Lionville Laboratory, Inc.
BNA ANALYTICAL DATA PACKAGE FOR
TNUHANFORD F08-043 H3669

DATE RECEIVED: 03/27/08 LVL LOT # :0803L833

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B1TDD3-A	004	S	08LE0147	03/06/08	03/30/08	04/23/08
B1TDD3-A	004 MS	S	08LE0147	03/06/08	03/30/08	04/23/08
LAB QC:						
SBLKTP	MB1	S	08LE0147	N/A	03/30/08	04/08/08
SBLKTP	MB1 BS	S	08LE0147	N/A	03/30/08	04/08/08

LIONVILLE LABORATORY INC.

Case Narrative

Client: TNU-HANFORD F08-043
LVL #: 0803L833
SDG/SAF # H3669 / F08-043

W.O. #: 11343-606-001-9999-00
Date Received: 03-27-2008

SEMIVOLATILE

One (1) soil sample was collected on 03-06-2008.

The sample and its associated QC samples were extracted according to Lionville Laboratory SOPs based on SW 846 method 3540C on 03-30-2008 and analyzed according to criteria set forth in Lionville Laboratory SOPs based on SW 846 Method 8270C for TCL Semivolatile target compounds on 04-08,23-2008.

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

1. All samples are reported on a wet weight basis due to insufficient sample sent.

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

3. The samples were analyzed within holding time. The samples were extracted outside of recommended holding time. A copy of the Sample Discrepancy Report (SDR) has been enclosed.

4. Non-target compounds were detected in these samples.

5. All surrogate recoveries were within acceptance criteria.

6. Two (2) of sixty-four (64) matrix spike recoveries were outside acceptance criteria. A copy of the Sample Discrepancy Report (SDR# 08MS085) has been enclosed.

7. Two (2) of sixty-four (64) blank spike recoveries were outside acceptance criteria. They were biased high and have minimal impact on data.

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LIONVILLE LABORATORY INC.

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

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

10. All continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.

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

12. 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").

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

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

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

4/29/18
Date

Lionville Laboratory Sample Discrepancy Report (SDR)

SDR #: 08MS089

Initiator: Shawn Saylor
Date: 4.25.08
Client: TNU F08-043 H3669

Batch: 0803LP33
Samples: MS, BS
Method: SW846/MCAWW/CLP/

Parameter: E270
Matrix: SOLID
Prep Batch: 08160147

1. Reason for SDR

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

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

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

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

(1) low recovery of several spike analytes in the BS & MS (4 nitrophenol, 2,4 Dinitrophenol, 4,6 Dinitro-2-methylphenol)

(2) Sample extracted outside the recommended holding time RG4/29/08

2. Known or Probable Causes(s) (1) compounds are subject to erratic chromatographic behavior especially if the GC system is contaminated with high boiling compounds. (2) Sample received 7 days past the hold time

3. Discussion and Proposed Action

Other Description: narrate

__ 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: 4/28/08
__ Concur with Proposed Action
__ Disagree with Proposed Action; See Instruction
__ Include in Case Narrative
__ Client Contacted:
Date/Person _____
__ Add
__ Cancel

5. Final Action...signature/date: 4-28-08 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
(1)	X Project Mgr: Stone/Johnson	__	__ GC/LC: Kiger
__	__ Data Management: Stilwell	(2)	X MS: Rychlak/Daley
__	__ Sample Prep: Beegle/Kiger	__	__ Log-in: Perry
		__	__ Admin: _____
		__	__ Other: _____

QA-105-A-0805

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: 04/25/08 11:02

RFW Batch Number: **0803L833** Client: **TNUHANFORD F08-043 H3669** Work Order: 11343606001 Page: 1a

