H1067

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October 27, 2000

Ms. Joan Kessner
Bechtel Hanford Inc.
3190 George Washington Way
Richland, WA 99352
MSIN: H9-03

Reference: **P.O. #TRC-SBB-207925**
Thermo Retec R0-10-020-7513, SDG H1067

Dear Ms. Kessner:

Enclosed is the data report for six other solid samples designated under SAF No. B00-076 received at Thermo Retec on October 4, 2000. 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

Melissa C. Mannion
Program Manager

MCM/sm

Enclosure: Data Package

RECEIVED
JAN 22 2001
EDMC

OCT 2000
RECEIVED

1.0 GENERAL

Bechtel Hanford Inc. (BHI) Sample Delivery Group H1067 was composed of six other solid samples designated under SAF No. B00-076 with a Project Designation of: SM & T Asbestos Abatement Sampling.

The samples were received as stated on the Chain-of-Custody documents. Any discrepancies are noted on the Thermo Retec Sample Receipt Checklist. The results were transmitted to BHI via e-Fax on October 27, 2000.

2.0 ANALYSIS NOTES

2.1 Gross Alpha and Gross Beta Analyses

No problems were encountered during the course of the analyses.

2.2 Total Strontium Analyses

No problems were encountered during the course of the analyses.

2.3 Isotopic Uranium Analyses

No problems were encountered during the course of the analyses.

2.4 Isotopic Plutonium Analyses

No problems were encountered during the course of the analyses.

2.5 Americium-241 Analyses

Due to a low yield (12%) sample B107K6 was reworked in chemistry. The data from the reworked sample is reported herein. The LCS percent recovery (86%) was slightly below the 3-sigma limits of 87 to 113%, but within the laboratory protocol limits of 80 to 120%.

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

2.6 Gamma Spectroscopy 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

Melissa C. Mannion
Program Manager

10/27/00

Date

T M A / R I C H M O N D
SAMPLE DELIVERY GROUP H1067

SDG	7513
Contact	Melissa C. Mannion

Client	Hanford
Contract	TRC-SBB-207925
Case no	SDG H1067

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

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

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Melissa Mannion
Prepared by

Melissa Mannion
Reviewed by

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-TOC
Version	3.06
Report date	10/27/00

SDG 7513
Contact Melissa C. Mannion

Client Hanford
Contract TRC-SBB-207925
Case no SDG_H1067

ABOUT THE DATA SUMMARY SECTION

The Data Summary Section of a Data Package has all data, in several useful orders, necessary for first level, routine review of the data package for a Sample Delivery Group (SDG). This section follows the Data Package Narrative, which has an overview of the data package and a discussion of special problems. It is followed by the Raw Data Section, which has full details.

The Data Summary Section has several groups of reports:

SAMPLE SUMMARIES

The Sample and QC Summary Reports show all samples, including QC samples, reported in one SDG. These reports cross-reference client and lab sample identifiers.

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches (lab groupings reflecting how work was organized) relevant to the reported SDG with information necessary to check the completeness and consistency of the SDG.

WORK SUMMARY

The Work Summary Report shows all samples and work done on them relevant to the reported SDG.

METHOD BLANKS

The Method Blank Reports, one for each Method Blank relevant to the SDG, show all results and primary supporting information for the blanks.

LAB CONTROL SAMPLES

The Lab Control Sample Reports, one for each Lab Control Sample relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 10/27/00

SDG 7513
Contact Melissa C. Mannion

Client Hanford
Contract TRC-SBB-207925
Case no SDG_H1067

ABOUT THE DATA SUMMARY SECTION

DUPLICATES

The Duplicate Reports, one for each Duplicate and Original sample pair relevant to the SDG, show all results, differences and primary supporting information for these QC samples.

MATRIX SPIKES

The Matrix Spike Reports, one for each Spiked and Original sample pair relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DATA SHEETS

The Data Sheet Reports, one for each client sample in the SDG, show all results and primary supporting information for these samples.

METHOD SUMMARIES

The Method Summary Reports, one for each test used in the SDG, show all results, QC and method performance data for one analyte on one or two pages. (A test is a short code for the method used to do certain work to the client's specification.)

REPORT GUIDES

The Report Guides, one for each of the above groups of reports, have documentation on how to read the associated reports.

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 10/27/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

SAMPLE SUMMARY

SDG 7513
Contact Melissa C. Mannion

Client Hanford
Contract TRC-SBB-207925
Case no SDG H1067

CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	LAB SAMPLE ID	SAF NO	CHAIN OF CUSTODY	COLLECTED
B107K2	200 Area - 202 S #9	SOLID		R010020-01	B00-076	B00-076-13	09/27/00 08:00
B107K5	200 Area - 276 S #12	SOLID		R010020-02	B00-076	B00-076-16	09/27/00 08:35
B107K6	200 Area - 291 S #13	SOLID		R010020-03	B00-076	B00-076-17	09/26/00 09:50
B107K9	2715-S #15	SOLID		R010020-04	B00-076	B00-076-13	09/27/00 09:15
B107L0	200 Area - 2718 S #16	SOLID		R010020-05	B00-076	B00-076-21	09/26/00 10:35
B107L2	200 Area - 2718 S #16	SOLID		R010020-06	B00-076	B00-076-21	09/26/00 10:35
Method Blank		SOLID		R010020-08	B00-076		
Lab Control Sample		SOLID		R010020-07	B00-076		
Duplicate (R010020-04)	2715-S #15	SOLID		R010020-09	B00-076		09/27/00 09:15

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-CS
Version 3.06
Report date 10/27/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

QC SUMMARY

SDG 7513
Contact Melissa C. Mannion

Client Hanford
Contract TRC-SBB-207925
Case no SDG H1067

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% SOLIDS	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	DAYS SINCE COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
7513	B00-076-13	B107K2	SOLID	100.0			10/04/00	7	R010020-01	7513-001
		B107K9	SOLID	100.0			10/04/00	7	R010020-04	7513-004
	B00-076-16	B107K5	SOLID	100.0			10/04/00	7	R010020-02	7513-002
	B00-076-17	B107K6	SOLID	100.0			10/04/00	8	R010020-03	7513-003
	B00-076-21	B107L0	SOLID	100.0			10/04/00	8	R010020-05	7513-005
		B107L2	SOLID	100.0			10/04/00	8	R010020-06	7513-006
		Method Blank	SOLID						R010020-08	7513-008
		Lab Control Sample	SOLID						R010020-07	7513-007
		Duplicate (R010020-04)	SOLID	100.0			10/04/00	7	R010020-09	7513-009

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-QS
Version 3.06
Report date 10/27/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

PREP BATCH SUMMARY

SDG 7513
Contact Melissa C. Mannion

Client Hanford
Contract TRC-SBB-207925
Case no SDG H1067

TEST	MATRIX	METHOD	PREPARATION BATCH	ERROR 2σ %	PLANCHETS ANALYZED CLIENT	MORE	RE	BLANK	LCS	DUP/ORIG	MS/ORIG	QUALIFIERS
Alpha Spectroscopy												
AM	SOLID	Americium 241 in Soil	6955-137	5.0	6			1	1	1/1		
PU	SOLID	Plutonium, Isotopic in Solids	6955-137	5.0	6			1	1	1/1		
U	SOLID	Uranium, Isotopic in Soil	6955-137	5.0	2			1	1	1/1		
Beta Counting												
SR	SOLID	Total Strontium in Soil	6955-137	10.0	6			1	1	1/1		
Gas Proportional Counting												
93A	SOLID	Gross Alpha in Soil	6955-137	20.0	6			1	1	1/1		
93B	SOLID	Gross Beta in Soil	6955-137	15.0	6			1	1	1/1		
Gamma Spectroscopy												
GAM	SOLID	Gamma Scan	6955-137	15.0	6			1	1	1/1		

Duplicates and Matrix Spikes are those with original (Client) sample in this Sample Delivery Group.
Blank and LCS planchets are those in the same preparation batch as some Client, Duplicate or Spike sample.

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-PBS
Version 3.06
Report date 10/27/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

WORK SUMMARY

SDG 7513
Contact Melissa C. Mannion

Client Hanford
Contract TRC-SBB-207925
Case no SDG H1067

CLIENT SAMPLE ID / LOCATION / CUSTODY	SAF No	MATRIX	LAB SAMPLE ID / COLLECTED / RECEIVED	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
B107K2			R010020-01	7513-001	93A/93		10/14/00	10/27/00	MCM	Gross Alpha in Soil
200 Area - 202 S #9		SOLID	09/27/00	7513-001	93B/93		10/14/00	10/27/00	MCM	Gross Beta in Soil
B00-076-13	B00-076		10/04/00	7513-001	AM		10/19/00	10/27/00	MCM	Americium 241 in Soil
				7513-001	GAM		10/12/00	10/27/00	MCM	Gamma Scan
				7513-001	PU		10/17/00	10/27/00	MCM	Plutonium, Isotopic in Solids
				7513-001	SR		10/18/00	10/27/00	MCM	Total Strontium in Soil
				7513-001	U		10/13/00	10/27/00	MCM	Uranium, Isotopic in Soil
B107K5			R010020-02	7513-002	93A/93		10/14/00	10/27/00	MCM	Gross Alpha in Soil
200 Area - 276 S #12		SOLID	09/27/00	7513-002	93B/93		10/14/00	10/27/00	MCM	Gross Beta in Soil
B00-076-16	B00-076		10/04/00	7513-002	AM		10/19/00	10/27/00	MCM	Americium 241 in Soil
				7513-002	GAM		10/12/00	10/27/00	MCM	Gamma Scan
				7513-002	PU		10/17/00	10/27/00	MCM	Plutonium, Isotopic in Solids
				7513-002	SR		10/18/00	10/27/00	MCM	Total Strontium in Soil
B107K6			R010020-03	7513-003	93A/93		10/16/00	10/27/00	MCM	Gross Alpha in Soil
200 Area - 291 S #13		SOLID	09/26/00	7513-003	93B/93		10/16/00	10/27/00	MCM	Gross Beta in Soil
B00-076-17	B00-076		10/04/00	7513-003	AM	R1	10/26/00	10/27/00	MCM	Americium 241 in Soil
				7513-003	GAM		10/12/00	10/27/00	MCM	Gamma Scan
				7513-003	PU		10/17/00	10/27/00	MCM	Plutonium, Isotopic in Solids
				7513-003	SR		10/18/00	10/27/00	MCM	Total Strontium in Soil
B107K9			R010020-04	7513-004	93A/93		10/16/00	10/27/00	MCM	Gross Alpha in Soil
2715-S #15		SOLID	09/27/00	7513-004	93B/93		10/16/00	10/27/00	MCM	Gross Beta in Soil
B00-076-13	B00-076		10/04/00	7513-004	AM		10/19/00	10/27/00	MCM	Americium 241 in Soil
				7513-004	GAM		10/12/00	10/27/00	MCM	Gamma Scan
				7513-004	PU		10/17/00	10/27/00	MCM	Plutonium, Isotopic in Solids
				7513-004	SR		10/18/00	10/27/00	MCM	Total Strontium in Soil
				7513-004	U		10/13/00	10/27/00	MCM	Uranium, Isotopic in Soil
B107L0			R010020-05	7513-005	93A/93		10/16/00	10/27/00	MCM	Gross Alpha in Soil
200 Area - 2718 S #16		SOLID	09/26/00	7513-005	93B/93		10/16/00	10/27/00	MCM	Gross Beta in Soil
B00-076-21	B00-076		10/04/00	7513-005	AM		10/19/00	10/27/00	MCM	Americium 241 in Soil
				7513-005	GAM		10/12/00	10/27/00	MCM	Gamma Scan
				7513-005	PU		10/17/00	10/27/00	MCM	Plutonium, Isotopic in Solids
				7513-005	SR		10/18/00	10/27/00	MCM	Total Strontium in Soil

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-CWS
Version 3.06
Report date 10/27/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

SDG 7513
Contact Melissa C. Mannion

WORK SUMMARY, cont.

