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EBERLINE
SERVICES

June 17, 2005

Mr. Steve Trent
Fluor Hanford Inc.
825 Jadwin Avenue
Richland, WA 99352

Reference: **P.O. #630**
Eberline Services R5-05-035-7267, SDG H3145

Dear Mr. Trent:

Enclosed is the data report for seven solid samples designated under SAF No. F04-015 received at Eberline Services on May 6, 2005. 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
Senior Program Manager

MCM/

Enclosure: Data Package

JUN 2005
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EDMC

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

Fluor Hanford Inc. (FH) Sample Delivery Group H3145 was composed of seven solid (soil) samples designated under SAF No. F04-015 with a Project Designation of: 200-MW-1 Characterization Sampling and Analysis – Soil.

The samples were received as stated on the Chain-of-Custody documents. Any discrepancies are noted on the Eberline Services Sample Receipt Checklist.

2.0 ANALYSIS NOTES

2.1 Total Strontium Analyses

No problems were encountered during the course of the analyses.

2.2 Technetium-99 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 Total Uranium Analyses

No problems were encountered during the course of the analyses.

2.5 Isotopic Plutonium Analyses

No problems were encountered during the course of the analyses.

2.6 Americium-241 Analyses

No problems were encountered during the course of the analyses.

2.7 Gamma Spectroscopy

No problems were encountered during the course of the analyses.

Case Narrative Certification Statement

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

Melissa Mannion — 6/17/5

Melissa C. Mannion
Senior Program Manager

Date

E B E R L I N E S E R V I C E S / R I C H M O N D
SAMPLE DELIVERY GROUP H3145

SDG	7267
Contact	Melissa C. Mannion

Client	Hanford
Contract	No. 630
Case no	SDG_H3145

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

Prepared by

Reviewed by

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-TOC
Version	3.06
Report date	06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

SDG 7267
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG H3145

ABOUT THE DATA SUMMARY SECTION

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

The Data Summary Section has several groups of reports:

SAMPLE SUMMARIES

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

PREPARATION BATCH SUMMARY

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

WORK SUMMARY

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

METHOD BLANKS

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

LAB CONTROL SAMPLES

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

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 06/17/05

SDG 7267
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG H3145

ABOUT THE DATA SUMMARY SECTION

DUPLICATES

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

MATRIX SPIKES

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

DATA SHEETS

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

METHOD SUMMARIES

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

REPORT GUIDES

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

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

SDG 7267
Contact Melissa C. Mannion

SAMPLE SUMMARY

Client Hanford
Contract No. 630
Case no SDG H3145

CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	LAB SAMPLE ID	SAF NO	CHAIN OF CUSTODY	COLLECTED
B1C769	216-T-13; 10-11 ft	SOLID		R505035-01	F04-015	F04-015-127	04/28/05 09:30
B1C771	216-T-13; 10-11 ft	SOLID		R505035-02	F04-015	F04-015-128	04/28/05 09:30
B1C774	216-T-13; 12-13 ft	SOLID		R505035-03	F04-015	F04-015-141	04/28/05 09:55
B1C775	216-T-13; 14-15 ft	SOLID		R505035-04	F04-015	F04-015-142	04/28/05 10:15
B1C776	216-T-13; 19-20 ft	SOLID		R505035-05	F04-015	F04-015-143	04/28/05 13:00
B1C777	216-T-13; 24-25 ft	SOLID		R505035-06	F04-015	F04-015-144	04/28/05 13:30
B1C778	216-T-13; 12-13 ft	SOLID		R505035-07	F04-015	F04-015-151	04/28/05 09:55
Method Blank		SOLID		R505035-09	F04-015		
Lab Control Sample		SOLID		R505035-08	F04-015		
Duplicate (R505035-06)	216-T-13; 24-25 ft	SOLID		R505035-11	F04-015		04/28/05 13:30
Duplicate (R505035-07)	216-T-13; 12-13 ft	SOLID		R505035-10	F04-015		04/28/05 09:55

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

SDG 7267
Contact Melissa C. Mannion

SAMPLE DELIVERY GROUP H3145

QC SUMMARY

Client Hanford
Contract No. 630
Case no SDG H3145

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% SOLIDS	SAMPLE AMOUNT	BASIS AMOUNT	DAYS RECEIVED	DAYS SINCE COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
7267	F04-015-127	B1C769	SOLID	91.1	71.64 g		05/06/05	8	R505035-01	7267-001
	F04-015-128	B1C771	SOLID	90.8	68.32 g		05/06/05	8	R505035-02	7267-002
	F04-015-141	B1C774	SOLID	90.5	98.81 g		05/06/05	8	R505035-03	7267-003
	F04-015-142	B1C775	SOLID	96.4	105.2 g		05/06/05	8	R505035-04	7267-004
	F04-015-143	B1C776	SOLID	96.9	110.5 g		05/06/05	8	R505035-05	7267-005
	F04-015-144	B1C777	SOLID	96.5	96.81 g		05/06/05	8	R505035-06	7267-006
	F04-015-151	B1C778	SOLID	93.6	732.2 g		05/06/05	8	R505035-07	7267-007
		Method Blank	SOLID						R505035-09	7267-009
		Lab Control Sample	SOLID						R505035-08	7267-008
		Duplicate (R505035-06)	SOLID	96.5	96.81 g		05/06/05	8	R505035-11	7267-011
		Duplicate (R505035-07)	SOLID	93.6	732.2 g		05/06/05	8	R505035-10	7267-010

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Protocol Hanford
Version Ver 1.0
Form DVD-QS
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

PREP BATCH SUMMARY

SDG 7267
Contact Melissa C. Mannion

Client Hanford
Contract No. 630
Case no SDG H3145

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 Solids	7136-034	5.0	1			1	1	1/1		
PU	SOLID	Plutonium, Isotopic in Solids	7136-034	5.0	1			1	1	1/1		
U	SOLID	Uranium, Isotopic in Solids	7136-034	5.0	1			1	1	1/1		
Beta Counting												
SR	SOLID	Total Strontium in Solids	7136-034	10.0	1			1	1	1/1		
TC	SOLID	Technetium 99 in Solids	7136-034	10.0	6			1	1	1/1		
Gamma Spectroscopy												
GAM	SOLID	Gamma Scan	7136-034	15.0	1			1	1	1/1		
Kinetic Phosphorimetry (KPA)												
U_T	SOLID	Uranium, Total in Solids	7136-034	9.0	1			1	1	1/1		

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

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

SAMPLE DELIVERY GROUP H3145

WORK SUMMARY

SDG 7267
Contact Melissa C. Mannion

Client Hanford
Contract No. 630
Case no SDG H3145

CLIENT SAMPLE ID / LOCATION / CUSTODY	SAF No	MATRIX	LAB SAMPLE ID / COLLECTED / RECEIVED	PLANCHET	TEST	SUFFIX	ANALYZED	REVIEWED	BY	METHOD
B1C769			R505035-01	7267-001	TC		06/14/05	06/17/05	MWT	Technetium 99 in Solids
216-T-13; 10-11 ft		SOLID	04/28/05							
F04-015-127	F04-015		05/06/05							
B1C771			R505035-02	7267-002	TC		06/15/05	06/17/05	MWT	Technetium 99 in Solids
216-T-13; 10-11 ft		SOLID	04/28/05							
F04-015-128	F04-015		05/06/05							
B1C774			R505035-03	7267-003	TC		06/14/05	06/17/05	MWT	Technetium 99 in Solids
216-T-13; 12-13 ft		SOLID	04/28/05							
F04-015-141	F04-015		05/06/05							
B1C775			R505035-04	7267-004	TC		06/15/05	06/17/05	MWT	Technetium 99 in Solids
216-T-13; 14-15 ft		SOLID	04/28/05							
F04-015-142	F04-015		05/06/05							
B1C776			R505035-05	7267-005	TC		06/13/05	06/17/05	MWT	Technetium 99 in Solids
216-T-13; 19-20 ft		SOLID	04/28/05							
F04-015-143	F04-015		05/06/05							
B1C777			R505035-06	7267-006	TC		06/13/05	06/17/05	MWT	Technetium 99 in Solids
216-T-13; 24-25 ft		SOLID	04/28/05							
F04-015-144	F04-015		05/06/05							
B1C778			R505035-07	7267-007	AM		06/01/05	06/17/05	MWT	Americium 241 in Solids
216-T-13; 12-13 ft		SOLID	04/28/05	7267-007	GAM		05/20/05	06/17/05	CSS	Gamma Scan
F04-015-151	F04-015		05/06/05	7267-007	PU		06/07/05	06/17/05	MWT	Plutonium, Isotopic in Solids
				7267-007	SR		06/01/05	06/17/05	MWT	Total Strontium in Solids
				7267-007	U		06/01/05	06/17/05	MWT	Uranium, Isotopic in Solids
				7267-007	U_T		05/25/05	06/17/05	MWT	Uranium, Total in Solids
Method Blank			R505035-09	7267-009	AM		06/01/05	06/17/05	MWT	Americium 241 in Solids
		SOLID		7267-009	GAM		05/20/05	06/17/05	CSS	Gamma Scan
	F04-015			7267-009	PU		06/07/05	06/17/05	MWT	Plutonium, Isotopic in Solids
				7267-009	SR		06/01/05	06/17/05	MWT	Total Strontium in Solids
				7267-009	TC		06/13/05	06/17/05	MWT	Technetium 99 in Solids
				7267-009	U		06/01/05	06/17/05	MWT	Uranium, Isotopic in Solids
				7267-009	U_T		05/25/05	06/17/05	MWT	Uranium, Total in Solids

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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

SDG 7267
Contact Melissa C. Mannion

WORK SUMMARY, cont.

Client Hanford
Contract No. 630
Case no SDG H3145

CLIENT SAMPLE ID / LOCATION / CUSTODY	SAF No	MATRIX	LAB SAMPLE ID / COLLECTED / RECEIVED	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
Lab Control Sample			R505035-08	7267-008	AM		06/01/05	06/17/05	MWT	Americium 241 in Solids
		SOLID		7267-008	GAM		05/20/05	06/17/05	CSS	Gamma Scan
	F04-015			7267-008	PU		06/07/05	06/17/05	MWT	Plutonium, Isotopic in Solids
				7267-008	SR		06/01/05	06/17/05	MWT	Total Strontium in Solids
				7267-008	TC		06/13/05	06/17/05	MWT	Technetium 99 in Solids
				7267-008	U		06/01/05	06/17/05	MWT	Uranium, Isotopic in Solids
				7267-008	U_T		05/25/05	06/17/05	MWT	Uranium, Total in Solids
Duplicate (R505035-06)			R505035-11	7267-011	TC		06/15/05	06/17/05	MWT	Technetium 99 in Solids
216-T-13; 24-25 ft		SOLID	04/28/05							
	F04-015		05/06/05							
Duplicate (R505035-07)			R505035-10	7267-010	AM		06/01/05	06/17/05	MWT	Americium 241 in Solids
216-T-13; 12-13 ft		SOLID	04/28/05	7267-010	GAM		05/23/05	06/17/05	CSS	Gamma Scan
	F04-015		05/06/05	7267-010	PU		06/07/05	06/17/05	MWT	Plutonium, Isotopic in Solids
				7267-010	SR		06/01/05	06/17/05	MWT	Total Strontium in Solids
				7267-010	U		06/01/05	06/17/05	MWT	Uranium, Isotopic in Solids
				7267-010	U_T		05/25/05	06/17/05	MWT	Uranium, Total in Solids

COUNTS OF TESTS BY SAMPLE TYPE

TEST	SAF No	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP SPIKE	TOTAL
AM	F04-015	Americium 241 in Solids	AMCMISO_IE_PLATE_AEA	1			1	1	1	4
GAM	F04-015	Gamma Scan	GAMMA_GS	1			1	1	1	4
PU	F04-015	Plutonium, Isotopic in Solids	PUISO_PLATE_AEA	1			1	1	1	4
SR	F04-015	Total Strontium in Solids	SRTOT_SEP_PRECIP_GPC	1			1	1	1	4
TC	F04-015	Technetium 99 in Solids	TC99_TR_SEP_LSC	6			1	1	1	9
U	F04-015	Uranium, Isotopic in Solids	UISO_PLATE_AEA	1			1	1	1	4
U_T	F04-015	Uranium, Total in Solids	UTOT_KPA	1			1	1	1	4
TOTALS				12			7	7	7	33

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-CWS
Version 3.06
Report date 06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

R505035-09 **Method Blank**

METHOD BLANK

SDG 7267	Client/Case no Hanford	SDG H3145	
Contact Melissa C. Mannion	Contract No. 630		
Lab sample id R505035-09	Client sample id Method Blank		
Dept sample id 7267-009	Material/Matrix	SOLID	
	SAF No F04-015		

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Total Strontium	SR-RAD	-0.110	0.12	0.27	1.0	U	SR
Technetium 99	14133-76-7	0.058	0.25	0.55	15	U	TC
Total Uranium (ug/g)	7440-61-1	0	0.004	0.009	1.0	U	U_T
Uranium 233/234	U-233/234	0	0.068	0.26	1.0	U	U
Uranium 235	15117-96-1	0	0.082	0.31	1.0	U	U
Uranium 238	U-238	0	0.068	0.26	1.0	U	U
Plutonium 238	13981-16-3	0	0.043	0.16	1.0	U	PU
Plutonium 239/240	PU-239/240	0.043	0.043	0.16	1.0	U	PU
Americium 241	14596-10-2	0.084	0.17	0.32	1.0	U	AM
Potassium 40	13966-00-2	U		0.29		U	GAM
Cobalt 60	10198-40-0	U		0.033	0.050	U	GAM
Cesium 137	10045-97-3	U		0.026	0.10	U	GAM
Radium 226	13982-63-3	U		0.052	0.10	U	GAM
Radium 228	15262-20-1	U		0.11	0.20	U	GAM
Europium 152	14683-23-9	U		0.068	0.10	U	GAM
Europium 154	15585-10-1	U		0.089	0.10	U	GAM
Europium 155	14391-16-3	U		0.042	0.10	U	GAM
Thorium 228	14274-82-9	U		0.032		U	GAM
Thorium 232	TH-232	U		0.11		U	GAM
Uranium 235	15117-96-1	U		0.082		U	GAM
Uranium 238	U-238	U		3.5		U	GAM
Americium 241	14596-10-2	U		0.025		U	GAM

200-MW-1 Characterization Sampling

QC-BLANK #52868

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-DS
Version 3.06
Report date 06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

R505035-08

Lab Control Sample

LAB CONTROL SAMPLE

SDG 7267

Contact Melissa C. Mannion

Client/Case no Hanford SDG H3145

Contract No. 630

Lab sample id R505035-08

Dept sample id 7267-008

Client sample id Lab Control Sample

Material/Matrix SOLID

SAF No F04-015

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
Total Strontium	10.5	0.56	0.23	1.0		SR	10.0	0.40	105	81-119	80-120
Technetium 99	107	2.7	0.60	15		TC	109	4.4	98	84-116	80-120
Total Uranium (ug/g)	33.2	3.9	0.092	1.0		U_T	33.0	1.3	101	77-123	80-120
Uranium 233/234	17.6	1.9	0.88	1.0		U	18.6	0.74	95	82-118	80-120
Uranium 235	14.1	1.6	0.22	1.0		U	15.1	0.60	93	82-118	80-120
Uranium 238	18.3	1.9	0.85	1.0		U	20.2	0.81	91	83-117	80-120
Plutonium 238	23.2	1.9	0.14	1.0		PU	24.0	0.96	97	85-115	80-120
Plutonium 239/240	24.9	2.0	0.14	1.0		PU	26.4	1.1	94	85-115	80-120
Americium 241	18.7	2.5	0.33	1.0		AM	20.4	0.82	92	79-121	80-120
Cobalt 60	0.945	0.064	0.038	0.050		GAM	0.909	0.036	104	74-126	80-120
Cesium 137	0.991	0.054	0.039	0.10		GAM	0.917	0.037	108	73-127	80-120

200-MW-1 Characterization Sampling

QC-LCS #52867

Lab id EBRLNE

Protocol Hanford

Version Ver 1.0

Form DVD-LCS

Version 3.06

Report date 06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

R505035-11 B1C777

DUPLICATE

SDG	7267			Client/Case no	Hanford SDG H3145
Contact	Melissa C. Mannion			Contract	No. 630
	DUPLICATE		ORIGINAL		
Lab sample id	R505035-11	Lab sample id	R505035-06	Client sample id	B1C777
Dept sample id	7267-011	Dept sample id	7267-006	Location/Matrix	216-T-13; 24-25 ft SOLID
		Received	05/06/05	Collected/Weight	04/28/05 13:30 96.81 g
% solids	96.5	% solids	96.5	Custody/SAF No	F04-015-144 F04-015

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 PROT TOT LIMIT
Technetium 99	0.177	0.37	0.61	15	U	TC	0.248	0.30	0.55	U	-	

200-MW-1 Characterization Sampling

QC-DUP#6 52870

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-DUP
Version 3.06
Report date 06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

R505035-10 B1C778

DUPLICATE

SDG 7267 Client/Case no Hanford SDG H3145

Contact Melissa C. Mannion Contract No. 630

DUPLICATE		ORIGINAL			
Lab sample id	R505035-10	Lab sample id	R505035-07	Client sample id	B1C778
Dept sample id	7267-010	Dept sample id	7267-007	Location/Matrix	216-T-13; 12-13 ft SOLID
		Received	05/06/05	Collected/Weight	04/28/05 09:55 732.2 g
% solids	93.6	% solids	93.6	Custody/SAF No	F04-015-151 F04-015

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 PROT TOT LIMIT
Total Strontium	0.270	0.13	0.21	1.0		SR	0.304	0.14	0.23		12	102
Total Uranium (ug/g)	1.98	0.22	0.009	1.0		U_T	2.06	0.23	0.009		4	30
Uranium 233/234	0.973	0.31	0.19	1.0		U	0.996	0.38	0.24		2	75
Uranium 235	0.121	0.12	0.23	1.0	U	U	0	0.075	0.29	U	-	
Uranium 238	0.499	0.20	0.19	1.0		U	0.622	0.25	0.24		22	86
Plutonium 238	0	0.050	0.19	1.0	U	PU	0	0.040	0.15	U	-	
Plutonium 239/240	0	0.050	0.19	1.0	U	PU	0.060	0.080	0.15	U	-	
Americium 241	0.028	0.11	0.21	1.0	U	AM	0.028	0.056	0.21	U	-	
Potassium 40	9.51	0.64	0.29			GAM	9.42	0.51	0.27		1	34
Cobalt 60	U		0.033	0.050	U	GAM	U		0.027	U	-	
Cesium 137	0.348	0.045	0.045	0.10		GAM	0.324	0.025	0.022		7	39
Radium 226	0.401	0.070	0.068	0.10		GAM	0.380	0.061	0.058		5	48
Radium 228	0.656	0.13	0.13	0.20		GAM	0.426	0.11	0.12		43	57
Europium 152	U		0.083	0.10	U	GAM	U		0.063	U	-	
Europium 154	U		0.11	0.10	U	GAM	U		0.085	U	-	
Europium 155	U		0.086	0.10	U	GAM	U		0.072	U	-	
Thorium 228	0.595	0.058	0.062			GAM	0.444	0.030	0.031		29	37
Thorium 232	0.656	0.13	0.13			GAM	0.426	0.11	0.12		43	57
Uranium 235	U		0.14		U	GAM	U		0.092	U	-	
Uranium 238	U		4.2		U	GAM	U		3.0	U	-	
Americium 241	U		0.14		U	GAM	U		0.066	U	-	

200-MW-1 Characterization Sampling

QC-DUP#7 52869

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-DUP
Version 3.06
Report date 06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

R505035-01 **B1C769**

DATA SHEET

SDG	7267	Client/Case no	Hanford	SDG H3145	
Contact	Melissa C. Mannion	Contract	No. 630		
Lab sample id	R505035-01	Client sample id	B1C769		
Dept sample id	7267-001	Location/Matrix	216-T-13; 10-11 ft	SOLID	
Received	05/06/05	Collected/Weight	04/28/05 09:30	71.64 g	
% solids	91.1	Custody/SAF No	F04-015-127	F04-015	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Technetium 99	14133-76-7	0.125	0.23	0.54	15	U	TC

200-MW-1 Characterization Sampling

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

R505035-02 **B1C771**

DATA SHEET

SDG	7267	Client/Case no	Hanford	SDG H3145	
Contact	Melissa C. Mannion	Contract	No. 630		
Lab sample id	R505035-02	Client sample id	B1C771		
Dept sample id	7267-002	Location/Matrix	216-T-13; 10-11 ft	SOLID	
Received	05/06/05	Collected/Weight	04/28/05 09:30	68.32 g	
% solids	90.8	Custody/SAF No	F04-015-128	F04-015	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Technetium 99	14133-76-7	0.145	0.22	0.55	15	U	TC

200-MW-1 Characterization Sampling

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

R505035-03 **B1C774**

DATA SHEET

SDG	7267	Client/Case no	Hanford	SDG H3145
Contact	Melissa C. Mannion	Contract	No. 630	
Lab sample id	R505035-03	Client sample id	B1C774	
Dept sample id	7267-003	Location/Matrix	216-T-13; 12-13 ft	SOLID
Received	05/06/05	Collected/Weight	04/28/05 09:55	98.81 g
% solids	90.5	Custody/SAF No	F04-015-141	F04-015

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Technetium 99	14133-76-7	0.068	0.27	0.56	15	U	TC

200-MW-1 Characterization Sampling

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

R505035-04 **B1C775**

DATA SHEET

SDG	7267	Client/Case no	Hanford	SDG H3145	
Contact	Melissa C. Mannion	Contract	No. 630		
Lab sample id	R505035-04	Client sample id	B1C775		
Dept sample id	7267-004	Location/Matrix	216-T-13; 14-15 ft	SOLID	
Received	05/06/05	Collected/Weight	04/28/05 10:15	105.2 g	
% solids	96.4	Custody/SAF No	F04-015-142	F04-015	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Technetium 99	14133-76-7	0.081	0.22	0.56	15	U	TC

200-MW-1 Characterization Sampling

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/17/05

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H3145

R505035-05 B1C776

DATA SHEET

SDG	7267	Client/Case no	Hanford	SDG H3145	
Contact	Melissa C. Mannion	Contract	No. 630		
Lab sample id	R505035-05	Client sample id	B1C776		
Dept sample id	7267-005	Location/Matrix	216-T-13; 19-20 ft	SOLID	
Received	05/06/05	Collected/Weight	04/28/05 13:00	110.5 g	
% solids	96.9	Custody/SAF No	F04-015-143	F04-015	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Technetium 99	14133-76-7	0.313	0.24	0.56	15	U	TC

200-MW-1 Characterization Sampling

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

R505035-06 **B1C777**

DATA SHEET

SDG	7267	Client/Case no	Hanford	SDG H3145
Contact	Melissa C. Mannion	Contract	No. 630	
Lab sample id	R505035-06	Client sample id	B1C777	
Dept sample id	7267-006	Location/Matrix	216-T-13; 24-25 ft	SOLID
Received	05/06/05	Collected/Weight	04/28/05 13:30	96.81 g
% solids	96.5	Custody/SAF No	F04-015-144	F04-015

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI-FIERS	TEST
Technetium 99	14133-76-7	0.248	0.30	0.55	15	U	TC

