

RECEIVED MAY 6, 2008

0078232

Fluor Hanford  
WSCF Analytical Lab  
P.O. Box 1000  
Richland, WA 99352  
Telephone 373-7495  
Telefax 372-0456

**FLUOR**

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**Memorandum**

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To: H. Hampt E6-35 Date: May 5, 2008 M4W41-SLF-08-482

From: S. L. Fitzgerald, Manager *by Sullivan J. Baird*  
WSCF Analytical Lab

cc: w/Attachments  
T. F. Dale S3-30 J. E. Trechter S3-30  
H. K. Meznarich S3-30 S. J. Trent E6-35  
P. D. Mix S3-30 File/LB

Subject: FINAL RESULTS FOR SAMPLE DELIVERY GROUP WSCF20080158 – SAF  
NUMBER F08-038

Reference: (1) Groundwater Protection Program-Letter of Instruction, FH-EIS-2003-MEM-001,  
October 31, 2002  
(2) HNF-SD-CD-QAPP-017, Rev. 8, Waste Sampling & Characterization Facility Quality  
Assurance Plan

This letter contains the following information for sample delivery group WSCF20080158:

- Cover Sheet (Attachment 1)
- Narrative (Attachment 2)
- Analytical Results (Attachment 3)
- Sample Receipt Information (Attachment 4)
- Memo, DL Widrig to PD Mix, BC-Cribs Mercury Samples, dated 5/1/08 (Attachment 5)

SLF/grf

Attachments 5

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EDMC

M4W41-SLF-08-482

ATTACHMENT 1

**COVER SHEET**

Consisting of 2 pages  
Including cover page

# WSCF SAF NUMBER CROSS REFERENCE

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Group#: WSCF20080158  
Data Deliverable Date: 15-may-2008  
Data Deliverable: Cover Sheet

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SAF#	Sample ID	WSCF#	Matrix
F08-038	B1T730	W08GR00189	SOIL

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M4W41-SLF-08-482

ATTACHMENT 2

**NARRATIVE**

Consisting of 3 pages  
Including cover page

## **Introduction**

Twelve (12) S&GRP samples were received at the WSCF Laboratory on January 30, 2008. However, only sample# B1T730 was analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter. Samples B1T677, B1T678, B1T679, B1T680, B1T681, B1T682, B1T683, B1T684, B1T685, B1T686 and B1T687 were not analyzed per client direction. Refer to e-mail from DL Widrig to PD Mix et al, dated May 1, 2008 for detail.

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4. Additionally, a copy of e-mail direction from client is included as Attachment 5.

It should be noted that the attached chain of custody was stamped “iced” and initialed by the WSCF Laboratory Sample Custodian during sample receiving, indicating the presence of ice in the sample container.

## **Analytical Methodology for Requested Analyses**

Refer to *WSCF Method References Report*, page 10, for a complete listing of approved analytical methods.

## **Inorganic Comments**

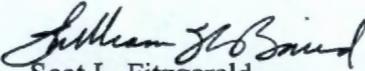
**ICP-MS Metals** – A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See page 12 for QC details. Analytical Note(s):

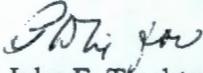
- Regulatory Holding Time is not applicable.
- Samples B1T677, B1T678, B1T679, B1T680, B1T681, B1T682, B1T683, B1T684, B1T685, B1T686 and B1T687 were not analyzed. Refer to e-mail direction from DL Widrig to PD Mix et al, dated May 1, 2008 for detail (Attachment 5).
- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1T677 of this SDG.

All other QC controls are within the established limits.

I certify that this data package is in compliance with the LOI, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this

hard copy data package has been authorized by the Laboratory Analytical Manager and Client Services as verified by the following signatures.

*for*   
Scot L. Fitzgerald  
WSCF Analytical Laboratory Manager

  
John E. Trechter  
WSCF Client Services

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ATTACHMENT 3

**ANALYTICAL RESULTS**

Consisting of 6 pages  
Including cover page

**WSCF  
ANALYTICAL RESULTS REPORT**

for

**Groundwater Remediation Program**

**Richland, WA 99354**

**Attention: Steve Trent**

Analytical: *William J. Baird WW Baird 5/5/08*  
Client Services: *G.D. P.D. Mix 5/5/2008*

*All results are reported on an "as received" basis unless otherwise noted in the comment section.*

This information is intended for the use of the addressee only. If the reader of this report is not the intended recipient or is not authorized by the recipient to receive the report, you are hereby notified that any dissemination, distribution or copying of this report is strictly prohibited. If you have received this report in error, please notify WSCF Laboratory immediately by telephone at (509) 373-7020 or (509) 531-8004. Information designation of this report is the responsibility of the customer.