Client Hanford
Contract TRC-SBB-207925
Case no SDG H1067

CLIENT SAMPLE ID / LOCATION / CUSTODY	SAF No	MATRIX	LAB SAMPLE ID / COLLECTED / RECEIVED	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
B107L2			R010020-06	7513-006	93A/93		10/16/00	10/27/00	MCM	Gross Alpha in Soil
200 Area - 2718 S #16		SOLID	09/26/00	7513-006	93B/93		10/16/00	10/27/00	MCM	Gross Beta in Soil
B00-076-21	B00-076		10/04/00	7513-006	AM		10/19/00	10/27/00	MCM	Americium 241 in Soil
				7513-006	GAM		10/12/00	10/27/00	MCM	Gamma Scan
				7513-006	PU		10/17/00	10/27/00	MCM	Plutonium, Isotopic in Solids
				7513-006	SR		10/18/00	10/27/00	MCM	Total Strontium in Soil
Method Blank			R010020-08	7513-008	93A/93		10/16/00	10/27/00	MCM	Gross Alpha in Soil
		SOLID		7513-008	93B/93		10/16/00	10/27/00	MCM	Gross Beta in Soil
	B00-076			7513-008	AM		10/20/00	10/27/00	MCM	Americium 241 in Soil
				7513-008	GAM		10/13/00	10/27/00	MCM	Gamma Scan
				7513-008	PU		10/17/00	10/27/00	MCM	Plutonium, Isotopic in Solids
				7513-008	SR		10/18/00	10/27/00	MCM	Total Strontium in Soil
				7513-008	U		10/13/00	10/27/00	MCM	Uranium, Isotopic in Soil
Lab Control Sample			R010020-07	7513-007	93A/93		10/16/00	10/27/00	MCM	Gross Alpha in Soil
		SOLID		7513-007	93B/93		10/16/00	10/27/00	MCM	Gross Beta in Soil
	B00-076			7513-007	AM		10/19/00	10/27/00	MCM	Americium 241 in Soil
				7513-007	GAM		10/13/00	10/27/00	MCM	Gamma Scan
				7513-007	PU		10/17/00	10/27/00	MCM	Plutonium, Isotopic in Solids
				7513-007	SR		10/18/00	10/27/00	MCM	Total Strontium in Soil
				7513-007	U		10/13/00	10/27/00	MCM	Uranium, Isotopic in Soil
Duplicate (R010020-04)			R010020-09	7513-009	93A/93		10/16/00	10/27/00	MCM	Gross Alpha in Soil
2715-S #15		SOLID	09/27/00	7513-009	93B/93		10/16/00	10/27/00	MCM	Gross Beta in Soil
	B00-076		10/04/00	7513-009	AM		10/23/00	10/27/00	MCM	Americium 241 in Soil
				7513-009	GAM		10/13/00	10/27/00	MCM	Gamma Scan
				7513-009	PU		10/17/00	10/27/00	MCM	Plutonium, Isotopic in Solids
				7513-009	SR		10/18/00	10/27/00	MCM	Total Strontium in Soil
				7513-009	U		10/13/00	10/27/00	MCM	Uranium, Isotopic in Soil

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-CWS
Version 3.06
Report date 10/27/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

SDG 7513
Contact Melissa C. Mannion

WORK SUMMARY, cont.

Client Hanford
Contract TRC-SBB-207925
Case no SDG H1067

COUNTS OF TESTS BY SAMPLE TYPE

TEST	SAF No	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP SPIKE	TOTAL
93A/93	B00-076	Gross Alpha in Soil	900.0_ALPHABETA_GPC	6			1	1	1	9
93B/93	B00-076	Gross Beta in Soil	900.0_ALPHABETA_GPC	6			1	1	1	9
AM	B00-076	Americium 241 in Soil	AMCMISO_IE_PLATE_AEA	6			1	1	1	9
GAM	B00-076	Gamma Scan	GAMMA_GS	6			1	1	1	9
PU	B00-076	Plutonium, Isotopic in Solids	PUISO_PLATE_AEA	6			1	1	1	9
SR	B00-076	Total Strontium in Soil	SRTOT_SEP_PRECIP_GPC	6			1	1	1	9
U	B00-076	Uranium, Isotopic in Soil	UISO_PLATE_AEA	2			1	1	1	5
TOTALS				38			7	7	7	59

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-CWS
Version 3.06
Report date 10/27/00

TMA / RICHMOND
SAMPLE DELIVERY GROUP H1067

R010020-08 Method Blank

METHOD BLANK

SDG	7513	Client/Case no	Hanford SDG H1067
Contact	Melissa C. Mannion	Contract	TRC-SBB-207925
Lab sample id	R010020-08	Client sample id	Method Blank
Dept sample id	7513-008	Material/Matrix	SOLID
		SAF No	B00-076

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Gross Alpha	12587-46-1	-1.21	1.3	3.6	10	U	93A
Gross Beta	12587-47-2	-1.09	3.5	6.2	15	U	93B
Total Strontium	SR-RAD	-0.020	0.14	0.20	1.0	U	SR
Uranium 233	U-233/234	0.045	0.045	0.17	1.0	U	U
Uranium 235	15117-96-1	0	0.055	0.21	1.0	U	U
Uranium 238	U-238	0	0.045	0.17	1.0	U	U
Plutonium 238	13981-16-3	-0.007	0.013	0.037	1.0	U	PU
Plutonium 239/240	PU-239/240	0.003	0.020	0.041	1.0	U	PU
Americium 241	14596-10-2	-0.003	0.018	0.038	1.0	U	AM
Potassium 40	13966-00-2	U		2.7		U	GAM
Cobalt 60	10198-40-0	U		0.31	0.050	U	GAM
Cesium 137	10045-97-3	U		0.28	0.10	U	GAM
Radium 226	13982-63-3	U		0.47	0.10	U	GAM
Radium 228	15262-20-1	U		1.0	0.20	U	GAM
Europium 152	14683-23-9	U		0.59	0.10	U	GAM
Europium 154	15585-10-1	U		0.81	0.10	U	GAM
Europium 155	14391-16-3	U		0.33	0.10	U	GAM
Thorium 228	14274-82-9	U		0.26		U	GAM
Thorium 232	TH-232	U		1.0		U	GAM
Uranium 235	15117-96-1	U		0.56		U	GAM
Uranium 238	U-238	U		31		U	GAM
Americium 241	14596-10-2	U		0.21		U	GAM

SM & T Asbestos Abatement Sampling

QC-BLANK 36106

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	10/27/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

R010020-07

Lab Control Sample

LAB CONTROL SAMPLE

SDG 7513
Contact Melissa C. Mannion

Client/Case no Hanford SDG H1067
Case no TRC-SBB-207925

Lab sample id R010020-07
Dept sample id 7513-007

Client sample id Lab Control Sample
Material/Matrix SOLID
SAF No B00-076

ANALYTE	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST	ADDED pCi/g	2σ ERR pCi/g	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS
Gross Alpha	253	17	4.0	10		93A	201	8.0	126	60-140	70-130
Gross Beta	222	11	7.2	15		93B	221	8.8	100	75-125	70-130
Total Strontium	13.8	0.42	0.18	1.0		SR	12.2	0.49	113	81-119	80-120
Uranium 233	9.98	1.2	0.54	1.0		U	9.28	0.37	108	78-122	80-120
Uranium 235	7.46	0.98	0.15	1.0		U	7.54	0.30	99	78-122	80-120
Uranium 238	10.6	1.2	0.52	1.0		U	10.1	0.40	105	80-120	80-120
Plutonium 238	9.37	0.66	0.036	1.0		PU	9.94	0.40	94	86-114	80-120
Plutonium 239/240	9.94	0.69	0.025	1.0		PU	10.6	0.42	94	87-113	80-120
Americium 241	8.24	0.59	0.045	1.0		AM	9.56	0.38	86	87-113	80-120
Cobalt 60	11.3	0.96	0.52	0.050		GAM	12.1	0.48	93	75-125	80-120
Cesium 137	13.1	0.92	0.68	0.10		GAM	13.3	0.53	98	75-125	80-120

SM & T Asbestos Abatement Sampling

QC-LCS 36105

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-LCS
Version 3.06
Report date 10/27/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

R010020-09 B107K9

DUPLICATE

SDG	7513			Client/Case no	Hanford SDG H1067
Contact	Melissa C. Mannion			Case no	TRC-SBB-207925
	DUPLICATE		ORIGINAL		
Lab sample id	R010020-09	Lab sample id	R010020-04	Client sample id	B107K9
Dept sample id	7513-009	Dept sample id	7513-004	Location/Matrix	2715-S #15 SOLID
		Received	10/04/00	Collected	09/27/00 09:15
% solids	100.0	% solids	100.0	Custody/SAF No	B00-076-13 B00-076

ANALYTE	DUPLICATE pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST	ORIGINAL pCi/g	2σ ERR (COUNT)	MDA pCi/g	QUALI-FIERS	RPD %	3σ TOT	PROT LIMIT
Gross Alpha	1.54	2.7	4.5	10	U	93A	0.417	2.2	4.2	U	-		
Gross Beta	6.53	4.4	7.1	15	U	93B	7.30	4.1	6.4	J	11	134	
Total Strontium	0.066	0.15	0.19	1.0	U	SR	0.107	0.12	0.17	U	-		
Uranium 233	0.173	0.10	0.13	1.0	J	U	0.169	0.15	0.18	U	2	158	
Uranium 235	0.021	0.042	0.16	1.0	U	U	0.029	0.058	0.22	U	-		
Uranium 238	0.156	0.10	0.13	1.0	J	U	0.145	0.098	0.18	U	7	140	
Plutonium 238	0.007	0.020	0.042	1.0	U	PU	0.029	0.033	0.046	U	-		
Plutonium 239/240	0.041	0.027	0.037	1.0	J	PU	0.067	0.042	0.051	J	48	139	
Americium 241	0.035	0.044	0.063	1.0	U	AM	0.007	0.014	0.027	U	-		
Potassium 40	1.41	0.94	0.75			GAM	U		8.5	U	143	262	
Cobalt 60	U		0.087	0.050	U	GAM	U		0.29	U	-		
Cesium 137	U		0.10	0.10	U	GAM	0.344	0.27	0.31		110	198	
Radium 226	0.132	0.12	0.13	0.10		GAM	U		0.61	U	129	254	
Radium 228	U		0.36	0.20	U	GAM	U		1.3	U	-		
Europium 152	U		0.20	0.10	U	GAM	U		0.66	U	-		
Europium 154	U		0.24	0.10	U	GAM	U		0.87	U	-		
Europium 155	U		0.17	0.10	U	GAM	U		0.50	U	-		
Thorium 228	U		0.12		U	GAM	U		0.37	U	-		
Thorium 232	U		0.36		U	GAM	U		1.3	U	-		
Uranium 235	U		0.27		U	GAM	U		0.93	U	-		
Uranium 238	U		10		U	GAM	U		32	U	-		
Americium 241	U		0.19		U	GAM	U		0.24	U	-		

