Quality Control

Lionville Laboratory

Analyte	Result and Qualifier	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L906090 - SW 3050B									
Matrix Spike (L906090-MS1)	**Source: 0906033-01**	Prepared: 06/12/2009 Analyzed: 06/13/2009							
Aluminum	139	17.2	mg/kg wet	172.41	17.2	81	75-125		
Antimony	32.4	0.862	mg/kg wet	43.103	0.862	75	75-125		
Arsenic	135	0.862	mg/kg wet	172.41	0.862	78	75-125		
Barium	136	0.431	mg/kg wet	172.41	0.431	79	75-125		
Beryllium	3.36	0.172	mg/kg wet	4.3103	0.172	78	75-125		
Bismuth	371	1.29	mg/kg wet	431.03	1.29	86	75-125		
Boron	66.0	1.72	mg/kg wet	86.207	1.72	77	75-125		
Cadmium	4.50	0.216	mg/kg wet	4.3103	0.768	87	75-125		
Calcium	1740 B	17.2	mg/kg wet	2155.2	62.8	78	75-125		
Chromium	13.6	0.862	mg/kg wet	17.241	0.862	79	75-125		
Cobalt	33.9	2.59	mg/kg wet	43.103	2.59	79	75-125		
Copper	17.9	1.72	mg/kg wet	21.552	1.67	76	75-125		
Iron	198	17.2	mg/kg wet	86.207	121	89	75-125		
Lead	35.1	0.862	mg/kg wet	43.103	0.862	81	75-125		
Lithium	68.4	1.72	mg/kg wet	86.207	1.72	79	75-125		
Magnesium	1750	4.31	mg/kg wet	2155.2	95.9	77	75-125		
Manganese	34.0	0.862	mg/kg wet	43.103	0.386	78	75-125		
Molybdenum	69.3	0.862	mg/kg wet	86.207	0.862	80	75-125		
Nickel	33.7	2.16	mg/kg wet	43.103	2.16	78	75-125		
Phosphorus	2740	17.2	mg/kg wet	431.03	2110	146*	75-125		
Potassium	3880	86.2	mg/kg wet	2155.2	1980	88	75-125		
Selenium	137	0.862	mg/kg wet	172.41	1.98	78	75-125		
Silicon	71.1	5.17	mg/kg wet	86.207	1.98	80	75-125		
Silver	3.56	0.862	mg/kg wet	4.3103	0.862	83	75-125		
Sodium	2720	43.1	mg/kg wet	2155.2	928	83	75-125		
Strontium	67.1	0.431	mg/kg wet	86.207	0.0872	78	75-125		
Thallium	142	0.862	mg/kg wet	172.41	0.181	82	75-125		
Tin	69.1	4.31	mg/kg wet	86.207	4.31	80	75-125		
Uranium	342	8.62	mg/kg wet	431.03	8.62	79	75-125		
Vanadium	33.9	0.862	mg/kg wet	43.103	0.862	79	75-125		
Zinc	54.5 B	2.59	mg/kg wet	43.103	17.1	87	75-125		

264 Welsh Pool Road
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Phone: 610-280-3000
Fax: 610-280-3041

WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/23/2009 15:11

Metals by SW846 6000/7000 series - Quality Control

Lionville Laboratory

Analyte	Result and Qualifier	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L906090 - SW 3050B									
Reference (L906090-SRM1)			Prepared: 06/12/2009 Analyzed: 06/13/2009						
Aluminum	6220	16.7	mg/kg wet	6766.6		92	0-225.5		
Antimony	67.8	0.833	mg/kg wet	56.630		120	0-225.6		
Arsenic	118	0.833	mg/kg wet	113.85		104	85-115		
Barium	322	0.417	mg/kg wet	298.35		108	75.7-124.3		
Beryllium	113	0.167	mg/kg wet	108.32		104	85.2-114.8		
Boron	84.7	1.67	mg/kg wet	86.580		98	68.5-131.6		
Cadmium	232	0.208	mg/kg wet	224.09		104	84.9-115.1		
Calcium	3380 B	16.7	mg/kg wet	3305.9		102	82.8-117.2		
Chromium	80.8	0.833	mg/kg wet	77.590		104	76.8-123.2		
Cobalt	168	2.50	mg/kg wet	163.19		103	79.4-120.6		
Copper	270	1.67	mg/kg wet	265.65		102	82.4-117.6		
Iron	8610	16.7	mg/kg wet	8202.8		105	78.9-121.1		
Lead	193	0.833	mg/kg wet	187.62		103	81.5-118.5		
Lithium	114	1.67	mg/kg wet	113.01		101	33.8-166.2		
Magnesium	7870	4.17	mg/kg wet	8352.3		94	84.2-115.8		
Manganese	1000	0.833	mg/kg wet	951.35		106	69-131		
Molybdenum	254	0.833	mg/kg wet	234.78		108	80.1-119.9		
Nickel	224	2.08	mg/kg wet	220.85		101	81.4-118.6		
Potassium	14900	83.3	mg/kg wet	14177		105	85.7-114.3		
Selenium	192	0.833	mg/kg wet	187.99		102	78.8-121.2		
Silicon	587	5.00	mg/kg wet	939.78		62	0-272.3		
Silver	87.2	0.833	mg/kg wet	83.960		104	81.9-118.1		
Sodium	9610	41.7	mg/kg wet	9587.1		100	83.5-116.4		
Strontium	180	0.417	mg/kg wet	171.65		105	67.5-132.5		
Thallium	85.6	0.833	mg/kg wet	85.410		100	77.1-122.9		
Tin	102	4.17	mg/kg wet	101.60		100	86.7-113.2		
Vanadium	104	0.833	mg/kg wet	97.430		107	75.8-124.2		
Zinc	211 B	2.50	mg/kg wet	196.52		107	78.9-121.1		

Lionville Laboratory

MERCURY PREPARATION

Logbook # 621

Analyst: EB
Date 6/11/09
Start Time/Temp: 1445 | 93°
End Time/Temp: 1515 | 95°

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

Prep Batch: L906087
Worksheet: HG061201
SOP No. ME-HgCVAA

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.

LvL Batch #	Spike Volume (mL)	Spike Conc. (µg/L)	Initial Wt. or Volume (g or mL)	Final Sample Volume (mL)	Comments, % Solids, etc.
Blank			10mL	50mL	
0.2 µg/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		L906087-BLK
LC1	*	*	0.30		L906087-SRM
0906033-01			0.39		
01R			0.31		
01S	0.500	1.0	0.39		
02			~~0.385~~ TEOD 6/11/09		
03			0.38		
04			0.36		
05			0.32		
06			0.40		
07			0.39		
08			0.39		
09			0.39		
10			0.32		
11			0.37		
12			0.31		
13			0.35		
14			0.39		

ndard:	ID	Prep Date/Time
L/MS	R1 6072-050-14B	6/11/09 0930
CCV/LCS	IV 6072-050-15A	

Reviewed By/Date: 6/17/09

see book # 93-8 for std traceability information

LCS =US Metals in soil No.3; True Value = 4.70 mg/Kg
ogue #1RM-021, Lot # E021

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

Lionville Laboratory

MERCURY PREPARATION

Logbook # 621

Analyst: EB
Date 6/11/09
Start Time/Temp:
End Time/Temp: See page 017

Instrument ID HG-3.1
Balance #: B29 /NA
Pipette Calibration (Daily) Y ✓

Prep Batch: 2906087
Worksheet: HG-061201
SOP No. ME-HgCVAA

pH < 2 for Liquids? __ Yes __ 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.

LvL Batch #	Spike Volume (mL)	Spike Conc. (µg/L)	Initial Wt. or Volume (g or mL)	Final Sample Volume (mL)	Comments, % Solids, etc.
0906033-15			0.40	50mL	
16			0.40		
17			0.33		
18			0.36		
19			0.39		
20			0.33		

EB 6/11/09

Standard:	ID	Prep Date/Time
AL/MS		
/CCV/LCS	See page 017	

Reviewed By/Date: [signature] 6/12/09

see book # 9368 for std traceability information

A LCS =US Metals in soil No.3; True Value = 4.70 mg/Kg
alogue #1RM-021, Lot # E021

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

Lionville Laboratory Incorporated Logbook #: 626

SAMPLE DIGESTION RECORD

SOP: L-SPI-3020 Rev. 00

Digestion Batch #: L906090
Date/Time Initiated: 6/11/09 1030
Date/Time Completed: 6/12/09 1045
Analyst(s): JJS
Matrix: Soil Water (Other): Fish
Instr. Type: AA ICP
Parameters: Bi, P, U

(Digested) / Undigested (circle one)
Balance #: B14
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

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
0906033 - 1		0.62	50	<2	TO		Black sludge		
L906090 - Dup1		0.64							
⊥ - MS1	0.5	0.58							
0906033 - 2		0.54							
- 3		0.65							
- 4		0.59							
- 5		0.75							
- 6		0.55							
- 7		0.79							
- 8		0.70							
- 9		0.77							
- 10		0.59							
- 11		0.54							
- 12		0.75							
- 13		0.58							
- 14		0.65							
- 15		0.77							
- 16		0.64							
- 17		0.66							
- 18		0.62							
- 19		0.73							
⊥ - 20		0.79							
L906090 BLT1		0.51				Coarse	Boiling chips		
⊥ SAM1	(A)	0.60	⊥	⊥	⊥	Fine	dusty pink sand		

Spiking IDs:
MS #: 8100-09-04
⊥ ⊥ -05
-06
6072-080-16
LCS #: (A) Premix I.D. 0901206

Reagent IDs:
HNO_3 H02076
HCL 65 0036
H_2O_2 G34A19
1:1 HNO_3 9799-097-01
1:1 HCL

File ID#: Premix Premix
LIMS Transfer: Y N MW 6/12/09
Data Review By/Date:
CD 6/23/09

6072-079-11 - Uranium
⊥ -14 - Phosphorus
⊥ -080 -10 - Bismuth

L-SPI-3020-A-0601

Lionville Laboratory Use Only: 0906033

Custody Transfer Record/Lab Work Request

Page 1 of 2

SRC

VLI

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

A Freezer (Utility Room)

Client: WC Hanford SAF# RC-118

Est. Final Proj. Sampling Date:

Project#: 60049-001-001-0001

Project Contact/Phone#:

Lionville Laboratory Project Manager: Arlette Johnson

QC: SW846 Del: STD TAT: 30 days

Date Rec'd: 6-11-09 Date Due: 7-11-09

Refrigerator #				2													
#/Type Container	Liquid																
	Solid			1pl						1							
Volume	Solid			500						1							
Preservatives				–													
ANALYSES REQUESTED →			ORGANIC						INORG								
			VOA	BNA	Pest/PCB	Herb			(3) Metal + HG	CN							
					Lionville Laboratory Use Only												
					06084				Met①								

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												
01	J18J59			SO	4-1-09	11:55			X					X				
02	J18J60					12:00			X					X				
03	J18J61					12:05			X					X				
04	J18J62					12:15			X					X				
05	J18J63					12:20			X					X				
06	J18K11					11:00			X					X				
07	J18K12					11:05			X					X				
08	J18K13					11:12			X					X				
09	J18K14					11:18			X					X				
10	J18K15					11:21			X					X				

Special Instructions: Run Matrix QC

Met① = HSL + B, Bi, Li, Mo, P, Sr, Sn, Si, U

Special Instructions:
1. Matrix Composed of Fish.
2.
3.
4.
5.
6.

Relinquished by	Received by	Date	Time
[signature]	[signature]	6-11-09	0955

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
ORIGINAL REWRITTEN		COMPOSITE MATRIX	

00000032

Lionville Laboratory Use Only

0906033

Custody Transfer Record/Lab Work Request

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

A2 Freezer (Utility Room)

LVLI

Client WC Hanford SAF RC-118

Est. Final Proj. Sampling Date

Project# See Pg 1

Project Contact/Phone#

Lionville Laboratory Project Manager Arlette Johnson

QC Del TAT

Date Rec'd 6.11.09 Date Due

Refrigerator #				2													
#/Type Container	Liquid / Solid			1pl													
Volume	Solid			500													
Preservatives				—													
ANALYSES REQUESTED →		ORGANIC							INORG								
		VOA	BNA	Pest/PCB	Herb				(5) Metal	CN							
		Lionville Laboratory Use Only															
				06084					Met 0								

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				Metal	CN						
11	J18K52			SO	4.1.09	0953			X					X							
12	J18K53					1000			X					X							
13	J18K54					1005			X					X							
14	J18K55					1010			X					X							
15	J18K56					1018			X					X							
16	J18KD3					0855			X					X							
17	J18KD4					0903			X					X							
18	J18KD5					0912			X					X							
19	J18KD6					0917			X					X							
20	J18KD7					0925			X					X							

Special Instructions:

Special Instructions:

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

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	6.11.09	0955

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time

000000933

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-16	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF1, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fedex 796405004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

SDG# K1579 (7351)

Sample No.	Matrix *	Sample Date	Sample Time	Preservation: None	None	None	None	None	Cool 4C	Cool 4C			
				Type of Container: G/P	G/P	G	G/P	G/P	G/P	aG			
				No. of Container(s): 1	0	0	0	0	0	0			
				Volume: 750g	2g	25g	5g	5g	15g	50g			
SAMPLE ANALYSIS				See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
J18J59	OTHER SOLID	4/1/09	11:55hrs	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Kevin Cranna	Date/Time: 4/1/09 1158	Received By/Stored In: EAS Locked Storage	Date/Time: 4/1/09 1158
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 4/2/09 1110	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 4/2/09 1110	Received By/Stored In: FEDEX 796405004446	Date/Time:
Relinquished By/Removed From: FED EX	Date/Time:	Received By/Stored In: R.F. HATHAWAY	Date/Time: 04/03/09 09 30
Relinquished By/Removed From: Alex Kelenson KELENSON	Date/Time: 16:00 6/10/09	Received By/Stored In: FED EX	Date/Time:
Relinquished By/Removed From: FedEx	Date/Time: 6.11.09 0955	Received By/Stored In: N. Smith	Date/Time: 6.11.09 0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