Contract#: FH-EIS-2003-MEM-001  
Report#: WSCF20080158  
Report Date: 5-may-2008  
Report WGPP/ver. 5.2  
Groundwater Remediation Program

Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20080158

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
35807	1	36213	40509	BLANK		ICP-200.8 MS All possible meta
35807	2	36213	40509	LCS		ICP-200.8 MS All possible meta
35807	4	36213	40509	MS	W08GR00178	ICP-200.8 MS All possible meta
35807	5	36213	40509	MSD	W08GR00178	ICP-200.8 MS All possible meta
35807	5	36213	40509	SPK-RPD	W08GR00178	ICP-200.8 MS All possible meta
35807	16	36213	40509	SAMPLE	W08GR00189	ICP-200.8 MS All possible meta

# WSCF

## METHOD REFERENCES REPORT

Department: Inorganic

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The results provided in this report were generated using the following WSCF Laboratory procedures. For your convenience, this table provides a listing of the regulatory or industry methods that are referenced by each of these WSCF procedures. Please note that the most recent version of the regulatory or industry method is listed here even though the WSCF procedure may reference an older version of the method. Also, a reference to a regulatory or industry method here does not necessarily indicate a verbatim implementation of that method.

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<b>LA-505-412</b>	<b>LA-505-412: DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY</b>
	<b>EPA-600/R-94-111 200.8</b> DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY COUPLED PLAS
	<b>HEIS 200.8 METALS ICPMS</b> Inductively Coupled Plasma - Mass Spectrometry
	<b>HEIS RADISOTOPES ICPMS</b> Radioisotopes by ICP/MS

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Note: A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at <http://www2.rl.gov/phmc/as-dol>.

Report Date: 5-may-2008  
Report#: WSCF20080158  
Report WGPPM/5.2

Page 1

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-038  
**Sample #** W08GR00189  
**Client ID:** B1T730

TRENT  
 WSCF

**Matrix:** SOIL

**Group #:** WSCF20080158  
**Department:** Inorganic  
**Sampled:** 01/30/08  
**Received:** 01/30/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP-200.8 MS All possible meta Prep											04/01/08
ICP-200.8 MS All possible meta											
Mercury	7439-97-8	LA-505-412	U	< 0.0504	mg/kg			1.01	0.0504		04/02/08

**MDL=Minimum Detection Limit** U - Analyzed for but not detected above limiting criteria(inorg)

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

\* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080158  
 Matrix: SOLID  
 Test: ICP-200.8 MS All possible meta

Sample Date: 01/30/08  
 Receive Date: 01/30/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
<b>Lab ID: W08GR00178</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
MS	Mercury	7439-97-6	2.078	103.900	% Recov	70.000	130.000				04/02/08
MSD	Mercury	7439-97-6	2.213	110.650	% Recov	70.000	130.000				04/02/08
SPK-RPD	Mercury	7439-97-6	110.650		RPD			6.292	20.000		04/02/08
<b>BATCH QC</b>											
BLANK	Mercury	7439-97-6	< 5e-2	n/a	ug/L					U	04/02/08
LCS	Mercury	7439-97-6	8.78	106.039	% Recov	71.000	132.000				04/02/08

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ATTACHMENT 4

**SAMPLE RECEIPT INFORMATION**

Consisting of 14 pages  
Including cover page

**Waste Sampling and Characterization Facility**  
P.O. BOX 1970 S3-30, Richland, WA 99352  
PHONE: (509) 373-7004/FAX: (509) 373-7134

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Groundwater Remediation Program

Richland, WA 99354  
Attn: Steve Trent

Customer Code: GPP  
PO#: 122727/ES10  
Group#: 20080158  
Project#: F08-038  
Proj Mgr: Steve Trent E6-35  
Phone: 373-5869