200-MW-1 Characterization Sampling

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/17/05

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H3145

R505035-07 B1C778

DATA SHEET

SDG	7267	Client/Case no	Hanford SDG H3145
Contact	Melissa C. Mannion	Contract	No. 630
Lab sample id	R505035-07	Client sample id	B1C778
Dept sample id	7267-007	Location/Matrix	216-T-13; 12-13 ft SOLID
Received	05/06/05	Collected/Weight	04/28/05 09:55 732.2 g
% solids	93.6	Custody/SAF No	F04-015-151 F04-015

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALIFIERS	TEST
Total Strontium	SR-RAD	0.304	0.14	0.23	1.0		SR
Total Uranium (ug/g)	7440-61-1	2.06	0.23	0.009	1.0		U_T
Uranium 233/234	U-233/234	0.996	0.38	0.24	1.0		U
Uranium 235	15117-96-1	0	0.075	0.29	1.0	U	U
Uranium 238	U-238	0.622	0.25	0.24	1.0		U
Plutonium 238	13981-16-3	0	0.040	0.15	1.0	U	PU
Plutonium 239/240	PU-239/240	0.060	0.080	0.15	1.0	U	PU
Americium 241	14596-10-2	0.028	0.056	0.21	1.0	U	AM
Potassium 40	13966-00-2	9.42	0.51	0.27			GAM
Cobalt 60	10198-40-0	U		0.027	0.050	U	GAM
Cesium 137	10045-97-3	0.324	0.025	0.022	0.10		GAM
Radium 226	13982-63-3	0.380	0.061	0.058	0.10		GAM
Radium 228	15262-20-1	0.426	0.11	0.12	0.20		GAM
Europium 152	14683-23-9	U		0.063	0.10	U	GAM
Europium 154	15585-10-1	U		0.085	0.10	U	GAM
Europium 155	14391-16-3	U		0.072	0.10	U	GAM
Thorium 228	14274-82-9	0.444	0.030	0.031			GAM
Thorium 232	TH-232	0.426	0.11	0.12			GAM
Uranium 235	15117-96-1	U		0.092		U	GAM
Uranium 238	U-238	U		3.0		U	GAM
Americium 241	14596-10-2	U		0.066		U	GAM

200-MW-1 Characterization Sampling

Lab id	EBRLNE
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

Test AM Matrix SOLID
SDG 7267
Contact Melissa C. Mannion

METHOD SUMMARY

AMERICIUM 241 IN SOLIDS
ALPHA SPECTROSCOPY

Client Hanford
Contract No. 630
Contract SDG H3145

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	PLANCHET	Americium 241
Preparation batch 7136-034					
B1C778	R505035-07			7267-007	U
BLK (QC ID=52868)	R505035-09			7267-009	U
LCS (QC ID=52867)	R505035-08			7267-008	ok
Duplicate (R505035-07)	R505035-10			7267-010	- U
Nominal values and limits from method				RDLs (pCi/g)	1.0
200-MW-1 Characterization 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 7136-034	2σ prep error 5.0 %			Reference Lab Notebook 7136 pg. 034												
B1C778	R505035-07			0.21	0.500			83		117			34	06/01/05	06/01	SS-059
BLK (QC ID=52868)	R505035-09			0.32	0.500			53		118				06/01/05	06/01	SS-061
LCS (QC ID=52867)	R505035-08			0.33	0.500			50		118				06/01/05	06/01	SS-060
Duplicate (R505035-07) (QC ID=52869)	R505035-10			0.21	0.500			83		118			34	06/01/05	06/01	SS-062
Nominal values and limits from method				1.0	0.500			20-105		100	100		180			

PROCEDURES	REFERENCE	AMCMISO_IE_PLATE_AEA
	CP-060	Soil Preparation, rev 7
	CP-071	Soil Dissolution, > 1.0g Aliquot, rev 5
	CP-963	Americium and Curium in Water and Dissolved Samples by Extraction Chromatography, rev 6
	CP-008	Heavy Element Electroplating, rev 9

AVERAGES ± 2 SD FOR 4 SAMPLES			
MDA	0.27	±	0.13
YIELD	67	±	36

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-CMS
Version 3.06
Report date 06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

Test PU Matrix SOLID
SDG 7267
Contact Melissa C. Mannion

METHOD SUMMARY

PLUTONIUM, ISOTOPIC IN SOLIDS
ALPHA SPECTROSCOPY

Client Hanford
Contract No. 630
Contract SDG H3145

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	Plutonium 238		Plutonium 239/240	
Preparation batch 7136-034								
B1C778	R505035-07			7267-007	U		U	
BLK (QC ID=52868)	R505035-09			7267-009	U		U	
LCS (QC ID=52867)	R505035-08			7267-008	ok		ok	
Duplicate (R505035-07)	R505035-10			7267-010	-	U	-	U
Nominal values and limits from method 200-MW-1 Characterization 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 7136-034 2σ prep error 5.0 % Reference Lab Notebook 7136 pg. 034																
B1C778	R505035-07			0.15	0.500			78		171			40	06/07/05	06/07	SS-059
BLK (QC ID=52868)	R505035-09			0.16	0.500			73		171				06/07/05	06/07	SS-061
LCS (QC ID=52867)	R505035-08			0.14	0.500			80		171				06/07/05	06/07	SS-060
Duplicate (R505035-07) (QC ID=52869)	R505035-10			0.19	0.500			62		171			40	06/07/05	06/07	SS-062
Nominal values and limits from method				1.0	0.500			20-105		100	100		180			

PROCEDURES	REFERENCE	PUISO_PLATE_AEA
	CP-060	Soil Preparation, rev 7
	CP-071	Soil Dissolution, > 1.0g Aliquot, rev 5
	CP-941	Plutonium in Water and Dissolved Samples by Extraction Chromatography, rev 3
	CP-008	Heavy Element Electroplating, rev 9

AVERAGES ± 2 SD FOR 4 SAMPLES
MDA 0.16 ± 0.043
YIELD 73 ± 16

Lab id EBERLNE
Protocol Hanford
Version Ver 1.0
Form DVD-CMS
Version 3.06
Report date 06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

Test U Matrix SOLID
SDG 7267
Contact Melissa C. Mannion

METHOD SUMMARY

URANIUM, ISOTOPIC IN SOLIDS
ALPHA SPECTROSCOPY

Client Hanford
Contract No. 630
Contract SDG H3145

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	1: Uranium 233/234	2: Uranium 235	3: Uranium 238	RESULT RATIOS (%) 1÷3	2σ	2÷3	2σ
Preparation batch 7136-034											
B1C778	R505035-07			7267-007	0.996	U	0.622	160	89	0	12
BLK (QC ID=52868)	R505035-09			7267-009	U	U	U				
LCS (QC ID=52867)	R505035-08			7267-008	ok	ok	ok				
Duplicate (R505035-07)	R505035-10			7267-010	ok	- U	ok	195	100	24	26
Nominal values and limits from method			RDLs (pCi/g)		1.0	1.0	1.0	100		4	
200-MW-1 Characterization Sampling							Averages	178		12	

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 7136-034 2σ prep error 5.0 % Reference Lab Notebook 7136 pg. 034																
B1C778	R505035-07			0.29	0.500			83		118			34	06/01/05	06/01	SS-063
BLK (QC ID=52868)	R505035-09			0.31	0.500			67		118				06/01/05	06/01	SS-065
LCS (QC ID=52867)	R505035-08			0.88	0.500			95		118				06/01/05	06/01	SS-064
Duplicate (R505035-07) (QC ID=52869)	R505035-10			0.23	0.500			92		119			34	06/01/05	06/01	SS-066
Nominal values and limits from method				1.0	0.500			20-105		100	100		180			

PROCEDURES	REFERENCE	UISO_PLATE_AEA
	CP-060	Soil Preparation, rev 7
	CP-071	Soil Dissolution, > 1.0g Aliquot, rev 5
	CP-921	Uranium in Water and Dissolved Samples by Extraction Chromatography, rev 1
	CP-008	Heavy Element Electroplating, rev 9

AVERAGES ± 2 SD FOR 4 SAMPLES
MDA 0.43 ± 0.61
YIELD 84 ± 25

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-CMS
Version 3.06
Report date 06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

Test SR Matrix SOLID
SDG 7267
Contact Melissa C. Mannion

METHOD SUMMARY

TOTAL STRONTIUM IN SOLIDS
BETA COUNTING

Client Hanford
Contract No. 630
Contract SDG H3145

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	Total Strontium
Preparation batch 7136-034					
B1C778	R505035-07			7267-007	0.304
BLK (QC ID=52868)	R505035-09			7267-009	U
LCS (QC ID=52867)	R505035-08			7267-008	ok
Duplicate (R505035-07)	R505035-10			7267-010	ok
Nominal values and limits from method				RDLs (pCi/g)	1.0
200-MW-1 Characterization 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 7136-034 2σ prep error 10.0 % Reference Lab Notebook 7136 pg. 034																
B1C778	R505035-07			0.23	1.00			92		100			34	06/01/05	06/01	GRB-223
BLK (QC ID=52868)	R505035-09			0.27	1.00			84		100				06/01/05	06/01	GRB-225
LCS (QC ID=52867)	R505035-08			0.23	1.00			90		100				06/01/05	06/01	GRB-218
Duplicate (R505035-07) (QC ID=52869)	R505035-10			0.21	1.00			98		100			34	06/01/05	06/01	GRB-224
Nominal values and limits from method				1.0	1.00			30-105		100			180			

PROCEDURES	REFERENCE	SRTOT_SEP_PRECIP_GPC
	CP-060	Soil Preparation, rev 7
	CP-071	Soil Dissolution, > 1.0g Aliquot, rev 5
	CP-383	Strontium in Dissolved Solid of < 5.0g Aliquot, rev 1

AVERAGES ± 2 SD FOR 4 SAMPLES				
	MDA	0.24	±	0.050
	YIELD	91	±	12

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-CMS
Version 3.06
Report date 06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

Test TC Matrix SOLID
SDG 7267
Contact Melissa C. Mannion

METHOD SUMMARY

TECHNETIUM 99 IN SOLIDS

BETA COUNTING

Client Hanford
Contract No. 630
Contract SDG H3145

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	Technetium 99	
Preparation batch 7136-034						
B1C769	R505035-01			7267-001	U	
B1C771	R505035-02			7267-002	U	
B1C774	R505035-03			7267-003	U	
B1C775	R505035-04			7267-004	U	
B1C776	R505035-05			7267-005	U	
B1C777	R505035-06			7267-006	U	
BLK (QC ID=52868)	R505035-09			7267-009	U	
LCS (QC ID=52867)	R505035-08			7267-008	ok	
Duplicate (R505035-06)	R505035-11			7267-011	-	U
Nominal values and limits from method				RDLs (pCi/g)	15	
200-MW-1 Characterization 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 7136-034	2σ prep error 10.0 %	Reference Lab Notebook 7136 pg. 034														
B1C769	R505035-01			0.54	1.00			93	50				47	06/10/05	06/14	GRB-222
B1C771	R505035-02			0.55	1.00			92	50				48	06/10/05	06/15	GRB-222
B1C774	R505035-03			0.56	1.00			90	50				47	06/10/05	06/14	GRB-224
B1C775	R505035-04			0.56	1.00			90	50				48	06/10/05	06/15	GRB-224
B1C776	R505035-05			0.56	1.00			93	50				46	06/10/05	06/13	GRB-217
B1C777	R505035-06			0.55	1.00			95	50				46	06/10/05	06/13	GRB-218
BLK (QC ID=52868)	R505035-09			0.55	1.00			92	50					06/10/05	06/13	GRB-220
LCS (QC ID=52867)	R505035-08			0.60	1.00			92	50					06/10/05	06/13	GRB-219
Duplicate (R505035-06) (QC ID=52870)	R505035-11			0.61	1.00			83	50				48	06/10/05	06/15	GRB-228
Nominal values and limits from method				15	1.00			20-105	50				180			

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-CMS
Version 3.06
Report date 06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

Test TC Matrix SOLID
SDG 7267
Contact Melissa C. Mannion

METHOD SUMMARY, cont.

TECHNETIUM 99 IN SOLIDS

BETA COUNTING

Client Hanford
Contract No. 630
Contract SDG H3145

PROCEDURES	REFERENCE	TC99_TR_SEP_LSC
	CP-431	Technetium-99 Purification of Soil or Resin by Extraction Chromatography, rev 2
	CP-008	Heavy Element Electroplating, rev 9

AVERAGES ± 2 SD FOR 9 SAMPLES
MDA 0.56 ± 0.048
YIELD 91 ± 7

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-CMS
Version 3.06
Report date 06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

Test GAM Matrix SOLID
SDG 7267
Contact Melissa C. Mannion

METHOD SUMMARY

GAMMA SCAN

GAMMA SPRCTROSCOPY

Client Hanford
Contract No. 630
Contract SDG H3145

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	Cobalt 60	Cesium 137
Preparation batch 7136-034						
B1C778	R505035-07			7267-007	U	0.324
BLK (QC ID=52868)	R505035-09			7267-009	U	U
LCS (QC ID=52867)	R505035-08			7267-008	ok	ok
Duplicate (R505035-07)	R505035-10			7267-010	- U	ok
Nominal values and limits from method				RDLs (pCi/g)	0.050	0.10
200-MW-1 Characterization 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 7136-034	2σ prep error 15.0 %	Reference Lab Notebook 7136 pg. 034														
B1C778	R505035-07			0.22	242					950			22	05/19/05	05/20	JR,03,00
BLK (QC ID=52868)	R505035-09			0.24	242					414				05/19/05	05/20	JR,07,00
LCS (QC ID=52867)	R505035-08			0.038	242					414				05/19/05	05/20	JR,05,00
Duplicate (R505035-07) (QC ID=52869)	R505035-10			0.31	242					401			25	05/19/05	05/23	JR,05,00
Nominal values and limits from method				0.050	765					100			180			

PROCEDURES	REFERENCE	GAMMA_GS
	CP-060	Soil Preparation, rev 7
	CP-100	Ge(Li) Preparation for Commercial Samples, rev 7

AVERAGES ± 2 SD FOR 4 SAMPLES
MDA 0.20 ± 0.23
YIELD _____ ± _____

Lab id EBRLNF
Protocol Hanford
Version Ver 1.0
Form DVD-CMS
Version 3.06
Report date 06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

Test U T Matrix SOLID
SDG 7267
Contact Melissa C. Mannion

METHOD SUMMARY

URANIUM, TOTAL IN SOLIDS
KINETIC PHOSPHORIMETRY (KPA)

Client Hanford
Contract No. 630
Contract SDG H3145

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	Total Uranium
Preparation batch 7136-034					
B1C778	R505035-07			7267-007	2.06
BLK (QC ID=52868)	R505035-09			7267-009	U
LCS (QC ID=52867)	R505035-08			7267-008	ok
Duplicate (R505035-07)	R505035-10			7267-010	ok
Nominal values and limits from method				RDLs (ug/g)	1.0
200-MW-1 Characterization Sampling					

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	MDA ug/g	ALIQ g	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7136-034	2σ prep error 9.0 %	Reference Lab Notebook 7136 pg. 034														
B1C778	R505035-07			0.009	0.0500								27	05/25/05	05/25	KPA-001
BLK (QC ID=52868)	R505035-09			0.009	0.0500									05/25/05	05/25	KPA-001
LCS (QC ID=52867)	R505035-08			0.092	0.0500									05/25/05	05/25	KPA-001
Duplicate (R505035-07) (QC ID=52869)	R505035-10			0.009	0.0500								27	05/25/05	05/25	KPA-001
Nominal values and limits from method				1.0	0.0500								180			

PROCEDURES	REFERENCE	UTOT_KPA
	CP-062	Sample Aliquoting, rev 2
	CP-071	Soil Dissolution, > 1.0g Aliquot, rev 5
	CP-928	Total Uranium by Kinetic Phosphorimetry, rev 8
	CP-929	Calibration of the Kinetic Phosphorimeter, rev 9

AVERAGES ± 2 SD FOR 4 SAMPLES
MDA 0.030 ± 0.083
YIELD _____ ± _____

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-CMS
Version 3.06
Report date 06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

SDG 7267
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_H3145

SAMPLE SUMMARY

The Sample and QC Summary Reports show all samples, including QC samples, reported in one Sample Delivery Group (SDG).

The Sample Summary Report fully identifies client samples and gives the corresponding lab sample identification. The QC Summary Report shows at the sample level how the lab organized the samples into batches and generated QC samples. The Preparation Batch and Method Summary Reports show this at the analysis level.

The following notes apply to these reports:

* LAB SAMPLE ID is the lab's primary identification for a sample.

* DEPARTMENT SAMPLE ID is an alternate lab id, for example one assigned by a radiochemistry department in a lab.

* CLIENT SAMPLE ID is the client's primary identification for a sample. It includes any sample preparation done by the client that is necessary to identify the sample.

* QC BATCH is a lab assigned code that groups samples to be processed and QCed together. These samples should have similar matrices.

  QC BATCH is not necessarily the same as SDG, which reflects samples received and reported together.

* All Lab Control Samples, Method Blanks, Duplicates and Matrix Spikes are shown that QC any of the samples. Due to possible reanalyses, not all results for all these QC samples may be relevant to the SDG. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 06/17/05

SDG 7267
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_H3145

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 06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

SDG 7267
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_H3145

WORK SUMMARY

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

The following notes apply to this report:

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

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

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

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

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

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

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REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_H3145

DATA SHEET

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

The following notes apply to this report:

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

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

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

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

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

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

The following qualifiers are defined by the DVD system:

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

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Version Ver 1.0
Form DVD-RG
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SDG 7267
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GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG_H3145

DATA SHEET

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

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

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

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

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

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

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

P The RESULT is 'preliminary'.

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

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

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

The following values are underlined to indicate possible problems:

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

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GUIDE, cont.

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Case no SDG_H3145

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.

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REPORT GUIDE

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LAB CONTROL SAMPLE

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

The following notes apply to this report:

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

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

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

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

* The first, computed limits for the recovery reflect:

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

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

  2. The error of ADDED.

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

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

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

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REPORT GUIDE

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DUPLICATE

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

The following notes apply to this report:

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

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

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

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

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

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

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

  This value reported for this limit is at most 999.

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

  1. A fixed percentage specified in the protocol.

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GUIDE, cont.

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DUPLICATE

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

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

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

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

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

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SAMPLE DELIVERY GROUP H3145

REPORT GUIDE

Client Hanford
Contract No. 630
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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
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Version 3.06
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GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG_H3145

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 06/17/05

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3145

SDG 7267
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_H3145

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'

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Protocol Hanford
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Version 3.06
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GUIDE, cont.

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Contract No. 630
Case no SDG_H3145

METHOD SUMMARY

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

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

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

  MDAs are underlined if greater than the printed RDL.

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

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

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

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

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

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

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Protocol Hanford
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GUIDE, cont.

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Contract No. 630
Case no SDG_H3145

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 EBRLNE
Protocol Hanford
Version Ver 1.0
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SDG 7267
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG_H3145

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 06/17/05

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-127	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION 216-T-13; 10-11 ft	**PROJECT DESIGNATION** H3145 (7267) 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015		
ICE CHEST NO. 5HWS-102	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Eberline Services	**OFFSITE PROPERTY NO.** 5el PTR 15463		**BILL OF LADING/AIR BILL NO.** 5el PTR 15463		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS N/A

SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C770

PRESERVATION	None																
TYPE OF CONTAINER	aG																
NO. OF CONTAINER(S)	1																
VOLUME	60mL																
SAMPLE ANALYSIS	~~Iodine-129~~ Technetium-99; ~~Tritium - H3~~	PMG 2/14/05															

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1C769	SOIL	4/28/05	0930

CHAIN OF POSSESSION

SIGN/ PRINT NAMES			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSPope/ 4-28-05	1530	M0-026/ REF #1	4-28-05 1530
RELINQUISHED BY/REMOVED FROM M0-026 REF 2	5/5/05 0855	RECEIVED BY/STORED IN M.H.Bachman M.G.Bachman	5/5/05 0855
RELINQUISHED BY/REMOVED FROM M.H.Bachman M.G.Bachman	5/5/05 0855	RECEIVED BY/STORED IN Fed Ex	DATE/TIME
RELINQUISHED BY/REMOVED FROM Fed Express	5/6/05 10:00	RECEIVED BY/STORED IN	05/06/05 10:00
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

LABORATORY SECTION	**RECEIVED BY**		**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**		**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-128	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION 216-T-13; 10-11 ft	**PROJECT DESIGNATION** H3145 (7267) 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015		
ICE CHEST NO. 5HW5-107	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Eberline Services	**OFFSITE PROPERTY NO.** 5a PTR 15463		**BILL OF LADING/AIR BIL NO.** 5a PTR 15463		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C770

PRESERVATION	None													
TYPE OF CONTAINER	aG													
NO. OF CONTAINER(S)	1													
VOLUME	60mL													
SAMPLE ANALYSIS	~~Iodine-129;~~ Technetium-99; ~~Tritium - H3~~	PMG 2/14/05												

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1C771	SOIL	4/28/5	0930

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pfister/ [illegible]	4/28/05 1530	MO-026 Ref. #1	4-28-05 1530
MO-026 Ref. #1	5/5/05 0865	M.H. Bauhus/M.G. Bauhus	5/5/05 0865
M.H. Bauhus/M.G. Bauhus	5/5/05 0856	LDL 4X	
Fed-Express	5/6/05 10:00	MFW	05/06/05 16:00

SPECIAL INSTRUCTIONS

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-141	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	8N	45 Days / 45 Days

SAMPLING LOCATION	PROJECT DESIGNATION	SAF NO.	AIR QUALITY
216-T-13; 12-13 ft	H3145 (7267) 200-MW-1 Characterization Sampling and Analysis - Soil	F04-015	☐

ICE CHEST NO.	FIELD LOGBOOK NO.	COA	METHOD OF SHIPMENT
STAS-106		119144ES10	Federal Express

SHIPPED TO	OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.
Eberline Services	24 PTR 15463	24 PTR 15463

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C780

PRESERVATION	None																	
TYPE OF CONTAINER	aG																	
NO. OF CONTAINER(S)	1																	
VOLUME	60mL																	
SAMPLE ANALYSIS	~~Iodine-129;~~ Technetium-99; ~~Tritium-H3;~~	PMG 2/14/05																

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME															
B1C774	SOIL	4-28-05	0955	X														

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSPope / [illegible]	4-28-05 1530	MW-026 REF #1	4-28-05 1530
MO-026 REF #1	5/5/05 0825	M.G. Bauhus	5/5/05 0825
M.G. Bauhus	5/5/05 0825	LCA EX	
Fed-Express	5/6/05 10:00	[illegible]	05/06/05 10:00

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-142	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Tyra/Wlberg	CS Cearlock	372-9638	TRENT, SJ	AIR QUALITY ☐	45 Days / ~~45 Days~~ 4.24.05
SAMPLING LOCATION 216-T-13; 14-15 ft	**PROJECT DESIGNATION** H3145 (7267) 200-MW-1 Characterization Sampling and Analysis - Soil	**SAF NO.** F04-015			
ICE CHEST NO. SAWS-106	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Eberline Services	**OFFSITE PROPERTY NO.** SuPTR 15463		**BILL OF LADING/AIR BILL NO.** SuPTR 15463		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	None										
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegitation W=Water WI=Wipe X=Other	N/A	TYPE OF CONTAINER	bG										
		NO. OF CONTAINER(S)	1										
		VOLUME	60mL										
	SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C781	SAMPLE ANALYSIS	~~Iodine-129~~; Technetium-99; ~~Tritium-H3~~	PMG 3/14/05									