000000034

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-17	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF2, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES// LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FedEx 7964050444 6

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS

SDG# K1579 (7351)

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			
	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions	Pesticides - 8081			
Sample No.	Matrix *	Sample Date	Sample Time									
J18J60	OTHER SOLID	4/1/09	1200hrs	X	X	X	X	X	X	X		

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Kevin Cranna	Date/Time: 4/1/09 12:03	Received By/Stored In: EAS Locked Storage	Date/Time: 4/1/09 12:03
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 1100 4/2/09	Received By/Stored In: FEDEX 7964050444 6	Date/Time:
Relinquished By/Removed From: FED EX	Date/Time:	Received By/Stored In: R.F. MATAUN/FEDEX	Date/Time: 04/07/09 0930
Relinquished By/Removed From: Alex Kelenson KELENSON	Date/Time: 16:00 6/10/09	Received By/Stored In: FED EX	Date/Time:
Relinquished By/Removed From: FED EX 6/11/09	Date/Time: 0955	Received By/Stored In: 6/11/09	Date/Time: 0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator EAS Custodian removed samples for shipping on 4/2/09

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

8888888335

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-18	Page 1 of 1

Collector: Kevin Crumma	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF3, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: 7948 5004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG				
No. of Container(s)	1	0	0	0	0	0	0				
Volume	750g	2g	25g	5g	5g	15g	50g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081				

SDG# K1579 (7351)

Sample No.	Matrix *	Sample Date	Sample Time										
J18J61	OTHER SOLID	4/1/09	1205 hrs	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Kevin Crumma	Date/Time: 4/1/09 1207	Received By/Stored In: EAS locked storage	Date/Time: 4/1/09 1207
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 4/2/09 1120	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 4/2/09 1120
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 4/2/09 1120	Received By/Stored In: FED EX 7948 5004446	Date/Time:
Relinquished By/Removed From: FED EX	Date/Time:	Received By/Stored In: N.F. NATALIA NATAL	Date/Time: 04/03/09 09:30
Relinquished By/Removed From: Alex Kellum KELLUM	Date/Time: 16:00 6/10/09	Received By/Stored In: FED EX	Date/Time:
Relinquished By/Removed From: FED EX	Date/Time: 6/11/09 10955	Received By/Stored In: [signature]	Date/Time: 6/11/09 10955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-19	Page 1 of 1

Collector	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF4, LIV/KID	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FED EX 7964950446	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			

SAMPLE ANALYSIS

SDG# K1579 (7351)

Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
J18J62	OTHER SOLID	4/1/09	1215hrs	X	X	X	X	X	X	X			

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Cummins	4/1/09 1216	EAS locked storage	4/1/09 1218
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	FEDEX 7964950446	
FED EX		R.F. MATKUSKAN	04/03/09 0932
Alex Kelleway KELLEWAY	6/10/09 16:00	FEDEX	
FED EX	6.11.09/0955	[illegible]	6.11.09/0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

8000000637

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-20	Page 1 of 1

Collector: Kevin Crouna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF5, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fed# 7934600444 6

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG				
No. of Container(s)	1	0	0	0	0	0	0				
Volume	750g	2g	25g	5g	5g	15g	50g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081				
SDG # K1579 (7351)											
Sample No.	Matrix *	Sample Date	Sample Time								
J18J63	OTHER SOLID	4/1/09	1220hrs	X	X	X	X	X	X	X	

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Kevin Crouna	4/1/09 1222	EAS Lockal storage	4/1/09 1222
Relinquished By/Removed From	EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From	SHANNAN JOHNSON	4/2/09 1100	FEDEX 7934605004446	
Relinquished By/Removed From	FED-EX		L.F. MATTOW	04/03/09 09:20
Relinquished By/Removed From	Rex Kellerson KELLERSON	6/10/09 16:00	FEDEX	
Relinquished By/Removed From	FEDEX	6.11.09/0955		6.11.09/0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/3/09

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-118-56	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WF1, LIV/KID	SAF No.: RC-118	
Ice Chest No.: AES-04-017	Field Logbook No.: 1633 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: Fed ex 795485004446	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS

SDG# K1579 (7351)

Preservation				None	None	None	None	None	Cool 4C	Cool 4C		
Type of Container				G/P	G/P	G	G/P	G/P	G/P	aG		
No. of Container(s)				1	0	0	0	0	0	0		
Volume				750g	2g	25g	5g	5g	15g	50g		
Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081		
J18K11	OTHER SOLID	4/1/09	1100hrs	X	X	X	X	X	X	X		

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Cranna	4/1/09 1102	EAS locked storage	4/1/09 1102
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	Fedex 795485004446	
FED EX		R.F. WATANABAN	6/03/09 0930
Alex Kelenov KELENOV	6/10/09 16:00	FEDEX	
Fed Ex	6/11/09 0955		6/11/09 0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

0020000639

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-57	Page 1 of 1

Collector: Kevin Cramma	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WF2, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX# 796485004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG				
No. of Container(s)	1	0	0	0	0	0	0				
Volume	750g	2g	25g	5g	5g	15g	50g				
SAMPLE ANALYSIS SDG# K1579 (7351)	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081				
Sample No. / Matrix * / Sample Date / Sample Time											
J18K12 / OTHER SOLID / 4/1/09 / 1105 hrs	X	X	X	X	X	X	X				

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From: Kevin Cramma		4/1/09 1107	EAS locked storage	4/1/09 1107
Relinquished By/Removed From: EAS LOCKED STORAGE		4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON		4/2/09 1100	FEDEX 796485004446	
Relinquished By/Removed From: FED EX			RF-WATERWAY	04/03/09 0930
Relinquished By/Removed From: Alex Kelentsov	KELENSOV	16:00 6/10/09	FEDEX	
Relinquished By/Removed From: FedEx		6.11.09/0955		6.11.09 0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-58	Page 1 of 1

Collector: Kevin Cramma	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WF3, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fedex 796485004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS

SDG # K1579 (7351)

Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
Preservation				None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container				G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)				1	0	0	0	0	0	0			
Volume				750g	2g	25g	5g	5g	15g	50g			
J18K13	OTHER SOLID	4/1/09	1112	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Cramma	4/1/09 1115	EAS locked storage	4/1/09 1115
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	FEDEX 796485004446	
FED EX		JLF. MATHUZOTTA	04/03/09 0930
Alex Kelentsov	6/10/09 1600	FEDEX	
FEDEX	6.11.09/0955		6.11.09/0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/12/09

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

1 7000000

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-59	Page 1 of 1

Collector: Kevin Crawna	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WF4, LIV/KID	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: Fedx# 7964250044[illegible]	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage
COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			

SAMPLE ANALYSIS

SDG# (K1579) (7351)

Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
J18K14	OTHER SOLID	4/1/09	1118hrs	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Sign/Print Names	Date/Time
Relinquished By/Removed From: Kevin Crawna		4/1/09 1120
Received By/Stored In: EAS locked storage		4/1/09 1120
Relinquished By/Removed From: EAS LOCKED STORAGE		4/2/09 1100
Received By/Stored In: SHANNAN JOHNSON		4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON		4/2/09 1100
Received By/Stored In: FEDEX		
Relinquished By/Removed From: FED EX		
Received By/Stored In: RF. NATAWATAN		06/03/09 0920
Relinquished By/Removed From: Alex Kelentry KELENSON		6/10/09 16:00
Received By/Stored In: FEDEX		
Relinquished By/Removed From: FEDEX		6.11.09/0955
Received By/Stored In:		6.11.09/0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-60	Page 1 of 1

Collector: Kevin Crouna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WF5, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fdx# 796485004445

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS

SDG # K1579 (7351)

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			
	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
Sample No.	Matrix *	Sample Date	Sample Time									
J18K15	OTHER SOLID	4/1/09	1121 hrs	X	X	X	X	X	X	X		

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Crouna	4/1/09 1123	EAS locked storage	4/1/09 1123
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	FEDEX 796485004446	
FEDEX			04/07/09 0920
Rex Kelmick KELLENSON	6/10/09 16:00	FEDEX	
	6.11.09 0955		6.11.09 0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-96	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K	Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WF1, LIV/KID		SAF No.: RC-118		
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX		
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fdx# 796405004446		

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			

SAMPLE ANALYSIS

SDG# K1579 (7052)

Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
J18K52	OTHER SOLID	4/1/09	~~1053 hrs~~ 0953 hrs RC 4/1/09	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Kevin Cranna	4/1/09 0955	Received By/Stored In: EAS locked storage	4/1/09 0955
Relinquished By/Removed From: EAS LOCKED STORAGE	4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	4/2/09 1100	Received By/Stored In: FEDEX 796405004446	
Relinquished By/Removed From: FED EX		Received By/Stored In: RF. MATHEWS	04/03/09 0930
Relinquished By/Removed From: Alex Kelenson KELENSON	6/10/09 16:00	Received By/Stored In: FEDEX	
Relinquished By/Removed From: FEDEX	6.11.09/0955	Received By/Stored In:	6.11.09/0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-97	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WF2, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fedx# 798405004440

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG				
No. of Container(s)	1	0	0	0	0	0	0				
Volume	750g	2g	25g	5g	5g	15g	50g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081				
SDG# K1579 (7352)											
Sample No.	Matrix *	Sample Date	Sample Time								
J18K53	OTHER SOLID	4/1/09	1000 hrs	X	X	X	X	X	X	X	

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Kevin Cranna	4/1/09 1002	EAS Locked Storage	4/1/09 1002
Relinquished By/Removed From: EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	4/2/09 1102	Received By/Stored In: Fedx# 798485004446	
Relinquished By/Removed From: FED EX		Received By/Stored In: NF-MATHWAKER	04/03/09 0930
Relinquished By/Removed From: Alex Kelenson KELENSON	6/10/09 16:00	Received By/Stored In: FEDEX	
Relinquished By/Removed From: FEDEX	6.11.09 0955	Received By/Stored In:	6.11.09 0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

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Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-98	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WF3, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fdx# 796405004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS

SDG# K1579 (7352)

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			
	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
Sample No.	Matrix *	Sample Date	Sample Time									
J18K54	OTHER SOLID	4/1/09	1005	X	X	X	X	X	X	X		

CHAIN OF POSSESSION	Sign/Print Names	Date/Time
Relinquished By/Removed From: Kevin Cranna		4/1/09 1007
Received By/Stored In: EAS locked storage		4/1/09 1007
Relinquished By/Removed From: EAS LOCKED STORAGE		4/2/09
Received By/Stored In: SHANNAN JOHNSON		4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON		4/2/09 1100
Received By/Stored In: Fdx# 796405004446		
Relinquished By/Removed From: FED EX		
Received By/Stored In: L.F. DEKTAR/XTRAN		04/07/09 0970
Relinquished By/Removed From: Alex Kelenson KELENSON		6/10/09 16:00
Received By/Stored In: FED EX		
Relinquished By/Removed From: FED EX		6.11.09/0955
Received By/Stored In:		6.11.09/0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-99	Page 1 of 1

Collector: Kevin Granna	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WF4, LIV/KID	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX# 796485004446	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage
COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS
SDG# K1579 (7352)

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			
	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
Sample No.	Matrix *	Sample Date	Sample Time									
J18K55	OTHER SOLID	4/1/09	1010 hrs	X	X	X	X	X	X	X		

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Granna	4/1/09 1013	EAS locked storage	4/1/09 1013
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	FDX# 796485004446	
FED EX		RLF	04/03/09 0930
Alex Kelenson KELENSON	6/10/09 16:00	FED EX	
FED EX	6.11.09/0955		6.11.09/0955

SPECIAL INSTRUCTIONS
Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09.