SM & T Asbestos Abatement Sampling

QC-DUP#4 36107

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-DUP
Version 3.06
Report date 10/27/00

TMA / RICHMOND

SAMPLE DELIVERY GROUP H1067

R010020-01 B107K2

DATA SHEET

SDG	7513	Client/Case no	Hanford SDG_H1067
Contact	Melissa C. Mannion	Contract	TRC-SBB-207925
Lab sample id	R010020-01	Client sample id	B107K2
Dept sample id	7513-001	Location/Matrix	200 Area - 202 S #9 SOLID
Received	10/04/00	Collected	09/27/00 08:00
% solids	100.0	Custody/SAF No	B00-076-13 B00-076

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Gross Alpha	12587-46-1	1.06	2.0	3.4	10	U	93A
Gross Beta	12587-47-2	-0.676	3.6	6.3	15	U	93B
Total Strontium	SR-RAD	-0.005	0.14	0.19	1.0	U	SR
Uranium 233	U-233/234	0.081	0.097	0.12	1.0	U	U
Uranium 235	15117-96-1	0	0.039	0.15	1.0	U	U
Uranium 238	U-238	0.081	0.065	0.12	1.0	U	U
Plutonium 238	13981-16-3	-0.015	0.015	0.051	1.0	U	PU
Plutonium 239/240	PU-239/240	0.015	0.015	0.029	1.0	U	PU
Americium 241	14596-10-2	0.010	0.020	0.037	1.0	U	AM
Potassium 40	13966-00-2	U		3.3		U	GAM
Cobalt 60	10198-40-0	U		0.16	0.050	U	GAM
Cesium 137	10045-97-3	U		0.20	0.10	U	GAM
Radium 226	13982-63-3	U		0.39	0.10	U	GAM
Radium 228	15262-20-1	U		0.78	0.20	U	GAM
Europium 152	14683-23-9	U		0.48	0.10	U	GAM
Europium 154	15585-10-1	U		0.55	0.10	U	GAM
Europium 155	14391-16-3	U		0.43	0.10	U	GAM
Thorium 228	14274-82-9	U		0.34		U	GAM
Thorium 232	TH-232	U		0.78		U	GAM
Uranium 235	15117-96-1	U		0.71		U	GAM
Uranium 238	U-238	U		20		U	GAM
Americium 241	14596-10-2	U		0.45		U	GAM

SM & T Asbestos Abatement Sampling

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	10/27/00

TMA / RICHMOND

SAMPLE DELIVERY GROUP H1067

R010020-02 B107K5

DATA SHEET

SDG	7513	Client/Case no	Hanford SDG H1067
Contact	Melissa C. Mannion	Contract	TRC-SBB-207925
Lab sample id	R010020-02	Client sample id	B107K5
Dept sample id	7513-002	Location/Matrix	200 Area - 276 S #12 SOLID
Received	10/04/00	Collected	09/27/00 08:35
% solids	100.0	Custody/SAF No	B00-076-16 B00-076

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Gross Alpha	12587-46-1	0.008	2.2	4.3	10	U	93A
Gross Beta	12587-47-2	1.28	3.4	5.7	15	U	93B
Total Strontium	SR-RAD	0.154	0.088	0.13	1.0	J	SR
Plutonium 238	13981-16-3	0	0.028	0.078	1.0	U	PU
Plutonium 239/240	PU-239/240	0.491	0.13	0.067	1.0	J	PU
Americium 241	14596-10-2	0.071	0.040	0.049	1.0	J	AM
Potassium 40	13966-00-2	2.21	2.0	1.9			GAM
Cobalt 60	10198-40-0	U		0.20	0.050	U	GAM
Cesium 137	10045-97-3	0.869	0.21	0.19	0.10		GAM
Radium 226	13982-63-3	U		0.37	0.10	U	GAM
Radium 228	15262-20-1	U		0.79	0.20	U	GAM
Europium 152	14683-23-9	U		0.48	0.10	U	GAM
Europium 154	15585-10-1	U		0.51	0.10	U	GAM
Europium 155	14391-16-3	U		0.35	0.10	U	GAM
Thorium 228	14274-82-9	0.276	0.27	0.28		U	GAM
Thorium 232	TH-232	U		0.79		U	GAM
Uranium 235	15117-96-1	U		0.57		U	GAM
Uranium 238	U-238	U		22		U	GAM
Americium 241	14596-10-2	U		0.41		U	GAM

SM & T Asbestos Abatement Sampling

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	10/27/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

R010020-03 B107K6

DATA SHEET

SDG	7513	Client/Case no	Hanford SDG H1067
Contact	Melissa C. Mannion	Contract	TRC-SBB-207925
Lab sample id	R010020-03	Client sample id	B107K6
Dept sample id	7513-003	Location/Matrix	200 Area - 291 S #13 SOLID
Received	10/04/00	Collected	09/26/00 09:50
% solids	100.0	Custody/SAF No	B00-076-17 B00-076

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Gross Alpha	12587-46-1	5.20	3.5	4.8	10	J	93A
Gross Beta	12587-47-2	7.93	3.9	5.7	15	J	93B
Total Strontium	SR-RAD	0.054	0.14	0.18	1.0	U	SR
Plutonium 238	13981-16-3	-0.016	0.019	0.048	1.0	U	PU
Plutonium 239/240	PU-239/240	0.019	0.019	0.035	1.0	U	PU
Americium 241	14596-10-2	0.011	0.064	0.12	1.0	U	AM
Potassium 40	13966-00-2	U		9.7		U	GAM
Cobalt 60	10198-40-0	U		0.30	0.050	U	GAM
Cesium 137	10045-97-3	U		0.33	0.10	U	GAM
Radium 226	13982-63-3	U		0.69	0.10	U	GAM
Radium 228	15262-20-1	U		1.5	0.20	U	GAM
Europium 152	14683-23-9	U		0.73	0.10	U	GAM
Europium 154	15585-10-1	U		0.88	0.10	U	GAM
Europium 155	14391-16-3	U		0.56	0.10	U	GAM
Thorium 228	14274-82-9	U		0.43		U	GAM
Thorium 232	TH-232	U		1.5		U	GAM
Uranium 235	15117-96-1	U		1.0		U	GAM
Uranium 238	U-238	U		36		U	GAM
Americium 241	14596-10-2	U		0.25		U	GAM

SM & T Asbestos Abatement Sampling

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	10/27/00

TMA / RICHMOND

SAMPLE DELIVERY GROUP H1067

R010020-04 B107K9

DATA SHEET

SDG	7513	Client/Case no	Hanford SDG H1067
Contact	Melissa C. Mannion	Contract	TRC-SBB-207925
Lab sample id	R010020-04	Client sample id	B107K9
Dept sample id	7513-004	Location/Matrix	2715-S #15 SOLID
Received	10/04/00	Collected	09/27/00 09:15
% solids	100.0	Custody/SAF No	B00-076-13 B00-076

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Gross Alpha	12587-46-1	0.417	2.2	4.2	10	U	93A
Gross Beta	12587-47-2	7.30	4.1	6.4	15	J	93B
Total Strontium	SR-RAD	0.107	0.12	0.17	1.0	U	SR
Uranium 233	U-233/234	0.169	0.15	0.18	1.0	U	U
Uranium 235	15117-96-1	0.029	0.058	0.22	1.0	U	U
Uranium 238	U-238	0.145	0.098	0.18	1.0	U	U
Plutonium 238	13981-16-3	0.029	0.033	0.046	1.0	U	PU
Plutonium 239/240	PU-239/240	0.067	0.042	0.051	1.0	J	PU
Americium 241	14596-10-2	0.007	0.014	0.027	1.0	U	AM
Potassium 40	13966-00-2	U		8.5		U	GAM
Cobalt 60	10198-40-0	U		0.29	0.050	U	GAM
Cesium 137	10045-97-3	0.344	0.27	0.31	0.10		GAM
Radium 226	13982-63-3	U		0.61	0.10	U	GAM
Radium 228	15262-20-1	U		1.3	0.20	U	GAM
Europium 152	14683-23-9	U		0.66	0.10	U	GAM
Europium 154	15585-10-1	U		0.87	0.10	U	GAM
Europium 155	14391-16-3	U		0.50	0.10	U	GAM
Thorium 228	14274-82-9	U		0.37		U	GAM
Thorium 232	TH-232	U		1.3		U	GAM
Uranium 235	15117-96-1	U		0.93		U	GAM
Uranium 238	U-238	U		32		U	GAM
Americium 241	14596-10-2	U		0.24		U	GAM

SM & T Asbestos Abatement Sampling

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	10/27/00

TMA / RICHMOND

SAMPLE DELIVERY GROUP H1067

R010020-05 B107L0

DATA SHEET

SDG	7513	Client/Case no	Hanford SDG H1067
Contact	Melissa C. Mannion	Contract	TRC-SBB-207925
Lab sample id	R010020-05	Client sample id	B107L0
Dept sample id	7513-005	Location/Matrix	200 Area - 2718 S #16 SOLID
Received	10/04/00	Collected	09/26/00 10:35
% solids	100.0	Custody/SAF No	B00-076-21 B00-076

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Gross Alpha	12587-46-1	4.44	3.0	4.0	10	J	93A
Gross Beta	12587-47-2	6.04	3.7	5.8	15	J	93B
Total Strontium	SR-RAD	2.39	0.19	0.13	1.0		SR
Plutonium 238	13981-16-3	0.018	0.046	0.081	1.0	U	PU
Plutonium 239/240	PU-239/240	0.211	0.066	0.056	1.0	J	PU
Americium 241	14596-10-2	0.053	0.036	0.042	1.0	J	AM
Potassium 40	13966-00-2	U		4.1		U	GAM
Cobalt 60	10198-40-0	U		0.24	0.050	U	GAM
Cesium 137	10045-97-3	0.990	0.32	0.33	0.10		GAM
Radium 226	13982-63-3	U		0.76	0.10	U	GAM
Radium 228	15262-20-1	U		1.0	0.20	U	GAM
Europium 152	14683-23-9	U		0.59	0.10	U	GAM
Europium 154	15585-10-1	U		0.79	0.10	U	GAM
Europium 155	14391-16-3	U		0.54	0.10	U	GAM
Thorium 228	14274-82-9	0.460	0.33	0.38			GAM
Thorium 232	TH-232	U		1.0		U	GAM
Uranium 235	15117-96-1	U		0.88		U	GAM
Uranium 238	U-238	U		29		U	GAM
Americium 241	14596-10-2	U		0.57		U	GAM

