



EBERLINE
SERVICES

0059157

December 21, 2002

Ms. Joan Kessner
Bechtel Hanford Inc.
3350 George Washington Way
Richland, WA 99352
MSIN: H0-025

Reference: P.O. #630
Eberline Services R2-12-030-7738, SDG/H2009
R2-12-031-7739

Dear Ms. Kessner:

Enclosed is the data report for forty-eight solid samples designated under SAF No. B00-029 received at Eberline Services on December 5, 2002. The samples were analyzed according to the accompanying chain-of-custody documents.

Please call if you have any questions concerning this report.

Sincerely,

Melissa C. Mannion
Program Manager

MCM

Enclosure: Data Package

RECEIVED
APR 28 2003

EDMC

RECEIVED
DEC 2002

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
www.eberlineservices.com

1.0 GENERAL

Bechtel Hanford Inc. (BHI) Sample Delivery Group H2009 was composed of forty-eight solid (soil) samples designated under SAF No. B00-029 with a Project Designation of: 100 F Area – Quick Turn.

The samples were received as stated on the Chain-of-Custody documents. Any discrepancies are noted on the Eberline Services Sample Receipt Checklist. The results were transmitted to BHI via e-fax on December 12 and 13, 2002. The electronic data deliverables (EDD) were transmitted to BHI via e-mail on December 12 and 13, 2002.

2.0 ANALYSIS NOTES

2.1 Gamma Screen Analyses

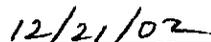
No problems were encountered during the course of the analyses.

Case Narrative Certification Statement

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



Melissa C. Mannion
Program Manager



Date

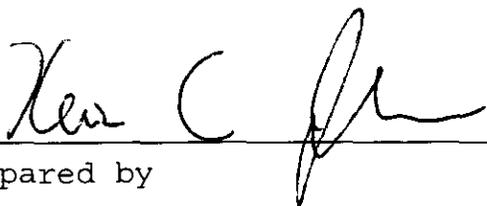
EBRLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

SDG 7738
Contact Melissa C. Mannion

Client Hanford
Contract No. 630
Case no SDG_H2009

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

T A B L E O F C O N T E N T S				
About this section	.	.	.	1
Sample Summaries	.	.	.	3
Prep Batch Summary	.	.	.	5
Work Summary	.	.	.	6
Method Blanks	.	.	.	9
Data Sheets	.	.	.	10
Method Summaries	.	.	.	34
Report Guides	.	.	.	36
End of Section	.	.	.	50


Prepared by

Reviewed by

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-TOC
Version 3.06
Report date 12/12/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_H2009

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.

REPORT GUIDES

Page 1

SUMMARY DATA SECTION

Page 1

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 12/12/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG_H2009

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.

REPORT GUIDES

Page 2

SUMMARY DATA SECTION

Page 2

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 12/12/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
 Contact Melissa C. Mannion

LAB SAMPLE SUMMARY

Client Hanford
 Contract No. 630
 Case no SDG H2009

LAB SAMPLE ID	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAF NO	CHAIN OF CUSTODY	COLLECTED
R212030-01	J00B32	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:30
R212030-02	J00B33	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:31
R212030-03	J00B34	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:32
R212030-04	J00B35	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:33
R212030-05	J00B36	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:34
R212030-06	J00B37	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:35
R212030-07	J00B38	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:38
R212030-08	J00B39	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:39
R212030-09	J00B40	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:40
R212030-10	J00B41	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:41
R212030-11	J00B42	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:42
R212030-12	J00B43	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:43
R212030-13	J00B44	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:46
R212030-14	J00B45	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:47
R212030-15	J00B46	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:48
R212030-16	J00B47	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:49
R212030-17	J00B48	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:50
R212030-18	J00B49	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:51
R212030-19	J00B50	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:54
R212030-20	J00B51	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:55
R212030-21	J00B52	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:56
R212030-22	J00B53	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:57
R212030-23	J00B54	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:58
R212030-24	J00B55	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-256	12/03/02 08:59
R212030-25	Method Blank		SOLID		B00-029		

LAB SUMMARY

Page 1

SUMMARY DATA SECTION

Page 3

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-LS
 Version 3.06
 Report date 12/12/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
 Contact Melissa C. Mannion

QC SUMMARY

Client Hanford
 Contract No. 630
 Case no SDG H2009

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% SOLIDS	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	LAB COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
7738	B00-029-256	J00B32	SOLID	100.0	811.3 g		12/05/02	2	R212030-01	7738-001
		J00B33	SOLID	100.0	828.5 g		12/05/02	2	R212030-02	7738-002
		J00B34	SOLID	100.0	802.6 g		12/05/02	2	R212030-03	7738-003
		J00B35	SOLID	100.0	726.7 g		12/05/02	2	R212030-04	7738-004
		J00B36	SOLID	100.0	764.6 g		12/05/02	2	R212030-05	7738-005
		J00B37	SOLID	100.0	799.1 g		12/05/02	2	R212030-06	7738-006
		J00B38	SOLID	100.0	677.4 g		12/05/02	2	R212030-07	7738-007
		J00B39	SOLID	100.0	689.8 g		12/05/02	2	R212030-08	7738-008
		J00B40	SOLID	100.0	654.8 g		12/05/02	2	R212030-09	7738-009
		J00B41	SOLID	100.0	785.0 g		12/05/02	2	R212030-10	7738-010
		J00B42	SOLID	100.0	625.0 g		12/05/02	2	R212030-11	7738-011
		J00B43	SOLID	100.0	841.4 g		12/05/02	2	R212030-12	7738-012
		J00B44	SOLID	100.0	691.2 g		12/05/02	2	R212030-13	7738-013
		J00B45	SOLID	100.0	785.8 g		12/05/02	2	R212030-14	7738-014
		J00B46	SOLID	100.0	811.0 g		12/05/02	2	R212030-15	7738-015
		J00B47	SOLID	100.0	638.1 g		12/05/02	2	R212030-16	7738-016
		J00B48	SOLID	100.0	716.9 g		12/05/02	2	R212030-17	7738-017
		J00B49	SOLID	100.0	666.2 g		12/05/02	2	R212030-18	7738-018
		J00B50	SOLID	100.0	737.1 g		12/05/02	2	R212030-19	7738-019
		J00B51	SOLID	100.0	747.3 g		12/05/02	2	R212030-20	7738-020
		J00B52	SOLID	100.0	745.2 g		12/05/02	2	R212030-21	7738-021
		J00B53	SOLID	100.0	799.6 g		12/05/02	2	R212030-22	7738-022
		J00B54	SOLID	100.0	760.4 g		12/05/02	2	R212030-23	7738-023
		J00B55	SOLID	100.0	800.0 g		12/05/02	2	R212030-24	7738-024
		Method Blank	SOLID						R212030-25	7738-025

QC SUMMARY

Page 1

SUMMARY DATA SECTION

Page 4

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-QS
 Version 3.06
 Report date 12/12/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
Contact Melissa C. Mannion

PREP BATCH SUMMARY

Client Hanford
Contract No. 630
Case no SDG H2009

TEST MATRIX	METHOD	PREPARATION ERROR BATCH	2σ %	CLIENT	PLANCHETS ANALYZED				QUALI- FIERS
					MORE	RE	BLANK	LCS DUP/ORIG MS/ORIG	
Gamma Spectroscopy									
GAM	SOLID	Gamma Scan	7032-116	15.0	24			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 12/12/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H2009

LAB WORK SUMMARY

SDG 7738
Contact Melissa C. Mannion

Client Hanford
Contract No. 630
Case no SDG H2009

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	MATRIX SAF No	PLANCHET	TEST	SUF- FIX	ANALYZED	REVIEWED	BY	METHOD
R212030-01 12/03/02 12/05/02	J00B32 100-F-19 Overburden Var. B00-029-256	SOLID B00-029	7738-001	GAM		12/10/02	12/12/02	MCM	Gamma Scan
R212030-02 12/03/02 12/05/02	J00B33 100-F-19 Overburden Var. B00-029-256	SOLID B00-029	7738-002	GAM		12/10/02	12/12/02	MCM	Gamma Scan
R212030-03 12/03/02 12/05/02	J00B34 100-F-19 Overburden Var. B00-029-256	SOLID B00-029	7738-003	GAM		12/10/02	12/12/02	MCM	Gamma Scan
R212030-04 12/03/02 12/05/02	J00B35 100-F-19 Overburden Var. B00-029-256	SOLID B00-029	7738-004	GAM		12/11/02	12/12/02	MCM	Gamma Scan
R212030-05 12/03/02 12/05/02	J00B36 100-F-19 Overburden Var. B00-029-256	SOLID B00-029	7738-005	GAM		12/11/02	12/12/02	MCM	Gamma Scan
R212030-06 12/03/02 12/05/02	J00B37 100-F-19 Overburden Var. B00-029-256	SOLID B00-029	7738-006	GAM		12/11/02	12/12/02	MCM	Gamma Scan
R212030-07 12/03/02 12/05/02	J00B38 100-F-19 Overburden Var. B00-029-256	SOLID B00-029	7738-007	GAM		12/11/02	12/12/02	MCM	Gamma Scan
R212030-08 12/03/02 12/05/02	J00B39 100-F-19 Overburden Var. B00-029-256	SOLID B00-029	7738-008	GAM		12/11/02	12/12/02	MCM	Gamma Scan
R212030-09 12/03/02 12/05/02	J00B40 100-F-19 Overburden Var. B00-029-256	SOLID B00-029	7738-009	GAM		12/11/02	12/12/02	MCM	Gamma Scan
R212030-10 12/03/02 12/05/02	J00B41 100-F-19 Overburden Var. B00-029-256	SOLID B00-029	7738-010	GAM		12/11/02	12/12/02	MCM	Gamma Scan

WORK SUMMARY

Page 1

SUMMARY DATA SECTION

Page 6

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 12/12/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
Contact Melissa C. Mannion

WORK SUMMARY, cont.

