0076847

SAF-RC-032
100-F Remaining Sites Burial Grounds - Soil Full Protocol
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Jeff DeBuigne	X9-07	KW 4/1/08 INITIAL/DATE
Kathy Wendt	H4-21	KW 4/1/08 INITIAL/DATE

COMMENTS:

SDG K1123 SAF-RC-032

Rad only Chem only X Rad & Chem

X Complete Partial

Waste Site: **100-F-26:9 SZ/FS Verification**

RECEIVED
APR 10 2008
EDMC

155

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SERVICES

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MAR 2008

February 28, 2008

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

Reference: **P.O. #630**
Eberline Services R8-02-132-7771, SDG K1123

Dear Ms. Kessner:

Enclosed is the data report for eleven solid (soil) samples designated under SAF No. RC-032, received at Eberline Services on February 21, 2008. 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 Services
2030 Wright Avenue
P.O. Box 4040
Richmond, California 94804-0040
(510) 235-2633 Fax (510) 235-0438
Toll Free (800) 841-5487
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1.0 GENERAL

Washington Closure Hanford (WCH) Sample Delivery Group K1123 was composed of five solid (soil) samples designated under SAF No. RC-032 with a Project Designation of: 100-F Remaining Sites Burial Grounds-Soil Full Protocol.

The samples were received as stated on the Chain-of-Custody document. Any discrepancies are noted on the Eberline Services Sample Receipt Checklist. The results were transmitted to WCH via e-mail on February 28, 2008.

2.0 ANALYSIS NOTES

2.1 Gross Alpha and Gross Beta Analysis

No problems were encountered during the course of the analyses.

2.2 Gamma Spectroscopy

No problems were encountered during the course of the analyses.

3.0 Case Narrative Certification Statement

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

Melissa Mannion

Melissa C. Mannion
Senior Program Manager

02/28/08

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 K1123

SDG	7771
Contact	Melissa C. Mannion

Client	Hanford
Contract	No. 630
Case no	SDG_K1123

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

Melissa Mannion
Reviewed by

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-TOC
Version	3.06
Report date	02/28/08

SDG 7771
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_K1123

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 02/28/08

SDG 7771	Client Hanford
Contact Melissa C. Mannion	Contract No. 630
	Case no SDG_K1123

GUIDE, cont.

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.

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-RG
Version	3.06
Report date	02/28/08

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

SDG 7771
Contact Melissa C. Mannion

LAB SAMPLE SUMMARY

Client Hanford
Contract No. 630
Case no SDG K1123

LAB SAMPLE ID	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAF NO	CHAIN OF CUSTODY	COLLECTED
R802132-01	J16934	100-F-26:9 SZ/FS Verif.	SOLID		RC-032	RC-032-189	02/14/08 08:15
R802132-02	J16935	100-F-26:9 SZ/FS Verif.	SOLID		RC-032	RC-032-189	02/14/08 08:25
R802132-03	J16936	100-F-26:9 SZ/FS Verif.	SOLID		RC-032	RC-032-189	02/14/08 08:35
R802132-04	J16937	100-F-26:9 SZ/FS Verif.	SOLID		RC-032	RC-032-189	02/14/08 08:45
R802132-05	J16938	100-F-26:9 SZ/FS Verif.	SOLID		RC-032	RC-032-189	02/14/08 08:55
R802132-06	J16939	100-F-26:9 SZ/FS Verif.	SOLID		RC-032	RC-032-189	02/14/08 09:05
R802132-07	J16940	100-F-26:9 SZ/FS Verif.	SOLID		RC-032	RC-032-189	02/14/08 09:15
R802132-08	J16941	100-F-26:9 SZ/FS Verif.	SOLID		RC-032	RC-032-189	02/14/08 09:25
R802132-09	J16942	100-F-26:9 SZ/FS Verif.	SOLID		RC-032	RC-032-189	02/14/08 09:35
R802132-10	J16943	100-F-26:9 SZ/FS Verif.	SOLID		RC-032	RC-032-189	02/14/08 09:45
R802132-11	J16944	100-F-26:9 SZ/FS Verif.	SOLID		RC-032	RC-032-189	02/14/08 09:55
R802132-12	Lab Control Sample		SOLID		RC-032		
R802132-13	Method Blank		SOLID		RC-032		
R802132-14	Duplicate (R802132-06)	100-F-26:9 SZ/FS Verif.	SOLID		RC-032		02/14/08 09:05

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LS
Version 3.06
Report date 02/28/08

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

SDG 7771
Contact Melissa C. Mannion

QC SUMMARY

Client Hanford
Contract No. 630
Case no SDG K1123

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
7771	RC-032-189	J16934	SOLID	96.2	1025 g		02/21/08	7	R802132-01	7771-001
		J16935	SOLID	96.3	1052 g		02/21/08	7	R802132-02	7771-002
		J16936	SOLID	95.1	837 g		02/21/08	7	R802132-03	7771-003
		J16937	SOLID	90.6	883 g		02/21/08	7	R802132-04	7771-004
		J16938	SOLID	94.1	855 g		02/21/08	7	R802132-05	7771-005
		J16939	SOLID	91.2	791 g		02/21/08	7	R802132-06	7771-006
		J16940	SOLID	95.1	815 g		02/21/08	7	R802132-07	7771-007
		J16941	SOLID	94.1	870 g		02/21/08	7	R802132-08	7771-008
		J16942	SOLID	92.2	823 g		02/21/08	7	R802132-09	7771-009
		J16943	SOLID	86.7	1036 g		02/21/08	7	R802132-10	7771-010
		J16944	SOLID	86.3	915 g		02/21/08	7	R802132-11	7771-011
		Method Blank	SOLID						R802132-13	7771-013
		Lab Control Sample	SOLID						R802132-12	7771-012
		Duplicate (R802132-06)	SOLID	91.2	791 g		02/21/08	7	R802132-14	7771-014

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-QS
Version 3.06
Report date 02/28/08

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

SDG 7771
Contact Melissa C. Mannion

PREP BATCH SUMMARY

Client Hanford
Contract No. 630
Case no SDG K1123

TEST	MATRIX	METHOD	PREPARATION BATCH	ERROR 2σ %	PLANCHETS ANALYZED CLIENT	MORE	RE	BLANK	LCS	DUP/ORIG	MS/ORIG	QUALIFIERS
Gas Proportional Counting												
93A	SOLID	Gross Alpha in Solids	6148-006	20.0	11			1	1	1/1		
93B	SOLID	Gross Beta in Solids	6148-006	15.0	11			1	1	1/1		
Gamma Spectroscopy												
GAM	SOLID	Gamma Scan	6148-006	15.0	11			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 02/28/08

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

SDG 7771
Contact Melissa C. Mannion

LAB WORK SUMMARY

Client Hanford
Contract No. 630
Case no SDG K1123

LAB SAMPLE / COLLECTED / RECEIVED	CLIENT SAMPLE ID / LOCATION / CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
802132-01	J16934			7771-001	93A/93		02/26/08	02/26/08	BW	Gross Alpha in Solids
02/14/08	100-F-26:9 SZ/FS Verif.		SOLID	7771-001	93B/93		02/26/08	02/26/08	BW	Gross Beta in Solids
02/21/08	RC-032-189	RC-032		7771-001	GAM		02/26/08	02/27/08	CSS	Gamma Scan
802132-02	J16935			7771-002	93A/93		02/26/08	02/26/08	BW	Gross Alpha in Solids
02/14/08	100-F-26:9 SZ/FS Verif.		SOLID	7771-002	93B/93		02/26/08	02/26/08	BW	Gross Beta in Solids
02/21/08	RC-032-189	RC-032		7771-002	GAM		02/26/08	02/27/08	CSS	Gamma Scan
802132-03	J16936			7771-003	93A/93		02/26/08	02/26/08	BW	Gross Alpha in Solids
02/14/08	100-F-26:9 SZ/FS Verif.		SOLID	7771-003	93B/93		02/26/08	02/26/08	BW	Gross Beta in Solids
02/21/08	RC-032-189	RC-032		7771-003	GAM		02/26/08	02/27/08	CSS	Gamma Scan
802132-04	J16937			7771-004	93A/93		02/26/08	02/26/08	BW	Gross Alpha in Solids
02/14/08	100-F-26:9 SZ/FS Verif.		SOLID	7771-004	93B/93		02/26/08	02/26/08	BW	Gross Beta in Solids
02/21/08	RC-032-189	RC-032		7771-004	GAM		02/26/08	02/27/08	CSS	Gamma Scan
802132-05	J16938			7771-005	93A/93		02/26/08	02/26/08	BW	Gross Alpha in Solids
02/14/08	100-F-26:9 SZ/FS Verif.		SOLID	7771-005	93B/93		02/26/08	02/26/08	BW	Gross Beta in Solids
02/21/08	RC-032-189	RC-032		7771-005	GAM		02/26/08	02/27/08	CSS	Gamma Scan
802132-06	J16939			7771-006	93A/93		02/26/08	02/26/08	BW	Gross Alpha in Solids
02/14/08	100-F-26:9 SZ/FS Verif.		SOLID	7771-006	93B/93		02/26/08	02/26/08	BW	Gross Beta in Solids
02/21/08	RC-032-189	RC-032		7771-006	GAM		02/26/08	02/27/08	CSS	Gamma Scan
802132-07	J16940			7771-007	93A/93		02/26/08	02/26/08	BW	Gross Alpha in Solids
02/14/08	100-F-26:9 SZ/FS Verif.		SOLID	7771-007	93B/93		02/26/08	02/26/08	BW	Gross Beta in Solids
02/21/08	RC-032-189	RC-032		7771-007	GAM		02/26/08	02/27/08	CSS	Gamma Scan
802132-08	J16941			7771-008	93A/93		02/26/08	02/26/08	BW	Gross Alpha in Solids
02/14/08	100-F-26:9 SZ/FS Verif.		SOLID	7771-008	93B/93		02/26/08	02/26/08	BW	Gross Beta in Solids
02/21/08	RC-032-189	RC-032		7771-008	GAM		02/26/08	02/27/08	CSS	Gamma Scan
802132-09	J16942			7771-009	93A/93		02/26/08	02/26/08	BW	Gross Alpha in Solids
02/14/08	100-F-26:9 SZ/FS Verif.		SOLID	7771-009	93B/93		02/26/08	02/26/08	BW	Gross Beta in Solids
02/21/08	RC-032-189	RC-032		7771-009	GAM		02/26/08	02/27/08	CSS	Gamma Scan
802132-10	J16943			7771-010	93A/93		02/26/08	02/26/08	BW	Gross Alpha in Solids
02/14/08	100-F-26:9 SZ/FS Verif.		SOLID	7771-010	93B/93		02/26/08	02/26/08	BW	Gross Beta in Solids
02/21/08	RC-032-189	RC-032		7771-010	GAM		02/26/08	02/27/08	CSS	Gamma Scan

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 02/28/08

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

SDG 7771
Contact Melissa C. Mannion

WORK SUMMARY, cont.

Client Hanford
Contract No. 630
Case no SDG K1123

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
R802132-11	J16944			7771-011	93A/93		02/26/08	02/26/08	BW	Gross Alpha in Solids
02/14/08	100-F-26:9 SZ/FS Verif.		SOLID	7771-011	93B/93		02/26/08	02/26/08	BW	Gross Beta in Solids
02/21/08	RC-032-189	RC-032		7771-011	GAM		02/26/08	02/27/08	CSS	Gamma Scan
R802132-12	Lab Control Sample			7771-012	93A/93		02/26/08	02/26/08	BW	Gross Alpha in Solids
			SOLID	7771-012	93B/93		02/26/08	02/26/08	BW	Gross Beta in Solids
		RC-032		7771-012	GAM		02/26/08	02/27/08	CSS	Gamma Scan
R802132-13	Method Blank			7771-013	93A/93		02/26/08	02/26/08	BW	Gross Alpha in Solids
			SOLID	7771-013	93B/93		02/26/08	02/26/08	BW	Gross Beta in Solids
		RC-032		7771-013	GAM		02/26/08	02/27/08	CSS	Gamma Scan
R802132-14	Duplicate (R802132-06)			7771-014	93A/93		02/26/08	02/26/08	BW	Gross Alpha in Solids
02/14/08	100-F-26:9 SZ/FS Verif.		SOLID	7771-014	93B/93		02/26/08	02/26/08	BW	Gross Beta in Solids
02/21/08		RC-032		7771-014	GAM		02/26/08	02/27/08	CSS	Gamma Scan

COUNTS OF TESTS BY SAMPLE TYPE

TEST	SAF No	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP SPIKE	TOTAL
93A/93	RC-032	Gross Alpha in Solids	900.0_ALPHABETA_GPC	11			1	1	1	14
93B/93	RC-032	Gross Beta in Solids	900.0_ALPHABETA_GPC	11			1	1	1	14
GAM	RC-032	Gamma Scan	GAMMA_GS	11			1	1	1	14
TOTALS				33			3	3	3	42

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 02/28/08

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

7771-013 Method Blank

METHOD BLANK

SDG	7771	Client/Case no	Hanford	SDG K1123
Contact	Melissa C. Mannion	Contract	No. 630	
Lab sample id	R802132-13	Client sample id	Method Blank	
Dept sample id	7771-013	Material/Matrix		SOLID
		SAF No	RC-032	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Gross Alpha	12587-46-1	-0.262	2.6	6.12	10.0	U	93A
Gross Beta	12587-47-2	-1.46	3.4	6.01	15.0	U	93B
Potassium 40	13966-00-2	U		1.82		U	GAM
Cobalt 60	10198-40-0	U		0.073	0.050	U	GAM
Cesium 137	10045-97-3	U		0.071	0.100	U	GAM
Radium 226	13982-63-3	U		0.144	0.100	U	GAM
Radium 228	15262-20-1	U		0.303	0.200	U	GAM
Europium 152	14683-23-9	U		0.182	0.100	U	GAM
Europium 154	15585-10-1	U		0.230	0.100	U	GAM
Europium 155	14391-16-3	U		0.116	0.100	U	GAM
Thorium 228	14274-82-9	U		0.098		U	GAM
Thorium 232	TH-232	U		0.303		U	GAM
Uranium 235	15117-96-1	U		0.240		U	GAM
Uranium 238	U-238	U		8.16		U	GAM
Americium 241	14596-10-2	U		0.058		U	GAM
Silver 108m	14391-65-2	U		0.057		U	GAM
Barium 133	13981-41-4	U		0.074		U	GAM

100-F RemainSitesBurialGrnds-SoilFP

QC-BLANK #64826

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	02/28/08

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

7771-012

Lab Control Sample

LAB CONTROL SAMPLE

SDG	7771	Client/Case no	Hanford SDG K1123
Contact	Melissa C. Mannion	Contract	No. 630
Lab sample id	R802132-12	Client sample id	Lab Control Sample
Dept sample id	7771-012	Material/Matrix	SOLID
		SAF No	RC-032

ANALYTE	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST	ADDED pCi/g	2σ ERR pCi/g	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS
Gross Alpha	118	17	6.89	10.0		93A	102	4.1	116	57-143	70-130
Gross Beta	85.5	7.1	5.60	15.0		93B	93.8	3.8	91	76-124	80-120
Cobalt 60	2.40	0.15	0.069	0.050		GAM	2.49	0.10	96	76-124	80-120
Cesium 137	2.84	0.12	0.062	0.100		GAM	2.62	0.10	108	74-126	80-120

100-F RemainSitesBurialGrnds-SoilFP

QC-LCS #64825

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-LCS
Version	3.06
Report date	02/28/08

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

7771-014 J16939

DUPLICATE

SDG	7771			Client/Case no	Hanford SDG K1123
Contact	Melissa C. Mannion			Contract	No. 630
	DUPLICATE		ORIGINAL		
Lab sample id	R802132-14	Lab sample id	R802132-06	Client sample id	J16939
Dept sample id	7771-014	Dept sample id	7771-006	Location/Matrix	100-F-26:9 SZ/FS Verif. SOLID
		Received	02/21/08	Collected/Weight	02/14/08 09:05 791 g
% solids	91.2	% solids	91.2	Custody/SAF No	RC-032-189 RC-032

ANALYTE	DUPLICATE pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST	ORIGINAL pCi/g	2σ ERR (COUNT)	MDA pCi/g	QUALI-FIERS	RPD %	3σ TOT	DER σ
Gross Alpha	10.2	5.8	5.90	10.0		93A	9.96	5.8	6.52		2	129	0.1
Gross Beta	13.1	3.9	5.29	15.0		93B	17.5	5.4	7.65		29	73	1.2
Potassium 40	12.9	0.98	0.499			GAM	12.6	1.4	0.658		2	38	0.2
Cobalt 60	U		0.054	0.050	U	GAM	U		0.068	U	-		0.3
Cesium 137	U		0.050	0.100	U	GAM	U		0.066	U	-		0.4
Radium 226	0.388	0.096	0.090	0.100		GAM	0.540	0.16	0.162		33	68	1.4
Radium 228	0.595	0.20	0.214	0.200		GAM	0.651	0.35	0.358		9	102	0.3
Europium 152	U		0.117	0.100	U	GAM	U		0.194	U	-		0.7
Europium 154	U		0.156	0.100	U	GAM	U		0.267	U	-		0.7
Europium 155	U		0.107	0.100	U	GAM	U		0.161	U	-		0.6
Thorium 228	0.600	0.057	0.052			GAM	0.588	0.088	0.084		2	41	0.1
Thorium 232	0.595	0.20	0.214			GAM	0.651	0.35	0.358		9	102	0.3
Uranium 235	U		0.159		U	GAM	U		0.289	U	-		0.8
Uranium 238	U		5.88		U	GAM	U		10.2	U	-		0.7
Americium 241	U		0.063		U	GAM	U		0.085	U	-		0.4
Silver 108m	U		0.034		U	GAM	U		0.059	U	-		0.7
Barium 133	U		0.044		U	GAM	U		0.090	U	-		0.9

100-F RemainSitesBurialGrnds-SoilFP

QC-DUP#6 64827

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DUP
Version	3.06
Report date	02/28/08

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

7771-001 J16934

DATA SHEET

SDG	7771	Client/Case no	Hanford	SDG K1123
Contact	Melissa C. Mannion	Contract	No. 630	
Lab sample id	R802132-01	Client sample id	J16934	
Dept sample id	7771-001	Location/Matrix	100-F-26:9 SZ/FS Verif.	SOLID
Received	02/21/08	Collected/Weight	02/14/08 08:15	1025 g
% solids	96.2	Custody/SAF No	RC-032-189	RC-032

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Gross Alpha	12587-46-1	5.89	5.1	6.68	10.0	U	93A
Gross Beta	12587-47-2	15.3	4.5	6.09	15.0		93B
Potassium 40	13966-00-2	13.2	1.5	0.804			GAM
Cobalt 60	10198-40-0	U		0.077	0.050	U	GAM
Cesium 137	10045-97-3	U		0.084	0.100	U	GAM
Radium 226	13982-63-3	0.348	0.14	0.158	0.100		GAM
Radium 228	15262-20-1	0.477	0.34	0.383	0.200		GAM
Europium 152	14683-23-9	U		0.205	0.100	U	GAM
Europium 154	15585-10-1	U		0.330	0.100	U	GAM
Europium 155	14391-16-3	U		0.174	0.100	U	GAM
Thorium 228	14274-82-9	0.533	0.088	0.095			GAM
Thorium 232	TH-232	0.477	0.34	0.383			GAM
Uranium 235	15117-96-1	U		0.303		U	GAM
Uranium 238	U-238	U		11.0		U	GAM
Americium 241	14596-10-2	U		0.340		U	GAM
Silver 108m	14391-65-2	U		0.055		U	GAM
Barium 133	13981-41-4	U		0.088		U	GAM

100-F RemainSitesBurialGrnds-SoilFP

Lab id	EBRLNE
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

7771-002 J16935

DATA SHEET

SDG	7771	Client/Case no	Hanford SDG K1123
Contact	Melissa C. Mannion	Contract	No. 630
Lab sample id	R802132-02	Client sample id	J16935
Dept sample id	7771-002	Location/Matrix	100-F-26:9 SZ/FS Verif. SOLID
Received	02/21/08	Collected/Weight	02/14/08 08:25 1052 g
% solids	96.3	Custody/SAF No	RC-032-189 RC-032

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Gross Alpha	12587-46-1	12.5	6.9	6.90	10.0		93A
Gross Beta	12587-47-2	17.3	4.3	5.41	15.0		93B
Potassium 40	13966-00-2	13.3	1.0	0.379			GAM
Cobalt 60	10198-40-0	U		0.050	0.050	U	GAM
Cesium 137	10045-97-3	U		0.054	0.100	U	GAM
Radium 226	13982-63-3	0.353	0.11	0.123	0.100		GAM
Radium 228	15262-20-1	0.668	0.21	0.207	0.200		GAM
Europium 152	14683-23-9	U		0.140	0.100	U	GAM
Europium 154	15585-10-1	U		0.171	0.100	U	GAM
Europium 155	14391-16-3	U		0.145	0.100	U	GAM
Thorium 228	14274-82-9	0.708	0.098	0.101			GAM
Thorium 232	TH-232	0.668	0.21	0.207			GAM
Uranium 235	15117-96-1	U		0.239		U	GAM
Uranium 238	U-238	U		5.82		U	GAM
Americium 241	14596-10-2	U		0.140		U	GAM
Silver 108m	14391-65-2	U		0.043		U	GAM
Barium 133	13981-41-4	U		0.055		U	GAM

100-F RemainSitesBurialGrnds-SoilFP

Lab id	EBRLNE
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

7771-003 J16936

DATA SHEET

SDG	7771	Client/Case no	Hanford	SDG K1123	
Contact	Melissa C. Mannion	Contract	No. 630		
Lab sample id	R802132-03	Client sample id	J16936		
Dept sample id	7771-003	Location/Matrix	100-F-26:9 SZ/FS Verif.	SOLID	
Received	02/21/08	Collected/Weight	02/14/08 08:35	837 g	
% solids	95.1	Custody/SAF No	RC-032-189	RC-032	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Gross Alpha	12587-46-1	9.89	6.5	7.44	10.0		93A
Gross Beta	12587-47-2	21.6	4.9	6.42	15.0		93B
Potassium 40	13966-00-2	13.4	1.4	0.795			GAM
Cobalt 60	10198-40-0	U		0.071	0.050	U	GAM
Cesium 137	10045-97-3	U		0.076	0.100	U	GAM
Radium 226	13982-63-3	0.415	0.12	0.120	0.100		GAM
Radium 228	15262-20-1	0.578	0.30	0.332	0.200		GAM
Europium 152	14683-23-9	U		0.170	0.100	U	GAM
Europium 154	15585-10-1	U		0.244	0.100	U	GAM
Europium 155	14391-16-3	U		0.155	0.100	U	GAM
Thorium 228	14274-82-9	0.549	0.081	0.085			GAM
Thorium 232	TH-232	0.578	0.30	0.332			GAM
Uranium 235	15117-96-1	U		0.272		U	GAM
Uranium 238	U-238	U		9.38		U	GAM
Americium 241	14596-10-2	U		0.082		U	GAM
Silver 108m	14391-65-2	U		0.057		U	GAM
Barium 133	13981-41-4	U		0.080		U	GAM

100-F RemainSitesBurialGrnds-SoilFP

Lab id	EBRLNE
Protocol	Hanford
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

7771-004 J16937

DATA SHEET

SDG	7771	Client/Case no	Hanford	SDG K1123
Contact	Melissa C. Mannion	Contract	No. 630	
Lab sample id	R802132-04	Client sample id	J16937	
Dept sample id	7771-004	Location/Matrix	100-F-26:9 SZ/FS Verif.	SOLID
Received	02/21/08	Collected/Weight	02/14/08 08:45	883 g
% solids	90.6	Custody/SAF No	RC-032-189	RC-032

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Gross Alpha	12587-46-1	10.6	6.2	5.73	10.0		93A
Gross Beta	12587-47-2	18.8	4.3	5.41	15.0		93B
Potassium 40	13966-00-2	13.7	1.2	0.525			GAM
Cobalt 60	10198-40-0	U		0.062	0.050	U	GAM
Cesium 137	10045-97-3	U		0.065	0.100	U	GAM
Radium 226	13982-63-3	0.404	0.12	0.112	0.100		GAM
Radium 228	15262-20-1	0.472	0.23	0.264	0.200		GAM
Europium 152	14683-23-9	U		0.156	0.100	U	GAM
Europium 154	15585-10-1	U		0.164	0.100	U	GAM
Europium 155	14391-16-3	U		0.144	0.100	U	GAM
Thorium 228	14274-82-9	0.733	0.11	0.117			GAM
Thorium 232	TH-232	0.472	0.23	0.264			GAM
Uranium 235	15117-96-1	U		0.226		U	GAM
Uranium 238	U-238	U		7.80		U	GAM
Americium 241	14596-10-2	U		0.087		U	GAM
Silver 108m	14391-65-2	U		0.047		U	GAM
Barium 133	13981-41-4	U		0.061		U	GAM

100-F RemainSitesBurialGrnds-SoilFP

Lab id	EBRLNE
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

7771-005 J16938

DATA SHEET

SDG	7771	Client/Case no	Hanford	SDG K1123	
Contact	Melissa C. Mannion	Contract	No. 630		
Lab sample id	R802132-05	Client sample id	J16938		
Dept sample id	7771-005	Location/Matrix	100-F-26:9 SZ/FS Verif.	SOLID	
Received	02/21/08	Collected/Weight	02/14/08 08:55	855 g	
% solids	94.1	Custody/SAF No	RC-032-189	RC-032	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Gross Alpha	12587-46-1	11.0	6.2	5.58	10.0		93A
Gross Beta	12587-47-2	18.9	4.5	5.72	15.0		93B
Potassium 40	13966-00-2	14.3	1.3	0.412			GAM
Cobalt 60	10198-40-0	U		0.063	0.050	U	GAM
Cesium 137	10045-97-3	U		0.071	0.100	U	GAM
Radium 226	13982-63-3	0.479	0.14	0.128	0.100		GAM
Radium 228	15262-20-1	0.962	0.28	0.238	0.200		GAM
Europium 152	14683-23-9	U		0.157	0.100	U	GAM
Europium 154	15585-10-1	U		0.235	0.100	U	GAM
Europium 155	14391-16-3	U		0.151	0.100	U	GAM
Thorium 228	14274-82-9	0.536	0.075	0.074			GAM
Thorium 232	TH-232	0.962	0.28	0.238			GAM
Uranium 235	15117-96-1	U		0.225		U	GAM
Uranium 238	U-238	U		7.42		U	GAM
Americium 241	14596-10-2	U		0.091		U	GAM
Silver 108m	14391-65-2	U		0.049		U	GAM
Barium 133	13981-41-4	U		0.060		U	GAM