SM & T Asbestos Abatement Sampling

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	10/27/00

TMA / RICHMOND

SAMPLE DELIVERY GROUP H1067

R010020-06 B107L2

DATA SHEET

SDG	7513	Client/Case no	Hanford	SDG H1067	
Contact	Melissa C. Mannion	Contract	TRC-SBB-207925		
Lab sample id	R010020-06	Client sample id	B107L2		
Dept sample id	7513-006	Location/Matrix	200 Area - 2718 S #16	SOLID	
Received	10/04/00	Collected	09/26/00 10:35		
% solids	100.0	Custody/SAF No	B00-076-21	B00-076	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Gross Alpha	12587-46-1	3.03	2.5	3.5	10	U	93A
Gross Beta	12587-47-2	8.93	4.6	7.0	15	J	93B
Total Strontium	SR-RAD	2.36	0.19	0.14	1.0		SR
Plutonium 238	13981-16-3	0.069	0.049	0.066	1.0	J	PU
Plutonium 239/240	PU-239/240	0.236	0.071	0.047	1.0	J	PU
Americium 241	14596-10-2	0.102	0.075	0.11	1.0	U	AM
Potassium 40	13966-00-2	2.99	1.1	0.80			GAM
Cobalt 60	10198-40-0	U		0.091	0.050	U	GAM
Cesium 137	10045-97-3	0.902	0.12	0.10	0.10		GAM
Radium 226	13982-63-3	0.296	0.15	0.17	0.10		GAM
Radium 228	15262-20-1	U		0.50	0.20	U	GAM
Europium 152	14683-23-9	U		0.23	0.10	U	GAM
Europium 154	15585-10-1	U		0.26	0.10	U	GAM
Europium 155	14391-16-3	U		0.19	0.10	U	GAM
Thorium 228	14274-82-9	0.304	0.13	0.14			GAM
Thorium 232	TH-232	U		0.50		U	GAM
Uranium 235	15117-96-1	U		0.30		U	GAM
Uranium 238	U-238	U		11		U	GAM
Americium 241	14596-10-2	U		0.24		U	GAM

SM & T Asbestos Abatement Sampling

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	10/27/00

Test AM Matrix SOLID
SDG 7513
Contact Melissa C. Mannion

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

METHOD SUMMARY

AMERICIUM 241 IN SOIL
ALPHA SPECTROSCOPY

Client Hanford
Contract TRC-SBB-207925
Contract SDG H1067

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	Americium 241
Preparation batch 6955-137					
B107K2	R010020-01			7513-001	U
B107K5	R010020-02			7513-002	0.071 J
B107K6	R010020-03		R1	7513-003	U
B107K9	R010020-04			7513-004	U
B107L0	R010020-05			7513-005	0.053 J
B107L2	R010020-06			7513-006	U
BLK (QC ID=36106)	R010020-08			7513-008	U
LCS (QC ID=36105)	R010020-07			7513-007	LOW
Duplicate (R010020-04)	R010020-09			7513-009	- U
Nominal values and limits from method				RDLs (pCi/g)	1.0

SM & T Asbestos Abatement Sampling

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	MDA pCi/g	ALIQ g	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 6955-137	2σ prep error 5.0 %				Reference Lab Notebook 6955 pg. 137											
B107K2	R010020-01			0.037	0.500			75		945			22	10/19/00	10/19	SS-036
B107K5	R010020-02			0.049	0.500			67		945			22	10/19/00	10/19	SS-038
B107K6	R010020-03		R1	0.12	0.500			39		569			30	10/19/00	10/26	SS-027
B107K9	R010020-04			0.027	0.500			70		945			22	10/19/00	10/19	SS-042
B107L0	R010020-05			0.042	0.500			59		951			23	10/19/00	10/19	SS-043
B107L2	R010020-06			0.11	0.500			46		951			23	10/19/00	10/19	SS-044
BLK (QC ID=36106)	R010020-08			0.038	0.500			91		845				10/19/00	10/20	SS-045
LCS (QC ID=36105)	R010020-07			0.045	0.500			68		951				10/19/00	10/19	SS-045
Duplicate (R010020-04) (QC ID=36107)	R010020-09			0.063	0.500			53		1045			26	10/19/00	10/23	SS-027
Nominal values and limits from method				1.0	0.500			20-105		700	100		180			

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-CMS
Version 3.06
Report date 10/27/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

Test	AM
Matrix	SOLID
SDG	7513
Contact	Melissa C. Mannion

METHOD SUMMARY, cont.

AMERICIUM 241 IN SOIL

ALPHA SPECTROSCOPY

Client	Hanford
Contract	TRC-SBB-207925
Contract	SDG H1067

PROCEDURES	REFERENCE	AMCMISO_IE_PLATE_AEA
	CP-060	Soil Preparation, rev 2
	CP-070	Soil Dissolution, < 1.0g Aliquot, rev 3
	CP-940	Plutonium Separation and Purification, rev 2
	CP-960	Americium-Curium Purification, Large Aliquot, rev 4
	CP-008	Heavy Element Electroplating, rev 3

AVERAGES ± 2 SD	MDA	0.059	±	0.067
FOR 9 SAMPLES	YIELD	63	±	32

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-CMS
Version	3.06
Report date	10/27/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

Test PU Matrix SOLID
SDG 7513
Contact Melissa C. Mannion

METHOD SUMMARY

PLUTONIUM, ISOTOPIC IN SOLIDS
ALPHA SPECTROSCOPY

Client Hanford
Contract TRC-SBB-207925
Contract SDG H1067

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	Plutonium 238	Plutonium 239/240
Preparation batch 6955-137						
B107K2	R010020-01			7513-001	U	U
B107K5	R010020-02			7513-002	U	0.491 J
B107K6	R010020-03			7513-003	U	U
B107K9	R010020-04			7513-004	U	0.067 J
B107L0	R010020-05			7513-005	U	0.211 J
B107L2	R010020-06			7513-006	0.069 J	0.236 J
BLK (QC ID=36106)	R010020-08			7513-008	U	U
LCS (QC ID=36105)	R010020-07			7513-007	ok	ok
Duplicate (R010020-04)	R010020-09			7513-009	- U	ok J
Nominal values and limits from method SM & T Asbestos Abatement Sampling				RDLs (pCi/g)	1.0	1.0

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	MAX MDA pCi/g	ALIQ g	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 6955-137 2σ prep error 5.0 % Reference Lab Notebook 6955 pg. 137																
B107K2	R010020-01			0.051	0.500			67		921			20	10/16/00	10/17	SS-045
B107K5	R010020-02			0.078	0.500			48		753			20	10/16/00	10/17	SS-027
B107K6	R010020-03			0.048	0.500			88		824			21	10/16/00	10/17	SS-031
B107K9	R010020-04			0.051	0.500			65		824			20	10/16/00	10/17	SS-032
B107L0	R010020-05			0.081	0.500			61		824			21	10/16/00	10/17	SS-033
B107L2	R010020-06			0.066	0.500			56		824			21	10/16/00	10/17	SS-034
BLK (QC ID=36106)	R010020-08			0.041	0.500			88		824				10/16/00	10/17	SS-036
LCS (QC ID=36105)	R010020-07			0.036	0.500			90		824				10/16/00	10/17	SS-035
Duplicate (R010020-04) (QC ID=36107)	R010020-09			0.042	0.500			90		824			20	10/16/00	10/17	SS-038
Nominal values and limits from method				1.0	0.500			20-105		50	100		180			

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-CMS
Version 3.06
Report date 10/27/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

Test	PU
Matrix	SOLID
SDG	7513
Contact	Melissa C. Mannion

METHOD SUMMARY, cont.

PLUTONIUM, ISOTOPIC IN SOLIDS

ALPHA SPECTROSCOPY

Client	Hanford
Contract	TRC-SBB-207925
Contract	SDG H1067

PROCEDURES	REFERENCE	PUISO_PLATE_AEA
	CP-060	Soil Preparation, rev 2
	CP-940	Plutonium Separation and Purification, rev 2
	CP-008	Heavy Element Electroplating, rev 3

AVERAGES ± 2 SD	MDA	0.055	±	0.033
FOR 9 SAMPLES	YIELD	73	±	33

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-CMS
Version	3.06
Report date	10/27/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

METHOD SUMMARY

URANIUM, ISOTOPIC IN SOIL

ALPHA SPECTROSCOPY

Test U Matrix SOLID
SDG 7513
Contact Melissa C. Mannion

Client Hanford
Contract TRC-SBB-207925
Contract SDG H1067

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	1: Uranium 233		2: Uranium 235		3: Uranium 238		RESULT RATIOS (%) 1÷3	2σ	2÷3	2σ
Preparation batch 6955-137														
B107K2	R010020-01			7513-001	U		U		U					
B107K9	R010020-04			7513-004	U		U		U					
BLK (QC ID=36106)	R010020-08			7513-008	U		U		U					
LCS (QC ID=36105)	R010020-07			7513-007	ok		ok		ok					
Duplicate (R010020-04)	R010020-09			7513-009	ok	J	-	U	ok	J	111	96	13	28
Nominal values and limits from method				RDLs (pCi/g)	1.0		1.0		1.0		100		4	
SM & T Asbestos Abatement Sampling										Averages	111		13	

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	MAX MDA pCi/g	ALIQ g	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 6955-137	2σ prep error 5.0 %			Reference Lab Notebook 6955 pg. 137												
B107K2	R010020-01			0.15	0.500			97		150			16	10/13/00	10/13	SS-033
B107K9	R010020-04			0.22	0.500			63		150			16	10/13/00	10/13	SS-034
BLK (QC ID=36106)	R010020-08			0.21	0.500			71		150				10/13/00	10/13	SS-038
LCS (QC ID=36105)	R010020-07			0.54	0.500			95		150				10/13/00	10/13	SS-036
Duplicate (R010020-04) (QC ID=36107)	R010020-09			0.16	0.500			90		150			16	10/13/00	10/13	SS-041
Nominal values and limits from method				1.0	0.500			20-105		150	100		180			

PROCEDURES	REFERENCE	UISO_PLATE_AEA
	CP-911	Uranium in Water and Dissolved Sample by Extraction Chromatography, rev 2
	CP-008	Heavy Element Electroplating, rev 3

AVERAGES ± 2 SD FOR 5 SAMPLES
MDA 0.26 ± 0.32
YIELD 83 ± 31

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-CMS
Version 3.06
Report date 10/27/00

Test SR Matrix SOLID
SDG 7513
Contact Melissa C. Mannion

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

METHOD SUMMARY

TOTAL STRONTIUM IN SOIL
BETA COUNTING

Client Hanford
Contract TRC-SBB-207925
Contract SDG H1067

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	Total Strontium
Preparation batch 6955-137					
B107K2	R010020-01			7513-001	U
B107K5	R010020-02			7513-002	0.154 J
B107K6	R010020-03			7513-003	U
B107K9	R010020-04			7513-004	U
B107L0	R010020-05			7513-005	2.39
B107L2	R010020-06			7513-006	2.36
BLK (QC ID=36106)	R010020-08			7513-008	U
LCS (QC ID=36105)	R010020-07			7513-007	ok
Duplicate (R010020-04)	R010020-09			7513-009	- U
Nominal values and limits from method SM & T Asbestos Abatement Sampling				RDLs (pCi/g)	1.0

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	MDA pCi/g	ALIQ g	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 6955-137 2σ prep error 10.0 % Reference Lab Notebook 6955 pg. 137																
B107K2	R010020-01			0.19	1.00			86		400			21	10/18/00	10/18	GRB-217
B107K5	R010020-02			0.13	1.00			93		200			21	10/18/00	10/18	GRB-218
B107K6	R010020-03			0.18	1.00			89		400			22	10/18/00	10/18	GRB-219
B107K9	R010020-04			0.17	1.00			94		400			21	10/18/00	10/18	GRB-220
B107L0	R010020-05			0.13	1.00			94		200			22	10/18/00	10/18	GRB-220
B107L2	R010020-06			0.14	1.00			93		200			22	10/18/00	10/18	GRB-221
BLK (QC ID=36106)	R010020-08			0.20	1.00			77		400				10/18/00	10/18	GRB-224
LCS (QC ID=36105)	R010020-07			0.18	1.00			92		400				10/18/00	10/18	GRB-223
Duplicate (R010020-04) (QC ID=36107)	R010020-09			0.19	1.00			95		400			21	10/18/00	10/18	GRB-225
Nominal values and limits from method				1.0	1.00			30-105		100			180			

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-CMS
Version 3.06
Report date 10/27/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

Test	SR
Matrix	SOLID
SDG	7513
Contact	Melissa C. Mannion

METHOD SUMMARY, cont.

