008225

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

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 6/24/09
INITIAL/DATE

COMMENTS:

SDG K1618 **SAF-RC-118**

Rad only Chem only ☑ Rad & Chem

☑ Complete Partial

Sampling Location:

UPRIVER SA-WF1, FILLET
UPRIVER SA-WF2, FILLET
UPRIVER SA-WF3, FILLET
UPRIVER SA-WF4, FILLET
UPRIVER SA-WF5, FILLET
UPRIVER SA-WF1, CARCASS
UPRIVER SA-WF2, CARCASS
UPRIVER SA-WF3, CARCASS
UPRIVER SA-WF4, CARCASS
UPRIVER SA-WF5, CARCASS
100SA-WF5, FILLET
100SA-WF5, CARCASS

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JUL 0 1 2009
EDMC

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

June 12, 2009

RECEIVED
JUN 2009

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

Reference: **P.O. #S00W235A00**
Eberline Analytical R9-05-038-7371, SDG K1618

Dear Ms. Kessner:

Enclosed is a data report for twelve solid (other solid) samples designated under SAF No. RC-118 received at Eberline Analytical on May 6, 2009. The samples were analyzed according to the accompanying chain-of-custody documents.

Please call if you have any questions concerning this report.

Sincerely,

N. Joseph Verville
Client Services Manager

NJV/ljb

Enclosure: Data Package

1.0 GENERAL

Washington Closure Hanford (WCH) Sample Delivery Group K1618 was composed of twelve 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 June 12, 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

The Th-229 tracer recoveries for samples J1872 (113%) and the QC Method Blank (116%) were greater than the upper control limit. 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

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 K1618

SDG	7371
Contact	N. Joseph Verville

Client	Hanford
Contract	No. S00W235A00
Case no	SDG K1618

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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VB

Prepared by

Reviewed by

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-TOC
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

SDG 7371
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG K1618

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 06/12/09

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 K1618

SDG 7371
Contact N. Joseph Verville

LAB SAMPLE SUMMARY

Client Hanford
Contract No. S00W235A00
Case no SDG K1618

LAB SAMPLE ID	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAF NO	CHAIN OF CUSTODY	COLLECTED
R905038-01	J18J06	UPRIVER SA-WF1,FILLET	SOLID		RC-118	RC-118-1	04/28/09 12:30
R905038-02	J18J07	UPRIVER SA-WF2,FILLET	SOLID		RC-118	RC-118-2	04/29/09 08:00
R905038-03	J18J08	UPRIVER SA-WF3,FILLET	SOLID		RC-118	RC-118-3	04/29/09 14:00
R905038-04	J18J09	UPRIVER SA-WF4,FILLET	SOLID		RC-118	RC-118-4	04/30/09 08:00
R905038-05	J18J10	UPRIVER SA-WF5,FILLET	SOLID		RC-118	RC-118-5	04/30/09 10:30
R905038-06	J18J69	UPRIVER SA-WF1,CARCASS	SOLID		RC-118	RC-118-26	04/28/09 14:30
R905038-07	J18J70	UPRIVER SA-WF2,CARCASS	SOLID		RC-118	RC-118-27	04/29/09 10:30
R905038-08	J18J71	UPRIVER SA-WF3,CARCASS	SOLID		RC-118	RC-118-28	04/29/09 15:30
R905038-09	J18J72	UPRIVER SA-WF4,CARCASS	SOLID		RC-118	RC-118-29	04/30/09 09:30
R905038-10	J18J73	UPRIVER SA-WF5,CARCASS	SOLID		RC-118	RC-118-30	04/30/09 12:00
R905038-11	J18J88	100SA-WF5,FILLET	SOLID		RC-118	RC-118-45	04/28/09 08:00
R905038-12	J18K25	100SA-WF5,CARCASS	SOLID		RC-118	RC-118-70	04/28/09 10:00
R905038-13	Lab Control Sample		SOLID		RC-118		
R905038-14	Method Blank		SOLID		RC-118		
R905038-15	Duplicate (R905038-01)	UPRIVER SA-WF1,FILLET	SOLID		RC-118		04/28/09 12:30

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LS
Version 3.06
Report date 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SDG 7371
Contact N. Joseph Verville

SAMPLE DELIVERY GROUP K1618

QC SUMMARY

Client Hanford
Contract No. S00W235A00
Case no SDG K1618

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
71	RC-118-1	J18J06	SOLID		863 g		05/06/09	8	R905038-01	7371-001
	RC-118-2	J18J07	SOLID		655 g		05/06/09	7	R905038-02	7371-002
	RC-118-26	J18J69	SOLID		761 g		05/06/09	8	R905038-06	7371-006
	RC-118-27	J18J70	SOLID		523 g		05/06/09	7	R905038-07	7371-007
	RC-118-28	J18J71	SOLID		337 g		05/06/09	7	R905038-08	7371-008
	RC-118-29	J18J72	SOLID		315 g		05/06/09	6	R905038-09	7371-009
	RC-118-3	J18J08	SOLID		466 g		05/06/09	7	R905038-03	7371-003
	RC-118-30	J18J73	SOLID		372 g		05/06/09	6	R905038-10	7371-010
	RC-118-4	J18J09	SOLID		318 g		05/06/09	6	R905038-04	7371-004
	RC-118-45	J18J88	SOLID		899 g		05/06/09	8	R905038-11	7371-011
	RC-118-5	J18J10	SOLID		562 g		05/06/09	6	R905038-05	7371-005
	RC-118-70	J18K25	SOLID		912 g		05/06/09	8	R905038-12	7371-012
		Method Blank	SOLID						R905038-14	7371-014
		Lab Control Sample	SOLID						R905038-13	7371-013
		Duplicate (R905038-01)	SOLID		863 g		05/06/09	8	R905038-15	7371-015

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-QS
Version 3.06
Report date 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

SDG 7371
Contact N. Joseph Verville

PREP BATCH SUMMARY

Client Hanford
Contract No. S00W235A00
Case no SDG K1618

TEST	MATRIX	METHOD	PREPARATION BATCH	ERROR 2σ %	PLANCHETS ANALYZED CLIENT	MORE	RE	BLANK	LCS	DUP/ORIG	MS/ORIG	QUALIFIERS
Alpha Spectroscopy												
PU	SOLID	Plutonium, Isotopic in Solids	7200-195	8.0	12			1	1	1/1		
TH	SOLID	Thorium, Isotopic in Solids	7200-195	8.0	12			1	1	1/1		
U	SOLID	Uranium, Isotopic in Solids	7200-195	8.0	12			1	1	1/1		
Beta Counting												
SR	SOLID	Total Strontium in Solids	7200-195	10.4	12			1	1	1/1		
TC	SOLID	Technetium 99 in Solids	7200-195	13.2	12			1	1	1/1		
Gamma Spectroscopy												
GAM	SOLID	Gamma Scan	7200-195	7.0	12			1	1	1/1		
Liquid Scintillation Counting												
C	SOLID	Carbon 14 in Solids	7200-195	10.0	12			1	1	1/1		
H	SOLID	Tritium in Solids	7200-195	10.0	12			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 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

SDG 7371
Contact N. Joseph Verville

LAB WORK SUMMARY

Client Hanford
Contract No. S00W235A00
Case no SDG K1618

B SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
05038-01	J18J06			7371-001	C		06/06/09	06/08/09	BW	Carbon 14 in Solids
04/28/09	UPRIVER SA-WF1,FILLET		SOLID	7371-001	GAM		05/19/09	05/28/09	CSS	Gamma Scan
05/06/09	RC-118-1	RC-118		7371-001	H		06/06/09	06/08/09	BW	Tritium in Solids
				7371-001	PU		06/05/09	06/09/09	BW	Plutonium, Isotopic in Solids
				7371-001	SR		06/04/09	06/08/09	BW	Total Strontium in Solids
				7371-001	TC		06/08/09	06/10/09	BW	Technetium 99 in Solids
				7371-001	TH		06/05/09	06/10/09	BW	Thorium, Isotopic in Solids
				7371-001	U		06/05/09	06/10/09	BW	Uranium, Isotopic in Solids
05038-02	J18J07			7371-002	C		06/06/09	06/08/09	BW	Carbon 14 in Solids
04/29/09	UPRIVER SA-WF2,FILLET		SOLID	7371-002	GAM		05/22/09	05/28/09	CSS	Gamma Scan
05/06/09	RC-118-2	RC-118		7371-002	H		06/06/09	06/08/09	BW	Tritium in Solids
				7371-002	PU		06/05/09	06/09/09	BW	Plutonium, Isotopic in Solids
				7371-002	SR		06/04/09	06/08/09	BW	Total Strontium in Solids
				7371-002	TC		06/06/09	06/10/09	BW	Technetium 99 in Solids
				7371-002	TH		06/04/09	06/10/09	BW	Thorium, Isotopic in Solids
				7371-002	U		06/05/09	06/10/09	BW	Uranium, Isotopic in Solids
05038-03	J18J08			7371-003	C		06/06/09	06/08/09	BW	Carbon 14 in Solids
04/29/09	UPRIVER SA-WF3,FILLET		SOLID	7371-003	GAM		05/19/09	05/28/09	CSS	Gamma Scan
05/06/09	RC-118-3	RC-118		7371-003	H		06/06/09	06/08/09	BW	Tritium in Solids
				7371-003	PU		06/05/09	06/09/09	BW	Plutonium, Isotopic in Solids
				7371-003	SR		06/04/09	06/08/09	BW	Total Strontium in Solids
				7371-003	TC		06/06/09	06/10/09	BW	Technetium 99 in Solids
				7371-003	TH		06/04/09	06/10/09	BW	Thorium, Isotopic in Solids
				7371-003	U		06/08/09	06/10/09	BW	Uranium, Isotopic in Solids
05038-04	J18J09			7371-004	C		06/06/09	06/08/09	BW	Carbon 14 in Solids
04/30/09	UPRIVER SA-WF4,FILLET		SOLID	7371-004	GAM		05/20/09	05/28/09	CSS	Gamma Scan
05/06/09	RC-118-4	RC-118		7371-004	H		06/06/09	06/08/09	BW	Tritium in Solids
				7371-004	PU		06/05/09	06/09/09	BW	Plutonium, Isotopic in Solids
				7371-004	SR		06/04/09	06/08/09	BW	Total Strontium in Solids
				7371-004	TC		06/09/09	06/10/09	BW	Technetium 99 in Solids
				7371-004	TH		06/04/09	06/10/09	BW	Thorium, Isotopic in Solids
				7371-004	U		06/05/09	06/10/09	BW	Uranium, Isotopic in Solids

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

SDG 7371
Contact N. Joseph Verville

WORK SUMMARY, cont.

Client Hanford
Contract No. S00W235A00
Case no SDG K1618

B SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
05038-05	J18J10			7371-005	C		06/06/09	06/08/09	BW	Carbon 14 in Solids
04/30/09	UPRIVER SA-WF5,FILLET		SOLID	7371-005	GAM		05/20/09	05/28/09	CSS	Gamma Scan
05/06/09	RC-118-5	RC-118		7371-005	H		06/06/09	06/08/09	BW	Tritium in Solids
				7371-005	PU		06/05/09	06/09/09	BW	Plutonium, Isotopic in Solids
				7371-005	SR		06/04/09	06/08/09	BW	Total Strontium in Solids
				7371-005	TC		06/08/09	06/10/09	BW	Technetium 99 in Solids
				7371-005	TH		06/04/09	06/10/09	BW	Thorium, Isotopic in Solids
				7371-005	U		06/05/09	06/10/09	BW	Uranium, Isotopic in Solids
05038-06	J18J69			7371-006	C		06/06/09	06/08/09	BW	Carbon 14 in Solids
04/28/09	UPRIVER SA-WF1,CARCASS		SOLID	7371-006	GAM		05/21/09	05/28/09	CSS	Gamma Scan
05/06/09	RC-118-26	RC-118		7371-006	H		06/06/09	06/08/09	BW	Tritium in Solids
				7371-006	PU		06/05/09	06/09/09	BW	Plutonium, Isotopic in Solids
				7371-006	SR		06/04/09	06/08/09	BW	Total Strontium in Solids
				7371-006	TC		06/06/09	06/10/09	BW	Technetium 99 in Solids
				7371-006	TH		06/04/09	06/10/09	BW	Thorium, Isotopic in Solids
				7371-006	U		06/05/09	06/10/09	BW	Uranium, Isotopic in Solids
05038-07	J18J70			7371-007	C		06/06/09	06/08/09	BW	Carbon 14 in Solids
04/29/09	UPRIVER SA-WF2,CARCASS		SOLID	7371-007	GAM		05/21/09	05/28/09	CSS	Gamma Scan
05/06/09	RC-118-27	RC-118		7371-007	H		06/06/09	06/08/09	BW	Tritium in Solids
				7371-007	PU		06/05/09	06/09/09	BW	Plutonium, Isotopic in Solids
				7371-007	SR		06/04/09	06/08/09	BW	Total Strontium in Solids
				7371-007	TC		06/06/09	06/10/09	BW	Technetium 99 in Solids
				7371-007	TH		06/04/09	06/10/09	BW	Thorium, Isotopic in Solids
				7371-007	U		06/05/09	06/10/09	BW	Uranium, Isotopic in Solids
05038-08	J18J71			7371-008	C		06/06/09	06/08/09	BW	Carbon 14 in Solids
04/29/09	UPRIVER SA-WF3,CARCASS		SOLID	7371-008	GAM		05/21/09	05/28/09	CSS	Gamma Scan
05/06/09	RC-118-28	RC-118		7371-008	H		06/06/09	06/08/09	BW	Tritium in Solids
				7371-008	PU		06/05/09	06/09/09	BW	Plutonium, Isotopic in Solids
				7371-008	SR		06/04/09	06/08/09	BW	Total Strontium in Solids
				7371-008	TC		06/08/09	06/10/09	BW	Technetium 99 in Solids
				7371-008	TH		06/05/09	06/10/09	BW	Thorium, Isotopic in Solids
				7371-008	U		06/05/09	06/10/09	BW	Uranium, Isotopic in Solids

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 K1618

SDG 7371
Contact N. Joseph Verville

WORK SUMMARY, cont.

Client Hanford
Contract No. S00W235A00
Case no SDG K1618

AB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
05038-09	J18J72			7371-009	C		06/06/09	06/08/09	BW	Carbon 14 in Solids
04/30/09	UPRIVER SA-WF4,CARCASS		SOLID	7371-009	GAM		05/21/09	05/28/09	CSS	Gamma Scan
05/06/09	RC-118-29	RC-118		7371-009	H		06/06/09	06/08/09	BW	Tritium in Solids
				7371-009	PU		06/05/09	06/09/09	BW	Plutonium, Isotopic in Solids
				7371-009	SR		06/04/09	06/08/09	BW	Total Strontium in Solids
				7371-009	TC		06/08/09	06/10/09	BW	Technetium 99 in Solids
				7371-009	TH		06/10/09	06/10/09	BW	Thorium, Isotopic in Solids
				7371-009	U		06/05/09	06/10/09	BW	Uranium, Isotopic in Solids
05038-10	J18J73			7371-010	C		06/06/09	06/08/09	BW	Carbon 14 in Solids
04/30/09	UPRIVER SA-WF5,CARCASS		SOLID	7371-010	GAM		05/22/09	05/28/09	CSS	Gamma Scan
05/06/09	RC-118-30	RC-118		7371-010	H		06/06/09	06/08/09	BW	Tritium in Solids
				7371-010	PU		06/05/09	06/09/09	BW	Plutonium, Isotopic in Solids
				7371-010	SR		06/04/09	06/08/09	BW	Total Strontium in Solids
				7371-010	TC		06/09/09	06/10/09	BW	Technetium 99 in Solids
				7371-010	TH		06/04/09	06/10/09	BW	Thorium, Isotopic in Solids
				7371-010	U		06/09/09	06/10/09	BW	Uranium, Isotopic in Solids
05038-11	J18J88			7371-011	C		06/06/09	06/08/09	BW	Carbon 14 in Solids
04/28/09	100SA-WF5,FILLET		SOLID	7371-011	GAM		05/21/09	05/28/09	CSS	Gamma Scan
05/06/09	RC-118-45	RC-118		7371-011	H		06/06/09	06/08/09	BW	Tritium in Solids
				7371-011	PU		06/05/09	06/09/09	BW	Plutonium, Isotopic in Solids
				7371-011	SR		06/04/09	06/08/09	BW	Total Strontium in Solids
				7371-011	TC		06/06/09	06/10/09	BW	Technetium 99 in Solids
				7371-011	TH		06/04/09	06/10/09	BW	Thorium, Isotopic in Solids
				7371-011	U		06/05/09	06/10/09	BW	Uranium, Isotopic in Solids
05038-12	J18K25			7371-012	C		06/06/09	06/08/09	BW	Carbon 14 in Solids
04/28/09	100SA-WF5,CARCASS		SOLID	7371-012	GAM		05/21/09	05/28/09	CSS	Gamma Scan
05/06/09	RC-118-70	RC-118		7371-012	H		06/06/09	06/08/09	BW	Tritium in Solids
				7371-012	PU		06/09/09	06/09/09	BW	Plutonium, Isotopic in Solids
				7371-012	SR		06/04/09	06/08/09	BW	Total Strontium in Solids
				7371-012	TC		06/06/09	06/10/09	BW	Technetium 99 in Solids
				7371-012	TH		06/04/09	06/10/09	BW	Thorium, Isotopic in Solids
				7371-012	U		06/05/09	06/10/09	BW	Uranium, Isotopic in Solids

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

SDG 7371
Contact N. Joseph Verville

WORK SUMMARY, cont.

Client Hanford
Contract No. S00W235A00
Case no SDG K1618

B SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
05038-13	Lab Control Sample			7371-013	C		06/07/09	06/08/09	BW	Carbon 14 in Solids
			SOLID	7371-013	GAM		05/27/09	05/28/09	CSS	Gamma Scan
		RC-118		7371-013	H		06/07/09	06/08/09	BW	Tritium in Solids
				7371-013	PU		06/09/09	06/09/09	BW	Plutonium, Isotopic in Solids
				7371-013	SR		06/04/09	06/08/09	BW	Total Strontium in Solids
				7371-013	TC		06/06/09	06/10/09	BW	Technetium 99 in Solids
				7371-013	TH		06/04/09	06/10/09	BW	Thorium, Isotopic in Solids
				7371-013	U		06/08/09	06/10/09	BW	Uranium, Isotopic in Solids
05038-14	Method Blank			7371-014	C		06/06/09	06/08/09	BW	Carbon 14 in Solids
			SOLID	7371-014	GAM		05/27/09	05/28/09	CSS	Gamma Scan
		RC-118		7371-014	H		06/06/09	06/08/09	BW	Tritium in Solids
				7371-014	PU		06/08/09	06/09/09	BW	Plutonium, Isotopic in Solids
				7371-014	SR		06/04/09	06/08/09	BW	Total Strontium in Solids
				7371-014	TC		06/06/09	06/10/09	BW	Technetium 99 in Solids
				7371-014	TH		06/04/09	06/10/09	BW	Thorium, Isotopic in Solids
				7371-014	U		06/08/09	06/10/09	BW	Uranium, Isotopic in Solids
05038-15	Duplicate (R905038-01)			7371-015	C		06/06/09	06/08/09	BW	Carbon 14 in Solids
04/28/09	UPRIVER SA-WF1,FILLET		SOLID	7371-015	GAM		05/21/09	05/28/09	CSS	Gamma Scan
05/06/09		RC-118		7371-015	H		06/06/09	06/08/09	BW	Tritium in Solids
				7371-015	PU		06/08/09	06/09/09	BW	Plutonium, Isotopic in Solids
				7371-015	SR		06/04/09	06/08/09	BW	Total Strontium in Solids
				7371-015	TC		06/06/09	06/10/09	BW	Technetium 99 in Solids
				7371-015	TH		06/04/09	06/10/09	BW	Thorium, Isotopic in Solids
				7371-015	U		06/08/09	06/10/09	BW	Uranium, Isotopic in Solids

Lab id EBRLNE
Protocol Hanford1
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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

SDG 7371
Contact N. Joseph Verville

WORK SUMMARY, cont.

Client Hanford
Contract No. S00W235A00
Case no SDG K1618

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	12			1	1	1	15
GAM	RC-118	Gamma Scan	GAMMA_GS	12			1	1	1	15
H	RC-118	Tritium in Solids	TRITIUM_COX_LSC	12			1	1	1	15
PU	RC-118	Plutonium, Isotopic in Solids	PUISO_PLATE_AEA	12			1	1	1	15
SR	RC-118	Total Strontium in Solids	SRTOT_SEP_PRECIP_GPC	12			1	1	1	15
TC	RC-118	Technetium 99 in Solids	TC99_TR_SEP_GPC	12			1	1	1	15
TH	RC-118	Thorium, Isotopic in Solids	THISO_IE_PLATE_AEA	12			1	1	1	15
U	RC-118	Uranium, Isotopic in Solids	UISO_PLATE_AEA	12			1	1	1	15
TOTALS				96			8	8	8	120

Lab id EBRLNE
Protocol Hanford1
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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-014 **Method Blank**

METHOD BLANK

SDG	7371	Client/Case no	Hanford	SDG K1618	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R905038-14	Client sample id	Method Blank		
Dept sample id	7371-014	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	-2.74	4.3	7.57	400	U	H
Carbon 14	14762-75-5	-0.654	3.6	6.10	50.0	U	C
Total Strontium	SR-RAD	-0.129	0.14	0.325	1.00	U	SR
Technetium 99	14133-76-7	0.094	0.26	0.497	15.0	U	TC
Thorium 228	14274-82-9	0.029	0.17	0.318	1.00	U	TH
Thorium 230	14269-63-7	0.144	0.17	0.220	1.00	U	TH
Thorium 232	TH-232	0.057	0.058	0.220	1.00	U	TH
Uranium 233/234	U-233/234	0.022	0.044	0.168	1.00	U	U
Uranium 235	15117-96-1	0.027	0.053	0.204	1.00	U	U
Uranium 238	U-238	0	0.044	0.168	1.00	U	U
Plutonium 238	13981-16-3	0	0.091	0.347	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.091	0.347	1.00	U	PU
Potassium 40	13966-00-2	U		0.327		U	GAM
Cobalt 60	10198-40-0	U		0.033	0.050	U	GAM
Cesium 137	10045-97-3	U		0.030	0.100	U	GAM
Radium 226	13982-63-3	U		0.063	0.100	U	GAM
Radium 228	15262-20-1	U		0.113	0.200	U	GAM
Europium 152	14683-23-9	U		0.077	0.100	U	GAM
Europium 154	15585-10-1	U		0.087	0.100	U	GAM
Europium 155	14391-16-3	U		0.054	0.100	U	GAM
Thorium 228	14274-82-9	U		0.045		U	GAM
Thorium 232	TH-232	U		0.113		U	GAM
Uranium 235	15117-96-1	U		0.132		U	GAM
Uranium 238	U-238	U		3.80		U	GAM
Americium 241	14596-10-2	U		0.030		U	GAM
Beryllium 7	13966-02-4	U		0.198		U	GAM
Ruthenium 106	13967-48-1	U		0.262		U	GAM
Antimony 125	14234-35-6	U		0.066		U	GAM
Cesium 134	13967-70-9	U		0.036		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-014 **Method Blank**

BLANK, cont.