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C775	SOIL	4-28-05	1015	X									

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
S.S. Pope	4-28-05 1530	MW-226 Refr #1	4-28-05 1530	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
M.W. Bachler	5/5/05 0825	M.W. Bachler	5/5/05 0825	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
M.W. Bachler	5/5/05 0826	fed ex		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
fed-express	5/6/05 10:00	MW	05/06/05 10:00	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
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

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-143	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ		
SAMPLING LOCATION	**PROJECT DESIGNATION** H3145 (7267)		**SAF NO.**	**AIR QUALITY** ☐	45 Days / ~~45 Days~~ 4-26-05
216-T-13; 19-20 ft	200-MW-1 Characterization Sampling and Analysis - Soil		F04-015		
ICE CHEST NO. SAWS-10C	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Eberline Services	**OFFSITE PROPERTY NO.** See PTR 15463		**BILL OF LADING/AIR BILL NO.** See PTR 15463		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C782

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
				None	aG	1	60mL	~~Iodine-129;~~ Technetium-99; ~~Tritium-H3;~~ PMG 2/14/05
B1C776	SOIL	4-28-05	1300	X				

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
T. Spotz	4-28-05 1530	MO-026 REF #1	04-28-05 1530
MO-026 REF #1 M.G. Balch	5/5/05 0825	M.G. Balch M.G. Balch	5/5/05 0825
M.G. Balch M.G. Balch	5/5/05 0826	[illegible]	
Fed Express	5/6/05 10:00	[illegible]	05/06/05 10:50

SPECIAL INSTRUCTIONS

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-144	PAGE 1 OF 1

COLLECTOR Pope/Pfister/Tyra/Wilberg	**COMPANY CONTACT** CS Cearlock	**TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ
SAMPLING LOCATION 216-T-13; 24-25 ft	**PROJECT DESIGNATION** H3145 (7267) 200-MW-1 Characterization Sampling and Analysis - Soil	**SAF NO.** F04-015	**PRICE CODE** BN **AIR QUALITY** ☐
ICE CHEST NO. 3HWS-106	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express
SHIPPED TO Eberline Services	**OFFSITE PROPERTY NO.** See PTR 15463		**BILL OF LADING/AIR BILL NO.** See PTR 15463

DATA TURNAROUND: 45 Days / 45 Days

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C783

PRESERVATION	None													
TYPE OF CONTAINER	aG													
NO. OF CONTAINER(S)	1													
VOLUME	60mL													
SAMPLE ANALYSIS	~~Iodine-129;~~ Technetium-99; ~~Tritium - H3;~~	PMG 4/28/05												
SAMPLE NO.	**MATRIX***	**SAMPLE DATE**	**SAMPLE TIME**											
B1C777	SOIL	4-28-05	1330	✓										

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSPfister/JSPfister	4-28-05 1520	MO-526 / Ref. #1	4-28-05 1530
MO-526 RTT	5/5/05 0845	M.H. Bauchus/M.G. Bauchus	5/5/05 0845
M.H. Bauchus/M.G. Bauchus	5/5/05 0845	FED EX	
Fred Espena	5/6/05 10:00	MFM	05/06/05 10:00

SPECIAL INSTRUCTIONS

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-151	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
216-T-13; 12-13 ft	200-MW-1 Characterization Sampling and Analysis - Soil		F04-015		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
SAMS-106		119144ES10	Federal Express		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
Eberline Services	SUPTC 15463		SUPTC 15463		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C780

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
				None	P	1	500mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
B1C778	SOIL	4-28-05	0955	X				

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
TSPOPE / [illegible]	4-28-05 1530	MO-026 / REF-H	4-28-05 1530
MO-026 / REF-H	5/5/05 0845	M.H. Bauchum M.L. Bauchum	5/5/05 0845
M.H. Bauchum M.L. Bauchum	5/5/05 0845	[illegible]	
Fed Express	5/6/05 10:00	MFW	05/06/05 10:00

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

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

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

EBERLINE SERVICES

RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

Client: FLUOR HANFORD City RICHLAND State WA

Date/Time received 05/06/05 10:50 CoC No. F04-015

Container I.D. No. SAWS 106 (ice chest) Requested TAT (Days) _____ P.O. Received Yes [ ] No [ ]

INSPECTION

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

14. Was P.M. notified of any anomalies? Yes [ ] No [ ] Date _____
15. Inspected by MFW Date: 05/06/05 Time: 11:00

Customer Sample No.	cpm	mR/hr	Wipe	Customer Sample No.	cpm	mR/hr	wipe
* BIC773							
* BIC779							

ship to SHAW LAB

Ion Chamber Ser. No. _____ Calibration date _____
Alpha Meter Ser. No. _____ Calibration date _____
Beta/Gamma Meter Ser. No. _____ Calibration date _____

LvLI
21 LIONVILLE LABORATORY INC.

Mr. Steve Trent
Fluor Hanford Inc.
825 Jadwin Ave.
Richland, WA 99352

Subject: Contract No. 630
Analytical Data Package

Dear Mr. Trent:

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

LvLI Batch #	0505L423
SDG #	H3145
SAF #	F05-015
Date Received	5-6-05
# Samples	7
Matrix	Soil
Volatiles	X
Semivolatiles	X
Pest/PCB	X
DRO/GRO/KRO	X
Herbicides	
GC Alcohol	
Metals	X
Inorganics	X

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

Sincerely,
Lionville Laboratory Incorporated

Orlette S. Johnson
Project Manager

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

Lionville Laboratory, Inc.
VOA ANALYTICAL DATA PACKAGE FOR
TNUHANFORD F04-015 H3145

DATE RECEIVED: 05/06/05 LVL LOT # :0505L423

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B1C778	007	S	05LVG131	04/28/05	N/A	05/12/05
B1C778	007 MS	S	05LVG131	04/28/05	N/A	05/12/05
B1C778	007 MSD	S	05LVG131	04/28/05	N/A	05/12/05
LAB QC:						
VBLKSB	MB1	S	05LVG131	N/A	N/A	05/12/05
VBLKSB	MB1 BS	S	05LVG131	N/A	N/A	05/12/05

LIONVILLE LABORATORY INC.

Case Narrative

Client: TNU-HANFORD F04-015
LVL #: 0505L423
SDG/SAF # H3158/F04-015

W.O. #: 11343-606-001-9999-00
Date Received: 05-06-2005

GC/MS VOLATILE

One (1) soil sample was collected on 04-28-2005.

The sample and its associated QC samples were analyzed according to criteria set forth in Lionville Laboratory SOPs based on SW 846 Method 8260B for TCL volatile target compounds on 05-12-2005.

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

1. All results presented in this report are derived from a sample that met LvLI's sample acceptance policy.
2. The sample was analyzed within required holding time.
3. Non-target compounds were not detected in the sample.
4. All surrogate recoveries were within acceptance criteria.
5. All matrix spike recoveries were within acceptance criteria.
6. All blank spike recoveries were within acceptance criteria.
7. The method blank contained the common laboratory contaminant Methylene Chloride at a level less than the CRQL.
8. Internal standard area and retention time criteria were met.
9. Manual integrations are performed according to SOP QA-125 to produce quality data with the utmost integrity. All manual integrations are required to be technically valid and properly documented. Appropriate technical flags are defined in the Glossary ("Technical Flags For Manual Integration").
10. LvLI is NELAP accredited by the state of Pennsylvania and holds over 20 additional state accreditations. For a complete listing of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager.
11. "I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard-copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature."

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

6/20/05
Date

som\group\data\voa\tnu-hanford\0505-462.doc

GLOSSARY

DATA QUALIFIERS

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

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

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

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

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

I = Interference.

NQ = Result qualitatively confirmed but not able to quantify.

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

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

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

GLOSSARY

ABBREVIATIONS

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

BSD = Indicates blank spike duplicate.

MS = Indicates matrix spike.

MSD = Indicates matrix spike duplicate.

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

NA = Not Applicable.

DF = Dilution Factor.

NR = Not Required.

SP, Z = Indicates Spiked Compound.

TECHNICAL FLAGS FOR MANUAL INTEGRATION

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

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

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

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

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

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

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

Lionville Laboratory, Inc.

Volatiles by GC/MS, HSL List

Report Date: 06/03/05 10:02

RFW Batch Number: **0505L423** Client: **TNUHANFORD F04-015 H3145** Work Order: 11343606001 Page: 1a

	Cust ID:	B1C778	B1C778	B1C778	VBLKSB	VBLKSB BS
Sample	RFW#:	007	007 MS	007 MSD	05LVG131-MB1	05LVG131-MB1
Information	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	0.962	0.962	0.926	1.00	1.00
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Surrogate Recovery	Toluene-d8	104 %	101 %	105 %	102 %	102 %
	Bromofluorobenzene	106 %	104 %	112 %	101 %	104 %
	1,2-Dichloroethane-d4	116 %	118 %	121 %	112 %	110 %
Chloromethane		10 U	10 U	10 U	10 U	10 U
Bromomethane		10 U	10 U	10 U	10 U	10 U
Vinyl Chloride		10 U	10 U	10 U	10 U	10 U
Chloroethane		10 U	10 U	10 U	10 U	10 U
Methylene Chloride		4 JB	5 JB	3 JB	2 J	2 JB
Acetone		10 U	10 U	10 U	10 U	10 U
Carbon Disulfide		5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene		5 U	81 %	82 %	5 U	80 %
1,1-Dichloroethane		5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethene (total)		5 U	5 U	5 U	5 U	5 U
Chloroform		5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane		5 U	5 U	5 U	5 U	5 U
2-Butanone		10 U	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane		5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride		5 U	5 U	5 U	5 U	5 U
Bromodichloromethane		5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane		5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene		5 U	5 U	5 U	5 U	5 U
Trichloroethene		5 U	93 %	97 %	5 U	95 %
Dibromochloromethane		5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane		5 U	5 U	5 U	5 U	5 U
Benzene		5 U	93 %	96 %	5 U	91 %
Trans-1,3-Dichloropropene		5 U	5 U	5 U	5 U	5 U
Bromoform		5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone		10 U	10 U	10 U	10 U	10 U
2-Hexanone		10 U	10 U	10 U	10 U	10 U
Tetrachloroethene		5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane		5 U	5 U	5 U	5 U	5 U
Toluene		5 U	99 %	107 %	5 U	98 %

*= Outside of EPA CLP QC limits.

RFW Batch Number: **0505L423** Client: **TNUHANFORD F04-015 H3145** Work Order: 11343606001 Page: 1b

Cust ID:	B1C778	B1C778	B1C778	VBLKSB	VBLKSB BS
RFW#:	007	007 MS	007 MSD	05LVG131-MB1	05LVG131-MB1
Chlorobenzene	5 U	95 %	104 %	5 U	97 %
Ethylbenzene	5 U	5 U	5 U	5 U	5 U
Styrene	5 U	5 U	5 U	5 U	5 U
Xylene (total)	5 U	5 U	5 U	5 U	5 U
cis-1,2-dichloroethene	5 U	5 U	5 U	5 U	5 U
trans-1,2-dichloroethene	5 U	5 U	5 U	5 U	5 U

*= Outside of EPA CLP QC limits.

Lionville Laboratory Use Only
0505L423

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

See SRC

Client: TNU Hanford F04-015
Est. Final Proj. Sampling Date:
Project #: 11343-006-001-9999-00
Project Contact/Phone #:
Lionville Laboratory Project Manager: OJ
QC: SPEC Del: STD TAT: 30 DAYS

Date Rec'd: 5/6/05 Date Due: 6/5/05

		BHC	C	D		(C)	A		E		F
Refrigerator #		1	6	6			6		6		6
#/Type Container	Liquid / Solid	3AG	1AG	1AG		bottle	1AG		1AG		1AG
Volume	Liquid / Solid	40	120	120			120		250		250
Preservatives											
ANALYSES REQUESTED →		VOA (ORGANIC)	BNA (ORGANIC)	Pest/PCB (ORGANIC)	Herb (ORGANIC)	w/ BNA	Oil / Grease		Metal (INORG)	CN (INORG)	Ammonia pH
Lionville Laboratory Use Only		0624H	0625X	0PUB		ODRD DGRD	IOGGR		METALS①		ICAM IASO4 IPH

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

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	VOA	BNA	Pest/PCB	Herb	w/ BNA	Oil/Grease		Metal	CN	Ammonia pH
001	B1C769			S	4/28/05	0930						1				
002	B1C771											1				
003	B1C774					0955						1				
004	B1C775					1015						1				
005	B1C776					1300						1				
006	B1C777					1330						1				
007	B1C778					0955	3	1	1		✓			1		1

Special Instructions:

METALS① = Cd, Cr, Pb, Hg

RUN MATRIX QC

DATE/REVISIONS:
1.
2.
3.
4.
5.
6.

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
FedEx	JPerry	5/6/05	1455					"COMPOSITE WASTE"		ORIGINAL REWRITTEN	

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-129	PAGE 1 OF 1
COLLECTOR: Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT: CS Cearlock	TELEPHONE NO.: 372-9638	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 8N
SAMPLING LOCATION: 216-T-13; 10-11 ft	PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO.: F04-015	AIR QUALITY: ☐
ICE CHEST NO.: GRP-05-001	FIELD LOGBOOK NO.	COA: 119144ES10	METHOD OF SHIPMENT: Federal Express	DATA TURNAROUND: 45 Days / 45 Days
SHIPPED TO: Lionville Laboratory Incorporated	OFFSITE PROPERTY NO.: 54PTL15464		BILL OF LADING/AIR BILL NO.: 54PTL15464	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C770

PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
Cool 4C	aG	1	120mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1C769	SOIL	4/28/05	0930

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope/A Pfister	4-28-05 1530	M6-026 Ref. #1	4-28-05 1530
M6-026 Ref. #1	5/5/05 0935	M.H. Bachler/M.G. Bachler	5/5/05 0935
M.H. Bachler/M.G. Bachler	5/5/05 0935	Fed Ex	
Fed Ex		J Penny	5/6/05 1455

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(1) ~~NO2/NO3 - 353.2~~; ~~Chromium Hex - 7196~~; Oil & Grease - 413.1;

PMG 2/14/05

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-130	PAGE 1 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** CS Cearlock	**TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ	**PRICE CODE** 8N **AIR QUALITY** ☐
SAMPLING LOCATION 216-T-13; 10-11 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015	**DATA TURNAROUND** 45 Days / 45 Days
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express	
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SUPTC 15464		**BILL OF LADING/AIR BILL NO.** SUPTC 15464	

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C770

PRESERVATION	Cool 4C												
TYPE OF CONTAINER	aG												
NO. OF CONTAINER(S)	1												
VOLUME	120mL												
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS												

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1C771	SOIL	4/28/5	0930

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope / [illegible]	4-28-05 1570	MO-026 / Ref. #1	4-28-05 1530
MO-026 Ref. #1	5/5/05 0935	M.H. Beecher / M.G. Bowker	5/5/05 0935
M.H. Beecher / M.G. Bowker	5/5/05 0935	FedEx	
FedEx		JP Murray	5/6/05 1455

SPECIAL INSTRUCTIONS
(1) ~~NO2/NO3 - 353.2; Chromium Hex - 7196~~; Oil & Grease - 413.1;
PMG 2/18/05

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-145	PAGE 1 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** CS Cearlock	**TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ	**PRICE CODE** 8N **AIR QUALITY** ☐
SAMPLING LOCATION 216-T-13; 12-13 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015	**DATA TURNAROUND** 45 Days / ~~45 Days~~
ICE CHEST NO. GRR-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express	
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SGW PTR 15464		**BILL OF LADING/AIR BILL NO.** SGW PTR 15464	

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS													
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegitation W=Water WI=Wipe X=Other	N/A	**PRESERVATION**	Cool 4C											
		TYPE OF CONTAINER	aG											
		NO. OF CONTAINER(S)	1											
		VOLUME	120mL											
	SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C780	**SAMPLE ANALYSIS**	SEE ITEM (1) IN SPECIAL INSTRUCTIONS											

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B1C774	SOIL	4-28-05	0955	f										

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM JSPope	DATE/TIME 4-28-05 1530	RECEIVED BY/STORED IN MSSOL/REF. #1	DATE/TIME 4-28-05 1530
RELINQUISHED BY/REMOVED FROM MO-026 RTL	DATE/TIME 5/5/05 0450	RECEIVED BY/STORED IN M.H. Boucher/M.H. Boucher	DATE/TIME 5/5/05 0450
RELINQUISHED BY/REMOVED FROM M.H. Boucher/M.H. Boucher	DATE/TIME 5/5/05 0450	RECEIVED BY/STORED IN FedEx	DATE/TIME
RELINQUISHED BY/REMOVED FROM FedEx	DATE/TIME	RECEIVED BY/STORED IN JPerry	DATE/TIME 5/6/05 1455
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

SPECIAL INSTRUCTIONS

(1)~~NO2/NO3 - 353.2, Chromium Hex - 7196~~; Oil & Grease - 413.1;
PMG 2/14/05

LABORATORY SECTION	**RECEIVED BY**		**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**		**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-146	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	8N	
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	45 Days / ~~45 Days~~ 90
216-T-13; 14-15 ft	200-MW-1 Characterization Sampling and Analysis - Soil		F04-015		
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** See PTR 15464		**BILL OF LADING/AIR BILL NO.** See PTR 15464		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C781

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
				Cool 4C	aG	1	120mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
B1C775	SOIL	4-28-05	1015	X				

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pfister/Tyra 4-28-05	1530	MO-026 / REF #1 4-28-05	1530
MO-026 REF #1 5/5/05	0950	M.H. Bachler M.G. Bachler 5/5/05	0950
M.H. Bachler M.G. Bachler 5/5/05	0950	Fed Ex	
FedEx		JPerry 5/6/05	1455

SPECIAL INSTRUCTIONS

(1) ~~NO2/NO3 - 353.2~~; ~~Chromium Hex - 7196~~; Oil & Grease - 413.1;

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-147	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
216-T-13; 19-20 ft	200-MW-1 Characterization Sampling and Analysis - Soil		F04-015		
ICE CHEST NO. GRP-06-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** 24 PTC 15464		**BILL OF LADING/AIR BILL NO.** 24 PTC 15464		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C782

PRESERVATION	Cool 4C													
TYPE OF CONTAINER	aG													
NO. OF CONTAINER(S)	1													
VOLUME	120mL													
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS													

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B1C776	SOIL	4-28-05	1300	X										

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope/4 Sfx	4-28-05 1530	MO-026 / REF #1	4-28-05 1530
MO-026, Ref #1	5/5/05 0960	M.H. Barnum M.G. Barnum	5/5/05 0950
M.H. Barnum M.G. Barnum	5/5/05 0950	Fed Ex	
Fed Ex		J Penny	5/6/05 1455

SPECIAL INSTRUCTIONS
(1) ~~NO2/NO3 - 353.2; Chromium Hex - 7196;~~ Oil & Grease - 413.1;
PMG - 2/14/05

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-148 PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
216-T-13; 24-25 ft	200-MW-1 Characterization Sampling and Analysis - Soil		F04-015		
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SAPTR 15464		**BILL OF LADING/AIR BILL NO.** SAPTR 15464		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C783

	SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
	B1C777	SOIL	4-28-05	1330	Cool 4C	aG	1	120mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope / [illegible]	4-28-05 1530	MO-026 Refrig #1	4-28-05 1530
MO-026 Refrig #1	5/5/05 0435	M.H. Bauchum M.G. Bauchum	5/5/05 0435
M.H. Bauchum M.G. Bauchum	5/5/05 0435	Fed Ex	
Fed Ex		J Perry	5/6/05 1455

SPECIAL INSTRUCTIONS
(1) ~~NO2/NO3 - 353.2; Chromium Hex - 7196;~~ Oil & Grease - 413.1;
4-28-05

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-152	PAGE 1 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N AIR QUALITY ☐
SAMPLING LOCATION 216-T-13; 12-13 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	DATA TURNAROUND 45 Days / ~~45 Days~~ 48 hr
ICE CHEST NO. GRP-05-001	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Federal Express	
SHIPPED TO Lionville Laboratory Incorporated	OFFSITE PROPERTY NO. SW PTR 15464		BILL OF LADING/AIR BILL NO. SW PTR 15464	

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C780

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C									
TYPE OF CONTAINER	aGs*	aG	aG	aG	aG									
NO. OF CONTAINER(S)	3	1	1	1	1									
VOLUME	40mL	120mL	120mL	250mL	250mL									
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS									

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B1C778	SOIL	4-28-05	0955	X	X	X	X	X						

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSPope/CSClearlock	4-28-05 1530	MO-026 REGH1	4-29-05 1530
MO-026 KRT	5/5/05 0940	M.H. Buchler/M.G. Buchler	5/5/05 0940
M.H. Buchler/M.G. Buchler	5/5/05 0940	FedEx	
FedEx		JPerry	5/6/05 1455

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(1)VOA - 8260A (TCL); VOA - 8260A (Add-On) {cis-1,2-Dichloroethylene, ~~n-~~ ~~Butylbenzene~~, trans-1,2-Dichloroethylene} PMG 2/14/05
(2)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range} TPH-Gasoline Range - WTPH-G;
(3)ICP Metals - 6010A (Supertrace) {Cadmium, Chromium, Lead, ~~Silver~~} ICP Metals - 6010A (Supertrace Add-On) {~~Copper~~} Mercury - 7471 - (CV);
(4)IC Anions - 300.0 {~~Fluoride, Nitrate, Nitrite~~, Phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045; PMG 2/14/05

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Lionville Laboratory Incorporated
SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU Hanford **Date:** 5/6/05

Purchase Order / Project# /
SAF# / SOW# / Release #:

LvLI Batch #: 0505L423 **Sample Custodian:** JHuang

NOTE: EXPLAIN ALL DISCREPANCIES

1.	Samples Hand Delivered or (Shipped)	Carrier FedEx		Airbill# 7922 7422 0461
2.	Custody seals on coolers or shipping container intact, signed and dated?	☑ Yes	☐ No	☐ No Seals Comments
3.	Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	
4.	All expected paperwork received (coc and other client specific information) sealed in plastic bag and easily accessible?	☑ Yes	☐ No	
5.	Samples received (cooled) or ambient?	Temp 3.2 °C		Cooler # 6RP-05-001
6.	Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7.	coc signed and dated?	☑ Yes	☐ No	
8.	Sample containers are intact?	☑ Yes	☐ No	
9.	All samples on coc received? All samples received on coc?	☑ Yes	☐ No	
10.	All sample label information matches coc?	☑ Yes	☐ No	
11.	Samples properly preserved?	☑ Yes	☐ No	
12.	Samples received within hold times? Short holds taken to wet lab?	☑ Yes	☐ No	
13.	VOA, TOC, TOX free of headspace?	☐ Yes	☐ No	☑ N/A
14.	QC stickers placed on bottles designated by client?	☐ Yes	☐ No	☑ N/A
15.	Shipment meets LvLI Sample Acceptance Policy? (Identify all bottles not within policy. See reverse side for policy)	☑ Yes	☐ No	
16.	Project Manager contacted concerning discrepancies? name/date (or samples outside criteria)	☐ Yes	☐ No	☑ No Discrepancies

SR-002-B

Lionville Laboratory, Inc.
BNA ANALYTICAL DATA PACKAGE FOR
TNUHANFORD F04-015 H3145

DATE RECEIVED: 05/06/05 LVL LOT # :0505L423

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B1C778	007	S	05LE0372	04/28/05	05/11/05	05/20/05
B1C778	007 MS	S	05LE0372	04/28/05	05/11/05	05/20/05
B1C778	007 MSD	S	05LE0372	04/28/05	05/11/05	05/20/05
LAB QC:						
SBLKJG	MB1	S	05LE0372	N/A	05/11/05	05/19/05
SBLKJG	MB1 BS	S	05LE0372	N/A	05/11/05	05/19/05

LIONVILLE LABORATORY INC.

