

SEPTEMBER 29, 2011

0101022

**FINAL REPORT FOR THE SAMPLES RECEIVED IN  
AUGUST, 2011, FOR SAF F11-057**

**Document No.: 20111496 Rev.0  
SDG: 222S20111496**

**Gerald P. Ritenour**  
Advanced Technologies and Laboratories International, Inc.

**Date Published**  
September 29, 2011

Prepared for:

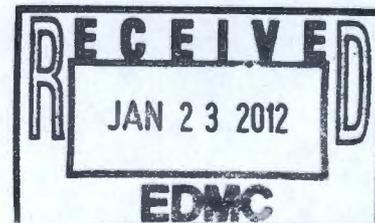
Prepared by:



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*G. P. Ritenour* 9-29-2011  
G. P. Ritenour, Project Manager



**222-S LABORATORY**

**FINAL REPORT FOR THE SAMPLES RECEIVED IN SEPTEMBER, 2011,  
FOR SAF F11-146**

**1.0 INTRODUCTION**

This final report presents the result for the one water sample taken on August 5, 2011. The sample was analyzed in accordance with Sampling Authorization Form (SAF) F11-146 and ATL-MP-1011; *ATL Quality Assurance Project Plan for 222-S Laboratory (QAPP)*. The following attachments are included in this report.

- Attachment 1 Data Summary Report
- Attachment 2 Holding Time Report
- Attachment 3 Receipt Paperwork

**2.0 SAMPLE RECEIPT AND HANDLING**

The sample was received on September 21, 2011, in good condition and with adequate paperwork.

**3.0 ANALYTICAL RESULTS SUMMARY**

The Data Summary Report (Attachment 1) present the final analytical results for those analytes requested in the SAF. The "Det Limit" column in Attachment 1 contains the method detection limit (MDL) for non-radionuclide analyses.

In Attachment 1, the column labeled "A#" indicates the aliquot class or the method used for sample preparation before analysis. For analysis without a preparation step, this column is left blank.

Manual calculations using rounded results from the Data Summary Report or result calculation forms may differ slightly from the actual results derived from the raw data.

**4.0 CYANIDE**

The cyanide analysis by distillation and spectrophotometry was performed on this sample. The SW-846 holding time of 14 days was not met, since sample had all ready exceeded its holding time by 33 days before being received at 222S on September 21, 2011. All QC requirements of the laboratory QAPP were met.

**5.0 PROCEDURES**

Table 1 lists the analytical procedure used for analysis of this sample.

**Table 1. Analytical Procedures.**

Analysis	Preparation Method	Analysis Procedure
Cyanide	LA-695-102 Rev. M-0 SW-846 9010C	LA-695-102 Rev. M-0 SW-846 9014

**6.0 REFERENCES**

ATL-MP-1011, 2011, *ATL Quality Assurance Project Plan for 222-S Laboratory*, Rev. 10-A, Applied Technologies and Laboratories International, Inc., Richland, Washington.

Sampling Authorization Form F11-056; September 2011– F11-146, 2011, CH2M Hill, Plateau Remediation Company, Richland, Washington.

SW-846, 1986, *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*, Third Edition, as amended, U.S. Environmental Protection Agency, Washington, D.C.

SEPTEMBER 29, 2011

Attachment 1

DATA SUMMARY REPORT

WSCF Diversion 2011-09  
Data Summary Report

Sample Group: 20111496

Customer Group or SDG Number: 222S20111496

Customer Sample ID: B2C7W7

Customer Sample ID: B2C7W7

Sample#	R	A#	CAS #	Analyte	Unit	STD %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Cnt Err %	Qual Flags
S11M000516			57-12-5	Cyanide	ug/g	93.9	<0.0370	<0.480	n/a	n/a	n/a	n/a	0.480	n/a	U

