AR TARGET SHEET

The following document was too large to scan as one unit, therefore, it has been broken down into sections.

EDMC#:	0069345
SECTION:	1 OF 2
DOCUMENT #:	K0205
TITLE:	Data Package

069345

SAF-RC-048
100 Area and 300 Area Component of the RCBRA Water Sampling
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Jill Thomson	H0-23	_NB 3/29/06_ INITIAL/DATE
Jeanette Duncan	H9-02	_NB 3/29/06_ INITIAL/DATE

COMMENTS:

SDG K0205 **SAF-RC-048**

Rad only Chem only X Rad & Chem

X Complete Partial

Waste Site(s): Cr 4 Pore Water, Cr 3 Surface Water, Cr 4 Surface Water, Cr 5 Pore Water, Cr 5 Surface Water, Cr 6 Vertical Tube, Cr 7 Surface Water, Cr 10 Surface Water, Cr 6 Pore Water Full QC, Cr 6 Surface Water Full QC, Cr 7 Pore Water, Cr 10 Pore Water

RECEIVED
APR 2 4 2006
EDMC

EBERLINE
SERVICES

RECEIVED
MAR 2006

March 22, 2006

Ms. Joan Kessner
Washington Closure Hanford
3190 George Washington Way
MSIN H9-02
Richland, WA 99352

Reference: **P.O. #630**
Eberline Services R6-02-010-7372, SDG K0205

Dear Ms. Kessner:

Enclosed is the data report for twelve water samples designated under SAF No. RC-048 received at Eberline Services on January 31, 2006. The samples were analyzed according to the accompanying chain-of-custody documents.

Please call if you have any questions concerning this report.

Sincerely,

Melissa Mannion

Melissa C. Mannion
Senior Program Manager

MCM/njv

Enclosure: Data Package

Analytical Servi
2030 Wright Ave
P.O. Box 4
Richmond, California 94804-0
(510) 235-2633 Fax (510) 235-0
Toll Free (800) 841-5
www.eberlineservices

1.0 GENERAL

Washington Closure Hanford (WCH) Sample Delivery Group K0205 was composed of twelve water samples designated under SAF No. RC-048 with a Project Designation of: 100 Area and 300 Area Component of the RCBRA Water Sa.

The samples were received as stated on the Chain-of-Custody documents. Any discrepancies are noted on the Eberline Services Sample Receipt Checklist. The results were transmitted to WCH via e-mail on March 21, 2006.

2.0 ANALYSIS NOTES

2.1 Tritium Analysis

No problems were encountered during the course of the analyses.

2.2 Carbon-14 Analysis

No problems were encountered during the course of the analyses.

2.3 Total Strontium Analysis

No problems were encountered during the course of the analyses.

2.4 Radium-226 Analysis

No problems were encountered during the course of the analyses.

2.5 Radium-228 Analysis

No other problems were encountered during the course of the analyses.

2.6 Isotopic Thorium Analysis

No problems were encountered during the course of the analyses.

2.7 Isotopic Uranium 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.

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."

Melissa Mannion

Melissa C. Mannion
Senior Program Manager

3/22/06

Date

E B E R L I N E S E R V I C E S / R I C H M O N D
SAMPLE DELIVERY GROUP K0205

SDG	7372
Contact	Melissa C. Mannion

Client	Hanford
Contract	No. 630
Case no	SDG_K0205

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

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

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Prepared by

Reviewed by

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-TOC
Version	3.06
Report date	03/21/06

SDG 7372
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG K0205

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 Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/21/06

SDG 7372
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG_K0205

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.

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Protocol Hanford
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Form DVD-RG
Version 3.06
Report date 03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

SDG 7372
Contact Melissa C. Mannion

LAB SAMPLE SUMMARY

Client Hanford
Contract No. 630
Case no SDG K0205

LAB SAMPLE ID	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAF NO	CHAIN OF CUSTODY	COLLECTED
R602010-01	J11232	Cr 4, Pore Water	WATER		RC-048	RC-048-244	01/29/06 14:15
R602010-02	J11238	Cr 3, Surface Water	WATER		RC-048	RC-048-251	01/29/06 13:30
R602010-03	J11239	Cr 4, Surface Water	WATER		RC-048	RC-048-252	01/29/06 15:30
R602010-04	J11245	Cr 5, Pore Water	WATER		RC-048	RC-048-258	01/29/06 16:30
R602010-05	J11279	Cr 5, Surface Water	WATER		RC-048	RC-048-276	01/29/06 16:00
R602010-06	J112C3	Cr 6, Vertical Tube	WATER		RC-048	RC-048-280	02/01/06 15:30
R602010-07	J112F6	Cr 7, Surface Water	WATER		RC-048	RC-048-282	02/01/06 16:00
R602010-08	J112F9	Cr 10, Surface Water	WATER		RC-048	RC-048-285	02/01/06 18:30
R602010-09	J112X3	Cr 6, Pore Water Full QC	WATER		RC-048	RC-048-290	02/01/06 14:45
R602010-10	J112X9	Cr 6, Pore Water Full QC	WATER		RC-048	RC-048-296	02/01/06 14:30
R602010-11	J11247	Cr 7, Pore Water	WATER		RC-048	RC-048-260	02/01/06 16:15
R602010-12	J11250	Cr 10, Pore Water	WATER		RC-048	RC-048-263	02/01/06 19:00
R602010-13	Lab Control Sample		WATER		RC-048		
R602010-14	Method Blank		WATER		RC-048		
R602010-15	Duplicate (R602010-01)	Cr 4, Pore Water	WATER		RC-048		01/29/06 14:15
R602010-17	Duplicate (R602010-09)	Cr 6, Pore Water Full QC	WATER		RC-048		02/01/06 14:45
R602010-18	Duplicate (R602010-09)	Cr 6, Pore Water Full QC	WATER		RC-048		02/01/06 14:45
R602010-19	Spike (R602010-10)	Cr 6, Pore Water Full QC	WATER		RC-048		02/01/06 14:30
R602010-20	Spike (R602010-02)	Cr 3, Surface Water	WATER		RC-048		01/29/06 13:30

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LS
Version 3.06
Report date 03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

QC SUMMARY

SDG 7372
Contact Melissa C. Mannion

Client Hanford
Contract No. 630
Case no SDG K0205

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% SOLIDS	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	DAYS SINCE COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
7372	RC-048-244	J11232	WATER		3.5 L		01/31/06	2	R602010-01	7372-001
	RC-048-251	J11238	WATER		3.5 L		01/31/06	2	R602010-02	7372-002
	RC-048-252	J11239	WATER		3.5 L		01/31/06	2	R602010-03	7372-003
	RC-048-258	J11245	WATER		3.5 L		01/31/06	2	R602010-04	7372-004
	RC-048-260	J11247	WATER		3.5 L		02/03/06	2	R602010-11	7372-011
	RC-048-263	J11250	WATER		3.5 L		02/03/06	2	R602010-12	7372-012
	RC-048-276	J11279	WATER		3.5 L		01/31/06	2	R602010-05	7372-005
	RC-048-280	J112C3	WATER		3.5 L		02/03/06	2	R602010-06	7372-006
	RC-048-282	J112F6	WATER		3.5 L		02/03/06	2	R602010-07	7372-007
	RC-048-285	J112F9	WATER		3.5 L		02/03/06	2	R602010-08	7372-008
	RC-048-290	J112X3	WATER		5.0 L		02/03/06	2	R602010-09	7372-009
	RC-048-296	J112X9	WATER		5.0 L		02/03/06	2	R602010-10	7372-010
		Method Blank	WATER						R602010-14	7372-014
		Lab Control Sample	WATER						R602010-13	7372-013
		Duplicate (R602010-01)	WATER		3.5 L		01/31/06	2	R602010-15	7372-015
		Duplicate (R602010-09)	WATER		5.0 L		02/03/06	2	R602010-17	7372-017
		Duplicate (R602010-09)	WATER		5.0 L		02/03/06	2	R602010-18	7372-018
		Spike (R602010-02)	WATER		3.5 L		01/31/06	2	R602010-20	7372-020
		Spike (R602010-10)	WATER		5.0 L		02/03/06	2	R602010-19	7372-019

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-QS
Version 3.06
Report date 03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

SDG 7372
Contact Melissa C. Mannion

PREP BATCH SUMMARY

Client Hanford
Contract No. 630
Case no SDG K0205

TEST	MATRIX	METHOD	PREPARATION BATCH	ERROR 2σ %	PLANCHETS ANALYZED CLIENT	MORE	RE	BLANK	LCS	DUP/ORIG	MS/ORIG	QUALIFIERS
Alpha Spectroscopy												
TH	WATER	Thorium, Isotopic in Water	7131-062	5.0	12			1	1	1/1		
U	WATER	Uranium, Isotopic in Water	7131-062	5.0	12			1	1	1/1		
Beta Counting												
AC	WATER	Radium 228 in Water	7131-062	5.0	12			1	1	1/1		
SR	WATER	Total Strontium in Water	7131-062	10.0	12			1	1	1/1		
Gamma Scan												
GAM	WATER	Gamma Emitters	7131-062	15.0	12			1	1	1/1		
Liquid Scintillation Counting												
C	WATER	Carbon 14 in Water	7131-062	10.0	3			1	1	1/1	1/1	X
H	WATER	Tritium in Water	7131-062	10.0	12			1	1	1/1	1/1	X
Radon Counting												
RA	WATER	Radium 226 in Water	7131-062	5.0	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 Hanford
Version Ver 1.0
Form DVD-PBS
Version 3.06
Report date 03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

SDG 7372
Contact Melissa C. Mannion

LAB WORK SUMMARY

Client Hanford
Contract No. 630
Case no SDG K0205

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
R602010-01	J11232			7372-001	AC		03/07/06	03/20/06	MWT	Radium 228 in Water
01/29/06	Cr 4, Pore Water		WATER	7372-001	C		03/11/06	03/20/06	MWT	Carbon 14 in Water
01/31/06	RC-048-244	RC-048		7372-001	GAM		02/26/06	03/01/06	CSS	Gamma Emitters
				7372-001	H		03/13/06	03/20/06	MWT	Tritium in Water
				7372-001	RA		03/14/06	03/20/06	MWT	Radium 226 in Water
				7372-001	SR		03/07/06	03/20/06	MWT	Total Strontium in Water
				7372-001	TH		03/08/06	03/20/06	MWT	Thorium, Isotopic in Water
				7372-001	U		03/02/06	03/20/06	MWT	Uranium, Isotopic in Water
R602010-02	J11238			7372-002	AC		03/07/06	03/20/06	MWT	Radium 228 in Water
01/29/06	Cr 3, Surface Water		WATER	7372-002	C		03/12/06	03/20/06	MWT	Carbon 14 in Water
01/31/06	RC-048-251	RC-048		7372-002	GAM		02/23/06	03/01/06	CSS	Gamma Emitters
				7372-002	H		03/13/06	03/20/06	MWT	Tritium in Water
				7372-002	RA		03/14/06	03/20/06	MWT	Radium 226 in Water
				7372-002	SR		03/07/06	03/20/06	MWT	Total Strontium in Water
				7372-002	TH		03/08/06	03/20/06	MWT	Thorium, Isotopic in Water
				7372-002	U		03/07/06	03/20/06	MWT	Uranium, Isotopic in Water
R602010-03	J11239			7372-003	AC		03/07/06	03/20/06	MWT	Radium 228 in Water
01/29/06	Cr 4, Surface Water		WATER	7372-003	C		03/12/06	03/20/06	MWT	Carbon 14 in Water
01/31/06	RC-048-252	RC-048		7372-003	GAM		02/23/06	03/01/06	CSS	Gamma Emitters
				7372-003	H		03/13/06	03/20/06	MWT	Tritium in Water
				7372-003	RA		03/14/06	03/20/06	MWT	Radium 226 in Water
				7372-003	SR		03/07/06	03/20/06	MWT	Total Strontium in Water
				7372-003	TH		03/08/06	03/20/06	MWT	Thorium, Isotopic in Water
				7372-003	U		03/02/06	03/20/06	MWT	Uranium, Isotopic in Water
R602010-04	J11245			7372-004	AC		03/07/06	03/20/06	MWT	Radium 228 in Water
01/29/06	Cr 5, Pore Water		WATER	7372-004	GAM		02/23/06	03/01/06	CSS	Gamma Emitters
01/31/06	RC-048-258	RC-048		7372-004	H		03/13/06	03/20/06	MWT	Tritium in Water
				7372-004	RA		03/14/06	03/20/06	MWT	Radium 226 in Water
				7372-004	SR		03/07/06	03/20/06	MWT	Total Strontium in Water
				7372-004	TH		03/08/06	03/20/06	MWT	Thorium, Isotopic in Water
				7372-004	U		03/02/06	03/20/06	MWT	Uranium, Isotopic in Water

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

SDG 7372
Contact Melissa C. Mannion

WORK SUMMARY, cont.

Client Hanford
Contract No. 630
Case no SDG K0205

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
R602010-05	J11279			7372-005	AC		03/07/06	03/20/06	MWT	Radium 228 in Water
01/29/06	Cr 5, Surface Water		WATER	7372-005	GAM		02/25/06	03/01/06	CSS	Gamma Emitters
01/31/06	RC-048-276	RC-048		7372-005	H		03/13/06	03/20/06	MWT	Tritium in Water
				7372-005	RA		03/14/06	03/20/06	MWT	Radium 226 in Water
				7372-005	SR		03/07/06	03/20/06	MWT	Total Strontium in Water
				7372-005	TH		03/08/06	03/20/06	MWT	Thorium, Isotopic in Water
				7372-005	U		03/02/06	03/20/06	MWT	Uranium, Isotopic in Water
R602010-06	J112C3			7372-006	AC		03/07/06	03/20/06	MWT	Radium 228 in Water
02/01/06	Cr 6, Vertical Tube		WATER	7372-006	GAM		02/27/06	03/01/06	CSS	Gamma Emitters
02/03/06	RC-048-280	RC-048		7372-006	H		03/14/06	03/20/06	MWT	Tritium in Water
				7372-006	RA		03/14/06	03/20/06	MWT	Radium 226 in Water
				7372-006	SR		03/07/06	03/20/06	MWT	Total Strontium in Water
				7372-006	TH		03/08/06	03/20/06	MWT	Thorium, Isotopic in Water
				7372-006	U		03/02/06	03/20/06	MWT	Uranium, Isotopic in Water
R602010-07	J112F6			7372-007	AC		03/07/06	03/20/06	MWT	Radium 228 in Water
02/01/06	Cr 7, Surface Water		WATER	7372-007	GAM		02/28/06	03/01/06	CSS	Gamma Emitters
02/03/06	RC-048-282	RC-048		7372-007	H		03/14/06	03/20/06	MWT	Tritium in Water
				7372-007	RA		03/14/06	03/20/06	MWT	Radium 226 in Water
				7372-007	SR		03/07/06	03/20/06	MWT	Total Strontium in Water
				7372-007	TH		03/08/06	03/20/06	MWT	Thorium, Isotopic in Water
				7372-007	U		03/02/06	03/20/06	MWT	Uranium, Isotopic in Water
R602010-08	J112F9			7372-008	AC		03/08/06	03/20/06	MWT	Radium 228 in Water
02/01/06	Cr 10, Surface Water		WATER	7372-008	GAM		02/26/06	03/01/06	CSS	Gamma Emitters
02/03/06	RC-048-285	RC-048		7372-008	H		03/14/06	03/20/06	MWT	Tritium in Water
				7372-008	RA		03/14/06	03/20/06	MWT	Radium 226 in Water
				7372-008	SR		03/07/06	03/20/06	MWT	Total Strontium in Water
				7372-008	TH		03/08/06	03/20/06	MWT	Thorium, Isotopic in Water
				7372-008	U		03/02/06	03/20/06	MWT	Uranium, Isotopic in Water
R602010-09	J112X3			7372-009	AC		03/08/06	03/20/06	MWT	Radium 228 in Water
02/01/06	Cr 6, Pore Water Full QC		WATER	7372-009	GAM		02/28/06	03/01/06	CSS	Gamma Emitters
02/03/06	RC-048-290	RC-048		7372-009	H		03/14/06	03/20/06	MWT	Tritium in Water
				7372-009	RA		03/14/06	03/20/06	MWT	Radium 226 in Water
				7372-009	SR		03/07/06	03/20/06	MWT	Total Strontium in Water
				7372-009	TH		03/11/06	03/20/06	MWT	Thorium, Isotopic in Water
				7372-009	U		03/07/06	03/20/06	MWT	Uranium, Isotopic in Water

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

SDG 7372
Contact Melissa C. Mannion

WORK SUMMARY, cont.

Client Hanford
Contract No. 630
Case no SDG K0205

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
R602010-10	J112X9			7372-010	AC		03/08/06	03/20/06	MWT	Radium 228 in Water
02/01/06	Cr 6, Pore Water Full QC		WATER	7372-010	GAM		02/28/06	03/01/06	CSS	Gamma Emitters
02/03/06	RC-048-296	RC-048		7372-010	H		03/14/06	03/20/06	MWT	Tritium in Water
				7372-010	RA		03/14/06	03/20/06	MWT	Radium 226 in Water
				7372-010	SR		03/07/06	03/20/06	MWT	Total Strontium in Water
				7372-010	TH		03/11/06	03/20/06	MWT	Thorium, Isotopic in Water
				7372-010	U		03/02/06	03/20/06	MWT	Uranium, Isotopic in Water
R602010-11	J11247			7372-011	AC		03/08/06	03/20/06	MWT	Radium 228 in Water
02/01/06	Cr 7, Pore Water		WATER	7372-011	GAM		02/28/06	03/01/06	CSS	Gamma Emitters
02/03/06	RC-048-260	RC-048		7372-011	H		03/14/06	03/20/06	MWT	Tritium in Water
				7372-011	RA		03/14/06	03/20/06	MWT	Radium 226 in Water
				7372-011	SR		03/07/06	03/20/06	MWT	Total Strontium in Water
				7372-011	TH		03/11/06	03/20/06	MWT	Thorium, Isotopic in Water
				7372-011	U		03/02/06	03/20/06	MWT	Uranium, Isotopic in Water
R602010-12	J11250			7372-012	AC		03/08/06	03/20/06	MWT	Radium 228 in Water
02/01/06	Cr 10, Pore Water		WATER	7372-012	GAM		02/28/06	03/01/06	CSS	Gamma Emitters
02/03/06	RC-048-263	RC-048		7372-012	H		03/14/06	03/20/06	MWT	Tritium in Water
				7372-012	RA		03/14/06	03/20/06	MWT	Radium 226 in Water
				7372-012	SR		03/07/06	03/20/06	MWT	Total Strontium in Water
				7372-012	TH		03/11/06	03/20/06	MWT	Thorium, Isotopic in Water
				7372-012	U		03/02/06	03/20/06	MWT	Uranium, Isotopic in Water
R602010-13	Lab Control Sample			7372-013	AC		03/07/06	03/20/06	MWT	Radium 228 in Water
			WATER	7372-013	C		03/12/06	03/20/06	MWT	Carbon 14 in Water
		RC-048		7372-013	GAM		02/28/06	03/01/06	CSS	Gamma Emitters
				7372-013	H		03/14/06	03/20/06	MWT	Tritium in Water
				7372-013	RA		03/14/06	03/20/06	MWT	Radium 226 in Water
				7372-013	SR		03/07/06	03/20/06	MWT	Total Strontium in Water
				7372-013	TH		03/11/06	03/20/06	MWT	Thorium, Isotopic in Water
				7372-013	U		03/02/06	03/20/06	MWT	Uranium, Isotopic in Water

Lab id EBRLNE
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

SDG 7372
Contact Melissa C. Mannion

WORK SUMMARY, cont.

Client Hanford
Contract No. 630
Case no SDG K0205

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
R602010-14	Method Blank			7372-014	AC		03/08/06	03/20/06	MWT	Radium 228 in Water
			WATER	7372-014	C		03/12/06	03/20/06	MWT	Carbon 14 in Water
		RC-048		7372-014	GAM		02/28/06	03/01/06	CSS	Gamma Emitters
				7372-014	H		03/14/06	03/20/06	MWT	Tritium in Water
				7372-014	RA		03/14/06	03/20/06	MWT	Radium 226 in Water
				7372-014	SR		03/07/06	03/20/06	MWT	Total Strontium in Water
				7372-014	TH		03/11/06	03/20/06	MWT	Thorium, Isotopic in Water
				7372-014	U		03/07/06	03/20/06	MWT	Uranium, Isotopic in Water
R602010-15	Duplicate (R602010-01)			7372-015	AC		03/08/06	03/20/06	MWT	Radium 228 in Water
01/29/06	Cr 4, Pore Water		WATER	7372-015	C		03/12/06	03/20/06	MWT	Carbon 14 in Water
01/31/06		RC-048		7372-015	GAM		03/01/06	03/01/06	CSS	Gamma Emitters
				7372-015	RA		03/14/06	03/20/06	MWT	Radium 226 in Water
R602010-17	Duplicate (R602010-09)			7372-017	SR		03/07/06	03/20/06	MWT	Total Strontium in Water
02/01/06	Cr 6, Pore Water Full QC		WATER	7372-017	TH		03/11/06	03/20/06	MWT	Thorium, Isotopic in Water
02/03/06		RC-048		7372-017	U		03/13/06	03/20/06	MWT	Uranium, Isotopic in Water
R602010-18	Duplicate (R602010-09)			7372-018	H		03/14/06	03/20/06	MWT	Tritium in Water
02/01/06	Cr 6, Pore Water Full QC		WATER							
02/03/06		RC-048								
R602010-19	Spike (R602010-10)			7372-019	H		03/14/06	03/20/06	MWT	Tritium in Water
02/01/06	Cr 6, Pore Water Full QC		WATER							
02/03/06		RC-048								
R602010-20	Spike (R602010-02)			7372-020	C		03/12/06	03/20/06	MWT	Carbon 14 in Water
01/29/06	Cr 3, Surface Water		WATER							
01/31/06		RC-048								

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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

SDG 7372
Contact Melissa C. Mannion

WORK SUMMARY, cont.

Client Hanford
Contract No. 630
Case no SDG K0205

COUNTS OF TESTS BY SAMPLE TYPE

TEST	SAF No	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP	SPIKE	TOTAL
AC	RC-048	Radium 228 in Water	RAISO_SEP_GPC	12			1	1	1		15
C	RC-048	Carbon 14 in Water	C14_CHEM_LSC	3			1	1	1	1	7
GAM	RC-048	Gamma Emitters	GAMMA_GS	12			1	1	1		15
H	RC-048	Tritium in Water	906.0_H3_LSC	12			1	1	1	1	16
RA	RC-048	Radium 226 in Water	903.1_RA226_LUC	12			1	1	1		15
SR	RC-048	Total Strontium in Water	SRTOT_SEP_PRECIP_GPC	12			1	1	1		15
TH	RC-048	Thorium, Isotopic in Water	THISO_IE_PLATE_AEA	12			1	1	1		15
U	RC-048	Uranium, Isotopic in Water	UISO_PLATE_AEA	12			1	1	1		15
TOTALS				87			8	8	8	2	113

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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

7372-014 **Method Blank**

METHOD BLANK

SDG	7372	Client/Case no	Hanford SDG K0205
Contact	Melissa C. Mannion	Contract	No. 630
Lab sample id	R602010-14	Client sample id	Method Blank
Dept sample id	7372-014	Material/Matrix	WATER
		SAF No	RC-048

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Tritium	10028-17-8	-254	1300	2300	400	U	H
Carbon 14	14762-75-5	-9.44	37	62	200	U	C
Total Strontium	SR-RAD	0.145	0.27	0.52	2.0	U	SR
Radium 228	15262-20-1	0.191	0.54	1.5	3.0	U	AC
Thorium 228	14274-82-9	0.032	0.20	0.36		U	TH
Thorium 230	14269-63-7	-0.129	0.066	0.31	1.0	U	TH
Thorium 232	TH-232	0	0.064	0.25	1.0	U	TH
Uranium 233/234	U-233/234	0	0.037	0.14	1.0	U	U
Uranium 235	15117-96-1	0	0.044	0.17	1.0	U	U
Uranium 238	U-238	0	0.037	0.14	1.0	U	U
Radium 226	13982-63-3	-0.236	0.34	0.74	2.0	U	RA
Potassium 40	13966-00-2	U		100		U	GAM
Cobalt 60	10198-40-0	U		10	25	U	GAM
Cesium 137	10045-97-3	U		10	15	U	GAM
Radium 226	13982-63-3	U		22		U	GAM
Radium 228	15262-20-1	U		44		U	GAM
Europium 152	14683-23-9	U		34	50	U	GAM
Europium 154	15585-10-1	U		35	50	U	GAM
Europium 155	14391-16-3	U		37	50	U	GAM
Thorium 228	14274-82-9	U		17		U	GAM
Thorium 232	TH-232	U		44		U	GAM
Uranium 235	15117-96-1	U		51		U	GAM
Uranium 238	U-238	U		1200		U	GAM
Americium 241	14596-10-2	U		56		U	GAM
Ruthenium 106	13967-48-1	U		95		U	GAM
Antimony 125	14234-35-6	U		26		U	GAM
Beryllium 7	13966-02-4	U		84		U	GAM
Cesium 134	13967-70-9	U		13		U	GAM

100&300Area Component RCBRA Water Sa

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

7372-014 **Method Blank**

BLANK, cont.

SDG	7372	Client/Case no	Hanford	SDG K0205	
Contact	Melissa C. Mannion	Contract	No. 630		
Lab sample id	R602010-14	Client sample id	Method Blank		
Dept sample id	7372-014	Material/Matrix		WATER	
		SAF No	RC-048		

QC-BLANK #56042

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
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Version	3.06
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

7372-013

Lab Control Sample

LAB CONTROL SAMPLE

SDG 7372

Contact Melissa C. Mannion

Client/Case no Hanford SDG K0205

Contract No. 630

Lab sample id R602010-13

Dept sample id 7372-013

Client sample id Lab Control Sample

Material/Matrix WATER

SAF No RC-048

ANALYTE	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST	ADDED pCi/L	2σ ERR pCi/L	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS
Tritium	21100	2000	2300	400		H	22200	890	95	79-121	80-120
Carbon 14	9340	320	150	200		C	9570	380	98	83-117	80-120
Total Strontium	21.6	1.1	0.46	2.0		SR	19.7	0.79	110	81-119	80-120
Radium 228	17.1	2.1	1.5	3.0		AC	16.7	0.67	102	79-121	80-120
Thorium 230	21.1	2.1	0.17	1.0		TH	22.2	0.89	95	83-117	80-120
Uranium 233/234	17.9	1.4	0.69	1.0		U	19.3	0.77	93	86-114	80-120
Uranium 235	16.2	1.4	0.12	1.0		U	15.7	0.63	103	83-117	80-120
Uranium 238	18.7	1.5	0.66	1.0		U	21.0	0.84	89	86-114	80-120
Radium 226	46.4	2.5	0.75	2.0		RA	50.3	2.0	92	88-112	80-120
Cobalt 60	433	43	34	25		GAM	486	19	89	75-125	80-120
Cesium 137	521	41	31	15		GAM	494	20	106	73-127	80-120

100&300Area Component RCBRA Water Sa

QC-LCS #56041

Lab id EBRLNE

Protocol Hanford

Version Ver 1.0

Form DVD-LCS

Version 3.06

Report date 03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

7372-015 J11232

DUPLICATE

SDG	7372	Client/Case no	Hanford SDG K0205
Contact	Melissa C. Mannion	Contract	No. 630
DUPLICATE		ORIGINAL	
Lab sample id	R602010-15	Lab sample id	R602010-01
Dept sample id	7372-015	Dept sample id	7372-001
		Received	01/31/06
Client sample id	J11232		
Location/Matrix	Cr 4, Pore Water WATER		
Collected/Volume	01/29/06 14:15 3.5 L		
Custody/SAF No	RC-048-244 RC-048		

ANALYTE	DUPLICATE pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST	ORIGINAL pCi/L	2σ ERR (COUNT)	MDA pCi/L	QUALI-FIERS	RPD %	3σ TOT	DER σ
Carbon 14	-37.5	72	120	200	U	C	-19.8	73	120	U	-		0.3
Radium 228	-0.386	0.62	1.6	3.0	U	AC	-0.620	0.65	1.9	U	-		0.5
Radium 226	0.079	0.41	0.78	2.0	U	RA	-0.022	0.36	0.64	U	-		0.4
Potassium 40	U		110		U	GAM	U		260	U	-		1.1
Cobalt 60	U		11	25	U	GAM	U		12	U	-		0.1
Cesium 137	U		12	15	U	GAM	U		14	U	-		0.2
Radium 226	U		21		U	GAM	U		25	U	-		0.2
Radium 228	U		47		U	GAM	U		62	U	-		0.4
Europium 152	U		32	50	U	GAM	U		34	U	-		0.1
Europium 154	U		32	50	U	GAM	U		47	U	-		0.5
Europium 155	U		37	50	U	GAM	U		43	U	-		0.2
Thorium 228	U		18		U	GAM	U		35	U	-		0.9
Thorium 232	U		47		U	GAM	U		62	U	-		0.4
Uranium 235	U		53		U	GAM	U		61	U	-		0.2
Uranium 238	U		1300		U	GAM	U		1700	U	-		0.4
Americium 241	U		59		U	GAM	U		100	U	-		0.7
Ruthenium 106	U		98		U	GAM	U		130	U	-		0.4
Antimony 125	U		27		U	GAM	U		33	U	-		0.3
Beryllium 7	U		120		U	GAM	U		150	U	-		0.3
Cesium 134	U		15		U	GAM	U		14	U	-		0.1

100&300Area Component RCBRA Water Sa

QC-DUP#1 56043

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DUP
Version	3.06
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

7372-017 J112X3

DUPLICATE

SDG	7372	Client/Case no	Hanford SDG K0205
Contact	Melissa C. Mannion	Contract	No. 630
DUPLICATE		ORIGINAL	
Lab sample id	R602010-17	Lab sample id	R602010-09
Dept sample id	7372-017	Dept sample id	7372-009
		Received	02/03/06
Client sample id	J112X3		
Location/Matrix	Cr 6, Pore Water Full QC WATER		
Collected/Volume	02/01/06 14:45 5.0 L		
Custody/SAF No	RC-048-290 RC-048		

ANALYTE	DUPLICATE pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST	ORIGINAL pCi/L	2σ ERR (COUNT)	MDA pCi/L	QUALI-FIERS	RPD %	3σ TOT	DER σ
Total Strontium	0.101	0.26	0.50	2.0	U	SR	0.013	0.24	0.50	U	-		0.5
Thorium 228	0.063	0.13	0.24		U	TH	0.026	0.10	0.25	U	-		0.5
Thorium 230	-0.031	0.12	0.24	1.0	U	TH	-0.026	0.10	0.20	U	-		0.1
Thorium 232	0.031	0.062	0.24	1.0	U	TH	0	0.052	0.20	U	-		0.8
Uranium 233/234	0.203	0.14	0.26	1.0	U	U	0.167	0.13	0.16		19	155	0.4
Uranium 235	0	0.082	0.31	1.0	U	U	0	0.051	0.19	U	-		0
Uranium 238	0.339	0.21	0.26	1.0		U	0.146	0.13	0.16	U	80	153	1.6

100&300Area Component RCBRA Water Sa

QC-DUP#9 56264

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DUP
Version	3.06
Report date	03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

7372-018 J112X3

DUPLICATE

SDG	7372			Client/Case no	Hanford SDG K0205
Contact	Melissa C. Mannion			Contract	No. 630
DUPLICATE		ORIGINAL			
Lab sample id	R602010-18	Lab sample id	R602010-09	Client sample id	J112X3
Dept sample id	7372-018	Dept sample id	7372-009	Location/Matrix	Cr 6, Pore Water Full QC WATER
		Received	02/03/06	Collected/Volume	02/01/06 14:45 5.0 L
				Custody/SAF No	RC-048-290 RC-048

ANALYTE	DUPLICATE pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST	ORIGINAL pCi/L	2σ ERR (COUNT)	MDA pCi/L	QUALI-FIERS	RPD %	3σ TOT	DER σ
Tritium	2.92	140	240	400	U	H	54.1	140	230	U	-		0.5

100&300Area Component RCBRA Water Sa

QC-DUP#9 S6373

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DUP
Version	3.06
Report date	03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

7372-020 J11238

MATRIX SPIKE

SDG 7372		Client/Case no Hanford	SDG K0205
Contact Melissa C. Mannion		Contract No. 630	
MATRIX SPIKE	ORIGINAL		
Lab sample id R602010-20	Lab sample id R602010-02	Client sample id J11238	
Dept sample id 7372-020	Dept sample id 7372-002	Location/Matrix Cr 3, Surface Water	WATER
	Received 01/31/06	Collected/Volume 01/29/06 13:30	3.5 L
		Custody/SAF No RC-048-251	RC-048

ANALYTE	SPIKE pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST	ADDED pCi/L	2σ ERR pCi/L	ORIGINAL pCi/L	2σ ERR (COUNT)	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS
Carbon 14	38100	1300	450	200	X	C	38300	1500	4.67	73	99	83-117	60-140

100&300Area Component RCBRA Water Sa

QC-MS #2 56375

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-MS
Version 3.06
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

7372-019 J112X9

MATRIX SPIKE

SDG	7372	Client/Case no	Hanford SDG K0205
Contact	Melissa C. Mannion	Contract	No. 630
MATRIX SPIKE		ORIGINAL	
Lab sample id	R602010-19	Lab sample id	R602010-10
Dept sample id	7372-019	Dept sample id	7372-010
		Received	02/03/06
Client sample id	J112X9		
Location/Matrix	Cr 6, Pore Water Full QC WATER		
Collected/Volume	02/01/06 14:30 5.0 L		
Custody/SAF No	RC-048-296 RC-048		