Client Hanford
Contract No. 630
Case no SDG H2009

LAB SAMPLE	CLIENT SAMPLE ID				SUF-					
COLLECTED	LOCATION	MATRIX			FIX	ANALYZED	REVIEWED	BY	METHOD	
RECEIVED	CUSTODY	SAP No	PLANCHET	TEST						
R212030-11	J00B42		7738-011	GAM		12/11/02	12/12/02	MCM	Gamma Scan	
12/03/02	100-F-19 Overburden Var.	SOLID								
12/05/02	B00-029-256	B00-029								
R212030-12	J00B43		7738-012	GAM		12/11/02	12/12/02	MCM	Gamma Scan	
12/03/02	100-F-19 Overburden Var.	SOLID								
12/05/02	B00-029-256	B00-029								
R212030-13	J00B44		7738-013	GAM		12/11/02	12/12/02	MCM	Gamma Scan	
12/03/02	100-F-19 Overburden Var.	SOLID								
12/05/02	B00-029-256	B00-029								
R212030-14	J00B45		7738-014	GAM		12/11/02	12/12/02	MCM	Gamma Scan	
12/03/02	100-F-19 Overburden Var.	SOLID								
12/05/02	B00-029-256	B00-029								
R212030-15	J00B46		7738-015	GAM		12/11/02	12/12/02	MCM	Gamma Scan	
12/03/02	100-F-19 Overburden Var.	SOLID								
12/05/02	B00-029-256	B00-029								
R212030-16	J00B47		7738-016	GAM		12/11/02	12/12/02	MCM	Gamma Scan	
12/03/02	100-F-19 Overburden Var.	SOLID								
12/05/02	B00-029-256	B00-029								
R212030-17	J00B48		7738-017	GAM		12/11/02	12/12/02	MCM	Gamma Scan	
12/03/02	100-F-19 Overburden Var.	SOLID								
12/05/02	B00-029-256	B00-029								
R212030-18	J00B49		7738-018	GAM		12/11/02	12/12/02	MCM	Gamma Scan	
12/03/02	100-F-19 Overburden Var.	SOLID								
12/05/02	B00-029-256	B00-029								
R212030-19	J00B50		7738-019	GAM		12/11/02	12/12/02	MCM	Gamma Scan	
12/03/02	100-F-19 Overburden Var.	SOLID								
12/05/02	B00-029-256	B00-029								
R212030-20	J00B51		7738-020	GAM		12/11/02	12/12/02	MCM	Gamma Scan	
12/03/02	100-F-19 Overburden Var.	SOLID								
12/05/02	B00-029-256	B00-029								

WORK SUMMARY

Page 2

SUMMARY DATA SECTION

Page 7

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 12/12/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
 Contact Melissa C. Mannion

WORK SUMMARY, cont.

Client Hanford
 Contract No. 630
 Case no SDG H2009

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	MATRIX SAF No	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
R212030-21 12/03/02 12/05/02	J00B52 100-F-19 Overburden Var. B00-029-256	SOLID B00-029	7738-021	GAM		12/11/02	12/12/02	MCM	Gamma Scan
R212030-22 12/03/02 12/05/02	J00B53 100-F-19 Overburden Var. B00-029-256	SOLID B00-029	7738-022	GAM		12/11/02	12/12/02	MCM	Gamma Scan
R212030-23 12/03/02 12/05/02	J00B54 100-F-19 Overburden Var. B00-029-256	SOLID B00-029	7738-023	GAM		12/11/02	12/12/02	MCM	Gamma Scan
R212030-24 12/03/02 12/05/02	J00B55 100-F-19 Overburden Var. B00-029-256	SOLID B00-029	7738-024	GAM		12/11/02	12/12/02	MCM	Gamma Scan
R212030-25	Method Blank	SOLID B00-029	7738-025	GAM		12/11/02	12/12/02	MCM	Gamma Scan

COUNTS OF TESTS BY SAMPLE TYPE										
TEST	SAF No	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP SPIKE	TOTAL
GAM	B00-029	Gamma Scan	GAMMA_GS	24			1			25
TOTALS				24			1			25

WORK SUMMARY

Page 3

SUMMARY DATA SECTION

Page 8

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-LWS
 Version 3.06
 Report date 12/12/02

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-025

Method Blank

METHOD BLANK

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	<u>SDG H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212030-25</u>	Client sample id <u>Method Blank</u>	
Dept sample id <u>7738-025</u>	Material/Matrix <u>SOLID</u>	
	SAF No <u>B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALIFIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.056</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		0.045	0.10	U	GAM
Europium 152	14683-23-9	U		0.095	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.14</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.12</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.22		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-001

J00B32

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	<u>SDG H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212030-01</u>	Client sample id <u>J00B32</u>	
Dept sample id <u>7738-001</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:30 811.3 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.057</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		0.060	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.11</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.20</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.13</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.17		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-002

J00B33

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212030-02</u>	Client sample id <u>J00B33</u>	
Dept sample id <u>7738-002</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:31 828.5 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.040	0.050	U	GAM
Cesium 137	10045-97-3	U		0.042	0.10	U	GAM
Europium 152	14683-23-9	U		0.10	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.17</u>	0.10	U	GAM
Europium 155	14391-16-3	U		0.094	0.10	U	GAM
Americium 241	14596-10-2	U		0.059		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-003

J00B34

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212030-03</u>	Client sample id <u>J00B34</u>	
Dept sample id <u>7738-003</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:32 802.6 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.072</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.080</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.18</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.20</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.17</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.24</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-004

J00B35

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R212030-04</u>	Client sample id <u>J00B35</u>	
Dept sample id <u>7738-004</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:33 726.7 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.051</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.061</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.13</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.21</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.14</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.18</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-005

J00B36

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	<u>SDG H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R212030-05</u>	Client sample id <u>J00B36</u>	
Dept sample id <u>7738-005</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:34 764.6 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.085</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.087</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.23</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.31</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.21</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.31</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-006

J00B37

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212030-06</u>	Client sample id <u>J00B37</u>	
Dept sample id <u>7738-006</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:35 799.1 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.049	0.050	U	GAM
Cesium 137	10045-97-3	U		0.056	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.13</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.20</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.15</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.20		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-007

J00B38

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212030-07</u>	Client sample id <u>J00B38</u>	
Dept sample id <u>7738-007</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:38 677.4 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.087</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.201	0.082	0.076	0.10		GAM
Europium 152	14683-23-9	0.220	0.11	<u>0.16</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.25</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.23</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.49		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 7

SUMMARY DATA SECTION

Page 16

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-008

J00B39

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R212030-08</u>	Client sample id <u>J00B39</u>	
Dept sample id <u>7738-008</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:39 689.8 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.096</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.109	0.079	<u>0.089</u>	0.10		GAM
Europium 152	14683-23-9	0.370	0.14	<u>0.17</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.27</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.20</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.29</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

DATA SHEETS

Page 8

SUMMARY DATA SECTION

Page 17

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-009

J00B40

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212030-09</u>	Client sample id <u>J00B40</u>	
Dept sample id <u>7738-009</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:40 654.8 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256</u> <u>B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.058</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.200	0.054	0.055	0.10		GAM
Europium 152	14683-23-9	0.500	0.14	<u>0.15</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.21</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.17</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.20		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-010

J00B41

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212030-10</u>	Client sample id <u>J00B41</u>	
Dept sample id <u>7738-010</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:41 785.0 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.060</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.121	0.071	0.064	0.10		GAM
Europium 152	14683-23-9	U		<u>0.15</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.20</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.17</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.39		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-011

J00B42

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R212030-11</u>	Client sample id <u>J00B42</u>	
Dept sample id <u>7738-011</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:42 625.0 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.078</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.114	0.056	0.053	0.10		GAM
Europium 152	14683-23-9	U		<u>0.18</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.25</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.18</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.22		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-012

J00B43

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R212030-12</u>	Client sample id <u>J00B43</u>	
Dept sample id <u>7738-012</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:43 841.4 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.081</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.12</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.19</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.23</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.22</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.48		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-013

J00B44

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212030-13</u>	Client sample id <u>J00B44</u>	
Dept sample id <u>7738-013</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:46 691.2 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.086</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.12</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.26</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.29</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.23</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.34		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-014

J00B45

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212030-14</u>	Client sample id <u>J00B45</u>	
Dept sample id <u>7738-014</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:47 785.8 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.067</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.226	0.069	<u>0.089</u>	0.10		GAM
Europium 152	14683-23-9	0.228	0.11	<u>0.13</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.22</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.17</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.20</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-015

J00B46

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212030-15</u>	Client sample id <u>J00B46</u>	
Dept sample id <u>7738-015</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:48 811.0 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.078</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.084	0.065	<u>0.081</u>	0.10		GAM
Europium 152	14683-23-9	0.181	0.096	<u>0.15</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.24</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.21</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.47</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-016

J00B47

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212030-16</u>	Client sample id <u>J00B47</u>	
Dept sample id <u>7738-016</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:49 638.1 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.11</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.11</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.28</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.35</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.26</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.36		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 16

SUMMARY DATA SECTION

Page 25

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-017

J00B48

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	<u>SDG_H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R212030-17</u>	Client sample id <u>J00B48</u>	
Dept sample id <u>7738-017</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:50 716.9 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.074</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.086</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.20</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.28</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.18</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.27</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-018

J00B49

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	<u>SDG_H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R212030-18</u>	Client sample id <u>J00B49</u>	
Dept sample id <u>7738-018</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:51 666.2 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.070</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.256	0.061	0.056	0.10		GAM
Europium 152	14683-23-9	0.548	0.12	<u>0.14</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.21</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.17</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.21		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-019

J00B50

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212030-19</u>	Client sample id <u>J00B50</u>	
Dept sample id <u>7738-019</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:54 737.1 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.075</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.264	0.063	0.065	0.10		GAM
Europium 152	14683-23-9	0.491	0.11	<u>0.13</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.21</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.21</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.45		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-020

J00B51

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212030-20</u>	Client sample id <u>J00B51</u>	
Dept sample id <u>7738-020</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:55 747.3 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256</u> <u>B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.10</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.571	0.12	<u>0.11</u>	0.10		GAM
Europium 152	14683-23-9	0.350	0.16	<u>0.22</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.36</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.23</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.31		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 20

SUMMARY DATA SECTION

Page 29

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-021

J00B52

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212030-21</u>	Client sample id <u>J00B52</u>	
Dept sample id <u>7738-021</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:56 745.2 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.065</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.070</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.16</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.24</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.16</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.21</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-022

J00B53

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212030-22</u>	Client sample id <u>J00B53</u>	
Dept sample id <u>7738-022</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:57 799.6 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256</u> <u>B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.080</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.490	0.089	0.078	0.10		GAM
Europium 152	14683-23-9	0.356	0.13	<u>0.15</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.24</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.23</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.44		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-023

J00B54

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	<u>SDG H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212030-23</u>	Client sample id <u>J00B54</u>	
Dept sample id <u>7738-023</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:58 760.4 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.11</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.312	0.094	<u>0.11</u>	0.10		GAM
Europium 152	14683-23-9	U		<u>0.25</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.31</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.22</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.31</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7738-024