SDG	7371	Client/Case no	Hanford	SDG_K1618	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R905038-14	Client sample id	Method Blank		
Dept sample id	7371-014	Material/Matrix		SOLID	
		SAF No	RC-118		

QC-BLANK #69847

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-013 Lab Control Sample

LAB CONTROL SAMPLE

SDG 7371
Contact N. Joseph Verville

Client/Case no Hanford SDG K1618
Contract No. S00W235A00

Lab sample id R905038-13
Dept sample id 7371-013

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	932	21	6.97	400		H	1100	44	85	86-114	80-120
Carbon 14	3060	62	13.7	50.0		C	3040	120	101	84-116	80-120
Total Strontium	10.9	0.66	0.297	1.00		SR	10.0	0.40	109	79-121	80-120
Technetium 99	132	3.7	0.437	15.0		TC	120	4.8	110	77-123	80-120
Thorium 230	19.7	2.3	0.327	1.00		TH	22.7	0.91	87	81-119	80-120
Uranium 233/234	4.25	0.80	0.506	1.00		U	5.20	0.21	82	74-126	80-120
Uranium 235	3.69	0.75	0.237	1.00		U	4.22	0.17	87	71-129	80-120
Uranium 238	4.64	0.81	0.490	1.00		U	5.64	0.23	82	76-124	80-120
Plutonium 238	7.26	0.99	0.229	1.00		PU	6.96	0.28	104	75-125	80-120
Plutonium 239/240	8.00	1.0	0.183	1.00		PU	7.92	0.32	101	77-123	80-120
Cobalt 60	2.00	0.089	0.059	0.050		GAM	2.02	0.081	99	86-114	80-120
Cesium 137	2.66	0.083	0.066	0.100		GAM	2.50	0.10	106	86-114	80-120

ColumbiaRiverComp.ofRCBRA-Tissue

QC-LCS #69846

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LCS
Version 3.06
Report date 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-015 J18J06

DUPLICATE

SDG	7371	Client/Case no	Hanford SDG K1618
Contact	N. Joseph Verville	Contract	No. S00W235A00
DUPLICATE		ORIGINAL	
Lab sample id	R905038-15	Lab sample id	R905038-01
Dept sample id	7371-015	Dept sample id	7371-001
		Received	05/06/09
Client sample id	J18J06		
Location/Matrix	UPRIVER SA-WF1,FILLET SOLID		
Collected/Weight	04/28/09 12:30 863 g		
Custody/SAF No	RC-118-1 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	-1.53	4.1	7.22	400	U	H	1.13	4.4	7.48	U	-		0.9
Carbon 14	-0.060	3.3	5.62	50.0	U	C	-3.24	3.3	5.82	U	-		1.4
Total Strontium	-0.055	0.14	0.305	1.00	U	SR	-0.065	0.14	0.299	U	-		0.1
Technetium 99	0.117	0.23	0.443	15.0	U	TC	0.107	0.16	0.400	U	-		0.1
Thorium 228	0.039	0.24	0.433	1.00	U	TH	0.115	0.31	0.552	U	-		0.4
Thorium 230	0.039	0.16	0.300	1.00	U	TH	0.230	0.23	0.293	U	-		1.4
Thorium 232	0.039	0.078	0.300	1.00	U	TH	0	0.077	0.293	U	-		0.7
Uranium 233/234	0.043	0.043	0.164	1.00	U	U	0	0.050	0.190	U	-		1.3
Uranium 235	0.026	0.052	0.199	1.00	U	U	0	0.060	0.230	U	-		0.7
Uranium 238	0	0.043	0.164	1.00	U	U	0	0.050	0.190	U	-		0
Plutonium 238	0.124	0.19	0.298	1.00	U	PU	0.054	0.11	0.208	U	-		0.6
Plutonium 239/240	0	0.062	0.238	1.00	U	PU	0	0.054	0.208	U	-		0
Potassium 40	U		3.78		U	GAM	U		1.28	U	-		1.2
Cobalt 60	U		0.032	0.050	U	GAM	U		0.041	U	-		0.3
Cesium 137	U		0.032	0.100	U	GAM	U		0.040	U	-		0.3
Radium 226	U		0.061	0.100	U	GAM	U		0.092	U	-		0.6
Radium 228	U		0.135	0.200	U	GAM	U		0.193	U	-		0.5
Europium 152	U		0.072	0.100	U	GAM	U		0.113	U	-		0.6
Europium 154	U		0.096	0.100	U	GAM	U		0.128	U	-		0.4
Europium 155	U		0.055	0.100	U	GAM	U		0.085	U	-		0.6
Thorium 228	U		0.096		U	GAM	U		0.065	U	-		0.5
Thorium 232	U		0.135		U	GAM	U		0.193	U	-		0.5
Uranium 235	U		0.138		U	GAM	U		0.196	U	-		0.5
Uranium 238	U		3.68		U	GAM	U		4.82	U	-		0.4
Americium 241	U		0.034		U	GAM	U		0.076	U	-		1.0
Beryllium 7	U		0.268		U	GAM	U		0.370	U	-		0.4
Ruthenium 106	U		0.270		U	GAM	U		0.342	U	-		0.3
Antimony 125	U		0.068		U	GAM	U		0.095	U	-		0.5

ColumbiaRiverComp.ofRCBRA-Tissue

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 K1618

7371-015 J18J06

DUPLICATE, cont.

SDG	7371	Client/Case no	Hanford SDG K1618
Contact	N. Joseph Verville	Contract	No. S00W235A00
DUPLICATE		ORIGINAL	
Lab sample id	R905038-15	Lab sample id	R905038-01
Dept sample id	7371-015	Dept sample id	7371-001
		Received	05/06/09
Client sample id	J18J06		
Location/Matrix	UPRIVER SA-WF1,FILLET SOLID		
Collected/Weight	04/28/09 12:30 863 g		
Custody/SAF No	RC-118-1 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		0.037		U	GAM	U		0.052	U	-		0.5

ColumbiaRiverComp.ofRCBRA-Tissue

QC-DUP#1 69848

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DUP
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-001 J18J06

DATA SHEET

SDG	7371	Client/Case no	Hanford SDG K1618
Contact	N. Joseph Verville	Contract	No. S00W235A00
Lab sample id	R905038-01	Client sample id	J18J06
Dept sample id	7371-001	Location/Matrix	UPRIVER SA-WF1,FILLET SOLID
Received	05/06/09	Collected/Weight	04/28/09 12:30 863 g
		Custody/SAF No	RC-118-1 RC-118

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	1.13	4.4	7.48	400	U	H
Carbon 14	14762-75-5	-3.24	3.3	5.82	50.0	U	C
Total Strontium	SR-RAD	-0.065	0.14	0.299	1.00	U	SR
Technetium 99	14133-76-7	0.107	0.16	0.400	15.0	U	TC
Thorium 228	14274-82-9	0.115	0.31	0.552	1.00	U	TH
Thorium 230	14269-63-7	0.230	0.23	0.293	1.00	U	TH
Thorium 232	TH-232	0	0.077	0.293	1.00	U	TH
Uranium 233/234	U-233/234	0	0.050	0.190	1.00	U	U
Uranium 235	15117-96-1	0	0.060	0.230	1.00	U	U
Uranium 238	U-238	0	0.050	0.190	1.00	U	U
Plutonium 238	13981-16-3	0.054	0.11	0.208	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.054	0.208	1.00	U	PU
Potassium 40	13966-00-2	U		1.28		U	GAM
Cobalt 60	10198-40-0	U		0.041	0.050	U	GAM
Cesium 137	10045-97-3	U		0.040	0.100	U	GAM
Radium 226	13982-63-3	U		0.092	0.100	U	GAM
Radium 228	15262-20-1	U		0.193	0.200	U	GAM
Europium 152	14683-23-9	U		0.113	0.100	U	GAM
Europium 154	15585-10-1	U		0.128	0.100	U	GAM
Europium 155	14391-16-3	U		0.085	0.100	U	GAM
Thorium 228	14274-82-9	U		0.065		U	GAM
Thorium 232	TH-232	U		0.193		U	GAM
Uranium 235	15117-96-1	U		0.196		U	GAM
Uranium 238	U-238	U		4.82		U	GAM
Americium 241	14596-10-2	U		0.076		U	GAM
Beryllium 7	13966-02-4	U		0.370		U	GAM
Ruthenium 106	13967-48-1	U		0.342		U	GAM
Antimony 125	14234-35-6	U		0.095		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

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

SAMPLE DELIVERY GROUP K1618

7371-001 **J18J06**

DATA SHEET, cont

SDG	7371	Client/Case no	Hanford	SDG_K1618
Contact	N. Joseph Verville	Contract	No. S00W235A00	
Lab sample id	R905038-01	Client sample id	J18J06	
Dept sample id	7371-001	Location/Matrix	UPRIVER SA-WF1,FILLET	SOLID
Received	05/06/09	Collected/Weight	04/28/09 12:30	863 g
		Custody/SAF No	RC-118-1	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		0.052		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
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Version	Ver 1.0
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EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-002 **J18J07**

DATA SHEET

SDG	7371	Client/Case no	Hanford	SDG_K1618	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R905038-02	Client sample id	J18J07		
Dept sample id	7371-002	Location/Matrix	UPRIVER SA-WF2,FILLET	SOLID	
Received	05/06/09	Collected/Weight	04/29/09 08:00	655 g	
		Custody/SAF No	RC-118-2	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-0.857	4.1	7.10	400	U	H
Carbon 14	14762-75-5	0.564	3.5	5.84	50.0	U	C
Total Strontium	SR-RAD	-0.088	0.15	0.311	1.00	U	SR
Technetium 99	14133-76-7	0.013	0.21	0.482	15.0	U	TC
Thorium 228	14274-82-9	0.060	0.12	0.288	1.00	U	TH
Thorium 230	14269-63-7	0.511	0.30	0.288	1.00		TH
Thorium 232	TH-232	0	0.060	0.230	1.00	U	TH
Uranium 233/234	U-233/234	0.022	0.090	0.172	1.00	U	U
Uranium 235	15117-96-1	0	0.054	0.208	1.00	U	U
Uranium 238	U-238	0	0.045	0.172	1.00	U	U
Plutonium 238	13981-16-3	0.072	0.14	0.276	1.00	U	PU
Plutonium 239/240	PU-239/240	0.289	0.22	0.276	1.00		PU
Potassium 40	13966-00-2	U		3.48		U	GAM
Cobalt 60	10198-40-0	U		0.036	0.050	U	GAM
Cesium 137	10045-97-3	U		0.034	0.100	U	GAM
Radium 226	13982-63-3	U		0.065	0.100	U	GAM
Radium 228	15262-20-1	U		0.146	0.200	U	GAM
Europium 152	14683-23-9	U		0.092	0.100	U	GAM
Europium 154	15585-10-1	U		0.103	0.100	U	GAM
Europium 155	14391-16-3	U		0.073	0.100	U	GAM
Thorium 228	14274-82-9	U		0.049		U	GAM
Thorium 232	TH-232	U		0.146		U	GAM
Uranium 235	15117-96-1	U		0.163		U	GAM
Uranium 238	U-238	U		3.97		U	GAM
Americium 241	14596-10-2	U		0.131		U	GAM
Beryllium 7	13966-02-4	U		0.321		U	GAM
Ruthenium 106	13967-48-1	U		0.287		U	GAM
Antimony 125	14234-35-6	U		0.073		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-002 J18J07

DATA SHEET, cont

SDG	7371	Client/Case no	Hanford	SDG K1618
Contact	N. Joseph Verville	Contract	No. S00W235A00	
Lab sample id	R905038-02	Client sample id	J18J07	
Dept sample id	7371-002	Location/Matrix	UPRIVER SA-WF2,FILLET	SOLID
Received	05/06/09	Collected/Weight	04/29/09 08:00	655 g
		Custody/SAF No	RC-118-2	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		0.038		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-003 J18J08

DATA SHEET

SDG	7371	Client/Case no	Hanford	SDG K1618	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R905038-03	Client sample id	J18J08		
Dept sample id	7371-003	Location/Matrix	UPRIVER SA-WF3,FILLET	SOLID	
Received	05/06/09	Collected/Weight	04/29/09 14:00	466 g	
		Custody/SAF No	RC-118-3	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-3.11	4.1	7.35	400	U	H
Carbon 14	14762-75-5	-0.132	3.6	6.18	50.0	U	C
Total Strontium	SR-RAD	-0.024	0.19	0.392	1.00	U	SR
Technetium 99	14133-76-7	0.037	0.26	0.460	15.0	U	TC
Thorium 228	14274-82-9	-0.030	0.12	0.289	1.00	U	TH
Thorium 230	14269-63-7	0.391	0.24	0.288	1.00		TH
Thorium 232	TH-232	0.030	0.060	0.230	1.00	U	TH
Uranium 233/234	U-233/234	0.044	0.044	0.167	1.00	U	U
Uranium 235	15117-96-1	0	0.053	0.202	1.00	U	U
Uranium 238	U-238	0.022	0.044	0.167	1.00	U	U
Plutonium 238	13981-16-3	0	0.080	0.306	1.00	U	PU
Plutonium 239/240	PU-239/240	0.080	0.080	0.306	1.00	U	PU
Potassium 40	13966-00-2	U		7.04		U	GAM
Cobalt 60	10198-40-0	U		0.060	0.050	U	GAM
Cesium 137	10045-97-3	U		0.059	0.100	U	GAM
Radium 226	13982-63-3	U		0.140	0.100	U	GAM
Radium 228	15262-20-1	U		0.294	0.200	U	GAM
Europium 152	14683-23-9	U		0.164	0.100	U	GAM
Europium 154	15585-10-1	U		0.194	0.100	U	GAM
Europium 155	14391-16-3	U		0.139	0.100	U	GAM
Thorium 228	14274-82-9	U		0.107		U	GAM
Thorium 232	TH-232	U		0.294		U	GAM
Uranium 235	15117-96-1	U		0.353		U	GAM
Uranium 238	U-238	U		7.25		U	GAM
Americium 241	14596-10-2	U		0.057		U	GAM
Beryllium 7	13966-02-4	U		0.557		U	GAM
Ruthenium 106	13967-48-1	U		0.509		U	GAM
Antimony 125	14234-35-6	U		0.146		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-003 J18J08

DATA SHEET, cont

SDG	7371	Client/Case no	Hanford	SDG K1618	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R905038-03	Client sample id	J18J08		
Dept sample id	7371-003	Location/Matrix	UPRIVER SA-WF3,FILLET	SOLID	
Received	05/06/09	Collected/Weight	04/29/09 14:00	466 g	
		Custody/SAF No	RC-118-3	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		0.078		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-004 **J18J09**

DATA SHEET

SDG	7371	Client/Case no	Hanford SDG K1618
Contact	N. Joseph Verville	Contract	No. S00W235A00
Lab sample id	R905038-04	Client sample id	J18J09
Dept sample id	7371-004	Location/Matrix	UPRIVER SA-WF4,FILLET SOLID
Received	05/06/09	Collected/Weight	04/30/09 08:00 318 g
		Custody/SAF No	RC-118-4 RC-118

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-2.27	3.7	6.55	400	U	H
Carbon 14	14762-75-5	-0.502	3.0	5.20	50.0	U	C
Total Strontium	SR-RAD	-0.047	0.14	0.295	1.00	U	SR
Technetium 99	14133-76-7	0.023	0.17	0.435	15.0	U	TC
Thorium 228	14274-82-9	0.033	0.13	0.253	1.00	U	TH
Thorium 230	14269-63-7	0.330	0.27	0.253	1.00		TH
Thorium 232	TH-232	0	0.066	0.253	1.00	U	TH
Uranium 233/234	U-233/234	0	0.051	0.194	1.00	U	U
Uranium 235	15117-96-1	0.031	0.061	0.234	1.00	U	U
Uranium 238	U-238	0	0.051	0.194	1.00	U	U
Plutonium 238	13981-16-3	0.037	0.15	0.282	1.00	U	PU
Plutonium 239/240	PU-239/240	-0.037	0.074	0.282	1.00	U	PU
Potassium 40	13966-00-2	U		4.26		U	GAM
Cobalt 60	10198-40-0	U		0.032	0.050	U	GAM
Cesium 137	10045-97-3	U		0.030	0.100	U	GAM
Radium 226	13982-63-3	U		0.057	0.100	U	GAM
Radium 228	15262-20-1	U		0.135	0.200	U	GAM
Europium 152	14683-23-9	U		0.081	0.100	U	GAM
Europium 154	15585-10-1	U		0.093	0.100	U	GAM
Europium 155	14391-16-3	U		0.064	0.100	U	GAM
Thorium 228	14274-82-9	U		0.044		U	GAM
Thorium 232	TH-232	U		0.135		U	GAM
Uranium 235	15117-96-1	U		0.143		U	GAM
Uranium 238	U-238	U		3.64		U	GAM
Americium 241	14596-10-2	U		0.121		U	GAM
Beryllium 7	13966-02-4	U		0.279		U	GAM
Ruthenium 106	13967-48-1	U		0.244		U	GAM
Antimony 125	14234-35-6	U		0.074		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-004 **J18J09**

DATA SHEET, cont

SDG	7371	Client/Case no	Hanford	SDG_K1618	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R905038-04	Client sample id	J18J09		
Dept sample id	7371-004	Location/Matrix	UPRIVER SA-WF4,FILLET	SOLID	
Received	05/06/09	Collected/Weight	04/30/09 08:00	318 g	
		Custody/SAF No	RC-118-4	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		0.034		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-005 J18J10

DATA SHEET

SDG	7371	Client/Case no	Hanford SDG K1618
Contact	N. Joseph Verville	Contract	No. S00W235A00
Lab sample id	R905038-05	Client sample id	J18J10
Dept sample id	7371-005	Location/Matrix	UPRIVER SA-WF5,FILLET SOLID
Received	05/06/09	Collected/Weight	04/30/09 10:30 562 g
		Custody/SAF No	RC-118-5 RC-118

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	5.62	4.4	7.03	400	U	H
Carbon 14	14762-75-5	-1.21	3.3	5.64	50.0	U	C
Total Strontium	SR-RAD	-0.056	0.13	0.285	1.00	U	SR
Technetium 99	14133-76-7	0.017	0.16	0.478	15.0	U	TC
Thorium 228	14274-82-9	-0.084	0.25	0.602	1.00	U	TH
Thorium 230	14269-63-7	0.084	0.17	0.320	1.00	U	TH
Thorium 232	TH-232	0	0.084	0.320	1.00	U	TH
Uranium 233/234	U-233/234	0.021	0.041	0.158	1.00	U	U
Uranium 235	15117-96-1	0.050	0.050	0.192	1.00	U	U
Uranium 238	U-238	0	0.041	0.158	1.00	U	U
Plutonium 238	13981-16-3	0.033	0.13	0.320	1.00	U	PU
Plutonium 239/240	PU-239/240	0.033	0.067	0.255	1.00	U	PU
Potassium 40	13966-00-2	U		9.61		U	GAM
Cobalt 60	10198-40-0	U		0.053	0.050	U	GAM
Cesium 137	10045-97-3	U		0.052	0.100	U	GAM
Radium 226	13982-63-3	U		0.118	0.100	U	GAM
Radium 228	15262-20-1	U		0.259	0.200	U	GAM
Europium 152	14683-23-9	U		0.138	0.100	U	GAM
Europium 154	15585-10-1	U		0.171	0.100	U	GAM
Europium 155	14391-16-3	U		0.111	0.100	U	GAM
Thorium 228	14274-82-9	U		0.089		U	GAM
Thorium 232	TH-232	U		0.259		U	GAM
Uranium 235	15117-96-1	U		0.279		U	GAM
Uranium 238	U-238	U		6.59		U	GAM
Americium 241	14596-10-2	U		0.046		U	GAM
Beryllium 7	13966-02-4	U		0.480		U	GAM
Ruthenium 106	13967-48-1	U		0.440		U	GAM
Antimony 125	14234-35-6	U		0.123		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-005 **J18J10**

DATA SHEET, cont

SDG	7371	Client/Case no	Hanford	SDG_K1618
Contact	N. Joseph Verville	Contract	No. S00W235A00	
Lab sample id	R905038-05	Client sample id	J18J10	
Dept sample id	7371-005	Location/Matrix	UPRIVER SA-WF5,FILLET	SOLID
Received	05/06/09	Collected/Weight	04/30/09 10:30	562 g
		Custody/SAF No	RC-118-5	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-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-007 **J18J70**

DATA SHEET

SDG	7371	Client/Case no	Hanford	SDG K1618	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R905038-07	Client sample id	J18J70		
Dept sample id	7371-007	Location/Matrix	UPRIVER SA-WF2,CARCASS	SOLID	
Received	05/06/09	Collected/Weight	04/29/09 10:30	523 g	
		Custody/SAF No	RC-118-27	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-1.98	3.9	6.90	400	U	H
Carbon 14	14762-75-5	2820	57	12.5	50.0		C
Total Strontium	SR-RAD	-0.027	0.14	0.301	1.00	U	SR
Technetium 99	14133-76-7	0.114	0.19	0.425	15.0	U	TC
Thorium 228	14274-82-9	0	0.062	0.238	1.00	U	TH
Thorium 230	14269-63-7	0.124	0.19	0.238	1.00	U	TH
Thorium 232	TH-232	0	0.062	0.238	1.00	U	TH
Uranium 233/234	U-233/234	0.023	0.046	0.175	1.00	U	U
Uranium 235	15117-96-1	0.055	0.056	0.212	1.00	U	U
Uranium 238	U-238	0	0.046	0.175	1.00	U	U
Plutonium 238	13981-16-3	-0.039	0.077	0.295	1.00	U	PU
Plutonium 239/240	PU-239/240	0.039	0.077	0.295	1.00	U	PU
Potassium 40	13966-00-2	U		2.78		U	GAM
Cobalt 60	10198-40-0	U		0.031	0.050	U	GAM
Cesium 137	10045-97-3	U		0.033	0.100	U	GAM
Radium 226	13982-63-3	U		0.067	0.100	U	GAM
Radium 228	15262-20-1	U		0.123	0.200	U	GAM
Europium 152	14683-23-9	U		0.085	0.100	U	GAM
Europium 154	15585-10-1	U		0.094	0.100	U	GAM
Europium 155	14391-16-3	U		0.057	0.100	U	GAM
Thorium 228	14274-82-9	U		0.048		U	GAM
Thorium 232	TH-232	U		0.123		U	GAM
Uranium 235	15117-96-1	U		0.149		U	GAM
Uranium 238	U-238	U		3.61		U	GAM
Americium 241	14596-10-2	U		0.031		U	GAM
Beryllium 7	13966-02-4	U		0.284		U	GAM
Ruthenium 106	13967-48-1	U		0.298		U	GAM
Antimony 125	14234-35-6	U		0.072		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-007 J18J70

DATA SHEET, cont

SDG	7371	Client/Case no	Hanford	SDG_K1618	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R905038-07	Client sample id	J18J70		
Dept sample id	7371-007	Location/Matrix	UPRIVER SA-WF2,CARCASS	SOLID	
Received	05/06/09	Collected/Weight	04/29/09 10:30	523 g	
		Custody/SAF No	RC-118-27	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		0.040		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-008 J18J71

DATA SHEET

SDG	7371	Client/Case no	Hanford SDG K1618
Contact	N. Joseph Verville	Contract	No. S00W235A00
Lab sample id	R905038-08	Client sample id	J18J71
Dept sample id	7371-008	Location/Matrix	UPRIVER SA-WF3,CARCASS SOLID
Received	05/06/09	Collected/Weight	04/29/09 15:30 337 g
		Custody/SAF No	RC-118-28 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	4.2	7.35	400	U	H
Carbon 14	14762-75-5	-2.82	3.3	5.72	50.0	U	C
Total Strontium	SR-RAD	-0.068	0.15	0.304	1.00	U	SR
Technetium 99	14133-76-7	-0.043	0.29	0.519	15.0	U	TC
Thorium 228	14274-82-9	0.058	0.12	0.279	1.00	U	TH
Thorium 230	14269-63-7	0.697	0.35	0.278	1.00		TH
Thorium 232	TH-232	0	0.058	0.222	1.00	U	TH
Uranium 233/234	U-233/234	0.063	0.085	0.162	1.00	U	U
Uranium 235	15117-96-1	0	0.051	0.196	1.00	U	U
Uranium 238	U-238	0	0.042	0.162	1.00	U	U
Plutonium 238	13981-16-3	0.073	0.15	0.281	1.00	U	PU
Plutonium 239/240	PU-239/240	0.073	0.074	0.281	1.00	U	PU
Potassium 40	13966-00-2	U		3.85		U	GAM
Cobalt 60	10198-40-0	U		0.049	0.050	U	GAM
Cesium 137	10045-97-3	U		0.078	0.100	U	GAM
Radium 226	13982-63-3	U		0.078	0.100	U	GAM
Radium 228	15262-20-1	U		0.191	0.200	U	GAM
Europium 152	14683-23-9	U		0.095	0.100	U	GAM
Europium 154	15585-10-1	U		0.159	0.100	U	GAM
Europium 155	14391-16-3	U		0.078	0.100	U	GAM
Thorium 228	14274-82-9	U		0.060		U	GAM
Thorium 232	TH-232	U		0.191		U	GAM
Uranium 235	15117-96-1	U		0.186		U	GAM
Uranium 238	U-238	U		5.60		U	GAM
Americium 241	14596-10-2	U		0.047		U	GAM
Beryllium 7	13966-02-4	U		0.384		U	GAM
Ruthenium 106	13967-48-1	U		0.345		U	GAM
Antimony 125	14234-35-6	U		0.087		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-008 **J18J71**