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

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Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-100	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WF5, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill: Fedx# 796405004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage
COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS
SDG# K1579 (7352)

Preservation				None	None	None	None	None	Cool 4C	Cool 4C		
Type of Container				G/P	G/P	G	G/P	G/P	G/P	nG		
No. of Container(s)				1	0	0	0	0	0	0		
Volume				750g	2g	25g	5g	5g	15g	50g		
				See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081		
Sample No.	Matrix *	Sample Date	Sample Time									
J18K56	OTHER SOLID	4/1/09	1018hrs	X	X	X	X	X	X	X		

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Kevin Cranna	4/1/09 1020	Received By/Stored In: EAS locked storage	4/1/09 1020
Relinquished By/Removed From: EAS LOCKED STORAGE	4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	4/2/09 1/12	Received By/Stored In: Fedx# 796405004446	
Relinquished By/Removed From: FED EX		Received By/Stored In: RF NATKIN	04/07/09 0930
Relinquished By/Removed From: Alex Kellerson KELLERSON	6/10/09 16:00	Received By/Stored In: FEDEX	
Relinquished By/Removed From: FEDEX	6.11.09 1095	Received By/Stored In:	6.11.09 1095

SPECIAL INSTRUCTIONS
Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

8796405004446

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-131	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-WF1, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fdx# 796485004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			

SDG# K1579 (7352)

Sample No.	Matrix *	Sample Date	Sample Time										
J18KD3	OTHER SOLID	4/1/09	0855	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Kevin Cranna	Date/Time: 4/1/09 0900	Received By/Stored In: EAS locked storage	Date/Time: 4/1/09 0900
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 4/2/09 1100	Received By/Stored In: FEDEX 796485004446	Date/Time:
Relinquished By/Removed From: FED EX	Date/Time:	Received By/Stored In: RF Lethaby	Date/Time: 04/07/09 0930
Relinquished By/Removed From: Alex Kelenson KELENSON	Date/Time: 16:00 6/10/09	Received By/Stored In: FEDEX	Date/Time:
Relinquished By/Removed From: FEDEX	Date/Time: 6-11-09/0955	Received By/Stored In:	Date/Time: 6-11-09/0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

9666666649

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-132	Page 1 of 1

Collector: Kevin Crannan	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-WF2, LIV/KID	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: Fdx# 796485004446	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage
COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS
SDG# K1579 (7352)

Preservation				None	None	None	None	None	Cool 4C	Cool 4C		
Type of Container				G/P	G/P	G	G/P	G/P	G/P	aG		
No. of Container(s)				1	0	0	0	0	0	0		
Volume				750g	2g	25g	5g	5g	15g	50g		
				See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081		
Sample No.	Matrix *	Sample Date	Sample Time									
J18KD4	OTHER SOLID	4/1/09	0903	X	X	X	X	X	X	X		

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Kevin Crannan	Date/Time: 4/1/09 0903	Received By/Stored In: EAS storage (locked)	Date/Time: 4/1/09 0905
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 4/2/09 1100	Received By/Stored In: FOX# 796485004446	Date/Time:
Relinquished By/Removed From: FED EX	Date/Time:	Received By/Stored In: TLF MATAWXOHAN	Date/Time: 04/03/09 0930
Relinquished By/Removed From: Alex Kellerman	Date/Time: 16:00 6/10/09	Received By/Stored In: FEDEX	Date/Time:
Relinquished By/Removed From:	Date/Time: 6.11.09/0955	Received By/Stored In:	Date/Time: 6/11.09/0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

98999959

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-133	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-WF3, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fdx# 796485004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG				
No. of Container(s)	1	0	0	0	0	0	0				
Volume	750g	2g	25g	5g	5g	15g	50g				

SAMPLE ANALYSIS

SDG# K1579 (7352)

Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
J18KD5	OTHER SOLID	4/1/09	0912	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Kevin Cranna	4/1/09 0915	Received By/Stored In: EAS locked Sto	4/1/09 0915
Relinquished By/Removed From: EAS LOCKED STORAGE	4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	4/2/09 1100	Received By/Stored In: FDX# 796485004446	
Relinquished By/Removed From: FED EX		Received By/Stored In: L.F. Hathaway	04/03/09 0970
Relinquished By/Removed From: Alex Kelenson KELENSON	6/10/09 16:00	Received By/Stored In: FEDEX	
Relinquished By/Removed From: FEDEX	6-11-09/0955	Received By/Stored In:	6-11-09/0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/3/09

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

9999999051

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-134	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-WF4, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fdx# 796485004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS

SDG# K1579 (7352)

			Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
			Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
			No. of Container(s)	1	0	0	0	0	0	0			
			Volume	750g	2g	25g	5g	5g	15g	50g			
				See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
Sample No.	Matrix *	Sample Date	Sample Time										
J18KD6	OTHER SOLID	4/1/09	0917	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Kevin Cranna	4/1/09 0920	Received By/Stored In: EAS locked storage	4/1/09 0920
Relinquished By/Removed From: EAS LOCKED STORAGE	4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	4/2/09 1100	Received By/Stored In: FEDEX 796485004446	
Relinquished By/Removed From: FED EX		Received By/Stored In: RLF-LEATHA ADAMS	04/03/09 0930
Relinquished By/Removed From: Alex Kelleher KELLEHER	6/10/09 16:00	Received By/Stored In: FEDEX	
Relinquished By/Removed From: FedEx	6/11/09 0955	Received By/Stored In: [signature]	6/11/09 0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09.

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

25999999

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-135	Page 1 of 1

Collector: Kevin Cramm	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-WF5, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fedex 796485004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG				
No. of Container(s)	1	0	0	0	0	0	0				
Volume	750g	2g	25g	5g	5g	15g	50g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081				

SDG# K1579 (7352)

Sample No.	Matrix *	Sample Date	Sample Time									
J18KD7	OTHER SOLID	4/1/09	0925	X	X	X	X	X	X	X		

CHAIN OF POSSESSION	Sign/Print Names
Relinquished By/Removed From: Kevin Cramm — Date/Time: 4/1/09 0930	Received By/Stored In: EAS locked storage — Date/Time: 4/1/09 0930
Relinquished By/Removed From: EAS LOCKED STORAGE — Date/Time: 4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON — Date/Time: 4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON — Date/Time: 4/2/09 1100	Received By/Stored In: Fdx# 796485004446 — Date/Time:
Relinquished By/Removed From: FED EX — Date/Time:	Received By/Stored In: JF MITTAUER — Date/Time: 04/07/09 0930
Relinquished By/Removed From: Alex Kelentuf — Date/Time: 6/10/09 16:00	Received By/Stored In: FEDEX — Date/Time:
Relinquished By/Removed From: FEDEX — Date/Time: 6/11/09 0955	Received By/Stored In: [illegible] — Date/Time: 6/11/09 0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

6896000853

P50000000

PAGE 1 Eberline Srvces CHAIN OF CUSTODY ORD # R9-06-041

06/10/09 09:43:58 WORK ID: SAF# RC-118 SDG# K1579

RCVD: 06/09/09 DUE: 07/24/09 KEEP: 07/24/10 DISP: S

SDG# K1579 (7351 & 7352)

DASH	SAMPLE IDENTIFICATION	STORED	TESTS
01A-X	J18J59	LIONVILLE	MISCEN
02A-X	J18J60	LIONVILLE	MISCEN
03A-X	J18J61	LIONVILLE	MISCEN
04A-X	J18J62	LIONVILLE	MISCEN
05A-X	J18J63	LIONVILLE	MISCEN
06A-X	J18K11	LIONVILLE	MISCEN
07A-X	J18K12	LIONVILLE	MISCEN
08A-X	J18K13	LIONVILLE	MISCEN
09A-X	J18K14	LIONVILLE	MISCEN
10A-X	J18K15	LIONVILLE	MISCEN
11A-X	J18K52	LIONVILLE	MISCEN
12A-X	J18K53	LIONVILLE	MISCEN
13A-X	J18K54	LIONVILLE	MISCEN
14A-X	J18K55	LIONVILLE	MISCEN
15A-X	J18K56	LIONVILLE	MISCEN
16A-X	J18KD3	LIONVILLE	MISCEN
17A-X	J18KD4	LIONVILLE	MISCEN
18A-X	J18KD5	LIONVILLE	MISCEN
19A-X	J18KD6	LIONVILLE	MISCEN
20A-X	J18KD7	LIONVILLE	MISCEN

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
Alex Kelenkaff	6/10/09	LIONVILLE	6/10/09		
Alex Ex	6-11-09			D. Mcell	6-11-09

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: WC. Hanford Date: 6.11.09

Project/SAF/SOW/Release #: RC-118

LvLI Batch #: 0906033 Sample Custodian: D Smith

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier FedEx		Airbill # 7966 8366 297
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 plastic bag and easily accessible?	☑ Yes	☐ No	
5. Samples received cooled or ambient?	Temp 5.8 °C		Cooler # AFS-04-017
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 6/23/09	☐ 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 6/25/09	☑ No	see #12
16. Project Manager contacted concerning any discrepancies?	☐ Yes	☐ No	☑ N/A

Person Contacted _____ Date _____

LVLI

000000855

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RECEIVED
JUL 2009

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1579 Project Manager: Joan Kessner	Reported: 07/17/2009 11:52

PESTICIDES

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
J18J59	0906033-01	Solid	04/01/2009 11:55	06/11/2009 09:55
J18J60	0906033-02	Solid	04/01/2009 12:00	06/11/2009 09:55
J18J61	0906033-03	Solid	04/01/2009 12:05	06/11/2009 09:55
J18J62	0906033-04	Solid	04/01/2009 12:15	06/11/2009 09:55
J18J63	0906033-05	Solid	04/01/2009 12:20	06/11/2009 09:55
J18K11	0906033-06	Solid	04/01/2009 11:00	06/11/2009 09:55
J18K12	0906033-07	Solid	04/01/2009 11:05	06/11/2009 09:55
J18K13	0906033-08	Solid	04/01/2009 11:12	06/11/2009 09:55
J18K14	0906033-09	Solid	04/01/2009 11:18	06/11/2009 09:55
J18K15	0906033-10	Solid	04/01/2009 11:21	06/11/2009 09:55
J18K52	0906033-11	Solid	04/01/2009 09:53	06/11/2009 09:55
J18K53	0906033-12	Solid	04/01/2009 10:00	06/11/2009 09:55
J18K54	0906033-13	Solid	04/01/2009 10:05	06/11/2009 09:55
J18K55	0906033-14	Solid	04/01/2009 10:10	06/11/2009 09:55
J18K56	0906033-15	Solid	04/01/2009 10:18	06/11/2009 09:55
J18KD3	0906033-16	Solid	04/01/2009 08:55	06/11/2009 09:55
J18KD4	0906033-17	Solid	04/01/2009 09:03	06/11/2009 09:55
J18KD5	0906033-18	Solid	04/01/2009 09:12	06/11/2009 09:55
J18KD6	0906033-19	Solid	04/01/2009 09:17	06/11/2009 09:55
J18KD7	0906033-20	Solid	04/01/2009 09:25	06/11/2009 09:55

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Case Narrative

Client: WC-HANFORD RC-118
LVL #: 0906033
SDG/SAF # K1579 /RC-118

W.O. #: 60049-001-001-0001-00
Date Received: 06-11-2009

CHLORINATED PESTICIDES

Twenty (20) fish samples were collected on 04-01-2009.

The samples and their associated QC samples were extracted on 06-23-2009 and analyzed according to Lionville Laboratory SOPs based on SW846, 3rd Edition procedure on 06-25,30-2009 and 07-02-2009. The extraction procedure was based on method 3540C and the extracts were analyzed based on method 8081A. Due to sample matrix (fish), samples were extracted with reduced initial volumes between 1 and 2 grams each. Reporting limits have been adjusted accordingly.

All samples are reported on a wet weight basis. 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. The samples were extracted 69 days outside of recommended hold time. A copy of the Sample Discrepancy Report (SDR #09GC163) is enclosed. Samples were received outside of hold time; they were extracted within 14 days of receipt at the laboratory.

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

3. All obtainable surrogate recoveries were within acceptance criteria.

4. All blank spike recoveries were within acceptance criteria.

5. Twenty-two (22) of eighty (80) matrix spike recoveries were outside acceptance criteria. A copy of the Sample Discrepancy Report (SDR# 09GC163) is enclosed.

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 Stm

Iain Daniels
Laboratory Manager
Lionville Laboratory

7/17/09
Date

Lionville Laboratory Sample Discrepancy Report (SDR)

SDR #: 09GC163

Initiator: Robert Carden
Date: 7/16/09
Client: WR Hanford R1118

Batch: 09U6033
Samples: MS/MSD
Method: SW846/MCAWW/CLP/

Parameter: 0608H
Matrix: Solid
Prep Batch: L906186

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)

#1 Samples extracted 69 days past the recommended hold time

#2 Several spike recoveries below QC acceptance criteria in MS/MSD's (BS criteria OK) All surrogates within criteria

2. Known or Probable Causes(s) #2 Samples received 57 days outside the recommended hold time (Samples extracted within 14 days of sample receipt)

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:
#1 + #2 Narrate
#2 Matrix effect of fish
JD.