J00B55

DATA SHEET

SDG <u>7738</u>	Client/Case no <u>Hanford</u>	<u>SDG H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R212030-24</u>	Client sample id <u>J00B55</u>	
Dept sample id <u>7738-024</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 08:59 800.0 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-256</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.061</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.427	0.073	0.065	0.10		GAM
Europium 152	14683-23-9	U		<u>0.15</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.22</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.16</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.20		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/12/02</u>

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H2009

Test GAM Matrix SOLID
 SDG 7738
 Contact Melissa C. Mannion

LAB METHOD SUMMARY

GAMMA SCAN
 GAMMA SPECTROSCOPY

Client Hanford
 Contract No. 630
 Contract SDG H2009

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-				
SAMPLE ID	TEST	FIX	CLIENT	SAMPLE ID	pCi/g	g	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR
Preparation batch 7032-116			2σ prep error 15.0 %			Reference Lab Notebook 7032 pg. 116											
R212030-01	J00B32		0.057	811										7	12/09/02	12/10	02,04,00
R212030-02	J00B33		0.040	829										7	12/09/02	12/10	MB,07,00
R212030-03	J00B34		0.072	803										7	12/09/02	12/10	02,03,00
R212030-04	J00B35		0.051	727										8	12/09/02	12/11	02,04,00
R212030-05	J00B36		0.085	765										8	12/09/02	12/11	02,03,00
R212030-06	J00B37		0.049	799										8	12/09/02	12/11	02,04,00
R212030-07	J00B38		0.087	677										8	12/09/02	12/11	MB,05,00
R212030-08	J00B39		0.096	690										8	12/09/02	12/11	02,03,00
R212030-09	J00B40		0.058	655										8	12/09/02	12/11	02,04,00
R212030-10	J00B41		0.060	785										8	12/09/02	12/11	MB,05,00
R212030-11	J00B42		0.078	625										8	12/09/02	12/11	02,04,00
R212030-12	J00B43		0.081	841										8	12/09/02	12/11	MB,05,00
R212030-13	J00B44		0.086	691										8	12/09/02	12/11	02,03,00
R212030-14	J00B45		0.067	786										8	12/09/02	12/11	02,04,00
R212030-15	J00B46		0.078	811										8	12/09/02	12/11	MB,05,00
R212030-16	J00B47		0.11	638										8	12/09/02	12/11	02,03,00
R212030-17	J00B48		0.074	717										8	12/09/02	12/11	02,03,00
R212030-18	J00B49		0.070	666										8	12/09/02	12/11	02,04,00
R212030-19	J00B50		0.075	737										8	12/09/02	12/11	MB,05,00
R212030-20	J00B51		0.10	747										8	12/09/02	12/11	02,03,00
R212030-21	J00B52		0.065	745										8	12/09/02	12/11	02,04,00
R212030-22	J00B53		0.080	800										8	12/09/02	12/11	MB,05,00
R212030-23	J00B54		0.11	760										8	12/09/02	12/11	02,03,00
R212030-24	J00B55		0.061	800										8	12/09/02	12/11	02,04,00
R212030-25	BLK (QC ID=27667)		0.056	625											12/09/02	12/11	MB,05,00
Nominal values and limits from method			0.050	908					100					180			

PROCEDURES REFERENCE GAMMA_GS
 CP-060 Soil Preparation, rev 4
 CP-100 Ge(Li) Preparation for Commercial Samples, rev 5

AVERAGES ± 2 SD MDA 0.074 ± 0.037
 FOR 25 SAMPLES YIELD _____ ± _____

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 12/12/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H2009

Test GAM Matrix SOLID
 SDG 7738
 Contact Melissa C. Mannion

LAB METHOD SUMMARY

GAMMA SCAN
 GAMMA SPECTROSCOPY

Client Hanford
 Contract No. 630
 Contract SDG H2009

RESULTS

LAB	RAW	SUF-			
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Cobalt 60	Cesium 137
Preparation batch 7032-116					
R212030-01		7738-001	J00B32	U	U
R212030-02		7738-002	J00B33	U	U
R212030-03		7738-003	J00B34	U	U
R212030-04		7738-004	J00B35	U	U
R212030-05		7738-005	J00B36	U	U
R212030-06		7738-006	J00B37	U	U
R212030-07		7738-007	J00B38	U	0.201
R212030-08		7738-008	J00B39	U	0.109
R212030-09		7738-009	J00B40	U	0.200
R212030-10		7738-010	J00B41	U	0.121
R212030-11		7738-011	J00B42	U	0.114
R212030-12		7738-012	J00B43	U	U
R212030-13		7738-013	J00B44	U	U
R212030-14		7738-014	J00B45	U	0.226
R212030-15		7738-015	J00B46	U	0.084
R212030-16		7738-016	J00B47	U	U
R212030-17		7738-017	J00B48	U	U
R212030-18		7738-018	J00B49	U	0.256
R212030-19		7738-019	J00B50	U	0.264
R212030-20		7738-020	J00B51	U	0.571
R212030-21		7738-021	J00B52	U	U
R212030-22		7738-022	J00B53	U	0.490
R212030-23		7738-023	J00B54	U	0.312
R212030-24		7738-024	J00B55	U	0.427
R212030-25		7738-025	BLK (QC ID=27667)	U	U

Nominal values and limits from method RDLs (pCi/g) 0.050 0.10
 100 F Area - Quick Turn

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 12/12/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_H2009

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.

REPORT GUIDES

Page 1

SUMMARY DATA SECTION

Page 36

Lab id EBRLINE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 12/12/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
 Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
 Contract No. 630
 Case no SDG_H2009

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.

REPORT GUIDES

Page 2

SUMMARY DATA SECTION

Page 37

Lab id EBRINE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 12/12/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG H2009

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.

REPORT GUIDES

Page 3

SUMMARY DATA SECTION

Page 38

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 12/12/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
 Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
 Contract No. 630
 Case no SDG H2009

DATA SHEET

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

The following notes apply to this report:

- * TEST is a code for the method used to measure an analyte. If the TEST is empty, no data is available; the analyte was not analyzed for.
- * The LAB SAMPLE ID and TEST uniquely identify work within the Summary Data Section of a Data Package. The Work Summary and Method Summary Reports further identify raw data that underlies this work.

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

- * ERRORS can be labeled TOTAL or COUNT. TOTAL implies a preparation (non-counting method) error has been added, as square root of sum of squares, to the counting error denoted by COUNT. The preparation errors, which may vary by preparation batch, are shown on the Method Summary Report.
- * A RESULT can be 'N.R.' (Not Reported). This means the lab did this work but chooses not to report it now, possibly because it was reported at another time.
- * When reporting a Method Blank, a RESULT can be 'N.A.' (Not Applicable). This means there is no reported client sample work in the same preparation batch as the Blank's result. This is likely to occur when the Method Blank is associated with reanalyses of selected work for a few samples in the SDG.

The following qualifiers are defined by the DVD system:

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

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 12/12/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
 Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
 Contract No. 630
 Case no SDG_H2009

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.

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 12/12/02

REPORT GUIDES

Page 5

SUMMARY DATA SECTION

Page 40

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
 Contact Melissa C. Mannion

GUIDE , cont .

Client Hanford
 Contract No. 630
 Case no SDG H2009

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.

REPORT GUIDES

Page 6

SUMMARY DATA SECTION

Page 41

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 12/12/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_H2009

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.

REPORT GUIDES

Page 7

SUMMARY DATA SECTION

Page 42

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 12/12/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
 Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
 Contract No. 630
 Case no SDG H2009

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.

REPORT GUIDES

Page 8

SUMMARY DATA SECTION

Page 43

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 12/12/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG H2009

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.

REPORT GUIDES

Page 9

SUMMARY DATA SECTION

Page 44

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 12/12/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
 Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
 Contract No. 630
 Case no SDG H2009

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

REPORT GUIDES

Page 10

SUMMARY DATA SECTION

Page 45

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 12/12/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG H2009

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.

REPORT GUIDES

Page 11

SUMMARY DATA SECTION

Page 46

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 12/12/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
 Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
 Contract No. 630
 Case no SDG H2009

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'

REPORT GUIDES

Page 12

SUMMARY DATA SECTION

Page 47

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 12/12/02

EBRLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
 Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
 Contract No. 630
 Case no SDG H2009

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.
- * Preparation 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.

REPORT GUIDES

Page 13

SUMMARY DATA SECTION

Page 48

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 12/12/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
 Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
 Contract No. 630
 Case no SDG_H2009

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

REPORT GUIDES

Page 14

SUMMARY DATA SECTION

Page 49

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 12/12/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7738
 Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
 Contract No. 630
 Case no SDG_H2009

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.

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 12/12/02

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-029-256		Page 1 of 2			
Collector MT Stankovich/Mitchell		Company Contact Mike Stankovich		Telephone No. 531-7620		Project Coordinator TRENT, SJ		Price Code <u>2D</u> Data Turnaround			
Project Designation 100 F Area - Quick Turn		Sampling Location 100-F-19 Overburden Variance <u>H2009 (7738)</u>		SAF No. B00-029		Air Quality <input type="checkbox"/>		<u>7-2 cap</u>			
Ice Chest No. <u>SEE OSPC</u>		Field Logbook No. EI-1535-7		COA R10F192000		Method of Shipment FedEx					
Shipped To <u>TMA/RECRA</u>		Offsite Property No. <u>A030 070</u>		Bill of Lading/Air Bill No. <u>SEE OSPC</u>							
POSSIBLE SAMPLE HAZARDS/REMARKS <i>Radioactive</i> <u>Tr-T0 B1270</u> Special Handling and/or Storage <u>None</u>					Preservation None	Type of Container Marinelli	No. of Container(s) 1	Volume 500mL			
SAMPLE ANALYSIS					See item (1) in Special Instructions.						
Sample No.	Matrix *	Sample Date	Sample Time								
J00B32	SOIL	12-3-02	0830	—							
J00B33	SOIL	12-3-02	0831	✓							
J00B34	SOIL	12-3-02	0832	✓							
J00B35	SOIL	12-3-02	0833	✓							
J00B36	SOIL	12-3-02	0834	✓							
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS					Matrix *	
Relinquished By/Removed From <u>MTS Stankovich</u>		Date/Time <u>12-3-02 1530</u>		Received By/Stored In <u>3B/3728</u>		Date/Time <u>12-3-02 1530</u>		(1) Gamma Spectroscopy - Screen (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Personnel not available to relinquish samples from the 3728 Ref # <u>3B</u> on <u>12/4/02</u>			S=Soil SE=Sediment SO=Solid SL=Sludge W=Water O=Oil DS=Drum Solids DL=Drum Liquids T=Tissue WT=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From <u>3B 3728</u>		Date/Time <u>12-4-02 1000</u>		Received By/Stored In <u>R. F. Kelly</u>		Date/Time <u>12-4-02</u>					
Relinquished By/Removed From <u>FEC</u>		Date/Time <u>10-00</u>		Received By/Stored In <u>Fed Ex</u>		Date/Time					
Relinquished By/Removed From <u>Fed Ex</u>		Date/Time <u>12/5/02</u>		Received By/Stored In <u>Anderson</u>		Date/Time <u>12/5/02 9:45</u>					
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time					
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time					
LABORATORY SECTION	Received By			Title			Date/Time				
FINAL SAMPLE DISPOSITION	Disposal Method			Disposed By			Date/Time				