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Lab id	EBRLNE
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

7771-006 J16939

DATA SHEET

SDG	7771	Client/Case no	Hanford	SDG K1123	
Contact	Melissa C. Mannion	Contract	No. 630		
Lab sample id	R802132-06	Client sample id	J16939		
Dept sample id	7771-006	Location/Matrix	100-F-26:9 SZ/FS Verif.	SOLID	
Received	02/21/08	Collected/Weight	02/14/08 09:05	791 g	
% solids	91.2	Custody/SAF No	RC-032-189	RC-032	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Gross Alpha	12587-46-1	9.96	5.8	6.52	10.0		93A
Gross Beta	12587-47-2	17.5	5.4	7.65	15.0		93B
Potassium 40	13966-00-2	12.6	1.4	0.658			GAM
Cobalt 60	10198-40-0	U		0.068	0.050	U	GAM
Cesium 137	10045-97-3	U		0.066	0.100	U	GAM
Radium 226	13982-63-3	0.540	0.16	0.162	0.100		GAM
Radium 228	15262-20-1	0.651	0.35	0.358	0.200		GAM
Europium 152	14683-23-9	U		0.194	0.100	U	GAM
Europium 154	15585-10-1	U		0.267	0.100	U	GAM
Europium 155	14391-16-3	U		0.161	0.100	U	GAM
Thorium 228	14274-82-9	0.588	0.088	0.084			GAM
Thorium 232	TH-232	0.651	0.35	0.358			GAM
Uranium 235	15117-96-1	U		0.289		U	GAM
Uranium 238	U-238	U		10.2		U	GAM
Americium 241	14596-10-2	U		0.085		U	GAM
Silver 108m	14391-65-2	U		0.059		U	GAM
Barium 133	13981-41-4	U		0.090		U	GAM

100-F RemainSitesBurialGrnds-SoilFP

Lab id	EBRLNE
Protocol	Hanford
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

7771-007 J16940

DATA SHEET

SDG	7771	Client/Case no	Hanford	SDG K1123	
Contact	Melissa C. Mannion	Contract	No. 630		
Lab sample id	R802132-07	Client sample id	J16940		
Dept sample id	7771-007	Location/Matrix	100-F-26:9 SZ/FS Verif.	SOLID	
Received	02/21/08	Collected/Weight	02/14/08 09:15	815 g	
% solids	95.1	Custody/SAF No	RC-032-189	RC-032	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Gross Alpha	12587-46-1	2.08	4.7	7.55	10.0	U	93A
Gross Beta	12587-47-2	19.5	4.4	5.81	15.0		93B
Potassium 40	13966-00-2	11.8	1.4	0.757			GAM
Cobalt 60	10198-40-0	U		0.087	0.050	U	GAM
Cesium 137	10045-97-3	U		0.073	0.100	U	GAM
Radium 226	13982-63-3	0.349	0.16	0.174	0.100		GAM
Radium 228	15262-20-1	0.953	0.34	0.259	0.200		GAM
Europium 152	14683-23-9	U		0.181	0.100	U	GAM
Europium 154	15585-10-1	U		0.251	0.100	U	GAM
Europium 155	14391-16-3	U		0.183	0.100	U	GAM
Thorium 228	14274-82-9	0.571	0.13	0.130			GAM
Thorium 232	TH-232	0.953	0.34	0.259			GAM
Uranium 235	15117-96-1	U		0.273		U	GAM
Uranium 238	U-238	U		9.82		U	GAM
Americium 241	14596-10-2	U		0.326		U	GAM
Silver 108m	14391-65-2	U		0.048		U	GAM
Barium 133	13981-41-4	U		0.080		U	GAM

100-F RemainSitesBurialGrnds-SoilFP

Lab id	EBRLNE
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

7771-008 J16941

DATA SHEET

SDG	7771	Client/Case no	Hanford	SDG K1123	
Contact	Melissa C. Mannion	Contract	No. 630		
Lab sample id	R802132-08	Client sample id	J16941		
Dept sample id	7771-008	Location/Matrix	100-F-26:9 SZ/FS Verif.	SOLID	
Received	02/21/08	Collected/Weight	02/14/08 09:25	870 g	
% solids	94.1	Custody/SAF No	RC-032-189	RC-032	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Gross Alpha	12587-46-1	9.88	6.6	8.29	10.0		93A
Gross Beta	12587-47-2	14.2	4.1	5.80	15.0		93B
Potassium 40	13966-00-2	12.8	1.2	0.526			GAM
Cobalt 60	10198-40-0	U		0.053	0.050	U	GAM
Cesium 137	10045-97-3	U		0.057	0.100	U	GAM
Radium 226	13982-63-3	0.326	0.10	0.103	0.100		GAM
Radium 228	15262-20-1	0.449	0.24	0.277	0.200		GAM
Europium 152	14683-23-9	U		0.157	0.100	U	GAM
Europium 154	15585-10-1	U		0.202	0.100	U	GAM
Europium 155	14391-16-3	U		0.166	0.100	U	GAM
Thorium 228	14274-82-9	0.596	0.11	0.124			GAM
Thorium 232	TH-232	0.449	0.24	0.277			GAM
Uranium 235	15117-96-1	U		0.266		U	GAM
Uranium 238	U-238	U		7.50		U	GAM
Americium 241	14596-10-2	U		0.168		U	GAM
Silver 108m	14391-65-2	U		0.047		U	GAM
Barium 133	13981-41-4	U		0.062		U	GAM

100-F RemainSitesBurialGrnds-SoilFP

Lab id	EBRLNE
Protocol	Hanford
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

7771-009 J16942

DATA SHEET

SDG	7771	Client/Case no	Hanford	SDG K1123	
Contact	Melissa C. Mannion	Contract	No. 630		
Lab sample id	R802132-09	Client sample id	J16942		
Dept sample id	7771-009	Location/Matrix	100-F-26:9 SZ/FS Verif.	SOLID	
Received	02/21/08	Collected/Weight	02/14/08 09:35	823 g	
% solids	92.2	Custody/SAF No	RC-032-189	RC-032	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Gross Alpha	12587-46-1	7.48	6.3	8.82	10.0	U	93A
Gross Beta	12587-47-2	20.9	4.4	5.74	15.0		93B
Potassium 40	13966-00-2	11.9	0.94	0.540			GAM
Cobalt 60	10198-40-0	U		0.054	0.050	U	GAM
Cesium 137	10045-97-3	U		0.052	0.100	U	GAM
Radium 226	13982-63-3	0.441	0.11	0.108	0.100		GAM
Radium 228	15262-20-1	0.570	0.21	0.235	0.200		GAM
Europium 152	14683-23-9	U		0.137	0.100	U	GAM
Europium 154	15585-10-1	U		0.180	0.100	U	GAM
Europium 155	14391-16-3	U		0.123	0.100	U	GAM
Thorium 228	14274-82-9	0.780	0.092	0.097			GAM
Thorium 232	TH-232	0.570	0.21	0.235			GAM
Uranium 235	15117-96-1	U		0.217		U	GAM
Uranium 238	U-238	U		6.63		U	GAM
Americium 241	14596-10-2	U		0.060		U	GAM
Silver 108m	14391-65-2	U		0.042		U	GAM
Barium 133	13981-41-4	U		0.066		U	GAM

100-F-RemainSitesBurialGrnds-SoilFP

Lab id	EBRLNE
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

7771-010 J16943

DATA SHEET

SDG	7771	Client/Case no	Hanford	SDG K1123	
Contact	Melissa C. Mannion	Contract	No. 630		
Lab sample id	R802132-10	Client sample id	J16943		
Dept sample id	7771-010	Location/Matrix	100-F-26:9 SZ/FS Verif.	SOLID	
Received	02/21/08	Collected/Weight	02/14/08 09:45	1036 g	
% solids	86.7	Custody/SAF No	RC-032-189	RC-032	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Gross Alpha	12587-46-1	6.98	5.8	7.71	10.0	U	93A
Gross Beta	12587-47-2	19.9	5.9	9.00	15.0		93B
Potassium 40	13966-00-2	13.0	0.78	0.274			GAM
Cobalt 60	10198-40-0	U		0.031	0.050	U	GAM
Cesium 137	10045-97-3	U		0.035	0.100	U	GAM
Radium 226	13982-63-3	0.456	0.082	0.084	0.100		GAM
Radium 228	15262-20-1	0.740	0.14	0.130	0.200		GAM
Europium 152	14683-23-9	U		0.110	0.100	U	GAM
Europium 154	15585-10-1	U		0.121	0.100	U	GAM
Europium 155	14391-16-3	U		0.116	0.100	U	GAM
Thorium 228	14274-82-9	0.669	0.056	0.052			GAM
Thorium 232	TH-232	0.740	0.14	0.130			GAM
Uranium 235	15117-96-1	U		0.182		U	GAM
Uranium 238	U-238	U		4.29		U	GAM
Americium 241	14596-10-2	U		0.116		U	GAM
Silver 108m	14391-65-2	U		0.031		U	GAM
Barium 133	13981-41-4	U		0.042		U	GAM

100-F RemainSitesBurialGrnds-SoilFP

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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

7771-011 J16944

DATA SHEET

SDG	7771	Client/Case no	Hanford	SDG K1123	
Contact	Melissa C. Mannion	Contract	No. 630		
Lab sample id	R802132-11	Client sample id	J16944		
Dept sample id	7771-011	Location/Matrix	100-F-26:9 SZ/FS Verif.	SOLID	
Received	02/21/08	Collected/Weight	02/14/08 09:55	915 g	
% solids	86.3	Custody/SAF No	RC-032-189	RC-032	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Gross Alpha	12587-46-1	10.7	6.7	7.81	10.0		93A
Gross Beta	12587-47-2	22.5	5.9	8.77	15.0		93B
Potassium 40	13966-00-2	7.54	2.7	0.591			GAM
Cobalt 60	10198-40-0	U		0.059	0.050	U	GAM
Cesium 137	10045-97-3	U		0.052	0.100	U	GAM
Radium 226	13982-63-3	0.403	0.14	0.102	0.100		GAM
Radium 228	15262-20-1	0.543	0.27	0.209	0.200		GAM
Europium 152	14683-23-9	U		0.140	0.100	U	GAM
Europium 154	15585-10-1	U		0.188	0.100	U	GAM
Europium 155	14391-16-3	U		0.116	0.100	U	GAM
Thorium 228	14274-82-9	0.572	0.075	0.070			GAM
Thorium 232	TH-232	0.543	0.27	0.209			GAM
Uranium 235	15117-96-1	U		0.188		U	GAM
Uranium 238	U-238	U		6.43		U	GAM
Americium 241	14596-10-2	U		0.112		U	GAM
Silver 108m	14391-65-2	U		0.042		U	GAM
Barium 133	13981-41-4	U		0.058		U	GAM

100-F RemainSitesBurialGrnds-SoilFP

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	02/28/08

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

Test 93A	Matrix SOLID
SDG 7771	
Contact Melissa C. Mannion	

LAB METHOD SUMMARY

GROSS ALPHA IN SOLIDS

GAS PROPORTIONAL COUNTING

Client Hanford	
Contract No. 630	
Contract SDG K1123	

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Gross Alpha
Preparation batch 6148-006					
R802132-01	93		7771-001	J16934	U
R802132-02	93		7771-002	J16935	12.5
R802132-03	93		7771-003	J16936	9.89
R802132-04	93		7771-004	J16937	10.6
R802132-05	93		7771-005	J16938	11.0
R802132-06	93		7771-006	J16939	9.96
R802132-07	93		7771-007	J16940	U
R802132-08	93		7771-008	J16941	9.88
R802132-09	93		7771-009	J16942	U
R802132-10	93		7771-010	J16943	U
R802132-11	93		7771-011	J16944	10.7
R802132-12	93		7771-012	Lab Control Sample	ok
R802132-13	93		7771-013	Method Blank	U
R802132-14	93		7771-014	Duplicate (R802132-06)	ok

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

.00-F RemainSitesBurialGrnds-SoilFP

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	02/28/08

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

Test 93A Matrix SOLID
SDG 7771
Contact Melissa C. Mannion

LAB METHOD SUMMARY

GROSS ALPHA IN SOLIDS
GAS PROPORTIONAL COUNTING

Client Hanford
Contract No. 630
Contract SDG K1123

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/g	ALIQ g	PREP FAC	DILU-TION	RESID mg	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 6148-006			2σ prep error 20.0 % Reference Lab Notebook #6148, pg. 6													
R802132-01	93		J16934	6.68	0.100			80		100			12	02/26/08	02/26	GRB-105
R802132-02	93		J16935	6.90	0.100			85		100			12	02/26/08	02/26	GRB-109
R802132-03	93		J16936	7.44	0.100			86		100			12	02/26/08	02/26	GRB-110
R802132-04	93		J16937	5.73	0.100			86		100			12	02/26/08	02/26	GRB-111
R802132-05	93		J16938	5.58	0.100			83		100			12	02/26/08	02/26	GRB-112
R802132-06	93		J16939	6.52	0.100			55		100			12	02/26/08	02/26	GRB-114
R802132-07	93		J16940	7.55	0.100			85		100			12	02/26/08	02/26	GRB-209
R802132-08	93		J16941	8.29	0.100			88		100			12	02/26/08	02/26	GRB-210
R802132-09	93		J16942	8.82	0.100			85		100			12	02/26/08	02/26	GRB-211
R802132-10	93		J16943	7.71	0.100			82		100			12	02/26/08	02/26	GRB-213
R802132-11	93		J16944	7.81	0.100			85		100			12	02/26/08	02/26	GRB-214
R802132-12	93		Lab Control Sample	6.89	0.100			62		100				02/26/08	02/26	GRB-216
R802132-13	93		Method Blank	6.12	0.100			62		100				02/26/08	02/26	GRB-105
R802132-14	93		Duplicate (R802132-06)	5.90	0.100			55		100			12	02/26/08	02/26	GRB-109
Nominal values and limits from method				10.0	0.100			5-250		100			180			

PROCEDURES	REFERENCE	900.0_ALPHABETA_GPC
	SPP-070	Soil Dissolution, < 1.0g Aliquot, rev 7
	SPP-125	Gross Alpha and Gross Beta in Dissolved Solids, rev 0

AVERAGES ± 2 SD	MDA	7.00	± 1.97
FOR 14 SAMPLES	RESIDUE	77	± 25

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 02/28/08

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

Test 93B Matrix SOLID
SDG 7771
Contact Melissa C. Mannion

LAB METHOD SUMMARY

GROSS BETA IN SOLIDS

GAS PROPORTIONAL COUNTING

Client Hanford
Contract No. 630
Contract SDG K1123

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Gross Beta
Preparation batch 6148-006					
R802132-01	93		7771-001	J16934	15.3
R802132-02	93		7771-002	J16935	17.3
R802132-03	93		7771-003	J16936	21.6
R802132-04	93		7771-004	J16937	18.8
R802132-05	93		7771-005	J16938	18.9
R802132-06	93		7771-006	J16939	17.5
R802132-07	93		7771-007	J16940	19.5
R802132-08	93		7771-008	J16941	14.2
R802132-09	93		7771-009	J16942	20.9
R802132-10	93		7771-010	J16943	19.9
R802132-11	93		7771-011	J16944	22.5
R802132-12	93		7771-012	Lab Control Sample	ok
R802132-13	93		7771-013	Method Blank	U
R802132-14	93		7771-014	Duplicate (R802132-06)	ok

Nominal values and limits from method RDLs (pCi/g) 15.0
100-F RemainSitesBurialGrnds-SoilFP

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 02/28/08

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

Test 93B Matrix SOLID
SDG 7771
Contact Melissa C. Mannion

LAB METHOD SUMMARY

GROSS BETA IN SOLIDS

GAS PROPORTIONAL COUNTING

Client Hanford
Contract No. 630
Contract SDG K1123

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/g	ALIQ g	PREP FAC	DILU-TION	RESID mg	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 6148-006 · 2σ prep error 15.0 % Reference Lab Notebook #6148, pg. 6																
R802132-01	93		J16934	6.09	0.100			80		100			12	02/26/08	02/26	GRB-105
R802132-02	93		J16935	5.41	0.100			85		100			12	02/26/08	02/26	GRB-109
R802132-03	93		J16936	6.42	0.100			86		100			12	02/26/08	02/26	GRB-110
R802132-04	93		J16937	5.41	0.100			86		100			12	02/26/08	02/26	GRB-111
R802132-05	93		J16938	5.72	0.100			83		100			12	02/26/08	02/26	GRB-112
R802132-06	93		J16939	7.65	0.100			55		100			12	02/26/08	02/26	GRB-114
R802132-07	93		J16940	5.81	0.100			85		100			12	02/26/08	02/26	GRB-209
R802132-08	93		J16941	5.80	0.100			88		100			12	02/26/08	02/26	GRB-210
R802132-09	93		J16942	5.74	0.100			85		100			12	02/26/08	02/26	GRB-211
R802132-10	93		J16943	9.00	0.100			82		100			12	02/26/08	02/26	GRB-213
R802132-11	93		J16944	8.77	0.100			85		100			12	02/26/08	02/26	GRB-214
R802132-12	93		Lab Control Sample	5.60	0.100			62		100				02/26/08	02/26	GRB-216
R802132-13	93		Method Blank	6.01	0.100			62		100				02/26/08	02/26	GRB-105
R802132-14	93		Duplicate (R802132-06)	5.29	0.100			55		100			12	02/26/08	02/26	GRB-109
Nominal values and limits from method				15.0	0.100			5-250		100			180			

PROCEDURES
REFERENCE 900.0_ALPHABETA_GPC
SPP-070 Soil Dissolution, < 1.0g Aliquot, rev 7
SPP-125 Gross Alpha and Gross Beta in Dissolved Solids, rev 0

AVERAGES ± 2 SD FOR 14 SAMPLES
MDA 6.34 ± 2.45
RESIDUE 77 ± 25

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 02/28/08

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

Test GAM Matrix SOLID
SDG 7771
Contact Melissa C. Mannion

LAB METHOD SUMMARY

GAMMA SCAN

GAMMA SPECTROSCOPY

Client Hanford
Contract No. 630
Contract SDG K1123

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Cobalt 60	Cesium 137
Preparation batch 6148-006						
R802132-01			7771-001	J16934	U	U
R802132-02			7771-002	J16935	U	U
R802132-03			7771-003	J16936	U	U
R802132-04			7771-004	J16937	U	U
R802132-05			7771-005	J16938	U	U
R802132-06			7771-006	J16939	U	U
R802132-07			7771-007	J16940	U	U
R802132-08			7771-008	J16941	U	U
R802132-09			7771-009	J16942	U	U
R802132-10			7771-010	J16943	U	U
R802132-11			7771-011	J16944	U	U
R802132-12			7771-012	Lab Control Sample	ok	ok
R802132-13			7771-013	Method Blank	U	U
R802132-14			7771-014	Duplicate (R802132-06)	- U	- U
Nominal values and limits from method				RDLs (pCi/g)	0.050	0.100
100-F RemainSitesBurialGrnds-SoilFP						

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 02/28/08

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP K1123

Test GAM Matrix SOLID
SDG 7771
Contact Melissa C. Mannion

LAB METHOD SUMMARY

GAMMA SCAN

GAMMA SPECTROSCOPY

Client Hanford
Contract No. 630
Contract SDG K1123

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUP-FIX	CLIENT SAMPLE ID	MDA pCi/g	ALIQ g	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 6148-006			2σ prep error 15.0 % Reference Lab Notebook #6148, pg. 6													
1802132-01			J16934	16.6	181					134			12	02/25/08	02/26	JR,05,00
1802132-02			J16935	10.2	200					134			12	02/25/08	02/26	JR,02,00
1802132-03			J16936	17.9	187					135			12	02/25/08	02/26	JR,01,00
1802132-04			J16937	15.2	194					135			12	02/25/08	02/26	JR,07,00
1802132-05			J16938	15.5	195					119			12	02/25/08	02/26	JR,07,00
1802132-06			J16939	18.6	188					118			12	02/25/08	02/26	JR,01,00
1802132-07			J16940	16.3	202					119			12	02/25/08	02/26	JR,05,00
1802132-08			J16941	13.3	183					119			12	02/25/08	02/26	JR,02,00
1802132-09			J16942	12.8	181					242			12	02/25/08	02/26	JR,01,00
1802132-10			J16943	8.52	199					242			12	02/25/08	02/26	JR,02,00
1802132-11			J16944	13.5	187					242			12	02/25/08	02/26	JR,04,00
1802132-12			Lab Control Sample	0.069	180					242				02/25/08	02/26	JR,05,00
1802132-13			Method Blank	15.6	180					242				02/25/08	02/26	JR,06,00
1802132-14			Duplicate (R802132-06)	11.6	188					242			12	02/25/08	02/26	JR,07,00
Nominal values and limits from method				0.050	180					100			180			

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

AVERAGES ± 2 SD FOR 14 SAMPLES
MDA 13.3 ± 9.50
YIELD ____ ± ____

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 02/28/08

SDG 7771
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG K1123

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 02/28/08

SDG	7771
Contact	Melissa C. Mannion

REPORT GUIDE

Client	Hanford
Contract	No. 630
Case no	SDG K1123

PREPARATION BATCH SUMMARY

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

The following notes apply to this report:

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

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

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

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

  These qualifiers should be reviewed as follows:

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

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

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

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

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Protocol	Hanford
Version	Ver 1.0
Form	DVD-RG
Version	3.06
Report date	02/28/08

SDG	7771
Contact	Melissa C. Mannion

REPORT GUIDE

Client	Hanford
Contract	No. 630
Case no	SDG_K1123

WORK SUMMARY

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

The following notes apply to this report:

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

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

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

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

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

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

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Protocol	Hanford
Version	Ver 1.0
Form	DVD-RG
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SDG	7771
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REPORT GUIDE

Client	Hanford
Contract	No. 630
Case no	SDG_K1123

DATA SHEET

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

The following notes apply to this report:

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

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

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

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

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

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

The following qualifiers are defined by the DVD system:

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

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Version	3.06
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DATA SHEET

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

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

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

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

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

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

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

P The RESULT is 'preliminary'.

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

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

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

The following values are underlined to indicate possible problems:

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

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GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG_K1123

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 02/28/08

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Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG K1123

LAB CONTROL SAMPLE

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

The following notes apply to this report:

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

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

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

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

* The first, computed limits for the recovery reflect:

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

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

  2. The error of ADDED.

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

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

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

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Protocol Hanford
Version Ver 1.0
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SDG 7771
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REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_K1123

DUPLICATE

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

The following notes apply to this report:

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

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

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

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

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

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

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

  This value reported for this limit is at most 999.

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

  1. A fixed percentage specified in the protocol.

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Report date 02/28/08

DUPLICATE

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

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

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

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

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

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REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_K1123

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 02/28/08

SDG 7771
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG K1123

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 02/28/08

SDG	7771
Contact	Melissa C. Mannion

REPORT GUIDE

Client	Hanford
Contract	No. 630
Case no	SDG_K1123

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	02/28/08

METHOD SUMMARY

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

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

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

  MDAs are underlined if greater than the printed RDL.