ANALYTE	SPIKE pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST	ADDED pCi/L	2σ ERR pCi/L	ORIGINAL pCi/L	2σ ERR (COUNT)	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS
Tritium	22400	730	340	400	X	H	22400	900	-8.64	140	100	83-117	60-140

100&300Area Component RCBRA Water Sa

QC-MS#10 56374

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-MS
Version 3.06
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

7372-001 J11232

DATA SHEET

SDG	7372	Client/Case no	Hanford SDG K0205
Contact	Melissa C. Mannion	Contract	No. 630
Lab sample id	R602010-01	Client sample id	J11232
Dept sample id	7372-001	Location/Matrix	Cr 4, Pore Water WATER
Received	01/31/06	Collected/Volume	01/29/06 14:15 3.5 L
		Custody/SAF No	RC-048-244 RC-048

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Tritium	10028-17-8	17.2	140	230	400	U	H
Carbon 14	14762-75-5	-19.8	73	120	200	U	C
Total Strontium	SR-RAD	-0.014	0.34	0.62	2.0	U	SR
Radium 228	15262-20-1	-0.620	0.65	1.9	3.0	U	AC
Thorium 228	14274-82-9	0.031	0.12	0.24		U	TH
Thorium 230	14269-63-7	-0.093	0.063	0.24	1.0	U	TH
Thorium 232	TH-232	0	0.062	0.24	1.0	U	TH
Uranium 233/234	U-233/234	0.243	0.12	0.12	1.0		U
Uranium 235	15117-96-1	0	0.037	0.14	1.0	U	U
Uranium 238	U-238	0.243	0.12	0.12	1.0		U
Radium 226	13982-63-3	-0.022	0.36	0.64	2.0	U	RA
Potassium 40	13966-00-2	U		260		U	GAM
Cobalt 60	10198-40-0	U		12	25	U	GAM
Cesium 137	10045-97-3	U		14	15	U	GAM
Radium 226	13982-63-3	U		25		U	GAM
Radium 228	15262-20-1	U		62		U	GAM
Europium 152	14683-23-9	U		34	50	U	GAM
Europium 154	15585-10-1	U		47	50	U	GAM
Europium 155	14391-16-3	U		43	50	U	GAM
Thorium 228	14274-82-9	U		35		U	GAM
Thorium 232	TH-232	U		62		U	GAM
Uranium 235	15117-96-1	U		61		U	GAM
Uranium 238	U-238	U		1700		U	GAM
Americium 241	14596-10-2	U		100		U	GAM
Ruthenium 106	13967-48-1	U		130		U	GAM
Antimony 125	14234-35-6	U		33		U	GAM
Beryllium 7	13966-02-4	U		150		U	GAM
Cesium 134	13967-70-9	U		14		U	GAM

100&300Area Component RCBRA Water Sa

Lab id	EBRLNE
Protocol	Hanford
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

7372-002 J11238

DATA SHEET

SDG	7372	Client/Case no	Hanford SDG K0205
Contact	Melissa C. Mannion	Contract	No. 630
Lab sample id	R602010-02	Client sample id	J11238
Dept sample id	7372-002	Location/Matrix	Cr 3, Surface Water WATER
Received	01/31/06	Collected/Volume	01/29/06 13:30 3.5 L
		Custody/SAF No	RC-048-251 RC-048

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Tritium	10028-17-8	0	130	230	400	U	H
Carbon 14	14762-75-5	4.67	73	120	200	U	C
Total Strontium	SR-RAD	0.065	0.32	0.65	2.0	U	SR
Radium 228	15262-20-1	0.102	1.1	1.6	3.0	U	AC
Thorium 228	14274-82-9	0.065	0.13	0.31		U	TH
Thorium 230	14269-63-7	-0.065	0.065	0.25	1.0	U	TH
Thorium 232	TH-232	0	0.065	0.25	1.0	U	TH
Uranium 233/234	U-233/234	0.197	0.12	0.15	1.0		U
Uranium 235	15117-96-1	0	0.048	0.18	1.0	U	U
Uranium 238	U-238	0.217	0.12	0.15	1.0		U
Radium 226	13982-63-3	0.133	0.38	0.69	2.0	U	RA
Potassium 40	13966-00-2	U		53		U	GAM
Cobalt 60	10198-40-0	U		5.2	25	U	GAM
Cesium 137	10045-97-3	U		5.3	15	U	GAM
Radium 226	13982-63-3	U		9.8		U	GAM
Radium 228	15262-20-1	U		20		U	GAM
Europium 152	14683-23-9	U		17	50	U	GAM
Europium 154	15585-10-1	U		14	50	U	GAM
Europium 155	14391-16-3	U		19	50	U	GAM
Thorium 228	14274-82-9	U		8.6		U	GAM
Thorium 232	TH-232	U		20		U	GAM
Uranium 235	15117-96-1	U		26		U	GAM
Uranium 238	U-238	U		600		U	GAM
Americium 241	14596-10-2	U		28		U	GAM
Beryllium 7	13966-02-4	U		57		U	GAM
Ruthenium 106	13967-48-1	U		49		U	GAM
Antimony 125	14234-35-6	U		14		U	GAM
Cesium 134	13967-70-9	U		6.4		U	GAM

100&300Area Component RCBRA Water Sa

Lab id	EBRLNE
Protocol	Hanford
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

7372-003 J11239

DATA SHEET

SDG	7372	Client/Case no	Hanford SDG K0205
Contact	Melissa C. Mannion	Contract	No. 630
Lab sample id	R602010-03	Client sample id	J11239
Dept sample id	7372-003	Location/Matrix	Cr 4, Surface Water WATER
Received	01/31/06	Collected/Volume	01/29/06 15:30 3.5 L
		Custody/SAF No	RC-048-252 RC-048

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Tritium	10028-17-8	-42.8	130	230	400	U	H
Carbon 14	14762-75-5	-18.0	74	120	200	U	C
Total Strontium	SR-RAD	-0.033	0.34	0.68	2.0	U	SR
Radium 228	15262-20-1	0.118	0.64	1.7	3.0	U	AC
Thorium 228	14274-82-9	0.028	0.11	0.21		U	TH
Thorium 230	14269-63-7	-0.055	0.055	0.21	1.0	U	TH
Thorium 232	TH-232	0	0.055	0.21	1.0	U	TH
Uranium 233/234	U-233/234	0.246	0.11	0.086	1.0		U
Uranium 235	15117-96-1	0	0.027	0.10	1.0	U	U
Uranium 238	U-238	0.202	0.090	0.086	1.0		U
Radium 226	13982-63-3	0.078	0.38	0.71	2.0	U	RA
Potassium 40	13966-00-2	U		380		U	GAM
Cobalt 60	10198-40-0	U		14	25	U	GAM
Cesium 137	10045-97-3	U		13	15	U	GAM
Radium 226	13982-63-3	U		31		U	GAM
Radium 228	15262-20-1	U		63		U	GAM
Europium 152	14683-23-9	U		37	50	U	GAM
Europium 154	15585-10-1	U		36	50	U	GAM
Europium 155	14391-16-3	U		46	50	U	GAM
Thorium 228	14274-82-9	U		21		U	GAM
Thorium 232	TH-232	U		63		U	GAM
Uranium 235	15117-96-1	U		53		U	GAM
Uranium 238	U-238	U		1600		U	GAM
Americium 241	14596-10-2	U		110		U	GAM
Ruthenium 106	13967-48-1	U		110		U	GAM
Antimony 125	14234-35-6	U		30		U	GAM
Beryllium 7	13966-02-4	U		140		U	GAM
Cesium 134	13967-70-9	U		22		U	GAM

100&300Area Component RCBRA Water Sa

Lab id	EBRLNE
Protocol	Hanford
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

7372-004 J11245

DATA SHEET

SDG	7372	Client/Case no	Hanford SDG_K0205
Contact	Melissa C. Mannion	Contract	No. 630
Lab sample id	R602010-04	Client sample id	J11245
Dept sample id	7372-004	Location/Matrix	Cr 5, Pore Water WATER
Received	01/31/06	Collected/Volume	01/29/06 16:30 3.5 L
		Custody/SAF No	RC-048-258 RC-048

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Tritium	10028-17-8	34.1	140	230	400	U	H
Total Strontium	SR-RAD	0.220	0.34	0.64	2.0	U	SR
Radium 228	15262-20-1	-0.060	0.60	1.7	3.0	U	AC
Thorium 228	14274-82-9	0	0.10	0.24		U	TH
Thorium 230	14269-63-7	0	0.10	0.19	1.0	U	TH
Thorium 232	TH-232	0	0.050	0.19	1.0	U	TH
Uranium 233/234	U-233/234	0.099	0.080	0.15	1.0	U	U
Uranium 235	15117-96-1	0	0.048	0.18	1.0	U	U
Uranium 238	U-238	0.079	0.079	0.15	1.0	U	U
Radium 226	13982-63-3	0.215	0.41	0.71	2.0	U	RA
Potassium 40	13966-00-2	U		180		U	GAM
Cobalt 60	10198-40-0	U		8.4	25	U	GAM
Cesium 137	10045-97-3	U		7.4	15	U	GAM
Radium 226	13982-63-3	U		15		U	GAM
Radium 228	15262-20-1	U		32		U	GAM
Europium 152	14683-23-9	U.		17	50	U	GAM
Europium 154	15585-10-1	U		21	50	U	GAM
Europium 155	14391-16-3	U		20	50	U	GAM
Thorium 228	14274-82-9	U		9.6		U	GAM
Thorium 232	TH-232	U		32		U	GAM
Uranium 235	15117-96-1	U		24		U	GAM
Uranium 238	U-238	U		820		U	GAM
Americium 241	14596-10-2	U		32		U	GAM
Ruthenium 106	13967-48-1	U		54		U	GAM
Antimony 125	14234-35-6	U		16		U	GAM
Beryllium 7	13966-02-4	U		62		U	GAM
Cesium 134	13967-70-9	U		8.7		U	GAM

100&300Area Component RCBRA Water Sa

Lab id	EBRLNE
Protocol	Hanford
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

7372-005 J11279

DATA SHEET

SDG	7372	Client/Case no	Hanford	SDG_K0205	
Contact	Melissa C. Mannion	Contract	No. 630		
Lab sample id	R602010-05	Client sample id	J11279		
Dept sample id	7372-005	Location/Matrix	Cr 5, Surface Water	WATER	
Received	01/31/06	Collected/Volume	01/29/06 16:00	3.5 L	
		Custody/SAF No	RC-048-276	RC-048	

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Tritium	10028-17-8	-22.2	130	230	400	U	H
Total Strontium	SR-RAD	-0.054	0.26	0.53	2.0	U	SR
Radium 228	15262-20-1	-0.339	0.72	1.9	3.0	U	AC
Thorium 228	14274-82-9	-0.051	0.10	0.32		U	TH
Thorium 230	14269-63-7	0.179	0.15	0.20	1.0	U	TH
Thorium 232	TH-232	0.026	0.051	0.20	1.0	U	TH
Uranium 233/234	U-233/234	0.190	0.13	0.16	1.0		U
Uranium 235	15117-96-1	0	0.051	0.20	1.0	U	U
Uranium 238	U-238	0.316	0.17	0.16	1.0		U
Radium 226	13982-63-3	0.214	0.47	0.82	2.0	U	RA
Potassium 40	13966-00-2	U		120		U	GAM
Cobalt 60	10198-40-0	U		11	25	U	GAM
Cesium 137	10045-97-3	U		11	15	U	GAM
Radium 226	13982-63-3	U		20		U	GAM
Radium 228	15262-20-1	U		43		U	GAM
Europium 152	14683-23-9	U		34	50	U	GAM
Europium 154	15585-10-1	U		30	50	U	GAM
Europium 155	14391-16-3	U		38	50	U	GAM
Thorium 228	14274-82-9	U		17		U	GAM
Thorium 232	TH-232	U		43		U	GAM
Uranium 235	15117-96-1	U		54		U	GAM
Uranium 238	U-238	U		1300		U	GAM
Americium 241	14596-10-2	U		59		U	GAM
Ruthenium 106	13967-48-1	U		100		U	GAM
Antimony 125	14234-35-6	U		29		U	GAM
Beryllium 7	13966-02-4	U		120		U	GAM
Cesium 134	13967-70-9	U		13		U	GAM

100&300Area Component RCBRA Water Sa

Lab id	EBRLNE
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

7372-006 J112C3

DATA SHEET

SDG	7372	Client/Case no	Hanford	SDG K0205	
Contact	Melissa C. Mannion	Contract	No. 630		
Lab sample id	R602010-06	Client sample id	J112C3		
Dept sample id	7372-006	Location/Matrix	Cr 6, Vertical Tube	WATER	
Received	02/03/06	Collected/Volume	02/01/06 15:30	3.5 L	
		Custody/SAF No	RC-048-280	RC-048	

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Tritium	10028-17-8	39.3	140	230	400	U	H
Total Strontium	SR-RAD	-0.053	0.27	0.51	2.0	U	SR
Radium 228	15262-20-1	0.516	0.87	2.0	3.0	U	AC
Thorium 228	14274-82-9	0	0.055	0.21		U	TH
Thorium 230	14269-63-7	0.027	0.11	0.21	1.0	U	TH
Thorium 232	TH-232	0	0.055	0.21	1.0	U	TH
Uranium 233/234	U-233/234	0.311	0.13	0.13	1.0		U
Uranium 235	15117-96-1	0.079	0.079	0.15	1.0	U	U
Uranium 238	U-238	0.360	0.16	0.13	1.0		U
Radium 226	13982-63-3	0.908	0.52	0.74	2.0		RA
Potassium 40	13966-00-2	U		270		U	GAM
Cobalt 60	10198-40-0	U		16	25	U	GAM
Cesium 137	10045-97-3	U		15	15	U	GAM
Radium 226	13982-63-3	U		27		U	GAM
Radium 228	15262-20-1	U		62		U	GAM
Europium 152	14683-23-9	U		36	50	U	GAM
Europium 154	15585-10-1	U		44	50	U	GAM
Europium 155	14391-16-3	U		47	50	U	GAM
Thorium 228	14274-82-9	U		21		U	GAM
Thorium 232	TH-232	U		62		U	GAM
Uranium 235	15117-96-1	U		64		U	GAM
Uranium 238	U-238	U		1800		U	GAM
Americium 241	14596-10-2	U		100		U	GAM
Ruthenium 106	13967-48-1	U		110		U	GAM
Antimony 125	14234-35-6	U		33		U	GAM
Beryllium 7	13966-02-4	U		140		U	GAM
Cesium 134	13967-70-9	U		17		U	GAM

100&300Area Component RCBRA Water Sa

Lab id	EBRLNE
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

7372-007 J112F6

DATA SHEET

SDG	7372	Client/Case no	Hanford SDG K0205
Contact	Melissa C. Mannion	Contract	No. 630
Lab sample id	R602010-07	Client sample id	J112F6
Dept sample id	7372-007	Location/Matrix	Cr 7, Surface Water WATER
Received	02/03/06	Collected/Volume	02/01/06 16:00 3.5 L
		Custody/SAF No	RC-048-282 RC-048

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Tritium	10028-17-8	68.8	140	230	400	U	H
Total Strontium	SR-RAD	-0.334	0.36	0.71	2.0	U	SR
Radium 228	15262-20-1	-0.038	0.65	1.8	3.0	U	AC
Thorium 228	14274-82-9	-0.045	0.18	0.50		U	TH
Thorium 230	14269-63-7	-0.045	0.090	0.35	1.0	U	TH
Thorium 232	TH-232	0	0.090	0.35	1.0	U	TH
Uranium 233/234	U-233/234	0.173	0.10	0.13	1.0		U
Uranium 235	15117-96-1	0.021	0.042	0.16	1.0	U	U
Uranium 238	U-238	0.173	0.10	0.13	1.0		U
Radium 226	13982-63-3	0.128	0.35	0.65	2.0	U	RA
Potassium 40	13966-00-2	U		230		U	GAM
Cobalt 60	10198-40-0	U		17	25	U	GAM
Cesium 137	10045-97-3	U		15	15	U	GAM
Radium 226	13982-63-3	U		27		U	GAM
Radium 228	15262-20-1	U		58		U	GAM
Europium 152	14683-23-9	U		39	50	U	GAM
Europium 154	15585-10-1	U		51	50	U	GAM
Europium 155	14391-16-3	U		37	50	U	GAM
Thorium 228	14274-82-9	U		21		U	GAM
Thorium 232	TH-232	U		58		U	GAM
Uranium 235	15117-96-1	U		55		U	GAM
Uranium 238	U-238	U		1700		U	GAM
Americium 241	14596-10-2	U		50		U	GAM
Ruthenium 106	13967-48-1	U		130		U	GAM
Antimony 125	14234-35-6	U		39		U	GAM
Beryllium 7	13966-02-4	U		150		U	GAM
Cesium 134	13967-70-9	U		20		U	GAM

100&300Area Component RCBRA Water Sa

Lab id	EBRLNE
Protocol	Hanford
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

7372-008 J112F9

DATA SHEET

SDG	7372	Client/Case no	Hanford	SDG K0205	
Contact	Melissa C. Mannion	Contract	No. 630		
Lab sample id	R602010-08	Client sample id	J112F9		
Dept sample id	7372-008	Location/Matrix	Cr 10, Surface Water	WATER	
Received	02/03/06	Collected/Volume	02/01/06 18:30	3.5 L	
		Custody/SAF No	RC-048-285	RC-048	

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Tritium	10028-17-8	39.8	140	230	400	U	H
Total Strontium	SR-RAD	-0.005	0.27	0.54	2.0	U	SR
Radium 228	15262-20-1	-0.260	0.58	1.6	3.0	U	AC
Thorium 228	14274-82-9	0.085	0.17	0.33		U	TH
Thorium 230	14269-63-7	-0.042	0.085	0.32	1.0	U	TH
Thorium 232	TH-232	0	0.085	0.32	1.0	U	TH
Uranium 233/234	U-233/234	0.194	0.13	0.12	1.0		U
Uranium 235	15117-96-1	0	0.039	0.15	1.0	U	U
Uranium 238	U-238	0.242	0.13	0.12	1.0		U
Radium 226	13982-63-3	-0.309	0.31	0.69	2.0	U	RA
Potassium 40	13966-00-2	U		110		U	GAM
Cobalt 60	10198-40-0	U		10	25	U	GAM
Cesium 137	10045-97-3	U		11	15	U	GAM
Radium 226	13982-63-3	U		21		U	GAM
Radium 228	15262-20-1	U		45		U	GAM
Europium 152	14683-23-9	U		35	50	U	GAM
Europium 154	15585-10-1	U		32	50	U	GAM
Europium 155	14391-16-3	U		38	50	U	GAM
Thorium 228	14274-82-9	U		18		U	GAM
Thorium 232	TH-232	U		45		U	GAM
Uranium 235	15117-96-1	U		53		U	GAM
Uranium 238	U-238	U		1400		U	GAM
Americium 241	14596-10-2	U		57		U	GAM
Ruthenium 106	13967-48-1	U		93		U	GAM
Antimony 125	14234-35-6	U		28		U	GAM
Beryllium 7	13966-02-4	U		120		U	GAM
Cesium 134	13967-70-9	U		13		U	GAM

100&300Area Component RCBRA Water Sa

Lab id	EBRLNE
Protocol	Hanford
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

7372-009 J112X3

DATA SHEET

SDG	7372	Client/Case no	Hanford SDG_K0205
Contact	Melissa C. Mannion	Contract	No. 630
Lab sample id	R602010-09	Client sample id	J112X3
Dept sample id	7372-009	Location/Matrix	Cr 6, Pore Water Full QC WATER
Received	02/03/06	Collected/Volume	02/01/06 14:45 5.0 L
		Custody/SAF No	RC-048-290 RC-048

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Tritium	10028-17-8	54.1	140	230	400	U	H
Total Strontium	SR-RAD	0.013	0.24	0.50	2.0	U	SR
Radium 228	15262-20-1	0.238	0.64	1.7	3.0	U	AC
Thorium 228	14274-82-9	0.026	0.10	0.25		U	TH
Thorium 230	14269-63-7	-0.026	0.10	0.20	1.0	U	TH
Thorium 232	TH-232	0	0.052	0.20	1.0	U	TH
Uranium 233/234	U-233/234	0.167	0.13	0.16	1.0		U
Uranium 235	15117-96-1	0	0.051	0.19	1.0	U	U
Uranium 238	U-238	0.146	0.13	0.16	1.0	U	U
Radium 226	13982-63-3	0.218	0.41	0.72	2.0	U	RA
Potassium 40	13966-00-2	U		630		U	GAM
Cobalt 60	10198-40-0	U		23	25	U	GAM
Cesium 137	10045-97-3	U		22	15	U	GAM
Radium 226	13982-63-3	U		51		U	GAM
Radium 228	15262-20-1	U		99		U	GAM
Europium 152	14683-23-9	U		60	50	U	GAM
Europium 154	15585-10-1	U		64	50	U	GAM
Europium 155	14391-16-3	U		73	50	U	GAM
Thorium 228	14274-82-9	U		35		U	GAM
Thorium 232	TH-232	U		99		U	GAM
Uranium 235	15117-96-1	U		88		U	GAM
Uranium 238	U-238	U		2400		U	GAM
Americium 241	14596-10-2	U		180		U	GAM
Ruthenium 106	13967-48-1	U		190		U	GAM
Antimony 125	14234-35-6	U		49		U	GAM
Beryllium 7	13966-02-4	U		210		U	GAM
Cesium 134	13967-70-9	U		24		U	GAM

100&300Area Component RCBRA Water Sa

Lab id	EBRLNE
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Version	Ver 1.0
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

7372-010 J112X9

DATA SHEET

SDG	7372	Client/Case no	Hanford SDG K0205
Contact	Melissa C. Mannion	Contract	No. 630
Lab sample id	R602010-10	Client sample id	J112X9
Dept sample id	7372-010	Location/Matrix	Cr 6, Pore Water Full QC WATER
Received	02/03/06	Collected/Volume	02/01/06 14:30 5.0 L
		Custody/SAF No	RC-048-296 RC-048

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Tritium	10028-17-8	-8.64	140	230	400	U	H
Total Strontium	SR-RAD	0.048	0.35	0.71	2.0	U	SR
Radium 228	15262-20-1	0.013	0.65	1.8	3.0	U	AC
Thorium 228	14274-82-9	0.264	0.27	0.49		U	TH
Thorium 230	14269-63-7	-0.087	0.088	0.33	1.0	U	TH
Thorium 232	TH-232	0	0.087	0.33	1.0	U	TH
Uranium 233/234	U-233/234	0.247	0.14	0.14	1.0		U
Uranium 235	15117-96-1	0	0.043	0.16	1.0	U	U
Uranium 238	U-238	0.247	0.14	0.14	1.0		U
Radium 226	13982-63-3	-0.100	0.36	0.70	2.0	U	RA
Potassium 40	13966-00-2	U		100		U	GAM
Cobalt 60	10198-40-0	U		10	25	U	GAM
Cesium 137	10045-97-3	U		10	15	U	GAM
Radium 226	13982-63-3	U		19		U	GAM
Radium 228	15262-20-1	U		39		U	GAM
Europium 152	14683-23-9	U		31	50	U	GAM
Europium 154	15585-10-1	U		32	50	U	GAM
Europium 155	14391-16-3	U		36	50	U	GAM
Thorium 228	14274-82-9	U		15		U	GAM
Thorium 232	TH-232	U		39		U	GAM
Uranium 235	15117-96-1	U		48		U	GAM
Uranium 238	U-238	U		1200		U	GAM
Americium 241	14596-10-2	U		52		U	GAM
Ruthenium 106	13967-48-1	U		89		U	GAM
Antimony 125	14234-35-6	U		26		U	GAM
Beryllium 7	13966-02-4	U		110		U	GAM
Cesium 134	13967-70-9	U		13		U	GAM

100&300Area Component RCBRA Water Sa

Lab id	EBRLNE
Protocol	Hanford
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Version	3.06
Report date	03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

7372-011 J11247

DATA SHEET

SDG	7372	Client/Case no	Hanford	SDG K0205
Contact	Melissa C. Mannion	Contract	No. 630	
Lab sample id	R602010-11	Client sample id	J11247	
Dept sample id	7372-011	Location/Matrix	Cr 7, Pore Water	WATER
Received	02/03/06	Collected/Volume	02/01/06 16:15	3.5 L
		Custody/SAF No	RC-048-260	RC-048

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Tritium	10028-17-8	-43.4	140	240	400	U	H
Total Strontium	SR-RAD	-0.009	0.19	0.40	2.0	U	SR
Radium 228	15262-20-1	-0.377	0.54	1.6	3.0	U	AC
Thorium 228	14274-82-9	0.095	0.13	0.24		U	TH
Thorium 230	14269-63-7	-0.063	0.063	0.24	1.0	U	TH
Thorium 232	TH-232	0	0.063	0.24	1.0	U	TH
Uranium 233/234	U-233/234	0.157	0.14	0.17	1.0	U	U
Uranium 235	15117-96-1	0.027	0.054	0.21	1.0	U	U
Uranium 238	U-238	0.270	0.14	0.17	1.0		U
Radium 226	13982-63-3	-0.092	0.30	0.67	2.0	U	RA
Potassium 40	13966-00-2	U		340		U	GAM
Cobalt 60	10198-40-0	U		15	25	U	GAM
Cesium 137	10045-97-3	U		14	15	U	GAM
Radium 226	13982-63-3	U		26		U	GAM
Radium 228	15262-20-1	U		60		U	GAM
Europium 152	14683-23-9	U		32	50	U	GAM
Europium 154	15585-10-1	U		39	50	U	GAM
Europium 155	14391-16-3	U		33	50	U	GAM
Thorium 228	14274-82-9	U		18		U	GAM
Thorium 232	TH-232	U		60		U	GAM
Uranium 235	15117-96-1	U		45		U	GAM
Uranium 238	U-238	U		1600		U	GAM
Americium 241	14596-10-2	U		58		U	GAM
Ruthenium 106	13967-48-1	U		110		U	GAM
Antimony 125	14234-35-6	U		29		U	GAM
Beryllium 7	13966-02-4	U		120		U	GAM
Cesium 134	13967-70-9	U		17		U	GAM

100&300Area Component RCBRA Water Sa

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

7372-012 J11250

DATA SHEET

SDG	7372	Client/Case no	Hanford	SDG K0205
Contact	Melissa C. Mannion	Contract	No. 630	
Lab sample id	R602010-12	Client sample id	J11250	
Dept sample id	7372-012	Location/Matrix	Cr 10, Pore Water	WATER
Received	02/03/06	Collected/Volume	02/01/06 19:00	3.5 L
		Custody/SAF No	RC-048-263	RC-048

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Tritium	10028-17-8	-34.8	140	240	400	U	H
Total Strontium	SR-RAD	-0.025	0.22	0.45	2.0	U	SR
Radium 228	15262-20-1	0.108	0.63	1.7	3.0	U	AC
Thorium 228	14274-82-9	0	0.15	0.36		U	TH
Thorium 230	14269-63-7	0.075	0.15	0.29	1.0	U	TH
Thorium 232	TH-232	0.037	0.075	0.29	1.0	U	TH
Uranium 233/234	U-233/234	0.237	0.13	0.12	1.0		U
Uranium 235	15117-96-1	0	0.038	0.15	1.0	U	U
Uranium 238	U-238	0.158	0.095	0.12	1.0		U
Radium 226	13982-63-3	0.022	0.36	0.72	2.0	U	RA
Potassium 40	13966-00-2	U		280		U	GAM
Cobalt 60	10198-40-0	U		14	25	U	GAM
Cesium 137	10045-97-3	U		14	15	U	GAM
Radium 226	13982-63-3	U		23		U	GAM
Radium 228	15262-20-1	U		56		U	GAM
Europium 152	14683-23-9	U		33	50	U	GAM
Europium 154	15585-10-1	U		41	50	U	GAM
Europium 155	14391-16-3	U		44	50	U	GAM
Thorium 228	14274-82-9	U		20		U	GAM
Thorium 232	TH-232	U		56		U	GAM
Uranium 235	15117-96-1	U		56		U	GAM
Uranium 238	U-238	U		1700		U	GAM
Americium 241	14596-10-2	U		100		U	GAM
Ruthenium 106	13967-48-1	U		110		U	GAM
Antimony 125	14234-35-6	U		31		U	GAM
Beryllium 7	13966-02-4	U		140		U	GAM
Cesium 134	13967-70-9	U		14		U	GAM

100&300Area Component RCBRA Water Sa

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

Test TH Matrix WATER
SDG 7372
Contact Melissa C. Mannion

LAB METHOD SUMMARY

THORIUM, ISOTOPIC IN WATER

ALPHA SPECTROSCOPY

Client Hanford
Contract No. 630
Contract SDG K0205

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Thorium 230	
Preparation batch 7131-062						
R602010-01			7372-001	J11232	U	
R602010-02			7372-002	J11238	U	
R602010-03			7372-003	J11239	U	
R602010-04			7372-004	J11245	U	
R602010-05			7372-005	J11279	U	
R602010-06			7372-006	J112C3	U	
R602010-07			7372-007	J112F6	U	
R602010-08			7372-008	J112F9	U	
R602010-09			7372-009	J112X3	U	
R602010-10			7372-010	J112X9	U	
R602010-11			7372-011	J11247	U	
R602010-12			7372-012	J11250	U	
R602010-13			7372-013	LCS (QC ID=56041)	ok	
R602010-14			7372-014	BLK (QC ID=56042)	U	
R602010-17			7372-017	Duplicate (R602010-09)	-	U

Nominal values and limits from method RDLs (pCi/L) 1.0
100&300Area Component RCBRA Water Sa

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

Test TH	Matrix WATER
SDG 7372	
Contact Melissa C. Mannion	

LAB METHOD SUMMARY

THORIUM, ISOTOPIC IN WATER

ALPHA SPECTROSCOPY

Client Hanford	
Contract No. 630	
Contract SDG K0205	

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MAX MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7131-062			2σ prep error 5.0 %	Reference Lab Notebook 7131 pg. 62												
R602010-01			J11232	0.24	0.500			50		166			38	03/06/06	03/08	SS-027
R602010-02			J11238	0.25	0.500			48		167			38	03/06/06	03/08	SS-032
R602010-03			J11239	0.21	0.500			56		167			38	03/06/06	03/08	SS-033
R602010-04			J11245	0.19	0.500			65		167			38	03/06/06	03/08	SS-034
R602010-05			J11279	0.20	0.500			51		167			38	03/06/06	03/08	SS-036
R602010-06			J112C3	0.21	0.500			48		167			35	03/06/06	03/08	SS-038
R602010-07			J112F6	0.35	0.500			36		167			35	03/06/06	03/08	SS-039
R602010-08			J112F9	0.32	0.500			42		167			35	03/06/06	03/08	SS-040
R602010-09			J112X3	0.20	0.500			50		195			38	03/06/06	03/11	SS-027
R602010-10			J112X9	0.33	0.500			30		196			38	03/06/06	03/11	SS-032
R602010-11			J11247	0.24	0.500			42		196			38	03/06/06	03/11	SS-033
R602010-12			J11250	0.29	0.500			37		196			38	03/06/06	03/11	SS-034
R602010-13			LCS (QC ID=56041)	0.17	0.500			63		196				03/06/06	03/11	SS-038
R602010-14			BLK (QC ID=56042)	0.31	0.500			42		196				03/06/06	03/11	SS-039
R602010-17			Duplicate (R602010-09) (QC ID=56264)	0.24	0.500			49		196			38	03/06/06	03/11	SS-040
Nominal values and limits from method				1.0	0.500			20-110		150	100		180			

PROCEDURES	REFERENCE	THISO_IE_PLATE_AEA
	SPP-062	Sample Aliquoting, rev 0
	CP-900	Thorium in Water and Dissolved Solid Samples by Extraction Chromatography, rev 1
	CP-008	Heavy Element Electroplating, rev 9

AVERAGES ± 2 SD	MDA	0.25	± 0.11
FOR 15 SAMPLES	YIELD	47	± 19

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

Test U Matrix WATER
SDG 7372
Contact Melissa C. Mannion

LAB METHOD SUMMARY

URANIUM, ISOTOPIC IN WATER

ALPHA SPECTROSCOPY

Client Hanford
Contract No. 630
Contract SDG K0205

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	1: Uranium 233/234	2: Uranium 235	3: Uranium 238	RESULT RATIOS (%) 1+3	2σ	2+3	2σ
Preparation batch 7131-062											
R602010-01			7372-001	J11232	0.243	U	0.243	100	70	0	15
R602010-02			7372-002	J11238	0.197	U	0.217	91	75	0	22
R602010-03			7372-003	J11239	0.246	U	0.202	122	77	0	13
R602010-04			7372-004	J11245	U	U	U				
R602010-05			7372-005	J11279	0.190	U	0.316	60	52	0	16
R602010-06			7372-006	J112C3	0.311	U	0.360	86	53	22	24
R602010-07			7372-007	J112F6	0.173	U	0.173	100	82	12	25
R602010-08			7372-008	J112F9	0.194	U	0.242	80	69	0	16
R602010-09			7372-009	J112X3	0.167	U	U				
R602010-10			7372-010	J112X9	0.247	U	0.247	100	80	0	17
R602010-11			7372-011	J11247	U	U	0.270	58	60	10	21
R602010-12			7372-012	J11250	0.237	U	0.158	150	122	0	24
R602010-13			7372-013	LCS (QC ID=56041)	ok	ok	ok				
R602010-14			7372-014	BLK (QC ID=56042)	U	U	U				
R602010-17			7372-017	Duplicate (R602010-09)	ok U	- U	ok	60	56	0	24
Nominal values and limits from method				RDLs (pCi/L)	1.0	1.0	1.0	100		4	
100&300Area Component RCBRA Water Sa								Averages 92		4	