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-029-256		Page 2 of 3											
Collector MT Stankovich/Mitchell		Company Contact Mike Stankovich		Telephone No. 531-7620		Project Coordinator TRENT, SJ		Price Code 20 Data Turnaround											
Project Designation 100 F Area - Quick Turn		Sampling Location 100-F-19 Overburden Variance		H2009 (7738)		SAF No. B00-029		Air Quality <input type="checkbox"/> 7-days											
Ice Chest No. SEE OSC		Field Logbook No. EI-1535-7		COA R10F192000		Method of Shipment FedEx													
Shipped To TMA/RECRA		Offsite Property No. A030 070				Bill of Lading/Air Bill No. SEE OSC													
POSSIBLE SAMPLE HAZARDS/REMARKS Radioactive Tie To B127RO					Preservation	None													
Special Handling and/or Storage None					Type of Container	Marinelli													
					No. of Container(s)	1													
					Volume	500mL													
SAMPLE ANALYSIS					See item (1) in Special Instructions.														
Sample No.	Matrix *	Sample Date	Sample Time																
J00B37	SOIL	12-3-02	0835	-															
J00B38	SOIL	12-3-02	0838	-															
J00B39	SOIL	12-3-02	0839	-															
J00B40	SOIL	12-3-02	0840	✓															
J00B41	SOIL	12-3-02	0841	✓															
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS				Matrix *							
Relinquished By/Removed From		Date/Time 1530		Received By/Stored In		Date/Time		(1) Gamma Spectroscopy - Screen (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Personnel not available to relinquish samples from the 3728 Ref # 3B on 12/4/02				S=Soil SE=Sediment SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue W1=Wipe L=Liquid V=Vegetation X=Other							
MT Stankovich		12-3-02		3B/3728		12-3-02 1530													
3B 3728		12-4-02 1000		R. F. Kelly R. F. Kelly		12-4-02													
R. F. Kelly		12-4-02		FedEx															
FedEx		12/5/02		John D. Brown		12/5/02 9:45													
LABORATORY SECTION		Received By		Title				Date/Time											
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By				Date/Time											

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-029-256		Page 2 of 2		
Collector MT Stankovich/Mitchell		Company Contact Mike Stankovich		Telephone No. 531-7620		Project Coordinator TRENT, SJ		Price Code 20 Data Turnaround		
Project Designation 100 F Area - Quick Turn		Sampling Location 100-F-19 Overburden Variance		H2009 (7738)		SAF No. B00-029		Air Quality <input type="checkbox"/> 7 days		
Ice Chest No. SEE OSPC		Field Logbook No. EI-1535-7		COA R10F192000		Method of Shipment FedEx				
Shipped To TMA/RECRA		Offsite Property No. F030 070		Bill of Lading/Air Bill No. SEE OSPC						
POSSIBLE SAMPLE HAZARDS/REMARKS Radioactive Tie To B127RO					Preservation None	Type of Container Marinelli	No. of Container(s) 1	Volume 500mL		
Special Handling and/or Storage None					See item (1) in Special Instructions					
SAMPLE ANALYSIS										
Sample No.	Matrix *	Sample Date	Sample Time							
✓ J00B42	SOIL	12-5-02	0842	✓						
✓ J00B43	SOIL	12-3-02	0843	✓						
✓ J00B44	SOIL	12-3-02	0846	✓						
✓ J00B45	SOIL	12-3-02	0847	✓						
✓ J00B46	SOIL	12-3-02	0848	✓						
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS			Matrix *		
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		(1) Gamma Spectroscopy - Screen (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Personnel not available to relinquish samples from the 3728 Ref # 3B on 12/4/02		
MT Stankovich		12-3-02 1530		3B/3728		12-3-02 1530				
3B 3728		12-4-02 1000		R. Fellows		12-4-02 1000				
E2C		12-4-02 1000		Fed Ex						
Fed Ex		12/5/02		Fred Davis		12/5/02 9:45				
LABORATORY SECTION	Received By		Title		Date/Time					
FINAL SAMPLE DISPOSITION	Disposal Method		Disposed By		Date/Time					

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-029-256	Page 1 of 2
Collector MT Stankovich/Mitchell		Company Contact Mike Stankovich		Telephone No. 531-7620	Project Coordinator TRENT, SJ	Price Code 20	Data Turnaround
Project Designation 100 F Area - Quick Turn		Sampling Location 100-F-19 Overburden Variance		H2009 (7738)	SAF No. B00-029	Air Quality <input type="checkbox"/>	7-day
Ice Chest No. SEE OSPC		Field Logbook No. EI-1535-7	COA R10F192000	Method of Shipment FedEx			
Shipped To TMA/RECRA		Offsite Property No. A030 070		Bill of Lading/Air Bill No. SEE OSPC			
POSSIBLE SAMPLE HAZARDS/REMARKS Radioactive Tie To B127RO			Preservation	None			
Special Handling and/or Storage None			Type of Container	Marinelli			
			No. of Container(s)	1			
			Volume	500mL			
SAMPLE ANALYSIS				See item (1) in Special Instructions.			
Sample No.	Matrix *	Sample Date	Sample Time				
✓ J00B47	SOIL	12-3-02	0849	-			
✓ J00B48	SOIL	12-3-02	0850	-			
✓ J00B49	SOIL	12-3-02	0851	-			
✓ J00B50	SOIL	12-3-02	0854	✓			
✓ J00B51	SOIL	12-3-02	0855	✓			
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time	(1) Gamma Spectroscopy - Screen (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Personnel not available to relinquish samples from the 3728 Ref # 3B on 12/4/02			S=Soil SE=Sediment SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue W =Wipe L=Liquid V=Vegetation X=Other
WTK Mstantouch	12-3-02	3B/3728	12-3-02 1500				
3B 3728	12-4-02 1000	R. F. Kelly	R. F. Kelly 12-4-02				
R. F. Kelly	12-4-02	Fed Ex					
Fed Ex	12/5/02	J. M. Davis	12/5/02 9:45				
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time				
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time				
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time				
LABORATORY SECTION	Received By		Title		Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method		Disposed By		Date/Time		

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-029-256		Page 2 of 2		
Collector MT Stankovich/Mitchell		Company Contact Mike Stankovich		Telephone No. 531-7620		Project Coordinator TRENT, SJ		Price Code 20 Data Turnaround		
Project Designation 100 F Area - Quick Turn		Sampling Location 100-F-19 Overburden Variance H2009 (7738)		SAF No. B00-029		Air Quality <input type="checkbox"/> 7-day				
Ice Chest No. SEE OSR		Field Logbook No. EI-1535-7		COA R10F192000		Method of Shipment FedEx				
Shipped To TMA/RECRA		Offsite Property No. A030 070		Bill of Lading/Air Bill No. SEE OSR						
POSSIBLE SAMPLE HAZARDS/REMARKS Radioactive Tjc To B127RO				Preservation None						
Special Handling and/or Storage None				Type of Container Marinelli						
				No. of Container(s) 1						
				Volume 500mL						
SAMPLE ANALYSIS				See item (1) in Special Instructions.						
Sample No.	Matrix *	Sample Date	Sample Time							
J00B52	SOIL	12-3-02	0856	-						
J00B53	SOIL	12-3-02	0857	-						
J00B54	SOIL	12-3-02	0858	-						
J00B55	SOIL	12-3-02	0859	✓						
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS				Matrix *
Relinquished By/Removed From		Date/Time 1530		Received By/Stored In		Date/Time		(1) Gamma Spectroscopy - Screen (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Personnel not available to relinquish samples from the 3728 Ref # 3B on 12/14/02		S=Soil SE=Sediment SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue WT=Wipe L=Liquid V=Vegetation X=Other
M. Stankovich		12-3-02		3B/3728		12-3-02 1530				
3B 3728		12-4-02 1000		R. Fehlbey R. Fehlbey		12-4-02				
R. Fehlbey R. Fehlbey		12-4-02 1000		Fed Ex						
Fed Ex		12/3/02		Jan 11 12/5/02 9:45						
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
LABORATORY SECTION	Received By			Title			Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method			Disposed By			Date/Time			

7 days rush

SAMPLE RECEIPT CHECKLIST

SAMPLE RECEIPT

Client: Bechtel Hanford Date/Time received 12/5/02
 CoC No. B00-029-256
 Container I.D. No. ERC02-007 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 []
 6. Number of samples in shipping container: 24
 7. Number of containers per sample: 1 (Or see CoC _____)
 8. Paperwork agrees with samples? Yes [] No []
 9. Samples have: Tape [] Hazard labels [] Rad labels [] Appropriate sample labels []
 10. Samples are: In good condition [] Leaking [] Broken Container [] Missing []
 11. Describe any anomalies: _____

 13. Was P.M. notified of any anomalies? Yes [] No [] Date _____
 14. Received by Judson Date: 12/5/02 Time: 9:45

Customer Sample No.	cpm	mr/hr	wipe	Customer Sample No.	cpm	mr/hr	wipe

Ion Chamber Ser. No. _____ Calibration date _____
 Alpha meter Ser. No. _____ Calibration date _____
 Survey Meter Ser. No. _____ Calibration date _____



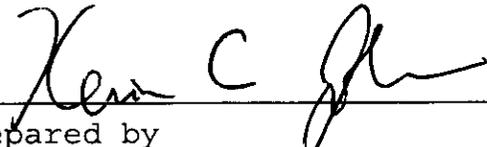
EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

SDG 7739
Contact Melissa C. Mannion

Client Hanford
Contract No. 630
Case no SDG_H2009

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

T A B L E O F C O N T E N T S				
About this section	.	.	.	1
Sample Summaries	.	.	.	3
Prep Batch Summary	.	.	.	5
Work Summary	.	.	.	6
Method Blanks	.	.	.	9
Data Sheets	.	.	.	10
Method Summaries	.	.	.	34
Report Guides	.	.	.	36
End of Section	.	.	.	50


Prepared by
Melissa Mannion
Reviewed by

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-TOC
Version 3.06
Report date 12/13/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG H2009

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.