The following samples were received from you on 01/30/08. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
W08GR00178	B1T677	TRENT	Solid, or handle as if solid	01/30/08
W08GR00179	B1T678	TRENT	Solid, or handle as if solid	01/30/08
W08GR00180	B1T679	TRENT	Solid, or handle as if solid	01/30/08
W08GR00181	B1T680	TRENT	Solid, or handle as if solid	01/30/08
W08GR00182	B1T681	TRENT	Solid, or handle as if solid	01/30/08
W08GR00183	B1T682	TRENT	Solid, or handle as if solid	01/30/08
W08GR00184	B1T683	TRENT	Solid, or handle as if solid	01/30/08
W08GR00185	B1T684	TRENT	Solid, or handle as if solid	01/30/08
W08GR00186	B1T685	TRENT	Solid, or handle as if solid	01/30/08
W08GR00187	B1T686	TRENT	Solid, or handle as if solid	01/30/08
W08GR00188	B1T687	TRENT	Solid, or handle as if solid	01/30/08
W08GR00189	B1T730	TRENT @2008	Solid, or handle as if solid	01/30/08

Test Acronym Description

Test Acronym	Description
@2008	ICP-200.8 MS All possible meta

**COLLECTOR**

NCO Sampler *WBS*

*3H*

**SAMPLING LOCATION**

I-1

*5'-5.5'*

**ICE CHEST NO.**

**SHIPPED TO**

Waste Sampling & Characterization

**MATRIX\***

- A=Air
- DL=Drum Liquids
- DS=Drum Solids
- L=Liquid
- O=Oil
- S=Soil
- SE=Sediment
- T=Tissue
- V=Vegetation
- 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 B1T6M1

**COMPANY CONTACT**

TRENT, SJ

**TELEPHONE NO.**

373-5869

**PROJECT COORDINATOR**

WIDRIG, DL

**PROJECT DESIGNATION**

BC Cribbs & Trenches - Geochemical Modeling and HRR Sampling

**SAF NO.**

F08-038

**FIELD LOGBOOK NO.**

*HNF-N-582-1*

**ACTUAL SAMPLE DEPTH**

**COA**

122727ES10

**PRICE CODE**

8N

**AIR QUALITY**

**DATA TURNAROUND**

45 Days / 45 Days

**METHOD OF SHIPMENT**

GOVERNMENT VEHICLE

**OFFSITE PROPERTY NO.**

N/A

**BILL OF LADING/AIR BILL NO.**

N/A

**PRESERVATION**

Cool-4C

**TYPE OF CONTAINER**

9G

**NO. OF CONTAINER(S)**

1

**VOLUME**

60mL

**SAMPLE ANALYSIS**

200.8 HG - ICPMS;

**SAMPLE NO.**

B1T677

*20080158*

**MATRIX\***

SOIL

**SAMPLE DATE**

*1-30-08*

**SAMPLE TIME**

*1025*

*W0806000758*

*626667*

**CHAIN OF POSSESSION**

**SIGN/ PRINT NAMES**

**SPECIAL INSTRUCTIONS**

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

**RELINQUISHED BY/REMOVED FROM**

*M. Kelly / Kim Wood*

**DATE/TIME**

*1-30-08 / 1530*

**RECEIVED BY/STORED IN**

**K Beebe**

*[Signature]*

**DATE/TIME**

*1/30/08 1532*

**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**

**ICED**

15 of 29

**COLLECTOR**

NCO Sampler *WESB*

**SAMPLING LOCATION**

I-2 *7.5' - 8'*

**ICE CHEST NO.**

**COMPANY CONTACT**

TRENT, SJ

**TELEPHONE NO.**

373-5869

**PROJECT COORDINATOR**

WIDRIG, DL

PRICE CODE 8N

DATA TURNAROUND

45 Days / 45 Days

**PROJECT DESIGNATION**

BC Cribbs & Trenches - Geochemical Modeling and HRR Sampling

**SAF NO.**

F08-038

AIR QUALITY

**FIELD LOGBOOK NO.**

*HNF-N-582-1*

**ACTUAL SAMPLE DEPTH**

**COA**

122727E510

**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=Vegetation  
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 to B1T6M2

**PRESERVATION**

Cool~4C

**TYPE OF CONTAINER**

8G

**NO. OF CONTAINER(S)**

1

**VOLUME**

60ml

**SAMPLE ANALYSIS**

200.8, HG -  
ICPMS;