TOTAL STRONTIUM IN SOIL

BETA COUNTING

Client	Hanford
Contract	TRC-SBB-207925
Contract	SDG H1067

PROCEDURES	REFERENCE	SRTOT_SEP_PRECIP_GPC
	CP-502	Strontium in Solids, rev 2
	CP-519	Strontium Planchet Demounting and Preparation for 90Y Decontamination, rev 2

AVERAGES ± 2 SD	MDA	0.17	±	0.055
FOR 9 SAMPLES	YIELD	90	±	11

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-CMS
Version	3.06
Report date	10/27/00

Test 93A Matrix SOLID
SDG 7513
Contact Melissa C. Mannion

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

METHOD SUMMARY

GROSS ALPHA IN SOIL
GAS PROPORTIONAL COUNTING

Client Hanford
Contract TRC-SBB-207925
Contract SDG H1067

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	Gross Alpha	
Preparation batch 6955-137						
B107K2	R010020-01	93		7513-001	U	
B107K5	R010020-02	93		7513-002	U	
B107K6	R010020-03	93		7513-003	5.20	J
B107K9	R010020-04	93		7513-004	U	
B107L0	R010020-05	93		7513-005	4.44	J
B107L2	R010020-06	93		7513-006	U	
BLK (QC ID=36106)	R010020-08	93		7513-008	U	
LCS (QC ID=36105)	R010020-07	93		7513-007	ok	
Duplicate (R010020-04)	R010020-09	93		7513-009	-	U

Nominal values and limits from method RDLs (pCi/g) 10
SM & T Asbestos Abatement Sampling

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	MDA pCi/g	ALIQ g	PREP FAC	DILU-TION	RESID mg	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 6955-137 2σ prep error 20.0 % Reference Lab Notebook 6955 pg. 137																
B107K2	R010020-01	93		3.4	0.100			27		100			17	10/14/00	10/14	GRB-114
B107K5	R010020-02	93		4.3	0.100			33		100			17	10/14/00	10/14	GRB-115
B107K6	R010020-03	93		4.8	0.100			40		100			20	10/14/00	10/16	GRB-113
B107K9	R010020-04	93		4.2	0.100			41		100			19	10/14/00	10/16	GRB-114
B107L0	R010020-05	93		4.0	0.100			37		100			20	10/14/00	10/16	GRB-115
B107L2	R010020-06	93		3.5	0.100			34		100			20	10/14/00	10/16	GRB-116
BLK (QC ID=36106)	R010020-08	93		3.6	0.100			26		99				10/14/00	10/16	GRB-111
LCS (QC ID=36105)	R010020-07	93		4.0	0.100			27		99				10/14/00	10/16	GRB-110
Duplicate (R010020-04) (QC ID=36107)	R010020-09	93		4.5	0.100			40		99			19	10/14/00	10/16	GRB-112
Nominal values and limits from method				10	0.100			5-250		100			180			

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-CMS
Version 3.06
Report date 10/27/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

Test 93A	Matrix SOLID
SDG 7513	
Contact Melissa C. Mannion	

METHOD SUMMARY, cont.

GROSS ALPHA IN SOIL

GAS PROPORTIONAL COUNTING

Client Hanford	
Contract TRC-SBB-207925	
Contract SDG H1067	

PROCEDURES	REFERENCE	900.0_ALPHABETA_GPC
	CP-060	Soil Preparation, rev 2
	CP-070	Soil Dissolution, < 1.0g Aliquot, rev 3
	CP-170	Soil Preparation for Direct Gross Alpha and Gross Beta Counting, rev 2

AVERAGES ± 2 SD	MDA	4.0	±	0.94
FOR 9 SAMPLES	RESIDUE	34	±	12

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-CMS
Version	3.06
Report date	10/27/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

Test 93B Matrix SOLID
SDG 7513
Contact Melissa C. Mannion

METHOD SUMMARY

GROSS BETA IN SOIL
GAS PROPORTIONAL COUNTING

Client Hanford
Contract TRC-SBB-207925
Contract SDG H1067

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	Gross Beta	
Preparation batch 6955-137						
B107K2	R010020-01	93		7513-001	U	
B107K5	R010020-02	93		7513-002	U	
B107K6	R010020-03	93		7513-003	7.93	J
B107K9	R010020-04	93		7513-004	7.30	J
B107L0	R010020-05	93		7513-005	6.04	J
B107L2	R010020-06	93		7513-006	8.93	J
BLK (QC ID=36106)	R010020-08	93		7513-008	U	
LCS (QC ID=36105)	R010020-07	93		7513-007	ok	
Duplicate (R010020-04)	R010020-09	93		7513-009	ok	U

Nominal values and limits from method RDLs (pCi/g) 15
SM & T Asbestos Abatement Sampling

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	MDA pCi/g	ALIQ g	PREP FAC	DILU-TION	RESID mg	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 6955-137 2σ prep error 15.0 % Reference Lab Notebook 6955 pg. 137																
B107K2	R010020-01	93		6.3	0.100			27		100			17	10/14/00	10/14	GRB-114
B107K5	R010020-02	93		5.7	0.100			33		100			17	10/14/00	10/14	GRB-115
B107K6	R010020-03	93		5.7	0.100			40		100			20	10/14/00	10/16	GRB-113
B107K9	R010020-04	93		6.4	0.100			41		100			19	10/14/00	10/16	GRB-114
B107L0	R010020-05	93		5.8	0.100			37		100			20	10/14/00	10/16	GRB-115
B107L2	R010020-06	93		7.0	0.100			34		100			20	10/14/00	10/16	GRB-116
BLK (QC ID=36106)	R010020-08	93		6.2	0.100			26		99				10/14/00	10/16	GRB-111
LCS (QC ID=36105)	R010020-07	93		7.2	0.100			27		99				10/14/00	10/16	GRB-110
Duplicate (R010020-04) (QC ID=36107)	R010020-09	93		7.1	0.100			40		99			19	10/14/00	10/16	GRB-112
Nominal values and limits from method				15	0.100			5-250		100			180			

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-CMS
Version 3.06
Report date 10/27/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

Test 93B Matrix SOLID
SDG 7513
Contact Melissa C. Mannion

METHOD SUMMARY, cont.

GROSS BETA IN SOIL
GAS PROPORTIONAL COUNTING

Client Hanford
Contract TRC-SBB-207925
Contract SDG H1067

PROCEDURES	REFERENCE	900.0_ALPHABETA_GPC
	CP-060	Soil Preparation, rev 2
	CP-070	Soil Dissolution, < 1.0g Aliquot, rev 3
	CP-170	Soil Preparation for Direct Gross Alpha and Gross Beta Counting, rev 2

AVERAGES ± 2 SD	MDA	6.4	±	1.2
FOR 9 SAMPLES	RESIDUE	34	±	12

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-CMS
Version 3.06
Report date 10/27/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

Test GAM	Matrix SOLID
SDG 7513	
Contact Melissa C. Mannion	

METHOD SUMMARY

GAMMA SCAN

GAMMA SPECTROSCOPY

Client Hanford	
Contract TRC-SBB-207925	
Contract SDG H1067	

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	Cobalt 60		Cesium 137	
Preparation batch 6955-137								
B107K2	R010020-01			7513-001	U		U	
B107K5	R010020-02			7513-002	U		0.869	
B107K6	R010020-03			7513-003	U		U	
B107K9	R010020-04			7513-004	U		0.344	
B107L0	R010020-05			7513-005	U		0.990	
B107L2	R010020-06			7513-006	U		0.902	
BLK (QC ID=36106)	R010020-08			7513-008	U		U	
LCS (QC ID=36105)	R010020-07			7513-007	ok		ok	
Duplicate (R010020-04)	R010020-09			7513-009	-	U	ok	U
Nominal values and limits from method				RDLs (pCi/g)	0.050		0.10	
SM & T Asbestos Abatement Sampling								

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	MAX MDA pCi/g	ALIQ g	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 6955-137	2σ prep error 15.0 % Reference Lab Notebook 6955 pg. 137															
B107K2	R010020-01			0.33	36.7					409			15	10/10/00	10/12	JR,03,00
B107K5	R010020-02			0.43	19.0					411			15	10/10/00	10/12	JR,04,00
B107K6	R010020-03			0.65	24.4					409			16	10/10/00	10/12	JR,07,00
B107K9	R010020-04			0.60	26.8					411			15	10/10/00	10/12	JR,07,00
B107L0	R010020-05			0.52	25.0					540			16	10/10/00	10/12	JR,03,00
B107L2	R010020-06			0.20	33.6					540			16	10/10/00	10/12	JR,04,00
BLK (QC ID=36106)	R010020-08			0.61	19.0					818				10/10/00	10/13	JR,01,00
LCS (QC ID=36105)	R010020-07			0.52	19.0					498				10/10/00	10/13	JR,01,00
Duplicate (R010020-04) (QC ID=36107)	R010020-09			0.17	26.8					851			16	10/10/00	10/13	JR,04,00
Nominal values and limits from method				0.050	19.0					100			180			

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-CMS
Version	3.06
Report date	10/27/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1067

Test GAM	Matrix SOLID
SDG 7513	
Contact Melissa C. Mannion	

METHOD SUMMARY, cont.

GAMMA SCAN

GAMMA SPECTROSCOPY

Client Hanford	
Contract TRC-SBB-207925	
Contract SDG H1067	

PROCEDURES	REFERENCE	GAMMA_GS
	CP-060	Soil Preparation, rev 2
	CP-100	Ge(Li) Preparation for Commercial Samples, rev 2

AVERAGES ± 2 SD	MDA	0.45	±	0.36
FOR 9 SAMPLES	YIELD		±	

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-CMS
Version	3.06
Report date	10/27/00

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-076-13	Page 1 of 1

Collector: Fahlberg	Company Contact: D Jacques	Telephone No.: 373-5299	Project Coordinator: TRENT, SJ
Price Code: 9K	Data Turnaround: 15 Days	Air Quality	
Project Designation: SM&T Asbestos Abatement Sampling	Sampling Location: 200 Area 202 S H1067 (7513) #9	SAF No.: B00-076	
Ice Chest No.: ERC 94-042 (1 of 3) 9-27-00 A70	Field Logbook No.: ~~EL 1517~~ EFL 1133-8	COA: BRIS1K1B80	Method of Shipment: Fed-EX
Shipped To: TMA/RECRA	Offsite Property No.: A000335		Bill of Lading/Air Bill No.: 4235 7953 -9529

POSSIBLE SAMPLE HAZARDS/REMARKS: Samples contain asbestos

Special Handling and/or Storage

SAMPLE ANALYSIS														
Preservation				None	None	None RT 9-28-00								
Type of Container				aG	aG	aG								
No. of Container(s)				0	1									
Volume				250mL	250mL	250mL								
				Isotopic Uranium	See item (1) in Special Instructions.	Metals by ICP (TCLP) - 1311/6010 {Cadmium, Chromium, Lead}								
Sample No.	Matrix *	Sample Date	Sample Time											
B107K2	OTHER SOLID	9-27-00	0800	Y	X	X			D16853					

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By	Date/Time	Received By	Date/Time
Doug Bowers		Doug Bowers	
Doug Bowers	9-27-00/1600	Ref 1A 3728	9-27-00/1600
Removed from Ref 1A 3728	10/3/00 1000	R Y Thoren	10/3/00 1000
R Y Thoren	10/3/00 1000	FedEx	10-3-00
FedEx	10-4-00 10:00	M Corso JR Rowe	10-4-00 10:00

FT 10/3/00

SPECIAL INSTRUCTIONS

(1) Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Isotopic Plutonium; Americium-241; Strontium-89,90 -- Total Sr

FAXED 10/4/00

Samples stored in Ref.# 1A at the 3728 Shipping Facility on 9/27/00
Collector not available to relinquish samples on 10/3/00 for shipment.