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

Test U	Matrix WATER
SDG 7372	
Contact Melissa C. Mannion	

LAB METHOD SUMMARY

URANIUM, ISOTOPIC IN WATER

ALPHA SPECTROSCOPY

Client Hanford	
Contract No. 630	
Contract SDG K0205	

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MAX MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7131-062			2σ prep error 5.0 %	Reference Lab Notebook 7131 pg. 62												
R602010-01			J11232	0.14	0.500			69		210			32	03/02/06	03/02	SS-036
R602010-02			J11238	0.18	0.500			77		171			37	03/02/06	03/07	SS-042
R602010-03			J11239	0.10	0.500			92		210			32	03/02/06	03/02	SS-038
R602010-04			J11245	0.18	0.500			64		210			32	03/02/06	03/02	SS-039
R602010-05			J11279	0.20	0.500			67		211			32	03/02/06	03/02	SS-040
R602010-06			J112C3	0.15	0.500			78		211			29	03/02/06	03/02	SS-042
R602010-07			J112F6	0.16	0.500			76		175			29	03/02/06	03/02	SS-067
R602010-08			J112F9	0.15	0.500			77		175			29	03/02/06	03/02	SS-068
R602010-09			J112X3	0.19	0.500			74		171			34	03/02/06	03/07	SS-031
R602010-10			J112X9	0.16	0.500			75		175			29	03/02/06	03/02	SS-070
R602010-11			J11247	0.21	0.500			58		176			29	03/02/06	03/02	SS-071
R602010-12			J11250	0.15	0.500			82		176			29	03/02/06	03/02	SS-072
R602010-13			LCS (QC ID=56041)	0.69	0.500			103		176				03/02/06	03/02	SS-073
R602010-14			BLK (QC ID=56042)	0.17	0.500			75		188				03/02/06	03/07	SS-032
R602010-17			Duplicate (R602010-09) (QC ID=56264)	0.31	0.500			74		108			40	03/02/06	03/13	SS-057
Nominal values and limits from method				1.0	0.500			30-105		100	100		180			

PROCEDURES	REFERENCE	UISO_PLATE_AEA
	SPP-062	Sample Aliquoting, rev 0
	CP-040	Environmental Water Dissolution, rev 9
	CP-921	Uranium in Water and Dissolved Samples by Extraction Chromatography, rev 1
	CP-008	Heavy Element Electroplating, rev 9

AVERAGES ± 2 SD	MDA	0.21	± 0.28
FOR 15 SAMPLES	YIELD	76	± 22

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

Test AC Matrix WATER
SDG 7372
Contact Melissa C. Mannion

LAB METHOD SUMMARY

RADIUM 228 IN WATER

BETA COUNTING

Client Hanford
Contract No. 630
Contract SDG K0205

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Radium 228	
Preparation batch 7131-062						
R602010-01			7372-001	J11232	U	
R602010-02			7372-002	J11238	U	
R602010-03			7372-003	J11239	U	
R602010-04			7372-004	J11245	U	
R602010-05			7372-005	J11279	U	
R602010-06			7372-006	J112C3	U	
R602010-07			7372-007	J112F6	U	
R602010-08			7372-008	J112F9	U	
R602010-09			7372-009	J112X3	U	
R602010-10			7372-010	J112X9	U	
R602010-11			7372-011	J11247	U	
R602010-12			7372-012	J11250	U	
R602010-13			7372-013	LCS (QC ID=56041)	ok	
R602010-14			7372-014	BLK (QC ID=56042)	U	
R602010-15			7372-015	Duplicate (R602010-01)	-	U

Nominal values and limits from method RDLs (pCi/L) 3.0
100&300Area Component RCBRA Water Sa

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

Test AC Matrix WATER
SDG 7372
Contact Melissa C. Mannion

LAB METHOD SUMMARY

RADIUM 228 IN WATER

BETA COUNTING

Client Hanford
Contract No. 630
Contract SDG K0205

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7131-062			2σ prep error 5.0 %	Reference Lab Notebook 7131 pg. 62												
R602010-01			J11232	1.9	0.500			60		150			37	03/07/06	03/07	GRB-217
R602010-02			J11238	1.6	0.500			72		150			37	03/07/06	03/07	GRB-218
R602010-03			J11239	1.7	0.500			68		150			37	03/07/06	03/07	GRB-219
R602010-04			J11245	1.7	0.500			65		150			37	03/07/06	03/07	GRB-220
R602010-05			J11279	1.9	0.500			62		150			37	03/07/06	03/07	GRB-225
R602010-06			J112C3	2.0	0.500			68		150			34	03/07/06	03/07	GRB-226
R602010-07			J112F6	1.8	0.500			65		150			34	03/07/06	03/07	GRB-227
R602010-08			J112F9	1.6	0.500			72		150			35	03/07/06	03/08	GRB-217
R602010-09			J112X3	1.7	0.500			67		150			35	03/07/06	03/08	GRB-218
R602010-10			J112X9	1.8	0.500			70		150			35	03/07/06	03/08	GRB-219
R602010-11			J11247	1.6	0.500			72		150			35	03/07/06	03/08	GRB-220
R602010-12			J11250	1.7	0.500			67		150			35	03/07/06	03/08	GRB-221
R602010-13			LCS (QC ID=56041)	1.5	0.500			71		150				03/07/06	03/07	GRB-228
R602010-14			BLK (QC ID=56042)	1.5	0.500			73		150				03/07/06	03/08	GRB-222
R602010-15			Duplicate (R602010-01) (QC ID=56043)	1.6	0.500			70		150			38	03/07/06	03/08	GRB-223
Nominal values and limits from method				3.0	0.500					100			180			

PROCEDURES	REFERENCE	RAISO_SEP_GPC
	SPP-062	Sample Aliquoting, rev 0
	CP-702	Radium-228 in Water, rev 9

AVERAGES ± 2 SD FOR 15 SAMPLES
MDA 1.7 ± 0.30
YIELD 68 ± 8

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

Test	SR
Matrix	WATER
SDG	7372
Contact	Melissa C. Mannion

LAB METHOD SUMMARY

TOTAL STRONTIUM IN WATER

BETA COUNTING

Client	Hanford
Contract	No. 630
Contract	SDG K0205

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Total Strontium	
Preparation batch 7131-062						
R602010-01			7372-001	J11232	U	
R602010-02			7372-002	J11238	U	
R602010-03			7372-003	J11239	U	
R602010-04			7372-004	J11245	U	
R602010-05			7372-005	J11279	U	
R602010-06			7372-006	J112C3	U	
R602010-07			7372-007	J112F6	U	
R602010-08			7372-008	J112F9	U	
R602010-09			7372-009	J112X3	U	
R602010-10			7372-010	J112X9	U	
R602010-11			7372-011	J11247	U	
R602010-12			7372-012	J11250	U	
R602010-13			7372-013	LCS (QC ID=56041)	ok	
R602010-14			7372-014	BLK (QC ID=56042)	U	
R602010-17			7372-017	Duplicate (R602010-09)	-	U

Nominal values and limits from method RDLs (pCi/L) 2.0

100&300Area Component RCBRA Water Sa

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

Test SR Matrix WATER
SDG 7372
Contact Melissa C. Mannion

LAB METHOD SUMMARY

TOTAL STRONTIUM IN WATER

BETA COUNTING

Client Hanford
Contract No. 630
Contract SDG K0205

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7131-062			2σ prep error 10.0 % Reference Lab Notebook 7131 pg. 62													
R602010-01			J11232	0.62	0.500			94		100			37	03/07/06	03/07	GRB-226
R602010-02			J11238	0.65	0.500			91		100			37	03/07/06	03/07	GRB-221
R602010-03			J11239	0.68	0.500			93		100			37	03/07/06	03/07	GRB-225
R602010-04			J11245	0.64	0.500			94		100			37	03/07/06	03/07	GRB-227
R602010-05			J11279	0.53	0.500			93		100			37	03/07/06	03/07	GRB-225
R602010-06			J112C3	0.51	0.500			85		150			34	03/07/06	03/07	GRB-224
R602010-07			J112F6	0.71	0.500			80		100			34	03/07/06	03/07	GRB-226
R602010-08			J112F9	0.54	0.500			86		100			34	03/07/06	03/07	GRB-227
R602010-09			J112X3	0.50	0.500			87		100			34	03/07/06	03/07	GRB-228
R602010-10			J112X9	0.71	0.500			87		100			34	03/07/06	03/07	GRB-229
R602010-11			J11247	0.40	0.500			95		100			34	03/07/06	03/07	GRB-228
R602010-12			J11250	0.45	0.500			96		100			34	03/07/06	03/07	GRB-218
R602010-13			LCS (QC ID=56041)	0.46	0.500			87		100				03/07/06	03/07	GRB-217
R602010-14			BLK (QC ID=56042)	0.52	0.500			80		100				03/07/06	03/07	GRB-220
R602010-17			Duplicate (R602010-09) (QC ID=56264)	0.50	0.500			90		100			34	03/07/06	03/07	GRB-201
Nominal values and limits from method				2.0	0.500			35-105		100			180			

PROCEDURES	REFERENCE	SRTOT_SEP_PRECIP_GPC
	SPP-062	Sample Aliquoting, rev 0
	CP-380	Strontium in Water Samples, rev 2

AVERAGES ± 2 SD FOR 15 SAMPLES
MDA 0.56 ± 0.20
YIELD 89 ± 10

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

Test GAM Matrix WATER
SDG 7372
Contact Melissa C. Mannion

LAB METHOD SUMMARY

GAMMA EMITTERS

GAMMA SCAN

Client Hanford
Contract No. 630
Contract SDG K0205

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Cobalt 60		Cesium 137	
Preparation batch 7131-062								
R602010-01			7372-001	J11232	U		U	
R602010-02			7372-002	J11238	U		U	
R602010-03			7372-003	J11239	U		U	
R602010-04			7372-004	J11245	U		U	
R602010-05			7372-005	J11279	U		U	
R602010-06			7372-006	J112C3	U		U	
R602010-07			7372-007	J112F6	U		U	
R602010-08			7372-008	J112F9	U		U	
R602010-09			7372-009	J112X3	U		U	
R602010-10			7372-010	J112X9	U		U	
R602010-11			7372-011	J11247	U		U	
R602010-12			7372-012	J11250	U		U	
R602010-13			7372-013	LCS (QC ID=56041)	ok		ok	
R602010-14			7372-014	BLK (QC ID=56042)	U		U	
R602010-15			7372-015	Duplicate (R602010-01)	-	U	-	U
Nominal values and limits from method				RDLs (pCi/L)	25		15	
100&300Area Component RCBRA Water Sa								

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

Test GAM Matrix WATER
SDG 7372
Contact Melissa C. Mannion

LAB METHOD SUMMARY

GAMMA EMITTERS

GAMMA SCAN

Client Hanford
Contract No. 630
Contract SDG K0205

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7131-062			2σ prep error 15.0 %	Reference Lab Notebook 7131 pg. 62												
R602010-01			J11232	81	0.500					301			28	02/22/06	02/26	MB,05,00
R602010-02			J11238	34	0.500					1202			25	02/22/06	02/23	01,04,00
R602010-03			J11239	78	0.500					984			25	02/22/06	02/23	01,02,00
R602010-04			J11245	34	0.500					984			25	02/22/06	02/23	MB,08,00
R602010-05			J11279	70	0.500					302			27	02/22/06	02/25	01,04,00
R602010-06			J112C3	82	0.500					289			26	02/22/06	02/27	MB,05,00
R602010-07			J112F6	69	0.500					354			27	02/22/06	02/28	01,03,00
R602010-08			J112F9	69	0.500					301			25	02/22/06	02/26	01,04,00
R602010-09			J112X3	130	0.500					354			27	02/22/06	02/28	01,02,00
R602010-10			J112X9	61	0.500					355			27	02/22/06	02/28	01,04,00
R602010-11			J11247	61	0.500					355			27	02/22/06	02/28	MB,08,00
R602010-12			J11250	74	0.500					344			27	02/22/06	02/28	MB,05,00
R602010-13			LCS (QC ID=56041)	31	0.500					315				02/22/06	02/28	01,03,00
R602010-14			BLK (QC ID=56042)	62	0.500					316				02/22/06	02/28	01,04,00
R602010-15			Duplicate (R602010-01) (QC ID=56043)	70	0.500					299			31	02/22/06	03/01	01,04,00
Nominal values and limits from method				15	0.500					100			180			

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

AVERAGES ± 2 SD FOR 15 SAMPLES
MDA 67 ± 48
YIELD ____ ± ____

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

Test C	Matrix WATER
SDG 7372	
Contact Melissa C. Mannion	

LAB METHOD SUMMARY

CARBON 14 IN WATER

LIQUID SCINTILLATION COUNTING

Client Hanford	
Contract No. 630	
Contract SDG K0205	

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Carbon 14	
Preparation batch 7131-062						
R602010-01			7372-001	J11232	U	
R602010-02			7372-002	J11238	U	
R602010-03			7372-003	J11239	U	
R602010-13			7372-013	LCS (QC ID=56041)	ok	
R602010-14			7372-014	BLK (QC ID=56042)	U	
R602010-15			7372-015	Duplicate (R602010-01)	-	U
R602010-20			7372-020	Spike (R602010-02)	ok	X

Nominal values and limits from method RDLs (pCi/L) 200

100&300Area Component RCBRA Water Sa

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7131-062			2σ prep error 10.0 % Reference Lab Notebook 7131 pg. 62													
R602010-01			J11232	120	0.0150			100		50			41	03/10/06	03/11	LSC-004
R602010-02			J11238	120	0.0150			100		50			42	03/10/06	03/12	LSC-004
R602010-03			J11239	120	0.0150			100		50			42	03/10/06	03/12	LSC-004
R602010-13			LCS (QC ID=56041)	150	0.0300			100		9				03/10/06	03/12	LSC-004
R602010-14			BLK (QC ID=56042)	62	0.0300			100		50				03/10/06	03/12	LSC-004
R602010-15			Duplicate (R602010-01) (QC ID=56043)	120	0.0150			100		50			42	03/10/06	03/12	LSC-004
R602010-20			Spike (R602010-02) (QC ID=56375)	450	0.0150			100		4			42	03/10/06	03/12	LSC-004
Nominal values and limits from method				200	0.0300					50			180			

PROCEDURES	REFERENCE	C14_CHEM_LSC
	CP-241	Carbon-14 in Aqueous Samples, rev 6

AVERAGES ± 2 SD	MDA 160	± 260
FOR 7 SAMPLES	YIELD 100	± 0

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

Test H Matrix WATER
SDG 7372
Contact Melissa C. Mannion

LAB METHOD SUMMARY

TRITIUM IN WATER

LIQUID SCINTILLATION COUNTING

Client Hanford
Contract No. 630
Contract SDG K0205

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Tritium	
Preparation batch 7131-062						
R602010-01			7372-001	J11232	U	
R602010-02			7372-002	J11238	U	
R602010-03			7372-003	J11239	U	
R602010-04			7372-004	J11245	U	
R602010-05			7372-005	J11279	U	
R602010-06			7372-006	J112C3	U	
R602010-07			7372-007	J112F6	U	
R602010-08			7372-008	J112F9	U	
R602010-09			7372-009	J112X3	U	
R602010-10			7372-010	J112X9	U	
R602010-11			7372-011	J11247	U	
R602010-12			7372-012	J112S0	U	
R602010-13			7372-013	LCS (QC ID=56041)	ok	
R602010-14			7372-014	BLK (QC ID=56042)	U	
R602010-18			7372-018	Duplicate (R602010-09)	-	U
R602010-19			7372-019	Spike (R602010-10)	ok	X

Nominal values and limits from method RDLs (pCi/L) 400
100&300Area Component RCBRA Water Sa

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

Test H Matrix WATER
SDG 7372
Contact Melissa C. Mannion

LAB METHOD SUMMARY

TRITIUM IN WATER

LIQUID SCINTILLATION COUNTING

Client Hanford
Contract No. 630
Contract SDG K0205

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7131-062			2σ prep error 10.0 %	Reference Lab Notebook 7131 pg. 62												
R602010-01			J11232	230	0.0100			100		75			43	03/10/06	03/13	LSC-007
R602010-02			J11238	230	0.0100			100		75			43	03/10/06	03/13	LSC-007
R602010-03			J11239	230	0.0100			100		75			43	03/10/06	03/13	LSC-007
R602010-04			J11245	230	0.0100			100		75			43	03/10/06	03/13	LSC-007
R602010-05			J11279	230	0.0100			100		75			43	03/10/06	03/13	LSC-007
R602010-06			J112C3	230	0.0100			100		75			41	03/10/06	03/14	LSC-007
R602010-07			J112F6	230	0.0100			100		75			41	03/10/06	03/14	LSC-007
R602010-08			J112F9	230	0.0100			100		75			41	03/10/06	03/14	LSC-007
R602010-09			J112X3	230	0.0100			100		75			41	03/10/06	03/14	LSC-007
R602010-10			J112X9	230	0.0100			100		75			41	03/10/06	03/14	LSC-007
R602010-11			J11247	240	0.0100			100		75			41	03/10/06	03/14	LSC-007
R602010-12			J11250	240	0.0100			100		75			41	03/10/06	03/14	LSC-007
R602010-13			LCS (QC ID=56041)	2300	0.0100			10		75				03/10/06	03/14	LSC-007
R602010-14			BLK (QC ID=56042)	2300	0.0100			10		75				03/10/06	03/14	LSC-007
R602010-18			Duplicate (R602010-09) (QC ID=56373)	240	0.0100			100		75			41	03/10/06	03/14	LSC-007
R602010-19			Spike (R602010-10) (QC ID=56374)	340	0.0400			25		38			41	03/10/06	03/14	LSC-007
Nominal values and limits from method				400	0.0100					25			180			

PROCEDURES REFERENCE 906.0_H3_LSC
CP-210 Tritium in Water Samples by Distillation, rev 8

AVERAGES ± 2 SD FOR 16 SAMPLES
MDA 500 ± 1400
YIELD 84 ± 69

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

Test RA Matrix WATER
SDG 7372
Contact Melissa C. Mannion

LAB METHOD SUMMARY

RADIUM 226 IN WATER

RADON COUNTING

Client Hanford
Contract No. 630
Contract SDG K0205

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Radium 226	
Preparation batch 7131-062						
R602010-01			7372-001	J11232	U	
R602010-02			7372-002	J11238	U	
R602010-03			7372-003	J11239	U	
R602010-04			7372-004	J11245	U	
R602010-05			7372-005	J11279	U	
R602010-06			7372-006	J112C3	0.908	
R602010-07			7372-007	J112F6	U	
R602010-08			7372-008	J112F9	U	
R602010-09			7372-009	J112X3	U	
R602010-10			7372-010	J112X9	U	
R602010-11			7372-011	J11247	U	
R602010-12			7372-012	J11250	U	
R602010-13			7372-013	LCS (QC ID=56041)	ok	
R602010-14			7372-014	BLK (QC ID=56042)	U	
R602010-15			7372-015	Duplicate (R602010-01)	-	U

Nominal values and limits from method RDLs (pCi/L) 2.0
100&300Area Component RCBRA Water Sa

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/21/06

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K0205

Test RA Matrix WATER
SDG 7372
Contact Melissa C. Mannion

LAB METHOD SUMMARY

RADIUM 226 IN WATER

RADON COUNTING

Client Hanford
Contract No. 630
Contract SDG K0205

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7131-062			2σ prep error 5.0 %	Reference Lab Notebook 7131 pg. 62												
R602010-01			J11232	0.64	0.100			100		148			44	03/14/06	03/14	RN-009
R602010-02			J11238	0.69	0.100			100		60			44	03/14/06	03/14	RN-011
R602010-03			J11239	0.71	0.100			100		60			44	03/14/06	03/14	RN-013
R602010-04			J11245	0.71	0.100			100		70			44	03/14/06	03/14	RN-012
R602010-05			J11279	0.82	0.100			100		76			44	03/14/06	03/14	RN-014
R602010-06			J112C3	0.74	0.100			100		70			41	03/14/06	03/14	RN-015
R602010-07			J112F6	0.65	0.100			100		60			41	03/14/06	03/14	RN-016
R602010-08			J112F9	0.69	0.100			100		82			41	03/14/06	03/14	RN-011
R602010-09			J112X3	0.72	0.100			100		64			41	03/14/06	03/14	RN-012
R602010-10			J112X9	0.70	0.100			100		86			41	03/14/06	03/14	RN-013
R602010-11			J11247	0.67	0.100			100		55			41	03/14/06	03/14	RN-011
R602010-12			J11250	0.72	0.100			100		55			41	03/14/06	03/14	RN-015
R602010-13			LCS (QC ID=56041)	0.75	0.100			100		70				03/14/06	03/14	RN-014
R602010-14			BLK (QC ID=56042)	0.74	0.100			100		71				03/14/06	03/14	RN-015
R602010-15			Duplicate (R602010-01) (QC ID=56043)	0.78	0.100			100		64			44	03/14/06	03/14	RN-016
Nominal values and limits from method				2.0	0.100			20-105		70			180			

PROCEDURES	REFERENCE	903.1_RA226_LUC
	SPP-062	Sample Aliquoting, rev 0
	CP-881	Radium-226 in Water and Dissolved Samples, rev 1

AVERAGES ± 2 SD FOR 15 SAMPLES				
	MDA	0.72	±	0.094
	YIELD	100	±	0

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/21/06

SDG	7372
Contact	Melissa C. Mannion

REPORT GUIDE

Client	Hanford
Contract	No. 630
Case no	SDG K0205

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	Hanford
Version	Ver 1.0
Form	DVD-RG
Version	3.06
Report date	03/21/06

SDG 7372
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG K0205

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 Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/21/06

SDG 7372
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG K0205

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 Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/21/06

SDG 7372
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG K0205

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 Hanford
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DATA SHEET

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

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

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

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

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

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

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

P The RESULT is 'preliminary'.

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

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

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

The following values are underlined to indicate possible problems:

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

SDG 7372
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG K0205

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 Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/21/06

SDG 7372
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG K0205

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 Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/21/06

SDG 7372
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG K0205

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 Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/21/06

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 7372
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_K0205

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 Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/21/06

SDG 7372
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG K0205

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 Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/21/06

SDG 7372
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_K0205

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 Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/21/06

SDG 7372
Contact Melissa C. Mannion

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Contract No. 630
Case no SDG K0205

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.

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/21/06

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-048-244	Page 1 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N	Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 4, PORE WATER K0205 (7372)		SAF No. RC-048	Air Quality ☐	
Ice Chest No. ERC-03-105	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES / LIONVILLE	Offsite Property No. A060238		Bill of Lading/Air Bill No. SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

~~COOL 4C~~ 1-30-06 RZS

None

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	~~125mL~~ 60 1-29-06	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL
SAMPLE ANALYSIS	Tritium - H3 CARBON 14	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081

Sample No.	Matrix *	Sample Date	Sample Time										
J11232	WATER	1-29-06	1415	X	X	X	X	X	X				

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	JAMES BERNHARD	1-29-06 2000	EAS LOCKED STORAGE	1-29-06 2000
Relinquished By/Removed From	EAS LOCKED STORAGE	01-30-06 0710	Received By/Stored In RZ Steffler R.Z. Steffler	1-30-06 0710
Relinquished By/Removed From	RZ Steffler R.Z. Steffler	1500 1-30-06	Received By/Stored In Fed Ex	
Relinquished By/Removed From	FED EX		Received By/Stored In Alex Kennedy	1/31/06 10:00
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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}

(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-251	Page 1 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 3, SURFACE WATER K0205 (7372)		SAF No. RC-048	Air Quality ☐
Ice Chest No. ERC-03-105	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX	
Shipped To EBERLINE SERVICES LIONVILLE	Offsite Property No. A060238		Bill of Lading/Air Bill No. SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

~~COOL 4C~~ RZS 1-30-06
None

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	~~125mL~~ 60 BH 1-24-06	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL
SAMPLE ANALYSIS	Tritium - H3 CARBON-14	See item (1) in Special Instructions.	Strontium-89,90 – Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081

Sample No.	Matrix *	Sample Date	Sample Time										
J11238	WATER	1-29-06	1330	X	X	X	X	X	X				

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	1-29-06 2000	EAS LOCKED STORAGE	1-29-06 2000
EAS LOCKED STORAGE	01-30-06 0710	RZ Steffler RZ Steffler	1-30-06 0710
RZ Steffler RZ Steffler	1-30-06 1500	Fed Ex	
FEDEX		Alex Kelmel	1/31/06 10:00

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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}
(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-252	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 4, SURFACE WATER K0205 (7372)	SAF No.: RC-048	
Ice Chest No.: ERC-03-105	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: A060 238	Bill of Lading/Air Bill No.: SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

~~COOL 4C~~ RZS 1-30-06
None

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	~~125~~mL EC pH 1-29-06	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Tritium - H3 CARBON-14	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium-226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
J11239	WATER	1-29-06	1530	X	X	X	X	X	X				

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	1-29-06 2000	EAS LOCKED STORAGE	1-29-06 2000
EAS LOCKED STORAGE	01-30-06 0710	RZ Steffler	1-30-06 0710
RZ Steffler	1-30-06 1500	Fed Ex	
FEDEX		Alex Kelmel	1/31/06 10:00

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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}
(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-258	Page 1 of 2
Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 7N; Data Turnaround: 45 Days
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 5, PORE WATER K0205 (7372)	SAF No.: RC-048	Air Quality ☐
Ice Chest No.: ERC-03-105	Field Logbook No.: EL-1597; COA: BESRAS6520	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A060238	Bill of Lading/Air Bill No.: SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

~~COOL 4C~~ RZS 1-30-06

None

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1 RZS 1-30-06	1	1	1	1	1	1	1	1	1
Volume	~~125mL~~ 60 ml	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL
SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081

Sample No.	Matrix *	Sample Date	Sample Time										
J11245	WATER	1-29-06	1630	X	X	X	X	X	X				

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	1-29-06 2000	EAS LOCKED STORAGE	1/29/06 2000
EAS LOCKED STORAGE	01-30-06 0710	RZ Steffler R.J. Steffler	1-30-06 0710
RZ Steffler R.J. Steffler	1-30-06 1500	Fed Ex	
FED EX		Alex Kelly	1/31/06 10:00

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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}

(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-276	Page 1 of 2

Collector: TILLER, B ~~JAMES BERNHARD~~	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 5, SURFACE WATER K0205 (7372)	SAF No.: RC-048	
Ice Chest No.: ERC-03-105	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: A060238	Bill of Lading/Air Bill No.: SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

~~COOL 4C~~ R25 1-30-06

None

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	60mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL
SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions	Strontium-89,90 -- Total Sr	Isotopic Thorium {Thorium-232}	Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
Sample No. / Matrix * / Sample Date / Sample Time										
J11279 / WATER / 1/29/06 / 1600	X	X	X	X	X	X				

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	1-29-06 ~~1000~~ 2000 BH 1-29-06	EAS LOCKED STORAGE	1-29-06 ~~1600~~ 2000 BH 1-29-06
EAS LOCKED STORAGE	01-30-06 0710	RZ Steffic R.J. Steffl	1-30-06 0710
RZ Steffic R.J. Steffl	1-30-06 1500 WCH	Fed Ex	
FEDEX		Alex Kilmurly	1/31/06 10:00

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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}

(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-280	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 6, VERTICAL TUBE K0205 (7372)	SAF No.: RC-048	
Ice Chest No.: ERC-96-030	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A060243	Bill of Lading/Air Bill No.: SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	60mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
J112C3	WATER	02-01-06	1530	X	X	X	X	X	X				

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	2030 02-01-06	EAS LOCKED STORAGE	2030 02-01-06
EAS LOCKED STORAGE	02-02-06 1200	[signature]	1200 02-02-06
[signature]	02/02/06 1400	Fed Ex	
FEDEX		Alex Kelly	2/3/06 10:00

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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}
(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-282	Page 1 of 2

Collector TILLER, B Bernhard	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N Air Quality ☐	Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 7, SURFACE WATER X0205 (7372)		SAF No. RC-048		
Ice Chest No. ERC-96-030	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES LIONVILLE	Offsite Property No. A060243		Bill of Lading/Air Bill No. SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	60mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium-226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
J112F6	WATER	2-1-06	16:00	X	X	X	X	X	X				

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	2130 2-1-06	EAS LOCKED STORAGE	2130 2-1-06
EAS LOCKED STORAGE	2000 02-02-06	David St. John WCH	2000 02-02-06
David St. John WCH	1400 02/02/06	Fed Ex	
FED EX	2/3/06	Alex Kelly	2/3/06 10:00

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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}
(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-285	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 10, SURFACE WATER K0205 (7372)	SAF No.: RC-048	
Ice Chest No.	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.		Bill of Lading/Air Bill No.: SEE OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	60mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
J112F9	WATER	02-01-06	1830	X	X	X	X	X	X				

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	2130 2-1-06	EAS LOCKED STORAGE	2130 2-1-06
EAS LOCKED STORAGE	02-02-06	David St John WCH	1200 02-02-06
David St John WCH	1400 02/02/06	Fed EX	
Alex Kelleu	2/3/06 FED EX	Alex Kelleu	2/3/06 10:00

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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}
(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-290	Page 1 of 2

Collector TILLER, B JAMES BERNHARD	**Company Contact** JOAN KESSNER **Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH	**Price Code** 7N **Data Turnaround** 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	**Sampling Location** Cr- 6, PORE WATER FULL QC K0205 (7372)	**SAF No.** RC-048	**Air Quality** ☐
Ice Chest No. ERC-96-030	**Field Logbook No.** EL-1597 **COA** BESRAS6520	**Method of Shipment** FED EX	
Shipped To EBERLINE SERVICES LIONVILLE	**Offsite Property No.** A060243	**Bill of Lading/Air Bill No.** SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	3	2	3
Volume	125mL	1000mL	1000mL	1000mL	1000mL	1000mL	500mL	1000mL	1000mL	1000mL
SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
Sample No. / Matrix * / Sample Date / Sample Time										
J112X3 / WATER / 02-01-06 / 1445	X	X	X	X	X	X				

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From JAMES BERNHARD	02/01/06 2030	Received By/Stored In EAS LOCKED STORAGE	02/01/06 2030
Relinquished By/Removed From EAS LOCKED STORAGE	02/02/06 1200	Received By/Stored In	02-02-06 1200
Relinquished By/Removed From	02/02/06 1400	Received By/Stored In Fed Ex	
Relinquished By/Removed From FED EX		Received By/Stored In Alex Kelleel	2/3/06 10:00
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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}
(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-296	Page 1 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N	Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr-6, SURFACE WATER FULL QC KD205 (7372)		SAF No. RC-048	Air Quality ☐	
Ice Chest No. ERC-99-030	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES LIONVILLE	Offsite Property No. A060243		Bill of Lading/Air Bill No. SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	3	2	3
Volume	125mL	1000mL	1000mL	1000mL	1000mL	1000mL	500mL	1000mL	1000mL	1000mL
SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081

Sample No.	Matrix *	Sample Date	Sample Time										
J112X9	WATER	02-01-06	1430	X	X	X	X	X	X				

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From JAMES BERNHARD	2030 02-01-06	Received By/Stored In EAS LOCKED STORAGE	2030 02-01-06
Relinquished By/Removed From EAS LOCKED STORAGE	02-02-06	Received By/Stored In David St. John Webb	1200 02-02-06
Relinquished By/Removed From David St. John	1400 02/02/06	Received By/Stored In Fed EX	
Relinquished By/Removed From FED EX		Received By/Stored In Alex Lelleul	2/3/06 10:00
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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}
(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-260	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 7, PORE WATER K0205 (7372)	SAF No.: RC-048	
Ice Chest No.: ERC-01-030	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: AD60243		Bill of Lading/Air Bill No.: SEE OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	~~125mL~~ 60 1/1/2006	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL
SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
Sample No. / Matrix * / Sample Date / Sample Time										
J11247 / WATER / 2-1-06 / 1615	X	X	X	X	X	X				

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: JAMES BERNHARD	Date/Time: 2130 2-1-06	Received By/Stored In: EAS LOCKED STORAGE	Date/Time: 2130 2-1-06
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 1200 02-02-06	Received By/Stored In: [signature]	Date/Time: 1200 02-02-06
Relinquished By/Removed From: [signature]	Date/Time: 1400 02/02/06	Received By/Stored In: Fed EX	Date/Time
Relinquished By/Removed From: FED EX	Date/Time	Received By/Stored In: [signature]	Date/Time: 2/3/06 10:00
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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}
(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-263	Page 1 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N Air Quality ☐	Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 10, PORE WATER K0205 (7372)		SAF No. RC-048		
Ice Chest No. GRC-99-030	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES/ LIONVILLE	Offsite Property No. A066243		Bill of Lading/Air Bill No. SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	~~125~~mL 60 4/12/06	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL
SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
Sample No. / Matrix * / Sample Date / Sample Time										
J11250 / WATER / 02-01-06 / 1900	X	X	X	X	X	X				

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From JAMES BERNHARD	Date/Time 2030 02-01-06	Received By/Stored In EAS LOCKED STORAGE	Date/Time 2030 02-01-06
Relinquished By/Removed From EAS LOCKED STORAGE	Date/Time 1200 02-02-06	Received By/Stored In WCH	Date/Time 1200 02-02-06
Relinquished By/Removed From WCH	Date/Time 1400 02/02/06	Received By/Stored In Fed EX	Date/Time
Relinquished By/Removed From FED EX	Date/Time	Received By/Stored In Alex Kellel	Date/Time 2/3/06 10:00
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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}
(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

EBERLINE SERVICES

RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

Client: W.S. HANFORD City RICHLAND State WA

Date/Time received 1/31/06 10:00 CoC No. RC-048-244, 251, 252, 258, 276

Container I.D. No. ERC-03-105 Requested TAT (Days) 45 P.O. Received Yes [ ] No [ ]

INSPECTION

1. Custody seals on shipping container intact? Yes [✓] No [ ] N/A [ ]
2. Custody seals on shipping container dated & signed? Yes [✓] No [ ] N/A [ ]
3. Custody seals on sample containers intact? Yes [✓] No [ ] N/A [ ]
4. Custody seals on sample containers dated & signed? Yes [✓] No [ ] N/A [ ]
5. Packing material is: Wet [ ] Dry [✓]
6. Number of samples in shipping container: 5 Sample Matrix WATER
7. Number of containers per sample: 6 (Or see CoC _____)
8. Samples are in correct container Yes [✓] No [ ]
9. Paperwork agrees with samples? Yes [✓] No [ ]
10. Samples have: Tape [ ] Hazard labels [ ] Rad labels [ ] Appropriate sample labels [✓]
11. Samples are: In good condition [✓] Leaking [ ] Broken Container [ ] Missing [ ]
12. Samples are: Preserved [✓] Not preserved [ ] pH 2 Preservative HNO_3
13. Describe any anomalies:
14. Was P.M. notified of any anomalies? Yes [ ] No [ ] Date _____
15. Inspected by AK Date: 1/31/06 Time: 10:00

Customer Sample No.	cpm	mR/hr	Wipe	Customer Sample No.	cpm	mR/hr	wipe

Ion Chamber Ser. No. _____ Calibration date _____

Alpha Meter Ser. No. _____ Calibration date _____

Beta/Gamma Meter Ser. No. _____ Calibration date _____

EBERLINE SERVICES

RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

Client: WC HANFORD City RICHLAND State WA

Date/Time received 2/3/06 10:00 CoC No. RC-048-280, 282, 285, 290, 296, 260, 263

Container I.D. No. ERC-96-030 ERC-01-030 Requested TAT (Days) 45 P.O. Received Yes [ ] No [ ]

INSPECTION

1. Custody seals on shipping container intact? Yes [✓] No [ ] N/A [ ]
2. Custody seals on shipping container dated & signed? Yes [✓] No [ ] N/A [ ]
3. Custody seals on sample containers intact? Yes [✓] No [ ] N/A [ ]
4. Custody seals on sample containers dated & signed? Yes [✓] No [ ] N/A [ ]
5. Packing material is: Wet [ ] Dry [✓]
6. Number of samples in shipping container: 7 Sample Matrix WATER
7. Number of containers per sample: 6 (Or see CoC _____)
8. Samples are in correct container Yes [✓] No [ ]
9. Paperwork agrees with samples? Yes [✓] No [ ]
10. Samples have: Tape [ ] Hazard labels [ ] Rad labels [ ] Appropriate sample labels [✓]
11. Samples are: In good condition [✓] Leaking [ ] Broken Container [ ] Missing [ ]
12. Samples are: Preserved [✓] Not preserved [ ] pH 2 Preservative HNO3
13. Describe any anomalies:
14. Was P.M. notified of any anomalies? Yes [ ] No [ ] Date _____
15. Inspected by AK Date: 2/3/06 Time: 10:30

Customer Sample No.	cpm	mR/hr	Wipe	Customer Sample No.	cpm	mR/hr	wipe

Ion Chamber Ser. No. _____ Calibration date _____

Alpha Meter Ser. No. _____ Calibration date _____

Beta/Gamma Meter Ser. No. _____ Calibration date _____

LIONVILLE LABORATORY INC.