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

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

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

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

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

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

METHOD SUMMARY

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

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

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

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

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

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

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

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

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

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

METHOD SUMMARY

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

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

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

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-032-189	Page 1 of 3

Collector T. Welch-Koelling	**Company Contact** R.T. Coffman	**Telephone No.** 528-6409	**Project Coordinator** KESSNER, JH
Project Designation 100-F Remaining Sites Burial Grounds - Soil Full Protocol	**Sampling Location** 100-F-26:9 SZ/FS Verification K1123 (7771)		**SAF No.** RC-032
Ice Chest No. AFS-04-121	**Field Logbook No.** EFL-1174-4	**COA** R10F262000	**Method of Shipment** FED EX
Shipped To EBERLINE SERVICES / LIONVILLE	**Offsite Property No.** A080170		**Bill of Lading/Air Bill No.** See OSPC

Price Code 8B **Data Turnaround** 7 DAY

POSSIBLE SAMPLE HAZARDS/REMARKS
NA

Special Handling and/or Storage
NA ~~Cool 4°C~~ MA 2/19/08

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None				
Type of Container	P	P	aG	aG	aG	G/P	P				
No. of Container(s)	2	1	1	1	1	1	1				
Volume	125mL	125mL	60mL	120mL	120mL	500mL	125mL				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	TPH (Total) - 418.1	See item (2) in Special Instructions.	Gross Alpha; Gross Beta				

JRD 1-23-08

2/21/08

Sample No.	Matrix *	Sample Date	Sample Time										
~~J16933~~	~~SOIL~~	2-14-08	0805										EB
J16934	SOIL		0815						X	X			1
J16935	SOIL		0825						X	X			2
J16936	SOIL		0835						X	X			3
J16937	SOIL		0845						X	X			4

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
T Welch Koelling [signature]	2-14-08 1100	JRDeBuigne [signature]	1100 2-14-08
JRDeBuigne [signature]	1415 2-14-08	1060 / 2B	1415 2-14-08
1060 / 2B	2/19/08 1130	[signature] MStankovich	1130 2/19/08
WCH [signature] MStankovich	1500 2/19/08	Fed Ex	
FED EX		[signature]	2/21/08 10:00

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(2) Gamma Spectroscopy (TCL List) {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gamma Spec - Add-on {Barium-133, Silver-108 metastable}

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-032-189	Page 2 of 3

Collector T. Welch-Koelling	**Company Contact** R.T. Coffman	**Telephone No.** 528-6409	**Project Coordinator** KESSNER, JH
Project Designation 100-F Remaining Sites Burial Grounds - Soil Full Protocol	**Sampling Location** 100-F-26:9 SZ/FS Verification K1123 (7771)		**SAF No.** RC-032
Ice Chest No. AFS-04-121	**Field Logbook No.** EFL-1174-4	**COA** R10F262000	**Method of Shipment** FED EX
Shipped To EBERLINE SERVICES / LIONVILLE	**Offsite Property No.** A080170		**Bill of Lading/Air Bill No.** See OSPC

Price Code 8B **Data Turnaround** 7 DAY

POSSIBLE SAMPLE HAZARDS/REMARKS
NA

Special Handling and/or Storage
NA ~~Cool 4°C~~ MS 2/19/08

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None				
Type of Container	P	P	aG	aG	aG	G/P	P				
No. of Container(s)	2	1	1	1	1	1	1				
Volume	125mL	125mL	60mL	120mL	120mL	500mL	125mL				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	TPH (Total) - 418.1	See item (2) in Special Instructions.	Gross Alpha: Gross Beta				

Sample No.	Matrix *	Sample Date	Sample Time										
J16938	SOIL	2-14-08	0855						X	X			5
J16939	SOIL		0905						X	X			6
J16940	SOIL		0915						X	X			7
J16941	SOIL		0925						X	X			8
J16942	SOIL		0935						X	X			9

JRD 1-23-08

CHAIN OF POSSESSION **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
T. Welch Koelling [signature]	2-14-08 1100	JRD DeBuigne JRD [signature]	1100 2-14-08
JRD DeBuigne JRD [signature]	1415 2-14-08	1060/2B	1415 2-14-08
1060/2B	2/19/08 1130	[signature] MStankouch	1130 2/19/08
MS 2/19/08 ~~1060/~~ [signature] MStankouch	2/19/08 1500	FED EX	
FED EX		Alex Kelmel	2/21/08 AK

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(2) Gamma Spectroscopy (TCL List) {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gamma Spec - Add-on {Barium-133, Silver-108 metastable}

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-032-189	Page 3 of 3

Collector: T. Welch-Koelling	Company Contact: R.T. Coffman; Telephone No.: 528-6409	Project Coordinator: KESSNER, JH	Price Code: 8B; Data Turnaround: 7 DAY
Project Designation: 100-F Remaining Sites Burial Grounds - Soil Full Protocol	Sampling Location: 100-F-26:9 SZ/FS Verification K1123 (7771)	SAF No.: RC-032	
Ice Chest No.: AFS 04 721	Field Logbook No.: EFL-1174-4; COA: R10F262000	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A080170	Bill of Lading/Air Bill No.: See OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

NA

Special Handling and/or Storage

NA ~~[illegible]~~ MA 2/19/08

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None				
Type of Container	P	P	aG	aG	aG	G/P	P				
No. of Container(s)	2	1	1	1	1	1	1				
Volume	125mL	125mL	60mL	120mL	120mL	500mL	125mL				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	TPH (Total) - 418.1	See item (2) in Special Instructions.	Gross Alpha; Gross Beta				

JRD 1-23-08

Sample No.	Matrix *	Sample Date	Sample Time										
J16943	SOIL	2-14-08	0945						X	X			10
J16944	SOIL	2-14-08	0955						X	X			10 D
~~J16945~~	~~SOIL~~								X	X			FS-1
~~J16946~~	~~SOIL~~								X	X			FS-2

JRD 2-14-08

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: [signature] Date/Time: 2-14-08 1100	Received By/Stored In: JRDeBuigne JRDB Date/Time: 1100 2-14-08		
Relinquished By/Removed From: ORDeBuigne JRDB Date/Time: 1415 2-14-08	Received By/Stored In: 1060 /2B Date/Time: 1415 2-14-08		
Relinquished By/Removed From: 1060/2B Date/Time: 2/19/08 1130	Received By/Stored In: MLC MStankovich Date/Time: 1130 2/19/08		
Relinquished By/Removed From: WCH Date/Time: 1500 MLC MStankovich 2/19/08	Received By/Stored In: Fed Ex Date/Time:		
Relinquished By/Removed From: FED EX Date/Time:	Received By/Stored In: Alex Kilwell Date/Time: 2/21/08 AK		
Relinquished By/Removed From: Date/Time:	Received By/Stored In: Date/Time:		

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(2) Gamma Spectroscopy (TCL List) {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gamma Spec - Add-on {Barium-133, Silver-108 metastable}

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

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

WCH-EE-011

EBERLINE

RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

Client: U.C. HANFORD City RICHLAND State CA

Date/Time received 2/21/08 10:00 CoC No. RC-032-189

Container I.D. No. AFS-04-121 Requested TAT (Days) 7 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 [ ] N/A ✓
6. Number of samples in shipping container: 11 Sample Matrix SOIL
7. Number of containers per sample: 2 (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 _____ Preservative _____
13. Describe any anomalies:
14. Was P.M. notified of any anomalies? Yes [ ] No [ ] Date _____
15. Inspected by HK Date: 2/21/08 Time: 10:20

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

Ion Chamber Ser. No. _____ Calibration date _____

Alpha Meter Ser. No. _____ Calibration date _____

Beta/Gamma Meter Ser. No. 100482 Calibration date 9 may 2007

LIONVILLE LABORATORY INC.

31 March 2008

RECEIVED APR 2008

Joan Kessner
WC-Hanford
2620 Fermi Avenue
MSIN H9-03
Richland, WA 99354

Subject: Analytical Data Package

Dear Ms. Kessner:

Enclosed are the hard copy analytical reports for the batch number/fraction indicated (marked X) in the following table:

LvLI Batch #	0802L628
SDG #	K1123
SAF #	RC-032
Date Received	2/20/08
# Samples	12
Matrix	SOIL
Volatiles	
Semivolatiles	X
Pest/PCB	X
Glycols	
DRO/KRO/GRO	
GC Alcohols	
Herbicides	
Metals	X
Inorganics	X

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

Sincerely,
Lionville Laboratory Incorporated

Orlette S. Johnson
Project Manager

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

RECEIVED
APR 2008

Lionville Laboratory, Inc.
BNA ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-032 K1123

DATE RECEIVED: 02/20/08 LVL LOT # : 08LE0088

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J16933	001	S	08LE0088	02/14/08	02/21/08	03/17/08
J16934	002	S	08LE0088	02/14/08	02/21/08	03/20/08
J16934	002 MS	S	08LE0088	02/14/08	02/21/08	03/20/08
J16934	002 MSD	S	08LE0088	02/14/08	02/21/08	03/20/08
J16935	003	S	08LE0088	02/14/08	02/21/08	03/20/08
J16936	004	S	08LE0088	02/14/08	02/21/08	03/20/08
J16937	005	S	08LE0088	02/14/08	02/21/08	03/21/08
J16938	006	S	08LE0088	02/14/08	02/21/08	03/21/08
J16939	007	S	08LE0088	02/14/08	02/21/08	03/21/08
J16940	008	S	08LE0088	02/14/08	02/21/08	03/19/08
J16941	009	S	08LE0088	02/14/08	02/21/08	03/19/08
J16942	010	S	08LE0088	02/14/08	02/21/08	03/19/08
J16943	011	S	08LE0088	02/14/08	02/21/08	03/23/08
J16944	012	S	08LE0088	02/14/08	02/21/08	03/21/08

LAB QC:

SBLKSS	MB1	S	08LE0088	N/A	02/21/08	03/17/08
SBLKSS	MB1 BS	S	08LE0088	N/A	02/21/08	03/21/08

LIONVILLE LABORATORY INC.

Case Narrative

Client: TNU-HANFORD RC-032
LVL #: 0802L628
SDG/SAF # K1118 / RC-032

W.O. #: 11343-606-001-9999-00
Date Received: 02-20-2008

SEMIVOLATILE

Twelve (12) soil samples were collected on 02-14-2008.

The samples and their associated QC samples were extracted according to Lionville Laboratory SOPs based on SW 846 method 3540C on 02-21-2008 and analyzed according to criteria set forth in Lionville Laboratory SOPs based on SW 846 Method 8270C for TCL Semivolatile target compounds on 03-17,19,20,21,23-2008.

All soil samples are reported on a dry weight basis unless requested by the client, required by the method, or noted otherwise. The following is a summary of QC results accompanying the sample results. Lionville Laboratory Inc (LvLI) certifies that all test results meet the requirements of NELAC except as noted below:

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

2. Non-target compounds were detected in the samples.

3. Five (5) of ninety-six (96) surrogate recoveries were outside acceptance criteria. The surrogate recovery criteria were not met for sample J16933. A copy of the Sample Discrepancy Report (SDR) has been enclosed.

4. Thirty-one (31) of one hundred and twenty-eight (128) matrix spike recoveries were outside acceptance criteria. A copy of the Sample Discrepancy Report (SDR) has been enclosed.

5. All blank spike recoveries were within acceptance criteria.

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

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

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

r:\group\data\2008\bna\tnu\0802-628ks2.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 33 pages.

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

LIONVILLE LABORATORY INC.

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

10. 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").

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

12. 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

3/27/08
Date

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

Lionville Laboratory Sample Discrepancy Report (SDR)

SDR #: 08MS045

Initiator: Sharon Saylor
Date: 3-26-08
Client: TNU RC032K1123

Batch: 08026628
Samples: 001, 002ms, 002msd, BS
Method: SW846/MCAWW/CLP/

Parameter: 8270
Matrix: SOLID
Prep Batch: 08LE0088

1. Reason for SDR

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

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

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

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

① 5 surrogates out of QC range in sample 001 (J16933)
② low spike recoveries in the ms & msd but BS is ok

2. Known or Probable Causes(s)

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

Other Description: narrate

4. Project Manager Instructions...signature/date: [signature] 3/27/08
__ Concur with Proposed Action
__ Disagree with Proposed Action; See Instruction
✓ Include in Case Narrative
__ Client Contacted:
Date/Person _____
__ Add
__ Cancel

5. Final Action...signature/date: [signature] 3/26/08
__ Verified re-[log][leach][extract][digest][analysis] (circle)
✓ Included in Case Narrative
__ Hard Copy COC Revised
__ Electronic COC Revised
__ EDD Corrections Completed

Other Explanation:

When Final Action has been recorded, forward original to QA 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
①	X Project Mgr: Stone/Johnson	__	__ GC/LC: Kiger
__	__ Data Management: Stilwell	①	X MS: Rychlak/Daley
__	__ Sample Prep: Beegle/Kiger	__	__ Log-in: Perry
		__	__ Admin: _____
		__	__ Other: _____

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.

A = Indicates that a TIC is a suspected aldol-condensation product.

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

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

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

GLOSSARY

ABBREVIATIONS

BS	=	Indicates blank spike in which reagent grade water is spiked with the CLP matrix spike solutions and carried through all the steps in the method. Spike recoveries are reported.
BSD	=	Indicates blank spike duplicate.
MS	=	Indicates matrix spike.
MSD	=	Indicates matrix spike duplicate.
DL	=	Suffix added to sample number to indicate that results are from a diluted analysis.
NA	=	Not Applicable.
DF	=	Dilution Factor.
NR	=	Not Required.
SP, Z	=	Indicates Spiked Compound.

TECHNICAL FLAGS FOR MANUAL INTEGRATION

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

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

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

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

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

CB - Coelution/Background: peak was manually integrated to eliminate contribution from coeluting compounds, background signal, or other interference.

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

Lionville Laboratory, Inc.

Semivolatiles by GC/MS, HSL List

Report Date: 03/27/08 09:31

RFW Batch Number: **0802L628** Client: **TNUHANFORD RC-032 K1123** Work Order: 11343606001 Page: 1a

	Cust ID:	J16933	J16934	J16934	J16934	J16935	J16936
Sample Information	RFW#:	001	002	002 MS	002 MSD	003	004
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Surrogate Recovery	Nitrobenzene-d5	18 * %	46 %	43 %	49 %	59 %	68 %
	2-Fluorobiphenyl	21 * %	56 %	66 %	76 %	74 %	90 %
	Terphenyl-d14	24 %	60 %	62 %	87 %	88 %	89 %
	Phenol-d5	16 * %	48 %	52 %	66 %	62 %	74 %
	2-Fluorophenol	19 * %	50 %	53 %	65 %	64 %	74 %
	2,4,6-Tribromophenol	6 * %	52 %	60 %	53 %	77 %	92 %
		fl	fl	fl	fl	fl	fl
Phenol		340 U	350 U	49 * %	67 %	340 U	350 U
bis(2-Chloroethyl)ether		340 U	350 U	38 * %	52 %	340 U	350 U
2-Chlorophenol		340 U	350 U	50 %	70 %	340 U	350 U
1,3-Dichlorobenzene		340 U	350 U	44 * %	59 %	340 U	350 U
1,4-Dichlorobenzene		340 U	350 U	45 * %	59 %	340 U	350 U
1,2-Dichlorobenzene		340 U	350 U	46 * %	63 %	340 U	350 U
2-Methylphenol		340 U	350 U	49 * %	70 %	340 U	350 U
2,2'-oxybis(1-Chloropropane)		340 U	350 U	38 * %	51 %	340 U	350 U
3/4 Methylphenol		340 U	350 U	52 * %	72 %	340 U	350 U
N-Nitroso-di-n-propylamine		340 U	350 U	41 * %	56 %	340 U	350 U
Hexachloroethane		340 U	350 U	40 * %	55 %	340 U	350 U
Nitrobenzene		340 U	350 U	37 * %	45 * %	340 U	350 U
Isophorone		340 U	350 U	42 * %	52 * %	340 U	350 U
2-Nitrophenol		340 U	350 U	46 * %	56 %	340 U	350 U
2,4-Dimethylphenol		340 U	350 U	48 * %	57 %	340 U	350 U
bis(2-Chloroethoxy)methane		340 U	350 U	39 * %	50 %	340 U	350 U
2,4-Dichlorophenol		340 U	350 U	49 * %	60 %	340 U	350 U
1,2,4-Trichlorobenzene		340 U	350 U	45 * %	55 * %	340 U	350 U
Naphthalene		340 U	350 U	42 %	51 %	340 U	350 U
4-Chloroaniline		340 U	350 U	30 %	38 %	340 U	350 U
Hexachlorobutadiene		340 U	350 U	50 %	61 %	340 U	350 U
4-Chloro-3-methylphenol		340 U	350 U	50 * %	62 %	340 U	350 U
2-Methylnaphthalene		340 U	350 U	45 * %	56 * %	340 U	350 U
Hexachlorocyclopentadiene		340 U	350 U	38 %	44 %	340 U	350 U
2,4,6-Trichlorophenol		340 U	350 U	60 %	56 %	340 U	350 U
2,4,5-Trichlorophenol		840 U	870 U	65 %	74 %	860 U	890 U

*= Outside of EPA CLP QC limits.

000000008

Cust ID:	J16933		J16934		J16934		J16934		J16935		J16936	
RFW#:	001		002		002 MS		002 MSD		003		004	
2-Chloronaphthalene	340	U	350	U	58	%	71	%	340	U	350	U
2-Nitroaniline	840	U	870	U	57 *	%	69	%	860	U	890	U
Dimethylphthalate	340	U	350	U	61	%	75	%	340	U	350	U
Acenaphthylene	340	U	350	U	57 *	%	74	%	340	U	350	U
2,6-Dinitrotoluene	340	U	350	U	61	%	77	%	340	U	350	U
3-Nitroaniline	840	U	870	U	60	%	77	%	860	U	890	U
Acenaphthene	340	U	350	U	57	%	71	%	340	U	350	U
2,4-Dinitrophenol	840	U	870	U	44	%	44	%	860	U	890	U
4-Nitrophenol	840	U	870	U	60	%	66	%	860	U	890	U
Dibenzofuran	340	U	350	U	59 *	%	75	%	340	U	350	U
2,4-Dinitrotoluene	340	U	350	U	64	%	81	%	340	U	350	U
Diethylphthalate	340	U	350	U	58	%	74	%	340	U	350	U
4-Chlorophenyl-phenylether	340	U	350	U	59	%	78	%	340	U	350	U
Fluorene	340	U	350	U	59 *	%	75	%	340	U	350	U
4-Nitroaniline	840	U	870	U	63	%	79	%	860	U	890	U
4,6-Dinitro-2-methylphenol	840	U	870	U	55	%	57	%	860	U	890	U
N-Nitrosodiphenylamine (1)	340	U	350	U	47 *	%	63	%	340	U	350	U
4-Bromophenyl-phenylether	340	U	350	U	56	%	72	%	340	U	350	U
Hexachlorobenzene	340	U	350	U	74	%	92	%	340	U	350	U
Pentachlorophenol	840	U	870	U	54	%	47	%	860	U	890	U
Phenanthrene	340	U	150	J	69	%	80	%	78	J	42	J
Anthracene	340	U	26	J	66	%	80	%	340	U	350	U
Carbazole	340	U	350	U	67	%	80	%	340	U	350	U
Di-n-butylphthalate	340	U	350	U	62	%	74	%	340	U	350	U
Fluoranthene	340	U	290	J	81	%	95	%	130	J	68	J
Pyrene	340	U	270	J	59	%	87	%	150	J	68	J
Butylbenzylphthalate	340	U	350	U	51	%	70	%	340	U	350	U
3,3'-Dichlorobenzidine	340	U	350	U	60	%	65	%	340	U	350	U
Benzo(a)anthracene	340	U	130	J	64	%	77	%	66	J	30	J
Chrysene	340	U	160	J	65	%	81	%	84	J	56	J
bis(2-Ethylhexyl)phthalate	340	U	31	JB	48 *	%	66	%	26	JB	250	JB
Di-n-octyl phthalate	340	U	350	U	38 *	%	58	%	340	U	350	U
Benzo(b)fluoranthene	340	U	97	J	59 *	%	72	%	62	J	38	J
Benzo(k)fluoranthene	340	U	100	J	60	%	82	%	59	J	34	J
Benzo(a)pyrene	340	U	120	J	63	%	80	%	69	J	36	J
Indeno(1,2,3-cd)pyrene	340	U	74	J	77	%	81	%	57	J	350	U
Dibenz(a,h)anthracene	340	U	39	J	76	%	81	%	340	U	350	U
Benzo(g,h,i)perylene	340	U	89	J	74	%	78	%	57	J	350	U

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

000000009

Lionville Laboratory, Inc.

Semivolatiles by GC/MS, HSL List

Report Date: 03/27/08 09:31

RFW Batch Number: 0802L628 Client: TNUHANFORD RC-032 K1123 Work Order: 11343606001 Page: 2a

	Cust ID:	J16937		J16938		J16939		J16940		J16941		J16942	
Sample Information	RFW#:	005		006		007		008		009		010	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	D.F.:	1.00		1.00		1.00		1.00		1.00		1.00	
	Units:	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Surrogate Recovery	Nitrobenzene-d5	62	%	57	%	64	%	49	%	57	%	52	%
	2-Fluorobiphenyl	82	%	67	%	76	%	64	%	66	%	69	%
	Terphenyl-d14	87	%	65	%	102	%	82	%	75	%	75	%
	Phenol-d5	65	%	49	%	67	%	48	%	50	%	49	%
	2-Fluorophenol	64	%	52	%	68	%	53	%	54	%	55	%
	2,4,6-Tribromophenol	46	%	21	%	34	%	66	%	80	%	43	%
			fl		fl		fl		fl		fl		fl
Phenol		370	U	350	U	360	U	350	U	360	U	360	U
bis(2-Chloroethyl)ether		370	U	350	U	360	U	350	U	360	U	360	U
2-Chlorophenol		370	U	350	U	360	U	350	U	360	U	360	U
1,3-Dichlorobenzene		370	U	350	U	360	U	350	U	360	U	360	U
1,4-Dichlorobenzene		370	U	350	U	360	U	350	U	360	U	360	U
1,2-Dichlorobenzene		370	U	350	U	360	U	350	U	360	U	360	U
2-Methylphenol		370	U	350	U	360	U	350	U	360	U	360	U
2,2'-oxybis(1-Chloropropane)		370	U	350	U	360	U	350	U	360	U	360	U
3/4 Methylphenol		370	U	350	U	360	U	350	U	360	U	360	U
N-Nitroso-di-n-propylamine		370	U	350	U	360	U	350	U	360	U	360	U
Hexachloroethane		370	U	350	U	360	U	350	U	360	U	360	U
Nitrobenzene		370	U	350	U	360	U	350	U	360	U	360	U
Isophorone		370	U	350	U	360	U	350	U	360	U	360	U
2-Nitrophenol		370	U	350	U	360	U	350	U	360	U	360	U
2,4-Dimethylphenol		370	U	350	U	360	U	350	U	360	U	360	U
bis(2-Chloroethoxy)methane		370	U	350	U	360	U	350	U	360	U	360	U
2,4-Dichlorophenol		370	U	350	U	360	U	350	U	360	U	360	U
1,2,4-Trichlorobenzene		370	U	350	U	360	U	350	U	360	U	360	U
Naphthalene		370	U	350	U	360	U	350	U	360	U	360	U
4-Chloroaniline		370	U	350	U	360	U	350	U	360	U	360	U
Hexachlorobutadiene		370	U	350	U	360	U	350	U	360	U	360	U
4-Chloro-3-methylphenol		370	U	350	U	360	U	350	U	360	U	360	U
2-Methylnaphthalene		370	U	350	U	360	U	350	U	360	U	360	U
Hexachlorocyclopentadiene		370	U	350	U	360	U	350	U	360	U	360	U
2,4,6-Trichlorophenol		370	U	350	U	360	U	350	U	360	U	360	U
2,4,5-Trichlorophenol		930	U	890	U	900	U	880	U	900	U	900	U

*= Outside of EPA CLP QC limits.

000000010

RFW Batch Number: 0802L628 Client: TNUHANFORD RC-032 K1123 Work Order: 11343606001 Page: 2b

Cust ID:	J16937		J16938		J16939		J16940		J16941		J16942	
RFW#:	005		006		007		008		009		010	
2-Chloronaphthalene	370	U	350	U	360	U	350	U	360	U	360	U
2-Nitroaniline	930	U	890	U	900	U	880	U	900	U	900	U
Dimethylphthalate	370	U	350	U	360	U	350	U	360	U	360	U
Acenaphthylene	370	U	350	U	360	U	350	U	360	U	360	U
2,6-Dinitrotoluene	370	U	350	U	360	U	350	U	360	U	360	U
3-Nitroaniline	930	U	890	U	900	U	880	U	900	U	900	U
Acenaphthene	370	U	350	U	360	U	350	U	360	U	360	U
2,4-Dinitrophenol	930	U	890	U	900	U	880	U	900	U	900	U
4-Nitrophenol	930	U	890	U	900	U	880	U	900	U	900	U
Dibenzofuran	370	U	350	U	360	U	350	U	360	U	360	U
2,4-Dinitrotoluene	370	U	350	U	360	U	350	U	360	U	360	U
Diethylphthalate	370	U	350	U	360	U	350	U	360	U	360	U
4-Chlorophenyl-phenylether	370	U	350	U	360	U	350	U	360	U	360	U
Fluorene	370	U	350	U	360	U	350	U	360	U	360	U
4-Nitroaniline	930	U	890	U	900	U	880	U	900	U	900	U
4,6-Dinitro-2-methylphenol	930	U	890	U	900	U	880	U	900	U	900	U
N-Nitrosodiphenylamine (1)	370	U	350	U	360	U	350	U	360	U	360	U
4-Bromophenyl-phenylether	370	U	350	U	360	U	350	U	360	U	360	U
Hexachlorobenzene	370	U	350	U	360	U	350	U	360	U	360	U
Pentachlorophenol	930	U	890	U	900	U	880	U	900	U	900	U
Phenanthrene	370	U	350	U	360	U	350	U	360	U	360	U
Anthracene	370	U	350	U	360	U	350	U	360	U	360	U
Carbazole	370	U	350	U	360	U	350	U	360	U	360	U
Di-n-butylphthalate	370	U	350	U	360	U	350	U	360	U	360	U
Fluoranthene	370	U	350	U	18	J	350	U	360	U	360	U
Pyrene	370	U	350	U	26	J	350	U	360	U	360	U
Butylbenzylphthalate	370	U	350	U	360	U	350	U	360	U	360	U
3,3'-Dichlorobenzidine	370	U	350	U	360	U	350	U	360	U	360	U
Benzo(a)anthracene	370	U	350	U	18	J	350	U	360	U	360	U
Chrysene	370	U	350	U	26	J	350	U	360	U	360	U
bis(2-Ethylhexyl)phthalate	39	JB	31	JB	62	JB	36	JB	36	JB	23	JB
Di-n-octyl phthalate	370	U	350	U	360	U	350	U	360	U	360	U
Benzo(b)fluoranthene	370	U	350	U	18	J	350	U	360	U	360	U
Benzo(k)fluoranthene	370	U	350	U	360	U	350	U	360	U	360	U
Benzo(a)pyrene	370	U	350	U	360	U	350	U	360	U	360	U
Indeno(1,2,3-cd)pyrene	370	U	350	U	360	U	350	U	360	U	360	U
Dibenz(a,h)anthracene	370	U	350	U	360	U	350	U	360	U	360	U
Benzo(g,h,i)perylene	370	U	350	U	360	U	350	U	360	U	360	U

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

000000011

Lionville Laboratory, Inc.

Semivolatiles by GC/MS, HSL List

Report Date: 03/27/08 09:31

RFW Batch Number: 0802L628 Client: TNUHANFORD RC-032 K1123 Work Order: 11343606001 Page: 3a

000000012

	Cust ID:	J16943		J16944		SBLKSS		SBLKSS BS	
Sample Information	RFW#:	011		012		08LE0088-MB1		08LE0088-MB1	
	Matrix:	SOIL		SOIL		SOIL		SOIL	
	D.F.:	1.00		1.00		1.00		1.00	
	Units:	ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Surrogate Recovery	Nitrobenzene-d5	74	%	79	%	54	%	62	%
	2-Fluorobiphenyl	70	%	91	%	64	%	99	%
	Terphenyl-d14	82	%	110	%	79	%	107	%
	Phenol-d5	70	%	76	%	54	%	77	%
	2-Fluorophenol	77	%	82	%	55	%	75	%
	2,4,6-Tribromophenol	30	%	41	%	31	%	73	%
Phenol		390	U	390	U	330	U	79	%
bis(2-Chloroethyl)ether		390	U	390	U	330	U	70	%
2-Chlorophenol		390	U	390	U	330	U	83	%
1,3-Dichlorobenzene		390	U	390	U	330	U	79	%
1,4-Dichlorobenzene		390	U	390	U	330	U	78	%
1,2-Dichlorobenzene		390	U	390	U	330	U	80	%
2-Methylphenol		390	U	390	U	330	U	79	%
2,2'-oxybis(1-Chloropropane)		390	U	390	U	330	U	69	%
3/4 Methylphenol		390	U	390	U	330	U	85	%
N-Nitroso-di-n-propylamine		390	U	390	U	330	U	78	%
Hexachloroethane		390	U	390	U	330	U	74	%
Nitrobenzene		390	U	390	U	330	U	57	%
Isophorone		390	U	390	U	330	U	66	%
2-Nitrophenol		390	U	390	U	330	U	67	%
2,4-Dimethylphenol		390	U	390	U	330	U	53	%
bis(2-Chloroethoxy)methane		390	U	390	U	330	U	61	%
2,4-Dichlorophenol		390	U	390	U	330	U	66	%
1,2,4-Trichlorobenzene		390	U	390	U	330	U	66	%
Naphthalene		390	U	390	U	330	U	60	%
4-Chloroaniline		390	U	390	U	330	U	31	%
Hexachlorobutadiene		390	U	390	U	330	U	78	%
4-Chloro-3-methylphenol		390	U	390	U	330	U	64	%
2-Methylnaphthalene		390	U	390	U	330	U	68	%
Hexachlorocyclopentadiene		390	U	390	U	330	U	93	%
2,4,6-Trichlorophenol		390	U	390	U	330	U	84	%
2,4,5-Trichlorophenol		970	U	980	U	830	U	96	%

*= Outside of EPA CLP QC limits.