REPORT GUIDES

Page 1

SUMMARY DATA SECTION

Page 1

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 12/13/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
Contact Melissa C. Mannion

GUIDE , c o n t .

Client Hanford
Contract No. 630
Case no SDG H2009

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.

REPORT GUIDES

Page 2

SUMMARY DATA SECTION

Page 2

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 12/13/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
 Contact Melissa C. Mannion

LAB SAMPLE SUMMARY

Client Hanford
 Contract No. 630
 Case no SDG H2009

LAB SAMPLE ID	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAF NO	CHAIN OF CUSTODY	COLLECTED
R212031-01	J00B56	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:02
R212031-02	J00B57	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:03
R212031-03	J00B58	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:04
R212031-04	J00B59	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:05
R212031-05	J00B60	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:06
R212031-06	J00B61	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:07
R212031-07	J00B62	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:10
R212031-08	J00B63	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:11
R212031-09	J00B64	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:12
R212031-10	J00B65	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:13
R212031-11	J00B66	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:14
R212031-12	J00B67	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:15
R212031-13	J00B68	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:18
R212031-14	J00B69	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:19
R212031-15	J00B70	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:20
R212031-16	J00B71	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:21
R212031-17	J00B72	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:22
R212031-18	J00B73	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:26
R212031-19	J00B74	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:27
R212031-20	J00B75	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:28
R212031-21	J00B76	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:28
R212031-22	J00B77	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:29
R212031-23	J00B78	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:30
R212031-24	J00B79	100-F-19 Overburden Var.	SOLID		B00-029	B00-029-257	12/03/02 09:31
R212031-25	Method Blank		SOLID		B00-029		

LAB SUMMARY

Page 1

SUMMARY DATA SECTION

Page 3

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-LS
 Version 3.06
 Report date 12/13/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H2009

QC SUMMARY

SDG 7739
 Contact Melissa C. Mannion

Client Hanford
 Contract No. 630
 Case no SDG H2009

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% SOLIDS	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	LAB COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
7739	B00-029-257	J00B56	SOLID	100.0	745.8 g		12/05/02	2	R212031-01	7739-001
		J00B57	SOLID	100.0	758.3 g		12/05/02	2	R212031-02	7739-002
		J00B58	SOLID	100.0	726.9 g		12/05/02	2	R212031-03	7739-003
		J00B59	SOLID	100.0	762.7 g		12/05/02	2	R212031-04	7739-004
		J00B60	SOLID	100.0	661.4 g		12/05/02	2	R212031-05	7739-005
		J00B61	SOLID	100.0	735.0 g		12/05/02	2	R212031-06	7739-006
		J00B62	SOLID	100.0	759.5 g		12/05/02	2	R212031-07	7739-007
		J00B63	SOLID	100.0	687.7 g		12/05/02	2	R212031-08	7739-008
		J00B64	SOLID	100.0	754.5 g		12/05/02	2	R212031-09	7739-009
		J00B65	SOLID	100.0	752.6 g		12/05/02	2	R212031-10	7739-010
		J00B66	SOLID	100.0	742.5 g		12/05/02	2	R212031-11	7739-011
		J00B67	SOLID	100.0	750.7 g		12/05/02	2	R212031-12	7739-012
		J00B68	SOLID	100.0	733.1 g		12/05/02	2	R212031-13	7739-013
		J00B69	SOLID	100.0	672.0 g		12/05/02	2	R212031-14	7739-014
		J00B70	SOLID	100.0	710.5 g		12/05/02	2	R212031-15	7739-015
		J00B71	SOLID	100.0	718.2 g		12/05/02	2	R212031-16	7739-016
		J00B72	SOLID	100.0	684.3 g		12/05/02	2	R212031-17	7739-017
		J00B73	SOLID	100.0	753.5 g		12/05/02	2	R212031-18	7739-018
		J00B74	SOLID	100.0	762.2 g		12/05/02	2	R212031-19	7739-019
		J00B75	SOLID	100.0	756.7 g		12/05/02	2	R212031-20	7739-020
		J00B76	SOLID	100.0	703.5 g		12/05/02	2	R212031-21	7739-021
		J00B77	SOLID	100.0	670.7 g		12/05/02	2	R212031-22	7739-022
		J00B78	SOLID	100.0	659.6 g		12/05/02	2	R212031-23	7739-023
		J00B79	SOLID	100.0	704.5 g		12/05/02	2	R212031-24	7739-024
		Method Blank	SOLID						R212031-25	7739-025

Lab id EBERLINE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-QS
 Version 3.06
 Report date 12/13/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
 Contact Melissa C. Mannion

PREP BATCH SUMMARY

Client Hanford
 Contract No. 630
 Case no SDG H2009

TEST	MATRIX	METHOD	PREPARATION ERROR		PLANCHETS ANALYZED				QUALI-	
			BATCH	2σ %	CLIENT	MORE	RE	BLANK		LCS
Gamma Spectroscopy										
GAM	SOLID	Gamma Scan	7032-119	15.0	24				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 12/13/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
 Contact Melissa C. Mannion

LAB WORK SUMMARY

Client Hanford
 Contract No. 630
 Case no SDG H2009

LAB SAMPLE	CLIENT SAMPLE ID				SUF-					
COLLECTED	LOCATION	MATRIX	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD	
RECEIVED	CUSTODY	SAF No								
R212031-01	J00B56		7739-001	GAM		12/11/02	12/13/02	MCM	Gamma Scan	
12/03/02	100-F-19 Overburden Var.	SOLID								
12/05/02	B00-029-257	B00-029								
R212031-02	J00B57		7739-002	GAM		12/11/02	12/13/02	MCM	Gamma Scan	
12/03/02	100-F-19 Overburden Var.	SOLID								
12/05/02	B00-029-257	B00-029								
R212031-03	J00B58		7739-003	GAM		12/11/02	12/13/02	MCM	Gamma Scan	
12/03/02	100-F-19 Overburden Var.	SOLID								
12/05/02	B00-029-257	B00-029								
R212031-04	J00B59		7739-004	GAM		12/11/02	12/13/02	MCM	Gamma Scan	
12/03/02	100-F-19 Overburden Var.	SOLID								
12/05/02	B00-029-257	B00-029								
R212031-05	J00B60		7739-005	GAM		12/11/02	12/13/02	MCM	Gamma Scan	
12/03/02	100-F-19 Overburden Var.	SOLID								
12/05/02	B00-029-257	B00-029								
R212031-06	J00B61		7739-006	GAM		12/11/02	12/13/02	MCM	Gamma Scan	
12/03/02	100-F-19 Overburden Var.	SOLID								
12/05/02	B00-029-257	B00-029								
R212031-07	J00B62		7739-007	GAM		12/11/02	12/13/02	MCM	Gamma Scan	
12/03/02	100-F-19 Overburden Var.	SOLID								
12/05/02	B00-029-257	B00-029								
R212031-08	J00B63		7739-008	GAM		12/12/02	12/13/02	MCM	Gamma Scan	
12/03/02	100-F-19 Overburden Var.	SOLID								
12/05/02	B00-029-257	B00-029								
R212031-09	J00B64		7739-009	GAM		12/12/02	12/13/02	MCM	Gamma Scan	
12/03/02	100-F-19 Overburden Var.	SOLID								
12/05/02	B00-029-257	B00-029								
R212031-10	J00B65		7739-010	GAM		12/13/02	12/13/02	MCM	Gamma Scan	
12/03/02	100-F-19 Overburden Var.	SOLID								
12/05/02	B00-029-257	B00-029								

WORK SUMMARY

Page 1

SUMMARY DATA SECTION

Page 6

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-LWS
 Version 3.06
 Report date 12/13/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H2009

WORK SUMMARY, cont.

SDG 7739
 Contact Melissa C. Mannion

Client Hanford
 Contract No. 630
 Case no SDG H2009

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	MATRIX SAF No	PLANCHET	TEST	SUF- FIX	ANALYZED	REVIEWED	BY	METHOD
R212031-11 12/03/02 12/05/02	J00B66 100-F-19 Overburden Var. B00-029-257	SOLID B00-029	7739-011	GAM		12/12/02	12/13/02	MCM	Gamma Scan
R212031-12 12/03/02 12/05/02	J00B67 100-F-19 Overburden Var. B00-029-257	SOLID B00-029	7739-012	GAM		12/12/02	12/13/02	MCM	Gamma Scan
R212031-13 12/03/02 12/05/02	J00B68 100-F-19 Overburden Var. B00-029-257	SOLID B00-029	7739-013	GAM		12/12/02	12/13/02	MCM	Gamma Scan
R212031-14 12/03/02 12/05/02	J00B69 100-F-19 Overburden Var. B00-029-257	SOLID B00-029	7739-014	GAM		12/12/02	12/13/02	MCM	Gamma Scan
R212031-15 12/03/02 12/05/02	J00B70 100-F-19 Overburden Var. B00-029-257	SOLID B00-029	7739-015	GAM		12/12/02	12/13/02	MCM	Gamma Scan
R212031-16 12/03/02 12/05/02	J00B71 100-F-19 Overburden Var. B00-029-257	SOLID B00-029	7739-016	GAM		12/12/02	12/13/02	MCM	Gamma Scan
R212031-17 12/03/02 12/05/02	J00B72 100-F-19 Overburden Var. B00-029-257	SOLID B00-029	7739-017	GAM		12/12/02	12/13/02	MCM	Gamma Scan
R212031-18 12/03/02 12/05/02	J00B73 100-F-19 Overburden Var. B00-029-257	SOLID B00-029	7739-018	GAM		12/12/02	12/13/02	MCM	Gamma Scan
R212031-19 12/03/02 12/05/02	J00B74 100-F-19 Overburden Var. B00-029-257	SOLID B00-029	7739-019	GAM		12/12/02	12/13/02	MCM	Gamma Scan
R212031-20 12/03/02 12/05/02	J00B75 100-F-19 Overburden Var. B00-029-257	SOLID B00-029	7739-020	GAM		12/12/02	12/13/02	MCM	Gamma Scan

WORK SUMMARY

Page 2

SUMMARY DATA SECTION

Page 7

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-LWS
 Version 3.06
 Report date 12/13/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
 Contact Melissa C. Mannion

WORK SUMMARY, cont.