21 March 2006

RECEIVED MAR 2006

Joan Kessner
WC-Hanford
3190 Washington Way
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 #	0601L184 0602L209
SDG #	K0205
SAF #	RC-048
Date Received	1-31-06; 2/3/06
# Samples	12
Mat\rix	Water
Volatiles	
Semivolatiles	X
Pest/PCB	X
PAH	
DRO/KRO/GRO	X
GC Alcohols	
Herbicides	
Metals	X
Inorganics	X

The electronic data deliverable (EDD) will be emailed shortly. If you have any questions, please don't hesitate to contact me at (610) 280-3012.

Sincerely,
Lionville Laboratory Incorporated

Orlette S. Johnson
r:\group\pm\orlette\tnu-hanford\data\b_ltrs.doc

208 Welsh Pool Road • Exton, PA 19341- 1313 • (610) 280-3000 • Fax (610) 280-3041

RECEIVED 2006

Lionville Laboratory, Inc.
DRO ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RCS-048 K0205

DATE RECEIVED: 01/31/06 LVL LOT # :0601L184

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J11238	001	W	06LE0087	01/29/06	02/05/06	02/07/06
J11232	002	W	06LE0087	01/29/06	02/05/06	02/07/06
J11239	003	W	06LE0087	01/29/06	02/05/06	02/07/06
J11279	004	W	06LE0087	01/29/06	02/05/06	02/08/06
J11245	005	W	06LE0087	01/29/06	02/05/06	02/08/06

LAB QC:

BLK	MB1	W	06LE0087	N/A	02/05/06	02/07/06
BLK	MB1 BS	W	06LE0087	N/A	02/05/06	02/07/06
BLK	MB1 BSD	W	06LE0087	N/A	02/05/06	02/07/06

2/21/6

Lionville Laboratory, Inc.
DRO ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RCS-048 K0205

DATE RECEIVED: 02/03/06 LVL LOT # :0602L209

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J112X3	001	W	06LE0087	02/01/06	02/05/06	02/08/06
J112X3	001 MS	W	06LE0087	02/01/06	02/05/06	03/03/06
J112X3	001 MSD	W	06LE0087	02/01/06	02/05/06	03/03/06
J112X9	002	W	06LE0087	02/01/06	02/05/06	02/08/06
J112X9	002 MS	W	06LE0087	02/01/06	02/05/06	02/08/06
J112X9	002 MSD	W	06LE0087	02/01/06	02/05/06	02/08/06
J112F9	003	W	06LE0087	02/01/06	02/05/06	02/08/06
J11250	004	W	06LE0087	02/01/06	02/05/06	02/08/06
J112C3	005	W	06LE0087	02/01/06	02/05/06	02/08/06
J112F6	006	W	06LE0087	02/01/06	02/05/06	02/08/06
J11247	007	W	06LE0087	02/01/06	02/05/06	02/08/06

LAB QC:

BLK	MB1	W	06LE0087	N/A	02/05/06	02/07/06
BLK	MB1 BS	W	06LE0087	N/A	02/05/06	02/07/06
BLK	MB1 BSD	W	06LE0087	N/A	02/05/06	02/07/06

LIONVILLE LABORATORY INC.

Case Narrative

Client: TNU-HANFORD RCS-048
LVL #: 0601L184 and 0602L209
SDG/SAF # K0205/RCS-048

W.O. #: 11343-606-001-9999-00
Date Received: 01-31-2006
03-03-2006

DIESEL RANGE ORGANICS

Twelve (12) water samples were collected on 01-29-2006 and 02-01-2006.

The samples and their associated QC samples were extracted on 02-05-2006 and analyzed according to Lionville Laboratory SOPs based on SW846, 3rd Edition procedure on 02-07,08-2006 and 03-03-2006. The analysis was based on method 8015B. The analysis met the intent of method WTPH-D.

The following is a summary of the QC results accompanying the sample results and a description of any problems encountered during their analyses:

1. All results presented in this report are derived from samples that met LvLI's sample acceptance policy.

2. Samples were extracted and analyzed within required holding time.

3. The method blanks were below the reporting limit for the target compound.

4. All surrogate recoveries were within acceptance criteria.

5. The blank spike recoveries were within acceptance criteria.

6. All matrix spike recoveries were within acceptance criteria.

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

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

9. LvLI is NELAP accredited by the state of Pennsylvania and holds over 20 additional state accreditations. For a complete listing of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager.

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 3 6 pages.

LIONVILLE LABORATORY INC.

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

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

3/7/6
Date

som\r:\group\data\dro\tnu hanford\0601-184-209.doc

208 Welsh Pool Road • Exton, PA 19341- 1313 • (610) 280-3000 • Fax (610) 280-3041

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.

Lionville Laboratory, Inc.

DIESEL RANGE ORGANICS BY GC

Report Date: 02/18/06 15:34

RFW Batch Number: **0601L184** Client: **TNUHANFORD RCS-048 K0205** Work Order: 11343606001 Page: 1

0000000006

	Cust ID:	J11238	J11232	J11239	J11279	J11245	BLK
Sample Information	RFW#:	001	002	003	004	005	06LE0087-MB1
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	p-Terphenyl	79 %	61 %	71 %	69 %	60 %	74 %
Diesel Range Organics		102 U	103 U	104 U	101 U	101 U	100 U

	Cust ID:	BLK BS	BLK BSD
Sample Information	RFW#:	06LE0087-MB1	06LE0087-MB1
	Matrix:	WATER	WATER
	D.F.:	1.00	1.00
	Units:	ug/L	ug/L
	p-Terphenyl	50 %	41 %
Diesel Range Organics		57 %	57 %

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

Lionville Laboratory, Inc.

DIESEL RANGE ORGANICS BY GC

Report Date: 03/03/06 16:15

RFW Batch Number: **0602L209** Client: **TNUHANFORD RCS-048 K0205** Work Order: 11343606001 Page: 1

000000007

	Cust ID:	J112X3	J112X3	J112X3	J112X9	J112X9	J112X9
Sample Information	RFW#:	001	001 MS	001 MSD	002	002 MS	002 MSD
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	p-Terphenyl	66 %	83 %	86 %	77 %	59 %	58 %
Diesel Range Organics		101 U	83 %	77 %	200	52 %	46 %

	Cust ID:	J112F9	J11250	J112C3	J112F6	J11247	BLK
Sample Information	RFW#:	003	004	005	006	007	06LE0087-MB1
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	p-Terphenyl	84 %	76 %	64 %	74 %	65 %	74 %
Diesel Range Organics		103 U	101 U	102 U	101 U	101 U	100 U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

JS 3/3/06

Lionville Laboratory, Inc.

DIESEL RANGE ORGANICS BY GC

Report Date: 03/03/06 16:15

RFW Batch Number: **0602L209** Client: **TNUHANFORD RCS-048 K0205** Work Order: 11343606001 Page: 2

	Cust ID:	BLK BS	BLK BSD
Sample Information	RFW#:	06LE0087-MB1	06LE0087-MB1
	Matrix:	WATER	WATER
	D.F.:	1.00	1.00
	Units:	ug/L	ug/L
	p-Terphenyl	50 %	41 %
Diesel Range Organics		57 %	57 %

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC.

000000008

Lionville Laboratory Use Only: 0601L184

Custody Transfer Record/Lab Work Request

Page 1 of 1

See SRC

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client: TNU Hanford RCS-048

Est. Final Proj. Sampling Date:

Project #: 11343-606-001-9999-00

Project Contact/Phone #:

Lionville Laboratory Project Manager: Arlette Johnson

QC: Spec. Del: Std. TAT: 30 Days

Date Rec'd: 1.31.06 Date Due: 3/2/06

		A	B	C	D	E	F	G	H	I	J	K	L
Refrigerator #		6	6	6	6	6	6	6	6	6	6	6	6
#/Type Container	Liquid	1gl	1gl	1gl	1gl	1gl	1pl	1pl	1pl	1gl	1pl	1pl	1pl
	Solid												
Volume	Liquid	1L	1L	1L	40	1L	250	125	125	500	125	125	250
	Solid												
Preservatives		—	—	—	HCl	HCl	HNO_3	—	—	HCL	H_2SO_4	H_2SO_4	H2SO4
ANALYSES REQUESTED →		VOA	BNA	Pest/PCB	~~PCB~~	TPH (GRO)	TPH Diesel (Z)	Metal Hg (INORG)	~~CN~~ AIV (B)	IC Anions	TPH (DRO) HB.1	NO2/NO3	NH3	N by Kjeldahl

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

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	VOA	BNA	Pest/PCB	~~PCB~~	TPH (GRO)	TPH Diesel	Metal Hg	~~CN~~	IC Anions	TPH (DRO)	NO2/NO3	NH3	N by Kjeldahl
							Lionville Laboratory Use Only												
								C635H	C608H	OPCB	OGRO	ODRO	METALS(i)	IALKL	IC(i)	IPHC	INSNIT	INHBN	INTKJN
001	J11238			W	1.29.06	1330		X	X	X	X	X	X		X	X	X		
002	~~J11222~~ DS 1.30.06 J11232					1415		X	X	X	X	X	X	X	X	X	X	X	X
003	J11239					1530		X	X	X	X	X	X		X	X	X		
004	J11279					1600		X	X	X	X	X	X		X	X	X		
005	J11245					1630		X	X	X	X	X	X	X	X	X	X	X	X

Special Instructions:

METALS(i) = HSL + Br, B, Li, Mo, P, Si, Sr, Sn, U

IC(i) = IC Cl, Br, Fl, NO_3, NO_2, SO_4, PO_4

DATE/REVISIONS:

1: 0608HV
2: OPCB R
3: OGRO B
4: ODRO A
5:
6:

Relinquished by	Received by	Date	Time
FedEx	D Smith	1.31.06	0910

Relinquished by	Received by	Date	Time

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-251	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality: ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 3, SURFACE WATER	SAF No.: RC-048	
Ice Chest No.: ERC-96-012	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: A060273		Bill of Lading/Air Bill No.: SEE OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	125mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Tritium - H3	See item (1) in Special Instructions.	Stronium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
J11238	WATER	1-29-06	1330							X	X	X	X

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	1-29-06 2000	EAS LOCKED STORAGE	1-29-06 2000
EAS LOCKED STORAGE	01-30-06 0710	RZ Stiffler R.Z. Stiffler	0710 1-30-06
RZ Stiffler R.Z. Stiffler	1500 1-30-06	Fed EX	
	1-31-06 0910	D. Smith	1-31-06 0910

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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}

(2) 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 - 7470 - (CV)

Matrix *

S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquid
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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-251	Page 2 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N	Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 3, SURFACE WATER		SAF No. RC-048	Air Quality ☐	
Ice Chest No. ERC-96-012	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES / LIONVILLE	Offsite Property No. A060273		Bill of Lading/Air Bill No. SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	HCl to pH <2 Cool 4C	HCl to pH <2 Cool 4C						
Type of Container	P	G	G/P	aG	aGs*						
No. of Container(s)	1	1	1	1	1						
Volume	125mL	500mL	125mL	1000mL	40mL						
SAMPLE ANALYSIS	See item (1) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G						
Sample No. / Matrix * / Sample Date / Sample Time											
J11238 / WATER / 1-29-06 / 1330	X	X	X	X	X						

3 ml 12406

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	1-29-06 2000	EAS LOCKED STORAGE	1-29-06 2000
EAS LOCKED STORAGE	01-30-06 0710	RC Stoffler	1-30-06 0710
RC Stoffler	1-30-06 1500 WCH	Fed Ex	
Fed Ex	1-31-06 / 0910		1-31-06 / 0910

SPECIAL INSTRUCTIONS

3 ml 12406

(1) IC Anions - 300.0 [Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate]

Matrix *

S=Soil
SE=Sediment
SO=Solid
SL=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquid
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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-244	Page 2 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 4, PORE WATER	SAF No.: RC-048	
Ice Chest No.: AFS-04-052	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: A060274		Bill of Lading/Air Bill No.: SEE OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	HCl to pH <2 Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	Cool 4C	
Type of Container	P	G	G/P	aG	aGs*	G/P	G/P	G/P	G/P	
No. of Container(s)	1	1	1	1	1	1	1	1	1	
Volume	~~125mL~~ 500mL 125 3 1/10/2006	500mL	125mL	1000mL	40mL	125mL	250mL	125mL	250mL	
SAMPLE ANALYSIS	See item (1) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G	Ammonia - 350.3	Nitrogen by Kjeldahl - 351.2	Alkalinity - 310.1	TDS - 160.1; TSS - 160.2	

Sample No.	Matrix *	Sample Date	Sample Time									
J11232	WATER	1-24-06	1415	X	X	X	X	X	X	X	X	X

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time 1-24-06 2000	Received By/Stored In EAS LOCKED STORAGE	Date/Time 1-24-06 2000
Relinquished By/Removed From JAMES BERNHARD EAS LOCKED STORAGE	Date/Time 01-30-06 0710	Received By/Stored In RZ Stoffler R.Z. Stoffler	Date/Time 0710 1-30-06
Relinquished By/Removed From RZ Stoffler R.Z. Stoffler	Date/Time 1500 1-30-06	Received By/Stored In Fed Ex	Date/Time
Relinquished By/Removed From Fed Ex	Date/Time 1-31-06 / 0910	Received By/Stored In D. Johnson	Date/Time 1-31-06 / 0910
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

3 1/10/2006

(1) IC Anions - 300.0 (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate)

Matrix *

S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquid
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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-244	Page 1 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N	Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 4, PORE WATER		SAF No. RC-048	Air Quality ☐	
Ice Chest No. AFS-04-052	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES LIONVILLE	Offsite Property No. A060274		Bill of Lading/Air Bill No. SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	125mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS				Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 – Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium-226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
Sample No.	Matrix *	Sample Date	Sample Time										
J11232	WATER	1-29-06	1415							X	X	X	X

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From JAMES BERNHARD	Date/Time 1-29-06 1415	Received By/Stored In EAS LOCKED STORAGE	Date/Time 1-29-06 1415
Relinquished By/Removed From EAS LOCKED STORAGE	Date/Time 0710 01-30-06	Received By/Stored In RZ Stoffler	Date/Time 0710 1-30-06
Relinquished By/Removed From RZ Stoffler	Date/Time 1500 WCH 1-30-06	Received By/Stored In Fed Ex	Date/Time
Relinquished By/Removed From Fed Ex	Date/Time 1-31-06 1010	Received By/Stored In D Smith	Date/Time 1-31-06 1010
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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238)
(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-252	Page 1 of 2

Collector TILLER, B [redacted]	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N	Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 4, SURFACE WATER		SAF No. RC-048	Air Quality ☐	
Ice Chest No. AFS-04-050	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES (LIONVILLE)	Offsite Property No. A060272		Bill of Lading/Air Bill No. SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	125mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium-226: Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
J11239	WATER	1-29-06	1530							X	X	X	X

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	1-29-06 2000	EAS LOCKED STORAGE	1-29-06 2000
EAS LOCKED STORAGE	01-30-06 0710	R2 Stiffler R.J. Stiffler	1-30-06 0710
R2 Stiffler R.J. Stiffler	1-30-06 1500	Fed Ex	
Fed Ex	1-31-06 0910	D. Smith	1-31-06 0910

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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}

(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-252	Page 2 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 4, SURFACE WATER	SAF No.: RC-048	
Ice Chest No.: AFS-04-050	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: A060272		Bill of Lading/Air Bill No.: SEE OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	HCl to pH <2 Cool 4C	HCl to pH <2 Cool 4C						
Type of Container	P	G	G/P	aG	aGs*						
No. of Container(s)	1	1	1	1	1						
Volume	125mL	500mL 3 Aliquots	125mL	1000mL	40mL						
SAMPLE ANALYSIS	See item (J) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G						
Sample No. / Matrix * / Sample Date / Sample Time											
J11239 / WATER / 1-29-06 / 1530	X	X	X	X	X						

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: JAMES BERNHARD	Date/Time: 1-29-06 2000	Received By/Stored In: EAS LOCKED STORAGE	Date/Time: 1-29-06 2000
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 01-30-06 0710	Received By/Stored In: RZ Stoffler	Date/Time: 0710 1-30-06
Relinquished By/Removed From: RZ Stoffler	Date/Time: 1500 1-30-06	Received By/Stored In: Fed Ex	Date/Time:
Relinquished By/Removed From: Fed Ex	Date/Time: 1-31-06 1090	Received By/Stored In: D. Smith	Date/Time: 1-31-06 1090
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

3 Aliquots

(J) IC Anions - 300.0 (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-276	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 7N	Data Turnaround: 45 Days
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 5, SURFACE WATER		SAF No.: RC-048	Air Quality ☐	
Ice Chest No.: AFS-04-050	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX		
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: A060272		Bill of Lading/Air Bill No.: SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	60mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 – Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226, Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
J11279	WATER	1-29-06	1600							X	X	X	X

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	1-29-06 1600	EAS LOCKED STORAGE	1-29-06 1600
EAS LOCKED STORAGE	0700	RZ Stoffler	1-30-06 0700
RZ Stoffler	1-30-06 1500	Fed Ex	
Fed Ex	1-31-06 0910	D. Smith	1-31-06 0910

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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}
(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-276	Page 2 of 2

Collector TILLER, B **JAMES BERNHARD**	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N	Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 5, SURFACE WATER		SAF No. RC-048	Air Quality ☐	
Ice Chest No. AFS-04-050	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES (LIONVILLE)	Offsite Property No. A060272		Bill of Lading/Air Bill No. SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	HCl to pH <2 Cool 4C	HCl to pH <2 Cool 4C						
Type of Container	P	G	G/P	aG	aGs*						
No. of Container(s)	1	1	1	1	1						
Volume	125mL	500mL 3 AH 12606	125mL	1000mL	40mL						
SAMPLE ANALYSIS	See item (1) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G						
Sample No. / Matrix * / Sample Date / Sample Time											
J11279 / WATER / 1-29-06 / 1600	X	X	X	X	X						

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From JAMES BERNHARD	Date/Time 1-29-06 2000	Received By/Stored In EAS LOCKED STORAGE	Date/Time 1-29-06 2000
Relinquished By/Removed From EAS LOCKED STORAGE	Date/Time 0710 1-30-06	Received By/Stored In RZ Steffler R.Z. Steffler	Date/Time 0710 1-30-06
Relinquished By/Removed From RZ Steffler R.Z. Steffler	Date/Time 1500 1-30-06	Received By/Stored In Fed Ex	Date/Time
Relinquished By/Removed From Fed Ex	Date/Time 1-31-06 1090	Received By/Stored In D Smith	Date/Time 1-31-06 1090
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

3 AH 12606

(1) IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate}

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-258	Page 1 of 2

Collector TILLER, B [redacted]	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N	Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 5, PORE WATER		SAF No. RC-048	Air Quality ☐	
Ice Chest No. ERC-96-012	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES, LIONVILLE	Offsite Property No. A060273		Bill of Lading/Air Bill No. SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1	1
Volume	~~125mL~~ 60 BA 1-31-06	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL	1000mL
SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226, Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
Sample No. / Matrix * / Sample Date / Sample Time											
J11245 / WATER / 1-29-06 / 1630							X	X	X	X

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From [redacted]		1-29-06 2000	EAS LOCKED STORAGE	1-29-06 2000
Relinquished By/Removed From EAS LOCKED STORAGE		21-30-00 0710	Received By/Stored In RZ Stoffler	1-30-06 0710
Relinquished By/Removed From RZ Stoffler		1-30-06 1500	Received By/Stored In Fed Ex	
Relinquished By/Removed From		1-31-06 0910	Received By/Stored In	1-31-06 0910
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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}

(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-258	Page 2 of 2

Collector TILLER, B **JAMES BERNHARD**	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N	Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 5, PORE WATER		SAF No. RC-048	Air Quality ☐	
Ice Chest No. ERC-96-012	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES, LIONVILLE	Offsite Property No. A060273		Bill of Lading/Air Bill No. SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	HCl to pH <2 Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	Cool 4C	
Type of Container	P	G	G/P	aG	aGs*	G/P	G/P	G/P	G/P	
No. of Container(s)	1	1	1	1	1	1	1	1	1	
Volume	125mL	500mL	125mL	1000mL	40mL	125mL	250mL	125mL	250mL	
SAMPLE ANALYSIS	See item (1) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G	Ammonia - 350.3	Nitrogen by Kjeldahl - 351.2	Alkalinity - 310.1	TDS - 160.1; TSS - 160.2	
Sample No.	Matrix *	Sample Date	Sample Time							
J11245	WATER	1-29-06	1630	X	X	X	X	X	X	X	X	X	

CHAIN OF POSSESSION	Sign/Print Names	Date/Time
Relinquished By/Removed From JAMES BERNHARD	Received By/Stored In EAS LOCKED STORAGE	1-29-06 2000
Relinquished By/Removed From EAS LOCKED STORAGE	Received By/Stored In RZ Stoffler	01-30-06 0710
Relinquished By/Removed From RZ Stoffler	Received By/Stored In Fed Ex	1-30-06 1500
Relinquished By/Removed From Fed Ex	Received By/Stored In	1-31-06 0910
Relinquished By/Removed From	Received By/Stored In	
Relinquished By/Removed From	Received By/Stored In	

SPECIAL INSTRUCTIONS

3 1260 GAP

(1) IC Anions - 300.0 (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate)

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

BHI-EE-011 (08/29/2005)

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU Hanford **Date:** 1-31-06

Purchase Order / Project# / SAF# / SOW# / Release #: RC-048

LvLI Batch # : 0601L184 **Sample Custodian:** D. Smith

NOTE: EXPLAIN ALL DISCREPANCIES

1.	Samples Hand Delivered or Shipped	Carrier Fed Ex		Airbill# 7920 0239 321 7926 4477 292 7907 9610 879
2.	Custody seals on coolers or shipping container intact, signed and dated?	☑ Yes	☐ No	☐ No Seals Comments
3.	Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	
4.	All expected paperwork received (coc and other client specific information) sealed in plastic bag and easily accessible?	☑ Yes	☐ No	
5.	Samples received cooled or ambient? IR	Temp 1.3 °C 1.8 °C 1.6 °C		Cooler # AFS-04-052 # AFS-04-050 # ERC-96-01
6.	Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7.	coc signed and dated?	☑ Yes	☐ No	
8.	Sample containers are intact?	☑ Yes	☐ No	
9.	All samples on coc received? All samples received on coc?	☑ Yes	☐ No	
10.	All sample label information matches coc?	☑ Yes	☐ No	
11.	Samples properly preserved?	☑ Yes	☐ No	
12.	Samples received within hold times? Short holds taken to wet lab?	☑ Yes	☐ No	
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 not within policy. See reverse side for policy)	☑ Yes	☐ No	
16.	Project Manager contacted concerning discrepancies? name/date (or samples outside criteria)	☐ Yes	☐ No	☑ No Discrepancies

SR-002-B

LvLI LIONVILLE LABORATORY INC.

Lionville Laboratory Use Only: 0602L209

Custody Transfer Record/Lab Work Request

Page 1 of 1 See SRC

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

RCS-048

Client: TNLL-HANFORD SAF#: RC-048

Est. Final Proj. Sampling Date:

Project #: 11343-606-001-9999-00

Project Contact/Phone #:

Lionville Laboratory Project Manager: OJ

QC: Spec Del: Std TAT: 30 Days

Date Rec'd: 2/3/06 Date Due: 3/5/06

		A-C	D-E		F-H	I-J	K-L	M	N	O	P	Q	R	0000000021
Refrigerator #		6	6		6	1	6	6	6	6	6	1	6	6
#/Type Container	Liquid	G	G		G	C	G				G			
	Solid													
Volume	Liquid	L	L		L	40	L	500	125	125	1000	125	125	250
	Solid													
Preservatives						HCL		HNO3	—	—	HCL	HNO3	H2SO4	H2SO4
ANALYSES REQUESTED	ORGANIC: VOA				Pest	TPH GRO	TPH Diesel	INORG: Metal	ALK	TC 4010/3	TOC TPH	NO3 NO2 & TOC	NH3	NBOD KJELDAHL
	ORGANIC: BNA													
	ORGANIC: Pest/PCB													
	ORGANIC: Herb													

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		C625H	OPCB		C608H	OGRO	ODRO	METALS(1)	IALKL	IC(1)	IPHC	IN3N2 IOCT	INH3N	INTKN
001	J112X3	✓	✓	W	2-1-06	1445		3	2		3	2	2	1	1	1	1	1	1	1
002	X9	✓	✓			1430		3	2		3	2	2	1		1	1	1		
003	F9					1830		1	1		1	1	1	1		1	1	1		
004	J112S0					1900		1	1		1	1	1	1	1	1	1	1	1	1
005	C3					1530		1	1		1	1	1	1	1	1	1	1	1	1
006	F6					1600		1	1		1	1	1	1		1	1	1		
007	47					1615		1	1		1	1	1	1	1	1	1	1	1	1

Special Instructions:

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

IC(1) = IC - Br, Cl, F, NO2, NO3, SO4, PO4

DATE/REVISIONS:

1. Share bottle "Q" for N3N2 & TOC ; per OJ
2. OPCB R
3. 0608H U
4. ODRO A
5. OGRO B
6.

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	2/3/06	0930

Relinquished by	Received by	Date	Time

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-290	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 7N	Data Turnaround: 45 Days
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr- 6, PORE WATER FULL QC		SAF No.: RC-048	Air Quality ☐	
Ice Chest No.: FEC-02-504	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX		
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: A060278		Bill of Lading/Air Bill No.: SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	3	2	3
Volume	125mL	1000mL	1000mL	1000mL	1000mL	1000mL	500mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
J112X3	WATER	02-01-06	1445							X	X	X	X

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	02-01-06 2030	EAS LOCKED STORAGE	02/01/06 2030
EAS LOCKED STORAGE	02/02/06 1200	[illegible]	02-02-06 1200
[illegible]	02/02/06 1400	Fed Ex	
[illegible]	2-3-06 0930	[illegible]	2-3-06 0930

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}

(2) 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 - 7470 - (CV)

Matrix *

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-290	Page 2 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr-6 PORE WATER FULL QC		SAF No.: RC-048
Ice Chest No.: ERC-02-504	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: A060278		Bill of Lading/Air Bill No.: SEE OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	Cool 4C	
Type of Container	P	G	G/P	aG	aG*	G/P	G/P	G/P	G/P	
No. of Container(s)	1	1	1	2	2	1	1	1	1	
Volume	125mL	1000mL 3 4/10/13006	125mL	1000mL	40mL	125mL	250mL	125mL	250mL	
SAMPLE ANALYSIS	See item (1) in Special Instructions	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G	Ammonia - 350.3	Nitrogen by Kjeldahl - 351.2	Alkalinity - 310.1	TDS - 160.1; TSS - 160.2	

Sample No.	Matrix *	Sample Date	Sample Time										
J112X3	WATER	02-01-06	1445	X	X	X	X	X	X	X	X	X	

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	02-01-06 2030	EAS LOCKED STORAGE	02-01-06 2030
EAS LOCKED STORAGE	02-02-06 1200	David Sullivan WCH	02-02-06 1200
David Sullivan WCH	02/02/06 1400	Fed Ex	
Fed Ex	2/3/06 0930		2-3-06 0930

SPECIAL INSTRUCTIONS

3 4/10/13006

(1) IC Anions - 300.0 (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-296	Page 1 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr-6 SURFACE WATER FULL QC		SAF No. RC-048
Ice Chest No. ERC-99-061	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX
Shipped To EBERLINE SERVICES (LIONVILLE)	Offsite Property No. A060278		Bill of Lading/Air Bill No. SEE OSPC

Price Code 7N

Data Turnaround 45 Days

Air Quality ☐

00000002

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	3	2	3
Volume	125mL	1000mL	1000mL	1000mL	1000mL	1000mL	500mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
J112X9	WATER	02-01-06	1430							X	X	X	X

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	2030 02-01-06	EAS LOCKED STORAGE	2030 02-01-06
EAS LOCKED STORAGE	1200 02-02-06	David Dr. John WCH	1200 02-02-06
David Dr. John WCH	1400 02/02/06	FedEx	
FedEx	2-3-06 0930		2-3-06 0930

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}

(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-296	Page 2 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr-6 SURFACE WATER FULL QC		SAF No. RC-048	Air Quality ☐
Ice Chest No. ERC-99-061	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX	
Shipped To EBERLINE SERVICES LIONVILLE	Offsite Property No. A060278		Bill of Lading/Air Bill No. SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	HCl to pH <2 Cool 4C						
Type of Container	P	G	G/P	aG	aGs*						
No. of Container(s)	1	1	1	2	2						
Volume	125mL	1000mL	125mL	1000mL	40mL						
SAMPLE ANALYSIS	See item (f) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G						
Sample No. / Matrix * / Sample Date / Sample Time											
J112X9 / WATER / 02-01-06 / 1430	X	X	X	X	X						

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From JAMES BERNHARD	Date/Time 2030 02-01-06	Received By/Stored In EAS LOCKED STORAGE	Date/Time 2030 02-01-06
Relinquished By/Removed From EAS LOCKED STORAGE	Date/Time 1200 02-02-06	Received By/Stored In David St. John WCH	Date/Time 1200 02-02-06
Relinquished By/Removed From David St. John WCH	Date/Time 1400 02/02/06	Received By/Stored In FedEx	Date/Time
Relinquished By/Removed From FedEx	Date/Time 2-3-06 0930	Received By/Stored In	Date/Time 2-3-06 0930
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(f) IC Anions - 300.0 [Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate]

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-285	Page 2 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N	Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 10, SURFACE WATER		SAF No. RC-048	Air Quality ☐	
Ice Chest No. ERC-96-061	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES / LIONVILLE	Offsite Property No. A060278		Bill of Lading/Air Bill No. SEE OSPC		