Case Narrative

Client: TNU-HANFORD F04-015
LVL #: 0505L423
SDG/SAF # H3145/F04-015

W.O. #: 11343-606-001-9999-00
Date Received: 05-06-2005

SEMIVOLATILE

One (1) soil sample was collected on 04-28-2005.

The sample and its associated QC samples were extracted according to Lionville Laboratory SOPs based on SW 846 method 3550B on 05-11-2005 and analyzed according to criteria set forth in Lionville Laboratory SOPs based on SW 846 Method 8270C for client specified Semivolatile target compound Tributylphosphate on 05-19,20-2005.

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

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

2. The sample was extracted and analyzed within required holding time.

3. All surrogate recoveries were within acceptance criteria.

4. All matrix spike recoveries were within acceptance criteria.

   All blank spike recoveries were within acceptance criteria.

   The target compound was not included in the spiking solution (spike recoveries were reported on the form 3).

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

6. Manual integrations are performed according to SOP QA-125 to produce quality data with the utmost integrity. All manual integrations are required to be technically valid and properly documented. Appropriate technical flags are defined in the Glossary ("Technical Flags For Manual Integration").

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

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

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

6/21/05
Date

som\gorup\data\bna\tnu-hanford\0505-423.doc

GLOSSARY

DATA QUALIFIERS

U	=	Compound was analyzed for but not detected. The associated numerical value is the estimated sample quantitation limit which is included and corrected for dilution and percent moisture.
J	=	Indicates an estimated value. This flag is used under the following circumstances: 1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; or 2) when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. For example, if the limit of detection is 10 ug/L and a concentration of 3 ug/L is calculated, it is reported as 3J.
B	=	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination. This flag is also used for a TIC as well as for a positively identified TCL compound.
E	=	Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.
D	=	Identifies all compounds identified in an analysis at a secondary dilution factor.
I	=	Interference.
NQ	=	Result qualitatively confirmed but not able to quantify.
A	=	Indicates that a TIC is a suspected aldol-condensation product.
N	=	Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.
X	=	This flag is used for a TIC compound which is quantified relative to a response factor generated from a daily calibration standard (rather than quantified relative to the closest internal standard).
Y	=	Additional qualifiers used as required are explained in the case narrative.

GLOSSARY

ABBREVIATIONS

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

TECHNICAL FLAGS FOR MANUAL INTEGRATION

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

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

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

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

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

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

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

Lionville Laboratory, Inc.

Semivolatiles by GC/MS, Special List Report Date: 05/23/05 12:28

RFW Batch Number: **0505L423** Client: **TNUHANFORD F04-015 H3145** Work Order: 11343606001 Page: 1a

	Cust ID:	B1C778	B1C778	B1C778	SBLKJG	SBLKJG BS
Sample Information	RFW#:	007	007 MS	007 MSD	05LE0372-MB1	05LE0372-MB1
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.00	1.00	1.00	1.00	1.00
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Surrogate Recovery	Nitrobenzene-d5	70 %	71 %	66 %	81 %	70 %
	2-Fluorobiphenyl	72 %	72 %	65 %	84 %	77 %
	Terphenyl-d14	77 %	82 %	76 %	98 %	93 %
Tributylphosphate		360 U	360 U	360 U	330 U	330 U

*= Outside of EPA CLP QC limits.

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Lionville Labs, Inc. Contract: 1343-06-01

Case No.: TNUHANFORD F04-015 H3145 RFW Lot No.: 0505L423-007

MATRIX Spike - Sample No.: B1C778 Level:(low/med) LOW

COMPOUND	SPIKE ADDED UG/KG	SAMPLE CONCENTRATION UG/KG	MS CONCENTRATION UG/KG	MS % REC #	QC LIMITS REC
Phenol	2720	0	1720	63	26 - 90
2-Chlorophenol	2720	0	1730	64	25 -102
1,4-Dichlorobenzene	1810	0	961	53	28 -104
N-Nitroso-Di-n-propylamine	1810	0	1220	67	41 -126
1,2,4-Trichlorobenzene	1810	0	1000	55	38 -107
4-Chloro-3-methylphenol	2720	0	2050	76	26 -103
Acenaphthene	1810	0	1160	64	31 -137
4-Nitrophenol	2720	0	935	34	11 -114
2,4-Dinitrotoluene	1810	0	1250	69	28 - 89
Pentachlorophenol	2720	0	1440	53	17 -109
Pyrene	1810	0	1260	69	35 -142

COMPOUND	SPIKE ADDED UG/KG	MSD CONCENTRATION UG/KG	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC
Phenol	2720	1620	60	4	35	26 - 90
2-Chlorophenol	2720	1630	60	6	50	25 -102
1,4-Dichlorobenzene	1810	989	55	3	27	28 -104
N-Nitroso-Di-n-propylamine	1810	1110	61	9	38	41 -126
1,2,4-Trichlorobenzene	1810	1020	56	1	23	38 -107
4-Chloro-3-methylphenol	2720	1990	73	4	33	26 -103
Acenaphthene	1810	1100	60	6	19	31 -137
4-Nitrophenol	2720	920	34	0	50	11 -114
2,4-Dinitrotoluene	1810	1240	68	1	47	28 - 89
Pentachlorophenol	2720	1440	53	0	47	17 -109
Pyrene	1810	1160	64	7	36	35 -142

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 11 outside limits
Spike Recovery: 0 out of 22 outside limits

COMMENTS:

3D

SOIL SEMIVOLATILE BLANK SPIKE RECOVERY

Lab Name: Lionville Labs, Inc. Contract: 1343-06-01

Case No.: TNUHANFORD F04-015 H3145 RFW Lot No.: 0505L423

BLANK Spike - Sample No.: SBLKJGLE0372-MB1 Level:(low/med) LOW

COMPOUND	SPIKE ADDED UG/KG	SAMPLE CONCENTRATION UG/KG	BS CONCENTRATION UG/KG	BS % REC #	QC LIMITS REC
Phenol	2500	0	1860	75	26 - 90
2-Chlorophenol	2500	0	1760	70	25 -102
1,4-Dichlorobenzene	1670	0	964	58	28 -104
N-Nitroso-Di-n-propylamine	1670	0	1190	71	41 -126
1,2,4-Trichlorobenzene	1670	0	1040	62	38 -107
4-Chloro-3-methylphenol	2500	0	1990	80	26 -103
Acenaphthene	1670	0	1130	68	31 -137
4-Nitrophenol	2500	0	2010	80	11 -114
2,4-Dinitrotoluene	1670	0	1230	74	28 - 89
Pentachlorophenol	2500	0	1880	75	17 -109
Pyrene	1670	0	1340	80	35 -142

Column to be used to flag recovery value with an asterisk
* Values outside of QC limits

Spike Recovery: 0 out of 11 outside limits

COMMENTS:

Lionville Laboratory Use Only: 0505L423

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

See SRC

Client: TNU Hanford F04-015

Est. Final Proj. Sampling Date:

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

Project Contact/Phone #:

Lionville Laboratory Project Manager: DJ

QC: Spec Del: Std TAT: 30 Days

Date Rec'd: 5/6/05 Date Due: 6/5/05

		B&H	C	D	(c)	A		E		F						
Refrigerator #		1	6	6		6		6		6						
#/Type Container	Liquid / Solid	3AGL	1AGL	1AGL		1AGL		1AGL		AGL						
Volume	Liquid / Solid	40	120	120	60ML	120		250		250						
Preservatives																
ANALYSES REQUESTED →		ORGANIC: VOA	BNA	Pest/PCB	Herb	8151 BNA	Oil/Grease	INORG: Metal	CN	Anions PH						
		Lionville Laboratory Use Only														
MATRIX CODES: S = Soil, SE = Sediment, SO = Solid, SL = Sludge, W = Water, O = Oil, A = Air, DS = Drum Solids, DL = Drum Liquids, L = EP/TCLP Leachate, WI = Wipe, X = Other, F = Fish		0624 H	0625 X	OPAB		ODRO OGRO		IOCR		METALS(1)		IC/PO4 IC/SO4 IPH				

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected												
001	BIC769			S	4/29/05	0930						1						
002	BIC771					1						1						
003	BIC774					0955						1						
004	BIC775					1015						1						
005	BIC776					1300						1						
006	BIC777					1930						1						
007	BIC778					0955	3	1	1		✓			1		1		

Special Instructions:

METALS(1) = Cd, Cr, Pb, Hg

RUN MATRIX QC

DATE/REVISIONS:

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

Relinquished by	Received by	Date	Time
FedEx	JPenny	5/6/05	1455

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
"COMPOSITE WASTE"			

ORIGINAL REWRITTEN

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-129	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
216-T-13; 10-11 ft	200-MW-1 Characterization Sampling and Analysis - Soil		F04-015		
ICE CHEST NO. GRP-05-021	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** 54PTL 15464		**BILL OF LADING/AIR BILL NO.** 54PTL 15464		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C770

PRESERVATION	Cool 4C															
TYPE OF CONTAINER	aG															
NO. OF CONTAINER(S)	1															
VOLUME	120mL															
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS															

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME													
B1C769	SOIL	4/28/5	0930	\												

CHAIN OF POSSESSION	SIGN/ PRINT NAMES		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope A Tyra	4-28-05 1530	MO-026 Ref. #1	4-28-05 1530
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
MO-026 Ref #1	5/5/05 0935	M.H. Bauchlin M.G. Bauchlin	5/5/05 0935
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
M.H. Bauchlin M.G. Bauchlin	5/5/05 0935	FedEx	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FedEx		JPenny	5/6/05 1455
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

SPECIAL INSTRUCTIONS
(1) ~~NO2/NO3 - 353.2~~; ~~Chromium Hex - 7196~~; Oil & Grease - 413.1;
PMG 2/14/05

LABORATORY SECTION	**RECEIVED BY**		**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**		**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-130	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION 216-T-13; 10-11 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015		
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SUPTR 15464		**BILL OF LADING/AIR BILL NO.** SUPTR 15464		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS N/A

SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C770

PRESERVATION	Cool 4C																	
TYPE OF CONTAINER	aG																	
NO. OF CONTAINER(S)	1																	
VOLUME	120mL																	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS																	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1C771	SOIL	4/28/05	0930

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope / CS Cearlock	4-28-05 1570	MO-026 / REF #1	4-28-05 1530
MO-026 REF 1	5/5/05 0935	M.H. Bachtler / M.G. Bauchlus	5/5/05 0935
M.H. Bachtler / M.G. Bauchlus	5/5/05 0935	Fed Ex	
Fed Ex		JP Lang	5/6/05 1455

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(1) ~~NO2/NO3 - 353.2; Chromium Hex - 7196~~; Oil & Grease - 413.1;

PMG 2/17/05

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-145	PAGE 1 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** / **TELEPHONE NO.** CS Cearlock 372-9638	**PROJECT COORDINATOR** TRENT, SJ	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / ~~45 Days~~ 90
SAMPLING LOCATION 216-T-13; 12-13 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil	**SAF NO.** F04-015	**AIR QUALITY** ☐	
ICE CHEST NO. GRAB-05-001 IHAD 516108	**FIELD LOGBOOK NO.** / **COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** See PTR 15464	**BILL OF LADING/AIR BILL NO.** See PTR 15464		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C780

PRESERVATION	Cool 4C															
TYPE OF CONTAINER	aG															
NO. OF CONTAINER(S)	1															
VOLUME	120mL															
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS															
SAMPLE NO.	**MATRIX***	**SAMPLE DATE**	**SAMPLE TIME**													
B1C774	SOIL	4-28-05	0955	X												

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSPope [signature]	4-28-05 1530	MOFOLK / REC. #1	4-28-05 1530
MO-026 RU	5/5/05 0450	M.H. Boucher / M.H. Boucher	5/5/05 0450
M.H. Boucher / M.H. Boucher	5/5/05 0450	Fed Ex	
FedEx		JRum	5/6/05 1455

SPECIAL INSTRUCTIONS
(1) ~~NO2/NO3 - 353.2; Chromium Hex - 7196~~; Oil & Grease - 413.1;
PMG 2/14/05

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-146	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	AIR QUALITY ☐	45 Days / ~~45 Days~~ 7 Days

SAMPLING LOCATION	PROJECT DESIGNATION	SAF NO.
216-T-13; 14-15 ft	200-MW-1 Characterization Sampling and Analysis - Soil	F04-015

ICE CHEST NO.	FIELD LOGBOOK NO.	COA	METHOD OF SHIPMENT
GRP-05-0001		119144ES10	Federal Express

SHIPPED TO	OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.
Lionville Laboratory Incorporated	SEPTR 15464	SEPTR 15464

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C781

PRESERVATION	Cool 4C													
TYPE OF CONTAINER	aG													
NO. OF CONTAINER(S)	1													
VOLUME	120mL													
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS													

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B1C775	SOIL	4-28-05	1015	X										

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pfister/AB Tyra	4-28-05 1530	MO-024 Ref. #1	4-28-05 1530
MO-024 Ref #1	5/5/05 0950	M.H. Barker/M.G. Barker	5/5/05 0950
M.H. Barker/M.G. Barker	5/5/05 0950	Fed Ex	
Fed Ex		J Perry	5/6/05 1455

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
(1) ~~NO2/NO3 - 353.2~~, ~~Chromium Hex - 7196~~; Oil & Grease - 413.1;

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-147	PAGE 1 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** CS Cearlock	**TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ	**PRICE CODE** 8N **AIR QUALITY** ☐
SAMPLING LOCATION 216-T-13; 19-20 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015	**DATA TURNAROUND** 45 Days / 45 Days
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express	
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** See PTR 15464		**BILL OF LADING/AIR BILL NO.** See PTR 15464	

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS													
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegitation W=Water WI=Wipe X=Other	N/A	**PRESERVATION**	Cool 4C											
		TYPE OF CONTAINER	aG											
		NO. OF CONTAINER(S)	1											
		VOLUME	120mL											
	SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C782	**SAMPLE ANALYSIS**	SEE ITEM (1) IN SPECIAL INSTRUCTIONS											

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B1C776	SOIL	4-28-05	1300	X										

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pfister/4 Sky	4-28-05 1530	MO-026 / REF #1	4-28-05 1530
MO-026, FedEx 5/5/05	0950	M.H. Barnhart M.G. Barnhart 5/5/05	0950
M.H. Barnhart M.G. Barnhart 5/5/05	0950	FedEx	
FedEx		JPenny	5/6/05 1455

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(1) ~~NO2/NO3 - 353.2; Chromium Hex - 7196;~~ Oil & Grease - 413.1;
PMG 2/14/05

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-148 PAGE 1 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** CS Cearlock **TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ
SAMPLING LOCATION 216-T-13; 24-25 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil	**SAF NO.** F04-015
ICE CHEST NO. GRP-05-0001	**FIELD LOGBOOK NO.** **COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SAMPLE 15464	**BILL OF LADING/AIR BILL NO.** SAMPLE 15464

PRICE CODE 8N **DATA TURNAROUND** — **AIR QUALITY** ☐ 45 Days / 45 Days

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C783

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
				Cool 4C	aG	1	120mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
B1C777	SOIL	4-28-05	1330	X				

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pfister / 0850	4-28-05 1530	MW-026 Refrig 1	4-28-05 1530
MW-026 Refrig 1	5/5/05 0435	M.H. Barker/M.G. Barker	5/5/05 0435
M.H. Barker/M.G. Barker	5/5/05 0435	Fed Ex	
Fed Ex		JPerry	5/6/05 1455

SPECIAL INSTRUCTIONS
(1) ~~NO2/NO3 - 353.2; Chromium Hex - 7196;~~ Oil & Grease - 413.1;
4-28-05

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-152	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	8N	AIR QUALITY ☐ 45 Days ~~45 Days~~ AS

SAMPLING LOCATION	PROJECT DESIGNATION	SAF NO.
216-T-13; 12-13 ft	200-MW-1 Characterization Sampling and Analysis - Soil	F04-015

ICE CHEST NO.	FIELD LOGBOOK NO.	COA	METHOD OF SHIPMENT
GRP-05-001		119144ES10	Federal Express

SHIPPED TO	OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.
Lionville Laboratory Incorporated	26 PTR 15464	26 PTR 15464

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C780

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
				Cool 4C	aGs*	3	40mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
				Cool 4C	aG	1	120mL	SEE ITEM (2) IN SPECIAL INSTRUCTIONS
				Cool 4C	aG	1	120mL	PCBs - 8082;
				Cool 4C	aG	1	250mL	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
				Cool 4C	aG	1	250mL	SEE ITEM (4) IN SPECIAL INSTRUCTIONS
B1C778	SOIL	4-28-05	0955	X	X	X	X	X

CHAIN OF POSSESSION	SIGN/ PRINT NAMES
RELINQUISHED BY/REMOVED FROM: JS Pope/CS Cearlock 4-28-05 1530	RECEIVED BY/STORED IN: mb-via REACH 4-29-05 1530
RELINQUISHED BY/REMOVED FROM: MD-026 RUT 5/5/05 0940 M.H. Buchheit/M.G. Buchheit 5/5/05 0940	RECEIVED BY/STORED IN: M.H. Buchheit/M.G. Buchheit 5/5/05 0940
RELINQUISHED BY/REMOVED FROM: FedEx	RECEIVED BY/STORED IN: Fed Ex
RELINQUISHED BY/REMOVED FROM:	RECEIVED BY/STORED IN: JPerry 5/6/05 1455
RELINQUISHED BY/REMOVED FROM:	RECEIVED BY/STORED IN:
RELINQUISHED BY/REMOVED FROM:	RECEIVED BY/STORED IN:
RELINQUISHED BY/REMOVED FROM:	RECEIVED BY/STORED IN:

SPECIAL INSTRUCTIONS

(1)VOA - 8260A (TCL); VOA - 8260A (Add-On) {cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene} PMG 2/14/05
(2)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range} TPH-Gasoline Range - WTPH-G;
(3)ICP Metals - 6010A (Supertrace) {Cadmium, Chromium, Lead, ~~Silver~~} ICP Metals - 6010A (Supertrace Add-On) {~~Copper~~} Mercury - 7471 - (CV);
(4)IC Anions - 300.0 {~~Fluoride, Nitrate, Nitrite~~, Phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045; PMG 2/14/05

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Lionville Laboratory Incorporated
SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU Hanford **Date:** 5/6/05

Purchase Order / Project# /
SAF# / SOW# / Release #:

LvLI Batch # : 0505L423 **Sample Custodian:** JHuang

NOTE: EXPLAIN ALL DISCREPANCIES

1.	Samples Hand Delivered or (Shipped)	Carrier FedEX		Airbill# 7922 7422 0461
2.	Custody seals on coolers or shipping container intact, signed and dated?	☑ Yes	☐ No	☐ No Seals Comments
3.	Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	
4.	All expected paperwork received (coc and other client specific information) sealed in plastic bag and easily accessible?	☑ Yes	☐ No	
5.	Samples received (cooled) or ambient?	Temp 3.2 °C		Cooler # 6RP-05-001
6.	Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7.	coc signed and dated?	☑ Yes	☐ No	
8.	Sample containers are intact?	☑ Yes	☐ No	
9.	All samples on coc received? All samples received on coc?	☑ Yes	☐ No	
10.	All sample label information matches coc?	☑ Yes	☐ No	
11.	Samples properly preserved?	☑ Yes	☐ No	
12.	Samples received within hold times? Short holds taken to wet lab?	☑ Yes	☐ No	
13.	VOA, TOC, TOX free of headspace?	☐ Yes	☐ No	☑ N/A
14.	QC stickers placed on bottles designated by client?	☐ Yes	☐ No	☑ N/A
15.	Shipment meets LvLI Sample Acceptance Policy? (Identify all bottles not within policy. See reverse side for policy)	☑ Yes	☐ No	
16.	Project Manager contacted concerning discrepancies? name/date (or samples outside criteria)	☐ Yes	☐ No	☑ No Discrepancies

SR-002-B

[redacted]17

Lionville Laboratory, Inc.
PCB ANALYTICAL DATA PACKAGE FOR
TNUHANFORD F04-015 H3145

DATE RECEIVED: 05/06/05 LVL LOT # :0505L423

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B1C778	007	S	05LE0367	04/28/05	05/10/05	05/14/05
B1C778	007 MS	S	05LE0367	04/28/05	05/10/05	05/14/05
B1C778	007 MSD	S	05LE0367	04/28/05	05/10/05	05/14/05
LAB QC:						
PBLKKX	MB1	S	05LE0367	N/A	05/10/05	05/14/05
PBLKKX	MB1 BS	S	05LE0367	N/A	05/10/05	05/14/05

LIONVILLE LABORATORY INC.

Case Narrative

Client: TNU-HANFORD F04-015
LVL #: 0505L423
SDG/SAF # H3145/F04-015

W.O. #: 11343-606-001-9999-00
Date Received: 05-06-2005

PCB

One (1) soil sample was collected on 04-28-2005.

The sample and its associated QC samples were extracted on 05-10-2005 and analyzed according to Lionville Laboratory SOPs based on SW846, 3rd Edition procedures on 05-14-2005. The extraction procedure was based on method 3540C and the extracts were analyzed based on method 8082.

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

1. All results presented in this report are derived from a sample that met LvLI's sample acceptance policy.
2. The sample was extracted and analyzed within required holding time.
3. The sample and its associated QC samples received a Sulfuric Acid cleanup according to Lionville Laboratory SOPs based on SW846 method 3665A.
4. The method blank was below the reporting limits for all target compounds.
5. All surrogate recoveries were within acceptance criteria.
6. The blank spike recoveries were within acceptance criteria.
7. All matrix spike recoveries were within acceptance criteria.
8. The initial calibrations associated with this data set were within acceptance criteria.
9. The continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.
10. LvLI is NELAP accredited by the state of Pennsylvania and holds over 20 additional state accreditations. For a complete listing of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager.
11. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard-copy data package has been authorized by the laboratory Manager or a designee, as verified by the following signature.

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

6/21/05
Date

som\r:\group\data\pest\tnu hanford\0505-423.pcb

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 1 3 pages.

GLOSSARY OF DATA

DATA QUALIFIERS

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

ABBREVIATIONS

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

Lionville Laboratory, Inc.