Cust ID:	J16943		J16944		SBLKSS		SBLKSS BS	
RFW#:	011		012		08LE0088-MB1		08LE0088-MB1	
2-Chloronaphthalene	390	U	390	U	330	U	92	%
2-Nitroaniline	970	U	980	U	830	U	92	%
Dimethylphthalate	390	U	390	U	330	U	95	%
Acenaphthylene	390	U	390	U	330	U	93	%
2,6-Dinitrotoluene	390	U	390	U	330	U	96	%
3-Nitroaniline	970	U	980	U	830	U	76	%
Acenaphthene	390	U	390	U	330	U	89	%
2,4-Dinitrophenol	970	U	980	U	830	U	49	%
4-Nitrophenol	970	U	980	U	830	U	65	%
Dibenzofuran	390	U	390	U	330	U	95	%
2,4-Dinitrotoluene	390	U	390	U	330	U	103	%
Diethylphthalate	390	U	390	U	330	U	93	%
4-Chlorophenyl-phenylether	390	U	390	U	330	U	95	%
Fluorene	390	U	390	U	330	U	95	%
4-Nitroaniline	970	U	980	U	830	U	93	%
4,6-Dinitro-2-methylphenol	970	U	980	U	830	U	64	%
N-Nitrosodiphenylamine (1)	390	U	390	U	330	U	77	%
4-Bromophenyl-phenylether	390	U	390	U	330	U	84	%
Hexachlorobenzene	390	U	390	U	330	U	112	%
Pentachlorophenol	970	U	980	U	830	U	70	%
Phenanthrene	390	U	390	U	330	U	99	%
Anthracene	390	U	390	U	330	U	101	%
Carbazole	390	U	390	U	330	U	101	%
Di-n-butylphthalate	390	U	390	U	330	U	96	%
Fluoranthene	390	U	390	U	330	U	111	%
Pyrene	390	U	390	U	330	U	103	%
Butylbenzylphthalate	390	U	390	U	330	U	101	%
3,3'-Dichlorobenzidine	390	U	390	U	330	U	64	%
Benzo(a)anthracene	390	U	390	U	330	U	99	%
Chrysene	390	U	390	U	330	U	102	%
bis(2-Ethylhexyl)phthalate	38	JB	32	JB	34	J	96	%
Di-n-octyl phthalate	390	U	390	U	330	U	89	%
Benzo(b)fluoranthene	390	U	390	U	330	U	95	%
Benzo(k)fluoranthene	390	U	390	U	330	U	91	%
Benzo(a)pyrene	390	U	390	U	330	U	88	%
Indeno(1,2,3-cd)pyrene	390	U	390	U	330	U	82	%
Dibenz(a,h)anthracene	390	U	390	U	330	U	82	%
Benzo(g,h,i)perylene	390	U	390	U	330	U	81	%

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

000000013

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

J16933

Lab Name: Lionville Labs, Inc. Work Order: 11343606001

Client: TNUHANFORD RC-032 K1123

Matrix: (soil/water) SOIL

Lab Sample ID: 0802L628-001

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: N031710

Level: (low/med) LOW

Date Received: 02/20/08

% Moisture: 1 decanted: (Y/N)__

Date Extracted: 02/21/08

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 03/17/08

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	4.860	200	J
2.	ALDOL CONDENSATE	5.269	600	JAB
3.	UNKNOWN	5.383	100	J
4.	UNKNOWN	5.862	80000	JB
5.	UNKNOWN	20.025	300	JB

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

J16934

Lab Name: Lionville Labs, Inc. Work Order: 11343606001

Client: TNUHANFORD RC-032 K1123

Matrix: (soil/water) SOIL

Lab Sample ID: 0802L628-002

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: N032011

Level: (low/med) LOW

Date Received: 02/20/08

% Moisture: 4 decanted: (Y/N)__

Date Extracted: 02/21/08

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 03/20/08

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

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

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	5.187	600	JAB
2.	ALKANE	5.300	900	JB
3.	UNKNOWN	5.762	50000	JB
4.	UNKNOWN	5.858	50000	J
5.	UNKNOWN	5.884	20000	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

J16935

Lab Name: Lionville Labs, Inc. Work Order: 11343606001

Client: TNUHANFORD RC-032 K1123

Matrix: (soil/water) SOIL

Lab Sample ID: 0802L628-003

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: N032014

Level: (low/med) LOW

Date Received: 02/20/08

% Moisture: 3 decanted: (Y/N)__

Date Extracted: 02/21/08

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 03/20/08

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	5.174	900	JA
2.	ALKANE	5.296	1000	JB
3.	UNKNOWN	5.741	50000	JB
4.	UNKNOWN	5.775	2000	J
5.	UNKNOWN	5.863	10000	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

J16936

Lab Name: Lionville Labs, Inc. Work Order: 11343606001

Client: TNUHANFORD RC-032 K1123

Matrix: (soil/water) SOIL

Lab Sample ID: 0802L628-004

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: N032015

Level: (low/med) LOW

Date Received: 02/20/08

% Moisture: 6 decanted: (Y/N)__

Date Extracted: 02/21/08

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 03/20/08

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

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

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	5.115	800	JA
2.	ALDOL CONDENSATE	5.286	1000	JAB
3.	UNKNOWN	5.748	100000	J
4.	UNKNOWN	5.852	80000	JB
5.	UNKNOWN	22.717	600	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

J16937

Lab Name: Lionville Labs, Inc. Work Order: 11343606001

Client: TNUHANFORD RC-032 K1123

Matrix: (soil/water) SOIL

Lab Sample ID: 0802L628-005

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: N032016

Level: (low/med) LOW

Date Received: 02/20/08

% Moisture: 10 decanted: (Y/N)__

Date Extracted: 02/21/08

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 03/21/08

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	5.712	700	JA
2.	UNKNOWN	5.747	60000	J
3.	UNKNOWN	5.843	70000	JB
4.	UNKNOWN	5.896	20000	J
5.	UNKNOWN	19.945	800	JB

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

J16938

Lab Name: Lionville Labs, Inc. Work Order: 11343606001

Client: TNUHANFORD RC-032 K1123

Matrix: (soil/water) SOIL

Lab Sample ID: 0802L628-006

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: N032017

Level: (low/med) LOW

Date Received: 02/20/08

% Moisture: 6 decanted: (Y/N)__

Date Extracted: 02/21/08

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 03/21/08

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENDSATE	5.374	700	JAB
2.	ALKANE	5.836	100000	JB
3.	UNKNOWN	5.871	30000	JB
4.	UNKNOWN	5.923	20000	J
5.	UNKNOWN	19.939	900	JB

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

J16939

Lab Name: Lionville Labs, Inc. Work Order: 11343606001

Client: TNUHANFORD RC-032 K1123

Matrix: (soil/water) SOIL

Lab Sample ID: 0802L628-007

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: N032108

Level: (low/med) LOW

Date Received: 02/20/08

% Moisture: 7 decanted: (Y/N)__

Date Extracted: 02/21/08

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 03/21/08

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	5.043	900	JAB
2.	ALKANE	5.156	1000	JB
3.	UNKNOWN	5.714	200000	JB
4.	ALDOL CONDENSATE	6.873	400	JAB
5.	UNKNOWN	19.799	1000	JB

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

J16940

Lab Name: Lionville Labs, Inc. Work Order: 11343606001

Client: TNUHANFORD RC-032 K1123

Matrix: (soil/water) SOIL

Lab Sample ID: 0802L628-008

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: N031817

Level: (low/med) LOW

Date Received: 02/20/08

% Moisture: 6 decanted: (Y/N)__

Date Extracted: 02/21/08

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 03/19/08

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	5.254	600	JAB
2.	ALDOL CONDENSATE	5.367	1000	JAB
3.	UNKNOWN	5.846	60000	JB
4.	ALDOL CONDENSATE	7.084	400	JAB
5.	UNKNOWN	20.001	300	JB

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

J16941

Lab Name: Lionville Labs, Inc. Work Order: 11343606001

Client: TNUHANFORD RC-032 K1123

Matrix: (soil/water) SOIL

Lab Sample ID: 0802L628-009

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: N031816

Level: (low/med) LOW

Date Received: 02/20/08

% Moisture: 8 decanted: (Y/N)__

Date Extracted: 02/21/08

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 03/19/08

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

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

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	5.373	1000	JAB
2.	UNKNOWN	5.835	60000	JB
3.	UNKNOWN	5.861	20000	J
4.	UNKNOWN	5.879	20000	J
5.	UNKNOWN	5.931	20000	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

J16942

Lab Name: Lionville Labs, Inc. Work Order: 11343606001

Client: TNUHANFORD RC-032 K1123

Matrix: (soil/water) SOIL

Lab Sample ID: 0802L628-010

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: N031815

Level: (low/med) LOW

Date Received: 02/20/08

% Moisture: 7 decanted: (Y/N)__

Date Extracted: 02/21/08

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 03/19/08

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	5.226	600	JAB
2.	ALDOL CONDENSATE	5.348	1000	JAB
3.	UNKNOWN	5.836	70000	JB
4.	UNKNOWN	5.905	20000	J
5.	UNKNOWN	19.999	700	JB

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

J16943

Lab Name: Lionville Labs, Inc. Work Order: 11343606001

Client: TNUHANFORD RC-032 K1123

Matrix: (soil/water) SOIL

Lab Sample ID: 0802L628-011

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: N032208

Level: (low/med) LOW

Date Received: 02/20/08

% Moisture: 14 decanted: (Y/N)__

Date Extracted: 02/21/08

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 03/23/08

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDESATE	4.959	1000	JAB
2.	ALDOL CONDENSATE	5.055	2000	JAB
3.	UNKNOWN	5.517	80000	JB
4.	UNKNOWN	5.604	90000	J
5.	UNKNOWN	19.680	1000	JB

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

J16944

Lab Name: Lionville Labs, Inc. Work Order: 11343606001

Client: TNUHANFORD RC-032 K1123

Matrix: (soil/water) SOIL

Lab Sample ID: 0802L628-012

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: N032110

Level: (low/med) LOW

Date Received: 02/20/08

% Moisture: 15 decanted: (Y/N)__

Date Extracted: 02/21/08

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 03/21/08

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	4.649	900	J
2.	ALKANE	5.172	900	JB
3.	UNKNOWN	5.625	70000	JB
4.	UNKNOWN	5.721	9000	J
5.	UNKNOWN	19.797	1000	JB

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SBLKSS

Lab Name: Lionville Labs, Inc. Work Order: 11343606001

Client: TNUHANFORD RC-032 K1123

Matrix: (soil/water) SOIL

Lab Sample ID: 08LE0088-MB1

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: N031709

Level: (low/med) LOW

Date Received: 02/21/08

% Moisture: _____ decanted: (Y/N)__

Date Extracted: 02/21/08

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 03/17/08

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	5.270	1000	JA
2.	ALKANE	5.375	2000	J
3.	UNKNOWN	5.941	200000	J
4.	ALDOL CONDENSATE	7.109	700	JA
5.	UNKNOWN	20.026	600	J

Lionville Laboratory Use Only

)802L628

Custody Transfer Record/Lab Work Request

Page 1 of 2

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

000000027

Client: TNU Hanford RC 032

Est. Final Proj. Sampling Date:

Project#: ~~11334~~ 11343-606-001.9999-00

Project Contact/Phone#:

Lionville Laboratory Project Manager: Arlette Johnson

SW846 Del STD TAT 7 Days

Date Rec'd 2-20-08 Date Due 2-27-08

		A	B					C,D		E	F				
Refrigerator #		2	2					2		2	2				
#/Type Container	Liquid														
	Solid	1gl	1gl					2pl		1pl	1gl				
Volume	Solid	120	60					125		125	120				
Preservatives		—	—					—		—	—				
ANALYSES REQUESTED →		ORGANIC: VOA	BNA	~~Pest~~ PCB	Herb			INORG: (1) Metal + Hg	CN	Cr+6	TPH 418.1				

Lionville Laboratory Use Only

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

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	0625H	OPCB	Met(1)	ICR6	IPHC
001	J16933			S	2-14-08	0805	X		X		
002	J16934					0815	X	X	X	X	X
003	J16935					0825	X	X	X	X	X
004	J16936					0835	X	X	X	X	X
005	J16937					0845	X	X	X	X	X
006	J16938					0855	X	X	X	X	X
007	J16939					0905	X	X	X	X	X
008	J16940					0915	X	X	X	X	X
009	J16941					0925	X	X	X	X	X
010	J16942					0935	X	X	X	X	X

Special Instructions: Run Matrix QC

Met(1) = HSL + B, Mo, Si (NOTL)

Special Instructions:

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

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	2-20-08	0940

Relinquished by	Received by	Date	Time

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

Lionville Laboratory Use Only

0802L628

Custody Transfer Record/Lab Work Request

Page 2 of 2

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

Client TNU Hanford RC-032

Est. Final Proj. Sampling Date

Project# See Pg 1

Project Contact/Phone#

Lionville Laboratory Project Manager Arlette Johnson

Del TAT 7 Days

Date Rec'd 2-20-08 Date Due

		A	B					C,D		E	F				
Refrigerator #		2	2					2		2	2				
#/Type Container	Liquid														
	Solid	1gl	1gl					2pl		1pl	1gl				
Volume	Solid	120	60					125		125	120				
Preservatives		—	—					—		—	—				
ANALYSES REQUESTED		ORGANIC: VOA	BNA	~~Pest~~ PCB	Herb			INORG: (1) Metal 1 Hg	CN	Cr+6	TPH 418.1				
Lionville Laboratory Use Only			0625H	OPCB				Met(1)		ICR6	IPHC				
Lab ID	Client ID/Description														
011	J16943			S	2-14-08	0945		X	X			X		X	X
012	J16944			J	J	0955		X	X			X		X	X

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

Special Instructions:

Special Instructions:

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

Relinquished by	Received by	Date	Time
Fed Ex	[signature]	2-20-08	0940

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time

0000000028

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-032-189	Page 1 of 3
Collector: T. Welch-Koelling	Company Contact: R.T. Coffman	Telephone No.: 528-6409	Project Coordinator: KESSNER, JH	Price Code: 8B; Data Turnaround: 7 DAY
Project Designation: 100-F Remaining Sites Burial Grounds - Soil Full Protocol	Sampling Location: 100-F-26:9 SZ/FS Verification		SAF No.: RC-032	
Ice Chest No.: ERC-02-407	Field Logbook No.: EFL-1174-4	COA: R10F262000	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A080186		Bill of Lading/Air Bill No.: See OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS
NA

Special Handling and/or Storage
NA

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None				
Type of Container	P	P	aG	aG	aG	G/P	P				
No. of Container(s)	2	1	1	1	1	1	1				
Volume	125mL	125mL	60mL	120mL	120mL	500mL	125mL				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	TPH (Total) - 418.1	See item (2) in Special Instructions	Gross Alpha; Gross Beta				

Sample No.	Matrix *	Sample Date	Sample Time										
J16933	SOIL	2-14-08	0805	X			X		1-23-08				EB
J16934	SOIL		0815	X	X	X	X	X					1
J16935	SOIL		0825	X	X	X	X	X					2
J16936	SOIL		0835	X	X	X	X	X					3
J16937	SOIL		0845	X	X	X	X	X					4

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[signature]	2-14-08 1100	JRDeBrigue JRDeBrigue	1100 2-14-08
JRDeBrigue JRDeBrigue	1415 2-14-08	1060/2B	1415 2-14-08
1060/2B	2/18/08 1030 ~~1000~~	MTStankovich MTS	1030 2/19/08
MTS MStankovich	2/19/08 1500	Fed Ex	
Fed Ex	2-20-08/0940	[signature]	2-20-08/0940

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(2) Gamma Spectroscopy (TCL List) {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gamma Spec - Add-on {Barium-133, Silver-108 metastable}

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

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

VCH-EE-011

000000029

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-032-189	Page 2 of 3

Collector: T. Welch-Koelling	Company Contact: R.T. Coffman	Telephone No.: 528-6409	Project Coordinator: KESSNER, JH
Price Code: 8B	Data Turnaround: 7 DAY		
Project Designation: 100-F Remaining Sites Burial Grounds - Soil Full Protocol	Sampling Location: 100-F-26:9 SZ/FS Verification	SAF No.: RC-032	
Ice Chest No.: GRP-03-014	Field Logbook No.: EFL-1174-4	COA: R10F262000	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A080186	Bill of Lading/Air Bill No.: See OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

NA

Special Handling and/or Storage

NA

SAMPLE ANALYSIS												
Preservation				None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None		
Type of Container				P	P	aG	aG	aG	G/P	P		
No. of Container(s)				2	1	1	1	1	1	1		
Volume				125mL	125mL	60mL	120mL	120mL	500mL	125mL		
				See item (1) in Special Instructions.	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	TPH (Total) - 418.1	See item (2) in Special Instructions.	Gross Alpha; Gross Beta		
Sample No.	Matrix *	Sample Date	Sample Time									
J16938	SOIL	2-14-08	0855	X	X	X	X	X				5
J16939	SOIL		0905	X	X	X	X	X				6
J16940	SOIL		0915	X	X	X	X	X				7
J16941	SOIL		0925	X	X	X	X	X				8
J16942	SOIL		0935	X	X	X	X	X				9

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time 2-14-08 1108	Received By/Stored In	Date/Time 1100 2-14-08
Relinquished By/Removed From	Date/Time 1415 2-14-08	Received By/Stored In 1060/2B	Date/Time 1415 2-14-08
Relinquished By/Removed From 1060/2B	Date/Time 2/19/08 1030 2/19/08	Received By/Stored In WCH mstankovich	Date/Time 2/19/08 1030
Relinquished By/Removed From WCH mstankovich	Date/Time 2/19/08 1500	Received By/Stored In Fed Ex	Date/Time
Relinquished By/Removed From Fed Ex	Date/Time 2-20-08/0940	Received By/Stored In	Date/Time 2-20-08/0940
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(2) Gamma Spectroscopy (TCL List) {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gamma Spec - Add-on {Barium-133, Silver-108 metastable}

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

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

VCH-EE-011

000000030

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-032-189	Page 1 of 1
Collector: T. Welch-Koelling	Company Contact: R.T. Coffman; Telephone No.: 528-6409	Project Coordinator: KESSNER, JH	Price Code: 8B; Data Turnaround: 7 DAY
Project Designation: 100-F Remaining Sites Burial Grounds - Soil Full Protocol	Sampling Location: 100-F-26:9 SZ/FS Verification	SAF No.: RC-032	
Ice Chest No.: ERC-02-407	Field Logbook No.: EFL-1174-4; COA: R10F262000	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A 080186	Bill of Lading/Air Bill No.: See OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS
NA

Special Handling and/or Storage
NA

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None				
Type of Container	P	P	aG	aG	aG	G/P	P				
No. of Container(s)	2	1	1	1	1	1	1				
Volume	125mL	125mL	60mL	120mL	120mL	500mL	125mL				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	TPH (Total) - 418.1	See item (2) in Special Instructions.	Gross Alpha; Gross Beta				
Sample No. / Matrix * / Sample Date / Sample Time											
16943 / SOIL / 2-14-08 / 0945	X	X	X	X	X						10
16944 / SOIL / 2-14-08 / 0955	X	X	X	X	X						10 D
16945 / SOIL	X	X	X	X	X						FS-1
16946 / SOIL	X	X	X	X	X						FS-2

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From	2-14-08 1100	Received By/Stored In	1100 2-14-08
Relinquished By/Removed From	1415 2-14-08	Received By/Stored In	1415 2-14-08
Relinquished By/Removed From	2/19/08 1030	Received By/Stored In: MSlankovich	2/19/08 1030
Relinquished By/Removed From: welch MSlankovich	2/19/08 1500	Received By/Stored In: Fed Ex	
Relinquished By/Removed From: Fed Ex	2.20.08 / 0940	Received By/Stored In	2.20.08 / 0940
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(2) Gamma Spectroscopy (TCL List) {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gamma Spec - Add-on {Barium-133, Silver-108 metastable}

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

CH-EE-011

0000000031

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU Hanford

Date: 2.20.08

Project/SAF/SOW/Release #: RC.032

LvLI Batch #: 0802L628

Sample Custodian: D Smith

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier Fed Ex		Airbill # 7926 5122 2990 7918 5227 1516
2. Custody Seals on coolers or shipping containers intact, signed & dated?	☑ Yes	☐ No	☐ No Seals
3. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	*Comments:*
4. All expected paperwork received (coc & other client specific information) sealed in plactic bag and easily accessible?	☑ Yes	☐ No	
5. Samples received cooled or ambient?	Temp 4.3-c 2.6 °C		Cooler # GRP-03-014 # ERC-02-407
How was the temperature taken?	☑ IR	☐ Temp. Blank	☐ Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	☑ Yes	☐ No	
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7. COC (Client & LvLI) signed & dated?	☑ Yes	☐ No	
8. Sample containers are intact?	☑ Yes	☐ No	
9. All samples on COC received?	☑ Yes	☐ No	
All samples received on COC?	☑ Yes	☐ No	
10. All sample label information matches COC?	☑ Yes	☐ No	
11. Samples properly preserved? (If #5 is no, then this is no.)	☑ Yes	☐ No	
12. Samples received within hold times?	☑ Yes	☐ No	
Short holds taken to wet lab?	☐ Yes	☐ No	☑ N/A
13. VOA, TOC, TOX free of headspace?	☐ Yes	☐ No	☑ N/A
14. QC stickers placed on bottles designated by client?	☐ Yes	☐ No	☑ N/A
15. Shipment meets LvLI Sample Acceptance Policy? (Identify all bottles that do not meet the policy, which is on the reverse of this page.)	☑ Yes	☐ No	
16. Project Manager contacted concerning any discrepancies?	☐ Yes	☐ No	☑ N/A

Person Contacted _____ Date _____

LvLI LIONVILLE LABORATORY INC

SR-002-B.doc

RECEIVED
APR 2008

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-032 K1123

DATE RECEIVED: 02/20/08 LVL LOT # : 08L628

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J16933						
% SOLIDS	001	S	08L%S023	02/14/08	02/21/08	02/22/08
J16934						
% SOLIDS	002	S	08L%S023	02/14/08	02/21/08	02/22/08
CHROMIUM VI	002	S	08LVI015	02/14/08	02/21/08	02/21/08
PETROLEUM HYDROCARBO	002	S	08LHC006	02/14/08	02/22/08	02/26/08
J16935						
% SOLIDS	003	S	08L%S023	02/14/08	02/21/08	02/22/08
CHROMIUM VI	003	S	08LVI015	02/14/08	02/21/08	02/21/08
PETROLEUM HYDROCARBO	003	S	08LHC006	02/14/08	02/22/08	02/26/08
J16936						
% SOLIDS	004	S	08L%S023	02/14/08	02/21/08	02/22/08
CHROMIUM VI	004	S	08LVI015	02/14/08	02/21/08	02/21/08
PETROLEUM HYDROCARBO	004	S	08LHC006	02/14/08	02/22/08	02/26/08
J16937						
% SOLIDS	005	S	08L%S023	02/14/08	02/21/08	02/22/08
CHROMIUM VI	005	S	08LVI015	02/14/08	02/21/08	02/21/08
PETROLEUM HYDROCARBO	005	S	08LHC007	02/14/08	02/26/08	02/26/08
J16938						
% SOLIDS	006	S	08L%S023	02/14/08	02/21/08	02/22/08
CHROMIUM VI	006	S	08LVI015	02/14/08	02/21/08	02/21/08
CHROMIUM VI	006 REP	S	08LVI015	02/14/08	02/21/08	02/21/08
CHROMIUM VI	006 MS	S	08LVI015	02/14/08	02/21/08	02/21/08
CHROMIUM VI	006 MSD	S	08LVI015	02/14/08	02/21/08	02/21/08
PETROLEUM HYDROCARBO	006	S	08LHC007	02/14/08	02/26/08	02/26/08
J16939						
% SOLIDS	007	S	08L%S023	02/14/08	02/21/08	02/22/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-032 K1123

DATE RECEIVED: 02/20/08 LVL LOT # :0802L628

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
CHROMIUM VI	007	S	08LVI015	02/14/08	02/21/08	02/21/08
PETROLEUM HYDROCARBO	007	S	08LHC007	02/14/08	02/26/08	02/26/08
J16940						
% SOLIDS	008	S	08L%S023	02/14/08	02/21/08	02/22/08
CHROMIUM VI	008	S	08LVI015	02/14/08	02/21/08	02/21/08
PETROLEUM HYDROCARBO	008	S	08LHC007	02/14/08	02/26/08	02/26/08
J16941						
% SOLIDS	009	S	08L%S023	02/14/08	02/21/08	02/22/08
CHROMIUM VI	009	S	08LVI015	02/14/08	02/21/08	02/21/08
PETROLEUM HYDROCARBO	009	S	08LHC007	02/14/08	02/26/08	02/26/08
J16942						
% SOLIDS	010	S	08L%S023	02/14/08	02/21/08	02/22/08
CHROMIUM VI	010	S	08LVI015	02/14/08	02/21/08	02/21/08
PETROLEUM HYDROCARBO	010	S	08LHC007	02/14/08	02/26/08	02/26/08
J16943						
% SOLIDS	011	S	08L%S023	02/14/08	02/21/08	02/22/08
CHROMIUM VI	011	S	08LVI015	02/14/08	02/21/08	02/21/08
PETROLEUM HYDROCARBO	011	S	08LHC007	02/14/08	02/26/08	02/26/08
J16944						
% SOLIDS	012	S	08L%S023	02/14/08	02/21/08	02/22/08
% SOLIDS	012 REP	S	08L%S023	02/14/08	02/21/08	02/22/08
CHROMIUM VI	012	S	08LVI015	02/14/08	02/21/08	02/21/08
PETROLEUM HYDROCARBO	012	S	08LHC007	02/14/08	02/26/08	02/26/08
PETROLEUM HYDROCARBO	012 REP	S	08LHC007	02/14/08	02/26/08	02/26/08
PETROLEUM HYDROCARBO	012 MS	S	08LHC007	02/14/08	02/26/08	02/26/08

LAB QC:

CHROMIUM VI	MB1	S	08LVI015	N/A	02/21/08	02/21/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-032 K1123

DATE RECEIVED: 02/20/08 LVL LOT # :0802L628

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
CHROMIUM VI	MB1 BS	S	08LVI015	N/A	02/21/08	02/21/08
CHROMIUM VI	MB1 BSD	S	08LVI015	N/A	02/21/08	02/21/08
PETROLEUM HYDROCARBO	MB1	S	08LHC006	N/A	02/22/08	02/26/08
PETROLEUM HYDROCARBO	MB1 BS	S	08LHC006	N/A	02/22/08	02/26/08
PETROLEUM HYDROCARBO	MB1	S	08LHC007	N/A	02/26/08	02/26/08
PETROLEUM HYDROCARBO	MB1 BS	S	08LHC007	N/A	02/26/08	02/26/08

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU-HANFORD RC-032 K1132
LVL#: 0802L628

W.O.#: 11343-606-001-9999-00
Date Received: 02-20-08

INORGANIC NARRATIVE

1. This narrative covers the analyses of 12 soil samples.

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

   LvLI is NELAP accredited by the State of Pennsylvania. For a complete list of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager. LvLI certifies that all test results meet the requirements of NELAC with any exception noted in the following statements.