00000026

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	HCl to pH <2 Cool 4C						
Type of Container	P	G	G/P	aG	aGs*						
No. of Container(s)	1	1	1	1	1						
Volume	125mL	500mL 3 1pt/12oz	125mL	1000mL	40mL						
SAMPLE ANALYSIS	See item (f) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G						
Sample No.	Matrix *	Sample Date	Sample Time								
J112F9	WATER	02-01-06	1830	X	X	X	X	X			

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From JAMES BERNHARD	Date/Time 2130 02-01-06	Received By/Stored In EAS LOCKED STORAGE	Date/Time 2130 2-1-06
Relinquished By/Removed From EAS LOCKED STORAGE	Date/Time 1200 02-02-06	Received By/Stored In David Stjohnwach	Date/Time 1200 02-02-06
Relinquished By/Removed From David Stjohnwach	Date/Time 1400 02/02/06	Received By/Stored In Fed Ex	Date/Time
Relinquished By/Removed From Fed Ex 2-3-06	Date/Time 0930	Received By/Stored In [illegible] 2-3-06	Date/Time 0930
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

3 1pt/12oz

(f) IC Anions - 300.0 [Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate]

Matrix *

S=Soil
SS=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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-285	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 10, SURFACE WATER	SAF No.: RC-048	
Ice Chest No.: ERC-96-061	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A06D278	Bill of Lading/Air Bill No.: SEE OSPC	

00000027

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	60mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL
SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081

Sample No.	Matrix *	Sample Date	Sample Time										
J112F9	WATER	07-01-06	1830							X	X	X	X

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	2-1-06	EAS LOCKED STORAGE	2-1-06 2130
EAS LOCKED STORAGE	02-02-06 1200	David Stephen WCH	02-02-06 1200
David Stephen	02/02/06 1600	Fed EX	
Fed EX	2-3-06 0930		2-3-06 0930

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}

(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-263	Page 2 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 10, PORE WATER		SAF No. RC-048
Ice Chest No. ERC-02-002	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX
Shipped To EBERLINE SERVICES / LIONVILLE	Offsite Property No. A060278		Bill of Lading/Air Bill No. SEE OSPC

Price Code 7N

Data Turnaround 45 Days

Air Quality ☐

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	HCl to pH <2 Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	Cool 4C	
Type of Container	P	G	G/P	aG	aGs*	G/P	G/P	G/P	G/P	
No. of Container(s)	1	1	1	1	1	1	1	1	1	
Volume	125mL	500mL 3 AH/2606	125mL	1000mL	40mL	125mL	250mL	125mL	250mL	
SAMPLE ANALYSIS	See item (J) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G	Ammonia - 350.3	Nitrogen by Kjeldahl - 351.2	Alkalinity - 310.1	TDS - 160.1; TSS - 160.2	
Sample No. / Matrix * / Sample Date / Sample Time										
J11250 / WATER / 02-01-06 / 1900	X	X	X	X	X	X	X	X	X	

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By/Removed From: JAMES BERNHARD 02-01-06	Date/Time 2030	Received By/Stored In: EAS LOCKED STORAGE 02-01-06 — Date/Time 2030
Relinquished By/Removed From: EAS LOCKED STORAGE 02-02-06	Date/Time 1200	Received By/Stored In: David Stephens WC4 — Date/Time 1200 02-02-06
Relinquished By/Removed From: David Stephens WC4 02/02/06	Date/Time 1400	Received By/Stored In: Fed Ex — Date/Time
Relinquished By/Removed From: Fed Ex 2-3-06	Date/Time 0930	Received By/Stored In: 2-3-06 — Date/Time 0930
Relinquished By/Removed From	Date/Time	Received By/Stored In — Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In — Date/Time

SPECIAL INSTRUCTIONS

3 AH/2606

(J) IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate}

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-263	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 10, PORE WATER	SAF No.: RC-048	
Ice Chest No.: ERC-02-002	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: AD60278	Bill of Lading/Air Bill No.: SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	125mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 – Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
J11250	WATER	02-01-06	1900							X	X	X	X

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: JAMES BERNHARD	02-01-06 2030	EAS LOCKED STORAGE	02-01-06 2030
Relinquished By/Removed From: EAS LOCKED STORAGE	02-02-06 1200	David Stillman WCH	02-02-06 1200
Relinquished By/Removed From: David Stillman WCH	02/02/06 1400	Fed Ex	
Relinquished By/Removed From: Fed Ex	2-3-06 0930	J. Kennedy	2-3-06 0930
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}

(2) 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 - 7470 - (CV)

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
Va=Vegetation
X=Other

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-280	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 6, VERTICAL TUBE	SAF No.: RC-048	
Ice Chest No.: ERC-02-002	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: A060278 ~~A0600~~ PA3 02/02/06		Bill of Lading/Air Bill No.: SEE OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	60mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL

Sample No.	Matrix *	Sample Date	Sample Time									
J112C3	WATER	02-01-06	1530							X	X	X	X

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	02-01-06 2030	EAS LOCKED STORAGE	02-01-06 2030
EAS LOCKED STORAGE	02-02-06 1200	David Stockwell	02-02-06 1200
David Stockwell	02/02/06 1430	Fed Ex	
Fed Ex	2-3-06 0930	[illegible]	2-3-06 0930

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) (Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238)

(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-280	Page 2 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N	Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 6, VERTICAL TUBE		SAF No. RC-048	Air Quality ☐	
Ice Chest No. ERC-02-002	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES/ LIONVILLE	Offsite Property No.		Bill of Lading/Air Bill No. SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G	G/P	aG	aGs*	G/P	G/P	G/P	G/P
No. of Container(s)	1	1	1	1	1	1	1	1	1
Volume	125mL	500mL	125mL	1000mL	40mL	125mL	250mL	125mL	250mL

3 AP 13006

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	See item (*) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G	Ammonia - 350.3	Nitrogen by Kjeldahl - 351.2	Alkalinity - 310.1	TDS - 160.1; TSS - 160.2
J112C3	WATER	02-01-06	1530	X	X	X	X	X	X	X	X	X

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	02-01-06 2030	EAS LOCKED STORAGE	02-01-06 2010
EAS LOCKED STORAGE	02-02-06 1200	David St. John West	02-02-06 1200
David St. John West	02/02/06 1400	Fed Ex	
Fed Ex	2-3-06 0930		2-3-06 0930

SPECIAL INSTRUCTIONS

3 AP 13006

(*) IC Anions - 300.0 (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-282	Page 1 of 2

Collector TILLER, B Bernhard	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 7, SURFACE WATER		SAF No. RC-048
Ice Chest No. ERC-03-106	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX
Shipped To EBERLINE SERVICES, LIONVILLE	Offsite Property No. A060278		Bill of Lading/Air Bill No. SEE OSPC

Price Code 7N

Air Quality ☐

Data Turnaround 45 Days

00000032

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	60mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL
SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium-226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081

Sample No.	Matrix *	Sample Date	Sample Time										
J112F6	WATER	2-1-06	1600							X	X	X	X

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From JAMES BERNHARD 2-1-06	Date/Time 2130	Received By/Stored In EAS LOCKED STORAGE	Date/Time 2-1-06 2130
Relinquished By/Removed From EAS LOCKED STORAGE 02-02-06	Date/Time 1200	Received By/Stored In David St. John W.C.H.	Date/Time 1200 02-02-06
Relinquished By/Removed From David St. John W.C.H. 02/02/06	Date/Time 1400	Received By/Stored In Fed Ex	Date/Time
Relinquished By/Removed From Fed Ex 2-3-06	Date/Time 0930	Received By/Stored In [illegible] 2-3-06	Date/Time 0930
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238]

(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-282	Page 2 of 2

Collector TILLER, B Bernhard	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 7, SURFACE WATER		SAF No. RC-048
Ice Chest No. ERC-03-106	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX
Shipped To EBERLINE SERVICES, LIONVILLE	Offsite Property No. A060278		Bill of Lading/Air Bill No. SEE OSPC

Price Code 7N

Air Quality ☐

Data Turnaround 45 Days

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	HCl to pH <2 Cool 4C						
Type of Container	P	G	G/P	aG	aGs*						
No. of Container(s)	1	1	1	1	1						
Volume	125mL	500mL	125mL	1000mL	40mL						
SAMPLE ANALYSIS	See item (*) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G						
Sample No. / Matrix * / Sample Date / Sample Time											
J112F6 / WATER / 2-1-06 / 1600	X	X	X	X	X						

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From JAMES BERNHARD	Date/Time 2130 2-1-06	Received By/Stored In EAS LOCKED STORAGE	Date/Time 2130 2-1-06
Relinquished By/Removed From EAS LOCKED STORAGE	Date/Time 1700 02-02-06	Received By/Stored In David St. John WCH	Date/Time 1700 02-02-06
Relinquished By/Removed From David St. John WCH	Date/Time 1400 02/22/06	Received By/Stored In Fed Ex	Date/Time
Relinquished By/Removed From Fed Ex	Date/Time 2-3-06 0930	Received By/Stored In T. Neeman	Date/Time 2-3-06 0930
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

3 AB/12/06

(*) IC Anions - 300.0 (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-260	Page 1 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH
Price Code 7N	Data Turnaround 45 Days	Air Quality ☐	
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 7, PORE WATER		SAF No. RC-048
Ice Chest No. ERC-03-106	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX
Shipped To EBERLINE SERVICES/ LIONVILLE	Offsite Property No. A060278		Bill of Lading/Air Bill No. SEE OSPC

9000000034

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	125mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL
SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
Sample No. / Matrix * / Sample Date / Sample Time										
J11247 / WATER / 2-1-06 / 1615							X	X	X	X

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: JAMES BERNHARD	2:30 2-1-06	Received By/Stored In: EAS LOCKED STORAGE	2:30 2-1-06
Relinquished By/Removed From: EAS LOCKED STORAGE	1200 02-02-06	Received By/Stored In: [illegible]	1200 02-02-06
Relinquished By/Removed From: [illegible]	1400 02/02/06	Received By/Stored In: Fed Ex	
Relinquished By/Removed From: FEDEX	2-3-06 0930	Received By/Stored In: [illegible]	2-3-06 0930
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) (Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238)
(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-260	Page 2 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 7, PORE WATER	SAF No.: RC-048	
Ice Chest No.: ERC-03-106	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: A060278	Bill of Lading/Air Bill No.: SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	HCl to pH <2 Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G	G/P	aG	aGs*	G/P	G/P	G/P	G/P
No. of Container(s)	1	1	1	1	1	1	1	1	1
Volume	125mL	500mL 3 JB 12/06	125mL	1000mL	40mL	125mL	250mL	125mL	250mL
SAMPLE ANALYSIS	See item (1) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G	Ammonia - 350.3	Nitrogen by Kjeldahl - 351.2	Alkalinity - 310.1	TDS - 160.1; TSS - 160.2

Sample No.	Matrix *	Sample Date	Sample Time										
J11247	WATER	2-1-06	1615	X	X	X	X	X	X	X	X	X	

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: JAMES BERNHARD	2-1-06 2130	Received By/Stored In: EAS LOCKED STORAGE	2-1-06 2130
Relinquished By/Removed From: EAS LOCKED STORAGE	02-02-06 1200	Received By/Stored In: David St. John WCH	02-02-06 1200
Relinquished By/Removed From: David St. John WCH	02/02/06 1400	Received By/Stored In: Fed EX	
Relinquished By/Removed From: Fed Ex	2-3-06 0930	Received By/Stored In:	2-3-06 0930
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

3 JB 12/06

(1) IC Anions - 300.0 (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate)

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

BHI-EE-011 (08/29/2005)

0000000035

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TMU HANFORD **Date:** 2-3-06

Purchase Order / Project# / SAF# / SOW# / Release #: RC-048

LvLI Batch # : 06021209 **Sample Custodian:** Victor Hernandez

NOTE: EXPLAIN ALL DISCREPANCIES

1.	Samples Hand Delivered ~~or Shipped~~	Carrier FEDEX		Airbill#	79200643 5541 5552 5563 7926 4937 8140 8150
2.	Custody seals on coolers or shipping container intact, signed and dated?	☑ Yes	☐ No	☐ No Seals	Comments
3.	Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No		
4.	All expected paperwork received (coc and other client specific information) sealed in plastic bag and easily accessible?	☑ Yes	☐ No		
5.	Samples received cooled or ambient?	Temp 4-2 4-1 2-9 3-8 4-	°C	Cooler #	ERC-02-504 99-061 02-002 03-106 96-061
6.	Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals	
7.	coc signed and dated?	☑ Yes	☐ No		
8.	Sample containers are intact?	☑ Yes	☐ No		
9.	All samples on coc received? All samples received on coc?	☑ Yes	☐ No		
10.	All sample label information matches coc?	☑ Yes	☐ No		
11.	Samples properly preserved?	☑ Yes	☐ No		
12.	Samples received within hold times? Short holds taken to wet lab?	☑ Yes	☐ No		
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 not within policy. See reverse side for policy)	☑ Yes	☐ No		
16.	Project Manager contacted concerning discrepancies? name/date (or samples outside criteria)	☐ Yes	☐ No	☑ No Discrepancies	

SR-002-B

LVLI LIONVILLE LABORATORY INC.

RECEIVED
MAR 2006

Lionville Laboratory, Inc.
BNA ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RCS-048 K0205

DATE RECEIVED: 01/31/06 LVL LOT # :0601L184

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J11238	001	W	06LE0089	01/29/06	02/05/06	02/08/06
J11232	002	W	06LE0089	01/29/06	02/05/06	02/08/06
J11239	003	W	06LE0089	01/29/06	02/05/06	02/08/06
J11279	004	W	06LE0089	01/29/06	02/05/06	02/08/06
J11245	005	W	06LE0089	01/29/06	02/05/06	02/08/06

LAB QC:

SBLKTL	MB1	W	06LE0089	N/A	02/05/06	02/08/06
SBLKTL	MB1 BS	W	06LE0089	N/A	02/05/06	02/08/06
SBLKTL	MB1 BSD	W	06LE0089	N/A	02/05/06	02/08/06

Lionville Laboratory, Inc.
BNA ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RCS-048 K0205

DATE RECEIVED: 02/03/06 LVL LOT # :0602L209

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J112X3	001	W	06LE0089	02/01/06	02/05/06	02/08/06
J112X3	001 MS	W	06LE0089	02/01/06	02/05/06	02/08/06
J112X3	001 MSD	W	06LE0089	02/01/06	02/05/06	02/09/06
J112X9	002	W	06LE0089	02/01/06	02/05/06	02/09/06
J112X9	002 MS	W	06LE0102	02/01/06	02/08/06	02/13/06
J112X9	002 MSD	W	06LE0102	02/01/06	02/08/06	02/13/06
J112F9	003	W	06LE0089	02/01/06	02/05/06	02/09/06
J11250	004	W	06LE0089	02/01/06	02/05/06	02/09/06
J112C3	005	W	06LE0089	02/01/06	02/05/06	02/09/06
J112F6	006	W	06LE0089	02/01/06	02/05/06	02/09/06
J11247	007	W	06LE0089	02/01/06	02/05/06	02/09/06

LAB QC:

SBLKTL	MB1	W	06LE0089	N/A	02/05/06	02/08/06
SBLKTL	MB1 BS	W	06LE0089	N/A	02/05/06	02/08/06
SBLKTL	MB1 BSD	W	06LE0089	N/A	02/05/06	02/08/06
SBLKTP	MB1	W	06LE0102	N/A	02/08/06	02/13/06
SBLKTP	MB1 BS	W	06LE0102	N/A	02/08/06	02/13/06
SBLKTP	MB1 BSD	W	06LE0102	N/A	02/08/06	02/13/06

LIONVILLE LABORATORY INC.

Case Narrative

Client: TNU-HANFORD RCS-048
LVL #: 0601L184 and 0602L209
SDG/SAF # K0205/RCS-048

W.O. #: 11343-606-001-9999-00
Date Received: 01-31-2006 & 02-03-2006

SEMIVOLATILE

Twelve (12) water samples were collected on 01-29-2006 and 02-01-2006.

The samples and their associated QC samples were extracted according to Lionville Laboratory SOPs based on SW 846 method 3520C on 02-05,08-2006 and analyzed according to criteria set forth in Lionville Laboratory SOPs based on SW 846 Method 8270C for TCL Semivolatile target compounds on 02-08,09,13-2006.

The following is a summary of the QC results accompanying the sample results and a description of any problems encountered during their analyses:

1. All results presented in this report are derived from samples that met LvLI's sample acceptance policy.
2. Samples were extracted and analyzed within required holding time.
3. Non-target compounds were detected in the samples.
4. All surrogate recoveries were within acceptance criteria.
5. Four (4) of two hundred fifty-six (256) matrix spike recoveries were outside acceptance criteria.

   Fourteen (14) of two hundred fifty-six (256) blank spike recoveries were outside acceptance criteria. A copy of the Sample Discrepancy Reports (SDR) has been enclosed.
6. The method blanks contained the common laboratory contaminant Bis (2-Ethylhexyl) phthalate at levels less than the CRQL.
7. Internal standard area and retention time criteria were met.
8. Manual integrations are performed according to SOP QA-125 to produce quality data with the utmost integrity. All manual integrations are required to be technically valid and properly documented. Appropriate technical flags are defined in the Glossary ("Technical Flags For Manual Integration").
9. LvLI is NELAP accredited by the state of Pennsylvania and holds over 20 additional state accreditations. For a complete listing of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager.
10. I certify, that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data, contained in this hard-copy data package, has been authorized, by the Laboratory Manager or a designee, as verified by the following signature.

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

2/17/06
Date

som\gorup\data\bna\tnu-hanford\0601-184 & 0602-209.doc
The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 5 8 pages.

Lionville Laboratory Sample Discrepancy Report (SDR)

SDR #: 06MS0048

Initiator: Sharon Saylor
Date: 06011184 2-9-06
Client: TAM

Batch: 06011184
Samples: 55, 55A
Method: SW846/MCAWW/CLP/

Parameter: 8270
Matrix: Aqueous
Prep Batch: 06LE0089

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)

<10% recovery of 4-chloroaniline, 3-nitroaniline & 3,3'dichlorobenzidine in blankspike &

<10% recovery of 3,3'-dichlorobenzidine in the blankspike dup

2. Known or Probable Causes(s)

loss during extraction

3. Discussion and Proposed Action Other Description:

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

4. Project Manager Instructions...signature/date: 2/17/06

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

Not likely the chloroanilines and benzidines exhibit erratic chromatographic behavior due to their polarity

5. Final Action...signature/date: 2/17/06 Other Explanation:

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

When Final Action has been recorded, forward original to QA Specialist for distribution and filing.

NULK 2-17

Route	Distribution of Completed SDR	Route	Distribution of Completed SDR
__	X Initiator	__	__ Metals: Beegle
__	X Lab General Manager: M. Taylor	__	__ Inorganic: Perrone
①	X Project Mgr: Stone/Johnson		__ GC/LC: Kiger
__	__ Data Management: Stilwell	②	X MS: Rychlak/Daley
__	__ Sample Prep: Beegle/Kiger	__	__ Log-In: Perry
		__	__ Admin: _____
		__	__ Other: _____

QA-105-A-0805

Lionville Laboratory Sample Discrepancy Report (SDR)

SDR #: 06MS052

Initiator: Sharon Saylor
Date: 2-10-06
Client: TRU

Batch: 0602L209
Samples: MS + BS
Method: SW846/MCAWW/CLP/

Parameter: 8270
Matrix: Aqueous
Prep Batch: 06LE0089

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)

low recovery of several analytes in the matrix spike and blank spike but matrix spike dup and blank spike dup are ok

2. Known or Probable Causes(s)

loss during extraction

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:

narrate

4. Project Manager Instructions...signature/date: 2/17/06

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

Not likely all compounds that are easily lost during extraction and concentration

5. Final Action...signature/date: 2/17/06

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

Other Explanation:

Recovered very well
2-chloroaniline and 4-chloroaniline exhibit erratic behavior due to their phase

When Final Action has been recorded, forward original to QA Specialist for distribution and filing.

Route	Distribution of Completed SDR	Route	Distribution of Completed SDR
__	X Initiator	__	__ Metals: Beegle
__	X Lab General Manager: M. Taylor	__	__ Inorganic: Perrone
✓	X Project Mgr: Stone/Johnson	✓	X MS: Rychlak/Daley
__	__ Data Management: Stilwell	__	__ Log-in: Perry
__	__ Sample Prep: Beegle/Kiger	__	__ Admin: _____
		__	__ Other: _____

CARTER
NOLTE
2/17/06

QA-105-A-0805

GLOSSARY

DATA QUALIFIERS

U = Compound was analyzed for but not detected. The associated numerical value is the estimated sample quantitation limit which is included and corrected for dilution and percent moisture.

J = Indicates an estimated value. This flag is used under the following circumstances: 1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; or 2) when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. For example, if the limit of detection is 10 ug/L and a concentration of 3 ug/L is calculated, it is reported as 3J.

B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination. This flag is also used for a TIC as well as for a positively identified TCL compound.

E = Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.

D = Identifies all compounds identified in an analysis at a secondary dilution factor.

I = Interference.

NQ = Result qualitatively confirmed but not able to quantify.

N = Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.

X = This flag is used for a TIC compound which is quantified relative to a response factor generated from a daily calibration standard (rather than quantified relative to the closest internal standard).

Y = Additional qualifiers used as required are explained in the case narrative.

GLOSSARY

ABBREVIATIONS

BS = Indicates blank spike in which reagent grade water is spiked with the CLP matrix spike solutions and carried through all the steps in the method. Spike recoveries are reported.

BSD = Indicates blank spike duplicate.

MS = Indicates matrix spike.

MSD = Indicates matrix spike duplicate.

DL = Suffix added to sample number to indicate that results are from a diluted analysis.

NA = Not Applicable.

DF = Dilution Factor.

NR = Not Required.

SP, Z = Indicates Spiked Compound.

sb\10-03\gloss.doc

TECHNICAL FLAGS FOR MANUAL INTEGRATION

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

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

PA - **Peak Assignment:** Quan report was changed to reflect correct peak assignment.

RI - **Routine Integration:** Routine integrations are performed for some analytes that are consistently integrated improperly by the automatic integration programs. Examples are the Dichlorobenzene isomers on the VOA packed column and Benzo (b) fluoranthene /Benzo (k) fluoranthene which are poorly resolve on the BNA column.

SP - **Split Peak:** The automatic integration improperly split the peak; a manual integration was performed to get the correct area.

CB - **Co-elution/ Background:** Peak was manually integrated to eliminate contribution from co-eluting compounds, background signal, or other interference.

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

Lionville Laboratory, Inc.

Semivolatiles by GC/MS, HSL List

Report Date: 02/16/06 16:59

RFW Batch Number: 0602L209 Client: **TNUHANFORD RCS-048 K0205** Work Order: 11343606001 Page: 1a

000000009

	Cust ID:	J112X3		J112X3		J112X3		J112X9		J112X9		J112X9	
Sample Information	RFW#:	001		001 MS		001 MSD		002		002 MS		002 MSD	
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	D.F.:	1.00		1.00		1.00		1.00		1.00		1.00	
	Units:	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Surrogate Recovery	Nitrobenzene-d5	80	%	64	%	54	%	72	%	57	%	51	%
	2-Fluorobiphenyl	70	%	71	%	66	%	60	%	71	%	66	%
	Terphenyl-d14	115	%	80	%	74	%	101	%	79	%	73	%
	Phenol-d5	88	%	81	%	83	%	78	%	85	%	77	%
	2-Fluorophenol	81	%	74	%	71	%	75	%	78	%	69	%
	2,4,6-Tribromophenol	91	%	85	%	81	%	80	%	90	%	88	%
			fl		fl		fl		fl		fl		fl
Phenol		10	U	91	%	96	%	10	U	99	%	89	%
bis(2-Chloroethyl)ether		10	U	86	%	88	%	10	U	93	%	83	%
2-Chlorophenol		10	U	88	%	86	%	10	U	94	%	84	%
1,3-Dichlorobenzene		10	U	65	%	63	%	10	U	65	%	66	%
1,4-Dichlorobenzene		10	U	66	%	64	%	10	U	64	%	65	%
1,2-Dichlorobenzene		10	U	71	%	70	%	10	U	70	%	71	%
2-Methylphenol		10	U	81	%	81	%	10	U	93	%	83	%
2,2'-oxybis(1-Chloropropane)		10	U	86	%	86	%	10	U	90	%	82	%
4-Methylphenol		10	U	93	%	96	%	10	U	102	%	92	%
N-Nitroso-di-n-propylamine		10	U	88	%	88	%	10	U	92	%	83	%
Hexachloroethane		10	U	60	%	59	%	10	U	61	%	63	%
Nitrobenzene		10	U	71	%	62	%	10	U	63	%	58	%
Isophorone		10	U	78	%	65	%	10	U	68	%	63	%
2-Nitrophenol		10	U	67	%	59	%	10	U	61	%	57	%
2,4-Dimethylphenol		10	U	70	%	64	%	10	U	57	%	53	%
bis(2-Chloroethoxy)methane		10	U	75	%	63	%	10	U	66	%	60	%
2,4-Dichlorophenol		10	U	74	%	62	%	10	U	65	%	61	%
1,2,4-Trichlorobenzene		10	U	60	%	50	%	10	U	54	%	52	%
Naphthalene		10	U	64	%	54	%	10	U	56	%	53	%
4-Chloroaniline		10	U	17 *	%	81	%	10	U	82	%	75	%
Hexachlorobutadiene		10	U	60	%	50	%	10	U	54	%	55	%
4-Chloro-3-methylphenol		10	U	78	%	66	%	10	U	72	%	68	%
2-Methylnaphthalene		10	U	71	%	59	%	10	U	62	%	59	%
Hexachlorocyclopentadiene		10	U	50	%	55	%	10	U	59	%	65	%
2,4,6-Trichlorophenol		10	U	103	%	104	%	10	U	104	%	98	%
2,4,5-Trichlorophenol		26	U	75	%	77	%	26	U	83	%	79	%

*= Outside of EPA CLP QC limits.

RFW Batch Number: 0602L209 Client: TNUHANFORD RCS-048 K0205 Work Order: 11343606001 Page: 1b

Cust ID:	J112X3		J112X3		J112X3		J112X9		J112X9		J112X9	
RFW#:	001		001 MS		001 MSD		002		002 MS		002 MSD	
2-Chloronaphthalene	10	U	82	%	82	%	10	U	85	%	78	%
2-Nitroaniline	26	U	88	%	94	%	26	U	88	%	78	%
Dimethylphthalate	10	U	94	%	87	%	10	U	87	%	79	%
Acenaphthylene	10	U	83	%	83	%	10	U	84	%	75	%
2,6-Dinitrotoluene	10	U	94	%	90	%	10	U	88	%	78	%
3-Nitroaniline	26	U	41	%	116	%	26	U	104	%	91	%
Acenaphthene	10	U	84	%	83	%	10	U	83	%	75	%
2,4-Dinitrophenol	26	U	88	%	58	%	26	U	51	%	47 *	%
4-Nitrophenol	26	U	101	%	105	%	26	U	86	%	75	%
Dibenzofuran	10	U	88	%	87	%	10	U	86	%	76	%
2,4-Dinitrotoluene	10	U	102	%	95	%	10	U	90	%	79	%
Diethylphthalate	10	U	96	%	86	%	10	U	85	%	77	%
4-Chlorophenyl-phenylether	10	U	89	%	85	%	10	U	85	%	76	%
Fluorene	10	U	89	%	85	%	10	U	84	%	74	%
4-Nitroaniline	26	U	87	%	102 *	%	26	U	91	%	76	%
4,6-Dinitro-2-methylphenol	26	U	95	%	94	%	26	U	83	%	77	%
N-Nitrosodiphenylamine (1)	10	U	61	%	70	%	10	U	72	%	67	%
4-Bromophenyl-phenylether	10	U	76	%	74	%	10	U	77	%	73	%
Hexachlorobenzene	10	U	87	%	84	%	10	U	83	%	80	%
Pentachlorophenol	26	U	102	%	101	%	26	U	100	%	105 *	%
Phenanthrene	10	U	89	%	86	%	10	U	86	%	78	%
Anthracene	10	U	89	%	87	%	10	U	87	%	79	%
Carbazole	10	U	93	%	93	%	10	U	88	%	77	%
Di-n-butylphthalate	10	U	89	%	79	%	10	U	80	%	74	%
Fluoranthene	10	U	97	%	90	%	10	U	82	%	73	%
Pyrene	10	U	84	%	82	%	10	U	89	%	81	%
Butylbenzylphthalate	10	U	91	%	84	%	10	U	92	%	83	%
3,3'-Dichlorobenzidine	10	U	3	%	72	%	10	U	68	%	65	%
Benzo(a)anthracene	10	U	92	%	88	%	10	U	87	%	79	%
Chrysene	10	U	91	%	88	%	10	U	85	%	78	%
bis(2-Ethylhexyl)phthalate	1	JB	92	%	79	%	1	JB	91	%	83	%
Di-n-octyl phthalate	10	U	96	%	79	%	10	U	98	%	89	%
Benzo(b)fluoranthene	10	U	95	%	83	%	10	U	86	%	80	%
Benzo(k)fluoranthene	10	U	92	%	89	%	10	U	87	%	82	%
Benzo(a)pyrene	10	U	87	%	83	%	10	U	83	%	79	%
Indeno(1,2,3-cd)pyrene	10	U	86	%	94	%	10	U	86	%	79	%
Dibenz(a,h)anthracene	10	U	86	%	94	%	10	U	86	%	75	%
Benzo(g,h,i)perylene	10	U	84	%	95	%	10	U	85	%	77	%

(1) - Cannot be separated from Diphenylamine. *= Outside of EPA CLP QC limits.

0000000010

Lionville Laboratory, Inc.

Semivolatiles by GC/MS, HSL List

RFW Batch Number: 0602L209 Client: TNUHANFORD RCS-048 K0205 Work Order: 11343606001 Report Date: 02/16/06 16:59 Page: 2a

	Cust ID:	J112F9		J11250		J112C3		J112F6		J11247		SBLKTL	
Sample Information	RFW#:	003		004		005		006		007		06LE0089-MB1	
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	D.F.:	1.00		1.00		1.00		1.00		1.00		1.00	
	Units:	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Surrogate Recovery	Nitrobenzene-d5	73	%	53	%	58	%	80	%	66	%	68	%
	2-Fluorobiphenyl	63	%	46	%	50	%	70	%	56	%	60	%
	Terphenyl-d14	110	%	106	%	114	%	129	%	117	%	79	%
	Phenol-d5	73	%	63	%	68	%	79	%	76	%	67	%
	2-Fluorophenol	77	%	54	%	60	%	85	%	67	%	59	%
	2,4,6-Tribromophenol	81	%	71	%	81	%	90	%	85	%	55	%
			fl		fl		fl		fl		fl		fl
Phenol		10	U	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethyl)ether		10	U	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol		10	U	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene		10	U	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene		10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene		10	U	10	U	10	U	10	U	10	U	10	U
2-Methylphenol		10	U	10	U	10	U	10	U	10	U	10	U
2,2'-oxybis(1-Chloropropane)		10	U	10	U	10	U	10	U	10	U	10	U
4-Methylphenol		10	U	10	U	10	U	10	U	10	U	10	U
N-Nitroso-di-n-propylamine		10	U	10	U	10	U	10	U	10	U	10	U
Hexachloroethane		10	U	10	U	10	U	10	U	10	U	10	U
Nitrobenzene		10	U	10	U	10	U	10	U	10	U	10	U
Isophorone		10	U	10	U	10	U	10	U	10	U	10	U
2-Nitrophenol		10	U	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol		10	U	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethoxy)methane		10	U	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol		10	U	10	U	10	U	10	U	10	U	10	U
1,2,4-Trichlorobenzene		10	U	10	U	10	U	10	U	10	U	10	U
Naphthalene		10	U	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline		10	U	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene		10	U	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol		10	U	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene		10	U	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		10	U	10	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol		10	U	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol		26	U	25	U	25	U	26	U	25	U	25	U

*= Outside of EPA CLP QC limits.

000000011

RFW Batch Number: 0602L209 Client: TNUHANFORD RCS-048 K0205 Work Order: 11343606001 Page: 2b

Cust ID:	J112F9		J11250		J112C3		J112F6		J11247		SBLKTL	
RFW#:	003		004		005		006		007		06LE0089-MB1	
2-Chloronaphthalene	10	U	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline	26	U	25	U	25	U	26	U	25	U	25	U
Dimethylphthalate	10	U	10	U	10	U	10	U	10	U	10	U
Acenaphthylene	10	U	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U	10	U
3-Nitroaniline	26	U	25	U	25	U	26	U	25	U	25	U
Acenaphthene	10	U	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	26	U	25	U	25	U	26	U	25	U	25	U
4-Nitrophenol	26	U	25	U	25	U	26	U	25	U	25	U
Dibenzofuran	10	U	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U	10	U
Diethylphthalate	10	U	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U	10	U	10	U	10	U	10	U
Fluorene	10	U	10	U	10	U	10	U	10	U	10	U
4-Nitroaniline	26	U	25	U	25	U	26	U	25	U	25	U
4,6-Dinitro-2-methylphenol	26	U	25	U	25	U	26	U	25	U	25	U
N-Nitrosodiphenylamine (1)	10	U	10	U	10	U	10	U	10	U	10	U
4-Bromophenyl-phenylether	10	U	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene	10	U	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol	26	U	25	U	25	U	26	U	25	U	25	U
Phenanthrene	10	U	10	U	10	U	10	U	10	U	10	U
Anthracene	10	U	10	U	10	U	10	U	10	U	10	U
Carbazole	10	U	10	U	10	U	10	U	10	U	10	U
Di-n-butylphthalate	10	U	10	U	0.5	J	10	U	10	U	10	U
Fluoranthene	10	U	10	U	10	U	10	U	10	U	10	U
Pyrene	10	U	10	U	10	U	10	U	10	U	10	U
Butylbenzylphthalate	10	U	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	10	U	10	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene	10	U	10	U	10	U	10	U	10	U	10	U
Chrysene	10	U	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	0.6	JB	2	JB	2	JB	1	JB	1	JB	0.6	J
Di-n-octyl phthalate	10	U	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene	10	U	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene	10	U	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene	10	U	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene	10	U	10	U	10	U	10	U	10	U	10	U
Dibenz(a,h)anthracene	10	U	10	U	10	U	10	U	10	U	10	U
Benzo(g,h,i)perylene	10	U	10	U	10	U	10	U	10	U	10	U

(1) - Cannot be separated from Diphenylamine. *= Outside of EPA CLP QC limits.