DATA SHEET, cont

SDG	7371	Client/Case no	Hanford	SDG_K1618
Contact	N. Joseph Verville	Contract	No. S00W235A00	
Lab sample id	R905038-08	Client sample id	J18J71	
Dept sample id	7371-008	Location/Matrix	UPRIVER SA-WF3,CARCASS	SOLID
Received	05/06/09	Collected/Weight	04/29/09 15:30	337 g
		Custody/SAF No	RC-118-28	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		0.052		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-009 **J18J72**

DATA SHEET

SDG	7371	Client/Case no	Hanford SDG K1618
Contact	N. Joseph Verville	Contract	No. S00W235A00
Lab sample id	R905038-09	Client sample id	J18J72
Dept sample id	7371-009	Location/Matrix	UPRIVER SA-WF4,CARCASS SOLID
Received	05/06/09	Collected/Weight	04/30/09 09:30 315 g
		Custody/SAF No	RC-118-29 RC-118

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-1.72	3.6	6.33	400	U	H
Carbon 14	14762-75-5	-0.691	2.9	4.96	50.0	U	C
Total Strontium	SR-RAD	0.065	0.20	0.389	1.00	U	SR
Technetium 99	14133-76-7	0.086	0.18	0.419	15.0	U	TC
Thorium 228	14274-82-9	0	0.17	0.373	1.00	U	TH
Thorium 230	14269-63-7	0.442	0.28	0.211	1.00		TH
Thorium 232	TH-232	0.028	0.055	0.211	1.00	U	TH
Uranium 233/234	U-233/234	0	0.045	0.171	1.00	U	U
Uranium 235	15117-96-1	0.027	0.054	0.207	1.00	U	U
Uranium 238	U-238	0	0.045	0.171	1.00	U	U
Plutonium 238	13981-16-3	-0.033	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	U		4.97		U	GAM
Cobalt 60	10198-40-0	U		0.060	0.050	U	GAM
Cesium 137	10045-97-3	U		0.061	0.100	U	GAM
Radium 226	13982-63-3	U		0.147	0.100	U	GAM
Radium 228	15262-20-1	U		0.304	0.200	U	GAM
Europium 152	14683-23-9	U		0.179	0.100	U	GAM
Europium 154	15585-10-1	U		0.203	0.100	U	GAM
Europium 155	14391-16-3	U		0.143	0.100	U	GAM
Thorium 228	14274-82-9	U		0.206		U	GAM
Thorium 232	TH-232	U		0.304		U	GAM
Uranium 235	15117-96-1	U		0.325		U	GAM
Uranium 238	U-238	U		6.89		U	GAM
Americium 241	14596-10-2	U		0.121		U	GAM
Beryllium 7	13966-02-4	U		0.566		U	GAM
Ruthenium 106	13967-48-1	U		0.510		U	GAM
Antimony 125	14234-35-6	U		0.148		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-009 J18J72

DATA SHEET, cont

SDG	7371	Client/Case no	Hanford	SDG_K1618
Contact	N. Joseph Verville	Contract	No. S00W235A00	
Lab sample id	R905038-09	Client sample id	J18J72	
Dept sample id	7371-009	Location/Matrix	UPRIVER SA-WF4,CARCASS	SOLID
Received	05/06/09	Collected/Weight	04/30/09 09:30	315 g
		Custody/SAF No	RC-118-29	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

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-010 **J18J73**

DATA SHEET

SDG	7371	Client/Case no	Hanford	SDG K1618	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R905038-10	Client sample id	J18J73		
Dept sample id	7371-010	Location/Matrix	UPRIVER SA-WF5,CARCASS	SOLID	
Received	05/06/09	Collected/Weight	04/30/09 12:00	372 g	
		Custody/SAF No	RC-118-30	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-1.26	4.3	7.60	400	U	H
Carbon 14	14762-75-5	16100	320	33.8	50.0		C
Total Strontium	SR-RAD	-0.012	0.14	0.289	1.00	U	SR
Technetium 99	14133-76-7	0.059	0.14	0.401	15.0	U	TC
Thorium 228	14274-82-9	-0.090	0.12	0.367	1.00	U	TH
Thorium 230	14269-63-7	0.239	0.24	0.228	1.00		TH
Thorium 232	TH-232	0.030	0.060	0.228	1.00	U	TH
Uranium 233/234	U-233/234	0.016	0.065	0.124	1.00	U	U
Uranium 235	15117-96-1	0	0.039	0.150	1.00	U	U
Uranium 238	U-238	0.032	0.065	0.124	1.00	U	U
Plutonium 238	13981-16-3	-0.070	0.070	0.335	1.00	U	PU
Plutonium 239/240	PU-239/240	-0.035	0.070	0.268	1.00	U	PU
Potassium 40	13966-00-2	U		1.58		U	GAM
Cobalt 60	10198-40-0	U		0.056	0.050	U	GAM
Cesium 137	10045-97-3	U		0.058	0.100	U	GAM
Radium 226	13982-63-3	U		0.123	0.100	U	GAM
Radium 228	15262-20-1	U		0.264	0.200	U	GAM
Europium 152	14683-23-9	U		0.149	0.100	U	GAM
Europium 154	15585-10-1	U		0.178	0.100	U	GAM
Europium 155	14391-16-3	U		0.124	0.100	U	GAM
Thorium 228	14274-82-9	U		0.094		U	GAM
Thorium 232	TH-232	U		0.264		U	GAM
Uranium 235	15117-96-1	U		0.311		U	GAM
Uranium 238	U-238	U		6.57		U	GAM
Americium 241	14596-10-2	U		0.051		U	GAM
Beryllium 7	13966-02-4	U		0.518		U	GAM
Ruthenium 106	13967-48-1	U		0.490		U	GAM
Antimony 125	14234-35-6	U		0.132		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-010 **J18J73**

DATA SHEET, cont

SDG	7371	Client/Case no	Hanford	SDG K1618
Contact	N. Joseph Verville	Contract	No. S00W235A00	
Lab sample id	R905038-10	Client sample id	J18J73	
Dept sample id	7371-010	Location/Matrix	UPRIVER SA-WF5,CARCASS	SOLID
Received	05/06/09	Collected/Weight	04/30/09 12:00	372 g
		Custody/SAF No	RC-118-30	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		0.069		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-011 J18J88

DATA SHEET

SDG	7371	Client/Case no	Hanford	SDG_K1618	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R905038-11	Client sample id	J18J88		
Dept sample id	7371-011	Location/Matrix	100SA-WF5,FILLET	SOLID	
Received	05/06/09	Collected/Weight	04/28/09 08:00	899 g	
		Custody/SAF No	RC-118-45	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-1.54	4.1	7.27	400	U	H
Carbon 14	14762-75-5	0.247	3.4	5.77	50.0	U	C
Total Strontium	SR-RAD	-0.045	0.13	0.274	1.00	U	SR
Technetium 99	14133-76-7	0.093	0.24	0.633	15.0	U	TC
Thorium 228	14274-82-9	0.056	0.11	0.268	1.00	U	TH
Thorium 230	14269-63-7	-0.028	0.11	0.214	1.00	U	TH
Thorium 232	TH-232	0	0.056	0.214	1.00	U	TH
Uranium 233/234	U-233/234	0	0.042	0.159	1.00	U	U
Uranium 235	15117-96-1	0.025	0.050	0.192	1.00	U	U
Uranium 238	U-238	0	0.042	0.159	1.00	U	U
Plutonium 238	13981-16-3	0.064	0.086	0.163	1.00	U	PU
Plutonium 239/240	PU-239/240	0.021	0.043	0.163	1.00	U	PU
Potassium 40	13966-00-2	U		2.48		U	GAM
Cobalt 60	10198-40-0	U		0.089	0.050	U	GAM
Cesium 137	10045-97-3	U		0.088	0.100	U	GAM
Radium 226	13982-63-3	U		0.190	0.100	U	GAM
Radium 228	15262-20-1	U		0.387	0.200	U	GAM
Europium 152	14683-23-9	U		0.223	0.100	U	GAM
Europium 154	15585-10-1	U		0.262	0.100	U	GAM
Europium 155	14391-16-3	U		0.192	0.100	U	GAM
Thorium 228	14274-82-9	U		0.145		U	GAM
Thorium 232	TH-232	U		0.387		U	GAM
Uranium 235	15117-96-1	U		0.474		U	GAM
Uranium 238	U-238	U		10.6		U	GAM
Americium 241	14596-10-2	U		0.077		U	GAM
Beryllium 7	13966-02-4	U		0.796		U	GAM
Ruthenium 106	13967-48-1	U		0.766		U	GAM
Antimony 125	14234-35-6	U		0.194		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-011 J18J88

DATA SHEET, cont

SDG	7371	Client/Case no	Hanford	SDG_K1618	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R905038-11	Client sample id	J18J88		
Dept sample id	7371-011	Location/Matrix	100SA-WF5,FILLET	SOLID	
Received	05/06/09	Collected/Weight	04/28/09 08:00	899 g	
		Custody/SAF No	RC-118-45	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		0.102		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-012 J18K25

DATA SHEET

SDG	7371	Client/Case no	Hanford	SDG_K1618	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R905038-12	Client sample id	J18K25		
Dept sample id	7371-012	Location/Matrix	100SA-WF5,CARCASS	SOLID	
Received	05/06/09	Collected/Weight	04/28/09 10:00	912 g	
		Custody/SAF No	RC-118-70	RC-118	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Tritium	10028-17-8	-0.619	3.9	6.84	400	U	H
Carbon 14	14762-75-5	0.232	3.2	5.40	50.0	U	C
Total Strontium	SR-RAD	-0.046	0.15	0.311	1.00	U	SR
Technetium 99	14133-76-7	0.063	0.22	0.451	15.0	U	TC
Thorium 228	14274-82-9	-0.035	0.14	0.331	1.00	U	TH
Thorium 230	14269-63-7	0.104	0.21	0.330	1.00	U	TH
Thorium 232	TH-232	0.035	0.069	0.264	1.00	U	TH
Uranium 233/234	U-233/234	0	0.040	0.155	1.00	U	U
Uranium 235	15117-96-1	0.024	0.049	0.187	1.00	U	U
Uranium 238	U-238	0.020	0.040	0.155	1.00	U	U
Plutonium 238	13981-16-3	0.019	0.037	0.142	1.00	U	PU
Plutonium 239/240	PU-239/240	0	0.037	0.142	1.00	U	PU
Potassium 40	13966-00-2	U		2.72		U	GAM
Cobalt 60	10198-40-0	U		0.030	0.050	U	GAM
Cesium 137	10045-97-3	U		0.026	0.100	U	GAM
Radium 226	13982-63-3	U		0.054	0.100	U	GAM
Radium 228	15262-20-1	U		0.125	0.200	U	GAM
Europium 152	14683-23-9	U		0.076	0.100	U	GAM
Europium 154	15585-10-1	U		0.068	0.100	U	GAM
Europium 155	14391-16-3	U		0.073	0.100	U	GAM
Thorium 228	14274-82-9	U		0.051		U	GAM
Thorium 232	TH-232	U		0.125		U	GAM
Uranium 235	15117-96-1	U		0.164		U	GAM
Uranium 238	U-238	U		3.10		U	GAM
Americium 241	14596-10-2	U		0.066		U	GAM
Beryllium 7	13966-02-4	U		0.253		U	GAM
Ruthenium 106	13967-48-1	U		0.243		U	GAM
Antimony 125	14234-35-6	U		0.064		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

7371-012 J18K25

DATA SHEET, cont

SDG	7371	Client/Case no	Hanford	SDG K1618	
Contact	N. Joseph Verville	Contract	No. S00W235A00		
Lab sample id	R905038-12	Client sample id	J18K25		
Dept sample id	7371-012	Location/Matrix	100SA-WF5,CARCASS	SOLID	
Received	05/06/09	Collected/Weight	04/28/09 10:00	912 g	
		Custody/SAF No	RC-118-70	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		0.031		U	GAM

ColumbiaRiverComp.ofRCBRA-Tissue

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

Test PU Matrix SOLID
SDG 7371
Contact N. Joseph Verville

LAB METHOD SUMMARY

PLUTONIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1618

ESULTS

ıB AMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Plutonium 238	Plutonium 239/240
·eparation batch 7200-195						
05038-01			7371-001	J18J06	U	U
05038-02			7371-002	J18J07	U	0.289
05038-03			7371-003	J18J08	U	U
05038-04			7371-004	J18J09	U	U
05038-05			7371-005	J18J10	U	U
05038-06			7371-006	J18J69	U	U
05038-07			7371-007	J18J70	U	U
05038-08			7371-008	J18J71	U	U
05038-09			7371-009	J18J72	U	U
05038-10			7371-010	J18J73	U	U
05038-11			7371-011	J18J88	U	U
05038-12			7371-012	J18K25	U	U
05038-13			7371-013	Lab Control Sample	ok	ok
05038-14			7371-014	Method Blank	U	U
05038-15			7371-015	Duplicate (R905038-01)	- U	- U
·minal values and limits from method ·lumbiaRiverComp.ofRCBRA-Tissue				RDLs (pCi/g)	1.00	1.00

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

Test PU Matrix SOLID
SDG 7371
Contact N. Joseph Verville

LAB METHOD SUMMARY

PLUTONIUM, ISOTOPIC IN SOLIDS
ALPHA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1618

ETHOD PERFORMANCE

B 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 7200-195			2σ prep error 8.0 %	Reference Lab Notebook No. 7200 pg.195												
05038-01			J18J06	0.208	0.500			77		104			38	06/04/09	06/05	SS-053
05038-02			J18J07	0.276	0.500			60		102			37	06/04/09	06/05	SS-052
05038-03			J18J08	0.306	0.500			65		108			37	06/04/09	06/05	SS-031
05038-04			J18J09	0.282	0.500			68		108			36	06/04/09	06/05	SS-032
05038-05			J18J10	0.320	0.500			68		108			36	06/04/09	06/05	SS-033
05038-06			J18J69	0.320	0.500			77		108			38	06/04/09	06/05	SS-034
05038-07			J18J70	0.295	0.500			73		100			37	06/04/09	06/05	SS-031
05038-08			J18J71	0.281	0.500			74		100			37	06/04/09	06/05	SS-032
05038-09			J18J72	0.318	0.500			74		100			36	06/04/09	06/05	SS-033
05038-10			J18J73	0.335	0.500			80		100			36	06/04/09	06/05	SS-034
05038-11			J18J88	0.163	0.500			81		133			38	06/04/09	06/05	SS-036
05038-12			J18K25	0.142	0.500			72		168			42	06/04/09	06/09	SS-051
05038-13			Lab Control Sample	0.229	0.500			64		156				06/04/09	06/09	SS-062
05038-14			Method Blank	0.347	0.500			69		108				06/04/09	06/08	SS-064
05038-15			Duplicate (R905038-01)	0.298	0.500			71		108			41	06/04/09	06/08	SS-065
minal values and limits from method				1.00	0.500			30-110		100	100		180			

PROCEDURES	REFERENCE	PUISO_PLATE_AEA
	SPP-071	Soil Dissolution, > 1.0g Aliquot, rev 1
	CP-941	Plutonium in Water and Dissolved Samples by Extraction Chromatography, rev 8
	CP-008	Heavy Element Electroplating, rev 13

AVERAGES ± 2 SD	MDA	0.275	± 0.124
FOR 15 SAMPLES	YIELD	72	± 12

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

Test TH Matrix SOLID
SDG 7371
Contact N. Joseph Verville

LAB METHOD SUMMARY

THORIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1618

ESULTS

B MPLE ID	RAW TEST	SUF- FIX	PLANCHET	CLIENT SAMPLE ID	Thorium 230
eparation batch 7200-195					
05038-01			7371-001	J18J06	U
05038-02			7371-002	J18J07	0.511
05038-03			7371-003	J18J08	0.391
05038-04			7371-004	J18J09	0.330
05038-05			7371-005	J18J10	U
05038-06			7371-006	J18J69	0.320
05038-07			7371-007	J18J70	U
05038-08			7371-008	J18J71	0.697
05038-09			7371-009	J18J72	0.442
05038-10			7371-010	J18J73	0.239
05038-11			7371-011	J18J88	U
05038-12			7371-012	J18K25	U
05038-13			7371-013	Lab Control Sample	ok
05038-14			7371-014	Method Blank	U
05038-15			7371-015	Duplicate (R905038-01)	- U

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

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

Test TH Matrix SOLID
SDG 7371
Contact N. Joseph Verville

LAB METHOD SUMMARY

THORIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1618

ETHOD PERFORMANCE

;PLE 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
:paration batch 7200-195			2σ prep error 8.0 %	Reference Lab Notebook No. 7200 pg.195												
)5038-01			J18J06	0.552	0.250			97		151			38	06/04/09	06/05	SS-035
)5038-02			J18J07	0.288	0.250			100		153			36	06/04/09	06/04	SS-036
)5038-03			J18J08	0.289	0.250			100		153			36	06/04/09	06/04	SS-038
)5038-04			J18J09	0.253	0.250			89		153			35	06/04/09	06/04	SS-039
)5038-05			J18J10	0.602	0.250			77		153			35	06/04/09	06/04	SS-040
)5038-06			J18J69	0.256	0.250			108		154			37	06/04/09	06/04	SS-042
)5038-07			J18J70	0.238	0.250			94		153			36	06/04/09	06/04	SS-051
)5038-08			J18J71	0.279	0.250			106		150			37	06/04/09	06/05	SS-036
)5038-09			J18J72	0.373	0.250			113		154			41	06/04/09	06/10	SS-061
)5038-10			J18J73	0.367	0.250			104		155			35	06/04/09	06/04	SS-061
)5038-11			J18J88	0.268	0.250			109		156			37	06/04/09	06/04	SS-063
)5038-12			J18K25	0.331	0.250			108		150			37	06/04/09	06/04	SS-031
)5038-13			Lab Control Sample	0.327	0.250			106		151				06/04/09	06/04	SS-032
)5038-14			Method Blank	0.318	0.250			116		151				06/04/09	06/04	SS-033
)5038-15			Duplicate (R905038-01)	0.433	0.250			95		151			37	06/04/09	06/04	SS-034
ıinal values and limits from method				1.00	0.250			30-110		150			180			

ROCEDURES	REFERENCE	THISO_IE_PLATE_AEA
	SPP-071	Soil Dissolution, > 1.0g Aliquot, rev 1
	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 15 SAMPLES
MDA 0.345 ± 0.216
YIELD 101 ± 20

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

Test	U
Matrix	SOLID
SDG	7371
Contact	N. Joseph Verville

LAB METHOD SUMMARY

URANIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client	Hanford
Contract	No. S00W235A00
Contract	SDG K1618

ESULTS

B MPLE 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 7200-195														
05038-01			7371-001	J18J06	U		U		U					
05038-02			7371-002	J18J07	U		U		U					
05038-03			7371-003	J18J08	U		U		U					
05038-04			7371-004	J18J09	U		U		U					
05038-05			7371-005	J18J10	U		U		U					
05038-06			7371-006	J18J69	U		U		U					
05038-07			7371-007	J18J70	U		U		U					
05038-08			7371-008	J18J71	U		U		U					
05038-09			7371-009	J18J72	U		U		U					
05038-10			7371-010	J18J73	U		U		U					
05038-11			7371-011	J18J88	U		U		U					
05038-12			7371-012	J18K25	U		U		U					
05038-13			7371-013	Lab Control Sample	ok		ok		ok					
05038-14			7371-014	Method Blank	U		U		U					
05038-15			7371-015	Duplicate (R905038-01)	-	U	-	U	-	U				
minal values and limits from method				RDLs (pCi/g)	1.00		1.00		1.00		100		4	
lumbiaRiverComp.ofRCBRA-Tissue											Averages			

Lab id	EBRLNE
Protocol	Hanford1
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

Test U Matrix SOLID
SDG 7371
Contact N. Joseph Verville

LAB METHOD SUMMARY

URANIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1618

ETHOD PERFORMANCE

B 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 7200-195			2σ prep error 8.0 %	Reference Lab Notebook No. 7200 pg.195												
05038-01			J18J06	0.230	0.500			102		110			38	06/02/09	06/05	SS-031
05038-02			J18J07	0.208	0.500			109		110			37	06/02/09	06/05	SS-032
05038-03			J18J08	0.202	0.500			107		100			40	06/02/09	06/08	SS-036
05038-04			J18J09	0.234	0.500			100		111			36	06/02/09	06/05	SS-034
05038-05			J18J10	0.192	0.500			102		106			36	06/02/09	06/05	SS-039
05038-06			J18J69	0.185	0.500			107		102			38	06/02/09	06/05	SS-053
05038-07			J18J70	0.212	0.500			101		106			37	06/02/09	06/05	SS-040
05038-08			J18J71	0.196	0.500			100		106			37	06/02/09	06/05	SS-042
05038-09			J18J72	0.207	0.500			91		110			36	06/02/09	06/05	SS-039
05038-10			J18J73	0.150	0.500			102		151			40	06/02/09	06/09	SS-054
05038-11			J18J88	0.192	0.500			98		111			38	06/02/09	06/05	SS-042
05038-12			J18K25	0.187	0.500			103		133			38	06/02/09	06/05	SS-035
05038-13			Lab Control Sample	0.506	0.500			100		104				06/02/09	06/08	SS-056
05038-14			Method Blank	0.204	0.500			98		108				06/02/09	06/08	SS-063
05038-15			Duplicate (R905038-01)	0.199	0.500			99		108			41	06/02/09	06/08	SS-066
minal values and limits from method				1.00	0.500			30-110		100	100		180			

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

AVERAGES ± 2 SD FOR 15 SAMPLES
MDA 0.220 ± 0.163
YIELD 101 ± 9

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

Test SR Matrix SOLID
SDG 7371
Contact N. Joseph Verville

LAB METHOD SUMMARY

TOTAL STRONTIUM IN SOLIDS

BETA COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1618

ESULTS

B MPLE ID	RAW TEST	SUF- FIX	PLANCHET	CLIENT SAMPLE ID	Total Strontium	
eparation batch 7200-195						
05038-01			7371-001	J18J06	U	
05038-02			7371-002	J18J07	U	
05038-03			7371-003	J18J08	U	
05038-04			7371-004	J18J09	U	
05038-05			7371-005	J18J10	U	
05038-06			7371-006	J18J69	U	
05038-07			7371-007	J18J70	U	
05038-08			7371-008	J18J71	U	
05038-09			7371-009	J18J72	U	
05038-10			7371-010	J18J73	U	
05038-11			7371-011	J18J88	U	
05038-12			7371-012	J18K25	U	
05038-13			7371-013	Lab Control Sample	ok	
05038-14			7371-014	Method Blank	U	
05038-15			7371-015	Duplicate (R905038-01)	-	U

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

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

Test SR Matrix SOLID
SDG 7371
Contact N. Joseph Verville

LAB METHOD SUMMARY

TOTAL STRONTIUM IN SOLIDS

BETA COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1618

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 7200-195			2σ prep error 10.4 % Reference Lab Notebook No. 7200 pg.195													
05038-01			J18J06	0.299	1.01			89		100			37	06/04/09	06/04	GRB-224
05038-02			J18J07	0.311	1.01			94		100			36	06/04/09	06/04	GRB-225
05038-03			J18J08	0.392	1.01			93		100			36	06/04/09	06/04	GRB-221
05038-04			J18J09	0.295	1.03			93		100			35	06/04/09	06/04	GRB-227
05038-05			J18J10	0.285	1.03			92		100			35	06/04/09	06/04	GRB-228
05038-06			J18J69	0.360	1.02			95		100			37	06/04/09	06/04	GRB-224
05038-07			J18J70	0.301	1.00			94		100			36	06/04/09	06/04	GRB-207
05038-08			J18J71	0.304	1.02			94		100			36	06/04/09	06/04	GRB-225
05038-09			J18J72	0.389	1.01			93		100			35	06/04/09	06/04	GRB-227
05038-10			J18J73	0.289	1.03			94		100			35	06/04/09	06/04	GRB-227
05038-11			J18J88	0.274	1.03			94		100			37	06/04/09	06/04	GRB-228
05038-12			J18K25	0.311	1.01			95		100			37	06/04/09	06/04	GRB-229
05038-13			Lab Control Sample	0.297	1.00			93		100				06/04/09	06/04	GRB-230
05038-14			Method Blank	0.325	1.00			91		100				06/04/09	06/04	GRB-231
05038-15			Duplicate (R905038-01)	0.305	1.01			91		100			37	06/04/09	06/04	GRB-232
minal values and limits from method				1.00	1.00			40-110		100			180			