	Cust ID:	B1TDD3-A	B1TDD3-A	SBLKTP	SBLKTP BS
Sample Information	RFW#:	004	004 MS	08LE0147-MB1	08LE0147-MB1
	Matrix:	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.00	1.00	1.00	1.00
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Surrogate Recovery	Nitrobenzene-d5	76 %	84 %	77 %	70 %
	2-Fluorobiphenyl	95 %	101 %	77 %	89 %
	Terphenyl-d14	114 %	105 %	96 %	92 %
	Phenol-d5	74 %	83 %	76 %	92 %
	2-Fluorophenol	71 %	79 %	74 %	88 %
	2,4,6-Tribromophenol	64 %	62 %	48 %	28 %
		fl	fl	fl	fl
Phenol		330 U	98 %	330 U	89 %
bis(2-Chloroethyl)ether		330 U	84 %	330 U	79 %
2-Chlorophenol		330 U	90 %	330 U	86 %
1,3-Dichlorobenzene		330 U	76 %	330 U	82 %
1,4-Dichlorobenzene		330 U	76 %	330 U	81 %
1,2-Dichlorobenzene		330 U	85 %	330 U	87 %
2-Methylphenol		330 U	90 %	330 U	84 %
2,2'-oxybis(1-Chloropropane)		330 U	85 %	330 U	82 %
3/4-Methylphenol		330 U	87 %	330 U	88 %
N-Nitroso-di-n-propylamine		330 U	90 %	330 U	87 %
Hexachloroethane		330 U	77 %	330 U	82 %
Nitrobenzene		330 U	85 %	330 U	67 %
Isophorone		330 U	96 %	330 U	75 %
2-Nitrophenol		330 U	94 %	330 U	64 %
2,4-Dimethylphenol		330 U	80 %	330 U	53 %
bis(2-Chloroethoxy)methane		330 U	88 %	330 U	67 %
2,4-Dichlorophenol		330 U	89 %	330 U	64 %
1,2,4-Trichlorobenzene		330 U	83 %	330 U	67 %
Naphthalene		330 U	84 %	330 U	67 %
4-Chloroaniline		330 U	41 %	330 U	48 %
Hexachlorobutadiene		330 U	94 %	330 U	70 %
4-Chloro-3-methylphenol		330 U	96 %	330 U	71 %
2-Methylnaphthalene		330 U	104 * %	330 U	71 %
Hexachlorocyclopentadiene		330 U	81 %	330 U	77 %
2,4,6-Trichlorophenol		330 U	51 %	330 U	36 %
2,4,5-Trichlorophenol		830 U	110 %	830 U	67 %

*= Outside of EPA CLP QC limits.

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Cust ID:	B1TDD3-A	B1TDD3-A	SBLKTP	SBLKTP BS
RFW#:	004	004 MS	08LE0147-MB1	08LE0147-MB1
2-Chloronaphthalene	330 U	97 %	330 U	83 %
2-Nitroaniline	830 U	99 %	830 U	88 %
Dimethylphthalate	330 U	97 %	330 U	91 %
Acenaphthylene	330 U	98 %	330 U	87 %
2,6-Dinitrotoluene	330 U	100 %	330 U	90 %
3-Nitroaniline	830 U	68 %	830 U	93 %
Acenaphthene	330 U	94 %	330 U	84 %
2,4-Dinitrophenol	830 U	110 %	830 U	16 * %
4-Nitrophenol	830 U	20 * %	830 U	96 %
Dibenzofuran	330 U	97 %	330 U	89 %
2,4-Dinitrotoluene	330 U	102 %	330 U	100 %
Diethylphthalate	330 U	101 %	330 U	93 %
4-Chlorophenyl-phenylether	330 U	95 %	330 U	87 %
Fluorene	330 U	96 %	330 U	90 %
4-Nitroaniline	830 U	80 %	830 U	106 %
4,6-Dinitro-2-methylphenol	830 U	122 %	830 U	22 * %
N-Nitrosodiphenylamine (1)	330 U	85 %	330 U	66 %
4-Bromophenyl-phenylether	330 U	84 %	330 U	70 %
Hexachlorobenzene	330 U	105 %	330 U	86 %
Pentachlorophenol	830 U	103 %	830 U	37 %
Phenanthrene	330 U	101 %	330 U	88 %
Anthracene	330 U	102 %	330 U	92 %
Carbazole	330 U	89 %	330 U	96 %
Di-n-butylphthalate	330 U	98 %	330 U	96 %
Fluoranthene	330 U	105 %	330 U	108 %
Pyrene	330 U	97 %	330 U	86 %
Butylbenzylphthalate	330 U	96 %	330 U	91 %
3,3-Dichlorobenzidine	330 U	56 %	330 U	69 %
Benzo(a)anthracene	330 U	99 %	330 U	94 %
Chrysene	330 U	102 %	330 U	94 %
bis(2-Ethylhexyl)phthalate	43 J	90 %	330 U	92 %
Di-n-octyl phthalate	330 U	94 %	330 U	92 %
Benzo(b)fluoranthene	330 U	96 %	330 U	91 %
Benzo(k)fluoranthene	330 U	116 %	330 U	96 %
Benzo(a)pyrene	330 U	103 %	330 U	94 %
Indeno(1,2,3-cd)pyrene	330 U	105 %	330 U	92 %
Dibenz(a,h)anthracene	330 U	103 %	330 U	96 %
Benzo(g,h,i)perylene	330 U	102 %	330 U	93 %
Tributylphosphate	330 U	330 U	330 U	330 U