4. Project Manager Instructions...signature/date: yli 7/17/09
✓ 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: yli 7/17/09
__ Verified re-[log][leach][extract][digest][analysis] (circle)
✓ Included in Case Narrative
__ Hard Copy COC Revised
__ Electronic COC Revised
__ EDD Corrections Completed

Other Explanation:

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

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/17/2009 11:52

Notes and Definitions

U	Analyte included in the analysis, but not detected
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
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. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1579 Project Manager: Joan Kessner	Reported: 07/17/2009 11:52

J18J59

0906033-01 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A								
alpha-BHC	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
gamma-BHC	**8.06 J**	8.06	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
beta-BHC	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
delta-BHC	**10.5 J**	8.06	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Heptachlor	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Aldrin	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Heptachlor epoxide	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
gamma-Chlordane	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
alpha-Chlordane	**8.06 J**	8.06	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endosulfan I	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
4,4'-DDE	**240**	8.06	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Dieldrin	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endrin	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
4,4'-DDD	**33.9 J**	8.06	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endosulfan II	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
4,4'-DDT	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endrin aldehyde	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endosulfan sulfate	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Methoxychlor	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endrin ketone	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Toxaphene	121 U	121	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*81.1 %*	*28-166*			*L906186*	*06/23/2009*	*06/25/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*67.0 %*	*37-153*			*L906186*	*06/23/2009*	*06/25/2009*	*8081A*

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/17/2009 11:52

J18J60

0906033-02 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
			Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	9.61	U	9.61	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
gamma-BHC	9.61	U	9.61	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
beta-BHC	9.61	U	9.61	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
delta-BHC	**18.3**	**J**	9.61	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Heptachlor	9.61	U	9.61	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Aldrin	9.61	U	9.61	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Heptachlor epoxide	9.61	U	9.61	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
gamma-Chlordane	9.61	U	9.61	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
alpha-Chlordane	9.61	U	9.61	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endosulfan I	9.61	U	9.61	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
4,4'-DDE	**156**		9.61	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Dieldrin	9.61	U	9.61	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endrin	9.61	U	9.61	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
4,4'-DDD	**24.0**	**J**	9.61	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endosulfan II	9.61	U	9.61	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
4,4'-DDT	9.61	U	9.61	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endrin aldehyde	9.61	U	9.61	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endosulfan sulfate	9.61	U	9.61	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Methoxychlor	9.61	U	9.61	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endrin ketone	9.61	U	9.61	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Toxaphene	144	U	144	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*85.0 %*		*28-166*			*L906186*	*06/23/2009*	*06/25/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*68.8 %*		*37-153*			*L906186*	*06/23/2009*	*06/25/2009*	*8081A*

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/17/2009 11:52

J18J61

0906033-03 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A								
alpha-BHC	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
gamma-BHC	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
beta-BHC	**27.0 J**	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
delta-BHC	**13.0 J**	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Heptachlor	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Aldrin	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Heptachlor epoxide	**9.57 J**	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
gamma-Chlordane	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
alpha-Chlordane	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endosulfan I	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
4,4'-DDE	**60.0**	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Dieldrin	**13.0 J**	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endrin	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
4,4'-DDD	**14.8 J**	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endosulfan II	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
4,4'-DDT	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endrin aldehyde	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endosulfan sulfate	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Methoxychlor	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endrin ketone	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Toxaphene	130 U	130	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*86.1 %*	*28-166*			*L906186*	*06/23/2009*	*06/25/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*64.0 %*	*37-153*			*L906186*	*06/23/2009*	*06/25/2009*	*8081A*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1579 Project Manager: Joan Kessner	Reported: 07/17/2009 11:52

J18J62

0906033-04 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A								
alpha-BHC	8.26 U	8.26	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
gamma-BHC	8.26 U	8.26	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
beta-BHC	8.26 U	8.26	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
delta-BHC	8.26 U	8.26	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Heptachlor	8.26 U	8.26	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Aldrin	8.26 U	8.26	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Heptachlor epoxide	8.26 U	8.26	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
gamma-Chlordane	8.26 U	8.26	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
alpha-Chlordane	8.26 U	8.26	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endosulfan I	8.26 U	8.26	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
4,4'-DDE	**209**	8.26	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Dieldrin	8.26 U	8.26	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endrin	8.26 U	8.26	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
4,4'-DDD	**45.5**	8.26	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endosulfan II	8.26 U	8.26	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
4,4'-DDT	8.26 U	8.26	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endrin aldehyde	8.26 U	8.26	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endosulfan sulfate	8.26 U	8.26	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Methoxychlor	8.26 U	8.26	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endrin ketone	8.26 U	8.26	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Toxaphene	124 U	124	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*92.8 %*	*28-166*			*L906186*	*06/23/2009*	*06/25/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*62.9 %*	*37-153*			*L906186*	*06/23/2009*	*06/25/2009*	*8081A*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1579 Project Manager: Joan Kessner	**Reported:** 07/17/2009 11:52

J18J63

0906033-05 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A								
alpha-BHC	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
gamma-BHC	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
beta-BHC	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
delta-BHC	**9.57 J**	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Heptachlor	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Aldrin	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Heptachlor epoxide	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
gamma-Chlordane	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
alpha-Chlordane	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endosulfan I	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
4,4'-DDE	**70.4**	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Dieldrin	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endrin	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
4,4'-DDD	**15.7 J**	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endosulfan II	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
4,4'-DDT	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endrin aldehyde	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endosulfan sulfate	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Methoxychlor	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endrin ketone	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Toxaphene	130 U	130	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*90.9 %*	*28-166*			*L906186*	*06/23/2009*	*06/25/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*65.9 %*	*37-153*			*L906186*	*06/23/2009*	*06/25/2009*	*8081A*

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/17/2009 11:52

J18K11

0906033-06 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A								
alpha-BHC	8.32 U	8.32	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
gamma-BHC	8.32 U	8.32	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
beta-BHC	8.32 U	8.32	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
delta-BHC	8.32 U	8.32	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Heptachlor	8.32 U	8.32	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Aldrin	8.32 U	8.32	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Heptachlor epoxide	8.32 U	8.32	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
gamma-Chlordane	8.32 U	8.32	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
alpha-Chlordane	**10.8 J**	8.32	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endosulfan I	8.32 U	8.32	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
4,4'-DDE	**82.5**	8.32	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Dieldrin	8.32 U	8.32	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endrin	8.32 U	8.32	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
4,4'-DDD	**19.2 J**	8.32	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endosulfan II	8.32 U	8.32	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
4,4'-DDT	8.32 U	8.32	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endrin aldehyde	8.32 U	8.32	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endosulfan sulfate	8.32 U	8.32	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Methoxychlor	8.32 U	8.32	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Endrin ketone	8.32 U	8.32	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Toxaphene	125 U	125	ug/kg wet	1	L906186	06/23/2009	06/25/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*72.2 %*	*28-166*			*L906186*	*06/23/2009*	*06/25/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*65.1 %*	*37-153*			*L906186*	*06/23/2009*	*06/25/2009*	*8081A*

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/17/2009 11:52

J18K12

0906033-07 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A								
alpha-BHC	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
gamma-BHC	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
beta-BHC	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
delta-BHC	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Heptachlor	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Aldrin	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Heptachlor epoxide	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
gamma-Chlordane	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
alpha-Chlordane	**16.5 J**	8.69	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan I	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDE	**271**	8.69	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Dieldrin	**24.3 J**	8.69	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDD	**30.4 J**	8.69	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan II	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDT	**13.9 J**	8.69	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin aldehyde	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan sulfate	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Methoxychlor	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin ketone	8.69 U	8.69	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Toxaphene	130 U	130	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*100 %*	*28-166*			*L906186*	*06/23/2009*	*06/30/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*96.4 %*	*37-153*			*L906186*	*06/23/2009*	*06/30/2009*	*8081A*

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J18K13

0906033-08 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
			Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	7.57	U	7.57	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
gamma-BHC	7.57	U	7.57	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
beta-BHC	7.57	U	7.57	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
delta-BHC	7.57	U	7.57	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Heptachlor	7.57	U	7.57	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Aldrin	7.57	U	7.57	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Heptachlor epoxide	7.57	U	7.57	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
gamma-Chlordane	7.57	U	7.57	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
alpha-Chlordane	**81.8**		7.57	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan I	7.57	U	7.57	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDE	**243**		7.57	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Dieldrin	7.57	U	7.57	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin	7.57	U	7.57	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDD	**28.0**	J	7.57	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan II	**8.33**	J	7.57	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDT	**7.58**	J	7.57	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin aldehyde	7.57	U	7.57	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan sulfate	7.57	U	7.57	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Methoxychlor	7.57	U	7.57	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin ketone	7.57	U	7.57	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Toxaphene	114	U	114	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*101 %*		*28-166*			*L906186*	*06/23/2009*	*06/30/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*87.9 %*		*37-153*			*L906186*	*06/23/2009*	*06/30/2009*	*8081A*

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2620 Fermi Avenue	Project Number: K1579	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/17/2009 11:52

J18K14

0906033-09 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A								
alpha-BHC	6.66 U	6.66	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
gamma-BHC	6.66 U	6.66	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
beta-BHC	6.66 U	6.66	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
delta-BHC	6.66 U	6.66	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Heptachlor	6.66 U	6.66	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Aldrin	6.66 U	6.66	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Heptachlor epoxide	6.66 U	6.66	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
gamma-Chlordane	6.66 U	6.66	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
alpha-Chlordane	**56.7**	6.66	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan I	6.66 U	6.66	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDE	**421**	6.66	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Dieldrin	6.66 U	6.66	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin	6.66 U	6.66	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDD	**42.7**	6.66	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan II	6.66 U	6.66	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDT	6.66 U	6.66	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin aldehyde	6.66 U	6.66	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan sulfate	6.66 U	6.66	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Methoxychlor	6.66 U	6.66	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin ketone	6.66 U	6.66	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Toxaphene	100 U	100	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*107 %*	*28-166*			*L906186*	*06/23/2009*	*06/30/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*94.2 %*	*37-153*			*L906186*	*06/23/2009*	*06/30/2009*	*8081A*

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J18K15

0906033-10 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A								
alpha-BHC	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
gamma-BHC	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
beta-BHC	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
delta-BHC	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Heptachlor	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Aldrin	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Heptachlor epoxide	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
gamma-Chlordane	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
alpha-Chlordane	**29.8 J**	8.06	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan I	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDE	**156**	8.06	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Dieldrin	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDD	**36.3 J**	8.06	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan II	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDT	**16.9 J**	8.06	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin aldehyde	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan sulfate	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Methoxychlor	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin ketone	8.06 U	8.06	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Toxaphene	121 U	121	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*101 %*	*28-166*			*L906186*	*06/23/2009*	*06/30/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*75.6 %*	*37-153*			*L906186*	*06/23/2009*	*06/30/2009*	*8081A*

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2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/17/2009 11:52

J18K52

0906033-11 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A								
alpha-BHC	6.89 U	6.89	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
gamma-BHC	**13.1 J**	6.89	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
beta-BHC	6.89 U	6.89	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
delta-BHC	**30.3 J**	6.89	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Heptachlor	6.89 U	6.89	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Aldrin	6.89 U	6.89	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Heptachlor epoxide	6.89 U	6.89	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
gamma-Chlordane	6.89 U	6.89	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
alpha-Chlordane	**13.1 J**	6.89	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan I	6.89 U	6.89	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDE	**121**	6.89	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Dieldrin	**6.90 J**	6.89	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin	**6.90 J**	6.89	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDD	**15.9 J**	6.89	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan II	**8.97 J**	6.89	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDT	**22.1 J**	6.89	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin aldehyde	6.89 U	6.89	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan sulfate	6.89 U	6.89	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Methoxychlor	6.89 U	6.89	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin ketone	6.89 U	6.89	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Toxaphene	103 U	103	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*105 %*	*28-166*			*L906186*	*06/23/2009*	*06/30/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*105 %*	*37-153*			*L906186*	*06/23/2009*	*06/30/2009*	*8081A*

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2620 Fermi Avenue	Project Number: K1579	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/17/2009 11:52

J18K53

0906033-12 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A								
alpha-BHC	6.62 U	6.62	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
gamma-BHC	6.62 U	6.62	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
beta-BHC	6.62 U	6.62	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
delta-BHC	6.62 U	6.62	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Heptachlor	6.62 U	6.62	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Aldrin	6.62 U	6.62	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Heptachlor epoxide	6.62 U	6.62	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
gamma-Chlordane	6.62 U	6.62	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
alpha-Chlordane	**50.3**	6.62	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan I	6.62 U	6.62	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDE	**797**	6.62	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Dieldrin	6.62 U	6.62	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin	6.62 U	6.62	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDD	**22.5 J**	6.62	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan II	**43.7**	6.62	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDT	**13.2 J**	6.62	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin aldehyde	6.62 U	6.62	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan sulfate	6.62 U	6.62	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Methoxychlor	**15.2 J**	6.62	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin ketone	6.62 U	6.62	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Toxaphene	99.3 U	99.3	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*109 %*	*28-166*			*L906186*	*06/23/2009*	*06/30/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*80.5 %*	*37-153*			*L906186*	*06/23/2009*	*06/30/2009*	*8081A*

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	07/17/2009 11:52

J18K54

0906033-13 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A								
alpha-BHC	5.98 U	5.98	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
gamma-BHC	5.98 U	5.98	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
beta-BHC	5.98 U	5.98	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
delta-BHC	5.98 U	5.98	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Heptachlor	5.98 U	5.98	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Aldrin	5.98 U	5.98	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Heptachlor epoxide	5.98 U	5.98	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
gamma-Chlordane	5.98 U	5.98	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
alpha-Chlordane	**40.7**	5.98	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan I	5.98 U	5.98	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDE	**80.2**	5.98	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Dieldrin	5.98 U	5.98	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin	5.98 U	5.98	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDD	**18.6 J**	5.98	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan II	**10.8 J**	5.98	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDT	5.98 U	5.98	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin aldehyde	5.98 U	5.98	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan sulfate	5.98 U	5.98	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Methoxychlor	5.98 U	5.98	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin ketone	5.98 U	5.98	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Toxaphene	89.8 U	89.8	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*115 %*	*28-166*			*L906186*	*06/23/2009*	*06/30/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*105 %*	*37-153*			*L906186*	*06/23/2009*	*06/30/2009*	*8081A*

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Richland WA, 99354	Project Manager: Joan Kessner	07/17/2009 11:52

J18K55

0906033-14 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A								
alpha-BHC	6.36 U	6.36	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
gamma-BHC	6.36 U	6.36	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
beta-BHC	6.36 U	6.36	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
delta-BHC	**15.3 J**	6.36	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Heptachlor	6.36 U	6.36	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Aldrin	6.36 U	6.36	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Heptachlor epoxide	6.36 U	6.36	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
gamma-Chlordane	6.36 U	6.36	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
alpha-Chlordane	**47.1**	6.36	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan I	6.36 U	6.36	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDE	**282**	6.36	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Dieldrin	6.36 U	6.36	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin	6.36 U	6.36	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDD	**32.5**	6.36	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan II	6.36 U	6.36	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDT	6.36 U	6.36	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin aldehyde	6.36 U	6.36	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan sulfate	6.36 U	6.36	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Methoxychlor	6.36 U	6.36	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin ketone	6.36 U	6.36	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Toxaphene	95.5 U	95.5	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*108 %*	*28-166*			*L906186*	*06/23/2009*	*06/30/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*95.7 %*	*37-153*			*L906186*	*06/23/2009*	*06/30/2009*	*8081A*