Client Hanford
 Contract No. 630
 Case no SDG H2009

LAB SAMPLE	CLIENT SAMPLE ID	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
R212031-21 12/03/02 12/05/02	J00B76 100-F-19 Overburden Var. B00-029-257	SOLID	7739-021	GAM		12/12/02	12/13/02	MCM	Gamma Scan
R212031-22 12/03/02 12/05/02	J00B77 100-F-19 Overburden Var. B00-029-257	SOLID	7739-022	GAM		12/12/02	12/13/02	MCM	Gamma Scan
R212031-23 12/03/02 12/05/02	J00B78 100-F-19 Overburden Var. B00-029-257	SOLID	7739-023	GAM		12/12/02	12/13/02	MCM	Gamma Scan
R212031-24 12/03/02 12/05/02	J00B79 100-F-19 Overburden Var. B00-029-257	SOLID	7739-024	GAM		12/12/02	12/13/02	MCM	Gamma Scan
R212031-25	Method Blank	SOLID B00-029	7739-025	GAM		12/13/02	12/13/02	MCM	Gamma Scan

COUNTS OF TESTS BY SAMPLE TYPE										
TEST	SAF No	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP SPIKE	TOTAL
GAM	B00-029	Gamma Scan	GAMMA_GS	24			1			25
TOTALS				24			1			25

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-LWS
 Version 3.06
 Report date 12/13/02

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-025

Method Blank

METHOD BLANK

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	<u>SDG H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212031-25</u>	Client sample id <u>Method Blank</u>	
Dept sample id <u>7739-025</u>	Material/Matrix _____	<u>SOLID</u>
	SAF No <u>B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.065</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.053</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.12</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.19</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.11</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.13</u>		U	GAM

100 F Area - Quick Turn

QC-BLANK 43355

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-001

J00B56

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R212031-01</u>	Client sample id <u>J00B56</u>	
Dept sample id <u>7739-001</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:02 745.8 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.089</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.292	0.095	<u>0.11</u>	0.10		GAM
Europium 152	14683-23-9	1.08	0.24	<u>0.24</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.29</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.26</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.59		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-002

J00B57

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R212031-02</u>	Client sample id <u>J00B57</u>	
Dept sample id <u>7739-002</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:03 758.3 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.059</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.133	0.056	0.061	0.10		GAM
Europium 152	14683-23-9	0.112	0.078	<u>0.12</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.22</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.22</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.079		U	GAM

100 F Area - Quick Turn

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-003

J00B58

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R212031-03</u>	Client sample id <u>J00B58</u>	
Dept sample id <u>7739-003</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:04 726.9 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.10</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.229	0.11	<u>0.12</u>	0.10		GAM
Europium 152	14683-23-9	0.261	0.17	<u>0.25</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.27</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.25</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.32</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-004

J00B59

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212031-04</u>	Client sample id <u>J00B59</u>	
Dept sample id <u>7739-004</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:05 762.7 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.076</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.301	0.075	<u>0.076</u>	0.10		GAM
Europium 152	14683-23-9	0.727	0.13	<u>0.15</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.27</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.18</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.23</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-005

J00B60

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212031-05</u>	Client sample id <u>J00B60</u>	
Dept sample id <u>7739-005</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:06 661.4 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.087</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.443	0.085	<u>0.080</u>	0.10		GAM
Europium 152	14683-23-9	0.736	0.15	<u>0.17</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.31</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.20</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.26		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-006

J00B61

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212031-06</u>	Client sample id <u>J00B61</u>	
Dept sample id <u>7739-006</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:07 735.0 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.078</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.398	0.076	<u>0.072</u>	0.10		GAM
Europium 152	14683-23-9	0.663	0.14	<u>0.16</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.28</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.18</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.23</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-007

J00B62

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	<u>SDG H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R212031-07</u>	Client sample id <u>J00B62</u>	
Dept sample id <u>7739-007</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:10 759.5 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.18</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.449	0.079	0.075	0.10		GAM
Europium 152	14683-23-9	0.915	0.12	<u>0.12</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.34</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.14</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.080		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-008

J00B63

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212031-08</u>	Client sample id <u>J00B63</u>	
Dept sample id <u>7739-008</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:11 687.7 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.10</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.18</u>	0.10	U	GAM
Europium 152	14683-23-9	0.422	0.18	<u>0.23</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.27</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.24</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.35		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-009

J00B64

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212031-09</u>	Client sample id <u>J00B64</u>	
Dept sample id <u>7739-009</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:12 754.5 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257</u> <u>B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.080</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.331	0.070	0.066	0.10		GAM
Europium 152	14683-23-9	0.653	0.14	<u>0.16</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.25</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.19</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.24		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-010

J00B65

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212031-10</u>	Client sample id <u>J00B65</u>	
Dept sample id <u>7739-010</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:13 752.6 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.11</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.211	0.10	<u>0.10</u>	0.10		GAM
Europium 152	14683-23-9	0.313	0.14	<u>0.19</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.33</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.22</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.31</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-011

J00B66

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212031-11</u>	Client sample id <u>J00B66</u>	
Dept sample id <u>7739-011</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:14 742.5 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.066</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.286	0.070	0.066	0.10		GAM
Europium 152	14683-23-9	0.194	0.089	<u>0.14</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.19</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.13</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.079		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-012

J00B67

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212031-12</u>	Client sample id <u>J00B67</u>	
Dept sample id <u>7739-012</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:15 750.7 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.061</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.306	0.062	0.061	0.10		GAM
Europium 152	14683-23-9	0.189	0.095	<u>0.13</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.19</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.11</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.070		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-013

J00B68

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	<u>SDG H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212031-13</u>	Client sample id <u>J00B68</u>	
Dept sample id <u>7739-013</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:18 733.1 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.082</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.344	0.089	0.099	0.10		GAM
Europium 152	14683-23-9	U		<u>0.26</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.32</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.20</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.27		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-014

J00B69

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212031-14</u>	Client sample id <u>J00B69</u>	
Dept sample id <u>7739-014</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:19 672.0 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.067</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.084	0.056	0.060	0.10		GAM
Europium 152	14683-23-9	0.168	0.098	<u>0.13</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.21</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.15</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.21		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-015

J00B70

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212031-15</u>	Client sample id <u>J00B70</u>	
Dept sample id <u>7739-015</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:20 710.5 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.071</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.171	0.072	<u>0.077</u>	0.10		GAM
Europium 152	14683-23-9	0.186	0.090	<u>0.13</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.23</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.21</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.44</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-016

J00B71

D A T A S H E E T

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212031-16</u>	Client sample id <u>J00B71</u>	
Dept sample id <u>7739-016</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:21 718.2 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257</u> <u>B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.11</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.277	0.11	0.097	0.10		GAM
Europium 152	14683-23-9	0.316	0.15	<u>0.18</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.32</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.21</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.30		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-017

J00B72

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212031-17</u>	Client sample id <u>J00B72</u>	
Dept sample id <u>7739-017</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:22 684.3 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.060</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.070	0.044	0.051	0.10		GAM
Europium 152	14683-23-9	U		<u>0.13</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.18</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.11</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.072		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-018

J00B73

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R212031-18</u>	Client sample id <u>J00B73</u>	
Dept sample id <u>7739-018</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:26 753.5 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.054</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.054</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.16</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.19</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.14</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.18</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-019

J00B74

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212031-19</u>	Client sample id <u>J00B74</u>	
Dept sample id <u>7739-019</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:27 762.2 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.070</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.057	0.050	<u>0.062</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.16</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.21</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.19</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.44</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-020

J00B75

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212031-20</u>	Client sample id <u>J00B75</u>	
Dept sample id <u>7739-020</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:28 756.7 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.038	0.050	U	GAM
Cesium 137	10045-97-3	0.049	0.043	0.042	0.10		GAM
Europium 152	14683-23-9	U		0.087	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.13</u>	0.10	U	GAM
Europium 155	14391-16-3	U		0.097	0.10	U	GAM
Americium 241	14596-10-2	U		0.12		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-021

J00B76

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212031-21</u>	Client sample id <u>J00B76</u>	
Dept sample id <u>7739-021</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:28 703.5 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.050	0.050	U	GAM
Cesium 137	10045-97-3	U		0.045	0.10	U	GAM
Europium 152	14683-23-9	U		0.10	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.16</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.13</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.30		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-022

J00B77

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212031-22</u>	Client sample id <u>J00B77</u>	
Dept sample id <u>7739-022</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:29 670.7 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALIFIERS	TEST
Cobalt 60	10198-40-0	U		0.040	0.050	U	GAM
Cesium 137	10045-97-3	U		0.038	0.10	U	GAM
Europium 152	14683-23-9	U		0.085	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.15</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.13</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.051		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-023

J00B78

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212031-23</u>	Client sample id <u>J00B78</u>	
Dept sample id <u>7739-023</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:30 659.6 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.068</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.060</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.16</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.21</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.15</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.20</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H2009

7739-024

J00B79

DATA SHEET

SDG <u>7739</u>	Client/Case no <u>Hanford</u>	SDG <u>H2009</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R212031-24</u>	Client sample id <u>J00B79</u>	
Dept sample id <u>7739-024</u>	Location/Matrix <u>100-F-19 Overburden Var. SOLID</u>	
Received <u>12/05/02</u>	Collected/Weight <u>12/03/02 09:31 704.5 g</u>	
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-257 B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.051</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		0.045	0.10	U	GAM
Europium 152	14683-23-9	U		0.096	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.18</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.12</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.15		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>12/13/02</u>

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H2009

Test GAM Matrix SOLID
 SDG 7739
 Contact Melissa C. Mannion

LAB METHOD SUMMARY

GAMMA SCAN
 GAMMA SPECTROSCOPY

Client Hanford
 Contract No. 630
 Contract SDG H2009

RESULTS

LAB RAW SUF-
 SAMPLE ID TEST FIX PLANCHET CLIENT SAMPLE ID Cobalt 60 Cesium 137

Preparation batch 7032-119

R212031-01		7739-001	J00B56	U	0.292
R212031-02		7739-002	J00B57	U	0.133
R212031-03		7739-003	J00B58	U	0.229
R212031-04		7739-004	J00B59	U	0.301
R212031-05		7739-005	J00B60	U	0.443
R212031-06		7739-006	J00B61	U	0.398
R212031-07		7739-007	J00B62	U	0.449
R212031-08		7739-008	J00B63	U	U
R212031-09		7739-009	J00B64	U	0.331
R212031-10		7739-010	J00B65	U	0.211
R212031-11		7739-011	J00B66	U	0.286
R212031-12		7739-012	J00B67	U	0.306
R212031-13		7739-013	J00B68	U	0.344
R212031-14		7739-014	J00B69	U	0.084
R212031-15		7739-015	J00B70	U	0.171
R212031-16		7739-016	J00B71	U	0.277
R212031-17		7739-017	J00B72	U	0.070
R212031-18		7739-018	J00B73	U	U
R212031-19		7739-019	J00B74	U	U
R212031-20		7739-020	J00B75	U	0.049
R212031-21		7739-021	J00B76	U	U
R212031-22		7739-022	J00B77	U	U
R212031-23		7739-023	J00B78	U	U
R212031-24		7739-024	J00B79	U	U
R212031-25		7739-025	BLK (QC ID=27732)	U	U