PCBs by GC

Report Date: 05/28/05 14:51

RFW Batch Number: **0505L423** Client: **TNUHANFORD F04-015 H3145** Work Order: 11343606001 Page: 1

	Cust ID:	B1C778	B1C778	B1C778	PBLKKX	PBLKKX BS
Sample Information	RFW#:	007	007 MS	007 MSD	05LE0367-MB1	05LE0367-MB1
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.00	1.00	1.00	1.00	1.00
	Units:	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Surrogate:	Tetrachloro-m-xylene	98 %	86 %	74 %	90 %	83 %
	Decachlorobiphenyl	116 %	107 %	95 %	107 %	108 %
Aroclor-1016		14 U	86 %	73 %	13 U	85 %
Aroclor-1221		14 U	29 U	29 U	13 U	400 U
Aroclor-1232		14 U	29 U	29 U	13 U	400 U
Aroclor-1242		14 U	29 U	29 U	13 U	400 U
Aroclor-1248		14 U	29 U	29 U	13 U	400 U
Aroclor-1254		14 U	29 U	29 U	13 U	400 U
Aroclor-1260		14 U	107 %	92 %	13 U	92 %

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

Lionville Laboratory Use Only

0505L423

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

See SRC

Client: TNU Hanford F04-015

Est. Final Proj. Sampling Date:

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

Project Contact/Phone #:

Lionville Laboratory Project Manager: DJ

QC: Spec Del: Std TAT: 30 DAYS

Date Rec'd: 5/6/05 Date Due: 6/5/05

		B&H	C	D	(c)	A		E		F					
Refrigerator #		1	6	6			6		6		6				
#/Type Container	Liquid	3 AGL	1 AGL	1 AGL		1 AGL		1 AGL		1 AGL					
	Solid														
Volume	Liquid	40	125	120	60 ml	120		250		250					
	Solid														
Preservatives															

ANALYSES REQUESTED →	ORGANIC						INORG								
	VOA	BNA	Reed PCB	Herb	PCB/BNA	Dell Grave	Metal	CN	Anion	pH					
	0624H	0625X	OPCB		ODRO OGRO	DOCR	METALS①		ICAP IC SO4 TPH						
001 BIC769				S	4/29/05	0930					1				
002 BIC771						L					1				
003 BIC774						0955					1				
004 BIC775						1015					1				
005 BIC776						1300					1				
006 BIC777						1330					1				
007 BIC778						0955	3	1	1		✓		1		1

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:

METALS① = Cd, Cr, Pb, Hg

RUN MATRIX QC

DATE/REVISIONS:

1. OPCB R
2. ODRO Q (KRO + DRO)
3. OGRO B
4.
5.
6.

Relinquished by	Received by	Date	Time
FedEx	JPenny	5/6/05	1455

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
"COMPOSITE WASTE"			

ORIGINAL REWRITTEN

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-129	PAGE 1 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** CS Cearlock	**TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ	**PRICE CODE** 8N **AIR QUALITY** ☐	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION 216-T-13; 10-11 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015		
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** 24 PTL 15464		**BILL OF LADING/AIR BILL NO.** 24 PTL 15464		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C770

PRESERVATION	Cool 4C													
TYPE OF CONTAINER	aG													
NO. OF CONTAINER(S)	1													
VOLUME	120mL													
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS													

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1C769	SOIL	4/28/05	0930

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pfister	4-28-05 1510	M6-026/Ref. #1	4-28-05 1510
M6-026 Ref #1	5/5/05 0935	M.H. Bachler/M.G. Bachler	5/5/05 0935
M.H. Bachler/M.G. Bachler	5/5/05 0935	FedEx	
FedEx		JPenny	5/6/05 1455

SPECIAL INSTRUCTIONS
(1) ~~NO2/NO3 - 353.2~~; ~~Chromium Hex - 7196~~; Oil & Grease - 413.1;
PMG 2/14/05

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-130	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
216-T-13; 10-11 ft	200-MW-1 Characterization Sampling and Analysis - Soil		F04-015		
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144E510	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SuPTC 15464		**BILL OF LADING/AIR BILL NO.** SuPTC 15464		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C770

PRESERVATION	Cool 4C													
TYPE OF CONTAINER	aG													
NO. OF CONTAINER(S)	1													
VOLUME	120mL													
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS													

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1C771	SOIL	4/28/5	0930

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope / [illegible]	4-28-05 1570	MO-026/Ref. #1	4-28-05 1530
MO-026 Ref #1	5/5/05 0935	M.H. Barker/M.G. Bowker	5/5/05 0935
M.H. Barker/M.G. Bowker	5/5/05 0935	[illegible]	
Fedex		JPenny	5/6/05 1455

SPECIAL INSTRUCTIONS

(1) ~~NO2/NO3 - 353.2; Chromium Hex - 7196~~; Oil & Grease - 413.1;

PMG 2/18/05

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-145	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	AIR QUALITY ☐	45 Days / ~~45 Days~~ 21 4-28-05

SAMPLING LOCATION	PROJECT DESIGNATION	SAF NO.
216-T-13; 12-13 ft	200-MW-1 Characterization Sampling and Analysis - Soil	F04-015

ICE CHEST NO.	FIELD LOGBOOK NO.	COA	METHOD OF SHIPMENT
GRAB-05-0001		119144ES10	Federal Express

SHIPPED TO	OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.
Lionville Laboratory Incorporated	SU PTR 15464	SU PTR 15464

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C780

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
				Cool 4C	aG	1	120mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
B1C774	SOIL	4-28-05	0955	✓				

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSPope	4-28-05 1530	MO-024 / REG. #1	4-28-05 1530
MR-GRAB	5/5/05 0950	M.H. Bachler/M.H. Bachler	5/5/05 0950
M.H. Bachler/M.H. Bachler	5/5/05 0950	Fed Ex	
Fed Ex		JRuiz	5/6/05 1455

SPECIAL INSTRUCTIONS
(1)~~NO2/NO3 - 353.2; Chromium Hex - 7196~~; Oil & Grease - 413.1;
PMG 2/14/05

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-146	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	8N	45 Days / ~~45 Days~~ 7 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	
216-T-13; 14-15 ft	200-MW-1 Characterization Sampling and Analysis - Soil		F04-015		
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** See PTR 15464		**BILL OF LADING/AIR BILL NO.** See PTR 15464		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C781

PRESERVATION	Cool 4C															
TYPE OF CONTAINER	aG															
NO. OF CONTAINER(S)	1															
VOLUME	120mL															
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS															

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME													
B1C775	SOIL	4-28-05	1015	X												

CHAIN OF POSSESSION	SIGN/ PRINT NAMES		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pfister/AP Tyra	4-28-05 1530	2116-026/Ref. #1	4-28-05 1530
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
2116-026 Ref. #1	5/5/05 0450	M.H. Barnhart M.G. Bachler	5/5/05 0450
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
M.H. Barnhart M.G. Bachler	5/5/05 0600	Fed Ex	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FedEx		JPerry	5/6/05 1455
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

SPECIAL INSTRUCTIONS
(1)~~NO2/NO3 - 353.2~~; ~~Chromium Hex - 7196~~; Oil & Grease - 413.1;

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-147	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	8N	
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	45 Days / 45 Days
216-T-13; 19-20 ft	200-MW-1 Characterization Sampling and Analysis - Soil		F04-015		
ICE CHEST NO. GRP-06-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** Su PTR 15464		**BILL OF LADING/AIR BILL NO.** Su PTR 15464		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C782

PRESERVATION	Cool 4C															
TYPE OF CONTAINER	aG															
NO. OF CONTAINER(S)	1															
VOLUME	120mL															
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS															

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME													
B1C776	SOIL	4-28-05	1300	X												

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope / [illegible] 4-28-05	1530	MO-026 / REEH1 4-28-05	1530
MO-026 REEH1 5/5/05	0950	M.H. Buchanan M.G. Buchanan 5/5/05	0950
M.H. Buchanan M.G. Buchanan 5/5/05	0950	Fed Ex	
Fed Ex		JPenny 5/6/05	1455

SPECIAL INSTRUCTIONS
(1) ~~NO2/NO3 - 353.2;~~ ~~Chromium Hex - 7196;~~ Oil & Grease - 413.1;
PMG 2/14/05

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-148 PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
216-T-13; 24-25 ft	200-MW-1 Characterization Sampling and Analysis - Soil		F04-015		
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SuPTR 15464		**BILL OF LADING/AIR BILL NO.** SuPTR 15464		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS N/A

SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C783

PRESERVATION	Cool 4C																
TYPE OF CONTAINER	aG																
NO. OF CONTAINER(S)	1																
VOLUME	120mL																
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS																

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME													
B1C777	SOIL	4-28-05	1330	X												

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope / M.C. Baucke	4-28-05 1530	MO-026 Refrig 1 / M.C. Baucke	4-28-05 1530
MO-026 Refrig 1	5/6/05 0935	M.H. Baucke / M.C. Baucke	5/6/05 0935
M.H. Baucke / M.C. Baucke	5/6/05 0935	Fed Ex	
Fed Ex		J Perry	5/6/05 1455

SPECIAL INSTRUCTIONS
(1) ~~NO2/NO3 - 353.2, Chromium Hex - 7196,~~ Oil & Grease - 413.1;
4-28-05

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-152	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	8N	
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	45 Days ~~45 Days~~ 48 Hours
216-T-13; 12-13 ft	200-MW-1 Characterization Sampling and Analysis - Soil		F04-015		
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SW PTR 15464		**BILL OF LADING/AIR BILL NO.** SW PTR 15464		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C780

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
				Cool 4C	aGs*	3	40mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
				Cool 4C	aG	1	120mL	SEE ITEM (2) IN SPECIAL INSTRUCTIONS
				Cool 4C	aG	1	120mL	PCBs - 8082;
				Cool 4C	aG	1	250mL	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
				Cool 4C	aG	1	250mL	SEE ITEM (4) IN SPECIAL INSTRUCTIONS
B1C778	SOIL	4-28-05	0955	X	X	X	X	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSPfister / A Tyra	4-28-05 1530	mb-926 / REFRIG 1	4-29-05 1530
MO-026 RLT	5/5/05 0940	M.H. Buchler/M.G. Buchler	5/5/05 0940
M.H. Buchler/M.G. Buchler	5/5/05 0940	Fed Ex	
Fed Ex		JPerry	5/6/05 1455

SPECIAL INSTRUCTIONS

(1)VOA - 8260A (TCL); VOA - 8260A (Add-On) {cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene} PMG 2/14/05
(2)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range} TPH-Gasoline Range - WTPH-G;
(3)ICP Metals - 6010A (Supertrace) {Cadmium, Chromium, Lead, ~~Silver~~} ICP Metals - 6010A (Supertrace Add-On) {~~Copper~~} Mercury - 7471 - (CV);
(4)IC Anions - 300.0 {~~Fluoride~~, Nitrate, ~~Nitrite~~, Phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045; PMG 2/14/05

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-518(02/02)

Lionville Laboratory Incorporated
SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU Hanford **Date:** 5/6/05

Purchase Order / Project# /
SAF# / SOW# / Release #:

LvLI Batch # : 0505L423 **Sample Custodian:** JHuey

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or (Shipped)	Carrier FedEX		Airbill# 7922 7422 0461	
2. Custody seals on coolers or shipping container intact, signed and dated?	☑ Yes	☐ No	☐ No Seals	Comments
3. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No		
4. All expected paperwork received (coc and other client specific information) sealed in plastic bag and easily accessible?	☑ Yes	☐ No		
5. Samples received (cooled) or ambient?	Temp 3.2 °C		Cooler # GRP-05-001	
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals	
7. coc signed and dated?	☑ Yes	☐ No		
8. Sample containers are intact?	☑ Yes	☐ No		
9. All samples on coc received? All samples received on coc?	☑ Yes	☐ No		
10. All sample label information matches coc?	☑ Yes	☐ No		
11. Samples properly preserved?	☑ Yes	☐ No		
12. Samples received within hold times? Short holds taken to wet lab?	☑ Yes	☐ No		
13. VOA, TOC, TOX free of headspace?	☐ Yes	☐ No	☑ N/A	
14. QC stickers placed on bottles designated by client?	☐ Yes	☐ No	☑ N/A	
15. Shipment meets LvLI Sample Acceptance Policy? (Identify all bottles not within policy. See reverse side for policy)	☑ Yes	☐ No		
16. Project Manager contacted concerning discrepancies? name/date (or samples outside criteria)	☐ Yes	☐ No	☑ No Discrepancies	

SR-002-B

Lionville Laboratory, Inc.
GRO ANALYTICAL DATA PACKAGE FOR
TNUHANFORD F04-015 H3145

DATE RECEIVED: 05/06/05 LVL LOT # :0505L423

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B1C778	007	S	05LVJ517	04/28/05	N/A	05/17/05
B1C778	007 MS	S	05LVJ517	04/28/05	N/A	05/17/05
B1C778	007 MSD	S	05LVJ517	04/28/05	N/A	05/17/05
LAB QC:						
TBLKUQ	MB1	S	05LVJ517	N/A	N/A	05/17/05
TBLKUQ	MB1 BS	S	05LVJ517	N/A	N/A	05/17/05

JH 6/9/05

LIONVILLE LABORATORY INC.

Case Narrative

Client: TNU-HANFORD F04-015
LVL #: 0505L423
SDG/SAF # H3145/F04-015

W.O. #: 11343-606-001-9999-00
Date Received: 05-06-2005

GRO

One (1) soil sample was collected on 04-28-2005.

The sample and its associated QC samples were analyzed according to Lionville Laboratory SOPs based on SW-846 method 8015B for Gasoline Range Organics (GRO) on 05-17-2005. The analysis met the intent of method WTPH-G.

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

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

2. The sample was analyzed outside the required holding time. A copy of the Sample Discrepancy Report (SDR) has been enclosed.

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

4. All surrogate recoveries were within acceptance criteria.

5. The blank spike recovery was within acceptance criteria.

6. The matrix spike recoveries were within acceptance criteria.

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

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

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

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

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

6/21/05
Date

som\r\group\data\gro\tnu-hanford\0505-423.doc

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 1 4 pages.

GLOSSARY OF DATA

DATA QUALIFIERS

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

ABBREVIATIONS

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

Initiator: John Lach
Date: JUN
Client: 5126105

Batch: 0505L423
Samples: All
Method: SW846/MCAWW/CLP/

Parameter: GRO
Matrix: SOIL
Prep Batch: 05LVJ517

1. Reason for SDR

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

b. General Discrepancy

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

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

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

Sample ran 5 Days past hold.

2. Known or Probable Causes(s)

3. Discussion and Proposed Action Other Description: Narr.

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

4. Project Manager Instructions...signature/date: _____ 6/8/05

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

5. Final Action...signature/date: _____ Other Explanation:

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

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

Route	Distribution of Completed SDR	Route	Distribution of Completed SDR
__	X Initiator	__	__ Metals: Beegle
__	X Lab General Manager: M. Taylor	__	__ Inorganic: Perrone
__	X Project Mgr: Stone/Johnson/Haslett	__	__ GC/LC: Kiger
__	X Technical Mgr: Wesson/Daniels	__	__ MS: Rychlak/Layman
__	X QA (file): Alberts	__	__ Log-in: Melnic
__	__ Data Management: Feldman	__	__ Admin: Soos
__	__ Sample Prep: Beegle/Kiger	__	__ Other: _____

Lionville Laboratory, Inc.

GAS RANGE ORGANICS

Report Date: 05/26/05 13:59

RFW Batch Number: **0505L423** Client: **TNUHANFORD F04-015 H3145** Work Order: 11343606001 Page: 1

	Cust ID:	B1C778	B1C778	B1C778	TBLKUQ	TBLKUQ BS
Sample Information	RFW#:	007	007 MS	007 MSD	05LVJ517-MB1	05LVJ517-MB1
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.00	1.00	1.00	1.00	1.00
	Units:	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Fluorobenzene		88 %	95 %	97 %	102 %	102 %
Gasoline Range Organics (GRO)		30 U	80 %	82 %	30 U	110 %

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

Lionville Laboratory Use Only: 0505L423

Custody Transfer Record/Lab Work Request

Page 1 of 1

VLI

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

See SRC

Client: TNU Hanford F04-015
Est. Final Proj. Sampling Date:
Project #: 11343-606-001-9999-00
Project Contact/Phone #:
Lionville Laboratory Project Manager: QJ
QC: Spec Del: Std TAT: 30 Days
Date Rec'd: 5/6/05 Date Due: 6/5/05

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

									B&H	C	D		(c)	A		E		F												
Refrigerator #									1	6	6			6		6		6												
#/Type Container	Liquid								3 Pol	1 Pol	1 AG		1 Gallon	1 AG		1 AG		1 AGL												
	Solid																													
Volume	Liquid								40	120	120		1 Gallon	120		250		250												
	Solid																													
Preservatives																														
ANALYSES REQUESTED →									ORGANIC									INORG												
									VOA	BNA	Pest/PCB	Herb	w/BNA	QCL Glycol		Metal	CN	Anions, pH												
									Lionville Laboratory Use Only																						
									0624 H	0625 X	OPAB		ODRO OGRO	IOOSR		METALS (1)		ICPAV EGSO4 IPH												
Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected																								
001	BIC769			S	4/28/05	0930								1																
002	BIC771					1								1																
003	BIC774					0955								1																
004	BIC775					1015								1																
005	BIC776					1300								1																
006	BIC777					1930								1																
007	BIC778					0955	3	1	1		✓					1		1												

Special Instructions:

METALS (1) = Cd, Cr, Pb, Hg

RUN MATRIX QC

DATE/REVISIONS:

1. OPCB R
2. ODRO Q (KRO + DRO)
3. OGRO B
4.
5.
6.

Relinquished by	Received by	Date	Time
FedEx	JPenny	5/6/05	1455

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
"COMPOSITE WASTE"			

ORIGINAL REWRITTEN

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-129	PAGE 1 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** CS Cearlock **TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ	**PRICE CODE** 8N **DATA TURNAROUND** **AIR QUALITY** ☐ 45 Days / 45 Days
SAMPLING LOCATION 216-T-13; 10-11 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil	**SAF NO.** F04-015	
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.** **COA** 119144E510	**METHOD OF SHIPMENT** Federal Express	
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** 200 PTL 15464	**BILL OF LADING/AIR BILL NO.** 200 PTL 15464	

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegitation W=Water WI=Wipe X=Other	N/A **SPECIAL HANDLING AND/OR STORAGE** Radioactive Tie To: B1C770	Cool 4C	aG	1	120mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1C769	SOIL	4/28/05	0930

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J Pope/A Pfister	4-28-05 1530	MO-026/Ref. #1	4-28-05 1530
MO-026 Ref #1	5/5/05 0935	M.H. Barnhart/M.G. Barnhart	5/5/05 0935
M.H. Barnhart/M.G. Barnhart	5/5/05 0935	Fed Ex	
Fed Ex		J Penny	5/6/05 1455
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

SPECIAL INSTRUCTIONS

(1) ~~NO2/NO3 - 353.2~~; ~~Chromium Hex - 7196~~; Oil & Grease - 413.1;

PMG 2/14/05

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-130	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	BN	
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	45 Days / 45 Days
216-T-13; 10-11 ft	200-MW-1 Characterization Sampling and Analysis - Soil		F04-015		
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SUPTC 15464		**BILL OF LADING/AIR BILL NO.** SUPTC 15464		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C770

PRESERVATION	Cool 4C													
TYPE OF CONTAINER	aG													
NO. OF CONTAINER(S)	1													
VOLUME	120mL													
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS													

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1C771	SOIL	4/28/5	0930	

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSPope/[illegible]	4-28-05 1520	MO-026/Ref. #1	4-28-05 1530
MO-026 Refr #1	5/5/05 0935	M.H. Bauchman/M.G. Bauchman	5/5/05 0935
M.H. Bauchman/M.G. Bauchman	5/5/05 0935	FedEx	
FedEx		JPMay	5/6/05 1455

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
(1) ~~NO2/NO3 - 353.2; Chromium Hex - 7196~~; Oil & Grease - 413.1;
PMG 2/1#/05

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-145	PAGE 1 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** CS Cearlock	**TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ	**PRICE CODE** 8N **AIR QUALITY** ☐
SAMPLING LOCATION 216-T-13; 12-13 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015	**DATA TURNAROUND** 45 Days / ~~45 Days~~
ICE CHEST NO. GRAB-05-0001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express	
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** See PTR 15464		**BILL OF LADING/AIR BILL NO.** See PTR 15464	

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS													
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegitation W=Water WI=Wipe X=Other	N/A	**PRESERVATION**	Cool 4C											
		TYPE OF CONTAINER	aG											
		NO. OF CONTAINER(S)	1											
		VOLUME	120mL											
	SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C780	**SAMPLE ANALYSIS**	SEE ITEM (1) IN SPECIAL INSTRUCTIONS											

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B1C774	SOIL	4-28-05	0955	X										

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	**DATE/TIME**	**RECEIVED BY/STORED IN**	**DATE/TIME**
JS Pope/MS Pfister/MW Tyra	4-28-05 1530	MS Pfister/REC. #1	4-28-05 1530
MS Pfister/MW Tyra/MH Bauchhenss	5/5/05 0450	MH Bauchhenss/M.H. Bauchhenss	5/5/05 0450
MH Bauchhenss/M.H. Bauchhenss	5/5/05 0450	Fed Ex	
FedEx			
		JPerry	5/6/05 1455

SPECIAL INSTRUCTIONS

(1)~~NO2/NO3 - 353.2; Chromium Hex - 7196~~; Oil & Grease - 413.1;
PMG 2/14/05

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-146	PAGE 1 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** / **TELEPHONE NO.** CS Cearlock 372-9638	**PROJECT COORDINATOR** TRENT, SJ	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / ~~45 Days~~ 4-28-05
SAMPLING LOCATION 216-T-13; 14-15 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil	**SAF NO.** F04-015	**AIR QUALITY** ☐	
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.** / **COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** See PTR 15464	**BILL OF LADING/AIR BILL NO.** See PTR 15464		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS													
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegitation W=Water WI=Wipe X=Other	N/A	**PRESERVATION**	Cool 4C											
		TYPE OF CONTAINER	aG											
		NO. OF CONTAINER(S)	1											
		VOLUME	120mL											
	SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C781	**SAMPLE ANALYSIS**	SEE ITEM (1) IN SPECIAL INSTRUCTIONS											

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B1C775	SOIL	4-28-05	1015	X										

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope/Pfister 4-28-05	1530	116-026 / Ref #1 4-28-05	1530
116-026 Ref #1 5/5/05	0450	M.H. Bachler M.G. Bachler 5/5/05	0450
M.H. Bachler M.G. Bachler 5/5/05	0600	Fed Ex	
FedEx		J Perry 5/6/05	1455

SPECIAL INSTRUCTIONS

(1) ~~NO2/NO3 - 353.2~~; ~~Chromium Hex - 7196~~; Oil & Grease - 413.1;

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-147	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
Pope/Pfister/Tyra/Wlberg	CS Cearlock	372-9638	TRENT, SJ	8N	
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	45 Days / 45 Days
216-T-13; 19-20 ft	200-MW-1 Characterization Sampling and Analysis - Soil		F04-015		
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** 5e PTR 15464		**BILL OF LADING/AIR BILL NO.** 5e PTR 15464		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C782

PRESERVATION	Cool 4C													
TYPE OF CONTAINER	aG													
NO. OF CONTAINER(S)	1													
VOLUME	120mL													
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS													

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B1C776	SOIL	4-28-05	1300	X										

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope/[illegible]	4-28-05 1530	MO-016 / REF #1	4-28-05 1530
MO-016 RFJ	5/5/05 0950	M.H. Ballinger M.G. Buchanan	5/5/05 0950
M.H. Ballinger M.G. Buchanan	5/5/05 0950	Fed Ex	
Fed Ex		JPerry	5/6/05 1455

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
(1)~~NO2/NO3 - 353.2; Chromium Hex - 7196;~~ Oil & Grease - 413.1;
PMG 2/14/05

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-148 PAGE 1 OF 1

COLLECTOR: Pope/Pfister/Tyra/Wiberg

SAMPLING LOCATION: 216-T-13; 24-25 ft

ICE CHEST NO.: GRP-05-001

COMPANY CONTACT: CS Cearlock — **TELEPHONE NO.**: 372-9638

PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil

FIELD LOGBOOK NO.: — **COA**: 119144ES10

PROJECT COORDINATOR: TRENT, SJ

SAF NO.: F04-015

METHOD OF SHIPMENT: Federal Express

PRICE CODE: 8N — **DATA TURNAROUND**: 45 Days / 45 Days

AIR QUALITY: ☐

SHIPPED TO: Lionville Laboratory Incorporated

OFFSITE PROPERTY NO.: SAVTR 15464

BILL OF LADING/AIR BILL NO.: SAVTR 15464

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C783

PRESERVATION	Cool 4C																	
TYPE OF CONTAINER	aG																	
NO. OF CONTAINER(S)	1																	
VOLUME	120mL																	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS																	
SAMPLE NO.	**MATRIX***	**SAMPLE DATE**	**SAMPLE TIME**															
B1C777	SOIL	4-28-05	1330	X														