3. Sample holding times as required by the method and/or contract were met.

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

5. The method blanks were within the method criteria.

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

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

8. The replicate analyses were within the 20% Relative Percent Difference (RPD) control limit with the exception of Chromium VI that was outside the control limit that may be attributed to sample inhomogeneity.

9. Results for soil are reported on a dry weight basis.

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

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

3/5/08
Date

njp\i02-628

The results presented in this report relate to the analytical testing and conditions of the samples upon 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 17 pages.

Lionville Laboratory Incorporated

WET CHEMISTRY

METHODS GLOSSARY FOR SOIL/SOLIDS SAMPLE ANALYSIS

	ASTM	SW846	OTHER
% Ash	__ D2216-80		
% Moisture	__ D2216-80		__ ILMO4.0 (e)
% Solids	✓ D2216-80		__ ILMO4.0 (e)
% Volatile Solids	__ D2216-80		
ASTM Extraction in Water	__ D3987-81/85		
BTU	__ D240-87		
CEC		__ 9081	__ c
Chromium VI		✓ 3060A/7196A	
Corrosivity ___ by coupon ___ by pH		__ 1110(mod) __ 9045C	
Cyanide, Total		__ 9010B	__ ILMO4.0 (e)
Cyanide, Reactive		__ Section 7.3/9014	
Halides, Extractable Organic		__ 9020B	__ EPA 600/4/84-008
Halides, Total		__ 9020B	__ EPA 600/4/84-008
EP Toxicity		__ 1310A	
Flash Point		__ 1010	
Ignitability		__ 1010	
Oil & Grease		__ 9071A	
Carbon, Total Organic		__ 9060	__ Lloyd Kahn (mod)
Oxygen Bomb Prep for Anions	__ D240-87(mod)	__ 5050	
Petroleum Hydrocarbons, Total Recoverable		✓ 9071 (mod.)	✓ EPA 418.1 (mod.)
pH, Soil		__ 9045C	
Sulfide, Reactive		__ Section 7.3/9030B	
Sulfide		__ 9030B(mod)	
Specific Gravity	__ D1429-76C/	__ D5057-90	
Sulfur, Total		__ 9056	
Synthetic Preparation Leach		__ 1312	
Paint Filter		__ 9095A	
Other:	**Method:**		
Other:	**Method**		

L-WI-034/B-01/01

METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

U = Indicates that the parameter was not detected at or above the reported limit. The associated numerical value is the sample detection limit.

* = Indicates that the original sample result is greater than 4x the spike amount added.

ABBREVIATIONS

MB = Method or Preparation Blank.
MS = Matrix Spike.
MSD = Matrix Spike Duplicate.
REP = Sample Replicate
LC = Laboratory Control Sample.
NC = Not calculated.

A suffix of -R, -S, or -T following these codes indicate a replicate, spike or sample duplicate analysis respectively.

ANALYTICAL WET CHEMISTRY METHODS

1. ASTM Standard Methods.

2. USEPA Methods for Chemical Analysis of Water and Wastes (USEPA 600/4-79-020).

3. Test Methods for Evaluating Solid Waste (USEPA SW-846).

a. Standard Methods for the Examination of Water and Waste, 16 ed, (1983).

b. Standard Methods for the Examination of Water and Waste, 17 ed, (1989)/18ed (1992).

c. Method of Soil Analysis, Part 1, Physical and Mineralogical Methods, 2nd ed, (1986).

d. Method of Soil Analysis, Part 2, Chemical and Microbiological Properties, Am. Soc. Agron., Madison, WI (1965).

e. USEPA Contract Laboratory Program, Statement of Work for Inorganic Analysis.

f. Code of Federal Regulations.

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 03/04/08

CLIENT: TNUHANFORD RC-032 K1123 LVL LOT #: 0802L628
WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-001	J16933	% Solids	99.4		%	0.01
-002	J16934	% Solids	96.1		%	0.01
		Chromium VI	0.21	u	MG/KG	0.21
		Petroleum Hydrocarbons	138	u	MG/KG	138
-003	J16935	% Solids	96.7		%	0.01
		Chromium VI	0.21	u	MG/KG	0.21
		Petroleum Hydrocarbons	137	u	MG/KG	137
-004	J16936	% Solids	94.1		%	0.01
		Chromium VI	0.24		MG/KG	0.21
		Petroleum Hydrocarbons	141	u	MG/KG	141
-005	J16937	% Solids	89.7		%	0.01
		Chromium VI	0.22	u	MG/KG	0.22
		Petroleum Hydrocarbons	148	u	MG/KG	148
-006	J16938	% Solids	94.0		%	0.01
		Chromium VI	0.23		MG/KG	0.21
		Petroleum Hydrocarbons	140	u	MG/KG	140
-007	J16939	% Solids	92.6		%	0.01
		Chromium VI	0.22	u	MG/KG	0.22
		Petroleum Hydrocarbons	143	u	MG/KG	143
-008	J16940	% Solids	94.5		%	0.01
		Chromium VI	0.26		MG/KG	0.21
		Petroleum Hydrocarbons	140	u	MG/KG	140
-009	J16941	% Solids	92.3		%	0.01
		Chromium VI	0.22	u	MG/KG	0.22
		Petroleum Hydrocarbons	144	u	MG/KG	144
-010	J16942	% Solids	92.6		%	0.01
		Chromium VI	0.22	u	MG/KG	0.22
		Petroleum Hydrocarbons	144	u	MG/KG	144

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 03/04/08

CLIENT: TNUHANFORD RC-032 K1123 LVL LOT #: 0802L628

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-011	J16943	% Solids	85.6		%	0.01
		Chromium VI	0.23	u	MG/KG	0.23
		Petroleum Hydrocarbons	155	u	MG/KG	155
-012	J16944	% Solids	85.4		%	0.01
		Chromium VI	0.38		MG/KG	0.23
		Petroleum Hydrocarbons	155	u	MG/KG	155

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 03/04/08

CLIENT: TNUHANFORD RC-032 K1123 LVL LOT #: 0802L628

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
BLANK10	08LVI015-MB1	Chromium VI	0.20	u	MG/KG	0.20
BLANK10	08LHC006-MB1	Petroleum Hydrocarbons	133	u	MG/KG	133
BLANK10	08LHC007-MB1	Petroleum Hydrocarbons	133	u	MG/KG	133

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 03/04/08

CLIENT: TNUHANFORD RC-032 K1123 LVL LOT #: 0802L628

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV
-006	J16938	Soluble Chromium VI	4.2	0.23	4.3	93.9
		Insoluble Chromium VI	1410	0.23	1370	103.3
-012	J16944	Petroleum Hydrocarbons	632	31.1	652	92.2
BLANK10	08LVI015-MB1	Soluble Chromium VI	4.0	0.20u	4.0	100.6
		Insoluble Chromium VI	1200	0.20u	1170	102.7
BLANK10	08LHC006-MB1	Petroleum Hydrocarbons	544	133 u	558	97.4
BLANK10	08LHC007-MB1	Petroleum Hydrocarbons	533	133 u	560	95.3

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 03/04/08

CLIENT: TNUHANFORD RC-032 K1123 LVL LOT #: 0802L628

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT		REPLICATE		RPD
-006REP	J16938	Chromium VI	0.23		0.34		37.7
-012REP	J16944	% Solids	85.4		85.6		0.23
		Petroleum Hydrocarbons	155	u	156	u	NC

onville Laboratory Use Only

)802L628

Custody Transfer Record/Lab Work Request

Page 1 of 2

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

ent TNU Hanford RC-032

t. Final Proj. Sampling Date

oject# ~~H334~~ 11343-606-001.9999-00

oject Contact/Phone#

nville Laboratory Project Manager Orlette Johnson

SW846 Del STD TAT 7 Days

te Rec'd 2-20-08 Date Due 2-27-08

		A	B					C,D		E	F				
Refrigerator #		2	2					2		2	2				
#/Type Container	Liquid														
	Solid	1gl	1gl					2pl		1pl	1gl				
Volume	Solid	120	60					125		125	120				
Preservatives		—	—					—		—	—				
ANALYSES REQUESTED		ORGANIC: VOA	BNA	~~Pest~~ PCB	Herb			INORG: Metal + Hg	CN	Cr+6	TPH 418.1				

Lionville Laboratory Use Only

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	0625H	OPCB	Met(1)	ICR6	IPHC
001	J16933			S	2.14.08	0805	X		X		
002	J16934					0815	X	X	X	X	X
003	J16935					0825	X	X	X	X	X
004	J16936					0835	X	X	X	X	X
005	J16937					0845	X	X	X	X	X
006	J16938					0855	X	X	X	X	X
007	J16939					0905	X	X	X	X	X
008	J16940					0915	X	X	X	X	X
009	J16941					0925	X	X	X	X	X
010	J16942					0935	X	X	X	X	X

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

ecial Instructions: Run Matrix QC

Met(1) = HSL + B, Mo, Si (NOTL)

Special Instructions:

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

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	2-20-08	0940

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time

ORIGINAL REWRITTEN

"COMPOSITE WASTE"

000000012

onville Laboratory Use Only

)802L628

Custody Transfer Record/Lab Work Request

Page 2 of 2

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

ent TNU Hanford RC-032

. Final Proj. Sampling Date

ject# See Pg 1

ject Contact/Phone#

nville Laboratory Project Manager Arlette Johnson

Del TAT 7 Days

e Rec'd 2-20-08 Date Due

		A	B					C,D		E	F				
Refrigerator #		2	2					2		2	2				
#/Type Container	Liquid														
	Solid	1pl	1gl					2pl		1pl	1gl				
Volume	Solid	120	60					125		125	120				
Preservatives		—	—					—		—	—				
ANALYSES REQUESTED →		ORGANIC						INORG							
		VOA	BNA	~~Pest~~ PCB	Herb			(1) Metal 1 Hg	CN	Cr+6	TPH 418.1				
		Lionville Laboratory Use Only													
			0625H	OPCB				Met(1)		ICR6	IPHC				
Matrix Codes: Soil, Sediment, Solid, Sludge, Water, Oil, Air, Drum, Solids, Drum, Liquids, EP/TCLP, Leachate, Wipe, Other, Fish															
Lab ID	Client ID/Description														
011	J16943			S	2-14-08	0945		X	X			X		X	X
012	J16944			J	J	0955		X	X			X		X	X

Special Instructions:

Special Instructions:

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

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	2-20-08	0940

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time

0000000013

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-032-189	Page 1 of 1
Collector: T. Welch-Koelling	Company Contact: R.T. Coffman; Telephone No.: 528-6409	Project Coordinator: KESSNER, JH	Price Code: 8B; Data Turnaround: 7 DAY
Project Designation: 100-F Remaining Sites Burial Grounds - Soil Full Protocol	Sampling Location: 100-F-26:9 SZ/FS Verification	SAF No.: RC-032	
Ice Chest No.: ERC-02-407	Field Logbook No.: EFL-1174-4; COA: R10F262000	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A080186	Bill of Lading/Air Bill No.: See OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS
NA

Special Handling and/or Storage
NA

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None				
Type of Container	P	P	sG	sG	sG	G/P	P				
No. of Container(s)	2	1	1	1	1	1	1				
Volume	125mL	125mL	60mL	120mL	120mL	500mL	125mL				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	TPH (Total) - 418.1	See item (2) in Special Instructions	Gross Alpha; Gross Beta				

Sample No.	Matrix *	Sample Date	Sample Time										
16933	SOIL	2-14-08	0805	X			X						EB
16934	SOIL		0815	X	X	X	X	X					1
16935	SOIL		0825	X	X	X	X	X					2
16936	SOIL		0835	X	X	X	X	X					3
16937	SOIL		0845	X	X	X	X	X					4

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time 2-14-08 1100	Received By/Stored In	Date/Time 1100 2-14-08
Relinquished By/Removed From	Date/Time 1415 2-14-08	Received By/Stored In 1060/2B	Date/Time 1415 2-14-08
Relinquished By/Removed From	Date/Time 1050 2/19/08	Received By/Stored In	Date/Time 1050 2/19/08
Relinquished By/Removed From WCH	Date/Time 2/19/08 1500	Received By/Stored In Fed Ex	Date/Time
Relinquished By/Removed From Fed Ex	Date/Time 2-20-08/0940	Received By/Stored In	Date/Time 2-20-08/0940
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) (Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc); Mercury - 7471 - (CV)
(2) Gamma Spectroscopy (TCL List) (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155); Gamma Spec - Add-on (Barium-133, Silver-108 metastable)

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

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

CH-EE-011

000000014

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-032-189

000000015

ollector T. Welch-Koelling	Company Contact R.T. Coffman	Telephone No. 528-6409	Project Coordinator KESSNER, JH
Price Code 8B	Data Turnaround 7 DAY		
roject Designation 100-F Remaining Sites Burial Grounds - Soil Full Protocol	Sampling Location 100-F-26:9 SZ/FS Verification		SAF No. RC-032
e Chest No. GRP-03-014	Field Logbook No. EFL-1174-4	COA R10F262000	Method of Shipment FED EX
hipped To EBERLINE SERVICES / LIONVILLE	Offsite Property No. A080186		Bill of Lading/Air Bill No. See OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

VA

Special Handling and/or Storage

VA

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None				
Type of Container	P	P	aG	aG	aG	G/P	P				
No. of Container(s)	2	1	1	1	1	1	1				
Volume	125mL	125mL	60mL	120mL	120mL	500mL	125mL				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	TPH (Total) - 418.1	See item (2) in Special Instructions.	Gross Alpha; Gross Beta				

Sample No.	Matrix *	Sample Date	Sample Time										
16938	SOIL	2-14-08	0855	X	X	X	X	X					5
16939	SOIL		0905	X	X	X	X	X					6
16940	SOIL		0915	X	X	X	X	X					7
16941	SOIL		0925	X	X	X	X	X					8
16942	SOIL		0935	X	X	X	X	X					9

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time 2-14-08 1108	Received By/Stored In	Date/Time 1100 2-14-08
Relinquished By/Removed From	Date/Time 1415 2-14-08	Received By/Stored In 1060/20	Date/Time 1415 2-14-08
Relinquished By/Removed From 260/20	Date/Time 1030 2/19/08 2/19/08	Received By/Stored In WCH mstankovich	Date/Time 2/19/08 1030
Relinquished By/Removed From WCH mstankovich	Date/Time 2/19/08 1580	Received By/Stored In Fed Ex	Date/Time
Relinquished By/Removed From Fed Ex	Date/Time 2-20-08/0940	Received By/Stored In	Date/Time 2-20-08/0940
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) (Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc); Mercury - 7471 - (CV)
(2) Gamma Spectroscopy (TCL List) (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155); Gamma Spec - Add-on (Barium-133, Silver-108 metastable)

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

CH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-032-189	Page 3 of 3
Collector: T. Welch-Koelling	Company Contact: R.T. Coffman; Telephone No.: 528-6409	Project Coordinator: KESSNER, JH	Price Code: 8B; Data Turnaround: 7 DAY
Project Designation: 100-F Remaining Sites Burial Grounds - Soil Full Protocol	Sampling Location: 100-F-26:9 SZ/FS Verification	SAF No.: RC-032	
Ice Chest No.: ERC-02-407	Field Logbook No.: EFL-1174-4; COA: R10F262000	Method of Shipment: FED EX	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A080186	Bill of Lading/Air Bill No.: see ASPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

NA

Special Handling and/or Storage

NA

SAMPLE ANALYSIS

Preservation				None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None		
Type of Container				P	P	aG	aG	aG	G/P	P		
No. of Container(s)				2	1	1	1	1	1	1		
Volume				125mL	125mL	60mL	120mL	120mL	500mL	125mL		
				See item (1) in Special Instructions.	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	TPH (Total) - 418.1	See item (2) in Special Instructions.	Gross Alpha; Gross Beta		
Sample No.	Matrix *	Sample Date	Sample Time									
16943	SOIL	2-14-08	0945	X	X	X	X	X				10
16944	SOIL	2-14-08	0955	X	X	X	X	X				10 D
16945	SOIL			X	X	X	X	X				FS-1
16946	SOIL			X	X	X	X	X				FS-2

CHAIN OF POSSESSION	Sign/Print Names	Date/Time
Relinquished By/Removed From	Received By/Stored In	2-14-08 1100
Relinquished By/Removed From	Received By/Stored In	2-14-08 1415
Relinquished By/Removed From	Received By/Stored In	2/19/08 1030
Relinquished By/Removed From	Received By/Stored In	2/19/08 1500
Relinquished By/Removed From	Received By/Stored In	2.20.08 0940
Relinquished By/Removed From	Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(2) Gamma Spectroscopy (TCL List) {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gamma Spec - Add-on {Barium-133, Silver-108 metastable}

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

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

CH-EE-011

000000016

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU Hanford **Date:** 2.20.08

Project/SAF/SOW/Release #: RC.032

LvLI Batch #: 0802L628 **Sample Custodian:** D Smith

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier Fed Ex		Airbill # 7926 5122 2990 7918 5227 1516
2. Custody Seals on coolers or shipping containers intact, signed & dated?	☑ Yes	☐ No	☐ No Seals
3. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	*Comments:*
4. All expected paperwork received (coc & other client specific information) sealed in plactic bag and easily accessible?	☑ Yes	☐ No	
5. Samples received cooled or ambient?	Temp 4.3 2.6 °C		Cooler # GRP03-014 # ERC-02.407
How was the temperature taken?	☑ IR	☐ Temp. Blank	☐ Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	☑ Yes	☐ No	
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7. COC (Client & LvLI) signed & dated?	☑ Yes	☐ No	
8. Sample containers are intact?	☑ Yes	☐ No	
9. All samples on COC received?	☑ Yes	☐ No	
All samples received on COC?	☑ Yes	☐ No	
10. All sample label information matches COC?	☑ Yes	☐ No	
11. Samples properly preserved? (If #5 is no, then this is no.)	☑ Yes	☐ No	
12. Samples received within hold times?	☑ Yes	☐ No	
Short holds taken to wet lab?	☐ Yes	☐ No	☑ N/A
13. VOA, TOC, TOX free of headspace?	☐ Yes	☐ No	☑ N/A
14. QC stickers placed on bottles designated by client?	☐ Yes	☐ No	☑ N/A
15. Shipment meets LvLI Sample Acceptance Policy? (Identify all bottles that do not meet the policy, which is on the reverse of this page.)	☑ Yes	☐ No	
16. Project Manager contacted concerning any discrepancies?	☐ Yes	☐ No	☑ N/A

Person Contacted _____ Date _____

LvLI LIONVILLE LABORATORY INC.

RECEIVED
APR 2008

Lionville Laboratory, Inc.
PCB ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD RC-032 K1123

DATE RECEIVED: 02/20/08 LVL LOT # :0802L628

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J16934	002	S	08LE0087	02/14/08	02/20/08	02/22/08
J16934	002 MS	S	08LE0087	02/14/08	02/20/08	02/22/08
J16934	002 MSD	S	08LE0087	02/14/08	02/20/08	02/22/08
J16935	003	S	08LE0087	02/14/08	02/20/08	02/22/08
J16936	004	S	08LE0087	02/14/08	02/20/08	02/22/08
J16937	005	S	08LE0087	02/14/08	02/20/08	02/22/08
J16938	006	S	08LE0087	02/14/08	02/20/08	02/22/08
J16939	007	S	08LE0087	02/14/08	02/20/08	02/22/08
J16940	008	S	08LE0087	02/14/08	02/20/08	02/22/08
J16941	009	S	08LE0087	02/14/08	02/20/08	02/22/08
J16942	010	S	08LE0087	02/14/08	02/20/08	02/22/08
J16943	011	S	08LE0087	02/14/08	02/20/08	02/22/08
J16944	012	S	08LE0087	02/14/08	02/20/08	02/22/08

LAB QC:

PBLKMZ	MB1	S	08LE0087	N/A	02/20/08	02/22/08
PBLKMZ	MB1 BS	S	08LE0087	N/A	02/20/08	02/22/08

LIONVILLE LABORATORY INC.

Case Narrative

Client: TNU-HANFORD RC-032
LVL #: 0802L628
SDG/SAF # K1123 / RC-032

W.O. #: 11343-606-001-9999-00
Date Received: 02-20-2008

PCB

Eleven (11) soil samples were collected on 02-14-2008.

The samples and their associated QC samples were extracted on 02-20-2008 and analyzed according to Lionville Laboratory SOPs based on SW846, 3rd Edition procedure on 02-22-2008. The extraction procedure was based on method 3540C and the extracts were analyzed based on method 8082.

All soil samples are reported on a dry weight basis unless requested by the client, required by the method, or noted otherwise. The following is a summary of the QC results accompanying the sample results. Lionville Laboratory Inc (LvLI) certifies that all test results meet the requirements of NELAC except as noted below:

1. The samples were extracted and analyzed within required holding time.

2. The samples and their associated QC samples received Copper-Sulfur and Sulfuric Acid cleanups according to Lionville Laboratory SOPs based on SW846 methods 3660A and 3665A respectively.

3. The method blank was below the reporting limits for all target compounds.

4. All 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. The 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.

r:\group\data\2008\pest\tnu\0802-628ks2.pcb.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 14 pages.

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

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

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

2/27/08
Date

LvLI
LIONVILLE LABORATORY INC.

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.

Lionville Laboratory, Inc.

PCBs by GC

Report Date: 02/25/08 13:22

RFW Batch Number: 0802L628 Client: TNU-HANFORD RC-032 Work Order: 11343606001 Page: 1

000000005

	Cust ID:	J16934	J16934	J16934	J16935	J16936	J16937
Sample Information	RFW#:	002	002 MS	002 MSD	003	004	005
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Surrogate:	Tetrachloro-m-xylene	82 %	81 %	83 %	83 %	90 %	86 %
	Decachlorobiphenyl	80 %	79 %	82 %	74 %	87 %	86 %
		fl	fl	fl	fl	fl	fl
Aroclor-1016		14 U	84 %	87 %	14 U	14 U	15 U
Aroclor-1221		14 U	14 U	14 U	14 U	14 U	15 U
Aroclor-1232		14 U	14 U	14 U	14 U	14 U	15 U
Aroclor-1242		14 U	14 U	14 U	14 U	14 U	15 U
Aroclor-1248		14 U	14 U	14 U	14 U	14 U	15 U
Aroclor-1254		14 U	14 U	14 U	14 U	14 U	4.0 J
Aroclor-1260		14 U	90 %	93 %	14 U	14 U	15 U

	Cust ID:	J16938	J16939	J16940	J16941	J16942	J16943
Sample Information	RFW#:	006	007	008	009	010	011
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Surrogate:	Tetrachloro-m-xylene	89 %	94 %	76 %	99 %	101 %	91 %
	Decachlorobiphenyl	85 %	93 %	69 %	92 %	91 %	89 %
		fl	fl	fl	fl	fl	fl
Aroclor-1016		14 U	14 U	14 U	14 U	14 U	16 U
Aroclor-1221		14 U	14 U	14 U	14 U	14 U	16 U
Aroclor-1232		14 U	14 U	14 U	14 U	14 U	16 U
Aroclor-1242		14 U	14 U	14 U	14 U	14 U	16 U
Aroclor-1248		14 U	14 U	14 U	14 U	14 U	16 U
Aroclor-1254		14 U	19	14 U	14 U	5.0 J	16 U
Aroclor-1260		14 U	9.0 J	14 U	14 U	17	3.9 J

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.