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Richland WA, 99354	Project Manager: Joan Kessner	07/17/2009 11:52

J18K56

0906033-15 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A								
alpha-BHC	7.68 U	7.68	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
gamma-BHC	7.68 U	7.68	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
beta-BHC	7.68 U	7.68	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
delta-BHC	7.68 U	7.68	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Heptachlor	7.68 U	7.68	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Aldrin	7.68 U	7.68	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Heptachlor epoxide	7.68 U	7.68	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
gamma-Chlordane	7.68 U	7.68	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
alpha-Chlordane	**40.0**	7.68	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan I	7.68 U	7.68	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDE	**84.6**	7.68	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Dieldrin	7.68 U	7.68	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin	7.68 U	7.68	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDD	**16.2 J**	7.68	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan II	7.68 U	7.68	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDT	**9.23 J**	7.68	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin aldehyde	7.68 U	7.68	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan sulfate	7.68 U	7.68	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Methoxychlor	7.68 U	7.68	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin ketone	**22.3 J**	7.68	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Toxaphene	115 U	115	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*96.7 %*	*28-166*			*L906186*	*06/23/2009*	*06/30/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*86.5 %*	*37-153*			*L906186*	*06/23/2009*	*06/30/2009*	*8081A*

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J18KD3

0906033-16 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A								
alpha-BHC	7.09 U	7.09	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
gamma-BHC	7.09 U	7.09	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
beta-BHC	7.09 U	7.09	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
delta-BHC	**12.1 J**	7.09	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Heptachlor	7.09 U	7.09	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Aldrin	7.09 U	7.09	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Heptachlor epoxide	7.09 U	7.09	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
gamma-Chlordane	7.09 U	7.09	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
alpha-Chlordane	**43.3**	7.09	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan I	7.09 U	7.09	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDE	**63.8**	7.09	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Dieldrin	7.09 U	7.09	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin	7.09 U	7.09	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDD	**17.0 J**	7.09	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan II	7.09 U	7.09	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
4,4'-DDT	7.09 U	7.09	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin aldehyde	7.09 U	7.09	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endosulfan sulfate	7.09 U	7.09	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Methoxychlor	7.09 U	7.09	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Endrin ketone	7.09 U	7.09	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Toxaphene	106 U	106	ug/kg wet	1	L906186	06/23/2009	06/30/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*109 %*	*28-166*			*L906186*	*06/23/2009*	*06/30/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*95.7 %*	*37-153*			*L906186*	*06/23/2009*	*06/30/2009*	*8081A*

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Richland WA, 99354	Project Manager: Joan Kessner	07/17/2009 11:52

J18KD4

0906033-17 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
			Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	7.04	U	7.04	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
gamma-BHC	7.04	U	7.04	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
beta-BHC	7.04	U	7.04	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
delta-BHC	7.04	U	7.04	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Heptachlor	7.04	U	7.04	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Aldrin	7.04	U	7.04	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Heptachlor epoxide	7.04	U	7.04	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
gamma-Chlordane	7.04	U	7.04	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
alpha-Chlordane	**39.4**		7.04	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endosulfan I	7.04	U	7.04	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
4,4'-DDE	**95.8**		7.04	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Dieldrin	**24.6**	J	7.04	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endrin	7.04	U	7.04	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
4,4'-DDD	**13.4**	J	7.04	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endosulfan II	7.04	U	7.04	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
4,4'-DDT	**18.3**	J	7.04	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endrin aldehyde	7.04	U	7.04	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endosulfan sulfate	7.04	U	7.04	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Methoxychlor	7.04	U	7.04	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endrin ketone	7.04	U	7.04	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Toxaphene	106	U	106	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*112 %*		*28-166*			*L906186*	*06/23/2009*	*07/02/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*101 %*		*37-153*			*L906186*	*06/23/2009*	*07/02/2009*	*8081A*

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2620 Fermi Avenue	Project Number: K1579	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/17/2009 11:52

J18KD5

0906033-18 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A								
alpha-BHC	6.17 U	6.17	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
gamma-BHC	6.17 U	6.17	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
beta-BHC	6.17 U	6.17	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
delta-BHC	**6.17 J**	6.17	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Heptachlor	6.17 U	6.17	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Aldrin	6.17 U	6.17	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Heptachlor epoxide	6.17 U	6.17	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
gamma-Chlordane	6.17 U	6.17	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
alpha-Chlordane	**53.1**	6.17	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endosulfan I	**22.2 J**	6.17	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
4,4'-DDE	**95.7**	6.17	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Dieldrin	6.17 U	6.17	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endrin	6.17 U	6.17	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
4,4'-DDD	**20.4 J**	6.17	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endosulfan II	**7.41 J**	6.17	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
4,4'-DDT	6.17 U	6.17	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endrin aldehyde	6.17 U	6.17	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endosulfan sulfate	6.17 U	6.17	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Methoxychlor	6.17 U	6.17	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endrin ketone	6.17 U	6.17	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Toxaphene	92.6 U	92.6	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*98.7 %*	*28-166*			*L906186*	*06/23/2009*	*07/02/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*95.1 %*	*37-153*			*L906186*	*06/23/2009*	*07/02/2009*	*8081A*

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Richland WA, 99354	Project Manager: Joan Kessner	07/17/2009 11:52

J18KD6

0906033-19 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A								
alpha-BHC	6.53 U	6.53	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
gamma-BHC	6.53 U	6.53	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
beta-BHC	6.53 U	6.53	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
delta-BHC	6.53 U	6.53	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Heptachlor	6.53 U	6.53	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Aldrin	6.53 U	6.53	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Heptachlor epoxide	6.53 U	6.53	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
gamma-Chlordane	6.53 U	6.53	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
alpha-Chlordane	**41.2**	6.53	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endosulfan I	6.53 U	6.53	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
4,4'-DDE	**83.7**	6.53	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Dieldrin	6.53 U	6.53	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endrin	6.53 U	6.53	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
4,4'-DDD	**9.15 J**	6.53	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endosulfan II	6.53 U	6.53	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
4,4'-DDT	6.53 U	6.53	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endrin aldehyde	6.53 U	6.53	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endosulfan sulfate	6.53 U	6.53	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Methoxychlor	6.53 U	6.53	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endrin ketone	6.53 U	6.53	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Toxaphene	98.0 U	98.0	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*102 %*	*28-166*			*L906186*	*06/23/2009*	*07/02/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*88.0 %*	*37-153*			*L906186*	*06/23/2009*	*07/02/2009*	*8081A*

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1579	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/17/2009 11:52

J18KD7

0906033-20 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A								
alpha-BHC	5.00 U	5.00	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
gamma-BHC	5.00 U	5.00	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
beta-BHC	5.00 U	5.00	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
delta-BHC	**19.0 J**	5.00	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Heptachlor	5.00 U	5.00	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Aldrin	5.00 U	5.00	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Heptachlor epoxide	5.00 U	5.00	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
gamma-Chlordane	5.00 U	5.00	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
alpha-Chlordane	**16.0 J**	5.00	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endosulfan I	5.00 U	5.00	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
4,4'-DDE	**83.0**	5.00	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Dieldrin	5.00 U	5.00	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endrin	5.00 U	5.00	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
4,4'-DDD	**16.0 J**	5.00	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endosulfan II	**10.5 J**	5.00	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
4,4'-DDT	**7.50 J**	5.00	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endrin aldehyde	5.00 U	5.00	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endosulfan sulfate	5.00 U	5.00	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Methoxychlor	5.00 U	5.00	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Endrin ketone	5.00 U	5.00	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Toxaphene	75.0 U	75.0	ug/kg wet	1	L906186	06/23/2009	07/02/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*114 %*	*28-166*			*L906186*	*06/23/2009*	*07/02/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*97.5 %*	*37-153*			*L906186*	*06/23/2009*	*07/02/2009*	*8081A*

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2620 Fermi Avenue	Project Number: K1579	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/17/2009 11:52

Organochlorine Pesticides by SW846 8081A - Quality Control

Lionville Laboratory

Analyte	Result and Qualifier	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L906186 - SW 3540C									
Blank (L906186-BLK1)			Prepared: 06/23/2009 Analyzed: 06/25/2009						
alpha-BHC	0.333 U	0.333	ug/kg wet						
gamma-BHC	0.333 U	0.333	ug/kg wet						
beta-BHC	0.333 U	0.333	ug/kg wet						
delta-BHC	0.333 U	0.333	ug/kg wet						
Heptachlor	0.333 U	0.333	ug/kg wet						
Aldrin	0.333 U	0.333	ug/kg wet						
Heptachlor epoxide	0.333 U	0.333	ug/kg wet						
gamma-Chlordane	0.333 U	0.333	ug/kg wet						
alpha-Chlordane	0.333 U	0.333	ug/kg wet						
Endosulfan I	0.333 U	0.333	ug/kg wet						
4,4'-DDE	0.333 U	0.333	ug/kg wet						
Dieldrin	0.333 U	0.333	ug/kg wet						
Endrin	0.333 U	0.333	ug/kg wet						
4,4'-DDD	0.333 U	0.333	ug/kg wet						
Endosulfan II	0.333 U	0.333	ug/kg wet						
4,4'-DDT	0.333 U	0.333	ug/kg wet						
Endrin aldehyde	0.333 U	0.333	ug/kg wet						
Endosulfan sulfate	0.333 U	0.333	ug/kg wet						
Methoxychlor	0.333 U	0.333	ug/kg wet						
Endrin ketone	0.333 U	0.333	ug/kg wet						
Toxaphene	5.00 U	5.00	ug/kg wet						
Surrogate: Tetrachloro-meta-xylene	*30.2*		*ug/kg wet*	*33.337*		*90.6*	*28-166*		
Surrogate: Decachlorobiphenyl	*23.2*		*ug/kg wet*	*33.333*		*69.7*	*37-153*		
LCS (L906186-BS1)			Prepared: 06/23/2009 Analyzed: 06/25/2009						
alpha-BHC	35.0	0.333	ug/kg wet	33.333		105	61-142		
gamma-BHC	34.8	0.333	ug/kg wet	33.333		104	65-142		
beta-BHC	35.9	0.333	ug/kg wet	33.333		108	71-134		
delta-BHC	35.1	0.333	ug/kg wet	33.333		105	53-144		
Heptachlor	34.1	0.333	ug/kg wet	33.333		102	70-138		
Aldrin	32.7	0.333	ug/kg wet	33.333		98.2	70-143		
Heptachlor epoxide	34.0	0.333	ug/kg wet	33.333		102	72-140		
gamma-Chlordane	33.6	0.333	ug/kg wet	33.333		101	74-140		
alpha-Chlordane	33.7	0.333	ug/kg wet	33.333		101	74-138		
Endosulfan I	34.0	0.333	ug/kg wet	33.333		102	81-141		
4,4'-DDE	35.7	0.333	ug/kg wet	33.333		107	82-145		
Dieldrin	33.6	0.333	ug/kg wet	33.333		101	79-144		
Endrin	34.7	0.333	ug/kg wet	33.333		104	73-147		
4,4'-DDD	32.3	0.333	ug/kg wet	33.333		96.9	77-148		
Endosulfan II	33.6	0.333	ug/kg wet	33.333		101	80-140		
4,4'-DDT	31.0	0.333	ug/kg wet	33.333		92.9	82-142		
Endrin aldehyde	29.8	0.333	ug/kg wet	33.333		89.4	59-133		
Endosulfan sulfate	31.1	0.333	ug/kg wet	33.333		93.4	77-135		

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2620 Fermi Avenue	Project Number: K1579	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	07/17/2009 11:52

Organochlorine Pesticides by SW846 8081A - Quality Control

Lionville Laboratory

Analyte	Result and Qualifier	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L906186 - SW 3540C									
LCS (L906186-BS1)			Prepared: 06/23/2009 Analyzed: 06/25/2009						
Methoxychlor	26.5	0.333	ug/kg wet	33.333		79.6	77-136		
Endrin ketone	29.6	0.333	ug/kg wet	33.333		88.8	85-134		
Surrogate: Tetrachloro-meta-xylene	*31.7*		*ug/kg wet*	*33.337*		*95.1*	*28-166*		
Surrogate: Decachlorobiphenyl	*23.9*		*ug/kg wet*	*33.333*		*71.8*	*37-153*		
Matrix Spike (L906186-MS1)		**Source: 0906033-06**	Prepared: 06/23/2009 Analyzed: 06/25/2009						
alpha-BHC	628	6.53	ug/kg wet	653.59	6.53	96.1	61-142		
gamma-BHC	517	6.53	ug/kg wet	653.59	6.53	79.1	65-142		
beta-BHC	556	6.53	ug/kg wet	653.59	6.53	85.0	71-134		
delta-BHC	488	6.53	ug/kg wet	653.59	6.53	74.6	53-144		
Heptachlor	299	6.53	ug/kg wet	653.59	6.53	45.7*	70-138		
Aldrin	589	6.53	ug/kg wet	653.59	6.53	90.1	70-143		
Heptachlor epoxide	557	6.53	ug/kg wet	653.59	6.53	85.2	72-140		
gamma-Chlordane	508	6.53	ug/kg wet	653.59	6.53	77.7	74-140		
alpha-Chlordane	538	6.53	ug/kg wet	653.59	10.8	80.6	74-138		
Endosulfan I	547	6.53	ug/kg wet	653.59	6.53	83.7	81-141		
4,4'-DDE	654	6.53	ug/kg wet	653.59	82.5	87.4	82-145		
Dieldrin	582	6.53	ug/kg wet	653.59	6.53	89.0	79-144		
Endrin	540	6.53	ug/kg wet	653.59	6.53	82.6	73-147		
4,4'-DDD	929	6.53	ug/kg wet	653.59	19.2	139	77-148		
Endosulfan II	579	6.53	ug/kg wet	653.59	6.53	88.6	80-140		
4,4'-DDT	94.1	6.53	ug/kg wet	653.59	6.53	14.4*	82-142		
Endrin aldehyde	51.0	6.53	ug/kg wet	653.59	6.53	7.80*	59-133		
Endosulfan sulfate	491	6.53	ug/kg wet	653.59	6.53	75.1*	77-135		
Methoxychlor	182	6.53	ug/kg wet	653.59	6.53	27.8*	77-136		
Endrin ketone	424	6.53	ug/kg wet	653.59	6.53	64.8*	85-134		
Surrogate: Tetrachloro-meta-xylene	*519*		*ug/kg wet*	*653.66*		*79.4*	*28-166*		
Surrogate: Decachlorobiphenyl	*399*		*ug/kg wet*	*653.59*		*61.0*	*37-153*		