Nominal values and limits from method RDLs (pCi/g) 0.050 0.10

100 F Area - Quick Turn

METHOD SUMMARIES

Page 1

SUMMARY DATA SECTION

Page 34

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 12/13/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H2009

LAB METHOD SUMMARY

GAMMA SCAN
GAMMA SPECTROSCOPY

Test GAM Matrix SOLID
SDG 7739
Contact Melissa C. Mannion

Client Hanford
Contract No. 630
Contract SDG H2009

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-				
SAMPLE ID	TEST	FIX	CLIENT	SAMPLE ID	pCi/g	g	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR
Preparation batch 7032-119			2σ prep error 15.0 % Reference Lab Notebook 7032 pg. 119														
R212031-01			J00B56		<u>0.089</u>	746								8	12/09/02	12/11	MB,05,00
R212031-02			J00B57		<u>0.059</u>	758								8	12/09/02	12/11	MB,07,00
R212031-03			J00B58		<u>0.10</u>	727								8	12/09/02	12/11	02,03,00
R212031-04			J00B59		<u>0.076</u>	763								8	12/09/02	12/11	02,04,00
R212031-05			J00B60		<u>0.087</u>	661								8	12/09/02	12/11	02,04,00
R212031-06			J00B61		<u>0.078</u>	735								8	12/09/02	12/11	02,04,00
R212031-07			J00B62		<u>0.18</u>	760								8	12/09/02	12/11	MB,07,00
R212031-08			J00B63		<u>0.10</u>	688								9	12/09/02	12/12	02,03,00
R212031-09			J00B64		<u>0.080</u>	754								9	12/09/02	12/12	02,04,00
R212031-10			J00B65		<u>0.11</u>	753								10	12/09/02	12/13	02,03,00
R212031-11			J00B66		<u>0.066</u>	743								9	12/09/02	12/12	MB,07,00
R212031-12			J00B67		<u>0.061</u>	751								9	12/09/02	12/12	MB,07,00
R212031-13			J00B68		<u>0.082</u>	733								9	12/09/02	12/12	02,03,00
R212031-14			J00B69		<u>0.067</u>	672								9	12/09/02	12/12	02,04,00
R212031-15			J00B70		<u>0.071</u>	710								9	12/09/02	12/12	MB,05,00
R212031-16			J00B71		<u>0.11</u>	718								9	12/09/02	12/12	02,03,00
R212031-17			J00B72		<u>0.060</u>	684								9	12/09/02	12/12	MB,07,00
R212031-18			J00B73		<u>0.054</u>	754								9	12/09/02	12/12	02,04,00
R212031-19			J00B74		<u>0.070</u>	762								9	12/09/02	12/12	MB,05,00
R212031-20			J00B75		0.038	757								9	12/09/02	12/12	02,04,00
R212031-21			J00B76		0.050	703								9	12/09/02	12/12	MB,05,00
R212031-22			J00B77		0.040	671								9	12/09/02	12/12	MB,07,00
R212031-23			J00B78		<u>0.068</u>	660								9	12/09/02	12/12	02,03,00
R212031-24			J00B79		<u>0.051</u>	704								9	12/09/02	12/12	02,04,00
R212031-25			BLK (QC ID=27732)		<u>0.065</u>	659									12/09/02	12/13	01,03,00
Nominal values and limits from method					0.050	659								100			180

PROCEDURES REFERENCE GAMMA_GS
CP-060 Soil Preparation, rev 4
CP-100 Ge(Li) Preparation for Commercial Samples, rev 5

AVERAGES ± 2 SD MDA 0.076 ± 0.058
FOR 25 SAMPLES YIELD _____ ± _____

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 12/13/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG H2009

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.

REPORT GUIDES

Page 1

SUMMARY DATA SECTION

Page 36

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 12/13/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
 Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
 Contract No. 630
 Case no SDG_H2009

PREPARATION BATCH SUMMARY

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

The following notes apply to this report:

- * The preparation batches are shown in the same order as the Method Summary Reports are printed.
- * Only analyses of planchets relevant to the SDG are included.
- * Each preparation batch should have at least one Method Blank and LCS in it to validate client sample results.
- * The QUALIFIERS shown are all qualifiers other than U, J, B, L and H that occur on any analysis in the preparation batch. The Method Summary Report has these qualifiers on a per sample basis.

These qualifiers should be reviewed as follows:

- X Some data has been manually entered or modified. Transcription errors are possible.
- P One or more results are 'preliminary'. The data is not ready for final reporting.
- 2 There were two or more results for one analyte on one planchet imported at one time. The results in DVD may not be the same as on the raw data sheets.

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

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 12/13/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
 Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
 Contract No. 630
 Case no SDG H2009

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.

REPORT GUIDES

Page 3

SUMMARY DATA SECTION

Page 38

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 12/13/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
 Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
 Contract No. 630
 Case no SDG H2009

DATA SHEET

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

The following notes apply to this report:

- * TEST is a code for the method used to measure an analyte. If the TEST is empty, no data is available; the analyte was not analyzed for.
- * The LAB SAMPLE ID and TEST uniquely identify work within the Summary Data Section of a Data Package. The Work Summary and Method Summary Reports further identify raw data that underlies this work.

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

- * ERRORS can be labeled TOTAL or COUNT. TOTAL implies a preparation (non-counting method) error has been added, as square root of sum of squares, to the counting error denoted by COUNT. The preparation errors, which may vary by preparation batch, are shown on the Method Summary Report.
- * A RESULT can be 'N.R.' (Not Reported). This means the lab did this work but chooses not to report it now, possibly because it was reported at another time.
- * When reporting a Method Blank, a RESULT can be 'N.A.' (Not Applicable). This means there is no reported client sample work in the same preparation batch as the Blank's result. This is likely to occur when the Method Blank is associated with reanalyses of selected work for a few samples in the SDG.

The following qualifiers are defined by the DVD system:

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

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 12/13/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
 Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
 Contract No. 630
 Case no SDG H2009

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.

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 12/13/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
 Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
 Contract No. 630
 Case no SDG H2009

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.

REPORT GUIDES

Page 6

SUMMARY DATA SECTION

Page 41

Lab id EBRINE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 12/13/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG H2009

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.

REPORT GUIDES

Page 7

SUMMARY DATA SECTION

Page 42

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 12/13/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
 Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
 Contract No. 630
 Case no SDG_H2009

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.

REPORT GUIDES

Page 8

SUMMARY DATA SECTION

Page 43

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 12/13/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG H2009

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.

REPORT GUIDES

Page 9

SUMMARY DATA SECTION

Page 44

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 12/13/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
 Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
 Contract No. 630
 Case no SDG_H2009

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 12/13/02

REPORT GUIDES

Page 10

SUMMARY DATA SECTION

Page 45

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
Contact Melissa C. Mannion

GUIDE , c o n t .

Client Hanford
Contract No. 630
Case no SDG H2009

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 12/13/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
 Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
 Contract No. 630
 Case no SDG H2009

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 12/13/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
 Contact Melissa C. Mannion

GUIDE , c o n t .

Client Hanford
 Contract No. 630
 Case no SDG_H2009

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.
- * Preparation 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.

REPORT GUIDES

Page 13

SUMMARY DATA SECTION

Page 48

Lab id EBRLNE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 12/13/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
 Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
 Contract No. 630
 Case no SDG_H2009

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

Lab id EBRINE
 Protocol Hanford
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 12/13/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H2009

SDG 7739
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG_H2009

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.

REPORT GUIDES

Page 15

SUMMARY DATA SECTION

Page 50

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 12/13/02

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-029-257		Page 1 of 3	
Collector MT Stankovich/Mitchell		Company Contact Mike Stankovich		Telephone No. 531-7620		Project Coordinator TRENT, SJ		Price Code <u>2D</u> Data Turnaround	
Project Designation 100 F Area - Quick Turn		Sampling Location 100-F-19 Overburden Variance <u>H2009 (7739)</u>		SAF No. B00-029		Air Quality <input type="checkbox"/> <u>7-days</u>			
Ice Chest No. <u>SEE OSPC</u>		Field Logbook No. EI-1535-7		COA R10F192000		Method of Shipment FedEx			
Shipped To <u>TMA/RECRA</u>		Offsite Property No. <u>A030 070</u>		Bill of Lading/Air Bill No. <u>SEE OSPC</u>					
POSSIBLE SAMPLE HAZARDS/REMARKS Radioactive <u>Tie To B127RO</u> Special Handling and/or Storage <u>None</u>					Preservation	None			
					Type of Container	Marinelli			
					No. of Container(s)	1			
					Volume	500mL			
SAMPLE ANALYSIS					See item (1) in Special Instructions.				
Sample No.	Matrix *	Sample Date	Sample Time						
✓ J00B56	SOIL	12-3-02	0902	-					
✓ J00B57	SOIL	12-3-02	0903	-					
✓ J00B58	SOIL	12-3-02	0904	-					
✓ J00B59	SOIL	12-3-02	0905	-					
✓ J00B60	SOIL	12-3-02	0906	✓					
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS				
Relinquished By/Removed From		Date/Time		Sign/Print Names		Date/Time		Matrix *	
<u>MILLIE</u>		<u>12-3-02 1530</u>		<u>3B/3728</u>		<u>12-3-02 1530</u>		(1) Gamma Spectroscopy - Screen (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155)	
Relinquished By/Removed From		Date/Time		Sign/Print Names		Date/Time		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	
<u>3B 3728</u>		<u>12-4-02 1000</u>		<u>R. G. G. R. G. G.</u>		<u>12-4-02 1000</u>		Personnel not available to relinquish samples from the 3728 Ref # <u>SB</u> on <u>12/4/02</u>	
Relinquished By/Removed From		Date/Time		Sign/Print Names		Date/Time			
<u>R. G. G. R. G. G.</u>		<u>12-4-02 1000</u>		<u>FedEx</u>					
Relinquished By/Removed From		Date/Time		Sign/Print Names		Date/Time			
<u>Fred</u>		<u>12/5/02</u>		<u>Jan</u>		<u>12/5/02 9:45</u>			
Relinquished By/Removed From		Date/Time		Sign/Print Names		Date/Time			
LABORATORY SECTION		Received By		Title		Date/Time			
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time			