PCBs by GC

Report Date: 02/25/08 13:22

RFW Batch Number: **0802L628** Client: **TNU-HANFORD RC-032** Work Order: 11343606001 Page: 2

000000006

	Cust ID:	J16944	PBLKMZ	PBLKMZ BS
Sample Information	RFW#:	012	08LE0087-MB1	08LE0087-MB1
	Matrix:	SOIL	SOIL	SOIL
	D.F.:	1.00	1.00	1.00
	Units:	UG/KG	UG/KG	UG/KG
Surrogate:	Tetrachloro-m-xylene	97 %	81 %	84 %
	Decachlorobiphenyl	96 %	71 %	78 %
Aroclor-1016		16 U	13 U	76 %
Aroclor-1221		16 U	13 U	13 U
Aroclor-1232		16 U	13 U	13 U
Aroclor-1242		16 U	13 U	13 U
Aroclor-1248		16 U	13 U	13 U
Aroclor-1254		16 U	13 U	13 U
Aroclor-1260		16 U	13 U	89 %

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

SAMPLE EXTRACTION RECORD

Sheet no.: 1

Extract. Date: 02/20/08 Extraction Batch No: 08LE0087 Analyst: MF Method: **** 5C73540

Test: OPCB Cleanup Date: 02/21/08 Analyst: MF Client: TNU-HANFORD RC-032

LIMS Report Date: 02/22/08 Solvent: DCM/ACETONE,HEXANE Adsorbent: H2SO4

Sample No:	Client Name / Client ID	pH	Initial WT/VOL	Surr. Mult.	Spike Mult.	Final VOL	Final VOL	Split Mult.	GPC Y/N	% Solids	C/D FACTOR
0802L628-	TNU-HANFORD RC-032										
002	J16934		30.0	1.0		10		1.0	N	0.096.06	333.3
002 -S	J16934		30.0	1.0	1.0	10		1.0	N	0.096.06	333.3
002 -T	J16934		30.0	1.0	1.0	10		1.0	N	0.096.06	333.3
003	J16935		30.0	1.0		10		1.0	N	0.096.66	333.3
004	J16936		30.0	1.0		10		1.0	N	0.094.09	333.3
005	J16937		30.0	1.0		10		1.0	N	0.089.71	333.3
006	J16938		30.0	1.0		10		1.0	N	0.093.98	333.3
007	J16939		30.0	1.0		10		1.0	N	0.095.26	333.3
008	J16940		30.0	1.0		10		1.0	N	0.094.46	333.3
009	J16941		30.0	1.0		10		1.0	N	0.092.31	333.3
010	J16942		30.0	1.0		10		1.0	N	0.092.60	333.3
011	J16943		30.0	1.0		10		1.0	N	0.085.58	333.3
012	J16944		30.0	1.0		10		1.0	N	0.085.48	333.3
08LE0087-MB1	PBLKMZ		30.0	1.0		10		1.0	N	100.00	333.3
08LE0087-MB1 -S	PBLKMZ		30.0	1.0	1.0	10		1.0	N	100.00	333.3

Comments:
Surrogate: 250 UL OLM PSURR 89916404
Spike: 250 UL AR1660 89916602

Extracts Transferred	Relinquished By	Date Time	Received By	Date Time	Reason for Transfer
all	[illegible]	2/22/08 1220	SZ	2/22/08 16:00	GC

000000007

SAMPLE EXTRACTION RECORD

Sheet no.: 1

Extract. Date: 02/20/08 Extraction Batch No: 08LE0087 Analyst: MF Method: ****

Test: OPCB Cleanup Date: 02/21/08 Analyst: MF Client: TNU-HANFORD RC-032

LIMS Report Date: 02/25/08 Solvent: DCM/ACETONE,HEXANE Adsorbent: H2SO4

Sample No:	Client Name Client ID	pH	Initial WT/VOL	Surr. Mult.	Spike Mult.	Final VOL	Final VOL	Split Mult.	GPC Y/N	% Solid	Vis H2O	C/D FACTOR	Sulfur Clean?
0802L628-	TNU-HANFORD RC-032												
002	J16934		30.0	1.0		10		1.0	N	96.06		347.0	
002 -S	J16934		30.0	1.0	1.0	10		1.0	N	96.06		347.0	
002 -T	J16934		30.0	1.0	1.0	10		1.0	N	96.06		347.0	
003	J16935		30.0	1.0		10		1.0	N	96.66		344.9	
004	J16936		30.0	1.0		10		1.0	N	94.09		354.3	
005	J16937		30.0	1.0		10		1.0	N	89.71		371.6	
006	J16938		30.0	1.0		10		1.0	N	93.98		354.7	
007	J16939		30.0	1.0		10		1.0	N	95.26		349.9	
008	J16940		30.0	1.0		10		1.0	N	94.46		352.9	
009	J16941		30.0	1.0		10		1.0	N	92.31		361.1	
010	J16942		30.0	1.0		10		1.0	N	92.60		360.0	
011	J16943		30.0	1.0		10		1.0	N	85.58		389.5	
012	J16944		30.0	1.0		10		1.0	N	85.48		390.0	
08LE0087-MB1			30.0	1.0		10		1.0	N	100.00		333.3	
08LE0087-MB1 -S			30.0	1.0	1.0	10		1.0	N	100.00		333.3	

Comments:
Surrogate: 250 UL OLM PSURR 89916404
Spike: 250 UL AR1660 89916602

Extracts Transferred	Relinquished By	Date Time	Received By	Date Time	Reason for Transfer
			CAC	2-25-08	% Solids

000000008

Lionville Laboratory Use Only

08D2L628

Custody Transfer Record/Lab Work Request

Page 1 of 2

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

Client: TNU Hanford RC-032

Est. Final Proj. Sampling Date:

Project#: ~~11334~~ 11343-606-001.9999-00

Project Contact/Phone#:

Lionville Laboratory Project Manager: Arlette Johnson

QC: SW846 Del: STD TAT: 7 Days

Date Rec'd: 2-20-08 Date Due: 2-27-08

		A	B					CD		E	F				
Refrigerator #		2	2					2		2	2				
#/Type Container	Liquid														
	Solid	1pl	1pl					2pl		1pl	1pl				
Volume	Solid	120	60					125		125	120				
Preservatives		—	—					—		—	—				
ANALYSES REQUESTED		ORGANIC						INORG							
		VOA	BNA	~~Pest~~ PCB	Herb			Metal + Hg	CN	Cr+6	TPH 418.1				

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		0625H	OPCB					Met①		ICRG	IPHC				
001	J16933			S	2-14-08	0805		X						X							
002	J16934					0815		X	X					X		X	X				
003	J16935					0825		X	X					X		X	X				
004	J16936					0835		X	X					X		X	X				
005	J16937					0845		X	X					X		X	X				
006	J16938					0855		X	X					X		X	X				
007	J16939					0905		X	X					X		X	X				
008	J16940					0915		X	X					X		X	X				
009	J16941					0925		X	X					X		X	X				
010	J16942					0935		X	X					X		X	X				

Special Instructions: Run matrix QC

Met① = HSL + B, Mo, Si (NOTL)

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

Relinquished by	Received by	Date	Time
FedEx	[signature]	2-20-08	0940

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
ORIGINAL REWRITTEN			

"COMPOSITE WASTE"

0000000009

Lionville Laboratory Use Only

0802L628

Custody Transfer Record/Lab Work Request

Page 2 of 2

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

Client: TNU Hanford RC-032

Est. Final Proj. Sampling Date:

Project#: Seelg 1

Project Contact/Phone#:

Lionville Laboratory Project Manager: Orlette Johnson

QC: Del: TAT: 7 Days

Date Rec'd: 2-20-08 Date Due:

		A	B					C,D		E	F				
Refrigerator #		2	2					2		2	2				
#/Type Container	Liquid														
	Solid	1gl	1gl					2pl		1pl	1gl				
Volume	Solid	120	60					125		125	120				
Preservatives		—	—					—		—	—				
ANALYSES REQUESTED →		ORGANIC: VOA	BNA	~~Pest~~ PCB	Herb			INORG: (1) Metal + Hg	CN	Cr+6	TPH 418.1				
		Lionville Laboratory Use Only													
		0625H	OPCB					Met(1)		ICR6	IPHC				
011	J16943			S	2-14-08	0945		X	X	X	X				
012	J16944			↓	↓	0955		X	X	X	X				

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

Special Instructions:

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

Relinquished by	Received by	Date	Time
Fed Ex	[signature]	2-20-08	0940

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time

000000010

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-032-189	Page 1 of 3

Collector T. Welch-Koelling	Company Contact R.T. Coffman	Telephone No. 528-6409	Project Coordinator KESSNER, JH
Project Designation 100-F Remaining Sites Burial Grounds - Soil Full Protocol	Sampling Location 100-F-26:9 SZ/FS Verification		SAF No. RC-032
Ice Chest No. ERC-02-407	Field Logbook No. EFL-1174-4	COA R10F262000	Method of Shipment FED EX
Shipped To EBERLINE SERVICES / LIONVILLE	Offsite Property No. A080186		Bill of Lading/Air Bill No. See OSPC

Price Code	Data Turnaround
8B	7 DAY

POSSIBLE SAMPLE HAZARDS/REMARKS

NA

Special Handling and/or Storage

NA

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None			
Type of Container	P	P	aG	aG	aG	G/P	P			
No. of Container(s)	2	1	1	1	1	1	1			
Volume	125mL	125mL	60mL	120mL	120mL	500mL	125mL			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	TPH (Total) - 418.1	See item (2) in Special Instructions	Gross Alpha; Gross Beta			

1-23-08

Sample No.	Matrix *	Sample Date	Sample Time										
J16933	SOIL	2-14-08	0805	X			X						EB
J16934	SOIL		0815	X	X	X	X	X					1
J16935	SOIL		0825	X	X	X	X	X					2
J16936	SOIL		0835	X	X	X	X	X					3
J16937	SOIL		0845	X	X	X	X	X					4

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From	2-14-08 1100	Received By/Stored In	1100 2-14-08
Relinquished By/Removed From	1415 2-14-08	Received By/Stored In 1060/2B	1415 2-14-08
Relinquished By/Removed From 1060/2B	1050 2/19/08	Received By/Stored In MT Stankovich	1050 2/19/08
Relinquished By/Removed From WCH MT Stankovich	2/19/08 1500	Received By/Stored In Fed Ex	
Relinquished By/Removed From Fed Ex	2-20-08/0940	Received By/Stored In	2-20-08/0940
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(2) Gamma Spectroscopy (TCL List) {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gamma Spec - Add-on {Barium-133, Silver-108 metastable}

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

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

WCH-EE-01.1

1100000000

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-032-189	Page 2 of 3

Collector: T. Welch-Koelling	Company Contact: R.T. Coffman	Telephone No.: 528-6409	Project Coordinator: KESSNER, JH
Price Code: 8B	Data Turnaround: 7 DAY		
Project Designation: 100-F Remaining Sites Burial Grounds - Soil Full Protocol	Sampling Location: 100-F-26:9 SZ/FS Verification	SAF No.: RC-032	
Ice Chest No.: GRP-03-014	Field Logbook No.: EFL-1174-4	COA: R10F262000	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A080186	Bill of Lading/Air Bill No.: See OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

NA

Special Handling and/or Storage

NA

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None				
Type of Container	P	P	aG	aG	aG	G/P	P				
No. of Container(s)	2	1	1	1	1	1	1				
Volume	125mL	125mL	60mL	120mL	120mL	500mL	125mL				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	TPH (Total) - 418.1	See item (2) in Special Instructions.	Gross Alpha; Gross Beta				
Sample No. / Matrix * / Sample Date / Sample Time											
J16938 / SOIL / 2-14-08 / 0855	X	X	X	X	X						5
J16939 / SOIL / / 0905	X	X	X	X	X						6
J16940 / SOIL / / 0915	X	X	X	X	X						7
J16941 / SOIL / / 0925	X	X	X	X	X						8
J16942 / SOIL / / 0935	X	X	X	X	X						9

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From	2-14-08 1108	Received By/Stored In	1100 2-14-08
Relinquished By/Removed From	1415 2-14-08	Received By/Stored In 1060/2B	1415 2-14-08
Relinquished By/Removed From 1060/2B	2/19/08 2/19/08 1030	Received By/Stored In WCH MSTANKOVICH	2/19/08 1030
Relinquished By/Removed From WCH MSTANKOVICH	2/19/08 1500	Received By/Stored In Fed Ex	
Relinquished By/Removed From Fed Ex	2-20-08/0940	Received By/Stored In	2-20-08/0940
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(2) Gamma Spectroscopy (TCL List) {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gamma Spec - Add-on (Barium-133, Silver-108 metastable)

Matrix *

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

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

WCH-EE-011

000000012

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-032-189	Page 1 of 1

Collector: T. Welch-Koelling	Company Contact: R.T. Coffman	Telephone No.: 528-6409	Project Coordinator: KESSNER, JH
Price Code: 8B	Data Turnaround: 7 DAY		
Project Designation: 100-F Remaining Sites Burial Grounds - Soil Full Protocol	Sampling Location: 100-F-26:9 SZ/FS Verification	SAF No.: RC-032	
Ice Chest No.: ERC-02-407	Field Logbook No.: EFL-1174-4	COA: R10F262000	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A080186	Bill of Lading/Air Bill No.: see ospc	

POSSIBLE SAMPLE HAZARDS/REMARKS

NA

Special Handling and/or Storage

NA

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None				
Type of Container	P	P	aG	aG	aG	G/P	P				
No. of Container(s)	2	1	1	1	1	1	1				
Volume	125mL	125mL	60mL	120mL	120mL	500mL	125mL				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	TPH (Total) - 418.1	See item (2) in Special Instructions.	Gross Alpha; Gross Beta				

Sample No.	Matrix *	Sample Date	Sample Time										
J16943	SOIL	2-14-08	0945	X	X	X	X	X					10
J16944	SOIL	2-14-08	0955	X	X	X	X	X					10 D
J16945	SOIL			X	X	X	X	X					FS-1
J16946	SOIL			X	X	X	X	X					FS-2

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[signature]	2-14-08 1100	[signature]	1100 2-14-08
[signature]	2-14-08 1415	1060/20	1415 2-14-08
1060/20	2/19/08 1030	MZK mstankovich	2/19/08 1030
MZK mstankovich	2/19/08 1500	Fed Ex	
Fed Ex	2.20.08 0940	[signature]	2.20.08 0940

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(2) Gamma Spectroscopy (TCL List) {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gamma Spec - Add-on {Barium-133, Silver-108 metastable}

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

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

WCH-EE-011

000000013

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU Hanford

Project/SAF/SDW/Release #: RC.032

Date: 2.20.08

LvLI Batch #: 08021628

Sample Custodian: D Smith

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier Fed Ex		Airbill # 7926 5122 2990 7918 5227 1516
2. Custody Seals on coolers or shipping containers intact, signed & dated?	☑ Yes	☐ No	☐ No Seals
3. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	*Comments:*
4. All expected paperwork received (coc & other client specific information) sealed in plactic bag and easily accessible?	☑ Yes	☐ No	
5. Samples received cooled or ambient?	Temp 4.3°C 2.6 °C		Cooler # GRP-03-014 # ERC-02-407
How was the temperature taken?	☑ IR	☐ Temp. Blank	☐ Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	☑ Yes	☐ No	
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7. COC (Client & LvLI) signed & dated?	☑ Yes	☐ No	
8. Sample containers are intact?	☑ Yes	☐ No	
9. All samples on COC received?	☑ Yes	☐ No	
All samples received on COC?	☑ Yes	☐ No	
10. All sample label information matches COC?	☑ Yes	☐ No	
11. Samples properly preserved? (If #5 is no, then this is no.)	☑ Yes	☐ No	
12. Samples received within hold times?	☑ Yes	☐ No	
Short holds taken to wet lab?	☐ Yes	☐ No	☑ N/A
13. VOA, TOC, TOX free of headspace?	☐ Yes	☐ No	☑ N/A
14. QC stickers placed on bottles designated by client?	☐ Yes	☐ No	☑ N/A
15. Shipment meets LvLI Sample Acceptance Policy? (Identify all bottles that do not meet the policy, which is on the reverse of this page.)	☑ Yes	☐ No	
16. Project Manager contacted concerning any discrepancies?	☐ Yes	☐ No	☑ N/A

Person Contacted _____ Date _____

LvLI LIONVILLE LABORATORY INC.

SR-002-B.doc

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-032 K1123

RECEIVED
APR 2008

DATE RECEIVED: 02/20/08 LVL LOT # 08L02L628

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J16933						
SILVER, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
ALUMINUM, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
ARSENIC, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
BORON, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
BARIUM, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
BERYLLIUM, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
CALCIUM, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
CADMIUM, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
COBALT, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
CHROMIUM, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
COPPER, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
IRON, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
MERCURY, TOTAL	001	S	08C0036	02/14/08	02/25/08	02/25/08
POTASSIUM, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
MAGNESIUM, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
MANGANESE, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
MOLYBDENUM, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
SODIUM, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
NICKEL, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
LEAD, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
ANTIMONY, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
SELENIUM, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
SILICON, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
VANADIUM, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
ZINC, TOTAL	001	S	08L0083	02/14/08	02/26/08	02/27/08
J16934						
SILVER, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
SILVER, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
SILVER, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
ALUMINUM, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
ALUMINUM, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
ALUMINUM, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
ARSENIC, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-032 K1123

DATE RECEIVED: 02/20/08 LVL LOT # :0802L628

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
ARSENIC, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
ARSENIC, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
BORON, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
BORON, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
BORON, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
BARIUM, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
BARIUM, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
BARIUM, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
BERYLLIUM, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
BERYLLIUM, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
BERYLLIUM, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
CALCIUM, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
CALCIUM, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
CALCIUM, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
CADMIUM, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
CADMIUM, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
CADMIUM, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
COBALT, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
COBALT, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
COBALT, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
CHROMIUM, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
CHROMIUM, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
CHROMIUM, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
COPPER, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
COPPER, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
COPPER, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
IRON, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
IRON, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
IRON, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
MERCURY, TOTAL	002	S	08C0036	02/14/08	02/25/08	02/25/08
MERCURY, TOTAL	002 REP	S	08C0036	02/14/08	02/25/08	02/25/08
MERCURY, TOTAL	002 MS	S	08C0036	02/14/08	02/25/08	02/25/08
POTASSIUM, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
POTASSIUM, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
POTASSIUM, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
MAGNESIUM, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
MAGNESIUM, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
MAGNESIUM, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-032 K1123

DATE RECEIVED: 02/20/08 LVL LOT # :0802L628

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
MANGANESE, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
MANGANESE, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
MANGANESE, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
MOLYBDENUM, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
MOLYBDENUM, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
MOLYBDENUM, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
SODIUM, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
SODIUM, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
SODIUM, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
NICKEL, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
NICKEL, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
NICKEL, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
LEAD, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
LEAD, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
LEAD, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
ANTIMONY, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
ANTIMONY, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
ANTIMONY, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
SELENIUM, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
SELENIUM, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
SELENIUM, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
SILICON, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
SILICON, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
SILICON, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
VANADIUM, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
VANADIUM, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
VANADIUM, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
ZINC, TOTAL	002	S	08L0083	02/14/08	02/26/08	02/27/08
ZINC, TOTAL	002 REP	S	08L0083	02/14/08	02/26/08	02/27/08
ZINC, TOTAL	002 MS	S	08L0083	02/14/08	02/26/08	02/27/08
J16935						
SILVER, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
ALUMINUM, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
ARSENIC, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
BORON, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
BARIUM, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-032 K1123

DATE RECEIVED: 02/20/08 LVL LOT # :0802L628

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
BERYLLIUM, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
CALCIUM, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
CADMIUM, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
COBALT, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
CHROMIUM, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
COPPER, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
IRON, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
MERCURY, TOTAL	003	S	08C0036	02/14/08	02/25/08	02/25/08
POTASSIUM, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
MAGNESIUM, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
MANGANESE, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
MOLYBDENUM, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
SODIUM, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
NICKEL, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
LEAD, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
ANTIMONY, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
SELENIUM, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
SILICON, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
VANADIUM, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
ZINC, TOTAL	003	S	08L0083	02/14/08	02/26/08	02/27/08
J16936						
SILVER, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
ALUMINUM, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
ARSENIC, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
BORON, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
BARIUM, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
BERYLLIUM, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
CALCIUM, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
CADMIUM, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
COBALT, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
CHROMIUM, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
COPPER, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
IRON, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
MERCURY, TOTAL	004	S	08C0036	02/14/08	02/25/08	02/25/08
POTASSIUM, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
MAGNESIUM, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-032 K1123

DATE RECEIVED: 02/20/08 LVL LOT # :0802L628

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
MANGANESE, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
MOLYBDENUM, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
SODIUM, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
NICKEL, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
LEAD, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
ANTIMONY, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
SELENIUM, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
SILICON, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
VANADIUM, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
ZINC, TOTAL	004	S	08L0083	02/14/08	02/26/08	02/27/08
J16937						
SILVER, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
ALUMINUM, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
ARSENIC, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
BORON, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
BARIUM, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
BERYLLIUM, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
CALCIUM, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
CADMIUM, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
COBALT, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
CHROMIUM, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
COPPER, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
IRON, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
MERCURY, TOTAL	005	S	08C0036	02/14/08	02/25/08	02/25/08
POTASSIUM, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
MAGNESIUM, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
MANGANESE, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
MOLYBDENUM, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
SODIUM, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
NICKEL, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
LEAD, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
ANTIMONY, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
SELENIUM, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
SILICON, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
VANADIUM, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08
ZINC, TOTAL	005	S	08L0083	02/14/08	02/26/08	02/27/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-032 K1123

DATE RECEIVED: 02/20/08 LVL LOT # :0802L628

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J16938						
SILVER, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
ALUMINUM, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
ARSENIC, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
BORON, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
BARIUM, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
BERYLLIUM, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
CALCIUM, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
CADMIUM, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
COBALT, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
CHROMIUM, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
COPPER, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
IRON, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
MERCURY, TOTAL	006	S	08C0036	02/14/08	02/25/08	02/25/08
POTASSIUM, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
MAGNESIUM, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
MANGANESE, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
MOLYBDENUM, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
SODIUM, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
NICKEL, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
LEAD, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
ANTIMONY, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
SELENIUM, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
SILICON, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
VANADIUM, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
ZINC, TOTAL	006	S	08L0083	02/14/08	02/26/08	02/27/08
J16939						
SILVER, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
ALUMINUM, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
ARSENIC, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
BORON, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
BARIUM, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
BERYLLIUM, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
CALCIUM, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-032 K1123

DATE RECEIVED: 02/20/08 LVL LOT # :0802L628

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
CADMIUM, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
COBALT, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
CHROMIUM, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
COPPER, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
IRON, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
MERCURY, TOTAL	007	S	08C0036	02/14/08	02/25/08	02/25/08
POTASSIUM, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
MAGNESIUM, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
MANGANESE, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
MOLYBDENUM, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
SODIUM, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
NICKEL, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
LEAD, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
ANTIMONY, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
SELENIUM, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
SILICON, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
VANADIUM, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
ZINC, TOTAL	007	S	08L0083	02/14/08	02/26/08	02/27/08
J16940						
SILVER, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
ALUMINUM, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
ARSENIC, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
BORON, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
BARIUM, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
BERYLLIUM, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
CALCIUM, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
CADMIUM, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
COBALT, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
CHROMIUM, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
COPPER, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
IRON, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
MERCURY, TOTAL	008	S	08C0036	02/14/08	02/25/08	02/25/08
POTASSIUM, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
MAGNESIUM, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
MANGANESE, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
MOLYBDENUM, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-032 K1123

DATE RECEIVED: 02/20/08 LVL LOT # :0802L628

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
SODIUM, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
NICKEL, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
LEAD, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
ANTIMONY, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
SELENIUM, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
SILICON, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
VANADIUM, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
ZINC, TOTAL	008	S	08L0083	02/14/08	02/26/08	02/27/08
J16941						
SILVER, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
ALUMINUM, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
ARSENIC, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
BORON, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
BARIUM, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
BERYLLIUM, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
CALCIUM, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
CADMIUM, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
COBALT, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
CHROMIUM, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
COPPER, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
IRON, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
MERCURY, TOTAL	009	S	08C0036	02/14/08	02/25/08	02/25/08
POTASSIUM, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
MAGNESIUM, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
MANGANESE, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
MOLYBDENUM, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
SODIUM, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
NICKEL, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
LEAD, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
ANTIMONY, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
SELENIUM, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
SILICON, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
VANADIUM, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
ZINC, TOTAL	009	S	08L0083	02/14/08	02/26/08	02/27/08
J16942						
SILVER, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-032 K1123

DATE RECEIVED: 02/20/08 LVL LOT # :0802L628

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
ALUMINUM, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
ARSENIC, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
BORON, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
BARIUM, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
BERYLLIUM, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
CALCIUM, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
CADMIUM, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
COBALT, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
CHROMIUM, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
COPPER, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
IRON, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
MERCURY, TOTAL	010	S	08C0036	02/14/08	02/25/08	02/25/08
POTASSIUM, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
MAGNESIUM, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
MANGANESE, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
MOLYBDENUM, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
SODIUM, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
NICKEL, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
LEAD, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
ANTIMONY, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
SELENIUM, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
SILICON, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
VANADIUM, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
ZINC, TOTAL	010	S	08L0083	02/14/08	02/26/08	02/27/08
J16943						
SILVER, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
ALUMINUM, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
ARSENIC, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
BORON, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
BARIUM, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
BERYLLIUM, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
CALCIUM, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
CADMIUM, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
COBALT, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
CHROMIUM, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
COPPER, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-032 K1123

DATE RECEIVED: 02/20/08 LVL LOT # :0802L628

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
IRON, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
MERCURY, TOTAL	011	S	08C0036	02/14/08	02/25/08	02/25/08
POTASSIUM, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
MAGNESIUM, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
MANGANESE, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
MOLYBDENUM, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
SODIUM, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
NICKEL, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
LEAD, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
ANTIMONY, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
SELENIUM, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
SILICON, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
VANADIUM, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
ZINC, TOTAL	011	S	08L0083	02/14/08	02/26/08	02/27/08
J16944						
SILVER, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
ALUMINUM, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
ARSENIC, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
BORON, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
BARIUM, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
BERYLLIUM, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
CALCIUM, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
CADMIUM, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
COBALT, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
CHROMIUM, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
COPPER, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
IRON, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
MERCURY, TOTAL	012	S	08C0036	02/14/08	02/25/08	02/25/08
POTASSIUM, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
MAGNESIUM, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
MANGANESE, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
MOLYBDENUM, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
SODIUM, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
NICKEL, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
LEAD, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
ANTIMONY, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-032 K1123

DATE RECEIVED: 02/20/08 LVL LOT # :0802L628

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
SELENIUM, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
SILICON, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
VANADIUM, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08
ZINC, TOTAL	012	S	08L0083	02/14/08	02/26/08	02/27/08

LAB QC:

SILVER LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
SILVER, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
ALUMINUM LABORTORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
ALUMINUM, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
ARSENIC LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
ARSENIC, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
BORON LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
BORON, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
BARIUM LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
BARIUM, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
BERYLLIUM LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
BERYLLIUM, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
CALCIUM LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
CALCIUM, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
CADMIUM LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
CADMIUM, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
COBALT LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
COBALT, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
CHROMIUM LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
CHROMIUM, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
COPPER LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
COPPER, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
IRON LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
IRON, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
MERCURY LABORATORY	LC1 BS	S	08C0036	N/A	02/25/08	02/25/08
MERCURY, TOTAL	MB1	S	08C0036	N/A	02/25/08	02/25/08
POTASSIUM LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
POTASSIUM, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
MAGNESIUM LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
MAGNESIUM, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
MANGANESE LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-032 K1123

DATE RECEIVED: 02/20/08 LVL LOT # :0802L628

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
MANGANESE, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
MOLYBDENUM LABORATOR	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
MOLYBDENUM, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
SODIUM LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
SODIUM, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
NICKEL LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
NICKEL, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
LEAD LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
LEAD, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
ANTIMONY LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
ANTIMONY, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
SELENIUM LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
SELENIUM, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
SILICON LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
SILICON, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
VANADIUM LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
VANADIUM, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08
ZINC LABORATORY	LC1 BS	S	08L0083	N/A	02/26/08	02/27/08
ZINC, TOTAL	MB1	S	08L0083	N/A	02/26/08	02/27/08

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU-HANFORD RC-032
LVL#: 0802L628
SDG/SAF#: K1123/RC-032

W.O.#: 11343-606-001-9999-00
Date Received: 02-20-08

METALS CASE NARRATIVE

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

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

1. This narrative covers the analyses of 12 soil samples.

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

   All samples, with the exception of sample J16933, were reported with 3-fold dilutions due to sample matrix.