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

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B1TDD3-A

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

Client: TNUHANFORD F08-043 H3669

Matrix: (soil/water) SOIL

Lab Sample ID: 0803L833-004

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

Lab File ID: N042316

Level: (low/med) LOW

Date Received: 03/27/08

% Moisture: 100 decanted: (Y/N)__

Date Extracted: 03/30/08

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 04/23/08

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 5

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	3.186	900	J
2.		UNKNOWN	3.604	400	J
3.		UNKNOWN	3.683	200000	JB
4.		UNKNOWN	17.364	500	JB
5.		SILOXANE	25.159	200	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SBLKTP

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

Client: TNUHANFORD F08-043 H3669

Matrix: (soil/water) SOIL

Lab Sample ID: 08LE0147-MB1

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

Lab File ID: N040806

Level: (low/med) LOW

Date Received: 03/30/08

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

Date Extracted: 03/30/08

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 04/08/08

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 5

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	3.358	200	J
2.		SILOXANE	3.963	100	J
3.		UNKNOWN	4.626	50000	J
4.		SILOXANE	7.006	100	J
5.		UNKNOWN	18.751	400	J

Lionville Laboratory Use Only

08031833

Custody Transfer Record/Lab Work Request

Page 1 of 1

See SRC

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI LIONVILLE LABORATORY, INC.

000000012

Client INU HANFORD F08-043

Est. Final Proj. Sampling Date

Project# 11343-606-001-9999

Project Contact/Phone#

Lionville Laboratory Project Manager R. Johnson

QC SW846 Del Std TAT 30 days

Date Rec'd 3/27/08 Date Due 4-26-08

Refrigerator #		B								A			B		
#/Type Container	Liquid / Solid	Wilcoxons								3			3		
										16 - 1			16		
Volume		Wilcoxons								120 - 1			120		
Preservatives															
ANALYSES REQUESTED →	ORGANIC: VOA	BNA	Pest/PCB	Herb				INORG: Metal	CN	Hg, Others, Sulfide, Sulfide			TC Anions		

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	Lionville Laboratory Use Only: 0625X						ICR6	ISFD		ICD		
	001	B1TV15			Soil	3-1-08	1250							X	X				
	002	V19				3-2-08	1255							X	X				
	003	H30				3-6-08	1045							X	X				
	004	B1TDD3-A				"	1045	X									X		

Special Instructions:

ICO - ICFL, ICND2, ICND3, ICS04

Special Instructions:

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

Relinquished by	Received by	Date	Time
FedEx	[signature]	3/27/08	0935

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
ORIGINAL REWRITTEN		COMPOSITE WASTE	

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-043-166	PAGE 1 OF 1
COLLECTOR NCO Sampler POPE	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5941, I-SSP-001	**PROJECT DESIGNATION** 216-A-30 Crib Sampling		**SAF NO.** F08-043	**AIR QUALITY** ☐	
ICE CHEST NO. GRP-04-013	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH** 18.1'-20.6'	**COA** 123215ES10	**METHOD OF SHIPMENT** FEDERAL EXPRESS	
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** See PTR 2W R3R H0021000		**BILL OF LADING/AIR BILL NO.** See PTR 2W R3R H0021000		

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
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

SAMPLE NO.	**MATRIX***	**SAMPLE DATE**	**SAMPLE TIME**	**PRESERVATION**	Cool~4C												
				TYPE OF CONTAINER	G												
				NO. OF CONTAINER(S)	1												
				VOLUME	120mL												
				SAMPLE ANALYSIS	Chromium Hex - 7196; Sulfides - 9030 (Sulfide)												
B1TV15	SOIL	3-11-08	1250	X													
		Lot# 024875															