**SAMPLE NO.**

B1T678

**MATRIX\***

SOIL

**SAMPLE DATE**

*1-30-08*

**SAMPLE TIME**

*1050*

**CHAIN OF POSSESSION**

**SIGN/ PRINT NAMES**

*62602*

**SPECIAL INSTRUCTIONS**

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

RELINQUISHED BY/REMOVED FROM

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

**LABORATORY SECTION**

RECEIVED BY

**TITLE**

DATE/TIME

**FINAL SAMPLE DISPOSITION**

DISPOSAL METHOD

**DISPOSED BY**

DATE/TIME

**ICED**

16 of 29

**COLLECTOR**

NCO Sampler *WDB*

**COMPANY CONTACT**

TRENT, SJ

**TELEPHONE NO.**

373-5869

**PROJECT COORDINATOR**

WIDRIG, DL

**PRICE CODE**

8N

**DATA TURNAROUND**

45 Days / 45 Days

**SAMPLING LOCATION**

I-3 *9.5' - 10'*

**PROJECT DESIGNATION**

BC Cribs & Trenches - Geochemical Modeling and HRR Sampling

**SAF NO.**

F08-038

**AIR QUALITY**

**ICE CHEST NO.**

**FIELD LOGBOOK NO.**

*HNF-N-582-1*

**ACTUAL SAMPLE DEPTH**

**COA**

122727E510

**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=Vegetation  
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 B1T6M3

**PRESERVATION**

Cool-4C

**TYPE OF CONTAINER**

2g

**NO. OF CONTAINER(S)**

1

**VOLUME**

60mL

**SAMPLE ANALYSIS**

200.8 HG -  
ICPMS

**SAMPLE NO.**

**MATRIX\***

**SAMPLE DATE**

**SAMPLE TIME**

B17679

SOIL

*1-30-08*

*1055*

*X*

*180*

**CHAIN OF POSSESSION**

**SIGN/ PRINT NAMES**

*026 004*

**SPECIAL INSTRUCTIONS**

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

**RELINQUISHED BY/REMOVED FROM**

**DATE/TIME**

*DW/MS/DM/MS 1-30-08*

*1530*

**RECEIVED BY/STORED IN**

**DATE/TIME**

*K Beebe*

*1-30-08 1530*

**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**

**ICED**

17 of 29

<b>COLLECTOR</b> NCO Sampler	<b>COMPANY CONTACT</b> TRENT, SJ	<b>TELEPHONE NO.</b> 373-5869	<b>PROJECT COORDINATOR</b> WIDRIG, DL	<b>PRICE CODE</b> 8N	<b>DATA TURNAROUND</b> 45 Days / 45 Days
<b>SAMPLING LOCATION</b> I-4	<b>PROJECT DESIGNATION</b> BC Cribs & Trenches - Geochemical Modeling and HRR Sampling	<b>SAF NO.</b> F08-038	<b>AIR QUALITY</b> <input type="checkbox"/>	<b>METHOD OF SHIPMENT</b> GOVERNMENT VEHICLE	
<b>ICE CHEST NO.</b>	<b>FIELD LOGBOOK NO.</b> HNF-N-582-1	<b>ACTUAL SAMPLE DEPTH</b>	<b>COA</b> 122727ES10	<b>BILL OF LADING/AIR BILL NO.</b> N/A	
<b>SHIPPED TO</b> Waste Sampling & Characterization	<b>OFFSITE PROPERTY NO.</b> N/A				

**MATRIX\***  
A=Air  
DL=Drum  
Liquids  
DS=Drum  
Solids  
L=Liquid  
O=Oil  
S=Soil  
SE=Sediment  
T=Tissue  
V=Vegetation  
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 B1T6M4

**PRESERVATION**  
Cool-4C

**TYPE OF CONTAINER**  
aG

**NO. OF CONTAINER(S)**  
1

**VOLUME**  
60mL

**SAMPLE ANALYSIS**  
200.B\_HG -  
ICPMS;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME							
B1T680	SOIL	1-30-08	1500	-						
(8)										

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM D WEISS/Neil Will	RECEIVED BY/STORED IN K Beebe	** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
DATE/TIME 1-30-08/1530	DATE/TIME 1/30/08/1530	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	