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

4. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within the 90-110% control limits (80-120% for Mercury) with the exception of all CCV's for Sodium. All samples were rerun, without dilution, in file PS0227B.

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

6. The preparation/method blank for 1 analyte was outside method criteria. {less than the Limit of Quantitation (3-10X the LOD), or samples greater than 20X MB value}. Refer to the Inorganics Method Blank Data Summary.

   a). The MB result for Sodium was greater than the Limit of Quantitation (LOQ) {3-10x the (LOD) Limit of Detection} and all samples, with the exception of sample J16942, read less than 20 times the MB concentration. However, no corrective action criteria for MBs were provided in SW846 method 6010B. The sample results were reported herein "uncorrected" for the levels found in the MB.

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 41 pages.

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

8. All laboratory control samples (LCS) were within the 80-120% control limits with the exception of Silicon at 29.3%. Refer to the Inorganics Laboratory Control Standards Report. Associated sample results may be biased low.

9. The matrix spike (MS) recoveries for 5 analytes were outside the 75-125% control limits. Refer to the Inorganics Accuracy Report.

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

Sample ID	Element	PDS Concentration (ppb)	PDS % Recovery
J16934	Aluminum	60,000	99.6
	Calcium	60,000	106.7
	Iron	60,000	104.3
	Antimony	300	102.9
	Silicon	6,300	97.6

11. The duplicate analyses for 4 analytes were outside the 20% Relative Percent Difference (RPD) control limits. Refer to the Inorganics Precision Report.

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

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

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

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

2/28/08
Date

LVLI
LIONVILLE LABORATORY INC.

METALS METHOD GLOSSARY

The following methods are used as reference for the digestion and analysis of samples contained within th
Lot#: 08021628

Leaching Procedure: __1310 __1311 __1312 __Other:_____

CLP Metals __ Digestion and __ Analysis Methods: __ILM03.0 __ILM04.0

Metals Digestion Methods: __3005A __3010A __3015 __3020A X3050B __3051 __200.7 __SS17
__Other: _____

Metals Analysis Methods

	SW846		EPA		STD MTD	EPA OSWR	USATHAMA
Aluminum	X6010B		__200.7				__99
Antimony	X6010B	__7041 [5]	__200.7	__204.2			__99
Arsenic	X6010B	__7060A [5]	__200.7	__206.2	__3113B		__99
Barium	X6010B		__200.7				__99
Beryllium	X6010B		__200.7				__99
Bismuth	__6010B [1]		__200.7 [1]			__1620	__99
Boron	X6010B		__200.7				__99
Cadmium	X6010B	__7131A [5]	__200.7	__213.2			__99
Calcium	X6010B		__200.7				__99
Chromium	X6010B	__7191 [5]	__200.7	__218.2			__SS17
Cobalt	X6010B		__200.7				__99
Copper	X6010B	__7211 [5]	__200.7	__220.2			__99
Iron	X6010B		__200.7				__99
Lead	X6010B	__7421 [5]	__200.7	__239.2	__3113B		__99
Lithium	__6010B	__7430 [4]	__200.7			__1620	__99
Magnesium	X6010B		__200.7				__99
Manganese	X6010B		__200.7				__99
Mercury	__7470A [3]	X7471A [3]	__245.1 [2]	__245.5 [2]			__99
Molybdenum	X6010B		__200.7				__99
Nickel	X6010B		__200.7				__99
Potassium	X6010B	__7610 [4]	__200.7	__258.1 [4]			__99
Rare Earths	__6010B [1]		__200.7 [1]			__1620	__99
Selenium	X6010B	__7740 [5]	__200.7	__270.2	__3113B		__99
Silicon	X6010B [1]		__200.7			__1620	__99
Silica	__6010B		__200.7			__1620	__99
Silver	X6010B	__7761 [5]	__200.7	__272.2			__99
Sodium	X6010B	__7770 [4]	__200.7	__273.1 [4]			__99
Strontium	__6010B		__200.7				__99
Thallium	__6010B	__7841 [5]	__200.7	__279.2__200.9			__99
Tin	__6010B		__200.7				__99
Titanium	__6010B		__200.7				__99
Uranium	__6010B [1]		__200.7 [1]			__1620	__99
Vanadium	X6010B		__200.7				__99
Zinc	X6010B		__200.7				__99
Zirconium	__6010B [1]		__200.7 [1]			__1620	__99

Other:_____ Method:_____

METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

U = Indicates that the parameter was not detected at or above the reported limit. The associated numerical value is the sample detection limit.

* = Indicates that the original sample result is greater than 4x the spike amount added.

ABBREVIATIONS

MB = Method or Preparation Blank.
MS = Matrix Spike.
MSD = Matrix Spike Duplicate.
REP = Sample Replicate
LCS = Laboratory Control Sample.
NC = Not calculated.

ANALYTICAL METAL METHODS

1. Not included in the method element list.

2. Modified Hg: Hg1 and Hg2 require less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionately scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 mL. For soils, approximately 0.3 grams of sample is taken to a final volume of 50 mL (including all reagents).

3. Flame AA.

4. Graphite Furnace AA.

L-WI-033/N-04/98

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/28/08

CLIENT: TNUHANFORD RC-D32 K1123 LVL LOT #: 0802L628

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	J16933	Silver, Total	0.09 u	MG/KG	0.09	1.0
		Aluminum, Total	69.6	MG/KG	3.4	1.0
		Arsenic, Total	0.43 u	MG/KG	0.43	1.0
		Boron, Total	0.43 u	MG/KG	0.43	1.0
		Barium, Total	1.8	MG/KG	0.09	1.0
		Beryllium, Total	0.06	MG/KG	0.04	1.0
		Calcium, Total	31.7	MG/KG	3.4	1.0
		Cadmium, Total	0.04 u	MG/KG	0.04	1.0
		Cobalt, Total	0.17 u	MG/KG	0.17	1.0
		Chromium, Total	0.17 u	MG/KG	0.17	1.0
		Copper, Total	0.17 u	MG/KG	0.17	1.0
		Iron, Total	1790	MG/KG	3.8	1.0
		Mercury, Total	0.009u	MG/KG	0.009	1.0
		Potassium, Total	26.1	MG/KG	3.4	1.0
		Magnesium, Total	12.6	MG/KG	2.1	1.0
		Manganese, Total	20.8	MG/KG	0.03	1.0
		Molybdenum, Total	0.26 u	MG/KG	0.26	1.0
		Sodium, Total	10.9	MG/KG	1.7	1.0
		Nickel, Total	0.17 u	MG/KG	0.17	1.0
		Lead, Total	0.31	MG/KG	0.26	1.0
		Antimony, Total	0.26 u	MG/KG	0.26	1.0
		Selenium, Total	0.51 u	MG/KG	0.51	1.0
		Silicon, Total	51.4	MG/KG	3.4	1.0
		Vanadium, Total	0.22	MG/KG	0.12	1.0
		Zinc, Total	2.5	MG/KG	0.51	1.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/28/08

CLIENT: TNUHANFORD RC-032 K1123 LVL LOT #: 0802L628

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-002	J16934	Silver, Total	0.25 u	MG/KG	0.25	3.0
		Aluminum, Total	4900	MG/KG	10.2	3.0
		Arsenic, Total	3.3	MG/KG	1.3	3.0
		Boron, Total	2.4	MG/KG	1.3	3.0
		Barium, Total	62.5	MG/KG	0.25	3.0
		Beryllium, Total	0.23	MG/KG	0.13	3.0
		Calcium, Total	7880	MG/KG	10.2	3.0
		Cadmium, Total	0.13 u	MG/KG	0.13	3.0
		Cobalt, Total	5.5	MG/KG	0.51	3.0
		Chromium, Total	8.3	MG/KG	0.51	3.0
		Copper, Total	14.1	MG/KG	0.51	3.0
		Iron, Total	15100	MG/KG	11.4	3.0
		Mercury, Total	0.04	MG/KG	0.01	1.0
		Potassium, Total	786	MG/KG	10.2	3.0
		Magnesium, Total	3470	MG/KG	6.3	3.0
		Manganese, Total	239	MG/KG	0.10	3.0
		Molybdenum, Total	0.76 u	MG/KG	0.76	3.0
		Sodium, Total	115	MG/KG	1.7	1.0
		Nickel, Total	9.0	MG/KG	0.51	3.0
		Lead, Total	6.1	MG/KG	0.76	3.0
		Antimony, Total	0.76 u	MG/KG	0.76	3.0
		Selenium, Total	1.5 u	MG/KG	1.5	3.0
		Silicon, Total	316	MG/KG	10.2	3.0
		Vanadium, Total	38.0	MG/KG	0.36	3.0
		Zinc, Total	42.9	MG/KG	1.5	3.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/28/08

CLIENT: TNUHANFORD RC-032 K1123 LVL LOT #: 0802L628

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-003	J16935	Silver, Total	0.26 u	MG/KG	0.26	3.0
		Aluminum, Total	4990	MG/KG	10.4	3.0
		Arsenic, Total	2.7	MG/KG	1.3	3.0
		Boron, Total	2.6	MG/KG	1.3	3.0
		Barium, Total	56.1	MG/KG	0.26	3.0
		Beryllium, Total	0.22	MG/KG	0.13	3.0
		Calcium, Total	4270	MG/KG	10.4	3.0
		Cadmium, Total	0.20	MG/KG	0.13	3.0
		Cobalt, Total	5.8	MG/KG	0.52	3.0
		Chromium, Total	9.2	MG/KG	0.52	3.0
		Copper, Total	15.7	MG/KG	0.52	3.0
		Iron, Total	15600	MG/KG	11.7	3.0
		Mercury, Total	0.02	MG/KG	0.009	1.0
		Potassium, Total	730	MG/KG	10.4	3.0
		Magnesium, Total	3660	MG/KG	6.5	3.0
		Manganese, Total	248	MG/KG	0.10	3.0
		Molybdenum, Total	0.78 u	MG/KG	0.78	3.0
		Sodium, Total	121	MG/KG	1.7	1.0
		Nickel, Total	9.9	MG/KG	0.52	3.0
		Lead, Total	7.0	MG/KG	0.78	3.0
		Antimony, Total	0.78 u	MG/KG	0.78	3.0
		Selenium, Total	1.6 u	MG/KG	1.6	3.0
		Silicon, Total	282	MG/KG	10.4	3.0
		Vanadium, Total	37.9	MG/KG	0.36	3.0
		Zinc, Total	49.3	MG/KG	1.6	3.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/28/08

CLIENT: TNUHANFORD RC-032 K1123 LVL LOT #: 0802L628

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-004	J16936	Silver, Total	0.27 u	MG/KG	0.27	3.0
		Aluminum, Total	4500	MG/KG	10.8	3.0
		Arsenic, Total	2.2	MG/KG	1.4	3.0
		Boron, Total	3.1	MG/KG	1.4	3.0
		Barium, Total	64.7	MG/KG	0.27	3.0
		Beryllium, Total	0.21	MG/KG	0.14	3.0
		Calcium, Total	4020	MG/KG	10.8	3.0
		Cadmium, Total	0.14 u	MG/KG	0.14	3.0
		Cobalt, Total	5.5	MG/KG	0.54	3.0
		Chromium, Total	7.0	MG/KG	0.54	3.0
		Copper, Total	12.4	MG/KG	0.54	3.0
		Iron, Total	14800	MG/KG	12.2	3.0
		Mercury, Total	0.02	MG/KG	0.009	1.0
		Potassium, Total	651	MG/KG	10.8	3.0
		Magnesium, Total	3350	MG/KG	6.8	3.0
		Manganese, Total	242	MG/KG	0.11	3.0
		Molybdenum, Total	0.81 u	MG/KG	0.81	3.0
		Sodium, Total	123	MG/KG	1.8	1.0
		Nickel, Total	9.0	MG/KG	0.54	3.0
		Lead, Total	5.5	MG/KG	0.81	3.0
		Antimony, Total	0.81 u	MG/KG	0.81	3.0
		Selenium, Total	1.6 u	MG/KG	1.6	3.0
		Silicon, Total	407	MG/KG	10.8	3.0
		Vanadium, Total	37.4	MG/KG	0.38	3.0
		Zinc, Total	41.2	MG/KG	1.6	3.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/28/08

CLIENT: TNUHANFORD RC-032 K1123 LVL LOT #: 0802L628

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-005	J16937	Silver, Total	0.30 u	MG/KG	0.30	3.0
		Aluminum, Total	5090	MG/KG	11.8	3.0
		Arsenic, Total	2.5	MG/KG	1.5	3.0
		Boron, Total	2.9	MG/KG	1.5	3.0
		Barium, Total	63.0	MG/KG	0.30	3.0
		Beryllium, Total	0.20	MG/KG	0.15	3.0
		Calcium, Total	3290	MG/KG	11.8	3.0
		Cadmium, Total	0.15 u	MG/KG	0.15	3.0
		Cobalt, Total	4.6	MG/KG	0.59	3.0
		Chromium, Total	9.7	MG/KG	0.59	3.0
		Copper, Total	16.0	MG/KG	0.59	3.0
		Iron, Total	13400	MG/KG	13.3	3.0
		Mercury, Total	0.15	MG/KG	0.009	1.0
		Potassium, Total	668	MG/KG	11.8	3.0
		Magnesium, Total	3500	MG/KG	7.4	3.0
		Manganese, Total	201	MG/KG	0.12	3.0
		Molybdenum, Total	0.89 u	MG/KG	0.89	3.0
		Sodium, Total	116	MG/KG	2.0	1.0
		Nickel, Total	9.2	MG/KG	0.59	3.0
		Lead, Total	6.6	MG/KG	0.89	3.0
		Antimony, Total	0.89 u	MG/KG	0.89	3.0
		Selenium, Total	1.8 u	MG/KG	1.8	3.0
		Silicon, Total	382	MG/KG	11.8	3.0
		Vanadium, Total	32.6	MG/KG	0.41	3.0
		Zinc, Total	45.7	MG/KG	1.8	3.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/28/08

CLIENT: TNUHANFORD RC-032 K1123 LVL LOT #: 0802L628

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-006	J16938	Silver, Total	0.23	u	MG/KG	0.23	3.0
		Aluminum, Total	4240		MG/KG	9.3	3.0
		Arsenic, Total	1.8		MG/KG	1.2	3.0
		Boron, Total	1.2	u	MG/KG	1.2	3.0
		Barium, Total	41.6		MG/KG	0.23	3.0
		Beryllium, Total	0.17		MG/KG	0.12	3.0
		Calcium, Total	4120		MG/KG	9.3	3.0
		Cadmium, Total	0.12	u	MG/KG	0.12	3.0
		Cobalt, Total	4.6		MG/KG	0.47	3.0
		Chromium, Total	7.3		MG/KG	0.47	3.0
		Copper, Total	11.1		MG/KG	0.47	3.0
		Iron, Total	12300		MG/KG	10.5	3.0
		Mercury, Total	0.03		MG/KG	0.008	1.0
		Potassium, Total	607		MG/KG	9.3	3.0
		Magnesium, Total	3140		MG/KG	5.8	3.0
		Manganese, Total	208		MG/KG	0.09	3.0
		Molybdenum, Total	0.70	u	MG/KG	0.70	3.0
		Sodium, Total	94.7		MG/KG	1.6	1.0
		Nickel, Total	8.8		MG/KG	0.47	3.0
		Lead, Total	3.5		MG/KG	0.70	3.0
		Antimony, Total	0.70	u	MG/KG	0.70	3.0
		Selenium, Total	1.4	u	MG/KG	1.4	3.0
		Silicon, Total	384		MG/KG	9.3	3.0
		Vanadium, Total	29.2		MG/KG	0.33	3.0
		Zinc, Total	28.9		MG/KG	1.4	3.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/28/08

CLIENT: TNUHANFORD RC-032 K1123 LVL LOT #: 0802L628

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-007	J16939	Silver, Total	0.30 u	MG/KG	0.30	3.0
		Aluminum, Total	4570	MG/KG	12.1	3.0
		Arsenic, Total	1.5 u	MG/KG	1.5	3.0
		Boron, Total	6.2	MG/KG	1.5	3.0
		Barium, Total	91.9	MG/KG	0.30	3.0
		Beryllium, Total	0.26	MG/KG	0.15	3.0
		Calcium, Total	4830	MG/KG	12.1	3.0
		Cadmium, Total	0.15 u	MG/KG	0.15	3.0
		Cobalt, Total	6.0	MG/KG	0.61	3.0
		Chromium, Total	6.7	MG/KG	0.61	3.0
		Copper, Total	11.3	MG/KG	0.61	3.0
		Iron, Total	15800	MG/KG	13.6	3.0
		Mercury, Total	0.01 u	MG/KG	0.01	1.0
		Potassium, Total	918	MG/KG	12.1	3.0
		Magnesium, Total	3550	MG/KG	7.6	3.0
		Manganese, Total	242	MG/KG	0.12	3.0
		Molybdenum, Total	0.91 u	MG/KG	0.91	3.0
		Sodium, Total	162	MG/KG	2.0	1.0
		Nickel, Total	8.7	MG/KG	0.61	3.0
		Lead, Total	3.8	MG/KG	0.91	3.0
		Antimony, Total	0.91 u	MG/KG	0.91	3.0
		Selenium, Total	1.8 u	MG/KG	1.8	3.0
		Silicon, Total	488	MG/KG	12.1	3.0
		Vanadium, Total	39.9	MG/KG	0.42	3.0
		Zinc, Total	34.6	MG/KG	1.8	3.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/28/08

CLIENT: TNUHANFORD RC-032 K1123 LVL LOT #: 0802L628

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-008	J16940	Silver, Total	0.28 u	MG/KG	0.28	3.0
		Aluminum, Total	4820	MG/KG	11.1	3.0
		Arsenic, Total	1.7	MG/KG	1.4	3.0
		Boron, Total	1.8	MG/KG	1.4	3.0
		Barium, Total	56.2	MG/KG	0.28	3.0
		Beryllium, Total	0.27	MG/KG	0.14	3.0
		Calcium, Total	3970	MG/KG	11.1	3.0
		Cadmium, Total	0.14 u	MG/KG	0.14	3.0
		Cobalt, Total	6.7	MG/KG	0.56	3.0
		Chromium, Total	7.6	MG/KG	0.56	3.0
		Copper, Total	11.3	MG/KG	0.56	3.0
		Iron, Total	18300	MG/KG	12.5	3.0
		Mercury, Total	0.01 u	MG/KG	0.01	1.0
		Potassium, Total	881	MG/KG	11.1	3.0
		Magnesium, Total	3710	MG/KG	7.0	3.0
		Manganese, Total	284	MG/KG	0.11	3.0
		Molybdenum, Total	0.84 u	MG/KG	0.84	3.0
		Sodium, Total	118	MG/KG	1.9	1.0
		Nickel, Total	10.6	MG/KG	0.56	3.0
		Lead, Total	4.0	MG/KG	0.84	3.0
		Antimony, Total	0.84 u	MG/KG	0.84	3.0
		Selenium, Total	1.7 u	MG/KG	1.7	3.0
		Silicon, Total	337	MG/KG	11.1	3.0
		Vanadium, Total	48.1	MG/KG	0.39	3.0
		Zinc, Total	36.9	MG/KG	1.7	3.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/28/08

CLIENT: TNUHANFORD RC-032 K1123 LVL LOT #: 0802L628

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-009	J16941	Silver, Total	0.26 u	MG/KG	0.26	3.0
		Aluminum, Total	4780	MG/KG	10.3	3.0
		Arsenic, Total	2.3	MG/KG	1.3	3.0
		Boron, Total	1.9	MG/KG	1.3	3.0
		Barium, Total	59.1	MG/KG	0.26	3.0
		Beryllium, Total	0.25	MG/KG	0.13	3.0
		Calcium, Total	3840	MG/KG	10.3	3.0
		Cadmium, Total	0.13 u	MG/KG	0.13	3.0
		Cobalt, Total	6.7	MG/KG	0.52	3.0
		Chromium, Total	7.7	MG/KG	0.52	3.0
		Copper, Total	10.6	MG/KG	0.52	3.0
		Iron, Total	18600	MG/KG	11.6	3.0
		Mercury, Total	0.009u	MG/KG	0.009	1.0
		Potassium, Total	861	MG/KG	10.3	3.0
		Magnesium, Total	3790	MG/KG	6.4	3.0
		Manganese, Total	277	MG/KG	0.10	3.0
		Molybdenum, Total	0.77 u	MG/KG	0.77	3.0
		Sodium, Total	120	MG/KG	1.7	1.0
		Nickel, Total	9.9	MG/KG	0.52	3.0
		Lead, Total	3.0	MG/KG	0.77	3.0
		Antimony, Total	0.77 u	MG/KG	0.77	3.0
		Selenium, Total	1.5 u	MG/KG	1.5	3.0
		Silicon, Total	344	MG/KG	10.3	3.0
		Vanadium, Total	47.5	MG/KG	0.36	3.0
		Zinc, Total	36.3	MG/KG	1.5	3.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/28/08

CLIENT: TNUHANFORD RC-032 K1123 LVL LOT #: 0802L628

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-010	J16942	Silver, Total	0.28 u	MG/KG	0.28	3.0
		Aluminum, Total	6250	MG/KG	11.3	3.0
		Arsenic, Total	2.1	MG/KG	1.4	3.0
		Boron, Total	23.7	MG/KG	1.4	3.0
		Barium, Total	226	MG/KG	0.28	3.0
		Beryllium, Total	0.34	MG/KG	0.14	3.0
		Calcium, Total	7170	MG/KG	11.3	3.0
		Cadmium, Total	0.14 u	MG/KG	0.14	3.0
		Cobalt, Total	6.2	MG/KG	0.56	3.0
		Chromium, Total	8.7	MG/KG	0.56	3.0
		Copper, Total	15.5	MG/KG	0.56	3.0
		Iron, Total	17100	MG/KG	12.7	3.0
		Mercury, Total	0.02	MG/KG	0.009	1.0
		Potassium, Total	886	MG/KG	11.3	3.0
		Magnesium, Total	4150	MG/KG	7.0	3.0
		Manganese, Total	335	MG/KG	0.11	3.0
		Molybdenum, Total	0.85 u	MG/KG	0.85	3.0
		Sodium, Total	406	MG/KG	1.9	1.0
		Nickel, Total	10.9	MG/KG	0.56	3.0
		Lead, Total	5.6	MG/KG	0.85	3.0
		Antimony, Total	0.85 u	MG/KG	0.85	3.0
		Selenium, Total	1.7 u	MG/KG	1.7	3.0
		Silicon, Total	479	MG/KG	11.3	3.0
		Vanadium, Total	37.5	MG/KG	0.39	3.0
		Zinc, Total	38.0	MG/KG	1.7	3.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/28/08

CLIENT: TNUHANFORD RC-032 K1123 LVL LOT #: 0802L628

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-011	J16943	Silver, Total	0.28 u	MG/KG	0.28	3.0
		Aluminum, Total	5980	MG/KG	11.3	3.0
		Arsenic, Total	2.1	MG/KG	1.4	3.0
		Boron, Total	3.6	MG/KG	1.4	3.0
		Barium, Total	73.6	MG/KG	0.28	3.0
		Beryllium, Total	0.25	MG/KG	0.14	3.0
		Calcium, Total	3050	MG/KG	11.3	3.0
		Cadmium, Total	0.14 u	MG/KG	0.14	3.0
		Cobalt, Total	6.3	MG/KG	0.57	3.0
		Chromium, Total	8.7	MG/KG	0.57	3.0
		Copper, Total	9.0	MG/KG	0.57	3.0
		Iron, Total	16900	MG/KG	12.7	3.0
		Mercury, Total	0.01	MG/KG	0.009	1.0
		Potassium, Total	1290	MG/KG	11.3	3.0
		Magnesium, Total	3490	MG/KG	7.1	3.0
		Manganese, Total	317	MG/KG	0.11	3.0
		Molybdenum, Total	0.85 u	MG/KG	0.85	3.0
		Sodium, Total	142	MG/KG	1.9	1.0
		Nickel, Total	9.5	MG/KG	0.57	3.0
		Lead, Total	4.4	MG/KG	0.85	3.0
		Antimony, Total	0.85 u	MG/KG	0.85	3.0
		Selenium, Total	1.7 u	MG/KG	1.7	3.0
		Silicon, Total	322	MG/KG	11.3	3.0
		Vanadium, Total	37.4	MG/KG	0.40	3.0
		Zinc, Total	37.2	MG/KG	1.7	3.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 02/28/08