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

AVERAGES ± 2 SD FOR 15 SAMPLES
MDA 0.316 ± 0.072
YIELD 93 ± 3

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

Test TC Matrix SOLID
SDG 7371
Contact N. Joseph Verville

LAB METHOD SUMMARY

TECHNETIUM 99 IN SOLIDS

BETA COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1618

ESULTS

.B MPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Technetium 99	
'eparation batch 7200-195						
05038-01			7371-001	J18J06	U	
05038-02			7371-002	J18J07	U	
05038-03			7371-003	J18J08	U	
05038-04			7371-004	J18J09	U	
05038-05			7371-005	J18J10	U	
05038-06			7371-006	J18J69	U	
05038-07			7371-007	J18J70	U	
05038-08			7371-008	J18J71	U	
05038-09			7371-009	J18J72	U	
05038-10			7371-010	J18J73	U	
05038-11			7371-011	J18J88	U	
05038-12			7371-012	J18K25	U	
05038-13			7371-013	Lab Control Sample	ok	
05038-14			7371-014	Method Blank	U	
05038-15			7371-015	Duplicate (R905038-01)	-	U

'minal values and limits from method RDLs (pCi/g) 15.0
'lumbiaRiverComp.ofRCBRA-Tissue

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

Test TC Matrix SOLID
SDG 7371
Contact N. Joseph Verville

LAB METHOD SUMMARY

TECHNETIUM 99 IN SOLIDS

BETA COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1618

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 7200-195			2σ prep error 13.2 % Reference Lab Notebook No. 7200 pg.195													
05038-01			J18J06	0.400	1.00			88		100			41	06/03/09	06/08	GRB-203
05038-02			J18J07	0.482	1.03			73		100			38	06/03/09	06/06	GRB-223
05038-03			J18J08	0.460	1.01			76		100			38	06/03/09	06/06	GRB-224
05038-04			J18J09	0.435	1.01			81		100			40	06/03/09	06/09	GRB-224
05038-05			J18J10	0.478	1.02			73		100			39	06/03/09	06/08	GRB-224
05038-06			J18J69	0.595	1.01			61		100			39	06/03/09	06/06	GRB-227
05038-07			J18J70	0.425	1.01			82		100			38	06/03/09	06/06	GRB-228
05038-08			J18J71	0.519	1.02			70		100			40	06/03/09	06/08	GRB-227
05038-09			J18J72	0.419	1.03			82		100			39	06/03/09	06/08	GRB-228
05038-10			J18J73	0.401	1.03			85		100			40	06/03/09	06/09	GRB-228
05038-11			J18J88	0.633	1.03			57		100			39	06/03/09	06/06	GRB-232
05038-12			J18K25	0.451	1.03			81		100			39	06/03/09	06/06	GRB-201
05038-13			Lab Control Sample	0.437	1.00			80		100				06/03/09	06/06	GRB-202
05038-14			Method Blank	0.497	1.00			71		100				06/03/09	06/06	GRB-203
05038-15			Duplicate (R905038-01)	0.443	1.02			81		100			39	06/03/09	06/06	GRB-204
minal values and limits from method				15.0	1.00			30-110		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 15 SAMPLES
MDA 0.472 ± 0.134
YIELD 76 ± 17

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

Test GAM Matrix SOLID
SDG 7371
Contact N. Joseph Verville

LAB METHOD SUMMARY

GAMMA SCAN

GAMMA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1618

ESULTS

.B .MPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Cobalt 60		Cesium 137	
eparation batch 7200-195								
05038-01			7371-001	J18J06	U		U	
05038-02			7371-002	J18J07	U		U	
05038-03			7371-003	J18J08	U		U	
05038-04			7371-004	J18J09	U		U	
05038-05			7371-005	J18J10	U		U	
05038-06			7371-006	J18J69	U		U	
05038-07			7371-007	J18J70	U		U	
05038-08			7371-008	J18J71	U		U	
05038-09			7371-009	J18J72	U		U	
05038-10			7371-010	J18J73	U		U	
05038-11			7371-011	J18J88	U		U	
05038-12			7371-012	J18K25	U		U	
05038-13			7371-013	Lab Control Sample	ok		ok	
05038-14			7371-014	Method Blank	U		U	
05038-15			7371-015	Duplicate (R905038-01)	-	U	-	U
minal values and limits from method lumbiaRiverComp.ofRCBRA-Tissue				RDLs (pCi/g)	0.050		0.100	

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

Test GAM Matrix SOLID
SDG 7371
Contact N. Joseph Verville

LAB METHOD SUMMARY

GAMMA SCAN

GAMMA SPECTROSCOPY

Client Hanford
Contract No. S00W235A00
Contract SDG K1618

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 7200-195			2σ prep error 7.0 % Reference Lab Notebook No. 7200 pg.195													
·05038-01			J18J06	9.82	114					938			21	05/18/09	05/19	JR,04,00
·05038-02			J18J07	8.74	114					924			23	05/18/09	05/22	JR,05,00
·05038-03			J18J08	15.9	115					848			20	05/18/09	05/19	JR,06,00
·05038-04			J18J09	7.10	115					1135			20	05/18/09	05/20	JR,05,00
·05038-05			J18J10	13.5	115					1134			20	05/18/09	05/20	JR,06,00
·05038-06			J18J69	10.2	116					423			23	05/18/09	05/21	JR,02,00
·05038-07			J18J70	8.75	117					832			22	05/18/09	05/21	JR,01,00
·05038-08			J18J71	11.0	115					423			22	05/18/09	05/21	JR,07,00
·05038-09			J18J72	15.3	119					423			21	05/18/09	05/21	JR,04,00
05038-10			J18J73	14.4	118					924			22	05/18/09	05/22	JR,06,00
05038-11			J18J88	22.4	116					423			23	05/18/09	05/21	JR,06,00
05038-12			J18K25	7.32	115					832			23	05/18/09	05/21	JR,02,00
05038-13			Lab Control Sample	0.059	110					868				05/18/09	05/27	JR,04,00
05038-14			Method Blank	7.63	110					868				05/18/09	05/27	JR,07,00
05038-15			Duplicate (R905038-01)	20.4	114					833			23	05/18/09	05/21	JR,07,00
·minal values and limits from method				0.050	110					100			180			

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

AVERAGES ± 2 SD FOR 15 SAMPLES
MDA 11.5 ± 11.3
YIELD ____ ± ____

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

Test C Matrix SOLID
SDG 7371
Contact N. Joseph Verville

LAB METHOD SUMMARY

CARBON 14 IN SOLIDS

LIQUID SCINTILLATION COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1618

ESULTS

B MPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Carbon 14	
eparation batch 7200-195						
05038-01			7371-001	J18J06	U	
05038-02			7371-002	J18J07	U	
05038-03			7371-003	J18J08	U	
05038-04			7371-004	J18J09	U	
05038-05			7371-005	J18J10	U	
05038-06			7371-006	J18J69	2480	
05038-07			7371-007	J18J70	2820	
05038-08			7371-008	J18J71	U	
05038-09			7371-009	J18J72	U	
05038-10			7371-010	J18J73	16100	
05038-11			7371-011	J18J88	U	
05038-12			7371-012	J18K25	U	
05038-13			7371-013	Lab Control Sample	ok	
05038-14			7371-014	Method Blank	U	
05038-15			7371-015	Duplicate (R905038-01)	-	U

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

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

Test C Matrix SOLID
SDG 7371
Contact N. Joseph Verville

LAB METHOD SUMMARY

CARBON 14 IN SOLIDS

LIQUID SCINTILLATION COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1618

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 7200-195			2σ prep error 10.0 % Reference Lab Notebook No. 7200 pg.195													
05038-01			J18J06	5.82	0.215			100		50			39	06/05/09	06/06	LSC-007
05038-02			J18J07	5.84	0.226			100		50			38	06/05/09	06/06	LSC-007
05038-03			J18J08	6.18	0.218			100		50			38	06/05/09	06/06	LSC-007
05038-04			J18J09	5.20	0.245			100		50			37	06/05/09	06/06	LSC-007
05038-05			J18J10	5.64	0.229			100		50			37	06/05/09	06/06	LSC-007
05038-06			J18J69	11.1	0.256			100		10			39	06/05/09	06/06	LSC-007
05038-07			J18J70	12.5	0.232			100		10			38	06/05/09	06/06	LSC-007
05038-08			J18J71	5.72	0.218			100		50			38	06/05/09	06/06	LSC-007
05038-09			J18J72	4.96	0.255			100		50			37	06/05/09	06/06	LSC-007
05038-10			J18J73	33.8	0.211			100		1			37	06/05/09	06/06	LSC-007
05038-11			J18J88	5.77	0.220			100		50			39	06/05/09	06/06	LSC-007
05038-12			J18K25	5.40	0.234			100		50			39	06/05/09	06/06	LSC-007
05038-13			Lab Control Sample	13.7	0.210			100		10				06/05/09	06/07	LSC-007
05038-14			Method Blank	6.10	0.210			100		50				06/05/09	06/06	LSC-007
05038-15			Duplicate (R905038-01)	5.62	0.222			100		50			39	06/05/09	06/06	LSC-007
minal values and limits from method				50.0	0.210					10			180			

PROCEDURES REFERENCE C14_COX_LSC
CP-251 Tritium/Carbon-14 Oxidation, rev 10

AVERAGES ± 2 SD FOR 15 SAMPLES
MDA 8.89 ± 14.9
YIELD 100 ± 0

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

Test H Matrix SOLID
SDG 7371
Contact N. Joseph Verville

LAB METHOD SUMMARY

TRITIUM IN SOLIDS

LIQUID SCINTILLATION COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1618

ESULTS

B MPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Tritium
eparation batch 7200-195					
05038-01			7371-001	J18J06	U
05038-02			7371-002	J18J07	U
05038-03			7371-003	J18J08	U
05038-04			7371-004	J18J09	U
05038-05			7371-005	J18J10	U
05038-06			7371-006	J18J69	U
05038-07			7371-007	J18J70	U
05038-08			7371-008	J18J71	U
05038-09			7371-009	J18J72	U
05038-10			7371-010	J18J73	U
05038-11			7371-011	J18J88	U
05038-12			7371-012	J18K25	U
05038-13			7371-013	Lab Control Sample	LOW
05038-14			7371-014	Method Blank	U
05038-15			7371-015	Duplicate (R905038-01)	- U

minal values and limits from method RDLs (pCi/g) 400
lumbiaRiverComp.ofRCBRA-Tissue

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

Test H Matrix SOLID
SDG 7371
Contact N. Joseph Verville

LAB METHOD SUMMARY

TRITIUM IN SOLIDS

LIQUID SCINTILLATION COUNTING

Client Hanford
Contract No. S00W235A00
Contract SDG K1618

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 7200-195			2σ prep error 10.0 % Reference Lab Notebook No. 7200 pg.195													
05038-01			J18J06	7.48	0.215			100		50			39	06/05/09	06/06	LSC-004
05038-02			J18J07	7.10	0.226			100		50			38	06/05/09	06/06	LSC-004
05038-03			J18J08	7.35	0.218			100		50			38	06/05/09	06/06	LSC-004
05038-04			J18J09	6.55	0.245			100		50			37	06/05/09	06/06	LSC-004
05038-05			J18J10	7.03	0.229			100		50			37	06/05/09	06/06	LSC-004
05038-06			J18J69	6.26	0.256			100		50			39	06/05/09	06/06	LSC-004
05038-07			J18J70	6.90	0.232			100		50			38	06/05/09	06/06	LSC-004
05038-08			J18J71	7.35	0.218			100		50			38	06/05/09	06/06	LSC-004
05038-09			J18J72	6.33	0.255			100		50			37	06/05/09	06/06	LSC-004
05038-10			J18J73	7.60	0.211			100		50			37	06/05/09	06/06	LSC-004
05038-11			J18J88	7.27	0.220			100		50			39	06/05/09	06/06	LSC-004
05038-12			J18K25	6.84	0.234			100		50			39	06/05/09	06/06	LSC-004
05038-13			Lab Control Sample	6.97	0.210			100		50				06/05/09	06/07	LSC-004
05038-14			Method Blank	7.57	0.210			100		50				06/05/09	06/06	LSC-004
05038-15			Duplicate (R905038-01)	7.22	0.222			100		50			39	06/05/09	06/06	LSC-004
minal values and limits from method				400	0.210					25			180			

PROCEDURES REFERENCE TRITIUM_COX_LSC
CP-251 Tritium/Carbon-14 Oxidation, rev 10

AVERAGES ± 2 SD FOR 15 SAMPLES
MDA 7.05 ± 0.842
YIELD 100 ± 0

Lab id EBRLNE
Protocol Hanford1
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 06/12/09

EBERLINE ANALTYICAL/RICHMOND

SAMPLE DELIVERY GROUP K1618

SDG 7371
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG K1618

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 06/12/09

SDG 7371
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1618

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 06/12/09

SDG 7371
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG K1618

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 06/12/09

SDG 7371
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG K1618

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 06/12/09

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.

SDG 7371
Contact N. Joseph Verville

GUIDE, cont.

Client Hanford
Contract No. S00W235A00
Case no SDG K1618

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 06/12/09

SDG 7371
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1618

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 06/12/09

SDG 7371
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG K1618

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 06/12/09

DUPLICATE

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

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

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

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

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

SDG 7371
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1618

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 06/12/09

SDG 7371
Contact N. Joseph Verville

GUIDE, cont.

Client Hanford
Contract No. S00W235A00
Case no SDG_K1618

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 06/12/09

SDG 7371
Contact N. Joseph Verville

REPORT GUIDE

Client Hanford
Contract No. S00W235A00
Case no SDG_K1618

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 06/12/09

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-118-1	Page 1 of 1
Collector: Josh McGough	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF1, FILLET K1618 (7371)	SAF No.: RC-118	
Ice Chest No.: AFS-04-006	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# 7965673 4890	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				

Sample No.	Matrix *	Sample Date	Sample Time										
J18J06	OTHER SOLID	4/28/09	1230	X	X	X	X			X			

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By/Removed From: Josh McGough	Date/Time: 4/28/09 1235	Received By/Stored In: EAS Locked Storage #2
Relinquished By/Removed From: EAS LOCKED STORAGE #2	Date/Time: 5/5/09 1205	Received By/Stored In: SHANNAN JOHNSON
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 5/5/09 1205	Received By/Stored In: Fax# 7965673 4890
Relinquished By/Removed From: FED EX	Date/Time:	Received By/Stored In: R.F. MATHUS
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:

Date/Time: 05/06/09 0900

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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-118-2	Page 1 of 1

Collector: Josh McGough	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N 9510 Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF2, FILLET K1618 (7371)	SAF No.: RC-118	
Ice Chest No.: AFS-04-006	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# 796567304890	

POSSIBLE SAMPLE HAZARDS/REMARKS

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

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				
Sample No. / Matrix * / Sample Date / Sample Time											
J18J07 / OTHER SOLID / 4/29/09 / 0800	X	X	X	X			X				

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Josh McGough	4/29/09 0800	Received By/Stored In: EAS Locked Storage #2	4/29/09 0800
Relinquished By/Removed From: EAS LOCKED STORAGE #2	5/5/09 1205	Received By/Stored In: SHANNAN JOHNSON	5/5/09 1205
Relinquished By/Removed From: SHANNAN JOHNSON	5/5/09 1205	Received By/Stored In: Fdx# 796567304890	
Relinquished By/Removed From: FED EX		Received By/Stored In: C.F. MATTHEWS	05/06/09 9:00
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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-118-3	Page 1 of 1

Collector: Josh McGough	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K W 9516 Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF3, FILLET K1618 (7371)	SAF No.: RC-118	
Ice Chest No.: AFS-04-006	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# 796567304009	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None			
Type of Container	G/P	G/P JAM 4/29/09	G/P	G/P	G/P	aG	G/P			
No. of Container(s)	* 1	x0	x0	x0	x0	x0	x0			
Volume	1500g	100g	100g	10g	250g	120g	10g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99			
Sample No. / Matrix * / Sample Date / Sample Time										
J18J08 / OTHER SOLID / 4/29/09 / 1400	X	X	X	X			X			

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Josh McGough Joel McKel	4/29/09 1405	Received By/Stored In: Joel McKel EAS Locked Storage #2	4/29/09 1405
Relinquished By/Removed From: EAS LOCKED STORAGE #2	5/5/09 1205	Received By/Stored In: SHANNAN JOHNSON	5/5/09 1205
Relinquished By/Removed From: SHANNAN JOHNSON	5/5/09 1205	Received By/Stored In: Fdx# 796567304890	
Relinquished By/Removed From: FED EX		Received By/Stored In: L.F. MATAWATAN	05/06/09 0900
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

* Trans Ship.
Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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-118-4	Page 1 of 1

Collector: Josh McGough	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ N Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF4, FILLET K1618 (7371)	SAF No.: RC-118	
Ice Chest No.: A FS-04-006	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# 796567304890	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None			
Type of Container	G/P	G/P JAM 4/30/09	G/P	G/P	G/P	aG	G/P			
No. of Container(s)	* 1	x 0	x 0	x 0	x 0	x 0	x 0			
Volume	1500g	100g	100g	10g	250g	120g	10g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99			

Sample No.	Matrix *	Sample Date	Sample Time										
J18J09	OTHER SOLID	4/30/09	0800	X	X	X	X			X			

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Josh McGough	4/30/09 0805	EAS Locked Storage #2	4/30/09 0805
EAS LOCKED STORAGE #2	5/5/09 1205	SHANNAN JOHNSON	5/5/09 1205
SHANNAN JOHNSON	5/5/09 1205	Fdx# 796567304890	
Fed Ex		FF Matowkin	05/06/09 0900

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

* Trans ship.

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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-118-5	Page 1 of 1

Collector: Josh McGough	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ N 9514 Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF5, FILLET K1618 (7371)	SAF No.: RC-118	
Ice Chest No.: AFS-04-006	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# 796567304890	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None			
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P			
No. of Container(s)	1	1	1	1	1	1	1			
Volume	1500g	100g	100g	10g	250g	120g	10g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99			
Sample No. / Matrix * / Sample Date / Sample Time										
J18J10 / OTHER SOLID / 4/30/09 / 1030	X	X	X	X			X			

CHAIN OF POSSESSION	Sign/Print Names	Date/Time
Relinquished By/Removed From: Josh McGough, Joel McAll	Received By/Stored In: Joel McAll, EAS Locked Storage #2	4/30/09 1035
Relinquished By/Removed From: EAS LOCKED STORAGE #2	Received By/Stored In: SHANNAN JOHNSON	5/5/09 1205
Relinquished By/Removed From: SHANNAN JOHNSON	Received By/Stored In: Fdx# 796567304890	5/5/09 1205
Relinquished By/Removed From: FED EX	Received By/Stored In: R.F. NATAWKAR	05/06/09 0900
Relinquished By/Removed From	Received By/Stored In	
Relinquished By/Removed From	Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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-118-26	Page 1 of 1
Collector: Josh McGough	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N Q916; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF1, CARCASS K1618 (7371)	SAF No.: RC-118	
Ice Chest No.: AFS-04-006	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# 7965 [illegible] 04 [illegible]	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				
Sample No. / Matrix * / Sample Date / Sample Time											
J18J69 / OTHER SOLID / 4/28/09 / 1430	X	X	X	X			X				

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By/Removed From: Josh McGough / Joel McGill 4/28/09 1435	Received By/Stored In: Joel McGill / EAS Locked Storage #2 4/28/09 1435	Date/Time
Relinquished By/Removed From: EAS LOCKED STORAGE #2 5/5/09 1205	Received By/Stored In: SHANNAN JOHNSON 5/5/09 1205	Date/Time
Relinquished By/Removed From: SHANNAN JOHNSON 5/5/09 1205	Received By/Stored In: Fdx# 7965 [illegible]	Date/Time
Relinquished By/Removed From: FED EX	Received By/Stored In: RF-[illegible] 05/06/09 0900	Date/Time
Relinquished By/Removed From	Received By/Stored In	Date/Time
Relinquished By/Removed From	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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-118-27	Page 1 of 1
Collector: Josh McGough	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N 9-016
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF2, CARCASS K1618 (7371)	SAF No.: RC-118	Data Turnaround: 45 Days
Ice Chest No.: AFS-04-006	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# 796567304890	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P EC 4/29/09	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	*1	X0	X0	X0	X0	X0	X0				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				
Sample No. / Matrix * / Sample Date / Sample Time											
J18J70 / OTHER SOLID / 4/29/09 / 1035 JAM 4/29/09	X	X	X	X			X				

CHAIN OF POSSESSION	Sign/Print Names	Date/Time
Relinquished By/Removed From: Josh McGough	Received By/Stored In: EAS Locked Storage #2	4/29/09 1035
Relinquished By/Removed From: EAS LOCKED STORAGE #2	Received By/Stored In: SHANNAN JOHNSON	5/5/09 1205
Relinquished By/Removed From: SHANNAN JOHNSON	Received By/Stored In: Fdx# 796567304890	5/5/09 1205
Relinquished By/Removed From: FED EX	Received By/Stored In: R.F. Matthews	5/6/09 0900
Relinquished By/Removed From:	Received By/Stored In:	
Relinquished By/Removed From:	Received By/Stored In:	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

* Trans-ship
Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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-118-28	Page 1 of 1

Collector: Josh McGough	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, CARCASS K1618 (7371)		SAF No.: RC-118
Ice Chest No.: AFS-04-006	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# 796567304890

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None			
Type of Container	G/P	G/P Jam 4/29/09	G/P	G/P	G/P	aG	G/P			
No. of Container(s)	* 1	10	10	10	10	10	10			
Volume	1500g	100g	100g	10g	250g	120g	10g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99			
Sample No. / Matrix * / Sample Date / Sample Time										
J18J71 / OTHER SOLID / 4/29/09 / 1530	X	X	X	X			X			

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Josh McGough Jal McAl	4/29/09 1535	Jal McAl EAS Locked Storage #2	4/29/09 1535
EAS LOCKED STORAGE #2	5/5/09 1215	SHANNAN JOHNSON	5/5/09 1205
SHANNAN JOHNSON	5/5/09 1205	Fdx# 796567304890	
FED EX		RF Hatfield	05/06/09 0900

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}

(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium

(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

* Trans Ship
Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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-118-29	Page 1 of 1

Collector: Josh McGough	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N 8240	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF4, CARCASS K1618 (7371)	SAF No.: RC-118	
Ice Chest No.: AFS-04-006	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# 796567304090	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P Jam	G/P 4/30/09	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	* 1	x0	x0	x0	x0	x0	x0				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				
Sample No.	Matrix *	Sample Date	Sample Time								
J18J72	OTHER SOLID	4/30/09	0930	X	X	X	X			X	

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Josh McGough, John McKel	4/30/09 0935	John McKel EAS Locked Storage #2	4/30/09 0935
SJ EAS LOCKED STORAGE #2	5/5/09 205	SHANNAN JOHNSON	5/5/09 205
SHANNAN JOHNSON	5/5/09 205	Fdx# 796567304090	
FED EX		TJF WATKINS	05/06/09 0900

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium. Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

*TRANS SHIP

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09.