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-029-257		Page 2 of 2		
Collector MT Stankovich/Mitchell		Company Contact Mike Stankovich		Telephone No. 531-7620		Project Coordinator TRENT, SJ		Price Code 20 Data Turnaround		
Project Designation 100 F Area - Quick Turn		Sampling Location 100-F-19 Overburden Variance H2009 (7739)				SAF No. B00-029		Air Quality <input type="checkbox"/> 7-day		
Ice Chest No. SEKOSPC		Field Logbook No. EI-1535-7		COA R10F192000		Method of Shipment FedEx				
Shipped To TMA/RECRA		Offsite Property No. 17030 070				Bill of Lading/Air Bill No. SEKOSPC				
POSSIBLE SAMPLE HAZARDS/REMARKS Radioactive Tie To B127B0					Preservation	None				
Special Handling and/or Storage None					Type of Container	Marnelli				
					No. of Container(s)	1				
					Volume	500mL				
SAMPLE ANALYSIS					See item (1) in Special Instructions.					
Sample No.	Matrix *	Sample Date	Sample Time							
J00B61	SOIL	12-3-02	0907	—						
J00B62	SOIL	12-3-02	0910	—						
J00B63	SOIL	12-3-02	0911	—						
J00B64	SOIL	12-3-02	0912	✓						
J00B65	SOIL	12-3-02	0913	✓						
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS				Matrix *
Relinquished By/Removed From		Date/Time 1530		Received By/Stored In		Date/Time		(1) Gamma Spectroscopy - Screen {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Personnel not available to relinquish samples from the 3726 Ref # 3B on 12/4/02		S=Soil SE=Settlement SO=Solid SL=Sludge W = Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue Wl=Wipe L=Liquid V=Vegetation X=Other
MILL M Stankovich		12-3-02		3B/3728		12-3-02 1530				
Relinquished By/Removed From		Date/Time 1000		Received By/Stored In		Date/Time 1000				
3B 3728		12-4-02		R. F. Fahberg		12-4-02				
Relinquished By/Removed From		Date/Time 1000		Received By/Stored In		Date/Time				
R. F. Fahberg		12-4-02		FedEx						
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
Fred		12/5/02		Fred		12/5/02 9:45				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
LABORATORY SECTION		Received By		Title		Date/Time				
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time				

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-029-257		Page 3 of 5			
Collector MT Stankovich/Mitchell		Company Contact Mike Stankovich		Telephone No. 531-7620		Project Coordinator TRENT, SJ		Price Code <u>2D</u> Data Turnaround			
Project Designation 100 F Area - Quick Turn		Sampling Location 100-F-19 Overburden Variance <u>H2009 (7739)</u>			SAF No. B00-029		Air Quality <input type="checkbox"/> <u>7 days</u>				
Ice Chest No. <u>SEE OSPC</u>		Field Logbook No. EI-1535-7		COA R10F192000		Method of Shipment FedEx					
Shipped To <u>TMA/RECRA</u>		Offsite Property No. <u>A030 070</u>			Bill of Lading/Air Bill No. <u>SEE OSPC</u>						
POSSIBLE SAMPLE HAZARDS/REMARKS <u>Radioactive Tic To B127RO</u>					Preservation	None					
Special Handling and/or Storage <u>None</u>					Type of Container	Marinelli					
					No. of Container(s)	1					
					Volume	500mL					
SAMPLE ANALYSIS					See item (1) in Special Instructions						
Sample No.	Matrix *	Sample Date	Sample Time								
✓ J00B66	SOIL	12-3-02	0914	-							
✓ J00B67	SOIL	12-3-02	0915	✓							
✓ J00B68	SOIL	12-3-02	0918	✓							
✓ J00B69	SOIL	12-3-02	0919	✓							
✓ J00B70	SOIL	12-3-02	0920	✓							
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS					Matrix *	
Relinquished By/Removed From <u>M. Mitchell</u>		Date/Time <u>12-3-02 1530</u>		Received By/Stored In <u>3B/3728</u>		Date/Time <u>12-3-02 1530</u>		(1) Gamma Spectroscopy - Screen (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Personnel not available to relinquish samples from the 3728 Ref # <u>3B</u> on <u>12/4/02</u>			S=Soil SE=Sediment SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquid T=Tissue WI=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From <u>3B 3728</u>		Date/Time <u>12-4-02 1000</u>		Received By/Stored In <u>R. E. O'Connell</u>		Date/Time <u>12-4-02 1000</u>					
Relinquished By/Removed From <u>R. E. O'Connell</u>		Date/Time <u>12-4-02 1000</u>		Received By/Stored In <u>FedEx</u>		Date/Time					
Relinquished By/Removed From <u>FedEx</u>		Date/Time <u>12/5/02</u>		Received By/Stored In <u>James Davis</u>		Date/Time <u>12/5/02 9:45</u>					
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time					
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time					
LABORATORY SECTION	Received By			Title			Date/Time				
FINAL SAMPLE DISPOSITION	Disposal Method			Disposed By			Date/Time				

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			B00-029-257	Page 4 of 5
Collector MT Stankovich/Mitchell	Company Contact Mike Stankovich	Telephone No. 531-7620	Project Coordinator TRENT, SJ		Price Code 20	Data Turnaround
Project Designation 100 F Area - Quick Turn	Sampling Location 100-F-19 Overburden Variance H2009 (7734)		SAF No. B00-029	Air Quality <input type="checkbox"/> 7-day		
Ice Chest No. SEE OSCP	Field Logbook No. EI-1535-7	COA R10F192000	Method of Shipment FedEx			
Shipped To TMA/RECRA	Offsite Property No. A030 070		Bill of Lading/Air Bill No. SEE OSCP			

POSSIBLE SAMPLE HAZARDS/REMARKS Radioactive Tie To B127RO Special Handling and/or Storage None	Preservation	None																		
	Type of Container	Marinelli																		
	No. of Container(s)	1																		
	Volume	500mL																		

SAMPLE ANALYSIS		See item (1) in Special Instructions.																		
------------------------	--	---------------------------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Sample No.	Matrix *	Sample Date	Sample Time																	
J00B71	SOIL	12-3-02	0921	✓																
J00B72	SOIL	12-3-02	0922	✓																
J00B73	SOIL	12-3-02	0926	✓																
J00B74	SOIL	12-3-02	0927	✓																
J00B75	SOIL	12-3-02	0928	✓																

CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS				Matrix *
Relinquished By/Removed From MTA M Stankovich	Date/Time 12-3-02 1530	Received By/Stored In 3B/3728	Date/Time 12-3-02 1530	(1) Gamma Spectroscopy - Screen (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Personnel not available to relinquish samples from the 3728 Ref # 3B on 12/4/02				S=Soil
Relinquished By/Removed From 3B 3728	Date/Time 12-4-02 1000	Received By/Stored In K. G. ...	Date/Time 12-4-02					SE=Sediment
Relinquished By/Removed From Eric	Date/Time 12-4-02 1000	Received By/Stored In Fed Ex	Date/Time					SO=Solid
Relinquished By/Removed From Fed Ex	Date/Time 12/5/02	Received By/Stored In Jan Jan	Date/Time 12/5/02 9:45					SL=Shed
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time					W=Water
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time	O=Oil				
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time	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

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						B00-029-257		Page 2 of 2		
Collector MT Stankovich/Mitchell		Company Contact Mike Stankovich		Telephone No. 531-7620		Project Coordinator TRENT, SJ		Price Code 20		Data Turnaround		
Project Designation 100 F Area - Quick Turn		Sampling Location 100-F-19 Overburden Variance		H2009 (7739)		SAF No. B00-029		Air Quality <input type="checkbox"/>		7-Day		
Ice Chest No. SEE OSRC		Field Logbook No. EI-1535-7		COA R10F192000		Method of Shipment FedEx						
Shipped To (TMA/RECRA)		Offsite Property No. A030070				Bill of Lading/Air Bill No. SEE OSRC						
POSSIBLE SAMPLE HAZARDS/REMARKS Radioactive Tie To B127RO Special Handling and/or Storage SEE OSRC R5 None				Preservation None	Type of Container Marinelli	No. of Container(s) 1	Volume 500mL					
SAMPLE ANALYSIS				See item (1) in Special Instructions.								
Sample No.	Matrix *	Sample Date	Sample Time									
✓ J00B76	SOIL	12-3-02	0928	~								
✓ J00B77	SOIL	12-3-02	0929	✓								
✓ J00B78	SOIL	12-3-02	0930	✓								
✓ J00B79	SOIL	12-3-02	0931	✓								
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS				Matrix *
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		(1) Gamma Spectroscopy - Screen (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Personnel not available to relinquish samples from the 3728 Ref # 3B on 12/4/02				S=Soil SE=Sediment SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue WT=Wipe L=Liquid V=Vegetation X=Other
M. Stankovich		12-3-02 1530		3B/3728		12-3-02 1530						
3B 3728		12-4-02 1000		R. Schilberg		12-4-02 1000						
R. Schilberg		12-4-02 1000		FedEx								
Fed Ex		12/5/02		Fred Jones		12/5/02 9:45						
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time						
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time						
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time						
LABORATORY SECTION	Received By			Title			Date/Time					
FINAL SAMPLE DISPOSITION	Disposal Method			Disposed By			Date/Time					

SAMPLE RECEIPT CHECKLIST

SAMPLE RECEIPT

Client: *Bectel Hanford* Date/Time received *12/8/02 9:45*
 CoC No. *300-029-257*
 Container I.D. No. *ERC99-055* 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 []
 6. Number of samples in shipping container: *24*
 7. Number of containers per sample: *1* (Or see CoC _____)
 8. Paperwork agrees with samples? Yes [] No []
 9. Samples have: Tape [] Hazard labels [] Rad labels [] Appropriate sample labels []
 10. Samples are: In good condition [] Leaking [] Broken Container [] Missing []
 11. Describe any anomalies: _____

 13. Was P.M. notified of any anomalies? Yes [] No [] Date _____
 14. Received by *[Signature]* Date: *12/8/02* Time: *9:45 AM*

Customer Sample No.	cpm	mr/hr	wipe	Customer Sample No.	cpm	mr/hr	wipe
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

Ion Chamber Ser. No. _____ Calibration date _____
 Alpha meter Ser. No. _____ Calibration date _____
 Survey Meter Ser. No. _____ Calibration date _____