000000012

Lionville Laboratory, Inc.

Semivolatiles by GC/MS, HSL List

Report Date: 02/16/06 16:59

RFW Batch Number: 0602L209 Client: TNUHANFORD RCS-048 K0205 Work Order: 11343606001 Page: 3a

	Cust ID:	SBLKTL BS	SBLKTL BSD	SBLKTP	SBLKTP BS	SBLKTP BSD	J11238
Sample Information	RFW#:	06LE0089-MB1	06LE0089-MB1	06LE0102-MB1	06LE0102-MB1	06LE0102-MB1	184-001
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Surrogate Recovery	Nitrobenzene-d5	80 %	81 %	61 %	53 %	91 %	73 %
	2-Fluorobiphenyl	73 %	73 %	52 %	63 %	85 %	65 %
	Terphenyl-d14	89 %	83 %	95 %	74 %	92 %	82 %
	Phenol-d5	56 %	84 %	65 %	77 %	94 %	71 %
	2-Fluorophenol	72 %	78 %	57 %	70 %	95 %	63 %
	2,4,6-Tribromophenol	75 %	73 %	71 %	85 %	111 %	63 %
		fl	fl	fl	fl	fl	fl
Phenol		84 %	94 %	10 U	85 %	108 %	10 U
bis(2-Chloroethyl)ether		88 %	98 %	10 U	80 %	101 %	10 U
2-Chlorophenol		84 %	90 %	10 U	81 %	104 %	10 U
1,3-Dichlorobenzene		66 %	70 %	10 U	57 %	81 %	10 U
1,4-Dichlorobenzene		67 %	70 %	10 U	56 %	80 %	10 U
1,2-Dichlorobenzene		70 %	73 %	10 U	60 %	86 %	10 U
2-Methylphenol		83 %	89 %	10 U	81 %	101 %	10 U
2,2'-oxybis(1-Chloropropane)		90 %	95 %	10 U	76 %	98 %	10 U
4-Methylphenol		89 %	94 %	10 U	88 %	111 * %	10 U
N-Nitroso-di-n-propylamine		82 %	86 %	10 U	79 %	95 %	10 U
Hexachloroethane		65 %	65 %	10 U	53 %	75 %	10 U
Nitrobenzene		83 %	84 %	10 U	55 %	96 %	10 U
Isophorone		90 %	95 %	10 U	60 %	102 %	10 U
2-Nitrophenol		81 %	82 %	10 U	55 %	96 %	10 U
2,4-Dimethylphenol		85 %	83 %	10 U	58 %	102 %	10 U
bis(2-Chloroethoxy)methane		25 %	82 %	10 U	58 %	98 %	10 U
2,4-Dichlorophenol		79 %	77 %	10 U	59 * %	102 %	10 U
1,2,4-Trichlorobenzene		66 %	65 %	10 U	47 %	88 %	10 U
Naphthalene		73 %	72 %	10 U	49 * %	88 %	10 U
4-Chloroaniline		5 * %	21 %	10 U	70 %	86 %	10 U
Hexachlorobutadiene		62 %	61 %	10 U	47 %	93 %	10 U
4-Chloro-3-methylphenol		84 %	83 %	10 U	64 %	108 %	10 U
2-Methylnaphthalene		78 %	76 %	10 U	55 %	95 %	10 U
Hexachlorocyclopentadiene		58 %	56 %	10 U	52 %	72 %	10 U
2,4,6-Trichlorophenol		76 %	75 %	10 U	94 %	124 * %	10 U
2,4,5-Trichlorophenol		76 %	72 %	25 U	74 %	99 %	26 U

*= Outside of EPA CLP QC limits.

000000013

RFW Batch Number: 0602L209 Client: TNUHANFORD RCS-048 K0205 Work Order: 11343606001 Page: 3b

Cust ID:	SBLKTL BS		SBLKTL BSD		SBLKTP		SBLKTP BS		SBLKTP BSD		J11238	
RFW#:	06LE0089-MB1		06LE0089-MB1		06LE0102-MB1		06LE0102-MB1		06LE0102-MB1		184-001	
2-Chloronaphthalene	76	%	75	%	10	U	74	%	97	%	10	U
2-Nitroaniline	87	%	90	%	25	U	76	%	96	%	26	U
Dimethylphthalate	83	%	83	%	10	U	76	%	97	%	10	U
Acenaphthylene	47 *	%	75	%	10	U	72	%	91	%	10	U
2,6-Dinitrotoluene	83	%	83	%	10	U	76	%	96	%	10	U
3-Nitroaniline	7 *	%	30	%	25	U	89	%	87	%	26	U
Acenaphthene	74	%	74	%	10	U	72	%	93	%	10	U
2,4-Dinitrophenol	106	%	95	%	25	U	47 *	%	96	%	26	U
4-Nitrophenol	90	%	91	%	25	U	72	%	93	%	26	U
Dibenzofuran	76	%	74	%	10	U	74	%	95	%	10	U
2,4-Dinitrotoluene	85	%	83	%	10	U	77	%	97	%	10	U
Diethylphthalate	81	%	82	%	10	U	73	%	94	%	10	U
4-Chlorophenyl-phenylether	77	%	75	%	10	U	73	%	95	%	10	U
Fluorene	88	%	85	%	10	U	72	%	92	%	10	U
4-Nitroaniline	19	%	79	%	25	U	76	%	93	%	26	U
4,6-Dinitro-2-methylphenol	105	%	98	%	25	U	73	%	99	%	26	U
N-Nitrosodiphenylamine (1)	36	%	58	%	10	U	57	%	58	%	10	U
4-Bromophenyl-phenylether	72	%	70	%	10	U	68	%	89	%	10	U
Hexachlorobenzene	73	%	71	%	10	U	75	%	97	%	10	U
Pentachlorophenol	97	%	91	%	25	U	92	%	139 *	%	26	U
Phenanthrene	82	%	80	%	10	U	74	%	96	%	10	U
Anthracene	81	%	80	%	10	U	75	%	96	%	10	U
Carbazole	49	%	83	%	10	U	75	%	96	%	10	U
Di-n-butylphthalate	82	%	81	%	10	U	73	%	94	%	10	U
Fluoranthene	83	%	82	%	10	U	72	%	94	%	10	U
Pyrene	83	%	84	%	10	U	76	%	97	%	10	U
Butylbenzylphthalate	76	%	89	%	10	U	80	%	104	%	10	U
3,3'-Dichlorobenzidine	0	%	2	%	10	U	41	%	51	%	10	U
Benzo(a)anthracene	89	%	86	%	10	U	77	%	99	%	10	U
Chrysene	89	%	86	%	10	U	75	%	97	%	10	U
bis(2-Ethylhexyl)phthalate	91	%	87	%	2	J	78	%	102	%	0.6	JB
Di-n-octyl phthalate	159 *	%	100	%	10	U	82	%	107	%	10	U
Benzo(b)fluoranthene	155 *	%	103	%	10	U	77	%	101	%	10	U
Benzo(k)fluoranthene	154 *	%	95	%	10	U	77	%	98	%	10	U
Benzo(a)pyrene	127	%	95	%	10	U	73	%	95	%	10	U
Indeno(1,2,3-cd)pyrene	149 *	%	103	%	10	U	77	%	104	%	10	U
Dibenz(a,h)anthracene	160 *	%	105	%	10	U	72	%	98	%	10	U
Benzo(g,h,i)perylene	134	%	98	%	10	U	76	%	105	%	10	U

(1) - Cannot be separated from Diphenylamine. *= Outside of EPA CLP QC limits.

000000014

Lionville Laboratory, Inc.

Semivolatiles by GC/MS, HSL List

Report Date: 02/16/06 16:59

RFW Batch Number: **0602L209** Client: **TNUHANFORD RCS-048 K0205** Work Order: 11343606001 Page: 4a

	Cust ID:	J11232		J11239		J11279		J11245	
Sample Information	RFW#:	184-002		184-003		184-004		184-005	
	Matrix:	WATER		WATER		WATER		WATER	
	D.F.:	1.00		1.00		1.00		1.00	
	Units:	ug/L		ug/L		ug/L		ug/L	
Surrogate Recovery	Nitrobenzene-d5	56	%	65	%	74	%	64	%
	2-Fluorobiphenyl	50	%	59	%	62	%	56	%
	Terphenyl-d14	66	%	81	%	80	%	110	%
	Phenol-d5	46	%	56	%	66	%	48	%
	2-Fluorophenol	47	%	53	%	60	%	66	%
	2,4,6-Tribromophenol	57	%	69	%	72	%	80	%
Phenol		0.7	J	10	U	10	U	10	U
bis(2-Chloroethyl)ether		10	U	10	U	10	U	10	U
2-Chlorophenol		10	U	10	U	10	U	10	U
1,3-Dichlorobenzene		10	U	10	U	10	U	10	U
1,4-Dichlorobenzene		10	U	10	U	10	U	10	U
1,2-Dichlorobenzene		10	U	10	U	10	U	10	U
2-Methylphenol		10	U	10	U	10	U	10	U
2,2'-oxybis(1-Chloropropane)		10	U	10	U	10	U	10	U
4-Methylphenol		10	U	10	U	10	U	10	U
N-Nitroso-di-n-propylamine		10	U	10	U	10	U	10	U
Hexachloroethane		10	U	10	U	10	U	10	U
Nitrobenzene		10	U	10	U	10	U	10	U
Isophorone		10	U	10	U	10	U	10	U
2-Nitrophenol		10	U	10	U	10	U	10	U
2,4-Dimethylphenol		10	U	10	U	10	U	10	U
bis(2-Chloroethoxy)methane		10	U	10	U	10	U	10	U
2,4-Dichlorophenol		10	U	10	U	10	U	10	U
1,2,4-Trichlorobenzene		10	U	10	U	10	U	10	U
Naphthalene		10	U	10	U	10	U	10	U
4-Chloroaniline		10	U	10	U	10	U	10	U
Hexachlorobutadiene		10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol		10	U	10	U	10	U	10	U
2-Methylnaphthalene		10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene		10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol		10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol		25	U	25	U	25	U	26	U

*= Outside of EPA CLP QC limits.

000000015

Cust ID:	J11232		J11239		J11279		J11245	
RFW#:	184-002		184-003		184-004		184-005	
2-Chloronaphthalene	10	U	10	U	10	U	10	U
2-Nitroaniline	25	U	25	U	25	U	26	U
Dimethylphthalate	10	U	10	U	10	U	10	U
Acenaphthylene	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene	10	U	10	U	10	U	10	U
3-Nitroaniline	25	U	25	U	25	U	26	U
Acenaphthene	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	25	U	25	U	25	U	26	U
4-Nitrophenol	25	U	25	U	25	U	26	U
Dibenzofuran	10	U	10	U	10	U	10	U
2,4-Dinitrotoluene	10	U	10	U	10	U	10	U
Diethylphthalate	10	U	10	U	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U	10	U	10	U
Fluorene	10	U	10	U	10	U	10	U
4-Nitroaniline	25	U	25	U	25	U	26	U
4,6-Dinitro-2-methylphenol	25	U	25	U	25	U	26	U
N-Nitrosodiphenylamine (1)	10	U	10	U	10	U	10	U
4-Bromophenyl-phenylether	10	U	10	U	10	U	10	U
Hexachlorobenzene	10	U	10	U	10	U	10	U
Pentachlorophenol	25	U	25	U	25	U	26	U
Phenanthrene	10	U	10	U	10	U	10	U
Anthracene	10	U	10	U	10	U	10	U
Carbazole	10	U	10	U	10	U	10	U
Di-n-butylphthalate	10	U	10	U	10	U	10	U
Fluoranthene	10	U	10	U	10	U	10	U
Pyrene	10	U	10	U	10	U	10	U
Butylbenzylphthalate	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	10	U	10	U	10	U	10	U
Benzo(a)anthracene	10	U	10	U	10	U	10	U
Chrysene	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	1	JB	1	JB	0.7	JB	0.8	JB
Di-n-octyl phthalate	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene	10	U	10	U	10	U	10	U
Benzo(a)pyrene	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene	10	U	10	U	10	U	10	U
Dibenz(a,h)anthracene	10	U	10	U	10	U	10	U
Benzo(g,h,i)perylene	10	U	10	U	10	U	10	U

(1) - Cannot be separated from Diphenylamine. *= Outside of EPA CLP QC limits.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J11238

Lab Name: Lionville Labs, Inc. Contract: 11343606001

Lab Code: Lionvi Case No.: _____ SAS No.: _____ SDG No.: K0205

Matrix: (soil/water) WATER Lab Sample ID: 0601L184-001

Sample wt/vol: 980 (g/mL) ML Lab File ID: J020811

Level: (low/med) LOW Date Received: 01/31/06

% Moisture: _____ decanted: (Y/N)__ Date Extracted: 02/05/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 02/08/06

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 4 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	4.699	7	J
2.	UNKNOWN	4.896	10	JB
3. 110-82-7	CYCLOHEXANE	5.362	70	JNB
4.	UNKNOWN	5.527	10	JB

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J11232

Lab Name: Lionville Labs, Inc. Contract: 11343606001

Lab Code: Lionvi Case No.: _____ SAS No.: _____ SDG No.: K0205

Matrix: (soil/water) WATER Lab Sample ID: 0601L184-002

Sample wt/vol: 990 (g/mL) ML Lab File ID: J020812

Level: (low/med) LOW Date Received: 01/31/06

% Moisture: _____ decanted: (Y/N)__ Date Extracted: 02/05/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 02/08/06

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 5 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	4.885	10	JB
2. 110-82-7	CYCLOHEXANE	5.361	50	JNB
3.	UNKNOWN	5.517	8	JB
4.	UNKNOWN	7.878	2	J
5.	UNKNOWN	24.434	2	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J11239

Lab Name: Lionville Labs, Inc. Contract: 11343606001

Lab Code: Lionvi Case No.: _____ SAS No.: _____ SDG No.: K0205

Matrix: (soil/water) WATER Lab Sample ID: 0601L184-003

Sample wt/vol: 990 (g/mL) ML Lab File ID: J020813

Level: (low/med) LOW Date Received: 01/31/06

% Moisture: _____ decanted: (Y/N)__ Date Extracted: 02/05/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 02/08/06

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 5 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	4.885	10	JB
2.	ALDOL CONDENSATE	5.227	8	JAB
3. 110-82-7	CYCLOHEXANE	5.362	50	JNB
4.	UNKNOWN	5.517	6	JB
5.	UNKNOWN	10.953	2	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J11279

Lab Name: Lionville Labs, Inc. Contract: 11343606001

Lab Code: Lionvi Case No.: _____ SAS No.: _____ SDG No.: K0205

Matrix: (soil/water) WATER Lab Sample ID: 0601L184-004

Sample wt/vol: 990 (g/mL) ML Lab File ID: J020814

Level: (low/med) LOW Date Received: 01/31/06

% Moisture: _____ decanted: (Y/N)__ Date Extracted: 02/05/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 02/08/06

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 5

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	4.678	3	J
2.	UNKNOWN	4.875	10	JB
3.	ALDOL CONDENSATE	5.217	6	JAB
4. 110-82-7	CYCLOHEXANE	5.351	50	JNB
5.	UNKNOWN	5.517	6	JB

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J11245

Lab Name: Lionville Labs, Inc. Contract: 11343606001

Lab Code: Lionvi Case No.: _____ SAS No.: _____ SDG No.: K0205

Matrix: (soil/water) WATER Lab Sample ID: 0601L184-005

Sample wt/vol: 980 (g/mL) ML Lab File ID: D020815

Level: (low/med) LOW Date Received: 01/31/06

% Moisture: _____ decanted: (Y/N)__ Date Extracted: 02/05/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 02/08/06

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	13.577	4	J

FORM 1 SV-TIC RFW (v3.3)

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J112X3

Lab Name: Lionville Labs, Inc. Contract: 11343606001

Lab Code: Lionvi Case No.: _____ SAS No.: _____ SDG No.: K0205

Matrix: (soil/water) WATER Lab Sample ID: 0602L209-001

Sample wt/vol: 980 (g/mL) ML Lab File ID: D020816

Level: (low/med) LOW Date Received: 02/03/06

% Moisture: _____ decanted: (Y/N)__ Date Extracted: 02/05/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 02/08/06

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	2.295	20	J
2.	UNKNOWN	5.103	4	J
3.	UNKNOWN	8.392	3	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J112X9

Lab Name: Lionville Labs, Inc. Contract: 11343606001

Lab Code: Lionvi Case No.: _____ SAS No.: _____ SDG No.: K0205

Matrix: (soil/water) WATER Lab Sample ID: 0602L209-002

Sample wt/vol: 980 (g/mL) ML Lab File ID: D020904

Level: (low/med) LOW Date Received: 02/03/06

% Moisture: _____ decanted: (Y/N)__ Date Extracted: 02/05/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 02/09/06

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				

IF

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J112F9

Lab Name: Lionville Labs, Inc. Contract: 11343606001

Lab Code: Lionvi Case No.: _____ SAS No.: _____ SDG No.: K0205

Matrix: (soil/water) WATER Lab Sample ID: 0602L209-003

Sample wt/vol: 980 (g/mL) ML Lab File ID: D020905

Level: (low/med) LOW Date Received: 02/03/06

% Moisture: _____ decanted: (Y/N)__ Date Extracted: 02/05/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 02/09/06

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J11250

Lab Name: Lionville Labs, Inc. Contract: 11343606001

Lab Code: Lionvi Case No.: _____ SAS No.: _____ SDG No.: K0205

Matrix: (soil/water) WATER Lab Sample ID: 0602L209-004

Sample wt/vol: 990 (g/mL) ML Lab File ID: D020906

Level: (low/med) LOW Date Received: 02/03/06

% Moisture: _____ decanted: (Y/N)__ Date Extracted: 02/05/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 02/09/06

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J112C3

Lab Name: Lionville Labs, Inc. Contract: 11343606001

Lab Code: Lionvi Case No.: _____ SAS No.: _____ SDG No.: K0205

Matrix: (soil/water) WATER Lab Sample ID: 0602L209-005

Sample wt/vol: 990 (g/mL) ML Lab File ID: D020907

Level: (low/med) LOW Date Received: 02/03/06

% Moisture: _____ decanted: (Y/N)__ Date Extracted: 02/05/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 02/09/06

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J112F6

Lab Name: Lionville Labs, Inc. Contract: 11343606001

Lab Code: Lionvi Case No.: _____ SAS No.: _____ SDG No.: K0205

Matrix: (soil/water) WATER Lab Sample ID: 0602L209-006

Sample wt/vol: 980 (g/mL) ML Lab File ID: D020908

Level: (low/med) LOW Date Received: 02/03/06

% Moisture: _____ decanted: (Y/N)__ Date Extracted: 02/05/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 02/09/06

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

J11247

Lab Name: Lionville Labs, Inc. Contract: 11343606001

Lab Code: Lionvi Case No.: _____ SAS No.: _____ SDG No.: K0205

Matrix: (soil/water) WATER Lab Sample ID: 0602L209-007

Sample wt/vol: 990 (g/mL) ML Lab File ID: D020909

Level: (low/med) LOW Date Received: 02/03/06

% Moisture: _____ decanted: (Y/N)__ Date Extracted: 02/05/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 02/09/06

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	2.229	3	J
2.	UNKNOWN	2.281	7	J
3.	UNKNOWN	5.089	4	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLKTL

Lab Name: Lionville Labs, Inc. Contract: 11343606001

Lab Code: Lionvi Case No.: _____ SAS No.: _____ SDG No.: K0205

Matrix: (soil/water) WATER Lab Sample ID: 06LE0089-MB1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: J020808

Level: (low/med) LOW Date Received: 02/05/06

% Moisture: _____ decanted: (Y/N)__ Date Extracted: 02/05/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 02/08/06

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 5 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	4.885	8	J
2.	ALDOL CONDENSATE	5.217	8	JA
3. 110-82-7	CYCLOHEXANE	5.351	40	J
4.	UNKNOWN	5.517	5	J
5.	UNKNOWN	7.930	6	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLKTP

Lab Name: Lionville Labs, Inc. Contract: 11343606001

Lab Code: Lionvi Case No.: _____ SAS No.: _____ SDG No.: K0205

Matrix: (soil/water) WATER Lab Sample ID: 06LE0102-MB1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: D021305

Level: (low/med) LOW Date Received: 02/08/06

% Moisture: _____ decanted: (Y/N)__ Date Extracted: 02/08/06

Concentrated Extract Volume: 1000(uL) Date Analyzed: 02/13/06

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				

Lionville Laboratory Use Only

06011L184

Custody Transfer Record/Lab Work Request

Page 1 of 1

See SRC

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client: TNU Hanford RCS-048

Est. Final Proj. Sampling Date:

Project #: 11343-606-001-9999-00

Project Contact/Phone #:

Lionville Laboratory Project Manager: Orlitta Johnson

QC: Spec Del: Std TAT: 30 Days

Date Rec'd: 1.31.06 Date Due: 3/2/06

		A	B	C	D	E	F	G	H	I	J	K	L
Refrigerator #		6	6	6	6	6	6	6	6	6	6	6	6
#/Type Container	Liquid	1gL	1gL	1gL	1gL	1gL	1pl	1pl	1pl	1gL	1pl	1pl	1pl
	Solid												
Volume	Liquid	1L	1L	1L	40	1L	250	125	125	500	125	125	250
	Solid												
Preservatives		—	—	—	HCL	HCL	HNO_3	—	—	HCL	H_2SO_4	H_2SO_4	H_2SO_4
ANALYSES REQUESTED →		VOA	BNA	Pest/PCB	~~PCB~~	TPH (GRO)	TPH-Diesel (21)	Metal Hg	~~Cd~~ Ag (3)	1-Juana	TPH (Total) HB.1	NO2/NO3	NH3	N by Kjeldahl
		ORGANIC					INORG						

Lionville Laboratory Use Only

MATRIX CODES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	CLGSH	CLCSH	EPCB	OGRO	ODRO	METALS(i)	IALKL	ICI	IFHC	INSHEET FOLT	INHSN	INTKN
S - Soil, SE - Sediment, SO - Solid, SL - Sludge, W - Water, O - Oil, A - Air, DS - Drum Solids, DL - Drum Liquids, L - EP/TCLP Leachate, WI - Wipe, X - Other, F - Fish	001	J11238			W	1.29.06	1330	X	X	X	X	X	X		X	X	X		
	002	~~J11222~~ J11232 (DS 1.31.06)					1415	X	X	X	X	X	X	X	X	X	X	X	X
	003	J11239					1530	X	X	X	X	X	X		X	X	X		
	004	J11279					1600	X	X	X	X	X	X		X	X	X		
	005	J11245					1630	X	X	X	X	X	X	X	X	X	X	X	X

Special Instructions:

METALS(i) = HSL + Bi, B, Li, Mo, P, Si, Sr, Sn, U

I.C.(i) = IC - Cl, Br, F, NO_3, NO_2, SO_4, PO_4

DATE/REVISIONS:

2/3/06 1. IOCT added (bottle "J") ; pH OK

2.

3.

4.

5.

6.

Relinquished by	Received by	Date	Time
FedEx	D Smith	1.31.06	0910

Relinquished by	Received by	Date	Time

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-251	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days		
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 3, SURFACE WATER	SAF No.: RC-048	Air Quality ☐
Ice Chest No.: ERC-96-012	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: A060273	Bill of Lading/Air Bill No.: SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	125mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
J11238							X	X	X	X

Sample No.	Matrix *	Sample Date	Sample Time
J11238	WATER	1-29-06	1330

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	1-29-06 2000	EAS LOCKED STORAGE	1-29-06 2000
EAS LOCKED STORAGE	01-30-06 0710	RZ Steffler R.Z. Steffler	1-30-06 0710
RZ Steffler R.Z. Steffler	1-30-06 1500	FED EX	
	1-31-06 1010	D. Smith	1-31-06 1010

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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238]

(2) 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 - 7470 - (CV)

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

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-251	Page 2 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 3, SURFACE WATER	SAF No.: RC-048	
Ice Chest No.: ERC-96-012	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/ LIONVILLE	Offsite Property No.: A060273	Bill of Lading/Air Bill No.: SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	HCl to pH <2 Cool 4C	HCl to pH <2 Cool 4C					
Type of Container	P	G	G/P	aG	aGs*					
No. of Container(s)	1	1	1	1	1					
Volume	125mL	500mL 3 SJA 12406	125mL	1000mL	40mL					
SAMPLE ANALYSIS	See item (1) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G					
Sample No. / Matrix * / Sample Date / Sample Time											
J11238 / WATER / 1-29-06 / 1330	X	X	X	X	X						

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: JAMES BERNHARD	Date/Time: 1-29-06 2000	Received By/Stored In: EAS LOCKED STORAGE	Date/Time: 1-29-06 2000
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 01-30-06 0710	Received By/Stored In: RR Stoffler R.R. Stoffler	Date/Time: 0710 1-30-06
Relinquished By/Removed From: RR Stoffler R.R. Stoffler	Date/Time: 1500 WCH 1-30-06	Received By/Stored In: FED EX	Date/Time:
Relinquished By/Removed From: FED EX	Date/Time: 1-31-06 / 09:0	Received By/Stored In: D. Johnson	Date/Time: 1-31-06 / 09:0
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

3 SJA 12406

(1) IC Anions - 300.0 [Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate]

Matrix *

S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solid
DL=Drum Liquid
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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-244	Page 2 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 4, PORE WATER	SAF No.: RC-048	
Ice Chest No.: AFS-04-052	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: A060274	Bill of Lading/Air Bill No.: SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	HCl to pH <2 Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	Cool 4C	
Type of Container	P	G	G/P	aG	aGs*	G/P	G/P	G/P	G/P	
No. of Container(s)	1	1	1	1	1	1	1	1	1	
Volume	~~125mL~~ 3 1/10/2006	500mL	125mL	1000mL	40mL	125mL	250mL	125mL	250mL	
SAMPLE ANALYSIS	See item (1) in Special Instructions	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G	Ammonia - 350.3	Nitrogen by Kjeldahl - 351.2	Alkalinity - 310.1	TDS - 160.1; TSS - 160.2	

Sample No.	Matrix *	Sample Date	Sample Time										
J11232	WATER	1-24-06	1415	X	X	X	X	X	X	X	X	X	

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[illegible]	1-24-06 2000	EAS LOCKED STORAGE [illegible]	1-24-06 2000
JAMES BERNHARD [illegible] EAS LOCKED STORAGE	01-30-06 0710	Received By/Stored In: RZ Stoffler R.Z. Stoffler	Date/Time 0710 1-30-06
Relinquished By/Removed From: RZ Stoffler R.Z. Stoffler	Date/Time 1500 1-30-06	Received By/Stored In: Fed Ex	Date/Time
Relinquished By/Removed From: Fed Ex	Date/Time 1-31-06 1090	Received By/Stored In: D. Johnson	Date/Time 1-31-06 1090
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

3 1/10/2006

(1) IC Anions - 300.0 (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-244	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality: ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 4, PORE WATER	SAF No.: RC-048	
Ice Chest No.: AFS-04-052	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES/LIONVILLE	Offsite Property No.: A060274		Bill of Lading/Air Bill No.: SEE OSPC

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POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

SAMPLE ANALYSIS												
Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	125mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL
	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 – Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium-226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
Sample No. / Matrix * / Sample Date / Sample Time										
J11232 / WATER / 1-29-06 / 1415							X	X	X	X

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From	JAMES BERNHARD	1-29-06 1415	EAS LOCKED STORAGE	1-29-06 1415
Relinquished By/Removed From	EAS LOCKED STORAGE	01-30-06 0710	Received By/Stored In: R2 Steffler	1-30-06 0710
Relinquished By/Removed From	R2 Steffler	1-30-06 1500 WCH	Received By/Stored In: Fed Ex	
Relinquished By/Removed From: Fed Ex		1-31-06 0910	Received By/Stored In	1-31-06 0910
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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238]

(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-252	Page 1 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N	Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 4, SURFACE WATER		SAF No. RC-048	Air Quality ☐	
Ice Chest No. AFS-04-050	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES (LIONVILLE)	Offsite Property No. A060272		Bill of Lading/Air Bill No. SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	125mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS				Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226: Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
Sample No.	Matrix *	Sample Date	Sample Time										
J11239	WATER	1-29-06	1530							X	X	X	X

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From JAMES BERNHARD	Date/Time 1-29-06 2000	Received By/Stored In EAS LOCKED STORAGE	Date/Time 1-29-06 2000
Relinquished By/Removed From EAS LOCKED STORAGE	Date/Time 01-30-06 0710	Received By/Stored In RZ Stiffler R.J. Stiffler	Date/Time 1-30-06 0710
Relinquished By/Removed From RZ Stiffler R.J. Stiffler	Date/Time WCH 1500 1-30-06	Received By/Stored In Fed Ex	Date/Time
Relinquished By/Removed From Fed Ex	Date/Time 1-31-06 0910	Received By/Stored In D. Smith	Date/Time 1-31-06 0910
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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238)

(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-252	Page 2 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N	Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 4, SURFACE WATER		SAF No. RC-048	Air Quality ☐	
Ice Chest No. AFS-04-050	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES LIONVILLE	Offsite Property No. A060272		Bill of Lading/Air Bill No. SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	HCl to pH <2 Cool 4C	HCl to pH <2 Cool 4C						
Type of Container	P	G	G/P	aG	aGs*						
No. of Container(s)	1	1	1	1	1						
Volume	125mL	500mL 3/18/2006	125mL	1000mL	40mL						
SAMPLE ANALYSIS	See item (1) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G						
Sample No.	Matrix *	Sample Date	Sample Time								
J11239	WATER	1-29-06	1530	X	X	X	X	X			

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From JAMES BERNHARD	1-29-06 2000	Received By/Stored In EAS LOCKED STORAGE	1-29-06 2000
Relinquished By/Removed From EAS LOCKED STORAGE	01-30-06 0710	Received By/Stored In RZ Stiffler	1-30-06 0710
Relinquished By/Removed From RZ Stiffler	1-30-06 1500	Received By/Stored In Fed Ex	
Relinquished By/Removed From Fed Ex	1-31-06 1090	Received By/Stored In D. Mitch	1-31-06 1090
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

3/18/2006

(1) IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate}

Matrix *

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

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-276	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 5, SURFACE WATER	SAF No.: RC-048	
Ice Chest No.: AFS-04-050	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: A060272		Bill of Lading/Air Bill No.: SEE OSPC

00000038

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	60mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL
SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081

Sample No.	Matrix *	Sample Date	Sample Time										
J11279	WATER	1-29-06	1600							X	X	X	X

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: JAMES BERNHARD	Date/Time 2000 BH 1-29-06 ~~1600~~	Received By/Stored In: EAS LOCKED STORAGE	Date/Time 2000 BH 1-29-06 ~~1600~~
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time 0130 00/0700	Received By/Stored In: RZ Steffler R.Z. Steffler	Date/Time 0700 1-30-06
Relinquished By/Removed From: RZ Steffler R.Z. Steffler	Date/Time 1500 WH 1-30-06	Received By/Stored In: Fed Ex	Date/Time
Relinquished By/Removed From: Fed Ex	Date/Time 1-31-06/0910	Received By/Stored In: D. Smith	Date/Time 1-31-06/0910
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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238)

(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-276	Page 2 of 2

Collector: TILLER, B **JAMES BERNHARD**	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 7N	Data Turnaround: 45 Days
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 5, SURFACE WATER		SAF No.: RC-048	Air Quality ☐	
Ice Chest No.: AFS-04-050	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX		
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: A060272		Bill of Lading/Air Bill No.: SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	HCl to pH <2 Cool 4C	HCl to pH <2 Cool 4C						
Type of Container	P	G	G/P	aG	aGs*						
No. of Container(s)	1	1	1	1	1						
Volume	125mL	500mL 3 AM 12606	125mL	1000mL	40mL						
SAMPLE ANALYSIS	See item (1) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G						
Sample No.	Matrix *	Sample Date	Sample Time								
J11279	WATER	1-29-06	1600	X	X	X	X	X			

CHAIN OF POSSESSION	Date/Time	Sigs/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: JAMES BERNHARD	1-29-06 2000	EAS LOCKED STORAGE	1-29-06 2000
Relinquished By/Removed From: EAS LOCKED STORAGE	1-30-06 0710	Received By/Stored In: RZ Stoffler	1-30-06 0710
Relinquished By/Removed From: RZ Stoffler	1-30-06 1500	Received By/Stored In: Fed Ex	1-30-06
Relinquished By/Removed From: Fed Ex	1-31-06 1090	Received By/Stored In: D Smith	1-31-06 1090
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

3 AM 12606

(1) IC Anions - 300.0 (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-258	Page 1 of 2

Collector: TILLER, B [redacted]	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 5, PORE WATER	SAF No.: RC-048	
Ice Chest No.: ERC-96-012	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: A060273	Bill of Lading/Air Bill No.: SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

SAMPLE ANALYSIS												
Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	~~125mL~~ 60 BA 1-27-06	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL
	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
Sample No. / Matrix * / Sample Date / Sample Time										
J11245 / WATER / 1-29-06 / 1630							X	X	X	X

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: [redacted]	1-29-06 2000 EAS	Received By/Stored In: LOCKED STORAGE	1-29-06 2000
Relinquished By/Removed From: EAS LOCKED STORAGE	1-30-06 0710	Received By/Stored In: RZ Stoffler	1-30-06 0710
Relinquished By/Removed From: RZ Stoffler	1-30-06 1500	Received By/Stored In: Fed Ex	
Relinquished By/Removed From: Fed Ex	1-31-06 0910	Received By/Stored In:	1-31-06 0910
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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238)

(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-258	Page 2 of 2

Collector: TILLER, B **JAMES BERNHARD**	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 5, PORE WATER	SAF No.: RC-048	
Ice Chest No.: ERC-96-012	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: A060273	Bill of Lading/Air Bill No.: SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	HCl to pH <2 Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	Cool 4C	
Type of Container	P	G	G/P	aG	aGs*	G/P	G/P	G/P	G/P	
No. of Container(s)	1	1	1	1	1	1	1	1	1	
Volume	125mL	500mL	125mL	1000mL	40mL	125mL	250mL	125mL	250mL	
SAMPLE ANALYSIS	See item (j) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G	Ammonia - 350.3	Nitrogen by Kjeldahl - 351.2	Alkalinity - 310.1	TDS - 160.1; TSS - 160.2	

Sample No.	Matrix *	Sample Date	Sample Time										
J11245	WATER	1-29-06	1630	X	X	X	X	X	X	X	X	X	

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By/Removed From: JAMES BERNHARD	Date/Time: 1-29-06 2000	Received By/Stored In: EAS LOCKED STORAGE — Date/Time: 1-29-06 2000
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 01-30-06 0710	Received By/Stored In: RZ Steffler — Date/Time: 0710 1-30-06
Relinquished By/Removed From: RZ Steffler	Date/Time: 1-30-06 1500	Received By/Stored In: Fed Ex — Date/Time:
Relinquished By/Removed From: Fed Ex	Date/Time: 1-31-06 1291 0	Received By/Stored In: [illegible] — Date/Time: 1-31-06 1291 0
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

3 1260 WAP

(j) IC Anions - 300.0 (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate)

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

BHI-EE-011 (08/29/2005)

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU Hanford

Date: 1-31-06

Purchase Order / Project# / SAF# / SOW# / Release #: RC-048

LvLI Batch # : 06011L184

Sample Custodian: D. Smith

NOTE: EXPLAIN ALL DISCREPANCIES

1.	Samples Hand Delivered or Shipped	Carrier Fed Ex		Airbill# 7920 0239 321 7926 4477 292 7907 9610 879
2.	Custody seals on coolers or shipping container intact, signed and dated?	☑ Yes	☐ No	☐ No Seals Comments
3.	Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	
4.	All expected paperwork received (coc and other client specific information) sealed in plastic bag and easily accessible?	☑ Yes	☐ No	
5.	Samples received cooled or ambient? IR	Temp 1.3 °C 1.8 °C 1.6 °C		Cooler # AFS-04-052 # AFS-04-050 # ERC-96-01
6.	Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7.	coc signed and dated?	☑ Yes	☐ No	
8.	Sample containers are intact?	☑ Yes	☐ No	
9.	All samples on coc received? All samples received on coc?	☑ Yes	☐ No	
10.	All sample label information matches coc?	☑ Yes	☐ No	
11.	Samples properly preserved?	☑ Yes	☐ No	
12.	Samples received within hold times? Short holds taken to wet lab?	☑ Yes	☐ No	
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 not within policy. See reverse side for policy)	☑ Yes	☐ No	
16.	Project Manager contacted concerning discrepancies? name/date (or samples outside criteria)	☐ Yes	☐ No	☑ No Discrepancies

SR-002-B

LVLI LIONVILLE LABORATORY INC.