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-118-30	Page 1 of 1

Collector: Josh McGough	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N 9V5/4	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: UPRIVER SA-WF5, CARCASS K1618 (7371)		SAF No.: RC-118
Ice Chest No.: AFS-04-006	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# 796567304090

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None			
Type of Container	G/P SAM	G/P 4/30/09	G/P	G/P	G/P	aG	G/P			
No. of Container(s)	* 1	10	10	10	10	10	10			
Volume	1500g	100g	100g	10g	250g	120g	10g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99			
Sample No. / Matrix * / Sample Date / Sample Time										
J18J73 / OTHER SOLID / 4/30/09 / 1200	X	X	X	X			X			

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Josh McGough	Date/Time: 4/30/09 1205	Received By/Stored In: EAS Locked Storage #2	Date/Time: 4/30/09 1205
Relinquished By/Removed From: EAS LOCKED STORAGE #2	Date/Time: 5/5/09 1205	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 5/5/09 1205
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 5/5/09 1205	Received By/Stored In: Fdx# 796567304090	Date/Time:
Relinquished By/Removed From: FED EX	Date/Time:	Received By/Stored In: M.F. WATSON	Date/Time: 5/06/09 0900
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

* Trans Ship
Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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-118-45	Page 1 of 1
Collector: Josh McGough	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N Q 5/10
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WF5, FILLET K1618 (7371)	SAF No.: RC-118	Data Turnaround: 45 Days
Ice Chest No.: AFS-04-006	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# 796567304890	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				
Sample No. / Matrix * / Sample Date / Sample Time											
J18J88 / OTHER SOLID / 4/28/09 / 0800	X	X	X	X			X				

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Josh McGough Joel M. Hall	4/28/09 0805	Joel M. Hall EAS Locked Storage #2	4/28/09 0805
EAS LOCKED STORAGE #2	5/5/09 1205	SHANNAN JOHNSON	5/5/09 1205
SHANNAN JOHNSON	5/5/09 1205	Fdx# 796567304890	
FED EX		R.F. WATHEN	05/06/09 0900

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}

(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium

(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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-118-70	Page 1 of 1

Collector: Josh McGough	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WF5, CARCASS K1618 (7371)	SAF No.: RC-118	
Ice Chest No.: AFS-04-006	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# 796567304890	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				
Sample No. / Matrix * / Sample Date / Sample Time											
J18K25 / OTHER SOLID / 4/28/09 / 1000	X	X	X	X			X				

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS
Relinquished By/Removed From: Josh McGough / Date/Time: 4/28/09 1005	Received By/Stored In: EAS Locked Storage #2 / Date/Time: 4/28/09 1005	(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}
Relinquished By/Removed From: EAS LOCKED STORAGE #2 / Date/Time: 5/5/09 1205	Received By/Stored In: SHANNAN JOHNSON / Date/Time: 5/5/09 1205	(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
Relinquished By/Removed From: SHANNAN JOHNSON / Date/Time: 5/5/09	Received By/Stored In: Fdx# 796567304890 / Date/Time:	(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: FED EX / Date/Time:	Received By/Stored In: / Date/Time: 5/6/09 0900	Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09
Relinquished By/Removed From: / Date/Time:	Received By/Stored In: / Date/Time:	
Relinquished By/Removed From: / Date/Time:	Received By/Stored In: / Date/Time:	

Matrix *
S=Soil
SE=Sediment
SO=Solid
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 5/6/09

Client: W.C. HANFORD City RICHLAND State WA

Date/Time received 05/06/09 0900 CoC No. RC-118-1,2,3,4,5,26,27,28,29,30,45,70

Container I.D. No. AFS-04-006 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: 12 Sample Matrix SOILD
7. Number of containers per sample: _____ (Or see CoC X)
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: 05/06/09 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 Jan 08

EBERLINE

RICHMOND, CA LABORATORY

ICE CHEST RECEIPT LOG

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

Customer: W.C. HAN Date:

Ice chest # or description	AFS 04-006	AFS 04-006				
*Ice chest scanned for activity?	YES					
Custody seals on ice chest intact?	YES					
Custody seals dated?	YES					
Custody seals signed?	YES					
Thermometer number	2132					
Thermometer: time in	10:50					
Thermometer: time out	11:50					
Thermometer reading	5.0 °C					
Correction factor	+0.5 °C					
**Actual temperature	5.5 °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:

LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

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

RECEIVED
JUN 2009

22 June 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 #	0905017
SDG #	K1618
SAF #	RC-118
Date Received	05/7/09
# Samples	12
Matrix	OTHER
Volatiles	
Semivolatiles	
Pest/PCB	X
Glycols	
DRO/KRO/GRO	
PAH	
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

LVL
LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

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

RECEIVED
JUN 2009

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 METALS Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
J18J06	0905017-01	Solid	04/28/2009 12:30	05/07/2009 17:58
J18J07	0905017-02	Solid	04/29/2009 08:00	05/07/2009 17:58
J18J08	0905017-03	Solid	04/29/2009 14:00	05/07/2009 17:58
J18J09	0905017-04	Solid	04/30/2009 08:00	05/07/2009 17:58
J18J10	0905017-05	Solid	04/30/2009 10:30	05/07/2009 17:58
J18J69	0905017-06	Solid	04/28/2009 14:30	05/07/2009 17:58
J18J70	0905017-07	Solid	04/29/2009 10:30	05/07/2009 17:58
J18J71	0905017-08	Solid	04/29/2009 15:30	05/07/2009 17:58
J18J72	0905017-09	Solid	04/30/2009 09:30	05/07/2009 17:58
J18J73	0905017-10	Solid	04/30/2009 12:00	05/07/2009 17:58
J18J88	0905017-11	Solid	04/28/2009 08:00	05/07/2009 17:58
J18K25	0905017-12	Solid	04/28/2009 10:00	05/07/2009 17:58

LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

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

Case Narrative

Client: WC-HANFORD RC-118
LVL#: 0905017
SDG/SAF#: K1618 /RC-118

W.O.#: 60049-001-001-0001-00
Date Received: 05-06-09

METALS

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

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 12 solid samples. The samples are reported on a wet weight, 'as-received' basis.

2. The samples were prepared and analyzed in accordance with methods checked on the attached glossary.

   The samples were redigested for Bismuth, Phosphorous, and Uranium, after the Matrix Spike in the initial digestion batch was not spiked for these analytes. The redigested samples have "...RE1" following the laboratory ID to distinguish them from the original samples.

   Samples J18J07, J18J69, J18J70, J18J73, and J18J88, were reported with 21-fold dilutions for Phosphorous high concentrations.

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

4. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within the 90-110% control limits.

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

6. All preparation/method blanks (MB) were within method criteria {less than the Limit of Quantitation (3-10X the LOD), or samples greater than 20X MB value}.

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

8. All Standard Reference Material (SRM) results were within the Prediction Intervals

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 51 pages.

provided by the manufacturer with the exception of Copper, Iron, Manganese, and Zinc.

9. The matrix spike (MS) recoveries for 2 analytes were outside the 75-125% control limits.

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

Sample ID	Element	PDS Concentration (ppb)	PDS % Recovery
J18J06	Calcium	20,800	88.7
	Phosphorous	5,000	81.4

11. The duplicate analyses for 10 analytes were outside the 20% Relative Percent Difference (RPD) control limits.

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

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

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

for Iain Daniels
Laboratory Manager
Lionville Laboratory

6/18/09
Date

jjw/m05-017

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

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

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

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

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J06
0905017-01 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	**2.99**	B	3.68	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Antimony	0.441	U	0.441	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Arsenic	**0.224**	B	0.735	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Barium	**0.698**		0.368	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Beryllium	0.147	U	0.147	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Boron	**3.86**		1.47	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cadmium	0.147	U	0.147	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Calcium	**2190**		73.5	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Chromium	**0.332**		0.221	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cobalt	1.47	U	1.47	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Copper	**0.636**	B	0.735	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Iron	**8.22**	B	14.7	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lead	0.368	U	0.368	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lithium	**0.521**	B	1.84	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Magnesium	**294**		55.1	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Manganese	**0.575**	B	3.68	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Molybdenum	1.47	U	1.47	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Nickel	2.94	U	2.94	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Potassium	**3980**		294	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Selenium	**0.691**	B	0.735	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silicon	**3.15**		1.47	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silver	0.147	U	0.147	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Sodium	**573**		36.8	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Strontium	**2.05**		0.735	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Thallium	0.368	U	0.368	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Tin	**14.9**		7.35	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Vanadium	1.84	U	1.84	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Zinc	**11.6**		7.35	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Mercury	**0.0538**		0.0281	mg/kg wet	1	L905164	05/18/2009	05/20/2009	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J06
0905017-01RE1 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Metals by SW846 6000/7000 series								
Bismuth	1.12 U	1.12	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B
Phosphorus	**2720**	14.9	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B
Uranium	7.46 U	7.46	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J07
0905017-02 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	**5.10**		4.63	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Antimony	0.556	U	0.556	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Arsenic	0.926	U	0.926	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Barium	**0.423**	B	0.463	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Beryllium	0.185	U	0.185	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Boron	**1.07**	B	1.85	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cadmium	0.185	U	0.185	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Calcium	**4630**		92.6	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Chromium	**0.319**		0.278	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cobalt	1.85	U	1.85	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Copper	**0.772**	B	0.926	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Iron	**7.52**	B	18.5	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lead	**0.320**	B, B	0.463	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lithium	2.31	U	2.31	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Magnesium	**351**		69.4	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Manganese	**0.923**	B	4.63	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Molybdenum	1.85	U	1.85	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Nickel	3.70	U	3.70	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Potassium	**4230**		370	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Selenium	**0.782**	B	0.926	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silicon	**2.44**		1.85	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silver	0.185	U	0.185	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Sodium	**553**		46.3	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Strontium	**4.19**		0.926	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Thallium	0.463	U	0.463	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Tin	**27.4**		9.26	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Vanadium	2.31	U	2.31	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Zinc	**12.3**		9.26	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Mercury	**0.0306**		0.0281	mg/kg wet	1	L905164	05/18/2009	05/20/2009	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J07

0905017-02RE1 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Metals by SW846 6000/7000 series								
Bismuth	1.14 U	1.14	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B
Phosphorus	**4010**	182	mg/kg wet	12	L905205	06/04/2009	06/10/2009	6010B
Uranium	7.58 U	7.58	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J08

0905017-03 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	4.63	U	4.63	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Antimony	0.556	U	0.556	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Arsenic	0.926	U	0.926	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Barium	0.463	U	0.463	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Beryllium	0.185	U	0.185	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Boron	**0.528**	B	1.85	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cadmium	0.185	U	0.185	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Calcium	**788**		92.6	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Chromium	**0.187**	B	0.278	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cobalt	1.85	U	1.85	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Copper	0.926	U	0.926	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Iron	18.5	U	18.5	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lead	0.463	U	0.463	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lithium	2.31	U	2.31	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Magnesium	**333**		69.4	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Manganese	**0.479**	B	4.63	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Molybdenum	1.85	U	1.85	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Nickel	3.70	U	3.70	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Potassium	**4420**		370	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Selenium	**0.749**	B	0.926	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silicon	**2.76**		1.85	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silver	0.185	U	0.185	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Sodium	**485**		46.3	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Strontium	**0.692**	B	0.926	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Thallium	0.463	U	0.463	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Tin	**5.14**	B	9.26	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Vanadium	2.31	U	2.31	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Zinc	**10.3**		9.26	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Mercury	**0.0177**	B	0.0231	mg/kg wet	1	L905164	05/18/2009	05/20/2009	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J08

0905017-03RE1 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Metals by SW846 6000/7000 series								
Bismuth	1.25 U	1.25	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B
Phosphorus	**3880**	16.7	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B
Uranium	8.33 U	8.33	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J09
0905017-04 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	3.52	U	3.52	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Antimony	0.423	U	0.423	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Arsenic	0.704	U	0.704	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Barium	**0.144**	B	0.352	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Beryllium	0.141	U	0.141	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Boron	**0.447**	B	1.41	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cadmium	0.141	U	0.141	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Calcium	**1980**		70.4	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Chromium	**0.144**	B	0.211	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cobalt	1.41	U	1.41	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Copper	**0.578**	B	0.704	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Iron	**7.09**	B	14.1	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lead	**0.214**	B, B	0.352	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lithium	1.76	U	1.76	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Magnesium	**313**		52.8	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Manganese	**0.566**	B	3.52	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Molybdenum	1.41	U	1.41	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Nickel	2.82	U	2.82	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Potassium	**4170**		282	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Selenium	**0.718**		0.704	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silicon	**1.88**		1.41	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silver	0.141	U	0.141	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Sodium	**490**		35.2	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Strontium	**1.86**		0.704	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Thallium	0.352	U	0.352	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Tin	**17.3**		7.04	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Vanadium	1.76	U	1.76	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Zinc	**10.5**		7.04	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Mercury	**0.0152**	B	0.0281	mg/kg wet	1	L905164	05/18/2009	05/20/2009	7471A

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1618	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/12/2009 16:43

J18J09
0905017-04RE1 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Metals by SW846 6000/7000 series								
Bismuth	1.03 U	1.03	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B
Phosphorus	**3230**	13.7	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B
Uranium	6.85 U	6.85	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J10

0905017-05 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	4.31	U	4.31	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Antimony	0.517	U	0.517	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Arsenic	0.862	U	0.862	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Barium	**0.178**	B	0.431	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Beryllium	0.172	U	0.172	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Boron	**0.607**	B	1.72	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cadmium	0.172	U	0.172	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Calcium	**2310**		86.2	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Chromium	**2.03**		0.259	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cobalt	**2.77**		1.72	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Copper	**0.854**	B	0.862	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Iron	**9.69**	B	17.2	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lead	0.431	U	0.431	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lithium	2.16	U	2.16	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Magnesium	**303**		64.7	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Manganese	**0.547**	B	4.31	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Molybdenum	1.72	U	1.72	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Nickel	3.45	U	3.45	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Potassium	**4200**		345	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Selenium	**0.860**	B	0.862	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silicon	**2.14**		1.72	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silver	0.172	U	0.172	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Sodium	**446**		43.1	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Strontium	**2.13**		0.862	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Thallium	0.431	U	0.431	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Tin	**12.3**		8.62	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Vanadium	2.16	U	2.16	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Zinc	**14.5**		8.62	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Mercury	**0.0158**	B	0.0243	mg/kg wet	1	L905164	05/18/2009	05/20/2009	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J10

0905017-05RE1 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Metals by SW846 6000/7000 series								
Bismuth	1.39 U	1.39	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B
Phosphorus	**3290**	18.5	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B
Uranium	9.26 U	9.26	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J69

0905017-06 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	3.97	U	3.97	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Antimony	0.476	U	0.476	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Arsenic	**0.242**	B	0.794	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Barium	**0.383**	B	0.397	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Beryllium	0.159	U	0.159	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Boron	**0.549**	B	1.59	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cadmium	**0.0497**	B	0.159	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Calcium	**5640**		79.4	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Chromium	**0.404**		0.238	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cobalt	1.59	U	1.59	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Copper	**0.436**	B	0.794	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Iron	**18.9**		15.9	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lead	0.397	U	0.397	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lithium	1.98	U	1.98	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Magnesium	**281**		59.5	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Manganese	**1.39**	B	3.97	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Molybdenum	1.59	U	1.59	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Nickel	3.17	U	3.17	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Potassium	**2950**		317	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Selenium	**0.943**		0.794	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silicon	**1.95**		1.59	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silver	0.159	U	0.159	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Sodium	**1140**		39.7	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Strontium	**4.85**		0.794	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Thallium	0.397	U	0.397	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Tin	**8.40**		7.94	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Vanadium	**0.178**	B	1.98	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Zinc	**17.9**		7.94	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Mercury	**0.0554**		0.0265	mg/kg wet	1	L905164	05/18/2009	05/20/2009	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J69

0905017-06RE1 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Metals by SW846 6000/7000 series								
Bismuth	1.10 U	1.10	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B
Phosphorus	**4300**	176	mg/kg wet	12	L905205	06/04/2009	06/10/2009	6010B
Uranium	7.35 U	7.35	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J70
0905017-07 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	3.73	U	3.73	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Antimony	0.448	U	0.448	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Arsenic	0.746	U	0.746	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Barium	**1.47**		0.373	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Beryllium	0.149	U	0.149	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Boron	**0.534**	B	1.49	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cadmium	0.149	U	0.149	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Calcium	**31400**		74.6	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Chromium	**0.724**		0.224	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cobalt	1.49	U	1.49	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Copper	0.746	U	0.746	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Iron	**14.7**	B	14.9	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lead	0.373	U	0.373	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lithium	**0.397**	B	1.87	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Magnesium	**687**		56.0	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Manganese	**5.80**		3.73	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Molybdenum	1.49	U	1.49	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Nickel	2.99	U	2.99	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Potassium	**3410**		299	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Selenium	**0.896**		0.746	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silicon	**2.59**		1.49	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silver	0.149	U	0.149	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Sodium	**1560**		37.3	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Strontium	**25.5**		0.746	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Thallium	0.373	U	0.373	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Tin	**5.07**	B	7.46	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Vanadium	**0.357**	B	1.87	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Zinc	**34.7**		7.46	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Mercury	**0.0320**		0.0273	mg/kg wet	1	L905164	05/18/2009	05/20/2009	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J70

0905017-07RE1 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Metals by SW846 6000/7000 series								
Bismuth	1.03 U	1.03	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B
Phosphorus	**8020**	164	mg/kg wet	12	L905205	06/04/2009	06/10/2009	6010B
Uranium	6.85 U	6.85	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J71
0905017-08 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	3.68	U	3.68	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Antimony	0.441	U	0.441	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Arsenic	**0.244**	B	0.735	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Barium	**0.581**		0.368	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Beryllium	0.147	U	0.147	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Boron	**0.462**	B	1.47	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cadmium	0.147	U	0.147	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Calcium	**8320**		73.5	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Chromium	**0.396**		0.221	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cobalt	1.47	U	1.47	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Copper	**0.515**	B	0.735	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Iron	**15.2**		14.7	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lead	0.368	U	0.368	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lithium	1.84	U	1.84	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Magnesium	**320**		55.1	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Manganese	**2.15**	B	3.68	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Molybdenum	1.47	U	1.47	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Nickel	2.94	U	2.94	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Potassium	**3190**		294	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Selenium	**0.979**		0.735	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silicon	**2.46**		1.47	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silver	0.147	U	0.147	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Sodium	**1080**		36.8	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Strontium	**7.20**		0.735	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Thallium	0.368	U	0.368	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Tin	**14.1**		7.35	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Vanadium	**0.161**	B	1.84	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Zinc	**28.2**		7.35	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Mercury	**0.0170**	B	0.0281	mg/kg wet	1	L905164	05/18/2009	05/20/2009	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J71
0905017-08RE1 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Metals by SW846 6000/7000 series								
Bismuth	1.44 U	1.44	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B
Phosphorus	**3890**	19.2	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B
Uranium	9.62 U	9.62	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J72
0905017-09 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Metals by SW846 6000/7000 series								
Aluminum	3.29 U	3.29	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Antimony	0.395 U	0.395	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Arsenic	0.658 U	0.658	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Barium	**0.205** B	0.329	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Beryllium	0.132 U	0.132	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Boron	**0.347** B	1.32	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cadmium	0.132 U	0.132	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Calcium	**2960**	65.8	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Chromium	**0.514**	0.197	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cobalt	1.32 U	1.32	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Copper	**0.429** B	0.658	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Iron	**9.95** B	13.2	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lead	0.329 U	0.329	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lithium	1.64 U	1.64	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Magnesium	**251**	49.3	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Manganese	**0.768** B	3.29	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Molybdenum	1.32 U	1.32	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Nickel	2.63 U	2.63	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Potassium	**3590**	263	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Selenium	**0.951**	0.658	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silicon	**1.94**	1.32	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silver	0.132 U	0.132	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Sodium	**1220**	32.9	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Strontium	**2.49**	0.658	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Thallium	0.329 U	0.329	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Tin	**8.36**	6.58	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Vanadium	1.64 U	1.64	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Zinc	**12.3**	6.58	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Mercury	**0.0242** B	0.0290	mg/kg wet	1	L905164	05/18/2009	05/20/2009	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J72
0905017-09RE1 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Metals by SW846 6000/7000 series								
Bismuth	1.19 U	1.19	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B
Phosphorus	**2650**	15.9	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B
Uranium	7.94 U	7.94	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J73
0905017-10 (Solid)

Lionville Laboratory

Metals by SW846 6000/7000 series

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Aluminum	3.52	U	3.52	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Antimony	0.423	U	0.423	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Arsenic	**0.220**	B	0.704	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Barium	**0.818**		0.352	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Beryllium	0.141	U	0.141	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Boron	**0.360**	B	1.41	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cadmium	0.141	U	0.141	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Calcium	**13500**		70.4	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Chromium	**0.626**		0.211	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cobalt	1.41	U	1.41	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Copper	**0.481**	B	0.704	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Iron	**16.0**		14.1	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lead	0.352	U	0.352	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lithium	1.76	U	1.76	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Magnesium	**428**		52.8	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Manganese	**2.85**	B	3.52	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Molybdenum	1.41	U	1.41	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Nickel	2.82	U	2.82	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Potassium	**3300**		282	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Selenium	**1.12**		0.704	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silicon	**2.03**		1.41	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silver	0.141	U	0.141	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Sodium	**1160**		35.2	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Strontium	**11.8**		0.704	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Thallium	0.352	U	0.352	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Tin	**8.39**		7.04	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Vanadium	**0.195**	B	1.76	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Zinc	**32.9**		7.04	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Mercury	**0.0168**	B	0.0225	mg/kg wet	1	L905164	05/18/2009	05/20/2009	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J73
0905017-10RE1 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Metals by SW846 6000/7000 series								
Bismuth	0.974 U	0.974	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B
Phosphorus	**18100**	156	mg/kg wet	12	L905205	06/04/2009	06/10/2009	6010B
Uranium	6.49 U	6.49	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J88
0905017-11 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	4.55	U	4.55	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Antimony	0.545	U	0.545	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Arsenic	**0.343**	B	0.909	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Barium	**0.316**	B	0.455	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Beryllium	0.182	U	0.182	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Boron	1.82	U	1.82	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cadmium	0.182	U	0.182	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Calcium	**3740**		90.9	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Chromium	**0.988**		0.273	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cobalt	**1.12**	B	1.82	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Copper	**0.616**	B	0.909	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Iron	**11.5**	B	18.2	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lead	0.455	U	0.455	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lithium	2.27	U	2.27	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Magnesium	**320**		68.2	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Manganese	**0.884**	B	4.55	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Molybdenum	1.82	U	1.82	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Nickel	3.64	U	3.64	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Potassium	**3810**		364	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Selenium	**0.808**	B	0.909	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silicon	**2.41**		1.82	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silver	0.182	U	0.182	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Sodium	**430**		45.5	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Strontium	**3.37**		0.909	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Thallium	0.455	U	0.455	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Tin	**15.3**		9.09	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Vanadium	2.27	U	2.27	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Zinc	**16.4**		9.09	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Mercury	**0.0456**		0.0265	mg/kg wet	1	L905164	05/18/2009	05/20/2009	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18J88

0905017-11RE1 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Metals by SW846 6000/7000 series								
Bismuth	1.23 U	1.23	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B
Phosphorus	**4570**	197	mg/kg wet	12	L905205	06/04/2009	06/11/2009	6010B
Uranium	8.20 U	8.20	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18K25

0905017-12 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Metals by SW846 6000/7000 series									
Aluminum	3.16	U	3.16	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Antimony	0.380	U	0.380	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Arsenic	**0.307**	B	0.633	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Barium	**0.336**		0.316	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Beryllium	0.127	U	0.127	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Boron	1.27	U	1.27	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cadmium	0.127	U	0.127	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Calcium	**4170**		63.3	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Chromium	**0.201**		0.190	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Cobalt	1.27	U	1.27	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Copper	0.633	U	0.633	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Iron	**10.5**	B	12.7	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lead	0.316	U	0.316	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Lithium	1.58	U	1.58	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Magnesium	**235**		47.5	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Manganese	**0.946**	B	3.16	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Molybdenum	1.27	U	1.27	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Nickel	2.53	U	2.53	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Potassium	**2850**		253	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Selenium	**0.759**		0.633	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silicon	**2.30**		1.27	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Silver	0.127	U	0.127	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Sodium	**947**		31.6	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Strontium	**3.69**		0.633	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Thallium	0.316	U	0.316	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Tin	**4.16**	B	6.33	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Vanadium	1.58	U	1.58	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Zinc	**14.3**		6.33	mg/kg wet	1	L905205	05/21/2009	05/26/2009	6010B
Mercury	**0.0318**		0.0243	mg/kg wet	1	L905164	05/18/2009	05/20/2009	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

J18K25
0905017-12RE1 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory								
Metals by SW846 6000/7000 series								
Bismuth	1.07 U	1.07	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B
Phosphorus	**2720**	14.3	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B
Uranium	7.14 U	7.14	mg/kg wet	1	L905205	06/04/2009	06/10/2009	6010B

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1618	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/12/2009 16:43