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Richland WA, 99354	Project Manager: Joan Kessner	07/17/2009 11:52

Organochlorine Pesticides by SW846 8081A - Quality Control

Lionville Laboratory

Analyte	Result and Qualifier	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L906186 - SW 3540C									
Matrix Spike (L906186-MS3)		**Source: 0906033-16**		Prepared: 06/23/2009 Analyzed: 07/02/2009					
alpha-BHC	776	6.53	ug/kg wet	653.59	6.53	119	61-142		
gamma-BHC	769	6.53	ug/kg wet	653.59	6.53	118	65-142		
beta-BHC	712	6.53	ug/kg wet	653.59	6.53	109	71-134		
delta-BHC	608	6.53	ug/kg wet	653.59	12.1	91.3	53-144		
Heptachlor	693	6.53	ug/kg wet	653.59	6.53	106	70-138		
Aldrin	722	6.53	ug/kg wet	653.59	6.53	110	70-143		
Heptachlor epoxide	716	6.53	ug/kg wet	653.59	6.53	110	72-140		
gamma-Chlordane	658	6.53	ug/kg wet	653.59	6.53	101	74-140		
alpha-Chlordane	695	6.53	ug/kg wet	653.59	43.3	99.7	74-138		
Endosulfan I	714	6.53	ug/kg wet	653.59	6.53	109	81-141		
4,4'-DDE	782	6.53	ug/kg wet	653.59	63.8	110	82-145		
Dieldrin	764	6.53	ug/kg wet	653.59	6.53	117	79-144		
Endrin	764	6.53	ug/kg wet	653.59	6.53	117	73-147		
4,4'-DDD	801	6.53	ug/kg wet	653.59	17.0	120	77-148		
Endosulfan II	720	6.53	ug/kg wet	653.59	6.53	110	80-140		
4,4'-DDT	350	6.53	ug/kg wet	653.59	6.53	53.5*	82-142		
Endrin aldehyde	55.6	6.53	ug/kg wet	653.59	6.53	8.50*	59-133		
Endosulfan sulfate	706	6.53	ug/kg wet	653.59	6.53	108	77-135		
Methoxychlor	423	6.53	ug/kg wet	653.59	6.53	64.7*	77-136		
Endrin ketone	697	6.53	ug/kg wet	653.59	6.53	107	85-134		
Surrogate: Tetrachloro-meta-xylene	*676*		*ug/kg wet*	*653.66*		*103*	*28-166*		
Surrogate: Decachlorobiphenyl	*688*		*ug/kg wet*	*653.59*		*105*	*37-153*		
Matrix Spike Dup (L906186-MSD1)		**Source: 0906033-06**		Prepared: 06/23/2009 Analyzed: 06/25/2009					
alpha-BHC	599	6.49	ug/kg wet	649.35	6.49	92.3	61-142	4.69	40
gamma-BHC	514	6.49	ug/kg wet	649.35	6.49	79.1	65-142	0.651	40
beta-BHC	542	6.49	ug/kg wet	649.35	6.49	83.5	71-134	2.43	40
delta-BHC	447	6.49	ug/kg wet	649.35	6.49	68.9	53-144	8.59	40
Heptachlor	454	6.49	ug/kg wet	649.35	6.49	69.9*	70-138	41.2*	40
Aldrin	574	6.49	ug/kg wet	649.35	6.49	88.4	70-143	2.56	40
Heptachlor epoxide	505	6.49	ug/kg wet	649.35	6.49	77.8	72-140	9.73	40
gamma-Chlordane	456	6.49	ug/kg wet	649.35	6.49	70.2*	74-140	10.8	40
alpha-Chlordane	534	6.49	ug/kg wet	649.35	10.8	80.5	74-138	0.773	40
Endosulfan I	464	6.49	ug/kg wet	649.35	6.49	71.4*	81-141	16.5	40
4,4'-DDE	570	6.49	ug/kg wet	649.35	82.5	75.1*	82-145	13.6	40
Dieldrin	497	6.49	ug/kg wet	649.35	6.49	76.6*	79-144	15.6	40
Endrin	516	6.49	ug/kg wet	649.35	6.49	79.4	73-147	4.60	40
4,4'-DDD	702	6.49	ug/kg wet	649.35	19.2	105	77-148	27.9	40
Endosulfan II	547	6.49	ug/kg wet	649.35	6.49	84.3	80-140	5.62	40
4,4'-DDT	160	6.49	ug/kg wet	649.35	6.49	24.6*	82-142	51.7*	40
Endrin aldehyde	43.5	6.49	ug/kg wet	649.35	6.49	6.70*	59-133	15.8	40
Endosulfan sulfate	456	6.49	ug/kg wet	649.35	6.49	70.2*	77-135	7.40	40
Methoxychlor	210	6.49	ug/kg wet	649.35	6.49	32.3*	77-136	14.3	40

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Organochlorine Pesticides by SW846 8081A - Quality Control

Lionville Laboratory

Analyte	Result and Qualifier	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L906186 - SW 3540C									
Matrix Spike Dup (L906186-MSD1)		**Source: 0906033-06**		Prepared: 06/23/2009 Analyzed: 06/25/2009					
Endrin ketone	388	6.49	ug/kg wet	649.35	6.49	59.8*	85-134	8.68	40
Surrogate: Tetrachloro-meta-xylene	*496*		*ug/kg wet*	*649.42*		*76.4*	*28-166*		
Surrogate: Decachlorobiphenyl	*350*		*ug/kg wet*	*649.35*		*53.9*	*37-153*		
Matrix Spike Dup (L906186-MSD3)		**Source: 0906033-16**		Prepared: 06/23/2009 Analyzed: 07/02/2009					
alpha-BHC	659	6.36	ug/kg wet	636.94	6.36	104	61-142	16.3	40
gamma-BHC	621	6.36	ug/kg wet	636.94	6.36	97.5	65-142	21.3	40
beta-BHC	580	6.36	ug/kg wet	636.94	6.36	91.1	71-134	20.4	40
delta-BHC	513	6.36	ug/kg wet	636.94	12.1	78.7	53-144	17.0	40
Heptachlor	586	6.36	ug/kg wet	636.94	6.36	92.0	70-138	16.7	40
Aldrin	606	6.36	ug/kg wet	636.94	6.36	95.2	70-143	17.4	40
Heptachlor epoxide	603	6.36	ug/kg wet	636.94	6.36	94.6	72-140	17.3	40
gamma-Chlordane	561	6.36	ug/kg wet	636.94	6.36	88.0	74-140	16.0	40
alpha-Chlordane	592	6.36	ug/kg wet	636.94	43.3	86.1	74-138	16.0	40
Endosulfan I	608	6.36	ug/kg wet	636.94	6.36	95.5	81-141	16.0	40
4,4'-DDE	662	6.36	ug/kg wet	636.94	63.8	94.0	82-145	16.6	40
Dieldrin	640	6.36	ug/kg wet	636.94	6.36	100	79-144	17.7	40
Endrin	629	6.36	ug/kg wet	636.94	6.36	98.7	73-147	19.4	40
4,4'-DDD	765	6.36	ug/kg wet	636.94	17.0	117	77-148	4.56	40
Endosulfan II	625	6.36	ug/kg wet	636.94	6.36	98.2	80-140	14.1	40
4,4'-DDT	292	6.36	ug/kg wet	636.94	6.36	45.8*	82-142	18.1	40
Endrin aldehyde	55.4	6.36	ug/kg wet	636.94	6.36	8.70*	59-133	0.255	40
Endosulfan sulfate	562	6.36	ug/kg wet	636.94	6.36	88.2	77-135	22.7	40
Methoxychlor	320	6.36	ug/kg wet	636.94	6.36	50.2*	77-136	27.8	40
Endrin ketone	569	6.36	ug/kg wet	636.94	6.36	89.3	85-134	20.2	40
Surrogate: Tetrachloro-meta-xylene	*608*		*ug/kg wet*	*637.01*		*95.4*	*28-166*		
Surrogate: Decachlorobiphenyl	*425*		*ug/kg wet*	*636.94*		*66.7*	*37-153*		

PREPARATION BENCH SHEET

L906186

Lionville Laboratory

inted: 6/25/2009 12:19:34PM

Matrix: Solid **Prepared using: GC - SW 3540C** **Surrogate used: 0901128**

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
0906033-01	8081A TCL Pesticides	06/23/2009 13:30	1.24	10				250	WC-Hanford, Inc.	
0906033-02	8081A TCL Pesticides	06/23/2009 13:30	1.04	10				250	WC-Hanford, Inc.	
0906033-03	8081A TCL Pesticides	06/23/2009 13:30	1.15	10				250	WC-Hanford, Inc.	
0906033-04	8081A TCL Pesticides	06/23/2009 13:30	1.21	10				250	WC-Hanford, Inc.	
0906033-05	8081A TCL Pesticides	06/23/2009 13:30	1.15	10				250	WC-Hanford, Inc.	
0906033-06	8081A TCL Pesticides	06/23/2009 13:30	1.2	10				250	WC-Hanford, Inc.	
0906033-07	8081A TCL Pesticides	06/23/2009 13:30	1.15	10				250	WC-Hanford, Inc.	
0906033-08	8081A TCL Pesticides	06/23/2009 13:30	1.32	10				250	WC-Hanford, Inc.	
0906033-09	8081A TCL Pesticides	06/23/2009 13:30	1.5	10				250	WC-Hanford, Inc.	
0906033-10	8081A TCL Pesticides	06/23/2009 13:30	1.24	10				250	WC-Hanford, Inc.	
0906033-11	8081A TCL Pesticides	06/23/2009 13:30	1.45	10				250	WC-Hanford, Inc.	
0906033-12	8081A TCL Pesticides	06/23/2009 13:30	1.51	10				250	WC-Hanford, Inc.	
0906033-13	8081A TCL Pesticides	06/23/2009 13:30	1.67	10				250	WC-Hanford, Inc.	
0906033-14	8081A TCL Pesticides	06/23/2009 13:30	1.57	10				250	WC-Hanford, Inc.	
0906033-15	8081A TCL Pesticides	06/23/2009 13:30	1.3	10				250	WC-Hanford, Inc.	
0906033-16	8081A TCL Pesticides	06/23/2009 13:30	1.41	10				250	WC-Hanford, Inc.	
0906033-17	8081A TCL Pesticides	06/23/2009 13:30	1.42	10				250	WC-Hanford, Inc.	
0906033-18	8081A TCL Pesticides	06/23/2009 13:30	1.62	10				250	WC-Hanford, Inc.	
0906033-19	8081A TCL Pesticides	06/23/2009 13:30	1.53	10				250	WC-Hanford, Inc.	
0906033-20	8081A TCL Pesticides	06/23/2009 13:30	2	10				250	WC-Hanford, Inc.	
L906186-BLK1	QC	06/23/2009 13:30	30	10				250		
L906186-BS1	QC	06/23/2009 13:30	30	10	0901105		250	250		
L906186-MS1	QC	06/23/2009 13:30	1.53	10	0901105	0906033-06	250	250		

Spiking Witnessed By Date | Preparation Reviewed By 6/25/09 1220 Date | Extracts Received By G Lock 6.25.09 12:40. Date

PREPARATION BENCH SHEET

L906186

Lionville Laboratory

Printed: 6/25/2009 12:19:34PM

Matrix: Solid **Prepared using: GC - SW 3540C** **Surrogate used: 0901128**

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
L906186-MS2	QC	06/23/2009 13:30	1.56	10	0901105	0906033-06	250	250		on hold do not run
L906186-MS3	QC	06/23/2009 13:30	1.53	10	0901105	0906033-16	250	250		
L906186-MS4	QC	06/23/2009 13:30	30	10	0901105	0906033-16	250	250		on hold do not run
L906186-MSD1	QC	06/23/2009 13:30	1.54	10	0901105	0906033-06	250	250		
L906186-MSD2	QC	06/23/2009 13:30	1.57	10	0901105	0906033-06	250	250		on hold do not run
L906186-MSD3	QC	06/23/2009 13:30	1.57	10	0901105	0906033-16	250	250		
L906186-MSD4	QC	06/23/2009 13:30	30	10	0901105	0906033-16	250	250		on hold do not run

Spiking Witnessed By Date

Preparation Reviewed By 6/25/09 1220 Date

SZak 6.25.09 12:20 Extracts Received By Date

Lionville Laboratory Use Only: 0906033

Custody Transfer Record/Lab Work Request

Page 1 of 2

See SRC

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

A Freezer (Utility Room)

Client: WC. Hanford SAF# RC-118

Est. Final Proj. Sampling Date:

Project#: 60049-001-001-0001

Project Contact/Phone#:

Lionville Laboratory Project Manager: Arlette Johnson

QC: SW846 Del: STD TAT: 30 days

Date Rec'd: 6-11-09 Date Due: 7-11-09

Refrigerator #				2-												
#/Type Container	Liquid															
	Solid			1pl						1						
Volume	Solid			500						1						
Preservatives				–												
ANALYSES REQUESTED →		VOA	BNA	Pest/PCB	Herb				(3) Metal + HS	CN						
				0608H					MetO							

Lionville Laboratory Use Only

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	Pest/PCB	Metal + HS
01	J18J59			SO	4-1-09	11:55	X	X
02	J18J60					12:00	X	X
03	J18J61					12:05	X	X
04	J18J62					12:15	X	X
05	J18J63					12:20	X	X
06	J18K11					11:00	X	X
07	J18K12					11:05	X	X
08	J18K13					11:12	X	X
09	J18K14					11:18	X	X
10	J18K15					11:21	X	X

Special Instructions: Run Matrix QC

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

Special Instructions:
1. * Matrix Composed of Fish.
2.
3.
4.
5.
6.