Lionville Laboratory Use Only

0602L209

Custody Transfer Record/Lab Work Request

Page 1 of 1

See SRC

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

RCS-048

Client: TNU- HANFORD SAF# RC-048

Est. Final Proj. Sampling Date:

Project #: 11343-606-001-9999-00

Project Contact/Phone #:

Lionville Laboratory Project Manager: DJ

QC: Spec Del: Std TAT: 30 Days

Date Rec'd: 2/3/06 Date Due: 3/5/06

		A-C	D E	F-H	I I	K L	M	N	O	P	Q	R
Refrigerator #		6	6	6	1	6	6	6	6	6	1	6
#/Type Container	Liquid	G	G	G	L	G				G		
#/Type Container	Solid											
Volume	Liquid	L	L	L	40	L	500	125	125	100L	125	125
Volume	Solid											
Preservatives					HCL		HNO3	—	—	HCL	H2SO4	H2SO4

ANALYSES REQUESTED →

	ORGANIC							INORG					
	VOA	BNA	Pest/PCB	Herb	PEST	TPH GRO	TPH Diesel	Metal	ALK	TC Aniens	TOT TPH	NCL NO3 & TOC	WHS
Lionville Laboratory Use Only													
		C625H	OPCB		8080H	OGRO	ODRO	METALS(1)	IALKL	IC(1)	IPHC	IN3N2 IOCT	INH3N

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	C625H	OPCB		8080H	OGRO	ODRO	METALS(1)	IALKL	IC(1)	IPHC	IN3N2 IOCT	INH3N	INTKN
001	J112X3	✓	✓	W	2-1-06	1445	3	2		3	2	2	1	1	1	1	1	1	1
002	X9	✓	✓			1430	3	2		3	2	2	1		1	1	1		
003	F9					1830	1	1		1	1	1	1		1	1	1		
004	J112 50					1900	1	1		1	1	1	1	1	1	1	1	1	1
005	C3					1530	1	1		1	1	1	1	1	1	1	1	1	1
006	F6					1600	1	1		1	1	1	1		1	1	1		
007	47					1615	1	1		1	1	1	1	1	1	1	1	1	1

Special Instructions:

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

IC(1) = IC - Br, Cl, F, NO2, NO3, SO4, PO4

DATE/REVISIONS:

1. Share bottle "Q" for N3N2 & TOC ; per DJ
2.
3.
4.
5.
6.

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	2/3/06	0930

Relinquished by	Received by	Date	Time

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-290	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr- 6, PORE WATER FULL QC		SAF No.: RC-048
Ice Chest No.: FAC-02-504	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: A060278		Bill of Lading/Air Bill No.: SEE OSPC

00000004

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	3	2	3
Volume	125mL	1000mL	1000mL	1000mL	1000mL	1000mL	500mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS				Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium-226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
Sample No.	Matrix *	Sample Date	Sample Time										
J112X3	WATER	02-01-06	1445							X	X	X	X

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: JAMES BERNHARD	02-01-06 2030	Received By/Stored In: EAS LOCKED STORAGE	02/01/06 2030
Relinquished By/Removed From: EAS LOCKED STORAGE	02/02/06 1200	Received By/Stored In: David Stephenson	02-02-06 1200
Relinquished By/Removed From: David Stephenson	02/02/06 1400	Received By/Stored In: Fed Ex	
Relinquished By/Removed From: Fed Ex	2-3-06 0930	Received By/Stored In:	2-3-06 0930
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) [Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238]

(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-290	Page 2 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr-6 PORE WATER FULL QC		SAF No.: RC-048
Ice Chest No.: ERC-02-504	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES ALIONVILLE	Offsite Property No.: A060278		Bill of Lading/Air Bill No.: SEE OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	Cool 4C	
Type of Container	P	G	G/P	aG	aGs*	G/P	G/P	G/P	G/P	
No. of Container(s)	1	1	1	2	2	1	1	1	1	
Volume	125mL	1000mL 3 MD 13006	125mL	1000mL	40mL	125mL	250mL	125mL	250mL	
SAMPLE ANALYSIS	See item (f) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G	Ammonia - 350.3	Nitrogen by Kjeldahl - 351.2	Alkalinity - 310.1	TDS - 160.1; TSS - 160.2	

Sample No.	Matrix *	Sample Date	Sample Time										
J112X3	WATER	02-01-06	1445	X	X	X	X	X	X	X	X	X	

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: JAMES BERNHARD	Date/Time: 02-01-06 2030	Received By/Stored In: EAS LOCKED STORAGE	Date/Time: 02-01-06 2030
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 02-02-06 1200	Received By/Stored In: David St. John West	Date/Time: 02-02-06 1200
Relinquished By/Removed From: David St. John West	Date/Time: 02/02/06 1400	Received By/Stored In: Fed Ex	Date/Time:
Relinquished By/Removed From: Fed Ex	Date/Time: 2/3/06 0930	Received By/Stored In:	Date/Time: 2-3-06 0930
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

3 MD 13006

(f) IC Anions - 300.0 [Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate]

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-296	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr-6, SURFACE WATER FULL QC		SAF No.: RC-048
Ice Chest No.: ERC-99-061	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: A060278		Bill of Lading/Air Bill No.: SEE OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	3	2	3
Volume	125mL	1000mL	1000mL	1000mL	1000mL	1000mL	500mL	1000mL	1000mL	1000mL
SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
Sample No. / Matrix * / Sample Date / Sample Time										
J112X9 / WATER / 02-01-06 / 1430							X	X	X	X

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: JAMES BERNHARD	Date/Time: 02-01-06 2030	Received By/Stored In: EAS LOCKED STORAGE	Date/Time: 02-01-06 2030
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 02-02-06 1200	Received By/Stored In: David St. John WCH	Date/Time: 02-02-06 1200
Relinquished By/Removed From: David St. John WCH	Date/Time: 02/02/06 1400	Received By/Stored In: Fed Ex	Date/Time
Relinquished By/Removed From: FEDEX	Date/Time: 2-3-06 0930	Received By/Stored In:	Date/Time: 2-3-06 0930
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}

(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-296	Page 2 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N	Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA-Water Sa	Sampling Location Cr-6 SURFACE WATER FULL QC		SAF No. RC-048	Air Quality ☐	
Ice Chest No. ERC-99-061	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES (LIONVILLE)	Offsite Property No. A060278		Bill of Lading/Air Bill No. SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	HCl to pH <2 Cool 4C						
Type of Container	P	G	G/P	aG	aGs*						
No. of Container(s)	1	1	1	2	2						
Volume	125mL	1000mL 3 HB 1300	125mL	1000mL	40mL						
SAMPLE ANALYSIS	See item (f) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G						
Sample No. / Matrix * / Sample Date / Sample Time											
J112X9 / WATER / 02-01-06 / 1430	X	X	X	X	X						

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From JAMES BERNHARD	Date/Time 2030 02-01-06	Received By/Stored In EAS LOCKED STORAGE	Date/Time 2030 02-01-06
Relinquished By/Removed From EAS LOCKED STORAGE	Date/Time 1200 02-02-06	Received By/Stored In David St. John	Date/Time 1200 02-02-06
Relinquished By/Removed From David St. John	Date/Time 1400 02/02/06	Received By/Stored In FedEx	Date/Time
Relinquished By/Removed From FedEx	Date/Time 2-3-06 0930	Received By/Stored In	Date/Time 2-3-06 0930
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

3 HB 1300

(f) IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate}

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-285	Page 2 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N	Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 10, SURFACE WATER		SAF No. RC-048	Air Quality ☐	
Ice Chest No. ERC-96-061	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES / CONVILLE	Offsite Property No. A060278		Bill of Lading/Air Bill No. SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	HCl to pH <2 Cool 4C						
Type of Container	P	G	G/P	aG	aGs*						
No. of Container(s)	1	1	1	1	1						
Volume	125mL	500mL	125mL	1000mL	40mL						
SAMPLE ANALYSIS	See item (f) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G						
Sample No.	Matrix *	Sample Date	Sample Time								
J112F9	WATER	02-01-06	1830	X	X	X	X	X			

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From JAMES BERNHARD	2130 02-01-010	Received By/Stored In EAS LOCKED STORAGE	2130 2-1-06
Relinquished By/Removed From EAS LOCKED STORAGE	1700 02-02-06	Received By/Stored In David St. Johnwch	1200 02-02-06
Relinquished By/Removed From Dalla St Johnwch	1400 02/02/06	Received By/Stored In Fed Ex	
Relinquished By/Removed From Fed Ex	2-3-06 0930	Received By/Stored In	2-3-06 0930
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

3 APP 12606

(f) IC Anions - 300.0 (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate)

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
Ve=Vegetation
X=Other

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-285	Page 1 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 10, SURFACE WATER		SAF No. RC-048	Air Quality ☐
Ice Chest No. ERC-96-061	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX	
Shipped To EBERLINE SERVICES, LIONVILLE	Offsite Property No. A06D278		Bill of Lading/Air Bill No. SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	60mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL
SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081

Sample No.	Matrix *	Sample Date	Sample Time										
J112F9	WATER	07-01-06	1830							X	X	X	X

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	JAMES BERNHARD	7-1-06	EAS LOCKED STORAGE	7-1-06 2130
Relinquished By/Removed From	EAS LOCKED STORAGE	02-02-06 1200	Received By/Stored In	02-02-06 1200
Relinquished By/Removed From		02/02/06 1400	Received By/Stored In	Fed EX
Relinquished By/Removed From	Fed EX	2-3-06 0930	Received By/Stored In	2-3-06 0930
Relinquished By/Removed From			Received By/Stored In	
Relinquished By/Removed From			Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) [Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238]

(2) 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 - 7470 - (CV)

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=Layered
Ve=Vegetation
X=Other

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-263	Page 2 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 10, PORE WATER	SAF No.: RC-048	
Ice Chest No.: ERC-02-002	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A060278	Bill of Lading/Air Bill No.: SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

SAMPLE ANALYSIS												
			Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	HCl to pH <2 Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	Cool 4C	
			Type of Container	P	G	G/P	aG	aGs*	G/P	G/P	G/P	G/P	
			No. of Container(s)	1	1	1	1	1	1	1	1	1	
			Volume	125mL	500mL	125mL	1000mL	40mL	125mL	250mL	125mL	250mL	
				3 AM/2606									
				See item (J) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G	Ammonia - 350.3	Nitrogen by Kjeldahl - 351.2	Alkalinity - 310.1	TDS - 160.1; TSS - 160.2	
Sample No.	Matrix *	Sample Date	Sample Time										
J11250	WATER	02-01-06	1900	X	X	X	X	X	X	X	X	X	

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By/Removed From: JAMES BERNHARD	Date/Time: 02-01-06 2030	Received By/Stored In: EAS LOCKED STORAGE
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 02-02-06 1200	Received By/Stored In: David Sigman WC4 / Date/Time: 02-02-06 1200
Relinquished By/Removed From: David Sigman WC4	Date/Time: 02/02/06 1400	Received By/Stored In: Fed EX
Relinquished By/Removed From: Fed Ex	Date/Time: 2-3-06 0930	Received By/Stored In: V. Nelson	Date/Time: 2-3-06 0930
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

3 AM/2606

(J) IC Anions - 300.0 (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate)

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
Ve=Vegetation
X=Other

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-263	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 7N	Data Turnaround: 45 Days
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 10, PORE WATER		SAF No.: RC-048	Air Quality ☐	
Ice Chest No.: ERC-02-002	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX		
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: A060278		Bill of Lading/Air Bill No.: SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	125mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL
SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium-226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081

Sample No.	Matrix *	Sample Date	Sample Time										
J11250	WATER	02-01-06	1900							X	X	X	X

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	JAMES BERNHARD	02-01-06 2030	EAS LOCKED STORAGE	02-01-06 2030
Relinquished By/Removed From	EAS LOCKED STORAGE	02-02-06 1200	David St. Johnwell	02-02-06 1200
Relinquished By/Removed From	David St. Johnwell	02/02/06 1400	Fed Ex	
Relinquished By/Removed From	Fed Ex	2-3-06 0930	J. Hernandez	2-3-06 0930
Relinquished By/Removed From			Received By/Stored In	
Relinquished By/Removed From			Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) [Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238]

(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-280	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 6, VERTICAL TUBE	SAF No.: RC-048	
Ice Chest No.: ERC-02-002	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: A060278 ~~A0600~~ 02/02/06		Bill of Lading/Air Bill No.: SEE OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	60mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
J112C3	WATER	02-01-06	1530							X	X	X	X

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	02-01-06 2030	EAS LOCKED STORAGE	02-01-06 2030
EAS LOCKED STORAGE	02-02-06 1200	David Stephens WCH	02-02-06 1200
David Stephens WCH	02/02/06 1400	Fed Ex	
Fed Ex	2-3-06 0930	[illegible]	2-3-06 0930

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) (Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238)

(2) 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 - 7470 - (CV)

Matrix *

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

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-280	Page 2 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N Air Quality ☐	Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 6, VERTICAL TUBE		SAF No. RC-048		
Ice Chest No. ERC-02-002	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES/ LIONVILLE	Offsite Property No.		Bill of Lading/Air Bill No. SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	Cool 4C	
Type of Container	P	G	G/P	aG	aGs*	G/P	G/P	G/P	G/P	
No. of Container(s)	1	1	1	1	1	1	1	1	1	
Volume	125mL	500mL 3 AP 13006	125mL	1000mL	40mL	125mL	250mL	125mL	250mL	
SAMPLE ANALYSIS	See item (2) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G	Ammonia - 350.3	Nitrogen by Kjeldahl - 351.2	Alkalinity - 310.1	TDS - 160.1; TSS - 160.2	

Sample No.	Matrix *	Sample Date	Sample Time										
J112C3	WATER	02-01-06	1530	X	X	X	X	X	X	X	X	X	

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	2030 02-01-06	EAS LOCKED STORAGE	2030 02-01-06
EAS LOCKED STORAGE	1200 02-02-06	David St. John WCH	1200 02-02-06
David St. John WCH	1400 02/02/06	Fed Ex	
Fed Ex	2-3-06 0930		2-3-06 0930

SPECIAL INSTRUCTIONS

3 AP 13006

(2) IC Anions - 300.0 (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-282	Page 1 of 2

Collector TILLER, B Bernhard	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 7. SURFACE WATER		SAF No. RC-048
Ice Chest No. ERC-03-106	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX
Shipped To EBERLINE SERVICES, LIONVILLE	Offsite Property No. A060278		Bill of Lading/Air Bill No. SEE OSPC

Price Code 7N

Air Quality ☐

Data Turnaround 45 Days

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	60mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium-226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
J112F6	WATER	2-1-06	1600							X	X	X	X

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From JAMES BERNHARD	Date/Time 2:30 2-1-06	Received By/Stored In EAS LOCKED STORAGE	Date/Time 2-1-06 2130
Relinquished By/Removed From EAS LOCKED STORAGE	Date/Time 1200 02-02-06	Received By/Stored In Bernard St. John w/c H	Date/Time 1200 02-02-06
Relinquished By/Removed From Bernard St. John w/c H	Date/Time 1400 02/02/06	Received By/Stored In Fed Ex	Date/Time
Relinquished By/Removed From Fed Ex	Date/Time 2-3-06 0930	Received By/Stored In Neeman	Date/Time 2-3-06 0930
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) [Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238]

(2) 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 - 7470 - (CV)

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
Ve=Vegetation
X=Other

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-282	Page 2 of 2

Collector TILLER, B Bernhard	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 7, SURFACE WATER		SAF No. RC-048
Ice Chest No. ERC-03-106	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX
Shipped To EBERLINE SERVICES (LIONVILLE)	Offsite Property No. A060278		Bill of Lading/Air Bill No. SEE OSPC

Price Code 7N

Air Quality ☐

Data Turnaround 45 Days

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	HCl to pH <2 Cool 4C						
Type of Container	P	G	G/P	aG	aGs*						
No. of Container(s)	1	1	1	1	1						
Volume	125mL	500mL	125mL	1000mL	40mL						
SAMPLE ANALYSIS	See item (1) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G						
Sample No. / Matrix * / Sample Date / Sample Time											
J112F6 / WATER / 2-1-06 / 1600	X	X	X	X	X						

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From JAMES BERNHARD	Date/Time 2130 2-1-06	Received By/Stored In EAS LOCKED STORAGE	Date/Time 2130 2-1-06
Relinquished By/Removed From EAS LOCKED STORAGE	Date/Time 1700 02-02-06	Received By/Stored In David St. John WCH	Date/Time 1700 02-02-06
Relinquished By/Removed From David St. John WCH	Date/Time 1400 02/02/06	Received By/Stored In Fed Ex	Date/Time
Relinquished By/Removed From Fed Ex	Date/Time 2-3-06 0930	Received By/Stored In T. Newcomb	Date/Time 2-3-06 0930
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

3 bottles

(1) IC Anions - 300.0 (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate)

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
LeLeipid
V=Vegetation
X=Other

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-260	Page 1 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 7, PORE WATER		SAF No. RC-048
Ice Chest No. ERC-03-106	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX
Shipped To EBERLINE SERVICES/LIONVILLE	Offsite Property No. A060278		Bill of Lading/Air Bill No. SEE OSPC

Price Code 7N

Air Quality ☐

Data Turnaround 45 Days

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	125mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL
SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081

Sample No.	Matrix *	Sample Date	Sample Time										
J11247	WATER	2-1-06	1615							X	X	X	X

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From JAMES BERNHARD	2130 2-1-06	Received By/Stored In EAS LOCKED STORAGE	2130 2-1-06
Relinquished By/Removed From EAS LOCKED STORAGE	1200 02-02-06	Received By/Stored In	1200 02-02-06
Relinquished By/Removed From	1600 02/02/06	Received By/Stored In Fed Ex	
Relinquished By/Removed From Fed Ex	2-3-06 0930	Received By/Stored In	2-3-06 0930
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) (Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238)

(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-260	Page 2 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 7, PORE WATER	SAF No.: RC-048	
Ice Chest No.: ERC-03-106	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: A060278	Bill of Lading/Air Bill No.: SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	HCl to pH <2 Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	Cool 4C	
Type of Container	P	G	G/P	aG	aGs*	G/P	G/P	G/P	G/P	
No. of Container(s)	1	1	1	1	1	1	1	1	1	
Volume	125mL	500mL	125mL	1000mL	40mL	125mL	250mL	125mL	250mL	
SAMPLE ANALYSIS	See item (1) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G	Ammonia - 350.3	Nitrogen by Kjeldahl - 351.2	Alkalinity - 310.1	TDS - 160.1; TSS - 160.2	
Sample No. / Matrix * / Sample Date / Sample Time										
J11247 / WATER / 2-1-06 / 1615	X	X	X	X	X	X	X	X	X	

3 JH 12406

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	2130 2-1-06	EAS LOCKED STORAGE	2130 2-1-06
EAS LOCKED STORAGE	02-02-06 1200	David St. John WCH	1200 02-02-06
David St. John WCH	1400 02/02/06	Fed EX	
Fed Ex	2-3-06 0930		2-3-06 0930

SPECIAL INSTRUCTIONS

3 JH 12406

(1) IC Anions - 300.0 (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate)

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

BHI-EE-011 (08/29/2005)

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU HANFORD **Date:** 2-3-06

Purchase Order / Project# / SAF# / SOW# / Release #: RC-048

LvLI Batch # : 06021209 **Sample Custodian:** Victor Hernandez

NOTE: EXPLAIN ALL DISCREPANCIES

1.	Samples Hand Delivered ~~or Shipped~~	Carrier FED EX		Airbill#	7920 0643 5541 5552 5563 8140 8150 ⊥ ⊥ 7926 4937 ⊥ ⊥ Comments
2.	Custody seals on coolers or shipping container intact, signed and dated?	☑ Yes	☐ No	☐ No Seals	
3.	Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No		
4.	All expected paperwork received (coc and other client specific information) sealed in plastic bag and easily accessible?	☑ Yes	☐ No		
5.	Samples received cooled or ambient?	Temp 4-2 4-1 2-9 3-8 4-	°C	Cooler #	ERC-02-504 99-061 02-002 03-106 96-061 ⊥
6.	Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals	
7.	coc signed and dated?	☑ Yes	☐ No		
8.	Sample containers are intact?	☑ Yes	☐ No		
9.	All samples on coc received? All samples received on coc?	☑ Yes	☐ No		
10.	All sample label information matches coc?	☑ Yes	☐ No		
11.	Samples properly preserved?	☑ Yes	☐ No		
12.	Samples received within hold times? Short holds taken to wet lab?	☑ Yes	☐ No		
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 not within policy. See reverse side for policy)	☑ Yes	☐ No		
16.	Project Manager contacted concerning discrepancies? name/date (or samples outside criteria)	☐ Yes	☐ No	☑ No Discrepancies	

SR-002-B

LvLI LIONVILLE LABORATORY INC.

RECEIVED
MAR 2006

Lionville Laboratory, Inc.
PEST/PCB ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RCS-048 K0205

DATE RECEIVED: 01/31/06 LVL LOT # :0601L184

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J11238	001	W	06LE0088	01/29/06	02/05/06	02/06/06
J11232	002	W	06LE0088	01/29/06	02/05/06	02/06/06
J11239	003	W	06LE0088	01/29/06	02/05/06	02/06/06
J11279	004	W	06LE0088	01/29/06	02/05/06	02/06/06
J11245	005	W	06LE0088	01/29/06	02/05/06	02/07/06
LAB QC:						
PBLKBA	MB1	W	06LE0088	N/A	02/05/06	02/06/06
PBLKBA	MB1 BS	W	06LE0088	N/A	02/05/06	02/06/06
PBLKBA	MB1 BSD	W	06LE0088	N/A	02/05/06	02/06/06

Lionville Laboratory, Inc.
PEST/PCB ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD RCS-048

DATE RECEIVED: 02/03/06 LVL LOT # :0602L209

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J112X3	001	W	06LE0088	02/01/06	02/05/06	02/07/06
J112X3	001 MS	W	06LE0088	02/01/06	02/05/06	02/07/06
J112X3	001 MSD	W	06LE0088	02/01/06	02/05/06	02/07/06
J112X9	002	W	06LE0088	02/01/06	02/05/06	02/07/06
J112F9	003	W	06LE0088	02/01/06	02/05/06	02/07/06
J11250	004	W	06LE0088	02/01/06	02/05/06	02/07/06
J112C3	005	W	06LE0088	02/01/06	02/05/06	02/07/06
J112F6	006	W	06LE0088	02/01/06	02/05/06	02/07/06
J11247	007	W	06LE0088	02/01/06	02/05/06	02/07/06

LAB QC:

PBLKBA	MB1	W	06LE0088	N/A	02/05/06	02/06/06
PBLKBA	MB1 BS	W	06LE0088	N/A	02/05/06	02/06/06
PBLKBA	MB1 BSD	W	06LE0088	N/A	02/05/06	02/06/06

LIONVILLE LABORATORY INC.

Case Narrative

Client: TNU-HANFORD RCS-048
LVL #: 0601L184 and 0602L209
SDG/SAF # K0205/RCS-048

W.O. #: 11343-606-001-9999-00
Date Received: 01-31-2006 and 02-03-2006

CHLORINATED PESTICIDES

Twelve (12) water samples were collected on 01-29-2006 and 02-01-2006.

The samples and their associated QC samples were extracted on 02-05-2006 and analyzed according to Lionville Laboratory SOPs based on SW846, 3rd Edition procedures on 02-06,07-2006. The extraction procedure was based on method 3520C and the extracts were analyzed based on method 8081A.

The following is a summary of the QC results accompanying the sample results and a description of any problems encountered during their analyses:

1. All results presented in this report are derived from samples that met LvLI's sample acceptance policy.
2. Samples were extracted and analyzed within required holding time.
3. The samples and their associated QC samples received a Copper-Sulfur cleanup according to Lionville Laboratory SOPs based on SW846 method 3660A.
4. The method blank was below the reporting limits for all target compounds.
5. All surrogate recoveries were within acceptance criteria.
6. All blank spike recoveries were within acceptance criteria.
7. All matrix spike recoveries were within acceptance criteria.
8. The initial calibrations associated with this data set were within acceptance criteria.
9. The continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.
10. LvLI is NELAP accredited by the state of Pennsylvania and holds over 20 additional state accreditations. For a complete listing of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager.
11. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard-copy data package has been authorized by the laboratory Manager or a designee, as verified by the following signature.

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

2/10/06
Date

som\r:\group\data\pest\tnu hanford\0601-184 & 0602-209.pst
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 3 6 pages.

208 Welsh Pool Road • Exton, PA 19341- 1313 • (610) 280-3000 • Fax (610) 280-3041

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.

Lionville Laboratory, Inc.

Pesticide/PCBs by GC, CLP List

Report Date: 02/09/06 12:55

RFW Batch Number: 0601L184 Client: TNUHANFORD RCS-048 K0205 Work Order: 11343606001 Page: 1

000000005

	Cust ID:	J11238		J11232		J11239		J11279		J11245		PBLKBA	
Sample Information	RFW#:	001		002		003		004		005		06LE0088-MB1	
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	D.F.:	1.00		1.00		1.00		1.00		1.00		1.00	
	Units:	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
Surrogate: Tetrachloro-m-xylene		59	%	57	%	55	%	62	%	58	%	39	%
Decachlorobiphenyl		62	%	66	%	58	%	61	%	68	%	60	%
			fl		fl		fl		fl		fl		fl
Alpha-BHC		0.052	U	0.051	U	0.051	U	0.051	U	0.051	U	0.050	U
gamma-BHC (Lindane)		0.052	U	0.051	U	0.051	U	0.051	U	0.051	U	0.050	U
Beta-BHC		0.052	U	0.051	U	0.051	U	0.051	U	0.051	U	0.050	U
Heptachlor		0.052	U	0.051	U	0.051	U	0.051	U	0.051	U	0.050	U
Delta-BHC		0.052	U	0.051	U	0.051	U	0.051	U	0.051	U	0.050	U
Aldrin		0.052	U	0.051	U	0.051	U	0.051	U	0.051	U	0.050	U
Heptachlor epoxide		0.052	U	0.051	U	0.051	U	0.051	U	0.051	U	0.050	U
gamma-Chlordane		0.052	U	0.051	U	0.051	U	0.051	U	0.051	U	0.050	U
Endosulfan I		0.052	U	0.051	U	0.051	U	0.051	U	0.051	U	0.050	U
alpha-Chlordane		0.052	U	0.051	U	0.051	U	0.051	U	0.051	U	0.050	U
4,4'-DDE		0.052	U	0.051	U	0.051	U	0.051	U	0.051	U	0.050	U
Dieldrin		0.052	U	0.051	U	0.051	U	0.051	U	0.051	U	0.050	U
Endrin		0.052	U	0.051	U	0.051	U	0.051	U	0.051	U	0.050	U
4,4'-DDD		0.052	U	0.051	U	0.051	U	0.051	U	0.051	U	0.050	U
Endosulfan II		0.052	U	0.051	U	0.051	U	0.051	U	0.051	U	0.050	U
4,4'-DDT		0.052	U	0.051	U	0.051	U	0.051	U	0.051	U	0.050	U
Endrin aldehyde		0.052	U	0.051	U	0.051	U	0.051	U	0.051	U	0.050	U
Endosulfan sulfate		0.052	U	0.051	U	0.051	U	0.051	U	0.051	U	0.050	U
Methoxychlor		0.052	U	0.051	U	0.051	U	0.051	U	0.051	U	0.050	U
Endrin ketone		0.052	U	0.051	U	0.051	U	0.051	U	0.051	U	0.050	U
Toxaphene		0.52	U	0.51	U	0.51	U	0.51	U	0.51	U	0.50	U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

2/9/06

Lionville Laboratory, Inc.

Pesticide/PCBs by GC, CLP List

Report Date: 02/09/06 12:55

RFW Batch Number: 0601L184 Client: TNUHANFORD RCS-048 K0205 Work Order: 11343606001 Page: 2

000000006

	Cust ID:	PBLKBA BS	PBLKBA BSD
Sample Information	RFW#:	06LE0088-MB1	06LE0088-MB1
	Matrix:	WATER	WATER
	D.F.:	1.00	1.00
	Units:	UG/L	UG/L

Surrogate:	Tetrachloro-m-xylene	64	%	61	%
	Decachlorobiphenyl	50	%	69	%

==========fl==========fl==========fl==========fl==========fl==========fl==========fl

Alpha-BHC	94	%	92	%
gamma-BHC (Lindane)	93	%	94	%
Beta-BHC	96	%	105	%
Heptachlor	83	%	83	%
Delta-BHC	91	%	93	%
Aldrin	89	%	86	%
Heptachlor epoxide	89	%	92	%
gamma-Chlordane	89	%	91	%
Endosulfan I	90	%	92	%
alpha-Chlordane	89	%	91	%
4,4'-DDE	96	%	98	%
Dieldrin	95	%	97	%
Endrin	101	%	103	%
4,4'-DDD	97	%	100	%
Endosulfan II	92	%	93	%
4,4'-DDT	93	%	95	%
Endrin aldehyde	86	%	88	%
Endosulfan sulfate	92	%	94	%
Methoxychlor	85	%	88	%
Endrin ketone	93	%	95	%
Toxaphene	0.50	U	0.50	U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

JS 2/9/06

Lionville Laboratory, Inc.