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope / [illegible]	4-28-05 1530	MO-026 / Ref. # 1	4-28-05 1530
MO-026 RJT 5/5/05 0435		MH Barlow MG Barlow 5/5/05 0435	
MH Barlow MG Barlow 5/5/05 0435		Fed Ex	
Fed Ex		JPerry	5/6/05 1455
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

SPECIAL INSTRUCTIONS

(1) ~~NO2/NO3 - 353.2, Chromium Hex - 7196,~~ Oil & Grease - 413.1;

4-28-05

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**	
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**	

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-152	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	AIR QUALITY ☐	45 Days / ~~15 Days~~ 45 4-28-05
SAMPLING LOCATION 216-T-13; 12-13 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015		
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** 54 PTR 15464		**BILL OF LADING/AIR BILL NO.** 54 PTR 15464		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C780

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C									
TYPE OF CONTAINER	aGs*	aG	aG	aG	aG									
NO. OF CONTAINER(S)	3	1	1	1	1									
VOLUME	40mL	120mL	120mL	250mL	250mL									
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS									
SAMPLE NO.	**MATRIX***	**SAMPLE DATE**	**SAMPLE TIME**											
B1C778	SOIL	4-28-05	0955	X	X	X	X	X						

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope/CS Cearlock	4-28-05 1530	MO-426/REGH1	4-4-05 1530
MO-426 RJT	5/5/05 0940	M.H. Bauchman/M.G. Bauchman	5/5/05 0940
M.H. Bauchman/M.G. Bauchman	5/5/05 0940	Fedex	
Fedex		JPerry	5/6/05 1455

SPECIAL INSTRUCTIONS

(1)VOA - 8260A (TCL); VOA - 8260A (Add-On) {cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene} PMG 2/14/05
(2)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range} TPH-Gasoline Range - WTPH-G;
(3)ICP Metals - 6010A (Supertrace) {Cadmium, Chromium, Lead, ~~Silver~~} ICP Metals - 6010A (Supertrace Add-On) {~~Copper~~} Mercury - 7471 - (CV);
(4)IC Anions - 300.0 {~~Fluoride, Nitrate, Nitrite~~, Phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045; PMG 2/14/05

LABORATORY SECTION	**RECEIVED BY**	**TITLE**		**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**		**DATE/TIME**

A-6003-618(03/03)

Lionville Laboratory Incorporated
SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU Hanford **Date:** 5/6/05

Purchase Order / Project# /
SAF# / SOW# / Release #:

LvLI Batch #: 0505L423 **Sample Custodian:** JHung

NOTE: EXPLAIN ALL DISCREPANCIES

1.	Samples Hand Delivered or (Shipped)	Carrier FedEX		Airbill# 7922 7422 0461	
2.	Custody seals on coolers or shipping container intact, signed and dated?	☑ Yes	☐ No	☐ No Seals	Comments
3.	Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No		
4.	All expected paperwork received (coc and other client specific information) sealed in plastic bag and easily accessible?	☑ Yes	☐ No		
5.	Samples received (cooled) or ambient?	Temp 3.2 °C		Cooler # GRP-05-001	
6.	Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals	
7.	coc signed and dated?	☑ Yes	☐ No		
8.	Sample containers are intact?	☑ Yes	☐ No		
9.	All samples on coc received? All samples received on coc?	☑ Yes	☐ No		
10.	All sample label information matches coc?	☑ Yes	☐ No		
11.	Samples properly preserved?	☑ Yes	☐ No		
12.	Samples received within hold times? Short holds taken to wet lab?	☑ Yes	☐ No		
13.	VOA, TOC, TOX free of headspace?	☐ Yes	☐ No	☑ N/A	
14.	QC stickers placed on bottles designated by client?	☐ Yes	☐ No	☑ N/A	
15.	Shipment meets LvLI Sample Acceptance Policy? (Identify all bottles not within policy. See reverse side for policy)	☑ Yes	☐ No		
16.	Project Manager contacted concerning discrepancies? name/date (or samples outside criteria)	☐ Yes	☐ No	☑ No Discrepancies	

SR-002-B

Lionville Laboratory, Inc.
DRO ANALYTICAL DATA PACKAGE FOR
TNUHANFORD F04-015 H3145

DATE RECEIVED: 05/06/05 LVL LOT # :0505L423

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B1C778	007	S	05LE0375	04/28/05	05/11/05	05/20/05
B1C778	007 MS	S	05LE0375	04/28/05	05/11/05	05/20/05
B1C778	007 MSD	S	05LE0375	04/28/05	05/11/05	05/20/05
LAB QC:						
BLK	MB1	S	05LE0375	N/A	05/11/05	05/19/05
BLK	MB1 BS	S	05LE0375	N/A	05/11/05	05/19/05
BLK	MB1 BSD	S	05LE0375	N/A	05/11/05	05/19/05

LIONVILLE LABORATORY INC.

Case Narrative

Client: TNU-HANFORD F04-015
LVL #: 0505L423
SDG/SAF # H3145/F04-015

W.O. #: 11343-606-001-9999-00
Date Received: 05-06-2005

DIESEL RANGE ORGANICS

One (1) soil sample was collected on 04-28-2005.

The sample and its associated QC samples were extracted on 05-11-2005 and analyzed according to Lionville Laboratory SOPs based on SW846, 3rd Edition procedure on 05-19,20-2005. The analysis was based on method 8015B. The analysis met the intent of method WTPH-D.

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

1. All results presented in this report are derived from a sample that met LvLI's sample acceptance policy.
2. The sample was extracted and analyzed within required holding time.
3. The method blank was below the reporting limits for the target compounds.
4. All surrogate recoveries were within acceptance criteria.
5. The blank spike recoveries were within acceptance criteria.
6. The matrix spike recoveries were within acceptance criteria.
7. All initial calibrations associated with this data set were within acceptance criteria.
8. The continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.
9. LvLI is NELAP accredited by the state of Pennsylvania and holds over 20 additional state accreditations. For a complete listing of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager.
10. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard-copy data package has been authorized by the laboratory Manager or a designee, as verified by the following signature.

Judy Stern
Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

6/21/05
Date

som\r:\group\data\dro\tnu hanford\0505-423doc

GLOSSARY OF DATA

DATA QUALIFIERS

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

ABBREVIATIONS

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

Lionville Laboratory, Inc.

DIESEL RANGE ORGANICS BY GC

Report Date: 05/23/05 14:26

RFW Batch Number: **0505L423** Client: **TNUHANFORD F04-015 H3145** Work Order: 11343606001 Page: 1

	Cust ID:	B1C778	B1C778	B1C778	BLK	BLK BS	BLK BSD
Sample Information	RFW#:	007	007 MS	007 MSD	05LE0375-MB1	05LE0375-MB1	05LE0375-MB1
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
p-Terphenyl		77 %	91 %	76 %	88 %	93 %	77 %
Diesel Range Organics		21000	84 %	71 %	12000 U	92 %	76 %
Kerosene		13000 U	NS	NS	12000 U	NS	NS

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

Lionville Laboratory Use Only

0505L423

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

See SRC

Client TNC Hanford F04-015

Est. Final Proj. Sampling Date

Project # 11343-606-001-9999-00

Project Contact/Phone #

Lionville Laboratory Project Manager DJ

QC Spec Del Std TAT 30 Days

Date Rec'd 5/6/05 Date Due 6/5/05

		B&H	C	D	(c)	A		E		F					
Refrigerator #		1	6	6		6		6		6					
#/Type Container	Liquid / Solid	3 AGL	1 AGL	1 AGL		1 AGL		1 AGL		1 AGL					
Volume	Liquid / Solid	40	120	120	60 ml	120		250		250					
Preservatives															
ANALYSES REQUESTED →		ORGANIC: VOA	BNA	Reg PCB	Herb	1,2 BNA	OCL Organic	INORG: Metal	CN	Anions PH					
Lionville Laboratory Use Only		0624 H	0625 X	OPCB		ODRO OGRO		INORG		METALS(1)		IC 504 IS 504 TDH			

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															
	001	BIC769			S	4/29/05	0930						1									
	002	BIC771					1						1									
	003	BIC774					0955						1									
	004	BIC775					1015						1									
	005	BIC776					1300						1									
	006	BIC777					1930						1									
	007	BIC778					0955	3	1	1		✓			1		1					

Special Instructions:

METALS(1) = Cd, Cr, Pb, Hg

RUN MATRIX QC

DATE/REVISIONS:

1. OPCB R
2. ODRO Q (KRO + DRO)
3. OGRO B
4.
5.
6.

Relinquished by	Received by	Date	Time
FedEx	JPenny	5/6/05	1455

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
"COMPOSITE WASTE"			

ORIGINAL REWRITTEN

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-129	PAGE 1 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** CS Cearlock	**TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ	**PRICE CODE** 8N **AIR QUALITY** ☐
SAMPLING LOCATION 216-T-13; 10-11 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015	**DATA TURNAROUND** 45 Days / 45 Days
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express	
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** 34 PTL 15464		**BILL OF LADING/AIR BILL NO.** 34 PTL 15464	

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C770

PRESERVATION	Cool 4C													
TYPE OF CONTAINER	aG													
NO. OF CONTAINER(S)	1													
VOLUME	120mL													
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS													

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1C769	SOIL	4/28/5	0930

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pfister	4-28-05 1530	MO-026 Ref. #1	4-28-05 1530
MO-026 Ref #1	5/5/05 0935	M.H. Bauchlur M.G. Bauchlur	5/5/05 0935
M.H. Bauchlur M.G. Bauchlur	5/5/05 0935	Fed Ex	
Fed Ex		JPenny	5/6/05 1455

SPECIAL INSTRUCTIONS
(1) ~~NO2/NO3 - 353.2~~; ~~Chromium Hex - 7196~~; Oil & Grease - 413.1;
PMG 2/14/05

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-130	PAGE 1 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** CS Cearlock	**TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ	**PRICE CODE** 8N **AIR QUALITY** ☐
SAMPLING LOCATION 216-T-13; 10-11 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015	**DATA TURNAROUND** 45 Days / 45 Days
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express	
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SUPTR 15464		**BILL OF LADING/AIR BILL NO.** SUPTR 15464	

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C770

	SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
	B1C771	SOIL	4/28/05	0930	Cool 4C	aG	1	120mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope / [illegible]	4-28-05 1520	M0-026 / REF #1	4-28-05 1530
M0-026 REF #1	5/5/05 0935	M.H. Barker / M.G. Bowker	5/5/05 0935
M.H. Barker / M.G. Bowker	5/5/05 0935	[illegible]	
FedEx		JPerry	5/6/05 1455

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
(1)~~NO2/NO3 - 353.2; Chromium Hex - 7196~~; Oil & Grease - 413.1;
PMG 2/13/05

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-145	PAGE 1 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** CS Cearlock	**TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ	**PRICE CODE** 8N **AIR QUALITY** ☐	**DATA TURNAROUND** 45 Days / ~~45 Days~~ 9 4-27-05
SAMPLING LOCATION 216-T-13; 12-13 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015		
ICE CHEST NO. GRAB-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** See PTR 15464		**BILL OF LADING/AIR BILL NO.** See PTR 15464		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS													
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegitation W=Water WI=Wipe X=Other	N/A	**PRESERVATION**	Cool 4C											
		TYPE OF CONTAINER	aG											
		NO. OF CONTAINER(S)	1											
		VOLUME	120mL											
	SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C780	**SAMPLE ANALYSIS**	SEE ITEM (1) IN SPECIAL INSTRUCTIONS											

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B1C774	SOIL	4-28-05	0955	f										

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSPope	4-28-05 1530	M05026 / REG. #1	4-28-05 1530
MG-GRAB-05-001	5/5/05 0450	M.H. Bachhuber/M.H. Bachhuber	5/5/05 0450
M.H. Bachhuber/M.H. Bachhuber	5/5/05 0450	Fed Ex	
Fed Ex		JPerry	5/6/05 1455

SPECIAL INSTRUCTIONS

(1)~~NO2/NO3 - 353.2, Chromium Hex - 7196~~; Oil & Grease - 413.1;
PMG 2/14/05

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-146	PAGE 1 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** CS Cearlock	**TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ	**PRICE CODE** 8N **AIR QUALITY** ☐
SAMPLING LOCATION 216-T-13; 14-15 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015	**DATA TURNAROUND** 45 Days / ~~45 Days~~ 7 Days 4-28-05
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express	
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** See PTR 15464		**BILL OF LADING/AIR BILL NO.** See PTR 15464	

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C781

SAMPLE NO.	**MATRIX***	**SAMPLE DATE**	**SAMPLE TIME**	**PRESERVATION**	Cool 4C									
				TYPE OF CONTAINER	aG									
				NO. OF CONTAINER(S)	1									
				VOLUME	120mL									
				SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS									
B1C775	SOIL	4-28-05	1015		X									

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	**DATE/TIME**	**RECEIVED BY/STORED IN**	**DATE/TIME**
SJ Trent/[illegible] 4-28-05	1530	MO-024 / Ref #1 4-28-05	1530
RELINQUISHED BY/REMOVED FROM	**DATE/TIME**	**RECEIVED BY/STORED IN**	**DATE/TIME**
MO-024 Ref #1 5/5/05	0950	M.H. Barker/M.G. Barker 5/5/05	0950
RELINQUISHED BY/REMOVED FROM	**DATE/TIME**	**RECEIVED BY/STORED IN**	**DATE/TIME**
M.H. Barker/M.G. Barker 5/5/05	0950	FedEx	
RELINQUISHED BY/REMOVED FROM	**DATE/TIME**	**RECEIVED BY/STORED IN**	**DATE/TIME**
FedEx		JPerry	5/6/05 1455
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**

SPECIAL INSTRUCTIONS
(1)~~NO2/NO3 - 353.2~~; ~~Chromium Hex - 7196~~; Oil & Grease - 413.1;

LABORATORY SECTION	**RECEIVED BY**		**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**		**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-147	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	8N	
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	45 Days / 45 Days
216-T-13; 19-20 ft	200-MW-1 Characterization Sampling and Analysis - Soil		F04-015		
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** 24 PTR 15464		**BILL OF LADING/AIR BILL NO.** 24 PTR 15464		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C782

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
				Cool 4C	aG	1	120mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
B1C776	SOIL	4-28-05	1300	X				

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSPfister/GRP	4-28-05 1530	MO-026 / REF #1	4-28-05 1530
MO-026 REF 5/5/05	0950	M.A. Buchholz / M.G. Buchholz 5/5/05	0950
M.A. Buchholz / M.G. Buchholz 5/5/05	0950	Fed Ex	
Fed Ex		JPenny	5/6/05 1455

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
(1) ~~NO2/NO3 - 353.2;~~ ~~Chromium Hex - 7196;~~ Oil & Grease - 413.1;
PMG 2/14/05

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-148 PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
216-T-13; 24-25 ft	200-MW-1 Characterization Sampling and Analysis - Soil		F04-015		
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SUPTR 15464		**BILL OF LADING/AIR BILL NO.** SUPTR 15464		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C783

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
				Cool 4C	aG	1	120mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
B1C777	SOIL	4-28-05	1330	X				

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope / [illegible]	4-28-05 1530	MO-026 Refrig 1 / [illegible]	4-28-05 1530
MO-026 Refrig 1	5/5/05 0935	M.H. Barnhart / M.G. Barnhart	5/5/05 0935
M.H. Barnhart / M.G. Barnhart	5/5/05 0935	Fed Ex	
Fedex		JPerry	5/6/05 1451

SPECIAL INSTRUCTIONS

(1) ~~NO2/NO3 - 353.2; Chromium Hex - 7196;~~ Oil & Grease - 413.1;

[illegible] 4-28-05

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-152	PAGE 1 OF 1
COLLECTOR: Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT: CS Cearlock	TELEPHONE NO.: 372-9638	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 8N
SAMPLING LOCATION: 216-T-13; 12-13 ft	PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO.: F04-015	AIR QUALITY: ☐
ICE CHEST NO.: GRP-05-001	FIELD LOGBOOK NO.:	COA: 119144ES10	METHOD OF SHIPMENT: Federal Express	DATA TURNAROUND: 45 Days ~~45 Days~~ 48 Hours
SHIPPED TO: Lionville Laboratory Incorporated	OFFSITE PROPERTY NO.: 5a PTR 15464		BILL OF LADING/AIR BILL NO.: 5a PTR 15464	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C780

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION										
				Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C						
TYPE OF CONTAINER				aGs*	aG	aG	aG	aG						
NO. OF CONTAINER(S)				3	1	1	1	1						
VOLUME				40mL	120mL	120mL	250mL	250mL						
SAMPLE ANALYSIS				SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS						
B1C778	SOIL	4-28-05	0955	X	X	X	X	X						

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope / C Stor	4-28-05 1530	mb-ui6 / REGH 1	4-29-05 1530
mb-026 / RH 1	5/5/05 0940	M.H. Bucher / M.G. Bucher	5/5/05 0940
M.H. Bucher / M.G. Bucher	5/5/05 0940	Fed Ex	
Fed Ex		J Perry	5/6/05 1455

SPECIAL INSTRUCTIONS

(1)VOA - 8260A (TCL); VOA - 8260A (Add-On) {cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene} PMG 7/14/05
(2)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range} TPH-Gasoline Range - WTPH-G;
(3)ICP Metals - 6010A (Supertrace) {Cadmium, Chromium, Lead, Silver} ICP Metals - 6010A (Supertrace Add-On) {~~Copper~~} Mercury - 7471 - (CV);
(4)IC Anions - 300.0 {Fluoride, ~~Nitrate~~, Nitrite, Phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045; PMG 7/14/05

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-518(03/03)

Lionville Laboratory Incorporated
SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU Hanford **Date:** 5/6/05

Purchase Order / Project# /
SAF# / SOW# / Release #:

LvLI Batch # : 0505L423 **Sample Custodian:** JHung

NOTE: EXPLAIN ALL DISCREPANCIES

1.	Samples Hand Delivered or (Shipped)	Carrier FedEX		Airbill# 7922 7422 0461
2.	Custody seals on coolers or shipping container intact, signed and dated?	☑ Yes	☐ No	☐ No Seals Comments
3.	Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	
4.	All expected paperwork received (coc and other client specific information) sealed in plastic bag and easily accessible?	☑ Yes	☐ No	
5.	Samples received (cooled) or ambient?	Temp 3.2 °C		Cooler # 6RP-05-001
6.	Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7.	coc signed and dated?	☑ Yes	☐ No	
8.	Sample containers are intact?	☑ Yes	☐ No	
9.	All samples on coc received? All samples received on coc?	☑ Yes	☐ No	
10.	All sample label information matches coc?	☑ Yes	☐ No	
11.	Samples properly preserved?	☑ Yes	☐ No	
12.	Samples received within hold times? Short holds taken to wet lab?	☑ Yes	☐ No	
13.	VOA, TOC, TOX free of headspace?	☐ Yes	☐ No	☑ N/A
14.	QC stickers placed on bottles designated by client?	☐ Yes	☐ No	☑ N/A
15.	Shipment meets LvLI Sample Acceptance Policy? (Identify all bottles not within policy. See reverse side for policy)	☑ Yes	☐ No	
16.	Project Manager contacted concerning discrepancies? name/date (or samples outside criteria)	☐ Yes	☐ No	☑ No Discrepancies

SR-002-B

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD F04-015 H3145

DATE RECEIVED: 05/06/05 LVL LOT # :0505L423

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B1C778						
CADMIUM, TOTAL	007	S	05L0312	04/28/05	06/07/05	06/09/05
CADMIUM, TOTAL	007 REP	S	05L0312	04/28/05	06/07/05	06/09/05
CADMIUM, TOTAL	007 MS	S	05L0312	04/28/05	06/07/05	06/09/05
CHROMIUM, TOTAL	007	S	05L0312	04/28/05	06/07/05	06/09/05
CHROMIUM, TOTAL	007 REP	S	05L0312	04/28/05	06/07/05	06/09/05
CHROMIUM, TOTAL	007 MS	S	05L0312	04/28/05	06/07/05	06/09/05
MERCURY, TOTAL	007	S	05C0111	04/28/05	05/22/05	05/23/05
MERCURY, TOTAL	007 REP	S	05C0111	04/28/05	05/22/05	05/23/05
MERCURY, TOTAL	007 MS	S	05C0111	04/28/05	05/22/05	05/23/05
LEAD, TOTAL	007	S	05L0312	04/28/05	06/07/05	06/09/05
LEAD, TOTAL	007 REP	S	05L0312	04/28/05	06/07/05	06/09/05
LEAD, TOTAL	007 MS	S	05L0312	04/28/05	06/07/05	06/09/05
LAB QC:						
CADMIUM LABORATORY	LC1 BS	S	05L0312	N/A	06/07/05	06/09/05
CADMIUM, TOTAL	MB1	S	05L0312	N/A	06/07/05	06/09/05
CHROMIUM LABORATORY	LC1 BS	S	05L0312	N/A	06/07/05	06/09/05
CHROMIUM, TOTAL	MB1	S	05L0312	N/A	06/07/05	06/09/05
MERCURY LABORATORY	LC1 BS	S	05C0111	N/A	05/22/05	05/23/05
MERCURY, TOTAL	MB1	S	05C0111	N/A	05/22/05	05/23/05
LEAD LABORATORY	LC1 BS	S	05L0312	N/A	06/07/05	06/09/05
LEAD, TOTAL	MB1	S	05L0312	N/A	06/07/05	06/09/05

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU-HANFORD F04-015
LVL#: 0505L423
SDG/SAF#: H3145/F04-015

W.O.#: 11343-606-001-9999-00
Date Received: 05-06-05

METALS CASE NARRATIVE

1. This narrative covers the analysis of 1 soil sample.

2. The sample was prepared and analyzed in accordance with methods checked on the attached glossary.

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

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

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

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 the Inorganics Laboratory Control Standards Report.

10. All matrix spike (MS) recoveries were within the 75-125% control limits. Refer to the Inorganics Accuracy Report.

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

12. For the purposes of this report, the data has been reported to the 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.

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

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

6/20/05
Date

gmb/m05-423

LVLI
LIONVILLE LABORATORY INC.

METALS METHOD GLOSSARY

The following methods are used as reference for the digestion and analysis of samples contained within this Lot#: 05052423

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:**_____

METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

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

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

ABBREVIATIONS

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

ANALYTICAL METAL METHODS

1. Not included in the method element list.

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

3. Flame AA.

4. Graphite Furnace AA.

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 06/09/05

CLIENT: TNUHANFORD F04-015 H3145 LVL LOT #: 0505L423
WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-007	B1C778	Cadmium, Total	0.13	MG/KG	0.03	1.0
		Chromium, Total	3.5	MG/KG	0.07	1.0
		Mercury, Total	0.04	MG/KG	0.02	1.0
		Lead, Total	10.9	MG/KG	0.24	1.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 06/09/05

CLIENT: TNUHANFORD F04-015 H3145 LVL LOT #: 0505L423
WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	05L0312-MB1	Cadmium, Total	0.03 u	MG/KG	0.03	1.0
		Chromium, Total	0.07 u	MG/KG	0.07	1.0
		Lead, Total	0.25 u	MG/KG	0.25	1.0
BLANK1	05C0111-MB1	Mercury, Total	0.02 u	MG/KG	0.02	1.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 06/09/05

CLIENT: TNUHANFORD F04-015 H3145 LVL LOT #: 0505L423
WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-007	B1C778	Cadmium, Total	4.8	0.13	5.0	93.5	1.0
		Chromium, Total	22.2	3.5	20.1	93.0	1.0
		Mercury, Total	0.22	0.04	0.17	110.6	1.0
		Lead, Total	57.8	10.9	50.3	93.2	1.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 06/09/05

CLIENT: TNUHANFORD F04-015 H3145 LVL LOT #: 0505L423

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

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-007REP	B1C778	Cadmium, Total	0.13	0.12	7.2	1.0
		Chromium, Total	3.5	11.6	107.3	1.0
		Mercury, Total	0.04	0.03	8.5	1.0
		Lead, Total	10.9	12.6	14.5	1.0

Lionville Laboratory, Inc.