**ICED**

18 of 29

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

COLLECTOR: NCO Sampler *D. WEBB*  
 COMPANY CONTACT: TRENT, SJ  
 TELEPHONE NO.: 373-5869  
 PROJECT COORDINATOR: WIDRIG, DL  
 PRICE CODE: SN  
 DATA TURNAROUND: 45 Days / 45 Days  
 SAMPLING LOCATION: I-5 *14.5' - 15'*  
 PROJECT DESIGNATION: BC Cribbs & Trenches - Geochemical Modeling and HRR Sampling  
 SAF NO.: F08-038  
 AIR QUALITY:   
 ICE CHEST NO.:  
 FIELD LOGBOOK NO.: *HNF-N-582-1*  
 ACTUAL SAMPLE DEPTH:  
 COA: 122727ES10  
 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=Vegetation  
 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 B1T6M5

PRESERVATION: Cool~4C  
 TYPE OF CONTAINER: aG  
 NO. OF CONTAINER(S): 1  
 VOLUME: 60ml  
 SAMPLE ANALYSIS: 200.8\_HG - ICPMS;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B1T681	SOIL	<i>1-30-08</i>	<i>1310</i>	<i>✓</i>										

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM <i>D. WEBB / New Webb</i>	RECEIVED BY/STORED IN <i>K Beebe</i>	** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	

**ICED**

19 of 29

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

**COLLECTOR**

NCO Sampler

*WEBB*

**COMPANY CONTACT**

TRENT, SJ

**TELEPHONE NO.**

373-5869

**PROJECT COORDINATOR**

WIDRIG, DL

**PRICE CODE**

BN

**DATA TURNAROUND**

45 Days / 45 Days

**SAMPLING LOCATION**

I-6

*17.5' - 18'*

**PROJECT DESIGNATION**

BC Cribs & Trenches - Geochemical Modeling and HRR Sampling

**SAF NO.**

F08-038

**AIR QUALITY**

**ICE CHEST NO.**

**FIELD LOGBOOK NO.**

**ACTUAL SAMPLE DEPTH**

**COA**

**METHOD OF SHIPMENT**

**SHIPPED TO**

Waste Sampling & Characterization

*HNF-N-582-1*

**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=Vegetation
- W=Water
- WL=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)

**PRESERVATION**

Cool--4C

**TYPE OF CONTAINER**

3G

**NO. OF CONTAINER(S)**

1

**VOLUME**

60mL

**SPECIAL HANDLING AND/OR STORAGE**

Radioactive tie to B1T6M6

**SAMPLE ANALYSIS**

200.8 HG - ICPMS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B1T682	SOIL	<i>1-30-05</i>	<i>1325</i>	<input checked="" type="checkbox"/>										
<i>183</i>														

**CHAIN OF POSSESSION**

**SIGN/ PRINT NAMES**

**SPECIAL INSTRUCTIONS**

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

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

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

**ICED**

**COLLECTOR**

NCO Sampler

*WAB*

**SAMPLING LOCATION**

1-7-D

*19.5' - 20'*

**ICE CHEST NO.**

**COMPANY CONTACT**

TRENT, SJ

**TELEPHONE NO.**

373-5869

**PROJECT COORDINATOR**

WDRIG, DL

**PRICE CODE**

8N

**DATA TURNAROUND**

45 Days / 45 Days

**PROJECT DESIGNATION**

BC Cribs & Trenches - Geochemical Modeling and HRR Sampling

**SAF NO.**

F08-038

**AIR QUALITY**

**FIELD LOGBOOK NO.**

*HNF-N-582-1*

**ACTUAL SAMPLE DEPTH**

**COA**

122727ES10

**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=Vegetation
- 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 B1T6M7

**PRESERVATION**

Cool-4C

**TYPE OF CONTAINER**

8G

**NO. OF CONTAINER(S)**

1

**VOLUME**

60ml

**SAMPLE ANALYSIS**

200.0 HG - ICMS;

**SAMPLE NO.**

B1T683

**MATRIX\***

SOIL

*184*

**SAMPLE DATE**

*1-30-08*

**SAMPLE TIME**

*1330*

*X*

**CHAIN OF POSSESSION**

**RELINQUISHED BY/REMOVED FROM**

*Dr WAB/Kim W White*

**DATE/TIME**

*1-30-08 / 1530*

**SIGN/ PRINT NAMES**

*020.044*

**RECEIVED BY/STORED IN**

**K Beebe**

**DATE/TIME**

*1/30/08 1530*

**SPECIAL INSTRUCTIONS**

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

**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**

**ICED**

COLLECTOR

NCO Sampler

Woss

SAMPLING LOCATION

I-B

225' - 23'

ICE CHEST NO.