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J.S. Pope / JSP	3-11-08 1345	Site RMA Fridge	3-11-08 1345
MO509 FRIDGE	3-25-08 0825	Ed Kawa	3-25-08 0825
Ed Kawa	3-25-08 0944	MO745 Refridge #3	3-25-08 0944
MO745 REF #3	3-26-08 1040	R. PEISTER	3-26-08 1040
R. PEISTER	3-26-08 1040	FED EX	
	3-27-08 0935		3-27-08 0935

SPECIAL INSTRUCTIONS

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

A-6003-618(01/06)

0000000013

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-043-173	PAGE 1 OF 1
COLLECTOR PFISTER WEBB FULTON NCO Sampler	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5941, I-SSP-00[illegible]2 1R 3-10-08	**PROJECT DESIGNATION** 216-A-30 Crib Sampling		**SAF NO.** F08-043	**AIR QUALITY** ☐	
ICE CHEST NO. GRP-04-013	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123215ES10	**METHOD OF SHIPMENT** FEDERAL EXPRESS	
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** See PTR See RSR H0021000		**BILL OF LADING/AIR BILL NO.** See PTR See RSR H0021000		

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
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool~4C
TYPE OF CONTAINER	G
NO. OF CONTAINER(S)	1
VOLUME	120mL
SAMPLE ANALYSIS	Chromium Hex - 7196; Sulfides - 9030 (Sulfide)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1TV19	SOIL	3/12/08	1255	✓
			Lot#	024875

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
R. PFISTER/[illegible]	3/12/08 1410	MO 509 Fridge	3-12-08 1410
MO 509 FRIDGE	3-25-08 0825	Ed Kaw/[illegible]	3-25-08 0825
Ed Kaw/[illegible]	3-25-08 0944	MO 745 - Refridge #3	3-25-08 0944
MO 745 REF #3	3-26-08 1040	R. PFISTER/[illegible]	3-26-08 1040
R. PFISTER/[illegible]	3-26-08 1040	FED EX	
FED EX	3-27-08 0935	[illegible]	3-27-08 0935

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

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

A-6003-618(01/06)

000000014

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-043-156	PAGE 1 OF 1
COLLECTOR NCO Sampler Fulton	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N **AIR QUALITY** ☐	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5941, I-004	**PROJECT DESIGNATION** 216-A-30 Crib Sampling		**SAF NO.** F08-043		
ICE CHEST NO. GRP-04-013	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH** 15.6-18.1'	**COA** 123215ES20	**METHOD OF SHIPMENT** FEDERAL EXPRESS	
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** SEE PTR See RSR # 0021000		**BILL OF LADING/AIR BILL NO.** SEE PTR See RSR # 0021000		

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
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive tie to B1TDB6

PRESERVATION	Cool~4C
TYPE OF CONTAINER	G
NO. OF CONTAINER(S)	1
VOLUME	120mL
SAMPLE ANALYSIS	Chromium Hex - 7196; Sulfides - 9030 (Sulfide)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1TH30	SOIL	3-6-08	1045	✓
			Lot #	024975

CHAIN OF POSSESSION

SIGN/ PRINT NAMES			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Chris Fulton	3-6-08 1145	MO 509 Fridge	3-6-08 1145
MO 509 Fridge	3-[illegible]-08 0705	Ed Kaser	3-[illegible]-08 0705
Ed Kaser	3-[illegible]-08 0757	MO 509 Fridge	3-[illegible]-08 0757
MO 509 FRIDGE	3-25-08 0825	Ed Kaser	3-25-08 0825
Ed Kaser	3-25-08 0944	MO 745 Refridge #3	3-25-08 0944
MO 745 REF #3	3-26-08 1040	R. PFISTER	3-26-08 1040
R. PFISTER	3-26-08 1040	FED EX	

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
	[signature]	II	3/27/08 0935
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(01/06)

0000000015

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F08-043-160	PAGE 1 OF 1
COLLECTOR NCO Sampler Fulton	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N **DATA TURNAROUND**
SAMPLING LOCATION C5941, I-004-SP	**PROJECT DESIGNATION** 216-A-30 Crib Sampling		**SAF NO.** F08-043	**AIR QUALITY** ☐ 45 Days / 45 Days
ICE CHEST NO. GRP-04-013	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123215ES20	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE
SHIPPED TO Lionville Laboratory Incorporated	**OFFSITE PROPERTY NO.** N/A Tel BLH0002000		**BILL OF LADING/AIR BILL NO.** See PTR Tel RSR H0002000	

MATRIX*
A=Air
BL=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
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive tie to B1TDB6