NA = Not Analyzed, ND = Not Detected

U - < Det Limit

WSCF Diversion 2011-09  
Data Summary Report

Sample Group: 20111496

Customer Group or SDG Number: 222S20111496

Customer Sample ID: B2C7W8

Customer Sample ID: B2C7W8

Sample#	R	A#	CAS #	Analyte	Unit	STD %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Cnt Err %	Qual Flags
S11M000517			57-12-5	Cyanide	ug/g	93.9	<0.0370	<0.480	n/a	n/a	n/a	n/a	0.480	n/a	U

NA = Not Analyzed, ND = Not Detected

U - < Det Limit

WSCF Diversion 2011-09  
Data Summary Report

Sample Group: 20111496

Customer Group or SDG Number: 222S20111496

Customer Sample ID: B2CKW6

Customer Sample ID: B2CKW6

Sample#	R	A#	CAS #	Analyte	Unit	STD %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Cnt Err %	Qual Flags
S11M000518			57-12-5	Cyanide	ug/g	93.9	<0.0370	<0.480	n/a	n/a	n/a	n/a	0.480	n/a	U

NA = Not Analyzed, ND = Not Detected

U - < Det Limit

WSCF Diversion 2011-09  
Data Summary Report

Sample Group: 20111496

Customer Group or SDG Number: 222S20111496

Customer Sample ID: B2CKW7

Customer Sample ID: B2CKW7

Sample#	R	A#	CAS #	Analyte	Unit	STD %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Cnt Err %	Qual Flags
S11M000519			57-12-5	Cyanide	ug/g	93.9	<0.0370	<0.480	n/a	n/a	n/a	n/a	0.480	n/a	U

NA = Not Analyzed, ND = Not Detected

U - < Det Limit

SEPTEMBER 29, 2011

Attachment 2

HOLDING TIME REPORT

**Hold Time Report**

**20111496**

<b>Holding Time</b>	<b>Sample Group</b>	<b>Sample</b>	<b>Matrix</b>	<b>Method</b>	<b>Prep Method</b>	<b>Sample Date</b>	<b>Received Date</b>	<b>Analysis Date</b>	<b>Missed Holding Time</b>	<b>Hold Time Days/Hr Remaining</b>
9/14/2011	20111496	S11M000516	SOLID	CN - EDTA	DIST	08/31/11 08:44	09/21/11 10:20	09/22/11 15:00	Y	-8
9/15/2011	20111496	S11M000517	SOLID	CN - EDTA	DIST	09/01/11 09:06	09/21/11 10:20	09/22/11 15:00	Y	-7
9/22/2011	20111496	S11M000518	SOLID	CN - EDTA	DIST	09/08/11 12:37	09/21/11 10:20	09/22/11 15:00	N	0
9/27/2011	20111496	S11M000519	SOLID	CN - EDTA	DIST	09/13/11 12:17	09/21/11 10:20	09/22/11 15:00	N	5

09/28/2011 08:04

holdtimereport 2.7.29

MissedHoldTimexls v 2.7.29

SEPTEMBER 29, 2011

Attachment 3

RECEIPT PAPERWORK

SEPTEMBER 29, 2011

<b>ATL</b>	<b>SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST</b>	LO-090-101 Rev <u>E.E.C</u>
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Date Samples Received: 9-21-11 Group #: 20111496 4, CN  
 Number of Samples: 5, Se. L 1, X4 water SAF F11-057  
 Sample Custodian: RTT

**Sample Custodian to Complete:**

Action	Yes	No	N/A	Comments
RSA/COC provided?	✓			
RSR provided?	✓			
Verify GKI is complete	✓			<input type="checkbox"/> In Project File <u>ON FILE</u>
Check that outer custody seal is intact, if present			-	
Record cooler temperature in centigrade, as appropriate				<input type="checkbox"/> Check if no cooler and/or no ice
Samples are intact and in good condition	✓			If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:				
• Client name and client sample number	✓			
• Date and time of sampling	✓			
• Sampling location or origin	✓			
• Container type, size, and number	✓			
• Preservatives (if used) are noted on the COC/RSA and sample bottle	✓			
• Analysis request is clear	✓			
• Signature of persons relinquishing and receiving samples	✓			
• Date and/or time of sample custody exchange	✓			
Verify that sample numbers on containers match the COC and/or RSA	✓			
Samples stored properly (e.g., refrigeration)	✓			

Notify the PM immediately if any problems are noted. (Any "No" checked requires Project Manager resolution.)