SHIPPED TO

Waste Sampling & Characterization

MATRIX\*

A=Air  
DL=Drum  
Liquids  
DS=Drum  
Solids  
L=Liquid  
O=Oil  
S=Soil  
SE=Sediment  
T=Tissue  
V=Vegetation  
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 B1T6M7

COMPANY CONTACT

TRENT, SJ

TELEPHONE NO.

373-5869

PROJECT COORDINATOR

WIDRIG, DL

PRICE CODE

8N

DATA TURNAROUND

45 Days / 45 Days

PROJECT DESIGNATION

BC Cribs & Trenches - Geochemical Modeling and HRR Sampling

SAF NO.

F08-038

AIR QUALITY

FIELD LOGBOOK NO.

HNF-N-582-1

ACTUAL SAMPLE DEPTH

COA

122727ES10

METHOD OF SHIPMENT

GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.

N/A

BILL OF LADING/AIR BILL NO.

N/A

PRESERVATION

Cool~4C

TYPE OF CONTAINER

3G

NO. OF CONTAINER(S)

1

VOLUME

60mL

SAMPLE ANALYSIS

200.8 HG - ICPS;

SAMPLE NO.

B1T684

MATRIX\*

SOIL

1485

SAMPLE DATE

1-30-08

SAMPLE TIME

1430

X

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM

Woss / W. W. W. 1-30-08 / 1530

DATE/TIME

DATE/TIME

SIGN/ PRINT NAMES

RECEIVED BY/STORER IN

K Beebe

RECEIVED BY/STORED IN

026004

DATE/TIME

1/30/08 1530

SPECIAL INSTRUCTIONS

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

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

ICED

22 of 29

COLLECTOR: NCO Sampler *WENT*  
 COMPANY CONTACT: TRENT, SJ  
 TELEPHONE NO.: 373-5869  
 PROJECT COORDINATOR: WIDRIG, DL  
 PRICE CODE: 8N  
 DATA TURNAROUND: 45 Days / 45 Days  
 SAMPLING LOCATION: I-9 *25'-25.5'*  
 PROJECT DESIGNATION: BC Crips & Trenches - Geochemical Modeling and HRR Sampling  
 SAF NO.: F08-038  
 AIR QUALITY:   
 ICE CHEST NO.:  
 FIELD LOGBOOK NO.: *HNF-N-582-1*  
 ACTUAL SAMPLE DEPTH:  
 COA: 122727ES10  
 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=Vegetation  
 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 B1T6M7

**PRESERVATION** Cool~4C  
**TYPE OF CONTAINER** aG  
**NO. OF CONTAINER(S)** 1  
**VOLUME** 60ml  
**SAMPLE ANALYSIS** 200.8\_HG - ICPMS;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B1T685	SOIL	1-30-08	1440	X										

**CHAIN OF POSSESSION**

RELINQUISHED BY/REMOVED FROM: *Don Widrig/Removal Unit* DATE/TIME: 1-30-08 / 1530  
 RECEIVED BY/STORED IN: **K Beebe** DATE/TIME: 1/30/08 1530  
 SPECIAL INSTRUCTIONS: \*\* The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

RELINQUISHED BY/REMOVED FROM: DATE/TIME: RECEIVED BY/STORED IN: DATE/TIME:

**ICED**

LABORATORY SECTION: RECEIVED BY: TITLE: DATE/TIME:

FINAL SAMPLE DISPOSITION: DISPOSAL METHOD: DISPOSED BY: DATE/TIME:

23 of 29

**COLLECTOR**

NCO Sampler

*WGB*

**SAMPLING LOCATION**

I-10

*27' - 27.5'*

**ICE CHEST NO.**

**SHIPPED TO**

Waste Sampling & Characterization

**MATRIX\***

A=Air  
DL=Drum  
Liquids  
DS=Drum  
Solids  
L=Liquid  
O=Oil  
S=Soil  
SE=Sediment  
T=Tissue  
V=Vegetation  
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 BIT6M7