INORGANICS LABORATORY CONTROL STANDARDS REPORT 06/09/05

CLIENT: TNUHANFORD F04-015 H3145 LVL LOT #: 0505L423
WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	05L0312-LC1	Cadmium, LCS	24.6	25.0	MG/KG	98.4
		Chromium, LCS	49.3	50.0	MG/KG	98.6
		Lead, LCS	247	250	MG/KG	99.0
LCS1	05C0111-LC1	Mercury, LCS	6.6	6.2	MG/KG	107.2

Lionville Laboratory Use Only

0505L423

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

See SRC

Client TNU Hanford F04-015

Est. Final Proj. Sampling Date

Project # 11343-006-001-9999-00

Project Contact/Phone #

Lionville Laboratory Project Manager QJ

QC Spec Del Std TAT 30 Days

Date Rec'd 5/6/05 Date Due 6/5/05

		B&H	C	D	(c)	A		E		F					
Refrigerator #		1	6	6		6		6		6					
#/Type Container	Liquid				6oz										
	Solid	8oz	1Arc	1Arc		1Arc		1Arc		Arc					
Volume	Liquid														
	Solid	40	120	120		120		250		250					
Preservatives															
ANALYSES REQUESTED →		ORGANIC						INORG							
		VOA	BNA	Pest/PCB	Herb	8/BNA		Metal	CN	Anions PH					
						Oil Grease									

Lionville Laboratory Use Only

MATRIX CODES: S = Soil, SE = Sediment, SO = Solid, SL = Sludge, W = Water, O = Oil, A = Air, DS = Drum Solids, DL = Drum Liquids, L = EP/TCLP Leachate, Wi = Wipe, X = Other, F = Fish	Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	0624H	0625X	0PCB		ODRO DGRO	TOCGR		METALS①		ICAP4 IGSO4 FP#				
	001	BIC769			S	4/28/05	0830						1								
	002	BIC771					L						1								
	003	BIC774					0955						1								
	004	BIC775					1015						1								
	005	BIC776					1300						1								
	006	BIC777					1830						1								
	007	BIC778			L	L	0955	3	1	1		✓			1		1				

Special Instructions:

METALS① = Cd, Cr, Pb, Hg

RUN MATRIX QC

DATE/REVISIONS:

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

Relinquished by	Received by	Date	Time
FedEx	JPenny	5/6/05	1455

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
"COMPOSITE WASTE"			

ORIGINAL REWRITTEN

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-129	PAGE 1 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** / **TELEPHONE NO.** CS Cearlock 372-9638	**PROJECT COORDINATOR** TRENT, SJ	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION 216-T-13; 10-11 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil	**SAF NO.** F04-015	**AIR QUALITY** ☐	
ICE CHEST NO. GRP-05-021	**FIELD LOGBOOK NO.** / **COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SU PTL 15464	**BILL OF LADING/AIR BILL NO.** SU PTL 15464		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C770

PRESERVATION	Cool 4C														
TYPE OF CONTAINER	aG														
NO. OF CONTAINER(S)	1														
VOLUME	120mL														
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS														

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1C769	SOIL	4/28/5	0930

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSPole/ASPole	4-28-05 1530	MO-026/REF.#1	4-28-05 1530
MO-026/REF.#1	5/5/05 0935	M.H.Bauchler/M.G.Bauchler	5/5/05 0935
M.H.Bauchler/M.G.Bauchler	5/5/05 0935	Fed Ex	
Fed Ex		JPenny	5/6/05 1455

SPECIAL INSTRUCTIONS
(1)~~NO2/NO3 - 353.2~~; ~~Chromium Hex - 7196~~; Oil & Grease - 413.1;
PMG 2/14/05

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-130	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
216-T-13; 10-11 ft	200-MW-1 Characterization Sampling and Analysis - Soil		F04-015		
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SuPTC 15464		**BILL OF LADING/AIR BILL NO.** SuPTC 15464		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C770

PRESERVATION	Cool 4C													
TYPE OF CONTAINER	aG													
NO. OF CONTAINER(S)	1													
VOLUME	120mL													
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS													

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1C771	SOIL	4/28/05	0930	

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope / [illegible]	4-28-05 1530	MO-026/REF. #1	4-28-05 1530
MO-026 REF. #1	5/5/05 0935	M.H. Barcheers/M.G. Bouchers	5/5/05 0935
M.H. Barcheers/M.G. Bouchers	5/5/05 0935	REF #1	
Fedex		JP Lang	5/6/05 1455

SPECIAL INSTRUCTIONS
(1) ~~NO2/NO3 - 353.2; Chromium Hex - 7196~~; Oil & Grease - 413.1;
PMG 2/18/05

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-145	PAGE 1 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** CS Cearlock	**TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ	**PRICE CODE** 8N **AIR QUALITY** ☐
SAMPLING LOCATION 216-T-13; 12-13 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015	**DATA TURNAROUND** 45 Days / ~~45 Days~~ 4
ICE CHEST NO. GRAB-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express	4-[illegible]
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** See PTR 15464		**BILL OF LADING/AIR BILL NO.** See PTR 15464	

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegitation W=Water WI=Wipe X=Other	N/A
	SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C780

PRESERVATION	Cool 4C																
TYPE OF CONTAINER	aG																
NO. OF CONTAINER(S)	1																
VOLUME	120mL																
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS																
SAMPLE NO.	**MATRIX***	**SAMPLE DATE**	**SAMPLE TIME**														
B1C774	SOIL	4-28-05	0955	X													

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM / **DATE/TIME**	**RECEIVED BY/STORED IN** / **DATE/TIME**	
JPope 4-28-05 1530	M05026 REF. #1 4-28-05 1530	
MQ-026 RUT 5/5/05 0450	M.H. Boucher/M.h. Boucher 5/5/05 0450	
M.H. Boucher/M.h. Boucher 5/5/05 0450	Fed Ex	
FedEx	JPerry 5/6/05 1455	

SPECIAL INSTRUCTIONS

(1)~~NO2/NO3 - 353.2, Chromium Hex - 7196~~; Oil & Grease - 413.1;
PMG 2/14/05

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-146	PAGE 1 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** CS Cearlock	**TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ	**PRICE CODE** 8N **AIR QUALITY** ☐
SAMPLING LOCATION 216-T-13; 14-15 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015	**DATA TURNAROUND** 45 Days / ~~45 Days~~ 4-28-05
ICE CHEST NO. GRP-05-0001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express	
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SEE PTRL 15464		**BILL OF LADING/AIR BILL NO.** SEE PTRL 15464	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C781

PRESERVATION	Cool 4C													
TYPE OF CONTAINER	aG													
NO. OF CONTAINER(S)	1													
VOLUME	120mL													
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS													
SAMPLE NO.	**MATRIX***	**SAMPLE DATE**	**SAMPLE TIME**											
B1C775	SOIL	4-28-05	1015	X										

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pfister/ [illegible]	4-28-05 1530	MO-026/ REF #1	4-28-05 1530
MO-024 REF 5/5/05	0450	M.H. Barker/M.G. Barker	5/5/05 0450
M.H. Barker/M.G. Barker	5/5/05 0450	FedEx	
FedEx		J Perry	5/6/05 1455

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
(1) ~~NO2/NO3 - 353.2~~; ~~Chromium Hex - 7196~~; Oil & Grease - 413.1;

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F04-015-147 | PAGE 1 OF 1

COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** CS Cearlock	**TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ
SAMPLING LOCATION 216-T-13; 19-20 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** 24 PTR 15464		**BILL OF LADING/AIR BILL NO.** 24 PTR 15464

PRICE CODE 8N | **DATA TURNAROUND** | **AIR QUALITY** ☐ | 45 Days / 45 Days

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C782

PRESERVATION	Cool 4C																
TYPE OF CONTAINER	aG																
NO. OF CONTAINER(S)	1																
VOLUME	120mL																
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS																

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME													
B1C776	SOIL	4-28-05	1300	X												

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope/JS Pope	4-28-05 1530	MO-026 / REF #1	4-28-05 1530
MO-026, RFF #1	5/5/05 0950	M.H. Barker/M.G. Barker	5/5/05 0950
M.H. Barker/M.G. Barker	5/5/05 0950	Fed Ex	
Fed Ex		JPerry	5/6/05 1455

SPECIAL INSTRUCTIONS
(1) ~~NO2/NO3 - 353.2;~~ ~~Chromium Hex - 7196;~~ Oil & Grease - 413.1;
PMG 2/14/05

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-148 PAGE 1 OF 1

COLLECTOR
Pope/Pfister/Tyra/Wiberg

COMPANY CONTACT CS Cearlock **TELEPHONE NO.** 372-9638

PROJECT COORDINATOR TRENT, SJ

PRICE CODE 8N **DATA TURNAROUND** 45 Days / 45 Days

AIR QUALITY ☐

SAMPLING LOCATION
216-T-13; 24-25 ft

PROJECT DESIGNATION
200-MW-1 Characterization Sampling and Analysis - Soil

SAF NO. F04-015

ICE CHEST NO. GRP-05-001

FIELD LOGBOOK NO. **COA** 119144ES10

METHOD OF SHIPMENT Federal Express

SHIPPED TO
Lionville Laboratory Incorporated

OFFSITE PROPERTY NO. SUPTR 15464

BILL OF LADING/AIR BILL NO. SUPTR 15464

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C783

	SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
	B1C777	SOIL	4-28-05	1330	Cool 4C	aG	1	120mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope / D Shay	4-28-05 1530	MO-026 / Ref # 1	4-28-05 1530
MO-026 Ref # 1	5/5/05 0935	M.H. Barker / M.C. Barker	5/5/05 0935
M.H. Barker / M.C. Barker	5/5/05 0935	Fed Ex	
Fed Ex		J Perry	5/6/05 1455

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
(1) ~~NO2/NO3 - 353.2, Chromium Hex - 7196,~~ Oil & Grease - 413.1;
4-28-05

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-152	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	AIR QUALITY ☐	45 Days / ~~15 Days~~
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
216-T-13; 12-13 ft	200-MW-1 Characterization Sampling and Analysis - Soil		F04-015		
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** 54 PTR 15464		**BILL OF LADING/AIR BILL NO.** 54 PTR 15464		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C780

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
				Cool 4C	aGs*	3	40mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
				Cool 4C	aG	1	120mL	SEE ITEM (2) IN SPECIAL INSTRUCTIONS
				Cool 4C	aG	1	120mL	PCBs - 8082;
				Cool 4C	aG	1	250mL	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
				Cool 4C	aG	1	250mL	SEE ITEM (4) IN SPECIAL INSTRUCTIONS
B1C778	SOIL	4-28-05	0955	X	X	X	X	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope / A Stier	4-28-05 1530	MO-926 / REGH 1	4-29-05 1530
MO-926 RST	5/5/05 0990	M.H. Buchler/M.G. Buchler	5/5/05 0940
M.H. Buchler/M.G. Buchler	5/5/05 0940	Fed Ex	
Fed Ex		JPerry	5/6/05 1455

SPECIAL INSTRUCTIONS

(1)VOA - 8260A (TCL); VOA - 8260A (Add-On) {cis-1,2-Dichloroethylene, ~~Benzene, Bromobenzene, Bromochloromethane, Bromodichloromethane, Bromoform, Bromomethane, 2-Butanone, n-Butylbenzene, sec-Butylbenzene, tert-Butylbenzene, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, 2-Chlorotoluene, 4-Chlorotoluene, Dibromochloromethane, 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, Dibromomethane, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-Dichloropropane, 1,3-Dichloropropane, 2,2-Dichloropropane, 1,1-Dichloropropene, Ethylbenzene, Hexachlorobutadiene, 2-Hexanone, Isopropylbenzene, 4-Isopropyltoluene, Methylene chloride, 4-Methyl-2-pentanone, Naphthalene, n-Propylbenzene, Styrene, 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, Tetrachloroethylene, Toluene, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Trichlorofluoromethane, 1,2,3-Trichloropropane, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Vinyl chloride, m-Xylene, o-Xylene, p-Xylene,~~ trans-1,2-Dichloroethylene} PMG 2/14/05

(2)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range} TPH-Gasoline Range - WTPH-G;

(3)ICP Metals - 6010A (Supertrace) {Cadmium, Chromium, Lead, ~~Silver~~} ICP Metals - 6010A (Supertrace Add-On) {~~Copper~~} Mercury - 7471 - (CV);

(4)IC Anions - 300.0 {~~Fluoride, Nitrate, Nitrite~~, Phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045; PMG 2/14/05

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Lionville Laboratory Incorporated
SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU Hanford **Date:** 5/6/05

Purchase Order / Project# /
SAF# / SOW# / Release #:

LvLI Batch # : 0505L423 **Sample Custodian:** JHuang

NOTE: EXPLAIN ALL DISCREPANCIES

1.	Samples Hand Delivered or (Shipped)	Carrier FedEX		Airbill# 7922 7422 0461	
2.	Custody seals on coolers or shipping container intact, signed and dated?	☑ Yes	☐ No	☐ No Seals	Comments
3.	Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No		
4.	All expected paperwork received (coc and other client specific information) sealed in plastic bag and easily accessible?	☑ Yes	☐ No		
5.	Samples received (cooled) or ambient?	Temp 3.2 °C		Cooler # 6RP-05-001	
6.	Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals	
7.	coc signed and dated?	☑ Yes	☐ No		
8.	Sample containers are intact?	☑ Yes	☐ No		
9.	All samples on coc received? All samples received on coc?	☑ Yes	☐ No		
10.	All sample label information matches coc?	☑ Yes	☐ No		
11.	Samples properly preserved?	☑ Yes	☐ No		
12.	Samples received within hold times? Short holds taken to wet lab?	☑ Yes	☐ No		
13.	VOA, TOC, TOX free of headspace?	☐ Yes	☐ No	☑ N/A	
14.	QC stickers placed on bottles designated by client?	☐ Yes	☐ No	☑ N/A	
15.	Shipment meets LvLI Sample Acceptance Policy? (Identify all bottles not within policy. See reverse side for policy)	☑ Yes	☐ No		
16.	Project Manager contacted concerning discrepancies? name/date (or samples outside criteria)	☐ Yes	☐ No	☑ No Discrepancies	

SR-002-B

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD F04-015 H3145

DATE RECEIVED: 05/06/05 LVL LOT # :0505L423

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B1C769						
% SOLIDS	001	S	05L%S064	04/28/05	05/11/05	05/12/05
OIL & GREASE BY GRAV	001	S	05LOG022	04/28/05	05/16/05	05/18/05
B1C771						
% SOLIDS	002	S	05L%S064	04/28/05	05/11/05	05/12/05
OIL & GREASE BY GRAV	002	S	05LOG022	04/28/05	05/16/05	05/18/05
B1C774						
% SOLIDS	003	S	05L%S064	04/28/05	05/11/05	05/12/05
OIL & GREASE BY GRAV	003	S	05LOG022	04/28/05	05/16/05	05/18/05
B1C775						
% SOLIDS	004	S	05L%S064	04/28/05	05/11/05	05/12/05
OIL & GREASE BY GRAV	004	S	05LOG023	04/28/05	05/20/05	05/20/05
B1C776						
% SOLIDS	005	S	05L%S064	04/28/05	05/11/05	05/12/05
OIL & GREASE BY GRAV	005	S	05LOG023	04/28/05	05/20/05	05/20/05
B1C777						
% SOLIDS	006	S	05L%S064	04/28/05	05/11/05	05/12/05
OIL & GREASE BY GRAV	006	S	05LOG023	04/28/05	05/20/05	05/20/05
OIL AND GREASE BY GR	006 REP	S	05LOG023	04/28/05	05/20/05	05/20/05
OIL AND GREASE BY GR	006 MS	S	05LOG023	04/28/05	05/20/05	05/20/05
B1C778						
% SOLIDS	007	S	05L%S064	04/28/05	05/11/05	05/12/05
PHOSPHATE BY IC	007	S	05LICZ32	04/28/05	05/10/05	05/10/05
PHOSPHATE BY IC	007 REP	S	05LICZ32	04/28/05	05/10/05	05/10/05

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD F04-015 H3145

DATE RECEIVED: 05/06/05 LVL LOT # :0505L423

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
PHOSPHATE BY IC	007 MS	S	05LICZ32	04/28/05	05/10/05	05/10/05
SULFATE BY IC	007	S	05LICZ32	04/28/05	05/10/05	05/10/05
SULFATE BY IC	007 REP	S	05LICZ32	04/28/05	05/10/05	05/10/05
SULFATE BY IC	007 MS	S	05LICZ32	04/28/05	05/10/05	05/10/05
PH	007	S	05LPH031	04/28/05	05/16/05	05/16/05

LAB QC:

OIL & GREASE BY GRAV	MB1	S	05LOG022	N/A	05/16/05	05/18/05
OIL AND GREASE BY GR	MB1 BS	S	05LOG022	N/A	05/16/05	05/18/05
OIL AND GREASE BY GR	MB1 BSD	S	05LOG022	N/A	05/16/05	05/18/05
OIL & GREASE BY GRAV	MB1	S	05LOG023	N/A	05/20/05	05/20/05
OIL AND GREASE BY GR	MB1 BS	S	05LOG023	N/A	05/20/05	05/20/05
OIL AND GREASE BY GR	MB1 BSD	S	05LOG023	N/A	05/20/05	05/20/05
PHOSPHATE BY IC	MB1	S	05LICZ32	N/A	05/10/05	05/10/05
PHOSPHATE BY IC	MB1 BS	S	05LICZ32	N/A	05/10/05	05/10/05
SULFATE BY IC	MB1	S	05LICZ32	N/A	05/10/05	05/10/05
SULFATE BY IC	MB1 BS	S	05LICZ32	N/A	05/10/05	05/10/05

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU-HANFORD F04-015 H3145
LVL#: 0505L423

W.O.#: 11343-606-001-9999-00
Date Received: 05-06-05

INORGANIC NARRATIVE

1. This narrative covers the analyses of 7 soil samples.

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

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

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

5. The method blanks were within the method criteria.

6. The Laboratory Control Samples (LCS) were within the laboratory control limits. The duplicate LCS for Oil and Grease were within the 20% Relative Percent Difference (RPD) control limit.

7. The matrix spike recoveries for Oil and Grease, Phosphate and Sulfate were within the 75-125% control limits.

8. The replicate analyses for Oil and Grease and Phosphate were within the 20% RPD control limit however replicate analysis for Sulfate was outside the control limit at 20.4%.

9. Results for solid samples are reported on a dry weight basis.

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

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

6/6/05
Date

njp\i05-423

The results presented in this report relate to the analytical testing and conditions of the samples upon receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 19 pages.

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

Lionville Laboratory Incorporated

WET CHEMISTRY

METHODS GLOSSARY FOR SOIL/SOLIDS SAMPLE ANALYSIS

	ASTM	SW846	OTHER
% Ash	__ D2216-80		
% Moisture	__ D2216-80		__ ILMO4.0 (e)
% Solids	√ D2216-80		__ ILMO4.0 (e)
% Volatile Solids	__ D2216-80		
ASTM Extraction in Water	__ D3987-81/85		
BTU	__ D240-87		
CEC		__ 9081	__ c
Chromium VI		__ 3060A/7196A	
Corrosivity ___ by coupon ___ by pH		__ 1110(mod) __ 9045C	
Cyanide, Total		__ 9010B	__ ILMO4.0 (e)
Cyanide, Reactive		__ Section 7.3/9014	
Halides, Extractable Organic		__ 9020B	__ EPA 600/4/84-008
Halides, Total		__ 9020B	__ EPA 600/4/84-008
EP Toxicity		__ 1310A	
Flash Point		__ 1010	
Ignitability		__ 1010	
Oil & Grease		√ 9071A (mod.)	√ EPA 413.1 (mod.)
Carbon, Total Organic		__ 9060	__ Lloyd Kahn (mod)
Oxygen Bomb Prep for Anions	__ D240-87(mod)	__ 5050	
Petroleum Hydrocarbons, Total Recoverable		__ 9071	__ EPA 418.1
pH, Soil		√ 9045C	
Sulfide, Reactive		__ Section 7.3/9030B	
Sulfide		__ 9030B(mod)	
Specific Gravity	__ D1429-76C/	__ D5057-90	
Sulfur, Total		__ 9056	
Synthetic Preparation Leach		__ 1312	
Paint Filter		__ 9095A	

Other: Phosphate and Sulfate **Method:** EPA 300.0 (mod.)

Other: **Method**

Lionville Laboratory Incorporated

METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

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

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

ABBREVIATIONS

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

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

ANALYTICAL WET CHEMISTRY METHODS

1. ASTM Standard Methods.

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

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

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

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

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

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

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

f. Code of Federal Regulations.

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 06/06/05

CLIENT: TNUHANFORD F04-015 H3145 LVL LOT #: 0505L423
WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	B1C769	% Solids	90.8		%	0.01	1.0
		Oil & Grease Gravimetri	734	u	MG/KG	734	1.0
-002	B1C771	% Solids	90.4		%	0.01	1.0
		Oil & Grease Gravimetri	738	u	MG/KG	738	1.0
-003	B1C774	% Solids	91.3		%	0.01	1.0
		Oil & Grease Gravimetri	730	u	MG/KG	730	1.0
-004	B1C775	% Solids	96.3		%	0.01	1.0
		Oil & Grease Gravimetri	693	u	MG/KG	693	1.0
-005	B1C776	% Solids	96.9		%	0.01	1.0
		Oil & Grease Gravimetri	688	u	MG/KG	688	1.0
-006	B1C777	% Solids	97.1		%	0.01	1.0
		Oil & Grease Gravimetri	687	u	MG/KG	687	1.0
-007	B1C778	% Solids	92.0		%	0.01	1.0
		Phosphate by IC	7.9		MG/KG	1.1	1.0
		Sulfate by IC	23.2		MG/KG	1.1	1.0
		pH	9.6		SOIL PH	0.01	1.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 06/06/05

CLIENT: TNUHANFORD F04-015 H3145 LVL LOT #: 0505L423
WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK10	05LOG022-MB1	Oil & Grease Gravimetri	667	u	MG/KG	667	1.0
BLANK10	05LOG023-MB1	Oil & Grease Gravimetri	667	u	MG/KG	667	1.0
BLANK10	05LICZ32-MB1	Phosphate by IC	12.5	u	MG/KG	12.5	1.0
		Sulfate by IC	12.5	u	MG/KG	12.5	1.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 06/06/05

CLIENT: TNUHANFORD F04-015 H3145 LVL LOT #: 0505L423
WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT		SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-006	B1C777	Oil & Grease Gravimetr	6710	687	u	7060	95.1	1.0
-007	B1C778	Phosphate by IC	80.8	7.9		70.6	103.3	2.0
		Sulfate by IC	104	23.2		70.6	115.1	2.0
BLANK10	05LOG022-MB1	Oil & Grease Gravimetr	5440	667	u	6660	81.6	1.0
		Oil & Grease - Grav M	5390	667	u	6660	80.8	1.0
BLANK10	05LOG023-MB1	Oil & Grease Gravimetr	6560	667	u	6850	95.8	1.0
		Oil & Grease - Grav M	6760	667	u	6850	98.7	1.0
BLANK10	05LICZ32-MB1	Phosphate by IC	262	12.5	u	250	104.7	1.0
		Sulfate by IC	242	12.5	u	250	96.9	1.0

Lionville Laboratory, Inc.