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 L905164 - SW 7471A Prep									
Blank (L905164-BLK1)				Prepared: 05/18/2009 Analyzed: 05/20/2009					
Mercury	0.0300 U	0.0300	mg/kg wet						
Duplicate (L905164-DUP4)		**Source: 0905017-01**		Prepared: 05/18/2009 Analyzed: 05/20/2009					
Mercury	0.0733	0.0257	mg/kg wet		0.0538			30.8*	20
Matrix Spike (L905164-MS4)		**Source: 0905017-01**		Prepared: 05/18/2009 Analyzed: 05/20/2009					
Mercury	0.219	0.0281	mg/kg wet	0.15625	0.0538	106	75-125		
Reference (L905164-SRM1)				Prepared: 05/18/2009 Analyzed: 05/20/2009					
Mercury	4.61	0.180	mg/kg wet	4.7000		98.1	80-120		
Batch L905205 - SW 3050B									
Blank (L905205-BLK1)				Prepared: 05/21/2009 Analyzed: 05/26/2009					
Aluminum	3.29 U	3.29	mg/kg wet						
Antimony	0.395 U	0.395	mg/kg wet						
Arsenic	0.658 U	0.658	mg/kg wet						
Barium	0.329 U	0.329	mg/kg wet						
Beryllium	0.132 U	0.132	mg/kg wet						
Boron	1.32 U	1.32	mg/kg wet						
Cadmium	0.132 U	0.132	mg/kg wet						
Calcium	65.8 U	65.8	mg/kg wet						
Chromium	0.197 U	0.197	mg/kg wet						
Cobalt	1.32 U	1.32	mg/kg wet						
Copper	0.658 U	0.658	mg/kg wet						
Iron	13.2 U	13.2	mg/kg wet						
Lead	0.455	0.329	mg/kg wet						
Lithium	1.64 U	1.64	mg/kg wet						
Magnesium	49.3 U	49.3	mg/kg wet						
Manganese	0.229 B	3.29	mg/kg wet						
Molybdenum	1.32 U	1.32	mg/kg wet						
Nickel	2.63 U	2.63	mg/kg wet						
Potassium	263 U	263	mg/kg wet						
Selenium	0.658 U	0.658	mg/kg wet						
Silicon	1.32 U	1.32	mg/kg wet						
Silver	0.132 U	0.132	mg/kg wet						
Sodium	32.9 U	32.9	mg/kg wet						
Strontium	0.658 U	0.658	mg/kg wet						
Thallium	0.329 U	0.329	mg/kg wet						
Tin	0.682 B	6.58	mg/kg wet						
Titanium	0.329 U	0.329	mg/kg wet						
Vanadium	1.64 U	1.64	mg/kg wet						
Zinc	6.58 U	6.58	mg/kg wet						
Zirconium	1.64 U	1.64	mg/kg wet						

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

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 L905205 - SW 3050B									
Blank (L905205-BLK2)				Prepared: 06/04/2009 Analyzed: 06/10/2009					
Bismuth	1.23 U	1.23	mg/kg wet						
Phosphorus	16.4 U	16.4	mg/kg wet						
Uranium	8.20 U	8.20	mg/kg wet						
Duplicate (L905205-DUP3)		**Source: 0905017-01**		Prepared: 05/21/2009 Analyzed: 05/26/2009					
Aluminum	3.52 U	3.52	mg/kg wet		2.99				20
Antimony	0.423 U	0.423	mg/kg wet		0.423				20
Arsenic	0.704 U	0.704	mg/kg wet		0.224				20
Barium	0.155 B	0.352	mg/kg wet		0.698			127*	20
Beryllium	0.141 U	0.141	mg/kg wet		0.141				20
Boron	1.29 B	1.41	mg/kg wet		3.86			100*	20
Cadmium	0.141 U	0.141	mg/kg wet		0.141				20
Calcium	1240	70.4	mg/kg wet		2190			55*	20
Chromium	0.436	0.211	mg/kg wet		0.332			27*	20
Cobalt	1.41 U	1.41	mg/kg wet		1.41				20
Copper	0.438 B	0.704	mg/kg wet		0.636			37*	20
Iron	7.80 B	14.1	mg/kg wet		8.22			5	20
Lead	0.241 B, B	0.352	mg/kg wet		0.352				20
Lithium	1.76 U	1.76	mg/kg wet		0.521				20
Magnesium	269	52.8	mg/kg wet		294			9	20
Manganese	0.320 B	3.52	mg/kg wet		0.575			57*	20
Molybdenum	1.41 U	1.41	mg/kg wet		1.41				20
Nickel	2.82 U	2.82	mg/kg wet		2.82				20
Potassium	3930	282	mg/kg wet		3980			1	20
Selenium	0.626 B	0.704	mg/kg wet		0.691			10	20
Silicon	2.11	1.41	mg/kg wet		3.15			40*	20
Silver	0.141 U	0.141	mg/kg wet		0.141				20
Sodium	554	35.2	mg/kg wet		573			3	20
Strontium	1.08	0.704	mg/kg wet		2.05			62*	20
Thallium	0.352 U	0.352	mg/kg wet		0.352				20
Tin	12.8	7.04	mg/kg wet		14.9			15	20
Vanadium	1.76 U	1.76	mg/kg wet		1.76				20
Zinc	7.57	7.04	mg/kg wet		11.6			42*	20

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

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 L905205 - SW 3050B										
Duplicate (L905205-DUP4)		**Source: 0905017-01RE1**		Prepared: 06/04/2009 Analyzed: 06/10/2009						
Bismuth	1.19	U	1.19	mg/kg wet		1.19				20
Phosphorus	3100		15.9	mg/kg wet		2720			13	20
Uranium	7.94	U	7.94	mg/kg wet		7.94				20
Matrix Spike (L905205-MS3)		**Source: 0905017-01**		Prepared: 05/21/2009 Analyzed: 05/26/2009						
Aluminum	160		4.39	mg/kg wet	175.44	2.99	89	75-125		
Antimony	40.5		0.526	mg/kg wet	43.860	0.526	92	75-125		
Arsenic	161		0.877	mg/kg wet	175.44	0.224	92	75-125		
Barium	166		0.439	mg/kg wet	175.44	0.698	94	75-125		
Beryllium	4.05		0.175	mg/kg wet	4.3860	0.175	92	75-125		
Boron	79.3		1.75	mg/kg wet	87.719	3.86	86	75-125		
Cadmium	4.09		0.175	mg/kg wet	4.3860	0.175	93	75-125		
Calcium	3450		87.7	mg/kg wet	2193.0	2190	57*	75-125		
Chromium	16.2		0.263	mg/kg wet	17.544	0.332	91	75-125		
Cobalt	40.8		1.75	mg/kg wet	43.860	1.75	93	75-125		
Copper	21.3		0.877	mg/kg wet	21.930	0.636	94	75-125		
Iron	91.0		17.5	mg/kg wet	87.719	8.22	94	75-125		
Lead	40.4	B	0.439	mg/kg wet	43.860	0.439	92	75-125		
Lithium	84.1		2.19	mg/kg wet	87.719	0.521	95	75-125		
Magnesium	2190		65.8	mg/kg wet	2193.0	294	87	75-125		
Manganese	40.5		4.39	mg/kg wet	43.860	0.575	91	75-125		
Molybdenum	87.7		1.75	mg/kg wet	87.719	1.75	100	75-125		
Nickel	40.6		3.51	mg/kg wet	43.860	3.51	93	75-125		
Potassium	5790		351	mg/kg wet	2193.0	3980	83	75-125		
Selenium	162		0.877	mg/kg wet	175.44	0.691	92	75-125		
Silicon	87.8		1.75	mg/kg wet	87.719	3.15	97	75-125		
Silver	4.12		0.175	mg/kg wet	4.3860	0.175	94	75-125		
Sodium	2540		43.9	mg/kg wet	2193.0	573	90	75-125		
Strontium	82.6		0.877	mg/kg wet	87.719	2.05	92	75-125		
Thallium	163		0.439	mg/kg wet	175.44	0.439	93	75-125		
Tin	90.4		8.77	mg/kg wet	87.719	14.9	86	75-125		
Vanadium	42.3		2.19	mg/kg wet	43.860	2.19	96	75-125		
Zinc	48.8		8.77	mg/kg wet	43.860	11.6	85	75-125		

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/12/2009 16:43

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 L905205 - SW 3050B									
Matrix Spike (L905205-MS4)		**Source: 0905017-01RE1** Prepared: 06/04/2009 Analyzed: 06/10/2009							
Bismuth	457	1.34	mg/kg wet	446.43	1.34	102	75-125		
Phosphorus	3050	17.9	mg/kg wet	446.43	2720	74*	75-125		
Uranium	454	8.93	mg/kg wet	446.43	8.93	102	75-125		
Reference (L905205-SRM1)		Prepared: 05/21/2009 Analyzed: 05/26/2009							
Aluminum	2280	3.38	mg/kg wet	2725.2		84	30.8-169.3		
Antimony	9560	19.5	mg/kg wet	4954.8		193	0-264.8		
Arsenic	45.0	0.676	mg/kg wet	24.800		182	0-205.6		
Barium	558	0.338	mg/kg wet	586.40		95	83.9-116.1		
Cadmium	1.26	0.135	mg/kg wet	1.2000		105	).083-183.3		
Calcium	5110	67.6	mg/kg wet	5426.5		94	70.1-129.9		
Chromium	8.07	0.203	mg/kg wet	10.700		75	0-205.6		
Cobalt	2.78	1.35	mg/kg wet	2.7000		103	0-1000		
Copper	4430	32.4	mg/kg wet	4792.4		92	52.2-147.8		
Iron	7460	13.5	mg/kg wet	6481.4		115	15.8-184.5		
Lead	73200 B	16.2	mg/kg wet	144740		51	0-1000		
Magnesium	2110	50.7	mg/kg wet	2367.4		89	0-1000		
Manganese	170	3.38	mg/kg wet	174.20		98	63.1-136.6		
Nickel	9.86	2.70	mg/kg wet	12.600		78	63.8-136.2		
Potassium	926	270	mg/kg wet	1005.8		92	62.1-137.8		
Silver	5.93	0.135	mg/kg wet	6.5000		91	36.9-169.2		
Sodium	274	33.8	mg/kg wet	380.00		72	25-175		
Thallium	0.338 U	0.338	mg/kg wet	0.60000			0-1000		
Tin	347	6.76	mg/kg wet	304.10		114	0-1000		
Vanadium	11.4	1.69	mg/kg wet	8.7000		131	0-1000		
Zinc	463	6.76	mg/kg wet	546.40		85	64.6-135.4		

Lionville Laboratory Incorporated

MERCURY PREPARATION

Logbook # 600

Analyst: CP
Date 5/18/09
Start Time/Temp: 1705 | 93°
End Time/Temp: 1735 | 95°

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

Prep Batch: L905164
Worksheet: HG-052001
SOP No. ME-HgCVAA, Rev. 02

pH < 2 for Liquids? __ Yes NA No (If no: designate affected samples in Comments column, and initiate an SDR)

NOTE: The Inital/Final Volume for water samples = 33mL, unless otherwise noted.
The Final volume for soil samples = 50mL, unless otherwise noted.

LvLI Batch #	Container Number	Spike Volume (mL)	Spike Conc. (µg/L)	Initial Wt. or Volume (g or mL)	Final Sample Volume (mL)	Comments, % Solids, etc.
Blank	ID on tube			10mL	50mL	
0.2 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		L905164-BLK
LC1		*	*	0.30		L905164-SRM
0904051-01				0.33		
01R				0.31		
01S		0.500	1.0	0.33		
0905038-01				0.31		
01R				0.35		
01S		0.500	1.0	0.31		
0905007-01				0.32		
01R				0.36		
01S		0.500	1.0	0.32		
0905016-01				0.34		
01R				0.37		
01S		0.500	1.0	0.34		
02				0.39		
0905017-01				0.32		
01R				0.35		
01S		0.500	1.0	0.32		

Standard:	ID	Prep Date/Time
ICAL/MS	R1 6078-080-14B	5/18/09 1145
ICV/CCV/LCS	IV 6078-080-15A	

Reviewed By/Date: [illegible] 5/28/09

see book # 9368 for std traceability information

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

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

ME-HgCVAA-Prep1007

Page #:

000000633

Lionville Laboratory Incorporated

MERCURY PREPARATION

Logbook # 600

Analyst: TEB
Date 5/18/09
Start Time/Temp: see page
End Time/Temp: see page

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

Prep Batch: L905164
Worksheet: HG052001
SOP No. ME-HgCVAA, Rev. 02

pH < 2 for Liquids? __ Yes NA No (If no: designate affected samples in Comments column, and initiate an SDR)

NOTE: The Inital/Final Volume for water samples = 33mL, unless otherwise noted.
The Final volume for soil samples = 50mL, unless otherwise noted.

LvLI Batch #	Container Number	Spike Volume (mL)	Spike Conc. (µg/L)	Initial Wt. or Volume (g or mL)	Final Sample Volume (mL)	Comments, % Solids, etc.
0905017-02	ID on tube			0.32	50mL	
03				0.39		
04				0.32		
05				0.37		
06				0.34		
07				0.323		
08				0.32		
09				0.31		
10				0.40		
11				0.34		
12				0.37		
0905049-01				0.32		
01R				0.34		
01S		0.500	1.0	0.32		

TEB 5/18/09

Standard:	ID	Prep Date/Time
ICAL/MS	see page 095	
ICV/CCV/LCS		

Reviewed By/Date: [illegible] 5/28/09

see book # 9368 for std traceability information

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

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

ME-HgCVAA-Prep1007

Page #:

000000034

Lionville Laboratory Incorporated Logbook #: 617

SAMPLE DIGESTION RECORD

SOP: L-SPI-3020 Rev. 00

Digestion Batch #: L905205
Date/Time Initiated: 5/21/09 10:55
Date/Time Completed: 5/21/09 1830
Analyst(s): JJS
Matrix: Soil Water Other:
Instr. Type: AA ICP
Parameters:

Digested / Undigested (circle one)
Balance #: B19
Balance Cal Verif: ✓ 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
0905043-1		0.77	50ml	L2	TO	Coarse	Brown Soil	roots	
L905205 -Dup1		0.52							
⊥ -MS1	0.5	0.71							
0905051-1		0.64				Coarse	White Filter paper		
L905205 -Dup2		0.67							
⊥ -MS2	0.5	0.78							
0905017-1		0.68				Coarse	Fish Flesh w/ blood		
L905205 -Dup3		0.71							
⊥ -MS3	0.5	0.57							
0905017-2		0.54							
-3		0.54							
-4		0.71							
-5		0.58							
-6		0.63							
-7		0.67							
-8		0.68							
-9		0.76							
-10		0.71							
-11		0.55							
⊥ -12		0.79							
L905205 -BLK1		0.76				Coarse	Boiling Chips		
⊥ -SRM1		0.74				Fine	Light Grey Soil		
		JJS 5/21/09							

Spiking IDs:
MS #: 8100-04-04
05
06
6072-080-16
LCS #: 12
79 14
79 13

Reagent IDs:
HNO_3 HC2026
HCL 650036
H_2O_2 634A19
1:1 HNO_3 9789-097-01
1:1 HCL

File ID#: Done in Pressure
LIMS Transfer: Y N MM 5/22/09
Data Review By/Date:

Lionville Laboratory Incorporated Logbook #: 626

SAMPLE DIGESTION RECORD

SOP: L-SPI-3020 Rev. 00

Digestion Batch #: L905205
Date/Time Initiated: 6/4/04 1055
Date/Time Completed: 6/5/04 1422
Analyst(s): JJS
Matrix: Soil Water (Other): Fish
Instr. Type: AA (ICP)
Parameters: Bi, P, V

(Digested) / Undigested (circle one)
Balance #: M14
Balance Cal Verif: ✓ 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
0905017-1 REI		0.67	50	✓		Coarse	Fish Bone Blend		
L905205 - Dup		0.63							
- MS/4	0.5	0.56							
0905017-2 REI		0.66							
3 REI		0.60							
4 REI		0.73							
5 REI		0.54							
6 REI		0.68							
7 REI		0.73							
8 REI		0.52							
9 REI		0.63							
10 REI		0.77							
11 REI		0.61							
12 REI		0.70							
L905205 BLK1		0.61					Boiling chips		
SRM1	(*)	0.65				Fine	Dust, pink stand		

JJS 6/5/04

Spiking IDs:
MS #: S100-04-04
-05
-06
6034-080-16
LCS #:
(*) Premium I.D. # 0901266

Reagent IDs:
HNO_3 H02026
HCL 650036
H_2O_2 G34A19
1:1 HNO_3 9784-047-01
1:1 HCL

File ID#: Division Premium
LIMS Transfer: Y N
Data Review By/Date:

800 SRC

Lionville Laboratory Use Only

0905 017

Custody Transfer Record/Lab Work Request

Page 1 of 2

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

Client: WC HANFORD RC-118

Est. Final Proj. Sampling Date:

Project#:

Project Contact/Phone#:

Lionville Laboratory Project Manager: O. JOHNSON

QC: SW846 Del: SHL TAT: 30 days

Date Rec'd: 5/6/09 Date Due: 6/6/09

		A						B							
Refrigerator #		2						2							
#/Type Container	Liquid / Solid	1G						1P							
Volume		250						250							
Preservatives		—						—							
ANALYSES REQUESTED →		ORGANIC						INORG							
		VOA	BNA	Pest/PCB	Herb			Metal	CN						
Lionville Laboratory Use Only				8080B				METALS							

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	8080B	METALS
01	J18 J06			SH	4-28-09	1230	X	X
02	07				4-29-09	0800	X	X
03	08				↓	1400	X	X
04	09				4-30-09	0800	X	X
05	10				↓	1030	X	X
06	69				4-28-09	1430	X	X
07	70				4-29-09	1030	X	X
08	71				↓	1530	X	X
09	72				4-30-09	0930	X	X
10	73				↓	1200	X	X

Special Instructions:

Special Instructions:

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

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	5/6/09	1410

Relinquished by	Received by	Date	Time

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

00000000137

Lionville Laboratory Use Only

0905017

Custody Transfer Record/Lab Work Request

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

Client: WC HANFORD BC-118

Est. Final Proj. Sampling Date:

Project#:

Project Contact/Phone#: Del Page

Lionville Laboratory Project Manager: O. JOHNSON

QC: Del: TAT:

Date Rec'd: Date Due:

		A	B
Refrigerator #		2	2
#/Type Container	Liquid		
	Solid	16	11
Volume		250	250
Preservatives		1	1
ANALYSES REQUESTED →	ORGANIC: VOA		
	ORGANIC: BNA		
	ORGANIC: Pest/PCB	OCBPH	
	ORGANIC: Herb		
	INORG: Metal	METALS	
	INORG: CN		

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	OCBPH	METALS
11	J18J88			Fish	4-28-09	0800	X	X
12	J18K25			⊥	⊥	1000	X	X

Special Instructions:

Special Instructions:

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

Relinquished by	Received by	Date	Time
[signature]	[signature]	4/6/09	1410

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time

000000033

0905017

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

Collector: Josh McGough	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, FILLET	SAF No.: RC-118	
Ice Chest No.: ERC99045	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# 7965796 19475	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				
Sample No.	Matrix *	Sample Date	Sample Time								
J18J06	OTHER SOLID	4/28/09	12:30					X	X		

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Josh McGough Josh McGough	4/28/09 1235	EAS Locked Storage #2	4/28/09 1235
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
EAS LOCKED STORAGE #2	5/5/09 1140	SHANNAN JOHNSON	5/5/09 1140
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
SHANNAN JOHNSON	5/5/09 1140	Fdx# 7965796 1475	
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Fed Ex	5-6-09 1410		5-6-09 1410
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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

00000039

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-2	Page 1 of 1

Collector: Josh McGough	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, FILLET		SAF No.: RC-118
Ice Chest No.: ERC 99045	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# 796579619475

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None			
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P			
No. of Container(s)	1	1	1	1	1	1	1			
Volume	1500g	100g	100g	10g	250g	120g	10g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99			

Sample No.	Matrix *	Sample Date	Sample Time										
J18J07	OTHER SOLID	4/29/09	0800					X	X				

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Josh McGough	Date/Time: 4/29/09 0800	Received By/Stored In: EAS Locked Storage #2	Date/Time: 4/29/09 0800
Relinquished By/Removed From: EAS LOCKED STORAGE #2	Date/Time: 5/5/09 1140	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 5/5/09 1140
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 5/5/09 1140	Received By/Stored In: Fdx# 796579619475	Date/Time:
Relinquished By/Removed From: Fed Ex	Date/Time: 5-6-09 1410	Received By/Stored In:	Date/Time: 5-6-09 1410
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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-118-3	Page 1 of 1

Collector: Josh McGough	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, FILLET		SAF No.: RC-118
Ice Chest No.: ERC 99 045	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# 79657961 9475

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				
Sample No.	Matrix *	Sample Date	Sample Time								
J18J08	OTHER SOLID	4/29/09	1400					X	X		

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Josh McGough	4/29/09 1405	Received By/Stored In: EAS Locked Storage #2	4/29/09 1405
Relinquished By/Removed From: EAS LOCKED STORAGE #2	5/5/09 1140	Received By/Stored In: SHANNAN JOHNSON	5/5/09 1140
Relinquished By/Removed From: SHANNAN JOHNSON	5/5/09 1140	Received By/Stored In: Fdx# 79657961 475	
Relinquished By/Removed From: Fed Ex	5-6-09 1410	Received By/Stored In:	5-6-09 1410
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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-118-4	Page 1 of 1

Collector: Josh McGough	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, FILLET	SAF No.: RC-118	
Ice Chest No.: ERC 99045	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# 79657961 9475	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				
Sample No. / Matrix * / Sample Date / Sample Time											
J18J09 / OTHER SOLID / 4/30/09 / 0800					X	X					

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Josh McGough	4/30/09 0805	Received By/Stored In: EAS Locked Storage #2	4/30/09 0805
Relinquished By/Removed From: EAS LOCKED STORAGE #2	5/5/09 1140	Received By/Stored In: SHANNAN JOHNSON	5/5/09 1140
Relinquished By/Removed From: SHANNAN JOHNSON	5/5/09 1140	Received By/Stored In: Fdx# 79657961 475	
Relinquished By/Removed From: Fed Ex	5-6-09 1410	Received By/Stored In:	5-6-09 1410
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09.

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-118-5	Page 1 of 1

Collector: Josh McGough	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, FILLET	SAF No.: RC-118	
Ice Chest No.: ERC 99045	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# 796579619475	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				
Sample No. / Matrix * / Sample Date / Sample Time											
J18J10 / OTHER SOLID / 4/30/09 / 1030					X	X					

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Josh McGough	4/30/09 1035	EAS Locked Storage #2	4/30/09 1035
EAS LOCKED STORAGE #2	5/5/09 1140	SHANNAN JOHNSON	5/5/09 1140
SHANNAN JOHNSON	5/5/09 1140	FdX# 796579619475	
Fed Ex	5-6-09 1410		5-6-09 1410
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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-118-26	Page 1 of 1

Collector: Josh McGough	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, CARCASS		SAF No.: RC-118
Ice Chest No.: ERC 99045	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# 796579619475

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None			
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P			
No. of Container(s)	1	1	1	1	1	1	1			
Volume	1500g	100g	100g	10g	250g	120g	10g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99			
Sample No. / Matrix * / Sample Date / Sample Time										
J18J69 / OTHER SOLID / 4/28/09 / 1430					X	X				

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Josh McGough	4/28/09 1435	Received By/Stored In: EAS Locked Storage #2	4/28/09 1435
Relinquished By/Removed From: EAS LOCKED STORAGE #2	5/5/09 1140	Received By/Stored In: SHANNAN JOHNSON	5/5/09 1140
Relinquished By/Removed From: SHANNAN JOHNSON	5/5/09 1140	Received By/Stored In: Fdx# 796579619475	
Relinquished By/Removed From: Fed Ex	5-6-09 1410	Received By/Stored In:	5-6-09 1410
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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-118-27	Page 1 of 1

Collector: Josh McGough	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, CARCASS		SAF No.: RC-118
Ice Chest No.: ERC 99045	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# 796579619475

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None			
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P			
No. of Container(s)	1	1	1	1	1	1	1			
Volume	1500g	100g	100g	10g	250g	120g	10g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99			
Sample No. / Matrix * / Sample Date / Sample Time										
J18J70 / OTHER SOLID / 4/29/09 / 1030					X	X				

CHAIN OF POSSESSION	Sign/Print Names	Date/Time
Relinquished By/Removed From: Josh McGough	Received By/Stored In: EAS Locked Storage	4/29/09 1035
Relinquished By/Removed From: EAS LOCKED STORAGE #2	Received By/Stored In: SHANNAN JOHNSON	5/5/09 1140
Relinquished By/Removed From: SHANNAN JOHNSON	Received By/Stored In: Fdx# 79657961 475	5/5/09 1140
Relinquished By/Removed From:	Received By/Stored In:	5-6-09 1410
Relinquished By/Removed From:	Received By/Stored In:	
Relinquished By/Removed From:	Received By/Stored In:	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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

00000945

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-28	Page 1 of 1

Collector: Josh McGough	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, CARCASS	SAF No.: RC-118	
Ice Chest No.: ERC 99045	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# 7965796 19475	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				
Sample No. / Matrix * / Sample Date / Sample Time											
J18J71 / OTHER SOLID / 4/29/09 / 1530					X	X					

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Josh McGough / Joel McGill	4/29/09 1535	Received By/Stored In: Joel McGill / EAS Locked Storage (#2)	4/29/09 1535
Relinquished By/Removed From: EAS LOCKED STORAGE #2	5/5/09 1140	Received By/Stored In: SHANNAN JOHNSON	5/5/09 1140
Relinquished By/Removed From: SHANNAN JOHNSON	5/5/09 1140	Received By/Stored In: Fax# 7965796 19475	
Relinquished By/Removed From: FED EX	5-6-09 1410	Received By/Stored In: [signature]	5-6-09 1410
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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

0700060

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-29	Page 1 of 1

Collector: Josh McGough	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, CARCASS		SAF No.: RC-118
Ice Chest No.: ERC 99045	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# 79657961 9475

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None			
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P			
No. of Container(s)	1	1	1	1	1	1	1			
Volume	1500g	100g	100g	10g	250g	120g	10g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99			

Sample No.	Matrix *	Sample Date	Sample Time										
J18J72	OTHER SOLID	4/30/09	0930					X	X				

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Josh McGough Josh McGough	4/30/09 0935	EAS Locked Storage #2	4/30/09 0935
Relinquished By/Removed From EAS LOCKED STORAGE #2	Date/Time 5/5/09 1140	Received By/Stored In SHANNAN JOHNSON	Date/Time 5/5/09 1140
Relinquished By/Removed From SHANNAN JOHNSON	Date/Time 5/5/09 1140	Received By/Stored In Fax# 79657961 9475	Date/Time
Relinquished By/Removed From Fed Ex	Date/Time 5-6-09 1410	Received By/Stored In	Date/Time 5-6-09 1410
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09.