**COMPANY CONTACT**

TRENT, SJ

**TELEPHONE NO.**

373-5869

**PROJECT COORDINATOR**

WIDRIG, DL

**PRICE CODE**

8N

**DATA TURNAROUND**

45 Days / 45 days

**PROJECT DESIGNATION**

BC Cribbs & Trenches - Geochemical Modeling and HRR Sampling

**SAF NO.**

F08-038

**AIR QUALITY**

**FIELD LOGBOOK NO.**

*HNF-N-582-1*

**ACTUAL SAMPLE DEPTH**

**COA**

122727ES10

**METHOD OF SHIPMENT**

GOVERNMENT VEHICLE

**OFFSITE PROPERTY NO.**

N/A

**BILL OF LADING/AIR BILL NO.**

N/A

**PRESERVATION**

Cool-4C

**TYPE OF CONTAINER**

aG

**NO. OF CONTAINER(S)**

1

**VOLUME**

60mL

**SAMPLE ANALYSIS**

200.8\_HG - ICPMS;

**SAMPLE NO.**

**MATRIX\***

BIT686

SOIL

*187*

**SAMPLE DATE**

**SAMPLE TIME**

*1-30-08*

*1450*

*X*

**CHAIN OF POSSESSION**

RELINQUISHED BY/REMOVED FROM

DATE/TIME

*Dennis B. Smith*

*1-30-08 1530*

RELINQUISHED BY/REMOVED FROM

DATE/TIME

**SIGN/ PRINT NAMES**

RECEIVED BY/STORED IN

**K Beebe**

DATE/TIME

*1/30/08 1530*

RECEIVED BY/STORED IN

DATE/TIME

**SPECIAL INSTRUCTIONS**

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

**ICED**

**LABORATORY SECTION**

RECEIVED BY

TITLE

DATE/TIME

**FINAL SAMPLE DISPOSITION**

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

**COLLECTOR**

NCO Sampler *WJB*

**SAMPLING LOCATION**

I-11 *29.5' - 30'*

**ICE CHEST NO.**

**SHIPPED TO**

Waste Sampling & Characterization

**MATRIX\***

- A=Air
- DL=Drum
- Liquids
- DS=Drum
- Solids
- L=Liquid
- O=Oil
- S=Soil
- SE=Sediment
- T=Tissue
- V=Vegetation
- 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 B1T6M7

**COMPANY CONTACT**

TRENT, SJ

**TELEPHONE NO.**

373-5869

**PROJECT COORDINATOR**

WIDRIG, DL

**PRICE CODE**

8N

**DATA TURNAROUND**

45 Days / 45 Days

**PROJECT DESIGNATION**

BC Cribbs & Trenches - Geochemical Modeling and HRR Sampling

**FIELD LOGBOOK NO.**

*HNF-N-582-1*

**OFFSITE PROPERTY NO.**

N/A

**ACTUAL SAMPLE DEPTH**

**SAF NO.**

F08-038

**AIR QUALITY**

**METHOD OF SHIPMENT**

GOVERNMENT VEHICLE

**COA**

122727ES10

**BILL OF LADING/AIR BILL NO.**

N/A

**PRESERVATION**

Cool~4C

**TYPE OF CONTAINER**

aG

**NO. OF CONTAINER(S)**

1

**VOLUME**

60mL

**SAMPLE ANALYSIS**

200.8\_HG - ICMS;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B1T687 <i>158</i>	SOIL	<i>1-30-08</i>	<i>1500</i>	<i>X</i>										