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	6-11-09	0955

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
ORIGINAL REWRITTEN			COMPOSITE

25SB00000052

Lionville Laboratory Use Only
0906033

Custody Transfer Record/Lab Work Request

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

A2 Freezer (Utility Room)

LVLI

Client WC Hanford SAF RC-118

Est. Final Proj. Sampling Date

Project# See Pg 1

Project Contact/Phone#

Lionville Laboratory Project Manager Arlitta Johnson

QC _____ Del _____ TAT _____

Date Rec'd 6-11-09 Date Due

Refrigerator #				2												
#/Type Container	Liquid															
	Solid			1pl												
Volume	Solid			500												
Preservatives				—												
ANALYSES REQUESTED →		ORGANIC							INORG							
		VOA	BNA	Pest/PCB	Herb				(5) Metal Hg	CN						
Lionville Laboratory Use Only				06084					Met(5)							

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													
11	J18K52			SO	4-09	0953			X					X					
12	J18K53					1000			X					X					
13	J18K54					1005			X					X					
14	J18K55					1010			X					X					
15	J18K56					1018			X					X					
16	J18KD3					0855			X					X					
17	J18KD4					0903			X					X					
18	J18KD5					0912			X					X					
19	J18KD6					0917			X					X					
20	J18KD7					0925			X					X					

Special Instructions:

Special Instructions:

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

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	6-11-09	0955

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-16	Page 1 of 1

Collector: Kevin Crouna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF1, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fedex 796405004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS

SDG# K1579 (7351)

Sample No.	Matrix *	Sample Date	Sample Time										
Preservation				None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container				G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)				1	0	0	0	0	0	0			
Volume				750g	2g	25g	5g	5g	15g	50g			
				See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
J18J59	OTHER SOLID	4/1/09	11:55hrs	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From: Kevin Crouna		4/1/09 1158	Received By/Stored In: EAS Locked Storage	4/1/09 1158
Relinquished By/Removed From: EAS LOCKED STORAGE		4/2/09 1110	Received By/Stored In: SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON		4/2/09 1110	Received By/Stored In: FEDEX 796405004446	
Relinquished By/Removed From: FEDEX			Received By/Stored In: REMTRWATTN	04/03/09 09 30
Relinquished By/Removed From: Alex Kelenson KELENSON		6/10/09 16:00	Received By/Stored In: FED EX	
Relinquished By/Removed From: FED EX		6.11.09/0955	Received By/Stored In: D. Smith	6.11.09/0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09.

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

888888834

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-17	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF2, LIV/KID	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES// LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FedEx 7964850444 6	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage
COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS
SD64 K1579 (7351)

			Preservation	None	None	None	None	None	Cool 4C	Cool 4C		
			Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG		
			No. of Container(s)	1	0	0	0	0	0	0		
			Volume	750g	2g	25g	5g	5g	15g	50g		
				See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions	Pesticides - 8081		
Sample No.	Matrix *	Sample Date	Sample Time									
J18J60	OTHER SOLID	4/1/09	1200hrs	X	X	X	X	X	X	X		

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Kevin Cranna	Date/Time: 4/1/09 12:03	Received By/Stored In: EAS Locked Storage	Date/Time: 4/1/09 12:07
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 4/2/09 1102	Received By/Stored In: FedEx 7964850444 6	Date/Time:
Relinquished By/Removed From: FED EX	Date/Time:	Received By/Stored In: R.F. MATAKAS	Date/Time: 04/03/09 0930
Relinquished By/Removed From: Alex Kelensky KELENSKY	Date/Time: 16:00 6/10/09	Received By/Stored In: FED EX	Date/Time:
Relinquished By/Removed From: FED EX	Date/Time: 6/11/09 0955	Received By/Stored In:	Date/Time: 6/11/09 0955

SPECIAL INSTRUCTIONS
Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/1/09

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

9999999835

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-18	Page 1 of 1

Collector: Kevin Crumm	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF3, LIV/KID	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: [illegible] 7964850044 46	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG				
No. of Container(s)	1	0	0	0	0	0	0				
Volume	750g	2g	25g	5g	5g	15g	50g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081				
SDG# K1579 (7351)											
Sample No. / Matrix * / Sample Date / Sample Time											
J18J61 / OTHER SOLID / 4/1/09 / 1205 hrs	X	X	X	X	X	X	X				

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Kevin Crumm	4/1/09 1207	Received By/Stored In: EAS locked storage	4/1/09 1207
Relinquished By/Removed From: EAS LOCKED STORAGE	4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	4/2/09 1100	Received By/Stored In: FED EX 7964850044 46	
Relinquished By/Removed From: FED EX		Received By/Stored In: N.F. NATALIANSN	04/03/09 0930
Relinquished By/Removed From: Alex Kellum	16:00 6/10/09	Received By/Stored In: FED EX	
Relinquished By/Removed From: FED EX	6.11.09 10955	Received By/Stored In: [illegible]	6.11.09 10955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

9999999935

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-19	Page 1 of 1

Collector	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF4, LIV/KID	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FEDEX 7964950 4446	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage
COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG				
No. of Container(s)	1	0	0	0	0	0	0				
Volume	750g	2g	25g	5g	5g	15g	50g				

SAMPLE ANALYSIS

SDG# K1579 (7351)

Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
J18J62	OTHER SOLID	4/1/09	1215hrs	X	X	X	X	X	X	X			

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Cummins	4/1/09 1216	EAS locked storage	4/1/09 1218
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	FEDEX 7964950 4446	
FED EX		R.F. MATAWATAN	04/03/09 0932
Alex Kelenson KELENSON	6/10/09 16:00	FEDEX	
FEDEX	6.11.09/0955	D. Smith	6.11.09/0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

9999999837

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-20	Page 1 of 1

Collector: Kevin Crumm	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF5, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FEDEX 7964650044 46

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS

SDG # K1579 (7351)

Preservation				None	None	None	None	None	Cool 4C	Cool 4C		
Type of Container				G/P	G/P	G	G/P	G/P	G/P	aG		
No. of Container(s)				1	0	0	0	0	0	0		
Volume				750g	2g	25g	5g	5g	15g	50g		
Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081		
J18J63	OTHER SOLID	4/1/09	1220hrs	X	X	X	X	X	X	X		

CHAIN OF POSSESSION	Sign/Print Names	Date/Time
Relinquished By/Removed From: Kevin Crumm	Received By/Stored In: EAS locked storage	4/1/09 1222
Relinquished By/Removed From: EAS LOCKED STORAGE	Received By/Stored In: SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	Received By/Stored In: FEDEX 7964650044 46	4/2/09 1100
Relinquished By/Removed From: FED EX	Received By/Stored In: R.F. OLATKOWITAN	04/03/09 0930
Relinquished By/Removed From: Rex Kellerson KELLERSON	Received By/Stored In: FEDEX	6/10/09 16:00
Relinquished By/Removed From: FEDEX	Received By/Stored In: D. Smith	6.11.09/0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-56	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WF1, LIV/KID	SAF No.: RC-118	
Ice Chest No.: AES-04-017	Field Logbook No.: 1633 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FedEx 796485004446	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS

SDG# K1579 (7351)

			Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
			Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
			No. of Container(s)	1	0	0	0	0	0	0			
			Volume	750g	2g	25g	5g	5g	15g	50g			
				See item (1) in Special Instructions	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
Sample No.	Matrix *	Sample Date	Sample Time										
J18K11	OTHER SOLID	4/1/09	1100hrs	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Kevin Cranna	4/1/09 1102	EAS locked storage	4/1/09 1102
Relinquished By/Removed From: EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	4/2/09 1100	FEDEX 796485004446	
Relinquished By/Removed From: FED EX		R.F. WATANABE	04/03/09 0930
Relinquished By/Removed From: Alex Kelenov	16:00 KELENOV 6/10/09	FEDEX	
Relinquished By/Removed From: FedEx	6-11-09/0955	[illegible]	6-11-09/0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

9999999939

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-57	Page 1 of 1

Collector: Kevin Crouna	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WF2, LIV/KID	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FedEx 796485004446	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage
COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS
SDG# K1579 (7351)

			Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
			Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
			No. of Container(s)	1	0	0	0	0	0	0			
			Volume	750g	2g	25g	5g	5g	15g	50g			
				See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
Sample No.	Matrix *	Sample Date	Sample Time										
J18K12	OTHER SOLID	4/1/09	1105 hrs	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By/Removed From: Kevin Crouna — Date/Time: 4/1/09 1107	Received By/Stored In: EAS locked storage — Date/Time: 4/1/09 1107	Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical. (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; Isotopic Uranium; 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) Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09	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: EAS LOCKED STORAGE — Date/Time: 4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON — Date/Time: 4/2/09 1100		
Relinquished By/Removed From: SHANNAN JOHNSON — Date/Time: 4/2/09 1100	Received By/Stored In: FEDEX 796485004446 — Date/Time:		
Relinquished By/Removed From: FEDEX — Date/Time:	Received By/Stored In: RF-WATAWA — Date/Time: 04/03/09 0930		
Relinquished By/Removed From: Alex Kellerhof KELLENSON — Date/Time: 16:00 6/10/09	Received By/Stored In: FEDEX — Date/Time:		
Relinquished By/Removed From: FEDEX — Date/Time: 6.11.09/0955	Received By/Stored In: [signature] — Date/Time: 6.11.09 0955		

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-118-58	Page 1 of 1

Collector: Kevin Gamma	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WF3, LIV/KID	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: Fedex 796485004446	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage
COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS
SDG# K1579 (7351)

Preservation				None	None	None	None	None	Cool 4C	Cool 4C		
Type of Container				G/P	G/P	G	G/P	G/P	G/P	aG		
No. of Container(s)				1	0	0	0	0	0	0		
Volume				750g	2g	25g	5g	5g	15g	50g		
Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081		
J18K13	OTHER SOLID	4/1/09	1112	X	X	X	X	X	X	X		

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Gamma	4/1/09 1115	EAS locked storage	4/1/09 1115
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	FEDEX 796485004446	
FED EX		R.F. MATHUSANTA	04/03/09 0930
Alex Kelentsov KELENSOV	6/10/09 16:00	FEDEX	
FEDEX	6-11-09/0955		6-11-09/0955

SPECIAL INSTRUCTIONS
Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

888888941

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-59	Page 1 of 1

Collector: Kevin Crouna	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WF4, LIV/KID	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: Fedx# 796485004466	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG				
No. of Container(s)	1	0	0	0	0	0	0				
Volume	750g	2g	25g	5g	5g	15g	50g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081				
SDG# (K1579) (7351)											
Sample No. / Matrix * / Sample Date / Sample Time											
J18K14 / OTHER SOLID / 4/1/09 / 1118hrs	X	X	X	X	X	X	X				

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Kevin Crouna	4/1/09 1120	EAS locked storage	4/1/09 1120
Relinquished By/Removed From: EAS LOCKED STORAGE	4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	4/2/09 1100	Received By/Stored In: FED EX	
Relinquished By/Removed From: FED EX		Received By/Stored In: R.F. NEATAWATAN	04/03/09 0926
Relinquished By/Removed From: Alex Kelinfelter RECEPTION	6/10/09 16:00	Received By/Stored In: FEDEX	
Relinquished By/Removed From: FEDEX	6.11.09/0955	Received By/Stored In:	6.11.09/0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

2790000042

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-60	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WF5, LIV/KID		SAF No.: RC-118
Ice Chest No.: A FS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fdx# 796485004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS

SDG # K1579 (7351)

			Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
			Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
			No. of Container(s)	1	0	0	0	0	0	0			
			Volume	750g	2g	25g	5g	5g	15g	50g			
				See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
Sample No.	Matrix *	Sample Date	Sample Time										
J18K15	OTHER SOLID	4/1/09	1121 hrs	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Sign/Print Names	Date/Time
Relinquished By/Removed From: Kevin Cranna	Received By/Stored In: EAS locked storage	4/1/09 1123
Relinquished By/Removed From: EAS LOCKED STORAGE	Received By/Stored In: SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	Received By/Stored In: FEDEX 796485004446	4/2/09 1100
Relinquished By/Removed From: FEDEX	Received By/Stored In: [illegible]	04/03/09 09[illegible]
Relinquished By/Removed From: Rex Kelleher KELLEHER	Received By/Stored In: FEDEX	6/10/09 16:00
Relinquished By/Removed From: [illegible]	Received By/Stored In: [illegible]	6.11.09 0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