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-118-30	Page 1 of 1

Collector: Josh McGough	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, CARCASS		SAF No.: RC-118
Ice Chest No.: ER C 99045	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# 796579619475

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				
Sample No. / Matrix * / Sample Date / Sample Time											
J18J73 / OTHER SOLID / 4/30/09 / 1200					X	X					

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Josh McGough Joel McNeil	4/30/09 1205	EAS Locked Storage #2	4/30/09 1205
EAS LOCKED STORAGE #2	5/5/09 1140	SHANNAN JOHNSON	5/5/09 1140
SHANNAN JOHNSON	5/5/09 1140	Fdx# 796579619475	
Fed Ex	5-6-09 1410		5-6-09 1410

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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-118-45	Page 1 of 1

Collector: Josh McGough	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, FILLET		SAF No.: RC-118
Ice Chest No.: ERC 99045	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# 796579619475

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				
Sample No. / Matrix * / Sample Date / Sample Time											
J18J88 / OTHER SOLID / 4/28/09 / 0800					X	X					

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Josh McGough	4/28/09 0805	EAS Locked Storage #2	4/28/09 0805
Relinquished By/Removed From: EAS LOCKED STORAGE #2	5/5/09 1140	SHANNAN JOHNSON	5/5/09 1140
Relinquished By/Removed From: SHANNAN JOHNSON	5/5/09 1140	FdX# 796579619475	
Relinquished By/Removed From:	5-6-09 1410	Received By/Stored In:	5-6-09 1410
Relinquished By/Removed From:	Date/Time	Received By/Stored In:	Date/Time
Relinquished By/Removed From:	Date/Time	Received By/Stored In:	Date/Time

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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

6700000009

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-70	Page 1 of 1

Collector: Josh McGough	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, CARCASS		SAF No.: RC-118
Ice Chest No.: ERC99045	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# 796579619475

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				
Sample No. / Matrix * / Sample Date / Sample Time											
J18K25 / OTHER SOLID / 4/28/09 / 1000					X	X					

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Josh McGough	4/28/09 1005	Received By/Stored In: EAS Locked Storage #2	4/28/09 1005
Relinquished By/Removed From: EAS LOCKED STORAGE #2	5/5/09 1140	Received By/Stored In: SHANNAN JOHNSON	5/5/09 1140
Relinquished By/Removed From: SHANNAN JOHNSON	5/6/09 1100	Received By/Stored In: Fdx# 796579611475	
Relinquished By/Removed From:	5-6-09 1410	Received By/Stored In:	5-6-09 1410
Relinquished By/Removed From:		Received By/Stored In:	
Relinquished By/Removed From:		Received By/Stored In:	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: WC-HANFORD

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

Date: 5/6/09

LvLI Batch #: 0905017

Sample Custodian: [illegible]

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier FedEx		Airbill # 7965 7961 9475
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 2.5 °C		Cooler # ERC-99-045
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 D. Johnson

Date 5-6-09

LVLI

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

RECEIVED
JUN 2009

WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1618	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	06/19/2009 10:15

PEST

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
J18J06	0905017-01	Solid	04/28/2009 12:30	05/07/2009 17:58
J18J07	0905017-02	Solid	04/29/2009 08:00	05/07/2009 17:58
J18J08	0905017-03	Solid	04/29/2009 14:00	05/07/2009 17:58
J18J09	0905017-04	Solid	04/30/2009 08:00	05/07/2009 17:58
J18J10	0905017-05	Solid	04/30/2009 10:30	05/07/2009 17:58
J18J69	0905017-06	Solid	04/28/2009 14:30	05/07/2009 17:58
J18J70	0905017-07	Solid	04/29/2009 10:30	05/07/2009 17:58
J18J71	0905017-08	Solid	04/29/2009 15:30	05/07/2009 17:58
J18J72	0905017-09	Solid	04/30/2009 09:30	05/07/2009 17:58
J18J73	0905017-10	Solid	04/30/2009 12:00	05/07/2009 17:58
J18J88	0905017-11	Solid	04/28/2009 08:00	05/07/2009 17:58
J18K25	0905017-12	Solid	04/28/2009 10:00	05/07/2009 17:58

LIONVILLE LABORATORY
A division of Eberline Analytical Corporation

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

Case Narrative

Client: WC-HANFORD RC-118
LVL #: 0905017
SDG/SAF # K1618 /RC-118

W.O. #: 60049-001-001-0001-00
Date Received: 05-06-2009

CHLORINATED PESTICIDES

Twelve (12) fish samples were collected on 04-28,29,30-2009.

The samples and their associated QC samples were extracted on 05-07-2009 and analyzed according to Lionville Laboratory SOPs based on SW846, 3rd Edition procedure on 05-08,09-2009. The extraction procedure was based on method 3540C and the extracts were analyzed based on method 8081A.

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. All required holding times for extraction and analysis have been met.
2. The samples and associated QC samples received Copper-Sulfur cleanup according to Lionville Laboratory SOPs based on SW846 method 3660A.
3. The method blank was below the reporting limit for all target compounds.
4. All obtainable surrogate recoveries were within acceptance criteria.
5. All blank spike recoveries were within acceptance criteria.
6. One (1) of sixty (60) matrix spike recoveries were outside acceptance criteria. A copy of the Sample Discrepancy Report (SDR# 09GC136) is enclosed.
7. All initial calibrations associated with this data set were within acceptance criteria.
8. All continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.

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 37 pages.

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

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

Judy Stone

Iain Daniels
Laboratory Manager
Lionville Laboratory

6/22/09
Date

Lionville Laboratory Sample Discrepancy Report (SDR)

SDR #: 09GC136

Initiator: Svetlana Zak
Date: 06.19.09
Client: WC Hanford

Batch: 0905017
Samples: L905053-MS1
Method: SW846/MCAWW/CLP/

Parameter: 608
Matrix: fish
Prep Batch: L905053

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)

One of Sixty spike Recoveries was outside accep-tance criteria.

BS is good

2. Known or Probable Causes(s)

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

Other Description:

N waste
JS

4. Project Manager Instructions...signature/date: jlz 6/19/09
✓ 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: jlz 6/19/09
✓ 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
(1) 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

000000084

GLOSSARY OF DATA

DATA QUALIFIERS

U	=	Indicates that the compound was analyzed for but not detected. The minimum detection limit for the sample (not the method detection limit) is reported with the U (e.g., 10U).
J	=	Indicates an estimated value. This flag is used in cases where a target analyte is detected at a level less than the lower quantification level. If the limit of quantification is 10 ug/L and a concentration of 3 ug/L is calculated, it is reported as 3J.
B	=	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination.
E	=	Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.
I	=	Interference.
. I	=	Indicates an interference on one analytical column only. Result is reported from remaining analytical column.

ABBREVIATIONS

BS	=	Indicates blank spike in which reagent grade water is spiked with the CLP matrix spiking solutions and carried through all the steps in the method. Spike recoveries are reported.
BSD	=	Indicates blank spike duplicate.
MS	=	Indicates matrix spike.
MSD	=	Indicates matrix spike duplicate.
DL	=	Indicates that recoveries were not obtained because the extract had to be diluted for analysis.
NA	=	Not Applicable.
DF	=	Dilution Factor.
NR	=	Not Required.
NS	=	Not Spiked.
SP	=	Indicates Spiked Compound.
P	=	This flag is used for an PESTICIDE/PCB target analyte when there is greater than 25% difference for detected concentrations between the two GC columns (see Form X). The lower of the two values is reported on Form I and flagged with a "P".
D	=	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
C	=	This flag applies to a compound that has been confirmed by GC/MS.
NPM	=	No pattern match for multi-component target analytes.

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/19/2009 10:15

J18J06
0905017-01 (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	L905053	05/07/2009	05/08/2009	8081A
gamma-BHC	8.32 U	8.32	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
beta-BHC	8.32 U	8.32	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
delta-BHC	8.32 U	8.32	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Heptachlor	8.32 U	8.32	ug/kg wet.	1	L905053	05/07/2009	05/08/2009	8081A
Aldrin	8.32 U	8.32	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Heptachlor epoxide	8.32 U	8.32	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
gamma-Chlordane	8.32 U	8.32	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
alpha-Chlordane	8.32 U	8.32	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan I	8.32 U	8.32	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDE	**382**	8.32	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Dieldrin	8.32 U	8.32	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin	8.32 U	8.32	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDD	**54.2**	8.32	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan II	8.32 U	8.32	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDT	**9.17** J	8.32	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin aldehyde	8.32 U	8.32	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan sulfate	8.32 U	8.32	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Methoxychlor	8.32 U	8.32	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin ketone	8.32 U	8.32	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Toxaphene	125 U	125	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*95.8 %*	*28-166*			*L905053*	*05/07/2009*	*05/08/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*95.1 %*	*37-153*			*L905053*	*05/07/2009*	*05/08/2009*	*8081A*

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1618	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/19/2009 10:15

J18J07
0905017-02 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	8.84	U	8.84	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
gamma-BHC	8.84	U	8.84	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
beta-BHC	8.84	U	8.84	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
delta-BHC	**11.5**	J	8.84	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Heptachlor	8.84	U	8.84	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Aldrin	8.84	U	8.84	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Heptachlor epoxide	8.84	U	8.84	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
gamma-Chlordane	8.84	U	8.84	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
alpha-Chlordane	8.84	U	8.84	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan I	8.84	U	8.84	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDE	**212**		8.84	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Dieldrin	**19.5**	J	8.84	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin	8.84	U	8.84	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDD	**9.73**	J	8.84	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan II	8.84	U	8.84	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDT	8.84	U	8.84	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin aldehyde	8.84	U	8.84	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan sulfate	8.84	U	8.84	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Methoxychlor	8.84	U	8.84	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin ketone	8.84	U	8.84	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Toxaphene	133	U	133	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*86.3 %*		*28-166*			*L905053*	*05/07/2009*	*05/08/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*100 %*		*37-153*			*L905053*	*05/07/2009*	*05/08/2009*	*8081A*

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1618	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/19/2009 10:15

J18J08

0905017-03 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	7.74	U	7.74	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
gamma-BHC	7.74	U	7.74	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
beta-BHC	**40.3**		7.74	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
delta-BHC	7.74	U	7.74	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Heptachlor	7.74	U	7.74	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Aldrin	7.74	U	7.74	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Heptachlor epoxide	7.74	U	7.74	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
gamma-Chlordane	7.74	U	7.74	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
alpha-Chlordane	7.74	U	7.74	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan I	7.74	U	7.74	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDE	**130**		7.74	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Dieldrin	**26.4**	J	7.74	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin	7.74	U	7.74	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDD	**22.5**	J	7.74	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan II	7.74	U	7.74	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDT	7.74	U	7.74	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin aldehyde	7.74	U	7.74	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan sulfate	7.74	U	7.74	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Methoxychlor	7.74	U	7.74	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin ketone	7.74	U	7.74	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Toxaphene	116	U	116	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*95.8 %*		*28-166*			*L905053*	*05/07/2009*	*05/08/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*97.8 %*		*37-153*			*L905053*	*05/07/2009*	*05/08/2009*	*8081A*

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1618	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/19/2009 10:15

J18J09

0905017-04 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	7.14	U	7.14	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
gamma-BHC	7.14	U	7.14	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
beta-BHC	**7.86**	J	7.14	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
delta-BHC	7.14	U	7.14	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Heptachlor	7.14	U	7.14	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Aldrin	7.14	U	7.14	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Heptachlor epoxide	7.14	U	7.14	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
gamma-Chlordane	7.14	U	7.14	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
alpha-Chlordane	7.14	U	7.14	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan I	7.14	U	7.14	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDE	**73.6**		7.14	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Dieldrin	**11.4**	J	7.14	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin	7.14	U	7.14	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDD	**27.9**	J	7.14	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan II	7.14	U	7.14	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDT	7.14	U	7.14	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin aldehyde	7.14	U	7.14	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan sulfate	7.14	U	7.14	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Methoxychlor	7.14	U	7.14	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin ketone	7.14	U	7.14	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Toxaphene	107	U	107	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*84.7 %*		*28-166*			*L905053*	*05/07/2009*	*05/08/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*88.6 %*		*37-153*			*L905053*	*05/07/2009*	*05/08/2009*	*8081A*

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1618	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/19/2009 10:15

J18J10

0905017-05 (Solid)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
		Lionville Laboratory						
Organochlorine Pesticides by SW846 8081A								
alpha-BHC	7.63 U	7.63	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
gamma-BHC	7.63 U	7.63	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
beta-BHC	7.63 U	7.63	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
delta-BHC	7.63 U	7.63	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Heptachlor	7.63 U	7.63	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Aldrin	7.63 U	7.63	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Heptachlor epoxide	7.63 U	7.63	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
gamma-Chlordane	7.63 U	7.63	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
alpha-Chlordane	7.63 U	7.63	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan I	7.63 U	7.63	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDE	**88.5**	7.63	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Dieldrin	**9.92** J	7.63	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin	7.63 U	7.63	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDD	**13.7** J	7.63	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan II	7.63 U	7.63	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDT	7.63 U	7.63	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin aldehyde	7.63 U	7.63	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan sulfate	7.63 U	7.63	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Methoxychlor	7.63 U	7.63	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin ketone	7.63 U	7.63	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Toxaphene	115 U	115	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*94.3 %*	*28-166*			*L905053*	*05/07/2009*	*05/08/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*97.3 %*	*37-153*			*L905053*	*05/07/2009*	*05/08/2009*	*8081A*

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-118 Project Number: K1618 Project Manager: Joan Kessner	**Reported:** 06/19/2009 10:15

J18J69
0905017-06 (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	L905053	05/07/2009	05/08/2009	8081A
gamma-BHC	8.69	U	8.69	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
beta-BHC	**9.57**	J	8.69	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
delta-BHC	**8.70**	J	8.69	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Heptachlor	8.69	U	8.69	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Aldrin	8.69	U	8.69	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Heptachlor epoxide	8.69	U	8.69	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
gamma-Chlordane	8.69	U	8.69	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
alpha-Chlordane	8.69	U	8.69	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan I	8.69	U	8.69	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDE	**546**		8.69	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Dieldrin	**18.3**	J	8.69	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin	8.69	U	8.69	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDD	**119**		8.69	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan II	8.69	U	8.69	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDT	**12.2**	J	8.69	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin aldehyde	8.69	U	8.69	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan sulfate	8.69	U	8.69	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Methoxychlor	8.69	U	8.69	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin ketone	8.69	U	8.69	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Toxaphene	130	U	130	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*78.4 %*		*28-166*			*L905053*	*05/07/2009*	*05/08/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*85.7 %*		*37-153*			*L905053*	*05/07/2009*	*05/08/2009*	*8081A*

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1618	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/19/2009 10:15

J18J70
0905017-07 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	9.79	U	9.79	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
gamma-BHC	9.79	U	9.79	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
beta-BHC	9.79	U	9.79	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
delta-BHC	**14.7**	J	9.79	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Heptachlor	9.79	U	9.79	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Aldrin	9.79	U	9.79	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Heptachlor epoxide	9.79	U	9.79	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
gamma-Chlordane	9.79	U	9.79	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
alpha-Chlordane	9.79	U	9.79	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan I	9.79	U	9.79	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDE	**404**		9.79	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Dieldrin	**30.4**	J	9.79	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin	9.79	U	9.79	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDD	**24.5**	J	9.79	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan II	9.79	U	9.79	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDT	**13.7**	J	9.79	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin aldehyde	9.79	U	9.79	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan sulfate	9.79	U	9.79	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Methoxychlor	9.79	U	9.79	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin ketone	9.79	U	9.79	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Toxaphene	147	U	147	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*94.1 %*		*28-166*			*L905053*	*05/07/2009*	*05/08/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*93.5 %*		*37-153*			*L905053*	*05/07/2009*	*05/08/2009*	*8081A*

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1618	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/19/2009 10:15

J18J71

0905017-08 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	9.25	U	9.25	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
gamma-BHC	9.25	U	9.25	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
beta-BHC	9.25	U	9.25	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
delta-BHC	**10.2**	**J**	9.25	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Heptachlor	9.25	U	9.25	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Aldrin	9.25	U	9.25	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Heptachlor epoxide	9.25	U	9.25	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
gamma-Chlordane	9.25	U	9.25	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
alpha-Chlordane	9.25	U	9.25	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan I	9.25	U	9.25	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDE	**226**		9.25	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Dieldrin	**59.3**		9.25	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin	9.25	U	9.25	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDD	9.25	U	9.25	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan II	9.25	U	9.25	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
4,4'-DDT	**11.1**	**J**	9.25	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin aldehyde	9.25	U	9.25	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endosulfan sulfate	9.25	U	9.25	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Methoxychlor	9.25	U	9.25	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Endrin ketone	9.25	U	9.25	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Toxaphene	139	U	139	ug/kg wet	1	L905053	05/07/2009	05/08/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*76.6 %*		*28-166*			*L905053*	*05/07/2009*	*05/08/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*74.9 %*		*37-153*			*L905053*	*05/07/2009*	*05/08/2009*	*8081A*

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1618	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/19/2009 10:15

J18J72
0905017-09 (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	L905053	05/07/2009	05/09/2009	8081A
gamma-BHC	8.26	U	8.26	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
beta-BHC	8.26	U	8.26	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
delta-BHC	8.26	U	8.26	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Heptachlor	8.26	U	8.26	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Aldrin	8.26	U	8.26	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Heptachlor epoxide	8.26	U	8.26	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
gamma-Chlordane	8.26	U	8.26	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
alpha-Chlordane	8.26	U	8.26	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endosulfan I	8.26	U	8.26	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
4,4'-DDE	**145**		8.26	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Dieldrin	**9.92**	**J**	8.26	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endrin	8.26	U	8.26	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
4,4'-DDD	8.26	U	8.26	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endosulfan II	8.26	U	8.26	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
4,4'-DDT	8.26	U	8.26	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endrin aldehyde	8.26	U	8.26	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endosulfan sulfate	8.26	U	8.26	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Methoxychlor	8.26	U	8.26	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endrin ketone	8.26	U	8.26	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Toxaphene	124	U	124	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*91.4 %*		*28-166*			*L905053*	*05/07/2009*	*05/09/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*87.6 %*		*37-153*			*L905053*	*05/07/2009*	*05/09/2009*	*8081A*

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1618	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/19/2009 10:15

J18J73
0905017-10 (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	L905053	05/07/2009	05/09/2009	8081A
gamma-BHC	8.06	U	8.06	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
beta-BHC	8.06	U	8.06	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
delta-BHC	**12.1**	J	8.06	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Heptachlor	8.06	U	8.06	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Aldrin	8.06	U	8.06	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Heptachlor epoxide	8.06	U	8.06	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
gamma-Chlordane	8.06	U	8.06	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
alpha-Chlordane	8.06	U	8.06	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endosulfan I	8.06	U	8.06	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
4,4'-DDE	**232**		8.06	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Dieldrin	**64.5**		8.06	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endrin	8.06	U	8.06	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
4,4'-DDD	8.06	U	8.06	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endosulfan II	8.06	U	8.06	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
4,4'-DDT	8.06	U	8.06	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endrin aldehyde	8.06	U	8.06	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endosulfan sulfate	8.06	U	8.06	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Methoxychlor	8.06	U	8.06	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endrin ketone	8.06	U	8.06	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Toxaphene	121	U	121	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*87.3 %*		*28-166*			*L905053*	*05/07/2009*	*05/09/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*72.7 %*		*37-153*			*L905053*	*05/07/2009*	*05/09/2009*	*8081A*

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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1618	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/19/2009 10:15

J18J88

0905017-11 (Solid)

Lionville Laboratory

Organochlorine Pesticides by SW846 8081A

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
alpha-BHC	9.42	U	9.42	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
gamma-BHC	9.42	U	9.42	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
beta-BHC	9.42	U	9.42	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
delta-BHC	9.42	U	9.42	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Heptachlor	9.42	U	9.42	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Aldrin	9.42	U	9.42	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Heptachlor epoxide	9.42	U	9.42	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
gamma-Chlordane	9.42	U	9.42	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
alpha-Chlordane	9.42	U	9.42	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endosulfan I	9.42	U	9.42	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
4,4'-DDE	**255**		9.42	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Dieldrin	**22.6**	J	9.42	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endrin	9.42	U	9.42	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
4,4'-DDD	**10.4**	J	9.42	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endosulfan II	9.42	U	9.42	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
4,4'-DDT	9.42	U	9.42	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endrin aldehyde	9.42	U	9.42	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endosulfan sulfate	9.42	U	9.42	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Methoxychlor	9.42	U	9.42	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endrin ketone	9.42	U	9.42	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Toxaphene	142	U	142	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*84.2 %*		*28-166*			*L905053*	*05/07/2009*	*05/09/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*57.5 %*		*37-153*			*L905053*	*05/07/2009*	*05/09/2009*	*8081A*

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: K1618	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/19/2009 10:15

J18K25

0905017-12 (Solid)

Analyte	Result and Qualifier		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Lionville Laboratory									
Organochlorine Pesticides by SW846 8081A									
alpha-BHC	6.13	U	6.13	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
gamma-BHC	6.13	U	6.13	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
beta-BHC	6.13	U	6.13	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
delta-BHC	6.13	U	6.13	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Heptachlor	6.13	U	6.13	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Aldrin	6.13	U	6.13	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Heptachlor epoxide	6.13	U	6.13	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
gamma-Chlordane	6.13	U	6.13	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
alpha-Chlordane	6.13	U	6.13	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endosulfan I	6.13	U	6.13	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
4,4'-DDE	**348**		6.13	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Dieldrin	**35.6**	J	6.13	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endrin	6.13	U	6.13	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
4,4'-DDD	**20.9**	J	6.13	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endosulfan II	6.13	U	6.13	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
4,4'-DDT	**15.3**	J	6.13	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endrin aldehyde	**6.13**	J	6.13	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endosulfan sulfate	6.13	U	6.13	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Methoxychlor	6.13	U	6.13	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Endrin ketone	6.13	U	6.13	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Toxaphene	92.0	U	92.0	ug/kg wet	1	L905053	05/07/2009	05/09/2009	8081A
Surrogate: Tetrachloro-meta-xylene	*88.8 %*		*28-166*			*L905053*	*05/07/2009*	*05/09/2009*	*8081A*
Surrogate: Decachlorobiphenyl	*37.9 %*		*37-153*			*L905053*	*05/07/2009*	*05/09/2009*	*8081A*

264 Welsh Pool Road
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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1618	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/19/2009 10:15