CLIENT: TNUHANFORD RC-032 K1123 LVL LOT #: 0802L628

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-012	J16944	Silver, Total	0.30 u	MG/KG	0.30	3.0
		Aluminum, Total	6570	MG/KG	12.1	3.0
		Arsenic, Total	3.0	MG/KG	1.5	3.0
		Boron, Total	4.2	MG/KG	1.5	3.0
		Barium, Total	117	MG/KG	0.30	3.0
		Beryllium, Total	0.28	MG/KG	0.15	3.0
		Calcium, Total	3940	MG/KG	12.1	3.0
		Cadmium, Total	0.16	MG/KG	0.15	3.0
		Cobalt, Total	7.1	MG/KG	0.61	3.0
		Chromium, Total	12.5	MG/KG	0.61	3.0
		Copper, Total	17.0	MG/KG	0.61	3.0
		Iron, Total	19300	MG/KG	13.6	3.0
		Mercury, Total	0.34	MG/KG	0.01	1.0
		Potassium, Total	1160	MG/KG	12.1	3.0
		Magnesium, Total	3920	MG/KG	7.6	3.0
		Manganese, Total	321	MG/KG	0.12	3.0
		Molybdenum, Total	0.91 u	MG/KG	0.91	3.0
		Sodium, Total	172	MG/KG	2.0	1.0
		Nickel, Total	10.7	MG/KG	0.61	3.0
		Lead, Total	4.9	MG/KG	0.91	3.0
		Antimony, Total	0.91 u	MG/KG	0.91	3.0
		Selenium, Total	1.8 u	MG/KG	1.8	3.0
		Silicon, Total	280	MG/KG	12.1	3.0
		Vanadium, Total	45.7	MG/KG	0.42	3.0
		Zinc, Total	54.4	MG/KG	1.8	3.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 02/28/08

CLIENT: TNUHANFORD RC-032 K1123 LVL LOT #: D802L628

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	08L0083-MB1	Silver, Total	0.10	u	MG/KG	0.10	1.0
		Aluminum, Total	4.0	u	MG/KG	4.0	1.0
		Arsenic, Total	0.50	u	MG/KG	0.50	1.0
		Boron, Total	0.50	u	MG/KG	0.50	1.0
		Barium, Total	0.10	u	MG/KG	0.10	1.0
		Beryllium, Total	0.05	u	MG/KG	0.05	1.0
		Calcium, Total	6.3		MG/KG	4.0	1.0
		Cadmium, Total	0.05	u	MG/KG	0.05	1.0
		Cobalt, Total	0.20	u	MG/KG	0.20	1.0
		Chromium, Total	0.20	u	MG/KG	0.20	1.0
		Copper, Total	0.22		MG/KG	0.20	1.0
		Iron, Total	4.5	u	MG/KG	4.5	1.0
		Potassium, Total	4.0	u	MG/KG	4.0	1.0
		Magnesium, Total	2.5	u	MG/KG	2.5	1.0
		Manganese, Total	0.04		MG/KG	0.04	1.0
		Molybdenum, Total	0.30	u	MG/KG	0.30	1.0
		Sodium, Total	11.5		MG/KG	2.0	1.0
		Nickel, Total	0.20	u	MG/KG	0.20	1.0
		Lead, Total	0.30	u	MG/KG	0.30	1.0
		Antimony, Total	0.30	u	MG/KG	0.30	1.0
		Selenium, Total	0.60	u	MG/KG	0.60	1.0
		Silicon, Total	4.0	u	MG/KG	4.0	1.0
		Vanadium, Total	0.14	u	MG/KG	0.14	1.0
		Zinc, Total	0.60	u	MG/KG	0.60	1.0
BLANK1	08C0036-MB1	Mercury, Total	0.01	u	MG/KG	0.01	1.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 02/28/08

CLIENT: TNUHANFORD RC-032 K1123 LVL LOT #: 0802L628

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-002	J16934	Silver, Total	4.0	0.25u	4.2	95.2	3.0
		Aluminum, Total	5230	4900	169	193.4*	3.0
		Arsenic, Total	167	3.3	169	96.8	3.0
		Boron, Total	84.8	2.4	84.6	97.4	3.0
		Barium, Total	221	62.5	169	93.8	3.0
		Beryllium, Total	4.3	0.23	4.2	96.9	3.0
		Calcium, Total	8520	7880	2120	30.3	3.0
		Cadmium, Total	4.3	0.13u	4.2	102.4	3.0
		Cobalt, Total	46.7	5.5	42.3	97.4	3.0
		Chromium, Total	24.8	8.3	16.9	97.6	3.0
		Copper, Total	33.2	14.1	21.1	90.5	3.0
		Iron, Total	14000	15100	84.6	-1300. *	3.0
		Mercury, Total	0.19	0.04	0.16	88.3	1.0
		Potassium, Total	2700	786	2120	90.6	3.0
		Magnesium, Total	5570	3470	2120	99.2	3.0
		Manganese, Total	280	239	42.3	96.0*	3.0
		Molybdenum, Total	79.1	0.76u	84.6	93.5	3.0
		Sodium, Total	2100	115	2120	93.7	1.0
		Nickel, Total	51.1	9.0	42.3	99.5	3.0
		Lead, Total	48.7	6.1	42.3	100.7	3.0
		Antimony, Total	23.2	0.76u	42.3	54.8	3.0
		Selenium, Total	144	1.5 u	169	85.2	3.0
		Silicon, Total	518	316	84.6	239.1	3.0
		Vanadium, Total	73.4	38.0	42.3	83.7	3.0
		Zinc, Total	79.7	42.9	42.3	87.0	3.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 02/28/08

CLIENT: TNUHANFORD RC-032 K1123 LVL LOT #: 0802L628

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-002REP	J16934	Silver, Total	0.25u	0.22u	NC	3.0
		Aluminum, Total	4900	4820	1.7	3.0
		Arsenic, Total	3.3	2.2	40.0	3.0
		Boron, Total	2.4	3.6	40.0	3.0
		Barium, Total	62.5	71.9	14.0	3.0
		Beryllium, Total	0.23	0.22	4.6	3.0
		Calcium, Total	7880	8070	2.4	3.0
		Cadmium, Total	0.13u	0.11	~~NC~~ 2.2	3.0
		Cobalt, Total	5.5	5.3	3.7	3.0
		Chromium, Total	8.3	7.8	6.2	3.0
		Copper, Total	14.1	13.0	8.1	3.0
		Iron, Total	15100	14200	6.3	3.0
		Mercury, Total	0.04	0.02	64.7	1.0
		Potassium, Total	786	729	7.5	3.0
		Magnesium, Total	3470	3580	3.0	3.0
		Manganese, Total	239	237	0.88	3.0
		Molybdenum, Total	0.76u	0.67u	NC	3.0
		Sodium, Total	115	127	9.9	1.0
		Nickel, Total	9.0	9.9	9.5	3.0
		Lead, Total	6.1	6.0	1.7	3.0
		Antimony, Total	0.76u	0.67u	NC	3.0
		Selenium, Total	1.5 u	1.3 u	NC	3.0
		Silicon, Total	316	319	1.1	3.0
		Vanadium, Total	38.0	36.1	5.1	3.0
		Zinc, Total	42.9	39.6	8.0	3.0

corrected value MW 2/28/08

Lionville Laboratory, Inc.

INORGANICS LABORATORY CONTROL STANDARDS REPORT 02/28/08

CLIENT: TNUHANFORD RC-032 K1123 LVL LOT #: 0802L628

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	08L0083-LC1	Silver, LCS	49.4	50.0	MG/KG	98.8
		Aluminum, LCS	496	500	MG/KG	99.1
		Arsenic, LCS	1000	1000	MG/KG	100
		Boron, LCS	490	500	MG/KG	98.1
		Barium, LCS	491	500	MG/KG	98.2
		Beryllium, LCS	25.7	25.0	MG/KG	102.8
		Calcium, LCS	2590	2500	MG/KG	103.7
		Cadmium, LCS	26.0	25.0	MG/KG	104.0
		Cobalt, LCS	257	250	MG/KG	102.8
		Chromium, LCS	51.2	50.0	MG/KG	102.4
		Copper, LCS	125	125	MG/KG	99.7
		Iron, LCS	510	500	MG/KG	101.9
		Potassium, LCS	2310	2500	MG/KG	92.6
		Magnesium, LCS	2480	2500	MG/KG	99.4
		Manganese, LCS	77.5	75.0	MG/KG	103.3
		Molybdenum, LCS	496	500	MG/KG	99.1
		Sodium, LCS	2360	2500	MG/KG	94.4
		Nickel, LCS	206	200	MG/KG	103.2
		Lead, LCS	259	250	MG/KG	103.6
		Antimony, LCS	294	300	MG/KG	98.1
		Selenium, LCS	960	1000	MG/KG	96.0
		Silicon, LCS	146	500	MG/KG	29.3
		Vanadium, LCS	251	250	MG/KG	100.4
		Zinc, LCS	101	100	MG/KG	101.3
LCS1	08C0036-LC1	Mercury, LCS	5.1	4.7	MG/KG	107.8

Lionville Laboratory Incorporated

MERCURY PREPARATION

Logbook # 422

Analyst: CLD
Date 2/25/08
Start Time/Temp: 1240 / 93°
End Time/Temp: 1315 / 95°

Instrument ID HG3.1/2.2
Balance #: 029 / NA
Pipette Calibration (Daily) Y ✓

Prep Batch: 08C0036
Worksheet: HG022501/02
SOP No. ME-HgCVAA, Rev. 02

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

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

LvLI Batch #	Container Number	Spike Volume (mL)	Spike Conc. (µg/L)	Initial Wt. or Volume (g or mL)	Final Sample Volume (mL)	Comments, % Solids, etc.
Blank	500			10mL	50mL	
0.2 µg/L	114	0.100				
1.0	71L	0.500				
2.0	AP	1.000				
5.0	CGR	2.500				
10.0	27	5.000				
ICV	WN	0.125	2.5			
CCV	OLN	0.250	5.0			
ICB/CCB	CYD					90.50L
MB1	PO			0.30		MBS136 100.00
LCI	WO	*	*	0.31		LCSS136
08021582-001	SPRT			0.32		99.99
002 ~~001R~~ TECHNICAL ERROR	PF			0.34		98.88
002R ~~001S~~	P3			0.35		
002S	CB2	0.500	1.0	0.34		
003	194			0.35		98.87
08021628-001	297			0.34		99.42
002 ~~001R~~	JB			0.32		96.06
002R ~~001S~~	290			0.33		
002S	8	0.500	1.0	0.32		
003	B32			0.36		96.66
004	WK			0.35		94.09
005	997			0.36		89.71
006	AHA			0.41		93.98
007	GD			0.34		92.56
008	RU			0.32		94.46
009	222			0.37		92.31

Standard:	ID	Prep Date/Time
ICAL/MS	RI 6072-75-07B	2/25/08 1030
ICV/CCV/LCS	US 6072-75-08A	

Reviewed By/Date: [signature] 2/27/08

see book # 936Y for std traceability information

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

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

Lionville Laboratory Incorporated

MERCURY PREPARATION

Logbook # 422

Analyst: GB
Date 2/25/08
Start Time/Temp:
End Time/Temp: see page 021

Instrument ID HG3.1/3.2
Balance #: B29 /NA
Pipette Calibration (Daily) Y ✓

Prep Batch: 08C0036
Worksheet: HG022501/02
SOP No. ME-HgCVAA, Rev. 02

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

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

LvLI Batch #	Container Number	Spike Volume (mL)	Spike Conc. (µg/L)	Initial Wt. or Volume (g or mL)	Final Sample Volume (mL)	Comments, % Solids, etc.
0S02L628-010	GTR			0.35	50mL	92.60
011	NJ			0.38	↓	85.58
012	818			0.36	↓	85.45

GB 2/25/08

Standard:	ID	Prep Date/Time
ICAL/MS	See page 021	
ICV/CCV/LCS		

Reviewed By/Date: [signature] 2/27/08

see book # 9368 for std traceability information

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

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

ME-HgCVAA-Prep1007

Page #:

000000034

SAMPLE DIGESTION RECORD

SOP: L-SPI-3020 Rev. 00

Digestion Batch #: 08L0083
Date/Time Initiated: 2/26/08 1215
Date/Time Completed: 2/26/08 2000
Analyst(s): JW
Matrix: Soil Water Other:
Instr. Type: AA ICP
Parameters: HSL+ B, Mo, Si (No Tl)

Digested / Undigested (circle one)
Balance #: B20
Balance Cal Verif: Y NA
Hot Plate Temp:

Method: SW (circle)
3005A
3010A
3015
3020A
7060A (As/Se)
7760A (Ag)
3050B
3051

DW 200.7 (1994)
200.9
3113B

MCAWW 200.7 (1982)
200 (AA)
206.2 (As/Se)

SM 3030C (NC)

CLP ILMO3.0
ILMO4.0

Other Teflon

TJW

COC Batch #	Spike Vol(s) (mL)	Initial Wt/Vol (g/mL)	Final Vol (mL)	pH <2	Type: To/So/TC	Texture	Color/Appearance	Artifact	Turb
0802L628-001		1.18 gm	100 ml		TO	coarse	tan/granular	(Otherwise sand)	
002		1.23 gm				fine	brown/rocks	none	
002R		1.40 gm							
002S	1.0 ml	1.23 gm							
003		1.19 gm							
004		1.18 gm							
005		1.13 gm							
006		1.37 gm							
007		1.07 gm							
008		1.14 gm							
009		1.26 gm							
010		1.15 gm							
011		1.24 gm							
012		1.16 gm							
0802L634-001		1.21 gm							
001R		1.14 gm							
001S	1.0 ml	1.21 gm							
002		1.25 gm							
08L0083-MB1		1.0 gm					boiling chips		
LC1	1.0 ml	1.0 gm							

JW 2/26/08

Spiking IDs:
MS #: 8100-04-01
02
03
8072-072-01
LCS #: 02
03
04
05

Reagent IDs:
HNO_3 E22071
HCL E40060
H_2O_2 E44A06
1:1 HNO_3 9789-070-06
1:1 HCL

File ID#: IC008301
LIMS Transfer: Y N updated
Data Review By/Date:
PMP, 02/27/08

Lionville Laboratory Use Only

)802L628

Custody Transfer Record/Lab Work Request

Page 1 of 2

VLI

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

000000036

lent TNU Hanford RC 032

t. Final Proj. Sampling Date

oject# H334 11843-606-001-9999-00

oject Contact/Phone#

nville Laboratory Project Manager Charlotte Johnson

SW846 Del STD TAT 7 Days

te Rec'd 2-20-08 Date Due 2-27-08

		A	B					C,D		E	F				
Refrigerator #		2	2					2		2	2				
#/Type Container	Liquid														
	Solid	1pl	1pl					2pl		1pl	1pl				
Volume	Solid	120	60					125		125	120				
Preservatives		—	—					—		—	—				
ANALYSES REQUESTED		ORGANIC						INORG							
		VOA	BNA	~~Pest~~ PCB	Herb			Metal +Hg	CN	Cr+6	TPH 418.1				

Lionville Laboratory Use Only

TRIX DES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected		8260 SH	OPCB				Met ①		ICRC	IPHC				
Soil, Sediment, Solid, Sludge, Water, Oil, Air, Drum Solids, Drum Liquids, EP/TCLP, Leachate, Wipe, Other, Fish	001	J16933			S	2-14-08	0805		X					X							
	002	J16934					0815		X	X				X		X	X				
	003	J16935					0825		X	X				X		X	X				
	004	J16936					0835		X	X				X		X	X				
	005	J16937					0845		X	X				X		X	X				
	006	J16938					0855		X	X				X		X	X				
	007	J16939					0905		X	X				X		X	X				
	008	J16940					0915		X	X				X		X	X				
	009	J16941					0925		X	X				X		X	X				
	010	J16942					0935		X	X				X		X	X				

Special Instructions: Run Matrix QC

Met ① = HSL + B, Mo, Si (NOTL)

Special Instructions:

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

Relinquished by	Received by	Date	Time
FedEx	[signature]	2-20-08	0940

Relinquished by	Received by	Date	Time

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

Ionville Laboratory Use Only

)802L628

Custody Transfer Record/Lab Work Request

Page 2 of 2

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

000000037

ient TNU Hanford RC-032

t. Final Proj. Sampling Date

oject# Seelg 1

oject Contact/Phone#

nville Laboratory Project Manager Arlette Johnson

Del TAT 7 Days

te Rec'd 2-20-08 Date Due

		A	B					C,D		E	F				
Refrigerator #		2	2					2		2	2				
#/Type Container	Liquid														
	Solid	1gl	1gl					2pl		1pl	1gl				
Volume	Solid	120	60					125		125	120				
Preservatives		—	—					—		—	—				
ANALYSES REQUESTED →		ORGANIC: VOA	BNA	~~PCB~~ PCB	Herb			INORG: (1) Metal 1 Hg	CN	Cr+6	TPH 418.1				
Lionville Laboratory Use Only			0625H	OPCB				Met (1)		ICR6	IPHC				
Matrix Codes: Soil, Sediment, Solid, Sludge, Water, Oil, Air, Drum Solids, Drum Liquids, EP/TCLP, Leachate, Wipe, Other, Fish															
Lab ID	Client ID/Description														
011	J16943			S	2-14-08	0945		X	X	X	X				
012	J16944			J	J	0955		X	X	X	X				

Special Instructions:

Special Instructions:

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

Relinquished by	Received by	Date	Time
RedEx	[signature]	2-20-08	0940

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-032-189	Page 1 of 3

Collector: T. Welch-Koelling	Company Contact: R.T. Coffman	Telephone No.: 528-6409	Project Coordinator: KESSNER, JH
Project Designation: 100-F Remaining Sites Burial Grounds - Soil Full Protocol	Sampling Location: 100-F-26:9 SZ/FS Verification		SAF No.: RC-032
Ice Chest No.: ERC-02-407	Field Logbook No.: EFL-1174-4	COA: R10F262000	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A080186		Bill of Lading/Air Bill No.: See OSPC

Price Code: 8B

Data Turnaround: 7 DAY

POSSIBLE SAMPLE HAZARDS/REMARKS

NA

Special Handling and/or Storage

NA

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None			
Type of Container	P	P	aG	aG	aG	G/P	P			
No. of Container(s)	2	1	1	1	1	1	1			
Volume	125mL	125mL	60mL	120mL	120mL	500mL	125mL			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	TPH (Total) - 418.1	See item (2) in Special Instructions	Gross Alpha; Gross Beta			

Sample No.	Matrix *	Sample Date	Sample Time										
J16933	SOIL	2-14-08	0805	X			X		JT 1-23-08				EB
J16934	SOIL		0815	X	X	X	X	X					1
J16935	SOIL		0825	X	X	X	X	X					2
J16936	SOIL		0835	X	X	X	X	X					3
J16937	SOIL		0845	X	X	X	X	X					4

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: [signature]	Date/Time: 2-14-08 1100	Received By/Stored In: JRDeBrigue [signature]	Date/Time: 1100 2-14-08
Relinquished By/Removed From: JRDeBrigue [signature]	Date/Time: 1415 2-14-08	Received By/Stored In: 1060/2B	Date/Time: 1415 2-14-08
Relinquished By/Removed From: 1060/2B 2/18/08	Date/Time: 1030 ~~1500~~ 2/18/08	Received By/Stored In: MTStankouch [signature]	Date/Time: 1030 2/19/08
Relinquished By/Removed From: WCH [signature] MStankouch 2/19/08	Date/Time: 1500	Received By/Stored In: Fed Ex	Date/Time:
Relinquished By/Removed From: Fed Ex	Date/Time: 2-20-08/0940	Received By/Stored In: [signature]	Date/Time: 22008/0940
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:	Date/Time:

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) (Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc); Mercury - 7471 - (CV)
(2) Gamma Spectroscopy (TCL List) (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155); Gamma Spec - Add-on (Barium-133, Silver-108 metastable)

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

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

/CH-EE-011

0000000038

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-032-189	Page 2 of 2

Collector: T. Welch-Koelling	Company Contact: R.T. Coffman	Telephone No.: 528-6409	Project Coordinator: KESSNER, JH
Price Code: 8B	Data Turnaround: 7 DAY		
Project Designation: 100-F Remaining Sites Burial Grounds - Soil Full Protocol	Sampling Location: 100-F-26:9 SZ/FS Verification	SAF No.: RC-032	
Ice Chest No.: GRP-03-014	Field Logbook No.: EFL-1174-4	COA: R10F262000	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A080186	Bill of Lading/Air Bill No.: See OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

NA

Special Handling and/or Storage

NA

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None				
Type of Container	P	P	aG	aG	aG	G/P	P				
No. of Container(s)	2	1	1	1	1	1	1				
Volume	125mL	125mL	60mL	120mL	120mL	500mL	125mL				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	TPH (Total) - 418.1	See item (2) in Special Instructions.	Gross Alpha; Gross Beta				
Sample No. / Matrix * / Sample Date / Sample Time											
J16938 / SOIL / 2-14-08 / 0855	X	X	X	X	X						5
J16939 / SOIL / / 0905	X	X	X	X	X						6
J16940 / SOIL / / 0915	X	X	X	X	X						7
J16941 / SOIL / / 0925	X	X	X	X	X						8
J16942 / SOIL / / 0935	X	X	X	X	X						9

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time 2-14-08 1100	Received By/Stored In	Date/Time 1100 2-14-08
Relinquished By/Removed From	Date/Time 1415 2-14-08	Received By/Stored In 1060/20	Date/Time 1415 2-14-08
Relinquished By/Removed From 1060/20 2/19/08	Date/Time 1030 2/19/08	Received By/Stored In WCH mstankovich	Date/Time 2/19/08 1030
Relinquished By/Removed From WCH mstankovich	Date/Time 2/19/08 1500	Received By/Stored In Fed Ex	Date/Time
Relinquished By/Removed From Fed Ex	Date/Time 2-20-08/0940	Received By/Stored In	Date/Time 2-20-08/0940
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) (Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc); Mercury - 7471 - (CV)
(2) Gamma Spectroscopy (TCL List) (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155); Gamma Spec - Add-on (Barium-133, Silver-108 metastable)

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

NCH-EE-011

00000039

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-032-189	Page 1 of 1

Collector: T. Welch-Koelling	Company Contact: R.T. Coffman	Telephone No.: 528-6409	Project Coordinator: KESSNER, JH
Price Code: 8B	Date Turnaround: 7 DAY		
Project Designation: 100-F Remaining Sites Burial Grounds - Soil Full Protocol	Sampling Location: 100-F-26:9 SZ/FS Verification		SAF No.: RC-032
Ice Chest No.: ERC-02-407	Field Logbook No.: EFL-1174-4	COA: R10F262000	Method of Shipment: FED EX
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A 080186		Bill of Lading/Air Bill No.: see ASPC

POSSIBLE SAMPLE HAZARDS/REMARKS

NA

Special Handling and/or Storage

NA

SAMPLE ANALYSIS												
			Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None			
			Type of Container	P	P	sG	sG	sG	G/P	P			
			No. of Container(s)	2	1	1	1	1	1	1			
			Volume	125mL	125mL	60mL	120mL	120mL	500mL	125mL			
				See item (1) in Special Instructions.	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	TPH (Total) - 418.1	See item (2) in Special Instructions.	Gross Alpha; Gross Beta			
Sample No.	Matrix *	Sample Date	Sample Time										
I16943	SOIL	2-14-08	0945	X	X	X	X	X					10
I16944	SOIL	2-14-08	0955	X	X	X	X	X					10 D
I16945	SOIL			X	X	X	X	X					FS-1
I16946	SOIL			X	X	X	X	X					FS-2

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time 2-14-08 1100	Received By/Stored In	Date/Time 1100 2-14-08
Relinquished By/Removed From	Date/Time 1415 2-14-08	Received By/Stored In 1060/20	Date/Time 1415 2-14-08
Relinquished By/Removed From 1060/20	Date/Time 2/19/08 1030	Received By/Stored In MSlankovich	Date/Time 2/19/08 1030
Relinquished By/Removed From WCH MSlankovich	Date/Time 2/19/08 1500	Received By/Stored In Fed Ex	Date/Time
Relinquished By/Removed From Fed Ex	Date/Time 2-20-08 0940	Received By/Stored In	Date/Time 2-20-08 0940
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(2) Gamma Spectroscopy (TCL List) {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gamma Spec - Add-on {Barium-133, Silver-108 metastable}

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

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

WCH-EE-011

000000040

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU Hanford

Project/SAF/SDW/Release #: RC.032

Date: 2.20.08

LvLI Batch #: 08021628

Sample Custodian: D Smith

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier: FedEx		Airbill # 7926 5122 2990 7918 5227 1516
2. Custody Seals on coolers or shipping containers intact, signed & dated?	☑ Yes	☐ No	☐ No Seals
3. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	*Comments:*
4. All expected paperwork received (coc & other client specific information) sealed in plactic bag and easily accessible?	☑ Yes	☐ No	
5. Samples received cooled or ambient?	Temp 4.3°C 2.6 °C		Cooler # GRP03-014 # ERC-02-407
How was the temperature taken?	☑ IR	☐ Temp. Blank	☐ Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	☑ Yes	☐ No	
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7. COC (Client & LvLI) signed & dated?	☑ Yes	☐ No	
8. Sample containers are intact?	☑ Yes	☐ No	
9. All samples on COC received?	☑ Yes	☐ No	
All samples received on COC?	☑ Yes	☐ No	
10. All sample label information matches COC?	☑ Yes	☐ No	
11. Samples properly preserved? (If #5 is no, then this is no.)	☑ Yes	☐ No	
12. Samples received within hold times?	☑ Yes	☐ No	
Short holds taken to wet lab?	☐ Yes	☐ No	☑ N/A
13. VOA, TOC, TOX free of headspace?	☐ Yes	☐ No	☑ N/A
14. QC stickers placed on bottles designated by client?	☐ Yes	☐ No	☑ N/A
15. Shipment meets LvLI Sample Acceptance Policy? (Identify all bottles that do not meet the policy, which is on the reverse of this page.)	☑ Yes	☐ No	
16. Project Manager contacted concerning any discrepancies?	☐ Yes	☐ No	☑ N/A

Person Contacted _____ Date _____

LvLI LIONVILLE LABORATORY INC

SR-002-B.doc