RT 10/3/00

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

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

BHI-EE-011 (10/99)

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-076-16	Page 1 of 1

Collector: Fahlberg	Company Contact: D Jacques	Telephone No.: 373-5299 H 1067 -	Project Coordinator: TRENT, SJ
Project Designation: SM&T Asbestos Abatement Sampling	Sampling Location: 200 Area 2765 ~~H(1067)~~ SM #12 (7513)		SAF No.: B00-076
Ice Chest No.: ERC99-042 (10/3/99-27-00)	Field Logbook No.: ~~EL 1517~~ EFL1133-8	COA: BRIS1K1B80	Method of Shipment: Fed-EX
Shipped To: TMA/RECRA	Offsite Property No.: A000335		Bill of Lading/Air Bill No.: 42357953-9829

Price Code: 9K

Data Turnaround: 15 Days

Air Quality ☐

POSSIBLE SAMPLE HAZARDS/REMARKS: Samples contain asbestos

Special Handling and/or Storage

Preservation	None	None									
Type of Container	aG	aG									
No. of Container(s)	1										
Volume	250mL	250mL									
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Metals by ICP (TCLP) - 1311/6010 (Cadmium, Chromium, Lead)									

Sample No.	Matrix *	Sample Date	Sample Time										
B107K5	OTHER SOLID	9-27-00	0835	X	X				B10854				

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By	Date/Time	Received By	Date/Time
Doug Bowman	9/27-00/1600	Stanard 14 A of 1A 3728	9-27-00/1600
Removed from A of 1A 3728	10/3/00 1000	R. Thoren	10/3/00 1000
R. Thoren	10/3/00 1000	FEDEX	10-3-00
Fed Ex	10-4-00 10:40	J Rivera	10-4-00 10:40

SPECIAL INSTRUCTIONS

(1) Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Isotopic Plutonium; Americium-241; Strontium-89,90 -- Total Sr

FAXED 10/4/00

Samples stored in Ref.# 1A at the 3728 Shipping Facility on 9/27/00. Collector not available to relinquish samples on 10/3/00 for shipment.

RT 10/3/00

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

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

BHI-EE-011 (10/99)

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-076-17	Page 1 of 1

Collector: Fahlberg / Barrow DL	Company Contact: D Jacques — Telephone No.: 373-5299 H1067 (7513)	Project Coordinator: TRENT, SJ	Price Code: 9K — Data Turnaround: 15 Days
Project Designation: SM&T Asbestos Abatement Sampling	Sampling Location: 200 Area 291S #13	SAF No.: B00-076	Air Quality ☐
Ice Chest No.: ERC 99-042 (1 of 3)	Field Logbook No.: ~~EL 1517~~ EFL 1133-8 — COA: BRIS1K1B80	Method of Shipment: Fed-EX	
Shipped To: TMA/RECRA	Offsite Property No.: A00335	Bill of Lading/Air Bill No.: 42357953-9829	

POSSIBLE SAMPLE HAZARDS/REMARKS: Samples contain asbestos

Special Handling and/or Storage

Preservation	None	None
Type of Container	aG	aG
No. of Container(s)	1	1
Volume	250mL	250mL

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions.	Metals by ICP (TCLP) - 1311/6010 (Cadmium, Chromium, Lead)
B107K6	OTHER SOLID	9-26-00	~~0940~~ 0950	X	X

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By	Date/Time	Received By	Date/Time
Doug Barrow	9-26-00 1840	Storage IA	9-26-00 1840
Removed from Ref 1A 3728	10/3/00 1000	R Thoren	10/3/00 1000
R Thoren	10/3/00 1000	FEDEX	10-3-00
Fed Ex	10-4-00 10:00	JR Ebbo	10-4-00

SPECIAL INSTRUCTIONS

(1) Gross Alpha; Gross Beta; Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155); Isotopic Plutonium; Americium-241; Strontium-89,90 -- Total Sr

FAXED 10/4/00

Samples stored in Ref.# 1A at the 3728 Shipping Facility on 9/26/00
Collector not available to relinquish samples on 10/3/00 for shipment..
RT 10/3/00

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

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

BHI-EE-011 (10/99)

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-076-13	Page 1 of 1
Collector: Fahlberg	Company Contact: D Jacques; Telephone No.: 373-5299 H1067 (7513)	Project Coordinator: TRENT, SJ	Price Code: 9K; Data Turnaround: 15 Days
Project Designation: SM&T Asbestos Abatement Sampling	Sampling Location: ~~9-27-00~~ 3715-S; 200 Area: ~~202-S~~ ~~#7~~ #15	SAF No.: B00-076	Air Quality ☐
Ice Chest No.: ERC 99-012 (1 of 3) 9-27-00	Field Logbook No.: ~~EL 1517~~ EFL 1133-8; COA: BRIS1K1B80	Method of Shipment: Fed-EX	
Shipped To: TMA/RECRA	Offsite Property No.: A000335	Bill of Lading/Air Bill No.: 42357953-9529	

POSSIBLE SAMPLE HAZARDS/REMARKS: Samples contain asbestos

Special Handling and/or Storage

Preservation	None	None	None RT 9/28/00								
Type of Container	aG	aG	aG								
No. of Container(s)	0	1									
Volume	250mL	250mL	250mL								
SAMPLE ANALYSIS	Isotopic Uranium	See item (1) in Special Instructions.	Metals by ICP (TCLP) - 1311/6010 (Cadmium, Chromium, Lead)								
Sample No. (9-27-00)	Matrix *	Sample Date	Sample Time								
~~B107K2~~ B107K9	OTHER SOLID	9-27-00	0915	X	X	X			B10K52		

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By	Date/Time
Relinquished By	Doug Bowers	9-27-00/1600	Received By: Stop at 1A	9-27-00/1600
Relinquished By	Remained with Rob 1A 3728	10/3/00 1000	Received By: R Thoren	10/3/00 1000
Relinquished By	R Thoren	10/3/00 1000	Received By: FED EX	10-3-00
Relinquished By: Fed Ex		10-4-00 10:00	Received By: JR Corso	10-4-00 10:00
Relinquished By			Received By	
Relinquished By			Received By	

SPECIAL INSTRUCTIONS

(1) Gross Alpha; Gross Beta; Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155); Isotopic Plutonium; Americium-241; Strontium-89,90 -- Total Sr

FAXED 10/4/00

Samples stored in Ref.# 1A at the 3728 Shipping Facility on 9/27/00. Collector not available to relinquish samples on 10/3/00 for shipment.

RT 10/3/00

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

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

BHI-EE-011 (10/99)

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-076-21	Page 1 of 1

Collector: Fahlberg / Bowers D.L.	Company Contact: D Jacques	Telephone No.: 373-5299 H1067 (75B)	Project Coordinator: TRENT, SJ
Price Code: 9K	Data Turnaround: 15 Days	Air Quality ☐	
Project Designation: SM&T Asbestos Abatement Sampling	Sampling Location: 200 Area 2718 S #16	SAF No.: B00-076	
Ice Chest No.: ERC 99-042 (1 of 3)	Field Logbook No.: ~~EL 1517~~ EFL1133-8	COA: BRIS1K1B80	Method of Shipment: Fed-EX
Shipped To: TMA/RECRA	Offsite Property No.: A0000335		Bill of Lading/Air Bill No.: 4235795 3-9529

POSSIBLE SAMPLE HAZARDS/REMARKS
Samples contain asbestos

Special Handling and/or Storage

Preservation	None	None									
Type of Container	aG	aG									
No. of Container(s)	1	1									
Volume	250mL	250mL									

SAMPLE ANALYSIS

				See item (1) in Special Instructions.	Metals by ICP (TCLP) - 1311/6010 [Cadmium, Chromium, Lead]								
Sample No.	Matrix *	Sample Date	Sample Time										
B107L0	OTHER SOLID	9-26-00	1035	X	X				B10852				
B107L2	other solid	9-26-00	1035	X	X				B10852				

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By	Date/Time	Received By	Date/Time
Doug Bowers		Storm	
Doug Bowers	9-26-00/1840	Ref 1A 3728	9-26-00/1840
Removed from Ref 1A 3728	10/3/00 1000	R Thoren	10/3/00 1000
R Thoren	10/3/00 1000	FEDEX	10-3-00
Fed Ex	10-4-00 10:00	J R Cooper	10-4-00 10:00

SPECIAL INSTRUCTIONS

(1) Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Isotopic Plutonium; Americium-241; Strontium-89,90 – Total Sr

FAXED 10/4/00

Samples stored in Ref.# 1A at the 3728 Shipping Facility on 9/26/00
Collector not available to relinquish samples on 10/3/00 for shipment.
RT 10/3/00

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

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

BHI-EE-011 (10/99)

ThermoRetec
Richmond Laboratory

Analytical Services

SAMPLE RECEIPT CHECKLIST

SAMPLE RECEIPT

Client: Bechtel Hanford Date/Time received 10-4-00 10:40

CoC No. BDD-076-13, 16, 17 & 21, BDD-077

Container I.D. No. ERC99-042 Requested TAT (Days) [redacted] 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. Cooler Temperature: _____ Packing material is: Wet [ ] Dry [✓]
6. Number of samples in shipping container: 7
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 10-4-00
14. Received by [signature] Date: 10-4-00 Time: 10:40

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

Ion Chamber Ser. No. _____ Calibration date _____

Survey Meter Ser No. _____ Calibration date _____

DEC 2000
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Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B00-076 H1067

DATE RECEIVED: 10/04/00 RFW LOT # :0010L855

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B107K6						
TCLP	002	SO	00LTO114	09/26/00	10/16/00	10/17/00
B107L0						
TCLP	003	SO	00LTO114	09/26/00	10/16/00	10/17/00
B107L2						
TCLP	004	SO	00LTO114	09/26/00	10/16/00	10/17/00
B107K2						
TCLP	005	SO	00LTO114	09/27/00	10/16/00	10/17/00
B107K5						
TCLP	006	SO	00LTO114	09/27/00	10/16/00	10/17/00
B107K6						
CADMIUM, TCLP LEACHA	008	W	99L1635	10/17/00	10/18/00	10/18/00
CADMIUM, TCLP LEACHA	008 REP	W	99L1635	10/17/00	10/18/00	10/18/00
CADMIUM, TCLP LEACHA	008 MS	W	99L1635	10/17/00	10/18/00	10/18/00
CHROMIUM, TCLP LEACH	008	W	99L1635	10/17/00	10/18/00	10/18/00
CHROMIUM, TCLP LEACH	008 REP	W	99L1635	10/17/00	10/18/00	10/18/00
CHROMIUM, TCLP LEACH	008 MS	W	99L1635	10/17/00	10/18/00	10/18/00
LEAD, TCLP LEACHATE	008	W	99L1635	10/17/00	10/18/00	10/18/00
LEAD, TCLP LEACHATE	008 REP	W	99L1635	10/17/00	10/18/00	10/18/00
LEAD, TCLP LEACHATE	008 MS	W	99L1635	10/17/00	10/18/00	10/18/00
B107L0						
CADMIUM, TCLP LEACHA	009	W	99L1635	10/17/00	10/18/00	10/18/00
CHROMIUM, TCLP LEACH	009	W	99L1635	10/17/00	10/18/00	10/18/00
LEAD, TCLP LEACHATE	009	W	99L1635	10/17/00	10/18/00	10/18/00

Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B00-076 H1067

DATE RECEIVED: 10/04/00 RFW LOT # :0010L855

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B107L2						
CADMIUM, TCLP LEACHA	010	W	99L1635	10/17/00	10/18/00	10/18/00
CHROMIUM, TCLP LEACH	010	W	99L1635	10/17/00	10/18/00	10/18/00
LEAD, TCLP LEACHATE	010	W	99L1635	10/17/00	10/18/00	10/18/00
B107K2						
CADMIUM, TCLP LEACHA	011	W	99L1635	10/17/00	10/18/00	10/18/00
CHROMIUM, TCLP LEACH	011	W	99L1635	10/17/00	10/18/00	10/18/00
LEAD, TCLP LEACHATE	011	W	99L1635	10/17/00	10/18/00	10/18/00
B107K5						
CADMIUM, TCLP LEACHA	012	W	99L1635	10/17/00	10/18/00	10/18/00
CHROMIUM, TCLP LEACH	012	W	99L1635	10/17/00	10/18/00	10/18/00
LEAD, TCLP LEACHATE	012	W	99L1635	10/17/00	10/18/00	10/18/00

LAB QC:

CADMIUM LABORATORY	LC1 BS	W	99L1635	N/A	10/18/00	10/18/00
CADMIUM, TCLP LEACHA	MB1	W	99L1635	N/A	10/18/00	10/18/00
CADMIUM, TCLP LEACHA	MB2	W	99L1635	N/A	10/18/00	10/18/00
CHROMIUM LABORATORY	LC1 BS	W	99L1635	N/A	10/18/00	10/18/00
CHROMIUM, TCLP LEACH	MB1	W	99L1635	N/A	10/18/00	10/18/00
CHROMIUM, TCLP LEACH	MB2	W	99L1635	N/A	10/18/00	10/18/00
LEAD LABORATORY	LC1 BS	W	99L1635	N/A	10/18/00	10/18/00
LEAD, TCLP LEACHATE	MB1	W	99L1635	N/A	10/18/00	10/18/00
LEAD, TCLP LEACHATE	MB2	W	99L1635	N/A	10/18/00	10/18/00

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Virtual Laboratories Everywhere

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Recra LabNet Philadelphia
Analytical Report

Client: TNU-HANFORD B00-076
RFW#: 0010L855
SDG/SAF#: H1067/B00-076

W.O.#: 10985-001-001-9999-00
Date Received: 10-04-00

METALS CASE NARRATIVE

1. This narrative covers the analyses of 5 TCLP leachate samples.

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

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

4. The cooler temperature has been recorded on the Chain of Custody.

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

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

7. All preparation/method blanks (MB) were within method criteria {less than the Practical Quantitation Limit (3X the IDL), MB value less than 5% of the RCRA limit, or samples greater than 20X MB value}. Refer to the Inorganics Method Blank Data Summary.

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

9. All laboratory control samples (LCS) were within the 80-120% control limits. Refer to form 7.

10. The duplicate analysis for 1 analyte was outside the 20% Relative Percent Difference (RPD) control limits. Refer to the Inorganics Precision Report.

11. The TCLP extract from sample B107K6 was selected for the matrix spike (MS) for this analytical batch. All MS recoveries were greater than 50% as per method criteria.

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 17 pages.

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

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

J. Michael Taylor
VP, Laboratory General Manager
Lionville Laboratory

11-30-00
Date

gmb/m10-855

METALS METHOD GLOSSARY

The following methods are used as reference for the digestion and analysis of samples contained within this Recra Lot#: 0010L855

Leaching Procedure: __1310 ✓1311 __1312 __Other:_____

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

Metals Digestion Methods: __3005A ✓3010A __3015 __3020A __3050B __3051 __200.7 __SS17
__Other: _____

Metals Analysis Methods

	SW846		EPA		STD MTD	EPA OSWR	USATHAMA
Aluminum	__6010B		__200.7				__99
Antimony	__6010B	__7041 [5]	__200.7	__204.2			__99
Arsenic	__6010B	__7060A [5]	__200.7	__206.2	__3113B		__99
Barium	__6010B		__200.7				__99
Beryllium	__6010B		__200.7				__99
Bismuth	__6010B [1]		__200.7 [1]			__1620	__99
Boron	__6010B		__200.7				__99
Cadmium	✓6010B	__7131A [5]	__200.7	__213.2			__99
Calcium	__6010B		__200.7				__99
Chromium	✓6010B	__7191 [5]	__200.7	__218.2			__SS17
Cobalt	__6010B		__200.7				__99
Copper	__6010B	__7211 [5]	__200.7	__220.2			__99
Iron	__6010B		__200.7				__99
Lead	✓6010B	__7421 [5]	__200.7	__239.2	__3113B		__99
Lithium	__6010B	__7430 [4]	__200.7			__1620	__99
Magnesium	__6010B		__200.7				__99
Manganese	__6010B		__200.7				__99
Mercury	__7470A [3]	__7471A [3]	__245.1 [2]	__245.5 [2]			__99
Molybdenum	__6010B		__200.7				__99
Nickel	__6010B		__200.7				__99
Potassium	__6010B	__7610 [4]	__200.7	__258.1 [4]			__99
Rare Earths	__6010B [1]		__200.7 [1]			__1620	__99
Selenium	__6010B	__7740 [5]	__200.7	__270.2	__3113B		__99
Silicon	__6010B [1]		__200.7			__1620	__99
Silica	__6010B		__200.7			__1620	__99
Silver	__6010B	__7761 [5]	__200.7	__272.2			__99
Sodium	__6010B	__7770 [4]	__200.7	__273.1 [4]			__99
Strontium	__6010B		__200.7				__99
Thallium	__6010B	__7841 [5]	__200.7	__279.2__200.9			__99
Tin	__6010B		__200.7				__99
Titanium	__6010B		__200.7				__99
Uranium	__6010B [1]		__200.7 [1]			__1620	__99
Vanadium	__6010B		__200.7				__99
Zinc	__6010B		__200.7				__99
Zirconium	__6010B [1]		__200.7 [1]			__1620	__99

Other:_____ Method:_____

L-WI-033/M-11/99

METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

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

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

ABBREVIATIONS

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

ANALYTICAL METAL METHODS

1. Not included in the method element list.

2. Modified Hg: Hg1 and Hg2 require less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionately scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 mL. For soils, 0.1 grams of sample is taken to a final volume of 50 mL (including all reagents).

3. Modified Hg: Hg1 and Hg2 require less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionately scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 mL. For soils, three 0.1 gram of sample is taken to a final volume of 50 mL (including all reagents).

4. Flame AA.

5. Graphite Furnace AA.

RFW 21-21L-033/N-10/96

Recra LabNet - Lionville

INORGANICS DATA SUMMARY REPORT 11/30/00

CLIENT: TNUHANFORD B00-076 H1067 RECRA LOT #: 0010L855

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-008	B107K6	Cadmium, TCLP Leachate	4.8	u	UG/L	4.8	1.0
		Chromium, TCLP Leachate	3.9		UG/L	3.5	1.0
		Lead, TCLP Leachate	22.1	u	UG/L	22.1	1.0
-009	B107L0	Cadmium, TCLP Leachate	4.8	u	UG/L	4.8	1.0
		Chromium, TCLP Leachate	4.1		UG/L	3.5	1.0
		Lead, TCLP Leachate	22.1	u	UG/L	22.1	1.0
-010	B107L2	Cadmium, TCLP Leachate	4.8	u	UG/L	4.8	1.0
		Chromium, TCLP Leachate	4.3		UG/L	3.5	1.0
		Lead, TCLP Leachate	25.4		UG/L	22.1	1.0
-011	B107K2	Cadmium, TCLP Leachate	4.8	u	UG/L	4.8	1.0
		Chromium, TCLP Leachate	22.1		UG/L	3.5	1.0
		Lead, TCLP Leachate	22.1	u	UG/L	22.1	1.0
-012	B107K5	Cadmium, TCLP Leachate	4.8	u	UG/L	4.8	1.0
		Chromium, TCLP Leachate	19.4		UG/L	3.5	1.0
		Lead, TCLP Leachate	22.1	u	UG/L	22.1	1.0

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INORGANICS METHOD BLANK DATA SUMMARY PAGE 11/30/00

CLIENT: TNUHANFORD B00-076 H1067

RECRA LOT #: 0010L055

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	99L1635-MB1	Cadmium, TCLP Leachate	4.8	u	UG/L	4.8	1.0
		Chromium, TCLP Leachate	3.5	u	UG/L	3.5	1.0
		Lead, TCLP Leachate	22.1	u	UG/L	22.1	1.0
BLANK2	99L1635-MB2	Cadmium, TCLP Leachate	4.8	u	UG/L	4.8	1.0
		Chromium, TCLP Leachate	3.5	u	UG/L	3.5	1.0
		Lead, TCLP Leachate	22.1	u	UG/L	22.1	1.0

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INORGANICS ACCURACY REPORT 11/30/00

CLIENT: TNUHANFORD B00-076 H1067

RECRA LOT #: 0010L855

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-008	B107K6	Cadmium, TCLP Leachate	890	4.8 u	1000	89.0	1.0
		Chromium, TCLP Leachat	4400	3.9	5000	88.0	1.0
		Lead, TCLP Leachate	4520	22.1 u	5000	90.4	1.0

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INORGANICS PRECISION REPORT 11/30/00

CLIENT: TNUHANFORD B00-076 H1067 RECRA LOT #: 0010L055

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-008REP	B107K6	Cadmium, TCLP Leachate	4.8 u	4.8 u	NC	1.0
		Chromium, TCLP Leachate	3.9	3.5 u	~~NC~~ 200	1.0
		Lead, TCLP Leachate	22.1 u	22.1 u	NC	1.0

MK
11/30/00

Recra LabNet - Lionville

INORGANICS LABORATORY CONTROL STANDARDS REPORT 11/30/00

CLIENT: TNUHANFORD B00-076 H1067

RECRA LOT #: 0010L855

WORK ORDER: 10985-001-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	99L1635-LC1	Cadmium, LCS	245	250	UG/L	98.1
		Chromium, LCS	474	500	UG/L	94.8
		Lead, LCS	2380	2500	UG/L	95.0

RECRA LabNet Use Only

00106855

Custody Transfer Record/Lab Work Request

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TC 10-4-00

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

(9) Met Dig Personnel

RECRA LabNet

Client: TMU - Hanford B00-076

Est. Final Proj. Sampling Date:

Project #: 10985-001-001-9999-00

Project Contact/Phone #:

RECRA Project Manager: QJ

QC: Spec Del: Std TAT: 15 days

Date Rec'd: 10-4-00 Date Due: 10-19-00

Account #:

Refrigerator #:

#/Type Container: Liquid / Solid

Volume: Liquid / Solid

Preservatives

ANALYSES REQUESTED →

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	VOA	BNA	Pest/PCB	Herb				ITCLP Metal	CN	Cd Cr Pb					
							RECRA LabNet Use Only														
														4							
														1L							
														1Pint							
														500							
														250							
														HNO3							
														ITCLP Metal	CN	Cd Cr Pb					
001	B10994			W	9/20/00	0855							TC 10-6-00	X							
002	B107K6			SO		0950								X							
003	B107L0					1035								X							
004	B107L2					0860	DS 9/20/00							X							
005	B107K2				9/27/00	0800								X							
006	B107K5					0835								X							
007	B10994 top of 001				*	—		TC 10-6-00								✓					
008	B107K6 002					—										✓					
009	B107L0 003					—										✓					
010	B107L2 004					—										✓					

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

Special Instructions: Saf B00-076

Run Matrix QC

Samples contain asbestos

DATE/REVISIONS:

* 1. See labchron

10-6-00 2. #001 Relogged to 00106882-001

⊥ 3. #007 cancelled

4.