Pesticide/PCBs by GC, CLP List

Report Date: 02/09/06 13:07

RFW Batch Number: 0602L209 Client: TNU-HANFORD RCS-048 Work Order: 11343606001 Page: 1

000000007

	Cust ID:	J112X3		J112X3		J112X3		J112X9		J112F9		J11250	
Sample Information	RFW#:	001		001 MS		001 MSD		002		003		004	
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	D.F.:	1.00		1.00		1.00		1.00		1.00		1.00	
	Units:	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
Surrogate:	Tetrachloro-m-xylene	59	%	57	%	60	%	55	%	58	%	59	%
	Decachlorobiphenyl	52	%	47	%	46	%	63	%	66	%	64	%
			fl		fl		fl		fl		fl		fl
Alpha-BHC		0.052	U	93	%	88	%	0.051	U	0.052	U	0.051	U
gamma-BHC (Lindane)		0.052	U	93	%	87	%	0.051	U	0.052	U	0.051	U
Beta-BHC		0.052	U	84	%	75	%	0.051	U	0.052	U	0.051	U
Heptachlor		0.052	U	82	%	79	%	0.051	U	0.052	U	0.051	U
Delta-BHC		0.052	U	91	%	84	%	0.051	U	0.052	U	0.051	U
Aldrin		0.052	U	85	%	83	%	0.051	U	0.052	U	0.051	U
Heptachlor epoxide		0.052	U	90	%	84	%	0.051	U	0.052	U	0.051	U
gamma-Chlordane		0.052	U	88	%	82	%	0.051	U	0.052	U	0.051	U
Endosulfan I		0.052	U	85	%	80	%	0.051	U	0.052	U	0.051	U
alpha-Chlordane		0.052	U	88	%	82	%	0.051	U	0.052	U	0.051	U
4,4'-DDE		0.052	U	89	%	86	%	0.051	U	0.052	U	0.051	U
Dieldrin		0.052	U	94	%	88	%	0.051	U	0.052	U	0.051	U
Endrin		0.052	U	103	%	96	%	0.051	U	0.052	U	0.051	U
4,4'-DDD		0.052	U	96	%	89	%	0.051	U	0.052	U	0.051	U
Endosulfan II		0.052	U	83	%	79	%	0.051	U	0.052	U	0.051	U
4,4'-DDT		0.052	U	87	%	85	%	0.051	U	0.052	U	0.051	U
Endrin aldehyde		0.052	U	85	%	79	%	0.051	U	0.052	U	0.051	U
Endosulfan sulfate		0.052	U	92	%	86	%	0.051	U	0.052	U	0.051	U
Methoxychlor		0.052	U	84	%	81	%	0.051	U	0.052	U	0.051	U
Endrin ketone		0.052	U	93	%	87	%	0.051	U	0.052	U	0.051	U
Toxaphene		0.52	U	0.51	U	0.51	U	0.51	U	0.52	U	0.51	U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

78 2/9/6

Lionville Laboratory, Inc.

Pesticide/PCBs by GC, CLP List

Report Date: 02/09/06 13:07

RFW Batch Number: 0602L209 Client: TNU-HANFORD RCS-048 Work Order: 11343606001 Page: 2

	Cust ID:	J112C3		J112F6		J11247		PBLKBA		PBLKBA BS		PBLKBA BSD	
Sample Information	RFW#:	005		006		007		06LE0088-MB1		06LE0088-MB1		06LE0088-MB1	
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	D.F.:	1.00		1.00		1.00		1.00		1.00		1.00	
	Units:	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
Surrogate:	Tetrachloro-m-xylene	62	%	51	%	50	%	39	%	64	%	61	%
	Decachlorobiphenyl	69	%	59	%	62	%	60	%	50	%	69	%
			fl		fl		fl		fl		fl		fl
Alpha-BHC		0.051	U	0.051	U	0.050	U	0.050	U	94	%	92	%
gamma-BHC (Lindane)		0.051	U	0.051	U	0.050	U	0.050	U	93	%	94	%
Beta-BHC		0.051	U	0.051	U	0.050	U	0.050	U	96	%	105	%
Heptachlor		0.051	U	0.051	U	0.050	U	0.050	U	83	%	83	%
Delta-BHC		0.051	U	0.051	U	0.050	U	0.050	U	91	%	93	%
Aldrin		0.051	U	0.051	U	0.050	U	0.050	U	89	%	86	%
Heptachlor epoxide		0.051	U	0.051	U	0.050	U	0.050	U	89	%	92	%
gamma-Chlordane		0.051	U	0.051	U	0.050	U	0.050	U	89	%	91	%
Endosulfan I		0.051	U	0.051	U	0.050	U	0.050	U	90	%	92	%
alpha-Chlordane		0.051	U	0.051	U	0.050	U	0.050	U	89	%	91	%
4,4'-DDE		0.051	U	0.051	U	0.050	U	0.050	U	96	%	98	%
Dieldrin		0.051	U	0.051	U	0.050	U	0.050	U	95	%	97	%
Endrin		0.051	U	0.051	U	0.050	U	0.050	U	101	%	103	%
4,4'-DDD		0.051	U	0.051	U	0.050	U	0.050	U	97	%	100	%
Endosulfan II		0.051	U	0.051	U	0.050	U	0.050	U	92	%	93	%
4,4'-DDT		0.051	U	0.051	U	0.050	U	0.050	U	93	%	95	%
Endrin aldehyde		0.051	U	0.051	U	0.050	U	0.050	U	86	%	88	%
Endosulfan sulfate		0.051	U	0.051	U	0.050	U	0.050	U	92	%	94	%
Methoxychlor		0.051	U	0.051	U	0.050	U	0.050	U	85	%	88	%
Endrin ketone		0.051	U	0.051	U	0.050	U	0.050	U	93	%	95	%
Toxaphene		0.51	U	0.51	U	0.50	U	0.50	U	0.50	U	0.50	U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

2/9/6

Lionville Laboratory Use Only

0601L184

Custody Transfer Record/Lab Work Request

Page 1 of 1

See SRC

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client: TNU Hanford RCS-048

Est. Final Proj. Sampling Date:

Project #: 11343-606-001-9999-00

Project Contact/Phone #:

Lionville Laboratory Project Manager: Orlette Johnson

QC: Spec. Del: Std. TAT: 30 Day

Date Rec'd: 1.31.06 Date Due: 3/2/06

		A	B	C	D	E	F	G	H	I	J	K
Refrigerator #		6	6	6	6	6	6	6	6	6	6	6
#/Type Container	Liquid	1gL	1gL	1gL	1gL	1gL	1pl	1pl	1pl	1gL	1pl	1pl
	Solid											
Volume	Liquid	1L	1L	1L	40	1L	250	125	125	500	125	125
	Solid											
Preservatives		—	—	—	HCL	HCL	HNO3	—	—	HCL	H2SO4	H2SO4
ANALYSES REQUESTED →		VOA	BNA	Pest/PCB	~~TPH~~ PCB	TPH (GRO)	TPH-Diesel (Z)	Metal Hg	~~CN~~ AVS (Z)	Anions	TPH (DRO)	NO2/NO3
		ORGANIC					INORG					

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	GC35H	GC8H	OPCB	GRO	ODRO	METALS(i)	IALK	IC(i)	IPHC	INANS	INHSN	INTKN
001	J11238			W	1.29.06	1330	X	X	X	X	X	X		X	X	X		
002	~~J11222~~ J11232 (DS 1.31.06)					1415	X	X	X	X	X	X	X	X	X	X	X	X
003	J11239					1530	X	X	X	X	X	X		X	X	X		
004	J11279					1600	X	X	X	X	X	X		X	X	X		
005	J11245					1630	X	X	X	X	X	X	X	X	X	X	X	X

Special Instructions:

METALS(i) = HSL + Bi, B, Li, Mo, P, Si, Sr, Sn, U

IC(i) = IC - Cl, Br, Fl, NO3, NO2, SO4, PO4

DATE/REVISIONS:

1. 06 03 HV
2. ~~OPCB~~ R
3. ~~OGRO~~ B
4. ODRO A
5.
6.

Relinquished by	Received by	Date	Time
FedEx	D Smith	1.31.06	0910

Relinquished by	Received by	Date	Time

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-251	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 3, SURFACE WATER		SAF No.: RC-048
Ice Chest No.: ERC-96-012	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: A060273		Bill of Lading/Air Bill No.: SEE OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	125mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium-226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides 8081
J11238	WATER	1-29-06	1330							X	X	X	X

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	1-29-06 2000	EAS LOCKED STORAGE	1-29-06 2000
EAS LOCKED STORAGE	01-30-06 0710	RZ Stoffler	1-30-06 0710
RZ Stoffler	1-30-06 1500	Fed EX	
	1-31-06 0910	D. Smith	1-31-06 0910

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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238)
(2) 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 - 7470 - (CV)

Matrix
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum S
DL=Drum L
T=Tissue
Wi=Wipe
L=Liquid
V=Vegetat
X=Other

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-251	Page 2 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Day		
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 3, SURFACE WATER		SAF No.: RC-048
Air Quality ☐			
Ice Chest No.: ERC-96-012	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: BBERLINE SERVICES/ LIONVILLE	Offsite Property No.: A060273		Bill of Lading/Air Bill No.: SEE OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	HCl to pH <2 Cool 4C	HCl to pH <2 Cool 4C					
Type of Container	P	G	G/P	aG	aGs*					
No. of Container(s)	1	1	1	1	1					
Volume	125mL	500mL	125mL	1000mL	40mL					
SAMPLE ANALYSIS	See item (1) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G					

3 JAB 12406

Sample No.	Matrix *	Sample Date	Sample Time										
J11238	WATER	1-29-06	1330	X	X	X	X	X					

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: JAMES BERNHARD	Date/Time: 1-29-06 2000	Received By/Stored In: EAS LOCKED STORAGE	Date/Time: 1-29-06 2000
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 0710 01-30-06	Received By/Stored In: RC Stoffler R.J. Stoffl	Date/Time: 0710 1-30-06
Relinquished By/Removed From: RC Stoffler R.J. Stoffl	Date/Time: 1500 WCH 1-30-06	Received By/Stored In: Fed Ex	Date/Time:
Relinquished By/Removed From: Fed Ex	Date/Time: 1-31-06 / 09:0	Received By/Stored In: D. Smith	Date/Time: 1-31-06 / 09:0
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

3 JAB 12406

(1) IC Anions - 300.0 [Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate]

Matrix

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

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-244	Page 2 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Day	Air Quality: ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 4, PORE WATER		SAF No.: RC-048
Ice Chest No.: AFS-04-052	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: A060274		Bill of Lading/Air Bill No.: SEE OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	HCl to pH <2 Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	Cool 4C	
Type of Container	P	G	G/P	aG	aGs*	G/P	G/P	G/P	G/P	
No. of Container(s)	1	1	1	1	1	1	1	1	1	
Volume	~~125mL~~ 60mL 3 1/31/2006	500mL	125mL	1000mL	40mL	125mL	250mL	125mL	250mL	
SAMPLE ANALYSIS	See item (f) in Special Instructions	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G	Ammonia - 350.3	Nitrogen by Kjeldahl - 351.2	Alkalinity - 310.1	TDS - 160.1; TSS - 160.2	

Sample No.	Matrix *	Sample Date	Sample Time										
J11232	WATER	1-29-06	1415	X	X	X	X	X	X	X	X	X	

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[signature]	1-29-06 2000	[signature] EAS LOCKED STORAGE	1-29-06 2000
JAMES BERNHARD [signature] EAS LOCKED STORAGE	01-30-06 0700	[signature] RZ Stoffler R.Z. Stoffler	0710 1-30-06
RZ Stoffler R.Z. Stoffler	1500 1-30-06	Fed Ex	
Fed Ex	1-31-06 1010	D. J. Smith	1-31-06 1010

SPECIAL INSTRUCTIONS

3 1/31/2006

(f) IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate}

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solid
DL=Drum Liquid
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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-244	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Day	Air Quality: ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 4, PORE WATER		SAF No.: RC-048
Ice Chest No.: AFS-04-052	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: BBERLINE SERVICES/ LIONVILLE	Offsite Property No.: A060274		Bill of Lading/Air Bill No.: SEE OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	125mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 – Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides 8081
J11232	WATER	1-29-06	1415							X	X	X	X

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	1-29-06 1415	EAS LOCKED STORAGE	1-29-06 1415
EAS LOCKED STORAGE	01-30-06 0710	R2 Steffler	1-30-06 0710
R2 Steffler	1-30-06 WCH 1500	Fed Ex	
Fed Ex	1-31-06 0910	D Smith	1-31-06 0910

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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}

(2) 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 - 7470 - (CV)

Matrix *
S=Soil
SE=Sediment
SO=Solid
SL=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solid
DL=Drum Liq
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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-252	Page 1 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N	Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 4, SURFACE WATER		SAF No. RC-048	Air Quality ☐	
Ice Chest No. AFS-04-050	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES (LIONVILLE)	Offsite Property No. A060272		Bill of Lading/Air Bill No. SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	125mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000ml
SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 – Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides 8081
Sample No. / Matrix * / Sample Date / Sample Time										
J11239 / WATER / 1-29-06 / 1530							X	X	X	X

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	JAMES BERNHARD	1-29-06 2000	EAS LOCKED STORAGE	1-29-06 2000
Relinquished By/Removed From	EAS LOCKED STORAGE	01-30-06 0710	Received By/Stored In RZ Stiffler R.Z. Stiffler	1-30-06 0710
Relinquished By/Removed From	RZ Stiffler R.Z. Stiffler	1-30-06 1500	Received By/Stored In Fed Ex	
Relinquished By/Removed From		1-31-06 0910	Received By/Stored In D. Smith	1-31-06 0910
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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}

(2) 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 - 7470 - (CV)

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Sol
DL=Drum Liq
T=Tissue
Wi=Wipe
L=Liquid
Vs=Vegetation
X=Other

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-252	Page 2 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 7N	Data Turnaround: 45 Days
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 4, SURFACE WATER		SAF No.: RC-048	Air Quality ☐	
Ice Chest No.: AFS-04-050	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX		
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: A060272		Bill of Lading/Air Bill No.: SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	HCl to pH <2 Cool 4C	HCl to pH <2 Cool 4C						
Type of Container	P	G	G/P	aG	aGs*						
No. of Container(s)	1	1	1	1	1						
Volume	125mL	500mL 3 A/B/C/D/E/F/G	125mL	1000mL	40mL						
SAMPLE ANALYSIS	See item (X) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G						
Sample No.	Matrix *	Sample Date	Sample Time								
J11239	WATER	1-29-06	1530	X	X	X	X	X			

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: JAMES BERNHARD	Date/Time: 1-29-06 2000	Received By/Stored In: EAS LOCKED STORAGE	Date/Time: 1-29-06 2000
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 01-30-06 0710	Received By/Stored In: RZ Stoffler	Date/Time: 1-30-06 0710
Relinquished By/Removed From: RZ Stoffler	Date/Time: 1-30-06 1500	Received By/Stored In: Fed Ex	Date/Time:
Relinquished By/Removed From: Fed Ex	Date/Time: 1-31-06 1010	Received By/Stored In:	Date/Time: 1-31-06 1010
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

3 A/B/C/D/E/F/G

(X) IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate}

Matrix *
S=Soil
SE=Sediment
SO=Solid
SL=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solid
DL=Drum Liquid
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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-276	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality: ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 5, SURFACE WATER	SAF No.: RC-048	
Ice Chest No.: AFS-04-050	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: A060272	Bill of Lading/Air Bill No.: SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	60mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium-226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
Sample No. / Matrix * / Sample Date / Sample Time										
J11279 / WATER / 1-29-06 / 1600							X	X	X	X

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From: JAMES BERNHARD		1-29-06 1600	EAS LOCKED STORAGE	1-29-06 1600
Relinquished By/Removed From: EAS LOCKED STORAGE		0130 wd / 0700 wd	RZ Stoffler	1-30-06 0700
Relinquished By/Removed From: RZ Stoffler		1-30-06 1500	Fed Ex	
Relinquished By/Removed From: Fed Ex		1-31-06 1090	D. Smith	1-31-06 1090
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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238)

(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-276	Page 2 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 5, SURFACE WATER	SAF No.: RC-048	
Ice Chest No.: AFS-04-050	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: A060272		Bill of Lading/Air Bill No.: SEE OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	HCl to pH <2 Cool 4C	HCl to pH <2 Cool 4C						
Type of Container	P	G	G/P	aG	aGs*						
No. of Container(s)	1	1	1	1	1						
Volume	125mL	500mL 3 APA 12606	125mL	1000mL	40mL						
SAMPLE ANALYSIS	See item (1) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G						
Sample No.	Matrix *	Sample Date	Sample Time								
J11279	WATER	1-29-06	1600	X	X	X	X	X			

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	JAMES BERNHARD	1-29-06 2000	EAS LOCKED STORAGE	1-29-06 2000
Relinquished By/Removed From	EAS LOCKED STORAGE	1-30-06 0710	RZ Stoffler	1-30-06 0710
Relinquished By/Removed From	RZ Stoffler	1-30-06 1500	Received By/Stored In: Fed Ex	
Relinquished By/Removed From: Fed Ex		1-31-06 1090	Received By/Stored In	1-31-06 1090
Relinquished By/Removed From			Received By/Stored In	
Relinquished By/Removed From			Received By/Stored In	

SPECIAL INSTRUCTIONS

3 APA 12606

(1) IC Anions - 300.0 (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate)

Matrix *

S=Soil
SE=Sediment
SO=Solid
SI=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquid
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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-258	Page 1 of 2

Collector: TILLER, B [redacted]	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days		
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 5, PORE WATER		SAF No.: RC-048
Air Quality ☐			
Ice Chest No.: ERC-96-012	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: A060273		Bill of Lading/Air Bill No.: SEE OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	~~125mL~~ 60 BH 1-24-06	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
J11245	WATER	1-24-06	1630							X	X	X	X

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[redacted]	1-24-06 2000	EAS LOCKED STORAGE	1-24-06 2000
EAS LOCKED STORAGE	21-30-06 0710	RZ Stiffler R.Z. Stiffler	1-30-06 0710
RZ Stiffler R.Z. Stiffler	1-30-06 WCH 1500	Fed Ex	
[signature]	1-31-06 1010	[signature]	1-31-06 1010

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, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238)
(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-258	Page 2 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 5, PORE WATER	SAF No.: RC-048	
Ice Chest No.: ERC-96-012	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: A060273	Bill of Lading/Air Bill No.: SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	HCl to pH <2 Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	Cool 4C	
Type of Container	P	G	G/P	aG	aGs*	G/P	G/P	G/P	G/P	
No. of Container(s)	1	1	1	1	1	1	1	1	1	
Volume	125mL	500mL	125mL	1000mL	40mL	125mL	250mL	125mL	250mL	
SAMPLE ANALYSIS	See item (1) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G	Ammonia - 350.3	Nitrogen by Kjeldahl - 351.2	Alkalinity - 310.1	TDS - 160.1; TSS - 160.2	
Sample No. / Matrix * / Sample Date / Sample Time										
J11245 / WATER / 1-29-06 / 1630	X	X	X	X	X	X	X	X	X	

CHAIN OF POSSESSION	Sign/Print Names	Date/Time
Relinquished By/Removed From: JAMES BERNHARD	Received By/Stored In: EAS LOCKED STORAGE	1-29-06 2000
Relinquished By/Removed From: EAS LOCKED STORAGE	Received By/Stored In: RZ Stoffler R.Z. Stoffler	01-30-06 0710 / 1-30-06 0710
Relinquished By/Removed From: RZ Stoffler R.Z. Stoffler	Received By/Stored In: Fed Ex	1-30-06 1500
Relinquished By/Removed From: Fed Ex	Received By/Stored In: D. Smith	1-31-06 1010
Relinquished By/Removed From	Received By/Stored In	
Relinquished By/Removed From	Received By/Stored In	

SPECIAL INSTRUCTIONS

3 1260 amp

(1) IC Anions - 300.0 (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate)

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

BHI-EE-011 (08/29/2005)

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU Hanford **Date:** 1-31-06

Purchase Order / Project# / RC-048
SAF# / SOW# / Release #:

LvLI Batch # : 0601L184 **Sample Custodian:** D. Smith

NOTE: EXPLAIN ALL DISCREPANCIES

1.	Samples Hand Delivered or Shipped	Carrier Fed Ex		Airbill# 7920 0239 321 7926 4477 293 7907 9610 870
2.	Custody seals on coolers or shipping container intact, signed and dated?	☑ Yes	☐ No	☐ No Seals Comments
3.	Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	
4.	All expected paperwork received (coc and other client specific information) sealed in plastic bag and easily accessible?	☑ Yes	☐ No	
5.	Samples received cooled or ambient? IR	Temp 1.3 °C 1.8 °C 1.6 °C		Cooler # AFS-04-052 # AFS-04-050 # ERC-96-0
6.	Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7.	coc signed and dated?	☑ Yes	☐ No	
8.	Sample containers are intact?	☑ Yes	☐ No	
9.	All samples on coc received? All samples received on coc?	☑ Yes	☐ No	
10.	All sample label information matches coc?	☑ Yes	☐ No	
11.	Samples properly preserved?	☑ Yes	☐ No	
12.	Samples received within hold times? Short holds taken to wet lab?	☑ Yes	☐ No	
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 not within policy. See reverse side for policy)	☑ Yes	☐ No	
16.	Project Manager contacted concerning discrepancies? name/date (or samples outside criteria)	☐ Yes	☐ No	☑ No Discrepancies

SR-002-B

LVLI LIONVILLE LABORATORIES INC

Lionville Laboratory Use Only

0602L209

Custody Transfer Record/Lab Work Request

Page 1 of 1

See SRC

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

RCS-048

Client TNU-HANFORD SAF# RC-048

Est. Final Proj. Sampling Date

Project # 11343-606-001-9999-00

Project Contact/Phone #

Lionville Laboratory Project Manager OJ

QC Spec Del Std TAT 30 Days

Date Rec'd 2/3/06 Date Due 3/5/06

		A-C	D-E	F-H	I-J	K-L	M	N	O	P	Q	R
Refrigerator #		6	6	6	1	6	6	6	6	6	1	6
#/Type Container	Liquid	G	G	G	L	G				G		
	Solid											
Volume	Liquid	L	L	L	40	L	500	125	125	1000	125	125
	Solid											
Preservatives					HCL		HNO3	—	—	HCL	H2SO4	H2SO4
ANALYSES REQUESTED →		VOA	BNA	Pest/PCB	Herb	Pest	TPH GRO	TPH Diesel	Metal	Anions	TOT TPH	NCL NO3 & TOC	NH3	NH3 Kjeldahl
		ORGANIC							INORG					

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

Lionville Laboratory Use Only

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected		C625H	OPCB	0608H	OGRO	ODRO	METALS(Q)	IALKL	IC(I)	IPHC	IN3N2 IOCT	INH3N	INTKN
001	T112X3	✓	✓	W	2-1-06	1445		3	2	3	2	2	1	1	1	1	1	1	1
002	X9	✓	✓			1430		3	2	3	2	2	1		1	1	1		
003	F9					1830		1	1	1	1	1	1		1	1	1		
004	T112S0					1900		1	1	1	1	1	1	1	1	1	1	1	1
005	C3					1530		1	1	1	1	1	1	1	1	1	1	1	1
006	F6					1600		1	1	1	1	1	1		1	1	1		
007	47					1615		1	1	1	1	1	1	1	1	1	1	1	1

Special Instructions:

METALS(Q) = HSL + Bi, B, Li, Mo, P, Si, Sr, Sn, U

IC(I) = IC - Br, Cl, F, NO2, NO3, SO4, PO4

DATE/REVISIONS:

1. Share bottle "Q" for N3N2 & TOC ; per OJ
2. OPCB R
3. 0608H U
4. ODRO A
5. OGRO B
6.

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	2/3/06	0930

Relinquished by	Received by	Date	Time

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-290	Page 1 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N	Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr- 8, PORE WATER FULL QC		SAF No. RC-048	Air Quality ☐	
Ice Chest No. FRC-02-504	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX		
Shipped To EBERLINE SERVICES (LIONVILLE)	Offsite Property No. A060278		Bill of Lading/Air Bill No. SEE OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	3	2	3
Volume	125mL	1000mL	1000mL	1000mL	1000mL	1000mL	500mL	1000mL	1000mL	1000mL

SAMPLE ANALYSIS				Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 – Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium-226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
Sample No.	Matrix *	Sample Date	Sample Time										
J112X3	WATER	02-01-06	1445							X	X	X	X

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From JAMES BERNHARD	02-01-06 2030	Received By/Stored In EAS LOCKED STORAGE	02/01/06 2030
Relinquished By/Removed From EAS LOCKED STORAGE	02/02/06 1200	Received By/Stored In	02-02-06 1200
Relinquished By/Removed From	02/02/06 1400	Received By/Stored In Fed Ex	
Relinquished By/Removed From	2-3-06 0930	Received By/Stored In	2-3-06 0930
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) [Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238]

(2) 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 - 7470 - (CV)

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
Liq=Liquid
V=Vegetation
X=Other

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-290	Page 2 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr-6 PORE WATER FULL QC		SAF No.: RC-048
Ice Chest No.: ERC-02-504	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: A060278		Bill of Lading/Air Bill No.: SEE OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	Cool 4C	
Type of Container	P	G	G/P	aG	aGs*	G/P	G/P	G/P	G/P	
No. of Container(s)	1	1	1	2	2	1	1	1	1	
Volume	125mL	1000mL 3 AD 13006	125mL	1000mL	40mL	125mL	250mL	125mL	250mL	
SAMPLE ANALYSIS	See item (f) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G	Ammonia - 350.3	Nitrogen by Kjeldahl - 351.2	Alkalinity - 310.1	TDS - 160.1; TSS - 160.2	

Sample No.	Matrix *	Sample Date	Sample Time										
J112X3	WATER	02-01-06	1445	X	X	X	X	X	X	X	X	X	

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: JAMES BERNHARD	Date/Time: 02-01-06 2030	Received By/Stored In: EAS LOCKED STORAGE	Date/Time: 02-01-06 2030
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 02-02-06 1200	Received By/Stored In: David St. John West	Date/Time: 02-02-06 1200
Relinquished By/Removed From: David St. John West	Date/Time: 02/02/06 1400	Received By/Stored In: Fed Ex	Date/Time:
Relinquished By/Removed From: Fed Ex 2/3/06	Date/Time: 0930	Received By/Stored In: 2-3-06	Date/Time: 0930
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:	Date/Time:
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:	Date/Time:

SPECIAL INSTRUCTIONS

3 AD 13006

(f) IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate}

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-296	Page 1 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr-6, SURFACE WATER FULL QC		SAF No. RC-048
Ice Chest No. ERC-99-061	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX
Shipped To EBERLINE SERVICES (LIONVILLE)	Offsite Property No. A060278		Bill of Lading/Air Bill No. SEE OSPC

Price Code 7N

Data Turnaround 45 Days

Air Quality ☐

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	aG
No. of Container(s)	1	1	1	1	1	1	1	3	2	3
Volume	125mL	1000mL	1000mL	1000mL	1000mL	1000mL	500mL	1000mL	1000mL	1000mL
SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 – Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081
Sample No. / Matrix * / Sample Date / Sample Time										
J112X9 / WATER / 02-01-06 / 1430							X	X	X	X

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From JAMES BERNHARD	02-01-06 2030	Received By/Stored In EAS LOCKED STORAGE	02-01-06 2030
Relinquished By/Removed From EAS LOCKED STORAGE	02-02-06 1200	Received By/Stored In David St. John WCH	02-02-06 1200
Relinquished By/Removed From David St. John WCH	02/02/06 1400	Received By/Stored In Fed Ex	
Relinquished By/Removed From Fed Ex	2-3-06 0930	Received By/Stored In	02-3-06 0930
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) [Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238]

(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-296	Page 2 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days		
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr-6, SURFACE WATER FULL QC		SAF No.: RC-048
Air Quality ☐			
Ice Chest No.: ERC-99-061	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES (LIONVILLE)	Offsite Property No.: A060278		Bill of Lading/Air Bill No.: SEE OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	HCl to pH <2 Cool 4C						
Type of Container	P	G	G/P	aG	aGs*						
No. of Container(s)	1	1	1	2	2						
Volume	125mL	1000mL	125mL	1000mL	40mL						
	3	1									

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	See item (f) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G					
J112X9	WATER	02-01-06	1430	X	X	X	X	X					

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	2030 02-01-06	EAS LOCKED STORAGE	2030 02-01-06
EAS LOCKED STORAGE	1200 02-02-06	David Strohm WCH	1200 02-02-06
David Strohm WCH	1400 02/02/06	FedEx	
FedEx	2-3-06 0930		2-3-06 0930

SPECIAL INSTRUCTIONS

3 1 1000

(f) IC Anions - 300.0 (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-285	Page 2 of 2

Collector TILLER, B JAMES BERNHARD	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 7N Data Turnaround 45 Days
Project Designation 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location Cr 10, SURFACE WATER		SAF No. RC-048	Air Quality ☐
Ice Chest No. ERC-96-061	Field Logbook No. EL-1597	COA BESRAS6520	Method of Shipment FED EX	
Shipped To EBERLINE SERVICES / CLONVILLE	Offsite Property No. A060278		Bill of Lading/Air Bill No. SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	HCl to pH <2 Cool 4C					
Type of Container	P	G	G/P	aG	aGs*					
No. of Container(s)	1	1	1	1	1					
Volume	125mL	500mL	125mL	1000mL	40mL					
SAMPLE ANALYSIS	See Item (4) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G					

3 AP 12606

Sample No.	Matrix *	Sample Date	Sample Time										
J112F9	WATER	02-01-06	1830	X	X	X	X	X					

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By/Removed From JAMES BERNHARD Date/Time 2130 02-01-010	Received By/Stored In EAS LOCKED STORAGE Date/Time 2130 2-1-06	
Relinquished By/Removed From EAS LOCKED STORAGE Date/Time 1700 02-02-06	Received By/Stored In Date/Time 1200 02-02-06	
Relinquished By/Removed From Date/Time 1400 02/02/06	Received By/Stored In Fed Ex Date/Time	
Relinquished By/Removed From Fed Ex Date/Time 2-3-06 0930	Received By/Stored In Date/Time 2-3-06 0930	
Relinquished By/Removed From Date/Time	Received By/Stored In Date/Time	
Relinquished By/Removed From Date/Time	Received By/Stored In Date/Time	

SPECIAL INSTRUCTIONS

3 AP 12606

(4) IC Anions - 300.0 [Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate]

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
Va=Vegetation
X=Other

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-285	Page 1 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality: ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 10, SURFACE WATER		SAF No.: RC-048
Ice Chest No.: ERC-96-061	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: A06D278		Bill of Lading/Air Bill No.: SEE OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	None	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	Cool 4C	Cool 4C	Cool 4C
Type of Container	P	G/P	G/P	G/P	G/P	G/P	G/P	aG	aG	uG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	60mL	500mL	1000mL	500mL	1000mL	500mL	250mL	1000mL	1000mL	1000mL
SAMPLE ANALYSIS	Tritium - H3	See item (1) in Special Instructions.	Strontium-89,90 -- Total Sr	Isotopic Thorium (Thorium-232)	Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)	Radium -226; Ra-228	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081

Sample No.	Matrix *	Sample Date	Sample Time										
J112F9	WATER	07-01-06	1830							X	X	X	X

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: JAMES BERNHARD	2-1-06	Received By/Stored In: EAS LOCKED STORAGE	2130 2-1-06
Relinquished By/Removed From: EAS LOCKED STORAGE	1200 02-02-06	Received By/Stored In: David Stephen WCH	1200 02-02-06
Relinquished By/Removed From: David Stephen	1400 02/02/06	Received By/Stored In: Fed EX	
Relinquished By/Removed From: Fed EX	2-3-06 0930	Received By/Stored In:	2-3-06 0930
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) Gamma Spec - (Full List) {Americium-241, Antimony-125, Beryllium-7, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Potassium-40, Ruthenium-106, Thorium-234, Uranium-235, Uranium-238}

(2) 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 - 7470 - (CV)

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

BHI-EE-011 (08/29/2005)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-048-263	Page 2 of 2

Collector: TILLER, B JAMES BERNHARD	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 7N	Data Turnaround: 45 Days	Air Quality ☐	
Project Designation: 100 Area and 300 Area Component of the RCBRA Water Sa	Sampling Location: Cr 10, PORE WATER	SAF No.: RC-048	
Ice Chest No.: ERC-02-002	Field Logbook No.: EL-1597	COA: BESRAS6520	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A060278	Bill of Lading/Air Bill No.: SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

POTENTIAL RADIOACTIVE < DOT LIMITS

Special Handling and/or Storage

COOL 4C

Preservation	Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	HCl to pH <2 Cool 4C	HCl to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	Cool 4C	
Type of Container	P	G	G/P	aG	aGs*	G/P	G/P	G/P	G/P	
No. of Container(s)	1	1	1	1	1	1	1	1	1	
Volume	125mL	500mL	125mL	1000mL	40mL	125mL	250mL	125mL	250mL	
SAMPLE ANALYSIS	See Item (J) in Special Instructions.	TPH (Total) - 418.1	NO2/NO3 - 353.2	TPH-Diesel Range - WTPH-D	TPH-Gasoline Range - WTPH-G	Ammonia - 350.3	Nitrogen by Kjeldahl - 351.2	Alkalinity - 310.1	TDS - 160.1; TSS - 160.2	

Sample No.	Matrix *	Sample Date	Sample Time										
J11250	WATER	02-01-06	1900	X	X	X	X	X	X	X	X	X	

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
JAMES BERNHARD	02-01-06 2030	EAS LOCKED STORAGE	02-01-06 2030
EAS LOCKED STORAGE	02-02-06 1200	WC4	02-02-06 1200
WC4	02/02/06 1400	Fed Ex	
Fed Ex	2-3-06 0930		2-3-06 0930

SPECIAL INSTRUCTIONS

(J) IC Anions - 300.0 (Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate)

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

BHI-EE-011 (08/29/2005)