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1TDD3-A	SOIL	3-6-08	1045	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Chris Fulton	3-6-08 1145	MO 509 RF	3-6-08 1145
MO 509 RF	3-25-08 0900	D. Parker	3-25-08 0900
D. Parker	3-25-08 1000	MO 745 REF #3	3-25-08 1000
MO 745 REF #3	3-26-08 1038	R. Pfister	3-26-08 1038
R. Pfister	3-26-08 1038	FED EX	
FED EX	3-27-08 0935	V. Hernandez	3-27-08 0935

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1)IC Anions - 300.0 {Fluoride, Nitrate, Nitrite, Sulfate}

Original COC attached to document chain of possession

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

A-6003-618(01/06)

0000000016

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-043-132	PAGE 1 OF 2
COLLECTOR NCO Sampler Fulton	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5941, I-004	**PROJECT DESIGNATION** 216-A-30 Crib Sampling		**SAF NO.** F08-043	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH** 15.6'-19.1'	**COA** 123215ES20	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

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
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive tie to B1TDB6

200805161

PRESERVATION	Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	None
TYPE OF CONTAINER	aG	aG	aG	G/P	G/P	Square Bottle - Poly
NO. OF CONTAINER(S)	1	1	1	1	1	1
VOLUME	120mL	120mL	120mL	120mL	120mL	500mL
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	SEE ITEM (5) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B1TDD3	SOIL	3-6-08	1045	✓	✓	✓	✓	✓	✓
W0806200163									
			LOT #	024875					

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Chris Fulton	3-6-08 1145	MO 509 Fridge	3-6-08 1145
MO-509 Fridge	3-15-08 0705	Ed Kawa	3-15-08 0705
Ed Kawa	3-18-08 0730	T A Frazier	3-18-08 0730
K Boothe	3-25-08 0700	D. Farlow	3-25-08 0700
Fed Ex	3-27-08 0935		3-27-08 0935

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1)Semi-VOA - 8270B (Add-On) {1,2,4-Trimethylbenzene, Tributyl phosphate}
(2)TPH-DieselKerosene Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(3)ICP/MS - 200.8 (TAL) {Barium, Cadmium, Chromium, Copper, Nickel, Silver, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Selenium} 200.8_HG - ICPMS;
(4)IC Anions - 300.0 {Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}
(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Radium-226} Gamma Spec - Add-on {Niobium-94, Radium-228} Isotopic Uranium; Neptunium-237; Strontium-89,90 -- Total Sr; Isotopic Plutonium; Americium-241 {Americium-241}

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

A-6003-618(01/06)

000000017

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNL HANFORD **Date:** 3/27/08

Project/SAF/SOW/Release #: F08-043

LvLI Batch #: 0803L833 **Sample Custodian:** Vicki Hennard

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier FedEx		Airbill # 790478490807
2. Custody Seals on coolers or shipping containers intact, signed & dated?	☑ Yes	☐ No	☐ No Seals
3. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	*Comments:*
4. All expected paperwork received (coc & other client specific information) sealed in plactic bag and easily accessible?	☑ Yes	☐ No	
5. Samples received cooled or ambient?	Temp 3-4 °C		Cooler # GRP-04-013
How was the temperature taken?	☑ IR	☐ Temp. Blank	☐ Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	☑ Yes	☐ No	
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7. COC (Client & LvLI) signed & dated?	☑ Yes	☐ No	
8. Sample containers are intact?	☑ Yes	☐ No	
9. All samples on COC received? All samples received on COC?	☑ Yes ☑ Yes	☐ No ☐ No	
10. All sample label information matches COC?	☑ Yes	☐ No	
11. Samples properly preserved? (If #5 is no, then this is no.)	☑ Yes	☐ No	
12. Samples received within hold times? Short holds taken to wet lab?	☑ Yes ☐ Yes	☐ No ☐ No	 ☑ N/A
13. VOA, TOC, TOX free of headspace?	☐ Yes	☐ No	☑ N/A
14. QC stickers placed on bottles designated by client?	☐ Yes	☐ No	☑ N/A
15. Shipment meets LvLI Sample Acceptance Policy? (Identify all bottles that do not meet the policy, which is on the reverse of this page.)	☑ Yes	☐ No	
16. Project Manager contacted concerning any discrepancies?	☐ Yes	☐ No	☑ N/A

Person Contacted _____ Date _____

LVLI LIONVILLE LABORATORY INC.