5.

6.

RECRA LabNet Use Only

Samples were: 1) Shipped ✓ or Hand Delivered ___

Airbill #

2) Ambient or Chilled

3) Received in Good Condition Y or N

4) Labels Indicate Properly Preserved Y or N

5) Received Within Holding Times Y or N

COC Tape was: 1) Present on Outer Package Y or N 2) Unbroken on Outer Package Y or N 3) Present on Sample Y or N 4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Cooler Temp. 5.8 °C

Discrepancies Between Samples Labels and COC Record? Y or N

NOTES:

4235 7953 9562

Relinquished by	Received by	Date	Time
FedEx	D. Smith	10/4/00	0915

BATCH WASTE

Relinquished by	Received by	Date	Time
COMPOSITE WASTE	ORIGINAL REWRITTEN		

RECRA LabNet Use Only
0010L855

Custody Transfer Record/Lab Work Request

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FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

RECRA LabNet

Client: TNU-Hanford B00-076

Est. Final Proj. Sampling Date:

Project #:

Project Contact/Phone #:

RECRA Project Manager:

QC: Del: TAT:

Date Rec'd: Date Due:

Account #:

Refrigerator #																
#/Type Container	Liquid															
	Solid															
Volume	Liquid															
	Solid															
Preservatives																
ANALYSES REQUESTED →		ORGANIC							INORG							
		VOA	BNA	Pest/PCB	Herb				Metal	CN						
RECRA LabNet Use Only																

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

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected															
011	B107K2 tclp of 005			L	*	–															
012	1 K5 1 006			1	1	–															

Special Instructions:

DATE/REVISIONS:

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

Relinquished by	Received by	Date	Time
Fed Ex	[illegible]	10/4/00	0815

Relinquished by	Received by	Date	Time

Discrepancies Between Samples Labels and COC Record? Y or N

NOTES:

RECRA LabNet Use Only

Samples were:
1) Shipped ____ or Hand Delivered ____
Airbill # ____
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Cooler Temp. ____ °C

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-076-17	Page 1 of 1

Collector: Fahlberg / Barron DL	Company Contact: D Jacques — Telephone No.: 373-5299	Project Coordinator: TRENT, SJ	Price Code: 9K — Data Turnaround: 15 Days
Project Designation: SM&T Asbestos Abatement Sampling	Sampling Location: 200 Area 2915 #13	SAF No.: B00-076	Air Quality: ! !
Ice Chest No.: SMI-354 (2 OF 2)	Field Logbook No.: ~~EL 1517~~ EFL 1135-8 — COA: BRIS1K1B80	Method of Shipment: Fed-EX	
Shipped To: TMA/RECRA	Offsite Property No.: A00 0345	Bill of Lading/Air Bill No.: 4235 7953 -9562	

POSSIBLE SAMPLE HAZARDS/REMARKS

Samples contain asbestos

Special Handling and/or Storage

SAMPLE ANALYSIS													
Preservation				None	None								
Type of Container				G	aG								
No. of Container(s)				1	1								
Volume				250mL	250mL								
				Sediment (1) in accordance with Special Instructions	Metals by ICP (TCLP) - 1311/6010 (Cadmium, Chromium, Lead)								
Sample No.	Matrix *	Sample Date	Sample Time										
B107K6	OTHER SOLID	9-21-00	~~0940~~ 0950	X	X			D/C&M					

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By	Date/Time	Received By	Date/Time
Doug Barron	9-26-00 1840	Brian Stormy / Ref 1A	9-26-00 1840
Removed from Ref 1A 3728	10/3/00 1000	R Thoren	10/3/00 1000
R Thoren	10/3/00 1000	FED EX	
FED EX	10/4/00 0915	D. Smith	10/4/00 0915

SPECIAL INSTRUCTIONS

(1) Gross Alpha; Gross Beta; Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155); Isotopic Plutonium; Americium-241; Strontium-89,90 -- Total Sr

Samples stored in Ref# 1A at the 3728 Shipping Facility on 9/26/00
Collector not available to relinquish samples on 10/3/00 for shipment.. RT 10/3/00

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

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

BHI-EE-011 (10/99)

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-076-21	Page 1 of 1

Collector: Fahlberg / Bowers D.L.	Company Contact: D Jacques	Telephone No.: 373-5299	Project Coordinator: TRENT, SJ
Project Designation: SM&T Asbestos Abatement Sampling	Sampling Location: 200 Area 2718 S #16		SAF No.: B00-076
Ice Chest No.: SM1-354 (2 OF 2)	Field Logbook No.: ~~EL1317~~ FL1133-8	COA: BRIS1K1B80	Method of Shipment: Fed-EX
Shipped To: TMA/RECRA	Offsite Property No.: A00034S		Bill of Lading/Air Bill No.: 42357953-9862

Price Code: 9K

Air Quality: ☐

Data Turnaround: 15 Days

POSSIBLE SAMPLE HAZARDS/REMARKS

Samples contain asbestos

Special Handling and/or Storage

Preservation	None	None									
Type of Container	G	aG									
No. of Container(s)	1	1									
Volume	250mL	250mL									
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Metals by ICP (TCLP) - 1311/6010 (Cadmium, Chromium, Lead)									
Sample No.	Matrix *	Sample Date	Sample Time								
B107L0	OTHER SOLID	9-26-00	1035	X	X				B10852		
B107L2	other solid	9-26-00	1035	X	X				B10852		

CHAIN OF POSSESSION

Relinquished By	Date/Time	Received By	Date/Time
Doug Bowers		Storie 14	
Tony Parker	9-26-00/1840	B.P.E. 3728	9-26-00/1840
Removed from Ref IA 3728	10/3/00 1000	Ref IA R Thorer	10/3/00 1000
R Thorer	10/3/00 1000	FEDEX	
Fed Ex	10/4/00 0915		10/4/00 0915

Sign/Print Names

SPECIAL INSTRUCTIONS

(1) Gross Alpha; Gross Beta; Gamma Spectroscopy [Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155]; Isotopic Plutonium; Americium-241; Strontium-89,90 -- Total Sr

Samples stored in Ref.# IA at the 3728 Shipping Facility on 9/26/00
Collector not available to relinquish samples on 10/3/00 for shipment..

ST 10/3/00

Matrix *

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

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

BHI-EE-011 (10/99)

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-076-13	Page 1 of 1
Collector: Fahlberg	Company Contact: D Jacques; Telephone No.: 373-5299	Project Coordinator: TRENT, SJ	Price Code: 9K; Data Turnaround: 15 Days
Project Designation: SM&T Asbestos Abatement Sampling	Sampling Location: 200 Area 202 S R1	SAF No.: B00-076	Air Quality ☐
Ice Chest No.: SM1-354 (2 of 2) 9-27-00	Field Logbook No.: ~~EL-1517~~ EFL 1133-8; COA: BRIS1K1B80	Method of Shipment: Fed-EX	
Shipped To: TMA/RECRA	Offsite Property No.: A000345	Bill of Lading/Air Bill No.: 42357953-9562	

POSSIBLE SAMPLE HAZARDS/REMARKS

Samples contain asbestos

Special Handling and/or Storage

Preservation	None	None	None								
Type of Container	aG	aG	aG								
No. of Container(s)			1								
Volume	250mL	250mL	250mL								
SAMPLE ANALYSIS	Isotopic Uranium	See Item (1) in Special Instructions.	Metals by ICP (TCLP) - 1311/6010 (Cadmium, Chromium, Lead)								
Sample No. / Matrix * / Sample Date / Sample Time											
B107K2 / OTHER SOLID / 9-27-00 / 0800	X	X	X				010853				

CHAIN OF POSSESSION

Relinquished By	Date/Time	Received By	Date/Time
Doug Bowers		Storer JN	
Amy Bowers	9-27-00/1600	Ref 1A 3728	9-27-00/1600
Renee Thoren	1000	R Thoren	1000
Ref 1A 3728	9-27-00		10/3/00
R Thoren	10/3/00 1000		
Fed Ex	10/4/00 0115	D. Arnold	10/4/00 0115

Sign/Print Names

SPECIAL INSTRUCTIONS

(1) Gross Alpha; Gross Beta; Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155); Isotopic Plutonium; Americium-241; Strontium-89,90 -- Total Sr

Samples stored in Ref.# 1A at the 3728 Shipping Facility on 9-27-00
Collector not available to relinquish samples on 10/3/00 for shipment.

RT 10/3/00

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

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

BHI-EE-011 (10/99)

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-076-16	Page 1 of 1

Collector: Fahlberg	Company Contact: D Jacques — Telephone No.: 373-5299	Project Coordinator: TRENT, SJ	Price Code: 9K — Data Turnaround: 15 Days
Project Designation: SM&T Asbestos Abatement Sampling	Sampling Location: 200 Area 2765 #12	SAF No.: B00-076	Air Quality
Ice Chest No.: Jml-354 (2of2) 9-27-00	Field Logbook No.: ~~EL-1517~~ EFL1133-8 — COA: BRIS1K1B80	Method of Shipment: Fed-EX	
Shipped To: TMA/RECRA	Offsite Property No.: A00034S	Bill of Lading/Air Bill No.: 4235795 3-9562	

POSSIBLE SAMPLE HAZARDS/REMARKS

Samples Contain asbestos

Special Handling and/or Storage

Preservation		None										
Type of Container	G	aG										
No. of Container(s)	1	1										
Volume	250mL	250mL										
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Metals by ICP (TCLP) - 1311/6010 (Cadmium, Chromium, Lead)										
Sample No.	Matrix *	Sample Date	Sample Time									
B107K5	OTHER SOLID	9-17-00	0835	X	X				010354			

CHAIN OF POSSESSION	Sign/Print Names	Date/Time
Relinquished By: Doug Jones	Received By: Stanard	9-27-00 1600
Relinquished By: Removed from Rel 1A 3728	Received By: R Thorsen	10/3/00 1000
Relinquished By: R Thorsen	Received By: Fed Ex	10/3/00 1000
Relinquished By: Fed Ex	Received By: D. Jones	10/4/00 0915
Relinquished By:	Received By:	
Relinquished By:	Received By:	

SPECIAL INSTRUCTIONS

(1) Gross Alpha; Gross Beta; Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155); Isotopic Plutonium; Americium-241; Strontium-89,90 -- Total Sr

Samples stored in Ref.# 1A at the 3728 Shipping Facility on 9/27/00
Collector not available to relinquish samples on 10/3/00 for shipment.
RT 10/3/00

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

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

BHI-EE-011 (10/99)