INORGANICS DUPLICATE SPIKE REPORT 06/06/05

CLIENT: TNUHANFORD F04-015 H3145 LVL LOT #: 0505L423
WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKE#1 %RECOV	SPIKE#2 %RECOV	%DIFF
BLANK10	05LOG022-MB1	Oil & Grease - Grav	81.6	80.8	0.98
BLANK10	05LOG023-MB1	Oil & Grease - Grav	95.8	98.7	3.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 06/06/05

CLIENT: TNUHANFORD F04-015 H3145 LVL LOT #: 0505L423
WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-006REP	B1C777	Oil & Grease Gravimetri	687 u	687 u	NC	1.0
-007REP	B1C778	Phosphate by IC	7.9	9.1	13.5	1.0
		Sulfate by IC	23.2	28.5	20.4	1.0

Lionville Laboratory Use Only
0505L423

Custody Transfer Record/Lab Work Request

Page 1 of 1

LVLI

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

See SRC

11

Client: TNU Hanford FOM-015

Est. Final Proj. Sampling Date

Project #: 11943-006-001-9999-00

Project Contact/Phone #

Lionville Laboratory Project Manager: JJ

QC: Spec Del: Std TAT: 30 Days

Date Rec'd: 5/6/05 Date Due: 6/5/05

	BHC	C	D		(C)	A		E		F
Refrigerator #	1	6	6	-		6		6		6
#/Type Container (Liquid / Solid)	3AOL	1AOL	1AOL			1AIL		1AIL		1AOL
Volume (Liquid / Solid)	40	120	120			120		250		250
Preservatives										
ANALYSES REQUESTED →	ORGANIC: VOA	BNA	Pest/PCB	Herb	8/BNA bomb	Oil/grease		INORG: Metal	CN	Anions/pH
Lionville Laboratory Use Only	0624H	0625X	0PCB		0DRO 0GRD	I0OGR		METALS(1)		IC404 IC504 IPH

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

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	VOA	BNA	Pest/PCB	Herb	(C)	A		Metal	CN	F
001	BIC769			S	4/29/05	0930						1				
002	BIC771					[illegible]						1				
003	BIC774					0955						1				
004	BIC775					1015						1				
005	BIC776					1300						1				
006	BIC777					1320						1				
007	BIC778					[illegible]	3	1	1		2	1		1		1

Special Instructions:

METALS(1) = Cd, Cr, Pb, Hg

RUN MATRIX QC

DATE/REVISIONS:

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

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
FedEx	JPenny	5/6/05	1455					"COMPOSITE WASTE"		ORIGINAL REWRITTEN	

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-129	PAGE 1 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** CS Cearlock	**TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ	**PRICE CODE** 8N **AIR QUALITY** ☐	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION 216-T-13; 10-11 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015		
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SUPTR 15464		**BILL OF LADING/AIR BILL NO.** SUPTR 15464		

MATRIX*
A=Air
DI=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C770

PRESERVATION	Cool 4C													
TYPE OF CONTAINER	BG													
NO. OF CONTAINER(S)	1													
VOLUME	120mL													
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS													
SAMPLE NO.	**MATRIX***	**SAMPLE DATE**	**SAMPLE TIME**											
B1C769	SOIL	4/28/05	0930	1										

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope/ A Pfister	4-28-05 1530	MO-026/ REF. #1	4-28-05 1530
MO-026/ RLT	5/5/05 0935	M.H. Bauchlur/M.G. Bauchlur	5/5/05 0935
M.H. Bauchlur/M.G. Bauchlur	5/5/05 0935	FedEx	
FedEx		J Penny	5/6/05 1455

SPECIAL INSTRUCTIONS
(1) ~~NO2/NO3 - 353.2~~; ~~Chromium Hex - 7196~~; Oil & Grease - 413.1;
PMG 2/14/05

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-130	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
216-T-13; 10-11 ft	200-MW-1 Characterization Sampling and Analysis - Soil		F04-015		
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SUPTR 15464		**BILL OF LADING/AIR BILL NO.** SUPTR 15464		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C770

	SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
	B1C771	SOIL	4/28/05	0930	Cool 4C	aG	1	120mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSPfister/JTyra 4-28-05	1530	MO-026/Ref. #1 4-28-05	1530
MO-026 Ref. #1 5/5/05	0935	M.H. Bauchle/M.G. Bauchle 5/5/05	0935
M.H. Bauchle/M.G. Bauchle 5/5/05	0935	Fedex	
Fedex		JPerry 5/6/05	1455

SPECIAL INSTRUCTIONS
(1) ~~NO2/NO3 - 353.2; Chromium Hex - 7196~~; Oil & Grease - 413.1;
PMG 2/15/05

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-145	PAGE 1 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** CS Cearlock	**TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ	**PRICE CODE** 8N **AIR QUALITY** ☐
SAMPLING LOCATION 216-T-13; 12-13 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015	**DATA TURNAROUND** ~~45 Days~~ 14 ~~45 Days~~ 4-26-05
ICE CHEST NO. GRAB-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express	
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SU PTR 15464		**BILL OF LADING/AIR BILL NO.** SU PTR 15464	

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegitation W=Water WI=Wipe X=Other	N/A **SPECIAL HANDLING AND/OR STORAGE** Radioactive Tie To: B1C780	Cool 4C	aG	1	120mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B1C774	SOIL	4-28-05	0955	X										

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM JSPope/ DATE/TIME 4-28-05 1530	**RECEIVED BY/STORED IN** MUSORA/REC. H1 DATE/TIME 4-28-05 1530	(1)~~NO2/NO3 - 353.2, Chromium Hex - 7196~~; Oil & Grease - 413.1; PMG 2/14/05
RELINQUISHED BY/REMOVED FROM MR-GRAB 3/5/05 0450 DATE/TIME	**RECEIVED BY/STORED IN** DATE/TIME	
RELINQUISHED BY/REMOVED FROM DATE/TIME	**RECEIVED BY/STORED IN** Fed Ex DATE/TIME	
RELINQUISHED BY/REMOVED FROM FedEx DATE/TIME	**RECEIVED BY/STORED IN** JRuiz 5/6/05 1455 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	
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**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-146	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Tyra/Wiberg	CS Cearlock	372-9638	TRENT, SJ	AIR QUALITY ☐	45 Days / ~~45 Days~~ 7 Days

SAMPLING LOCATION	PROJECT DESIGNATION	SAF NO.
216-T-13; 14-15 ft	200-MW-1 Characterization Sampling and Analysis - Soil	F04-015

ICE CHEST NO.	FIELD LOGBOOK NO.	COA	METHOD OF SHIPMENT
GRP-05-001		119144ES10	Federal Express

SHIPPED TO	OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.
Lionville Laboratory Incorporated	SEPTR 15464	SEPTR 15464

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C781

PRESERVATION	Cool 4C													
TYPE OF CONTAINER	aG													
NO. OF CONTAINER(S)	1													
VOLUME	120mL													
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS													

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B1C775	SOIL	4-28-05	1015	X										

CHAIN OF POSSESSION	SIGN/ PRINT NAMES
RELINQUISHED BY/REMOVED FROM: TSPfister/AGTyra 4-28-05 DATE/TIME: 1530	RECEIVED BY/STORED IN: 2116-026/REF.#1 4-28-05 DATE/TIME: 1530
RELINQUISHED BY/REMOVED FROM: 2116-026 REF#1 5/5/05 DATE/TIME: 0950	RECEIVED BY/STORED IN: M.H.Barker/M.G.Bachler 5/5/05 DATE/TIME: 0950
RELINQUISHED BY/REMOVED FROM: M.H.Barker/M.G.Bachler 5/5/05 DATE/TIME: 0950	RECEIVED BY/STORED IN: Fed Ex DATE/TIME:
RELINQUISHED BY/REMOVED FROM: FedEx DATE/TIME:	RECEIVED BY/STORED IN: JHenry 5/6/05 DATE/TIME: 1455
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:

SPECIAL INSTRUCTIONS
(1)~~NO2/NO3 - 353.2~~; ~~Chromium Hex - 7196~~; Oil & Grease - 413.1;

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-147	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Tyra/Wilberg	CS Cearlock	372-9638	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days 4-26-05
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
216-T-13; 19-20 ft	200-MW-1 Characterization Sampling and Analysis - Soil		F04-015		
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express		
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SEA PTR 15464		**BILL OF LADING/AIR BILL NO.** SEA PTR 15464		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C782

PRESERVATION	Cool 4C															
TYPE OF CONTAINER	aG															
NO. OF CONTAINER(S)	1															
VOLUME	120mL															
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS															

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME													
B1C776	SOIL	4-28-05	1300	X												

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pfister/GRP	4-28-05	1530	MO-026 / REF #1 4-28-05	1530
MO-026 RJ	5/5/05	0950	M.A. Burkhart M.G. Burkhart	5/5/05 0950
M.A. Burkhart M.G. Burkhart	5/5/05 0950		Lab
FedEx			JPerry	5/6/05	1455

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(1) ~~NO2/NO3 - 353.2;~~ ~~Chromium Hex - 7196;~~ Oil & Grease - 413.1;
PMG - 2/14/05

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-148 PAGE 1 OF 1

COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** CS Cearlock	**TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ
SAMPLING LOCATION 216-T-13; 24-25 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SUVTR 15464		**BILL OF LADING/AIR BILL NO.** SUVTR 15464

PRICE CODE 8N **DATA TURNAROUND** 45 Days / 45 Days

AIR QUALITY ☐

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

POSSIBLE SAMPLE HAZARDS/ REMARKS N/A

SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C783

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
				Cool 4C	aG	1	120mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
B1C777	SOIL	4-28-05	1330	X				

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope / [illegible]	4-28-05 1530	MO-022 Refrig 1	4/28/05 1530
MO-022 Refrig 1	5/5/05 0435	M.H. Barker / M.C. Barker	5/5/05 0435
M.H. Barker / M.C. Barker	5/5/05 0435	Fed Ex	
Fed Ex		J Perry	5/6/05 1455

SPECIAL INSTRUCTIONS

(1) ~~NO2/NO3 - 353.2; Chromium Hex - 7196;~~ Oil & Grease - 413.1;

[illegible] 4-28-05

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-152	PAGE 1 OF 1
COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** CS Cearlock	**TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ	**PRICE CODE** 8N **AIR QUALITY** ☐
SAMPLING LOCATION 216-T-13; 12-13 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015	**DATA TURNAROUND** 45 Days / ~~15 Days~~ AS 4-26-05
ICE CHEST NO. GRP-05-001	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express	
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SU PTR 15464		**BILL OF LADING/AIR BILL NO.** SU PTR 15464	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C780

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
				Cool 4C	aGs*	3	40mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
				Cool 4C	aG	1	120mL	SEE ITEM (2) IN SPECIAL INSTRUCTIONS
				Cool 4C	aG	1	120mL	PCBs - 8082;
				Cool 4C	aG	1	250mL	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
				Cool 4C	aG	1	250mL	SEE ITEM (4) IN SPECIAL INSTRUCTIONS
B1C778	SOIL	4-26-05	0955	X	X	X	X	X

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope/CS Cearlock	4-26-05 1530	MO-326/REFGH1	4-4-05 1530
MO-326 REFT	5/5/05 0940	M.H. Buchholz/M.G. Buchholz	5/5/05 0940
M.H. Buchholz/M.G. Buchholz	5/5/05 0940	FedEx	
FedEx		JSPenny	5/6/05 1455

SPECIAL INSTRUCTIONS

(1)VOA - 8260A (TCL); VOA - 8260A (Add-On) {cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene} PMG 2/14/05
(2)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range} TPH-Gasoline Range - WTPH-G;
(3)ICP Metals - 6010A (Supertrace) {Cadmium, Chromium, Lead, ~~Silver~~} ICP Metals - 6010A (Supertrace Add-On) {~~Copper~~} Mercury - 7471 - (CV);
(4)IC Anions - 300.0 {~~Fluoride, Nitrate, Nitrite~~, Phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045; PMG 2/14/05

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**	
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**	

A-6003-618(03/03)

Lionville Laboratory Incorporated
SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU Hanford **Date:** 5/6/05

Purchase Order / Project# /
SAF# / SOW# / Release #:

LvLI Batch #: 0505L423 **Sample Custodian:** JHung

NOTE: EXPLAIN ALL DISCREPANCIES

1.	Samples Hand Delivered or (Shipped)	Carrier FedEX		Airbill# 7922 7422 0461
2.	Custody seals on coolers or shipping container intact, signed and dated?	☑ Yes	☐ No	☐ No Seals Comments
3.	Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	
4.	All expected paperwork received (coc and other client specific information) sealed in plastic bag and easily accessible?	☑ Yes	☐ No	
5.	Samples received (cooled) or ambient?	Temp 3.2 °C		Cooler # GRP-05-001
6.	Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7.	coc signed and dated?	☑ Yes	☐ No	
8.	Sample containers are intact?	☑ Yes	☐ No	
9.	All samples on coc received? All samples received on coc?	☑ Yes	☐ No	
10.	All sample label information matches coc?	☑ Yes	☐ No	
11.	Samples properly preserved?	☑ Yes	☐ No	
12.	Samples received within hold times? Short holds taken to wet lab?	☑ Yes	☐ No	
13.	VOA, TOC, TOX free of headspace?	☐ Yes	☐ No	☑ N/A
14.	QC stickers placed on bottles designated by client?	☐ Yes	☐ No	☑ N/A
15.	Shipment meets LvLI Sample Acceptance Policy? (Identify all bottles not within policy. See reverse side for policy)	☑ Yes	☐ No	
16.	Project Manager contacted concerning discrepancies? name/date (or samples outside criteria)	☐ Yes	☐ No	☑ No Discrepancies

SR-002-B

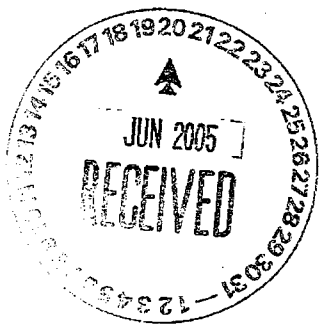
Shaw™
Shaw E & I, Inc.

Geotechnical Laboratory
PO Box 4339
1570 Bear Creek Road
Oak Ridge TN 37830
(865) 482-6497

CERTIFICATE OF ANALYSIS

Stephen Trent
Fluor Hanford, Inc.
825 Jadwin Avenue
Richland, Washington 99352

June 15, 2005



This is the Certificate of Analysis for the following samples:

Shaw Project ID:	**Eberline - Hanford**
Shaw Project Number:	**100846.59000000**
Client Sample Data Group:	H3145
Date Received by Lab:	May 11, 2005
Number of Samples:	Two (2)
Sample Type:	Soil

I. Introduction/Case Narrative

Two soil samples were received by the Shaw Geotechnical Laboratory on May 11, 2005. Samples were submitted for determination of moisture content. The sample numbers received were B1C773 and B1C779.

Please see Appendix A, Sample Number Cross Reference List; Appendix B, Analysis Results; and Appendix C, Chain-of-Custody/Sample Receipt Records.

"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 contained in this hardcopy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature."

Reviewed and Approved:

Ralph Cole
Laboratory Manager, Geotechnical Services

Shaw Geotechnical Laboratory
Oak Ridge TN
(865) 482-6497

II. Analytical Results/Methodology

REFERENCES: United States Army Corps of Engineers (USACE), Engineer Manual 1110-2-1906, *Laboratory Soils Testing*, appendix II, 1970; United States Environmental Protection Agency, SW846, *Test Methods for Examining Solid Waste, Physical/Chemical Methods*, 3rd ed., Nov 1986 (EPA SW-846). Annual Book of ASTM Standards, Section 4, Construction, Volume 04.08, *Soil and Rock (I)*, and Volume 04.09, *Soil and Rock (II)*, 2005. Shaw Environmental and infrastructure, Standard Operating Procedures.

Moisture Content of Soil and Rock..... **ASTM D 2216**

III. Quality Control

Quality control checks such as duplicates and spikes (QC samples), are not normally applicable to geotechnical testing. This is due largely to the inability of obtaining samples with known characteristics, the heterogenous nature of the samples, and quality control procedures built-in to the analytical method.

QC measures to ensure accuracy and precision of test results include the following:

- 100% verification of all numerical results - raw data entries, transcriptions and calculations entered by lab technicians are checked, recalculated and verified. Most data calculations are performed by computer programs.

- Data validation through test reasonableness - summaries of all test results for individual reports are reviewed to determine the overall reasonableness of data and to determine the presence of any data that may be considered outliers.

- Quality control procedures are built into most standardized geotechnical procedures. For example, liquid limit and plastic limit analyses call for re-analyses and specify acceptance criteria.

- Routine instrument calibration - instruments, gauges and equipment used in testing are calibrated on a routine basis. All instrument calibration follows ASTM or manufacturer guidelines.

- Maintenance of all past calibration records - calibration records and certification documents of all instruments, gauges and equipment are updated routinely and maintained in the Quality Control Coordinators Quality/Operations files.

Shaw Geotechnical Laboratory
Oak Ridge TN
(865) 482-6497

- Certified and trained personnel - all technicians are certified by the National Institute for Certification of Engineering Technicians (NICET) in geotechnical soil testing, and are trained in the application of standard laboratory procedures for geotechnical analyses as well as the quality assurance measures implemented by Shaw.

- Quantitative analyses frequently used in geotechnical/physical testing programs do not use QC tools common to wet chemistry or radiochemistry laboratories. Measures not employed in the analysis of samples reported in this report include: laboratory control samples (LCS), blanks, matrix spikes (MS), duplicate analyses, dilutions, digestions, correction factors, surrogate sample analyses, detection limit determinations, control charts, and/or tentatively identified compounds (TICs).

IV. Data Qualification

None.

Appendix A
Sample Cross-Reference List

June 15,2005
Stephen Trent
Fluor Hanford, Inc.
Shaw Project Name: Eberline Hanford
Shaw Project No. 100846.59000000
SDG No. H3145

Shaw Geotechnical Laboratory
Oak Ridge TN
(865) 482-6497

SAMPLE NUMBER CROSS-REFERENCE LIST

LAB SAMPLE NO.	CLIENT SAMPLE NO.	MATRIX
BC0567	B1C773	Soil
BC0568	B1C779	Soil

Appendix B
Sample Test Results

June 15,2005
Stephen Trent
Fluor Hanford, Inc.
Shaw Project Name: Eberline Hanford
Shaw Project No. 100846.59000000
SDG No. H3145

Shaw Geotechnical Laboratory
Oak Ridge TN
(865) 482-6497

MOISTURE CONTENT

PROJECT NAME
Eberline Hanford

PROJECT NUMBER
100846.59000000

LAB SAMPLE NO.	CLIENT SAMPLE NO.	MOISTURE, % ASTM D 2216	MOISTURE , % SW846	SOLIDS, % SW846
BC0567	B1C773	9.6	8.8	91.2
BC0568	B1C779	3.2	3.1	96.9

ASTM D 2216 results are based on dry sample weight.
SW846 results are based on wet sample weight.
Solids content is determined by subtracting the SW846 moisture (%) from 100.

Appendix C
Chain-of-Custody and Request-for-Analysis Records

100846.54000000

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-131	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Wiberg/Tyra	CS Cearlock	372-9638	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days

SAMPLING LOCATION	PROJECT DESIGNATION	SAF NO.
216-T-13; 10-11 ft	200-MW-1 Characterization Sampling and Analysis - Soil	F04-015

ICE CHEST NO.	FIELD LOGBOOK NO.	COA	METHOD OF SHIPMENT
SHNS-106		119144ES10	Federal Express

SHIPPED TO	OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.
Shaw Group	See PTR 15463	See PTR 15463

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: SDG # H3145

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C770

PRESERVATION	None	None	
TYPE OF CONTAINER	Moisture Resistant Cont	Liner	
NO. OF CONTAINER(S)	1	1	
VOLUME	200g	1000g	
SAMPLE ANALYSIS	Moisture Content - D2216;	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1C773	SOIL	4/28/05	0930	BC 0567

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope / [signature]	4-28-05 1530	mw-026 / REF # / [signature]	4-28-05 1530
MD-026 RW	5/5/05 0855	M.A. Burchw	5/5/05 0855
M.A. Burchw / M.A. Burchw	5/5/05 0855	[illegible]	
FED EX	5/6/05 10:00	MFM	05/06/05 10:50
Alex Wiberg	5/10/05	D. Huskey SHAW E+I/ETDC	5/11/05 0900

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(1) ~~Bulk Density - D2937; Particle Size (Dry Sieve) - D422;~~ MAB 1/20/05

To SHAW

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
	D. Huskey SHAW E+I/ETDC	SR. LAB TECH	5/11/05 0900
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-136 PAGE 1 OF 1
COLLECTOR Pope/Pfister/Wiberg/Tyra	**COMPANY CONTACT** CS Cearlock **TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ
SAMPLING LOCATION 216-T-13; 24-25 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil	**SAF NO.** F04-015
ICE CHEST NO. SHWS-106	**FIELD LOGBOOK NO.** **COA** 119144ES10	**METHOD OF SHIPMENT** Federal Express
SHIPPED TO Shaw Group	**OFFSITE PROPERTY NO.** SuPTR 15463	**BILL OF LADING/AIR BILL NO.** SuPTR 15463

PRICE CODE 8N **DATA TURNAROUND** 45 Days / 45 Days

AIR QUALITY ☐

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
SDG # H3145

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C783

PRESERVATION	None	None
TYPE OF CONTAINER	Moisture Resistant Cont	Liner
NO. OF CONTAINER(S)	1	1
VOLUME	200g	1000g
SAMPLE ANALYSIS	Moisture Content - D2216;	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

PMG 4/28/05

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1C779	SOIL	4-28-05	1330	X	

BC 0568

CHAIN OF POSSESSION **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
3S10 FE/ Shaw	4-28-05 1530	MO-020/ Ref. #1	4-28-05 1530
MO-020/ RW	5/3/05 0845	M.H. Bauhus/M.G. Bauhus	5/3/05 0845
M.H. Bauhus/M.G. Bauhus	5/3/05 0845	FedEx	
Fed Ex #	5/6/5 10:00	RFW	05/06/05 10:00
Alex Ellerton	5/10/05	SHAWEST	5/11/05 0900

SPECIAL INSTRUCTIONS
~~(1)Bulk Density - D2937; Particle Size (Dry Sieve) - D422;~~ PMG 4/28/05

To SHAW

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
	D. Huskey	SR. LAB TECH	05/11/05 0900
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

SDG# H3145

PAGE 1 Kberline Srvces CHAIN OF CUSTODY ORD # R5-05-036

05/09/05 08:34:40 WORK ID: SAF# F04-015 SDG# H3145

RCVD: 05/06/05 DUE: 06/20/05 KEEP: 06/20/06 DISP: S

DASH	SAMPLE IDENTIFICATION	STORED	TESTS
01A-S	B1C773	SHAW	E333S
02A-S	B1C779	SHAW	E333S

BC 0567

BC 0568

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
Alex Kellenbach	5/10/05	SHAW LAB	5/10/05	Don Hurley	5/11/05