**CHAIN OF POSSESSION**

RELINQUISHED BY/ REMOVED FROM

*DLW WJB/SJ / Date w/ with*

DATE/TIME

*1-30-08 / 1530*

**SIGN/ PRINT NAMES**

RECEIVED BY/ STORED IN

**K Beebe** *[Signature]*

DATE/TIME

*1/30/08 1530*

**SPECIAL INSTRUCTIONS**

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

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

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

**ICED**

25 of 29

<b>COLLECTOR</b> NCO Sampler <i>WFB</i>	<b>COMPANY CONTACT</b> TRENT, SJ	<b>TELEPHONE NO.</b> 373-5869	<b>PROJECT COORDINATOR</b> WIDRIG, DL	<b>PRICE CODE</b> 8N	<b>DATA TURNAROUND</b> 45 Days / 45 Days
<b>SAMPLING LOCATION</b> I-7-D <i>19.5' - 20'</i>	<b>PROJECT DESIGNATION</b> BC Cribbs & Trenches - Geochemical Modeling and HRR Sampling		<b>SAF NO.</b> F08-038	<b>AIR QUALITY</b> <input type="checkbox"/>	
<b>ICE CHEST NO.</b>	<b>FIELD LOGBOOK NO.</b> <i>HNF N-5821</i>	<b>ACTUAL SAMPLE DEPTH</b>	<b>COA</b> 122727ES10	<b>METHOD OF SHIPMENT</b> GOVERNMENT VEHICLE	
<b>SHIPPED TO</b> Waste Sampling & Characterization	<b>OFFSITE PROPERTY NO.</b> N/A		<b>BILL OF LADING/AIR BILL NO.</b> N/A		

<b>MATRIX*</b> A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	<b>POSSIBLE SAMPLE HAZARDS/ REMARKS</b> 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)	<b>PRESERVATION</b> Cool-4C							
		<b>TYPE OF CONTAINER</b> G							
		<b>NO. OF CONTAINER(S)</b> 1							
		<b>VOLUME</b> 60ml							
	<b>SPECIAL HANDLING AND/OR STORAGE</b> Radioactive tie to B1T6M7	<b>SAMPLE ANALYSIS</b> 200.8 Hg - ICPMS;							

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B1T730	SOIL	<i>1/30/08</i>	<i>1332</i>	<i>✓</i>					

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
<i>D. WEAVER / [Signature]</i>	<i>1/30/08</i>	<b>K Beebe</b> <i>[Signature]</i>	<i>1/30/08 (S3C)</i>
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
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**  
\*\* The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

**ICED**

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

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M4W41-SLF-08-482

ATTACHMENT 5

**MEMO FROM DL WIDRIG RE BC-CRIBS MERCURY SAMPLES**

Consisting of 3 pages  
Including cover page

**Mix, Pauline D**

---

**From:** Widrig, Dana L  
**Sent:** Thursday, May 01, 2008 10:54 AM  
**To:** Mix, Pauline D; Trent, Stephen J  
**Cc:** Sumner, Laine C; Ayres, Doris E  
**Subject:** RE: BC-Cribs Mercury Samples - How about samples from WSCF20080334 (SAF# F08-038)

Pauline,

We do not need Mercury analysis on those samples. You can dispose of those also.

Thanks,

Dana

---

**From:** Mix, Pauline D  
**Sent:** Thursday, May 01, 2008 10:37 AM  
**To:** Widrig, Dana L  
**Cc:** Gent, Philip M; Benecke, Mark W; Trent, Stephen J; Dale, Troy F; Frazier, Teresa A; Beebe, Kevin L; Sims, Vic T  
**Subject:** RE: BC-Cribs Mercury Samples - How about samples from WSCF20080334 (SAF# F08-038)

Dana

How about samples from WSCF20080334 (B1T6K9, B1T6L1, B1T6L2, B1T6L3, B1T6L4)?

*Pauline D. Mix*  
WSCF Client Services  
Phone 372-1488  
Cell 947-0751  
FAX 372-0456  
MSIN S3-30  
[Pauline\\_D\\_Mix@rl.gov](mailto:Pauline_D_Mix@rl.gov)

---

**From:** Widrig, Dana L  
**Sent:** Thursday, May 01, 2008 10:22 AM  
**To:** Mix, Pauline D; Dale, Troy F  
**Cc:** Gent, Philip M; Benecke, Mark W; Trent, Stephen J  
**Subject:** BC-Cribs Mercury Samples

Troy and Pauline,

Sample B1T730 in SDG WSCF20080158 can now be analyzed for Mercury on SAF F08-038. All other samples that you have received to date for this SAF for Mercury can be marked for disposal. You should start receiving samples for Mercury for this SAF soon. Proceed with processing these samples as normal. If you have any questions let me know.

Thanks,

Dana L. Widrig  
Sample Management Project Coordinator  
Fluor Hanford - Soil & Groundwater Remediation Project  
Ph: (509) 376-2858  
Cell: (509) 392-2297