888888843

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-96	Page 1 of 1

Collector: Kevin Crawna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WF1, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fdx# 796405004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS

SDG# K1579 (7352)

Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
No. of Container(s)	1	0	0	0	0	0	0			
Volume	750g	2g	25g	5g	5g	15g	50g			
	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
Sample No.	Matrix *	Sample Date	Sample Time									
J18K52	OTHER SOLID	4/1/09	~~1053 hrs~~ 0953 hrs RC 4/1/09	X	X	X	X	X	X	X		

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Kevin Crawna	4/1/09 0955	Received By/Stored In: EAS locked storage	4/1/09 0955
Relinquished By/Removed From: EAS LOCKED STORAGE	4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	4/2/09 1100	Received By/Stored In: FEDEX 796405004446	
Relinquished By/Removed From: FED EX		Received By/Stored In: TLF. NATHAN PARKER	04/07/09 0930
Relinquished By/Removed From: Alex Kelenson KELENSON	6/10/09 16:00	Received By/Stored In: FEDEX	
Relinquished By/Removed From: FEDEX	6.11.09/0955	Received By/Stored In: [signature]	6.11.09/0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-97	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WF2, LIV/KID	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES /LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: Fdx# 7984050044 40	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage
COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS
SDG# K1579 (7352)

			Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
			Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
			No. of Container(s)	1	0	0	0	0	0	0			
			Volume	750g	2g	25g	5g	5g	15g	50g			
				See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
Sample No.	Matrix *	Sample Date	Sample Time										
J18K53	OTHER SOLID	4/1/09	1000 hrs	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By/Removed From: Kevin Cranna — Date/Time: 4/1/09 1002	Received By/Stored In: EAS Locked Storage — Date/Time: 4/1/09 1002	Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.	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: EAS LOCKED STORAGE — Date/Time: 4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON — Date/Time: 4/2/09 1100	(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; Isotopic Uranium; 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)	
Relinquished By/Removed From: SHANNAN JOHNSON — Date/Time: 1100 4/2/09	Received By/Stored In: Fdx# 7984850044 46 — Date/Time:		
Relinquished By/Removed From: FED EX — Date/Time:	Received By/Stored In: MF-MATAWANDA — Date/Time: 04/03/09 0930		
Relinquished By/Removed From: Alex Kelenson KELENSON — Date/Time: 16:00 6/10/09	Received By/Stored In: FEDEX — Date/Time:	Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09	
Relinquished By/Removed From: FEDEX — Date/Time: 6-11-09 0955	Received By/Stored In: [signature] — Date/Time: 6-11-09 0955		

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

WCH-EE-011

5798888845

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-98	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WF3, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fedx# 796485004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

SDG# K1579 (7352)

SAMPLE ANALYSIS

			Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
			Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
			No. of Container(s)	1	0	0	0	0	0	0			
			Volume	750g	2g	25g	5g	5g	15g	50g			
				See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
Sample No.	Matrix *	Sample Date	Sample Time										
J18K54	OTHER SOLID	4/1/09	1005	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Sign/Print Names	Date/Time
Relinquished By/Removed From: Kevin Cranna	Received By/Stored In: EAS locked storage	4/1/09 1007
Relinquished By/Removed From: EAS LOCKED STORAGE	Received By/Stored In: SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	Received By/Stored In: Fdx# 796485004446	4/2/09 1100
Relinquished By/Removed From: FED EX	Received By/Stored In: [illegible]	04/07/09 0970
Relinquished By/Removed From: Alex Kelenson KELENSON	Received By/Stored In: FED EX	6/10/09 16:00
Relinquished By/Removed From: FED EX	Received By/Stored In: [illegible]	6-11-09 0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

9966996645

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-99	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WF4, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FedEx# 796405004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage
COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG				
No. of Container(s)	1	0	0	0	0	0	0				
Volume	750g	2g	25g	5g	5g	15g	50g				
SAMPLE ANALYSIS SDG# K1579 (7352)	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081				
Sample No.	Matrix *	Sample Date	Sample Time								
J18K55	OTHER SOLID	4/1/09	1010 hrs	X	X	X	X	X	X	X	

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Kevin Cranna	4/1/09 1013	Received By/Stored In: EAS locked storage	4/1/09 1013
Relinquished By/Removed From: EAS LOCKED STORAGE	4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	4/2/09 1100	Received By/Stored In: Fedex# 796405004446	
Relinquished By/Removed From: FED EX		Received By/Stored In: RF	04/03/09 0930
Relinquished By/Removed From: Alex Kelenson KELENSON	6/10/09 16:00	Received By/Stored In: FEDEX	
Relinquished By/Removed From: FedEx	6-11-09/0955	Received By/Stored In:	6-11-09/0955

SPECIAL INSTRUCTIONS
Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

9999999647

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-100	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WF5, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fedex# 796405004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	G/P	G/P	G/P	nG				
No. of Container(s)	1	0	0	0	0	0	0				
Volume	750g	2g	25g	5g	5g	15g	50g				

SAMPLE ANALYSIS

SDG# K1579 (7352)

Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
J18K56	OTHER SOLID	4/1/09	1018hrs	X	X	X	X	X	X	X			

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Cranna	4/1/09 1020	EAS locked storage	4/1/09 1020
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	Fedex# 796405004446	
FED EX		TLF WATKINS	04/07/09 0930
Alex Kelleher / KELLEHER	6/10/09 16:00	FEDEX	
FEDEX	6.11.09 10955		6.11.09 10955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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-118-131	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-WF1, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fdx# 796485004443

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG				
No. of Container(s)	1	0	0	0	0	0	0				
Volume	750g	2g	25g	5g	5g	15g	50g				

SAMPLE ANALYSIS

SDG# K1579 (7352)

Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
J18KD3	OTHER SOLID	4/1/09	0855	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Kevin Cranna	4/1/09 0900	Received By/Stored In: EAS locked storage	4/1/09 0900
Relinquished By/Removed From: EAS LOCKED STORAGE	4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	4/2/09 1100	Received By/Stored In: FEDEX 796485004446	
Relinquished By/Removed From: FED EX		Received By/Stored In: RF Lethbridge	04/07/09 0930
Relinquished By/Removed From: KELENSON	6/10/09 16:00	Received By/Stored In: FEDEX	
Relinquished By/Removed From: FEDEX	6-11-09 0955	Received By/Stored In:	6-11-09 0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

6498888849

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-132	Page 1 of 1

Collector: Kevin Crenna	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-WF2, LIV/KID	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: Fdx# 796485004446	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage
COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS
SDG# K1579 (7352)

Preservation				None	None	None	None	None	Cool 4C	Cool 4C		
Type of Container				G/P	G/P	G	G/P	G/P	G/P	aG		
No. of Container(s)				1	0	0	0	0	0	0		
Volume				750g	2g	25g	5g	5g	15g	50g		
				See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081		
Sample No.	Matrix *	Sample Date	Sample Time									
J18KD4	OTHER SOLID	4/1/09	0903	X	X	X	X	X	X	X		

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Kevin Crenna	Date/Time: 4/1/09 0903	Received By/Stored In: EAS storage (locked)	Date/Time: 4/1/09 0905
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 4/2/09 1100	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 1100 4/2/09	Received By/Stored In: FDX# 796485004446	Date/Time
Relinquished By/Removed From: FED EX	Date/Time	Received By/Stored In: FLF MATRIX HAN	Date/Time: 04/03/09 0930
Relinquished By/Removed From: Alex Kellum	Date/Time: 16:00 KELLENSON 6/10/09	Received By/Stored In: FEDEX	Date/Time
Relinquished By/Removed From:	Date/Time: 6-11-09/0955	Received By/Stored In:	Date/Time: 6-11-09/0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

8999000958

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-133	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-WF3, LIV/KID		SAF No.: RC-118
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: Fdx# 796485004446

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	None	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG				
No. of Container(s)	1	0	0	0	0	0	0				
Volume	750g	2g	25g	5g	5g	15g	50g				

SAMPLE ANALYSIS

SDG# K1579 (7352)

Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
J18KD5	OTHER SOLID	4/1/09	0912	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Sign/Print Names	Date/Time
Relinquished By/Removed From: Kevin Cranna	Received By/Stored In: EAS locked Stor	4/1/09 0915
Relinquished By/Removed From: EAS LOCKED STORAGE	Received By/Stored In: SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	Received By/Stored In: Fdx# 796485004446	4/2/09 1100
Relinquished By/Removed From: FED EX	Received By/Stored In: R.F. Nelthurman	04/03/09 0970
Relinquished By/Removed From: Alex Kelenson KELENSON	Received By/Stored In: FEDEX	6/10/09 16:00
Relinquished By/Removed From: FEDEX	Received By/Stored In: [illegible]	6-11-09 0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

888888851

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-134	Page 1 of 1

Collector: Kevin Cranna	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-WF4, LIV/KID	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: Fdx# 796405004446	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS

SDG# K1579 (7352)

			Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
			Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
			No. of Container(s)	1	0	0	0	0	0	0			
			Volume	750g	2g	25g	5g	5g	15g	50g			
				See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
Sample No.	Matrix *	Sample Date	Sample Time										
J18KD6	OTHER SOLID	4/1/09	0917	X	X	X	X	X	X	X			

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Kevin Cranna	4/1/09 0920	EAS locked storage	4/1/09 0920
EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
SHANNAN JOHNSON	4/2/09 1100	FDX# 796405004446	
FED EX		R.F. [illegible]	04/03/09 0930
Alex Kelleher	6/10/09 16:00	FEDEX	
[illegible]	6/11/09 0955	[illegible]	6/11/09 0955

SPECIAL INSTRUCTIONS

Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09.

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

00000852

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-135	Page 1 of 1

Collector: Kevin Cramm	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-WF5, LIV/KID	SAF No.: RC-118	
Ice Chest No.: AFS-04-017	Field Logbook No.: 1633 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: Fedex 796485004446	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage
COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS
SDG# K1579 (7352)

			Preservation	None	None	None	None	None	Cool 4C	Cool 4C			
			Type of Container	G/P	G/P	G	G/P	G/P	G/P	aG			
			No. of Container(s)	1	0	0	0	0	0	0			
			Volume	750g	2g	25g	5g	5g	15g	50g			
				See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	Technetium-99	See item (3) in Special Instructions.	Pesticides - 8081			
Sample No.	Matrix *	Sample Date	Sample Time										
J18KD7	OTHER SOLID	4/1/09	0925	X	X	X	X	X	X	X			

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Kevin Cramm	4/1/09 0930	EAS locked storage	4/1/09 0930
Relinquished By/Removed From: EAS LOCKED STORAGE	4/2/09 1100	SHANNAN JOHNSON	4/2/09 1100
Relinquished By/Removed From: SHANNAN JOHNSON	4/2/09 1100	FedEx# 796485004446	
Relinquished By/Removed From: FED EX		Received By/Stored In: T.F. WATKINS	06/03/09 0930
Relinquished By/Removed From: Alex Kelemen	6/10/09 16:00	Received By/Stored In: FEDEX	
Relinquished By/Removed From: FEDEX	6/11/09 0955	Received By/Stored In: [illegible]	6/11/09 0955

SPECIAL INSTRUCTIONS
Perform gamma spec then contact Joan Kessner for additional anaysis. Maintain 4C cooling as practical.

(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; Isotopic Uranium; 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)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 4/2/09

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

0008888553

Eberline Srvces CHAIN OF CUSTODY ORD # R9-06-041

06/10/09 09:43:58 WORK ID: SAF# RC-118 SDG# K1579

RCVD: 06/09/09 DUE: 07/24/09 KEEP: 07/24/10 DISP: S

SDG# K1579 (7351 & 7352)

DASH	SAMPLE IDENTIFICATION	STORED	TESTS
01A-X	J18J59	LIONVILLE	MISCEN
02A-X	J18J60	LIONVILLE	MISCEN
03A-X	J18J61	LIONVILLE	MISCEN
04A-X	J18J62	LIONVILLE	MISCEN
05A-X	J18J63	LIONVILLE	MISCEN
06A-X	J18K11	LIONVILLE	MISCEN
07A-X	J18K12	LIONVILLE	MISCEN
08A-X	J18K13	LIONVILLE	MISCEN
09A-X	J18K14	LIONVILLE	MISCEN
10A-X	J18K15	LIONVILLE	MISCEN
11A-X	J18K52	LIONVILLE	MISCEN
12A-X	J18K53	LIONVILLE	MISCEN
13A-X	J18K54	LIONVILLE	MISCEN
14A-X	J18K55	LIONVILLE	MISCEN
15A-X	J18K56	LIONVILLE	MISCEN
16A-X	J18KD3	LIONVILLE	MISCEN
17A-X	J18KD4	LIONVILLE	MISCEN
18A-X	J18KD5	LIONVILLE	MISCEN
19A-X	J18KD6	LIONVILLE	MISCEN
20A-X	J18KD7	LIONVILLE	MISCEN

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
Alex Kelenhard	6/10/09	LIONVILLE	6/10/09		
[illegible]	6-11-09			[illegible]	6-11-09

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: WC. Hanford Date: 6 11 09

Project/SAF/SOW/Release #: RC-118

LvLI Batch #: 0906033 Sample Custodian: [illegible]

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier FedEx		Airbill # 7966 8366 297
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 plastic bag and easily accessible?	☑ Yes	☐ No	
5. Samples received cooled or ambient?	Temp 5.8	°C	Cooler # AFS-04-017
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