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 L905053 - SW 3540C									
Blank (L905053-BLK1)			Prepared: 05/07/2009 Analyzed: 05/08/2009						
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	*33.8*		*ug/kg wet*	*33.337*		*101*	*28-166*		
Surrogate: Decachlorobiphenyl	*28.7*		*ug/kg wet*	*33.333*		*86.2*	*37-153*		
LCS (L905053-BS1)			Prepared: 05/07/2009 Analyzed: 05/08/2009						
alpha-BHC	32.6	0.333	ug/kg wet	33.333		97.7	61-142		
gamma-BHC	32.4	0.333	ug/kg wet	33.333		97.3	65-142		
beta-BHC	29.1	0.333	ug/kg wet	33.333		87.3	71-134		
delta-BHC	31.0	0.333	ug/kg wet	33.333		93.0	53-144		
Heptachlor	32.8	0.333	ug/kg wet	33.333		98.3	70-138		
Aldrin	32.5	0.333	ug/kg wet	33.333		97.6	70-143		
Heptachlor epoxide	32.0	0.333	ug/kg wet	33.333		96.0	72-140		
gamma-Chlordane	32.5	0.333	ug/kg wet	33.333		97.5	74-140		
alpha-Chlordane	32.1	0.333	ug/kg wet	33.333		96.2	74-138		
Endosulfan I	32.0	0.333	ug/kg wet	33.333		96.0	81-141		
4,4'-DDE	32.4	0.333	ug/kg wet	33.333		97.1	82-145		
Dieldrin	32.1	0.333	ug/kg wet	33.333		96.4	79-144		
Endrin	33.4	0.333	ug/kg wet	33.333		100	73-147		
4,4'-DDD	30.8	0.333	ug/kg wet	33.333		92.5	77-148		
Endosulfan II	31.6	0.333	ug/kg wet	33.333		94.7	80-140		
4,4'-DDT	31.5	0.333	ug/kg wet	33.333		94.6	82-142		
Endrin aldehyde	28.7	0.333	ug/kg wet	33.333		86.1	59-133		
Endosulfan sulfate	30.7	0.333	ug/kg wet	33.333		92.0	77-135		

264 Welsh Pool Road
Exton, PA 19341
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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1618	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/19/2009 10:15

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 L905053 - SW 3540C									
LCS (L905053-BS1)			Prepared: 05/07/2009 Analyzed: 05/08/2009						
Methoxychlor	30.5	0.333	ug/kg wet	33.333		91.6	77-136		
Endrin ketone	29.8	0.333	ug/kg wet	33.333		89.5	85-134		
Surrogate: Tetrachloro-meta-xylene	*29.8*		*ug/kg wet*	*33.337*		*89.3*	*28-166*		
Surrogate: Decachlorobiphenyl	*28.5*		*ug/kg wet*	*33.333*		*85.4*	*37-153*		
Matrix Spike (L905053-MS1)		**Source: 0905017-01**	Prepared: 05/07/2009 Analyzed: 05/08/2009						
alpha-BHC	897	8.54	ug/kg wet	854.70	8.54	105	61-142		
gamma-BHC	890	8.54	ug/kg wet	854.70	8.54	104	65-142		
beta-BHC	862	8.54	ug/kg wet	854.70	8.54	101	71-134		
delta-BHC	609	8.54	ug/kg wet	854.70	8.54	71.3	53-144		
Heptachlor	670	8.54	ug/kg wet	854.70	8.54	78.4	70-138		
Aldrin	792	8.54	ug/kg wet	854.70	8.54	92.7	70-143		
Heptachlor epoxide	660	8.54	ug/kg wet	854.70	8.54	77.2	72-140		
gamma-Chlordane	718	8.54	ug/kg wet	854.70	8.54	84.0	74-140		
alpha-Chlordane	732	8.54	ug/kg wet	854.70	8.54	85.6	74-138		
Endosulfan I	777	8.54	ug/kg wet	854.70	8.54	90.9	81-141		
4,4'-DDE	1180	8.54	ug/kg wet	854.70	382	93.1	82-145		
Dieldrin	811	8.54	ug/kg wet	854.70	8.54	94.9	79-144		
Endrin	839	8.54	ug/kg wet	854.70	8.54	98.2	73-147		
4,4'-DDD	902	8.54	ug/kg wet	854.70	54.2	99.2	77-148		
Endosulfan II	821	8.54	ug/kg wet	854.70	8.54	96.1	80-140		
4,4'-DDT	855	8.54	ug/kg wet	854.70	9.17	98.9	82-142		
Endrin aldehyde	364	8.54	ug/kg wet	854.70	8.54	42.6*	59-133		
Endosulfan sulfate	815	8.54	ug/kg wet	854.70	8.54	95.3	77-135		
Methoxychlor	889	8.54	ug/kg wet	854.70	8.54	104	77-136		
Endrin ketone	861	8.54	ug/kg wet	854.70	8.54	101	85-134		
Surrogate: Tetrachloro-meta-xylene	*829*		*ug/kg wet*	*854.79*		*97.0*	*28-166*		
Surrogate: Decachlorobiphenyl	*828*		*ug/kg wet*	*854.70*		*96.9*	*37-153*		

264 Welsh Pool Road
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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1618	Reported:
Richland WA, 99354	Project Manager: Joan Kessner	06/19/2009 10:15

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 L905053 - SW 3540C									
Matrix Spike Dup (L905053-MSD1)	**Source: 0905017-01**	Prepared: 05/07/2009 Analyzed: 05/08/2009							
alpha-BHC	866	8.61	ug/kg wet	862.07	8.61	100	61-142	3.53	40
gamma-BHC	854	8.61	ug/kg wet	862.07	8.61	99.1	65-142	4.06	40
beta-BHC	832	8.61	ug/kg wet	862.07	8.61	96.5	71-134	3.50	40
delta-BHC	595	8.61	ug/kg wet	862.07	8.61	69.0	53-144	2.42	40
Heptachlor	653	8.61	ug/kg wet	862.07	8.61	75.7	70-138	2.65	40
Aldrin	768	8.61	ug/kg wet	862.07	8.61	89.1	70-143	3.10	40
Heptachlor epoxide	641	8.61	ug/kg wet	862.07	8.61	74.3	72-140	2.97	40
gamma-Chlordane	696	8.61	ug/kg wet	862.07	8.61	80.7	74-140	3.15	40
alpha-Chlordane	716	8.61	ug/kg wet	862.07	8.61	83.1	74-138	2.11	40
Endosulfan I	752	8.61	ug/kg wet	862.07	8.61	87.2	81-141	3.30	40
4,4'-DDE	1130	8.61	ug/kg wet	862.07	382	87.3	82-145	3.74	40
Dieldrin	778	8.61	ug/kg wet	862.07	8.61	90.2	79-144	4.22	40
Endrin	815	8.61	ug/kg wet	862.07	8.61	94.5	73-147	2.98	40
4,4'-DDD	866	8.61	ug/kg wet	862.07	54.2	94.2	77-148	4.00	40
Endosulfan II	787	8.61	ug/kg wet	862.07	8.61	91.3	80-140	4.26	40
4,4'-DDT	798	8.61	ug/kg wet	862.07	9.17	91.5	82-142	6.83	40
Endrin aldehyde	514	8.61	ug/kg wet	862.07	8.61	59.6	59-133	34.1	40
Endosulfan sulfate	815	8.61	ug/kg wet	862.07	8.61	94.5	77-135	0.0154	40
Methoxychlor	810	8.61	ug/kg wet	862.07	8.61	94.0	77-136	9.24	40
Endrin ketone	815	8.61	ug/kg wet	862.07	8.61	94.5	85-134	5.49	40
Surrogate: Tetrachloro-meta-xylene	*801*		*ug/kg wet*	*862.16*		*92.9*	*28-166*		
Surrogate: Decachlorobiphenyl	*798*		*ug/kg wet*	*862.07*		*92.6*	*37-153*		

264 Welsh Pool Road
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WC-Hanford, Inc.	Project: RC-118	
2620 Fermi Avenue	Project Number: K1618	**Reported:**
Richland WA, 99354	Project Manager: Joan Kessner	06/19/2009 10:15

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

PREPARATION BENCH SHEET

L905053

Lionville Laboratory

Printed: 5/8/2009 2:30:54PM

Surrogate used: 0900465

Matrix: Solid

Prepared using: GC - SW 3540C

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
0905017-01	8081A TCL Pesticides	05/07/2009 12:37	1.2	10				250	WC-Hanford, Inc.	
0905017-02	8081A TCL Pesticides	05/07/2009 12:37	1.13	10				250	WC-Hanford, Inc.	
0905017-03	8081A TCL Pesticides	05/07/2009 12:37	1.29	10				250	WC-Hanford, Inc.	
0905017-04	8081A TCL Pesticides	05/07/2009 12:37	1.4	10				250	WC-Hanford, Inc.	
0905017-05	8081A TCL Pesticides	05/07/2009 12:37	1.31	10				250	WC-Hanford, Inc.	
0905017-06	8081A TCL Pesticides	05/07/2009 12:37	1.15	10				250	WC-Hanford, Inc.	
0905017-07	8081A TCL Pesticides	05/07/2009 12:37	1.02	10				250	WC-Hanford, Inc.	
0905017-08	8081A TCL Pesticides	05/07/2009 12:37	1.08	10				250	WC-Hanford, Inc.	
0905017-09	8081A TCL Pesticides	05/07/2009 12:37	1.21	10				250	WC-Hanford, Inc.	
0905017-10	8081A TCL Pesticides	05/07/2009 12:37	1.24	10				250	WC-Hanford, Inc.	
0905017-11	8081A TCL Pesticides	05/07/2009 12:37	1.06	10				250	WC-Hanford, Inc.	
0905017-12	8081A TCL Pesticides	05/07/2009 12:37	1.63	10				250	WC-Hanford, Inc.	
L905053-BLK1	QC	05/07/2009 12:37	30	10				250		
L905053-BS1	QC	05/07/2009 12:37	30	10	0901105		250	250		
L905053-MS1	QC	05/07/2009 12:37	1.17	10	0901105	0905017-01	250	250		
L905053-MSD1	QC	05/07/2009 12:37	1.16	10	0901105	0905017-01	250	250		

Spiking Witnessed By Date

Preparation Reviewed By 5/8/09 1420 Date

Extracts Received By S Zak 5/08/09 14:20 Date

~~800~~ SRC

Lionville Laboratory Use Only: 0905 017

Custody Transfer Record/Lab Work Request

LVLI

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client: WC HANFORD RC-118

Est. Final Proj. Sampling Date:

Project#:

Project Contact/Phone#:

Lionville Laboratory Project Manager: O. JOHNSON

QC: SW846 Del: SHL TAT: 30 days

Date Rec'd: 5/6/09 Date Due: 6/6/09

		A							B							
Refrigerator #				2					2							
#/Type Container	Liquid															
	Solid			1G					1P							
Volume				250					250							
Preservatives				–					–							
ANALYSES REQUESTED →		ORGANIC							INORG							
		VOA	BNA	Pest/PCB	Herb				Metal	CN						
Lionville Laboratory Use Only				060BH					METALS							

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	060BH	METALS
01	J18J06			FISH	4-28-09	1230	X	X
02	07				4-29-09	0800	X	X
03	08				⊥	1400	X	X
04	09				4-30-09	0800	X	X
05	10				⊥	1030	X	X
06	69				4-28-09	1430	X	X
07	70				4-29-09	1030	X	X
08	71				⊥	1530	X	X
09	72				4-30-09	0930	X	X
10	73				⊥	1200	X	X

Special Instructions:

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

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	5/6/09	1410

Relinquished by	Received by	Date	Time

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

0000000023

Lionville Laboratory Use Only

0905 017

Custody Transfer Record/Lab Work Request

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client: WC HANFORD BC-118

Est. Final Proj. Sampling Date:

Project#: Page 1

Project Contact/Phone#:

Lionville Laboratory Project Manager: O. JOHNSON

QC: Del: TAT:

Date Rec'd: Date Due:

		A	B
Refrigerator #		2	2
#/Type Container	Liquid		
	Solid	16	11
Volume		250	250
Preservatives		–	–

ANALYSES REQUESTED →

ORGANIC				INORG	
VOA	BNA	Pest/PCB	Herb	Metal	CN

Lionville Laboratory Use Only: OLEOH, METALS

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	OLEOH	METALS
11	J18J88			Fish	4-28-09	0800	X	X
12	J18K25			↓	↓	1000	X	X

Special Instructions:

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

Relinquished by	Received by	Date	Time
[signature]	[signature]	9/6/09	1410

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time

9999999974

0905017

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

Collector: Josh McGough	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, FILLET		SAF No.: RC-118
Ice Chest No.: ERC99045	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# 796579619475

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				

Sample No.	Matrix *	Sample Date	Sample Time										
J18J06	OTHER SOLID	4/28/09	12:30					X	X				

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Josh McGough Joel M. Hill	4/28/09 1235	Received By/Stored In: Joel M. Hill EAS Locked Storage #2	4/28/09 1235
Relinquished By/Removed From: EAS LOCKED STORAGE #2	5/5/09 1140	Received By/Stored In: SHANNAN JOHNSON	5/5/09 1140
Relinquished By/Removed From: SHANNAN JOHNSON	5/5/09 1140	Received By/Stored In: Fdx# 796579619475	
Relinquished By/Removed From: Fed Ex	5-6-09 1410	Received By/Stored In:	5-6-09 1410
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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

0809090925

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-2	Page 1 of 1

Collector: Josh McGough	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, FILLET		SAF No.: RC-118
Ice Chest No.: ERC 99045	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# 796579619475

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				
Sample No. / Matrix * / Sample Date / Sample Time											
J18J07 / OTHER SOLID / 4/29/09 / 0800					X	X					

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Josh McGough	Date/Time: 4/29/09 0800	Received By/Stored In: EAS Locked Storage #2	Date/Time: 4/29/09 0800
Relinquished By/Removed From: EAS LOCKED STORAGE #2	Date/Time: 5/5/09 1140	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 5/5/09 1140
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 5/5/09 1140	Received By/Stored In: Fdx# 796579619475	Date/Time:
Relinquished By/Removed From: Fed Ex	Date/Time: 5-6-09 1410	Received By/Stored In:	Date/Time: 5-6-09 1410
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:	Date/Time:
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:	Date/Time:

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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

0099998025

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-3	Page 1 of 1

Collector: Josh McGough	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, FILLET		SAF No.: RC-118
Ice Chest No.: ERC 99 045	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# 79657961 9475

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				
Sample No.	Matrix *	Sample Date	Sample Time								
J18J08	OTHER SOLID	4/29/09	1400					X	X		

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Josh McGough	4/29/09 1405	EAS Locked Storage #2	4/29/09 1405
EAS LOCKED STORAGE #2	5/5/09 1140	SHANNAN JOHNSON	5/5/09 1140
SHANNAN JOHNSON	5/5/09 1140	Fdx# 79657961 475	
Fed Ex	5-6-09 1410		5-6-09 1410
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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-118-4	Page 1 of 1

Collector: Josh McGough	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, FILLET		SAF No.: RC-118
Ice Chest No.: ERC 99045	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# 7965796 19475

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None			
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P			
No. of Container(s)	1	1	1	1	1	1	1			
Volume	1500g	100g	100g	10g	250g	120g	10g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99			
Sample No. / Matrix * / Sample Date / Sample Time										
J18J09 / OTHER SOLID / 4/30/09 / 0800					X	X				

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Josh McGough	4/30/09 0805	EAS Locked Storage #2	4/30/09 0805
Relinquished By/Removed From: EAS LOCKED STORAGE #2	5/5/09 1140	Received By/Stored In: SHANNAN JOHNSON	5/5/09 1140
Relinquished By/Removed From: SHANNAN JOHNSON	5/5/09 1140	Received By/Stored In: Fdx# 7965796 1 475	
Relinquished By/Removed From: Fed Ex	5-6-09 1410	Received By/Stored In:	5-6-09 1410
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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-118-5	Page 1 of 1

Collector: Josh McGough	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, FILLET	SAF No.: RC-118	
Ice Chest No.: ERC 99045	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# 796579619475	

POSSIBLE SAMPLE HAZARDS/REMARKS

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

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				
Sample No. / Matrix * / Sample Date / Sample Time											
J18J10 / OTHER SOLID / 4/30/09 / 1030					X	X					

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Josh McGough	4/30/09 1035	Received By/Stored In: EAS Locked Storage #2	4/30/09 1035
Relinquished By/Removed From: EAS LOCKED STORAGE #2	5/5/09 1140	Received By/Stored In: SHANNAN JOHNSON	5/5/09 1140
Relinquished By/Removed From: SHANNAN JOHNSON	5/5/09 1140	Received By/Stored In: FdX# 796579619475	
Relinquished By/Removed From: Fed Ex	5-6-09 1410	Received By/Stored In:	5-6-09 1410
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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

00009629

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-26	Page 1 of 1

Collector: Josh McGough	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, CARCASS		SAF No.: RC-118
Ice Chest No.: ERC 99045	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# 796579619475

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS												
Preservation				None	None	None	None	Cool 4C	Cool 4C	None		
Type of Container				G/P	G/P	G/P	G/P	G/P	aG	G/P		
No. of Container(s)				1	1	1	1	1	1	1		
Volume				1500g	100g	100g	10g	250g	120g	10g		
				See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99		
Sample No.	Matrix *	Sample Date	Sample Time									
J18J69	OTHER SOLID	4/28/09	1430					X	X			

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Josh McGough	4/28/09 1435	EAS Locked Storage #2	4/28/09 1435
EAS LOCKED STORAGE #2	5/5/09 1140	SHANNAN JOHNSON	5/5/09 1140
SHANNAN JOHNSON	5/5/09 1140	Fdx# 79657961475	
Fed Ex	5-6-09 1410		5-6-09 1410
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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-118-27	Page 1 of 1

Collector: Josh McGough	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, CARCASS		SAF No.: RC-118
Ice Chest No.: ERC 99045	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# 796579619475

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None			
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P			
No. of Container(s)	1	1	1	1	1	1	1			
Volume	1500g	100g	100g	10g	250g	120g	10g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99			
Sample No. / Matrix * / Sample Date / Sample Time										
J18J70 / OTHER SOLID / 4/29/09 / 1030					X	X				

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By/Removed From: Josh McGough	Date/Time: 4/29/09 1035	Received By/Stored In: EAS Locked Storage	Date/Time: 4/29/09 1035
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 5/5/09 1140	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 5/5/09 1140
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 5/5/09 1140	Received By/Stored In: Fdx# 796579611475	Date/Time:
Relinquished By/Removed From:	Date/Time: 5-6-09 1410	Received By/Stored In:	Date/Time: 5-6-09 1410
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:	Date/Time:
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:	Date/Time:

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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

00000031

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-28	Page 1 of 1

Collector: Josh McGough	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, CARCASS	SAF No.: RC-118	
Ice Chest No.: ERC 99045	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# 79657961 9475	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None			
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P			
No. of Container(s)	1	1	1	1	1	1	1			
Volume	1500g	100g	100g	10g	250g	120g	10g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99			
Sample No. / Matrix * / Sample Date / Sample Time										
J18J71 / OTHER SOLID / 4/29/09 / 1530					X	X				

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From: Josh McGough	Joel McGill	4/29/09 1535	EAS Locked Storage (#2)	4/29/09 1535
Relinquished By/Removed From: EAS LOCKED STORAGE #2		5/5/09 1140	SHANNAN JOHNSON	5/5/09 1140
Relinquished By/Removed From: SHANNAN JOHNSON		5/5/09 1140	Fax# 79657961 475	
Relinquished By/Removed From: FED EX		5-6-09 1410		5-6-09 1410
Relinquished By/Removed From			Received By/Stored In	
Relinquished By/Removed From			Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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

000000037

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-29	Page 1 of 1

Collector: Josh McGough	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, CARCASS		SAF No.: RC-118
Ice Chest No.: ERC 99045	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# 79657961 9475

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None			
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P			
No. of Container(s)	1	1	1	1	1	1	1			
Volume	1500g	100g	100g	10g	250g	120g	10g			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99			

Sample No.	Matrix *	Sample Date	Sample Time										
J18J72	OTHER SOLID	4/30/09	0930					X	X				

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By/Removed From: Josh McGough	Date/Time: 4/30/09 0935	Received By/Stored In: EAS Locked Storage #2 — Date/Time: 4/30/09 0935
Relinquished By/Removed From: EAS LOCKED STORAGE #2	Date/Time: 5/5/09 1140	Received By/Stored In: SHANNAN JOHNSON — Date/Time: 5/5/09 1140
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 5/5/09 1140	Received By/Stored In: Fax# 79657961 9475 — Date/Time:
Relinquished By/Removed From: Fed Ex	Date/Time: 5-6-09 1410	Received By/Stored In: — Date/Time: 5-6-09 1410
Relinquished By/Removed From:	Date/Time:	Received By/Stored In: — Date/Time:
Relinquished By/Removed From:	Date/Time:	Received By/Stored In: — Date/Time:

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09.

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

00006033

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-30	Page 1 of 1

Collector: Josh McGough	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, CARCASS		SAF No.: RC-118
Ice Chest No.: ERC 99045	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# 796579619475

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				
Sample No. / Matrix * / Sample Date / Sample Time											
J18J73 / OTHER SOLID / 4/30/09 / 1200					X	X					

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Josh McGough Joel McNeil	4/30/09 1205	Received By/Stored In: Joel McNeil EAS Locked Storage #2	4/30/09 1205
Relinquished By/Removed From: EAS LOCKED STORAGE #2	5/5/09 1140	Received By/Stored In: SHANNAN JOHNSON	5/5/09 1140
Relinquished By/Removed From: SHANNAN JOHNSON	5/5/09 1140	Received By/Stored In: FdX# 796579619475	
Relinquished By/Removed From:	5-6-09 1410	Received By/Stored In:	5-6-09 1410
Relinquished By/Removed From:	Date/Time	Received By/Stored In:	Date/Time
Relinquished By/Removed From:	Date/Time	Received By/Stored In:	Date/Time

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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-118-45	Page 1 of 1

Collector: Josh McGough	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, FILLET		SAF No.: RC-118
Ice Chest No.: ERC 99045	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# 796579619475

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				
Sample No. / Matrix * / Sample Date / Sample Time											
J18J88 / OTHER SOLID / 4/28/09 / 0800					X	X					

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Josh McGough	4/28/09 0805	EAS Locked Storage #2	4/28/09 0805
EAS LOCKED STORAGE #2	5/5/09 1140	SHANNAN JOHNSON	5/5/09 1140
SHANNAN JOHNSON	5/5/09 1140	FdX# 796579619475	
	5-6-09 1410		5-6-09 1410

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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

00000035

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-70	Page 1 of 1

Collector: Josh McGough	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, CARCASS		SAF No.: RC-118
Ice Chest No.: ERC99045	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# 796579619475

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

COOL 4C "MATRIX COMPOSED OF FISH"

Preservation	None	None	None	None	Cool 4C	Cool 4C	None				
Type of Container	G/P	G/P	G/P	G/P	G/P	aG	G/P				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	1500g	100g	100g	10g	250g	120g	10g				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14	Tritium - H3	See item (2) in Special Instructions.	See item (3) in Special Instructions.	Pesticides - 8081	Technetium-99				
Sample No. / Matrix * / Sample Date / Sample Time											
J18K25 / OTHER SOLID / 4/28/09 / 1000					X	X					

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Josh McGough	4/28/09 1005	Received By/Stored In: EAS Locked Storage #2	4/28/09 1005
Relinquished By/Removed From: EAS LOCKED STORAGE #2	5/5/09 1140	Received By/Stored In: SHANNAN JOHNSON	5/5/09 1140
Relinquished By/Removed From: SHANNAN JOHNSON	5/6/09 1140	Received By/Stored In: Fdx# 796579611475	
Relinquished By/Removed From:	5-6-09 1410	Received By/Stored In:	5-6-09 1410
Relinquished By/Removed From:		Received By/Stored In:	
Relinquished By/Removed From:		Received By/Stored In:	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238}
(2) Strontium-89,90 -- Total Sr; Isotopic Thorium {Thorium-232}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium
(3) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV)

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 5/5/09

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

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: WC-HANFORD

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

Date: 5/6/09

LvLI Batch #: 0905017

Sample Custodian: [illegible]

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier FedEx		Airbill # 7965 7961 9475
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 2.5	°C	Cooler # ERC-99-045
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 D. Johnson		Date 5-6-09	

LVLI