**PM to Complete:**

Samples acceptable for release? yes PM Initials RTT Date 9-21-11  
 If No, comment on communication and resolution: per GPR

Other Comments:

COLLECTOR  
*Rosanne Rust Becan*  
SAMPLING LOCATION

C8189 (199-N-187); I-025  
ICE CHEST NO.

SHIPPED TO *9/21/11 mmg*  
~~Waste Sampling & Characterization~~ *222-S*

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

**POSSIBLE SAMPLE HAZARDS/ REMARKS**  
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

**SPECIAL HANDLING AND/OR STORAGE**

COMPANY CONTACT  
RADLOFF, AW  
TELEPHONE NO.  
376-4554

PROJECT DESIGNATION  
100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment

FIELD LOGBOOK NO.  
*INF-N-503-2 pg 116*

ACTUAL SAMPLE DEPTH  
*82.0 84.5*

OFFSITE PROPERTY NO.  
N/A

PROJECT COORDINATOR  
RADLOFF, AW

SAF NO.  
F11-057

COA  
300104E510

BILL OF LADING/AIR BILL NO.  
N/A

PRICE CODE  
8C

AIR QUALITY

METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

DATA  
Data Turnaround  
15 Days / 15 Days

ORIGINAL

PRESERVATION	HOLDING TIME	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
Cool~4C	14 Days	G	1	250mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
Cool~4C	14/40 Days	aG	1	250mL	Sem-VOA 8270 (TCL 100 Area RI/FS);
Cool~4C	14/40 Days	aG	1	250mL	SEE ITEM (2) IN SPECIAL INSTRUCTIONS
Cool~4C	14 Days	G	1	120mL	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
None	6 Months	G/P	1	250mL	SEE ITEM (4) IN SPECIAL INSTRUCTIONS
Cool~4C	30 Days	G/P	1	120mL	Chromium Hex - 7196;
Cool~4C	1 yr/1 yr	aG	1	250mL	PCBs - 8082 (100 Area RI/FS);
Cool~4C	28 Days/48 Hours	aG	1	250mL	SEE ITEM (5) IN SPECIAL INSTRUCTIONS
None	6 Months	P	1	500mL	SEE ITEM (6) IN SPECIAL INSTRUCTIONS
None	6 Months	G/P	1	120mL	SEE ITEM (7) IN SPECIAL INSTRUCTIONS

SAMPLE NO. *113059*  
B2C7W7 1 SOIL

MATRIX\*

SAMPLE DATE *8-31-11* SAMPLE TIME *0844*

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM  
*Larry Reaves Terry Rosene* 8/31/11 1335

RELINQUISHED BY/REMOVED FROM  
*Don Brotherton* 9/21/11 1000

RELINQUISHED BY/REMOVED FROM  
**DON BROTHERTON / CHPRC** 9/21/11 1020

RELINQUISHED BY/REMOVED FROM

RELINQUISHED BY/REMOVED FROM

RELINQUISHED BY/REMOVED FROM

RELINQUISHED BY/REMOVED FROM

SIGN/ PRINT NAMES

RECEIVED BY/STORED IN  
*M. Nelson* 8/31/11 1335

RECEIVED BY/STORED IN  
**DON BROTHERTON / CHPRC** 9/21/11 1000

RECEIVED BY/STORED IN  
*RT Steele* 9/21/11 1020

RECEIVED BY/STORED IN

RECEIVED BY/STORED IN

RECEIVED BY/STORED IN

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

*222S*  
*CRPT# 20111496*  
*SAM# S11M000516*  
*3°C*  
*Revised*  
*9-21-11*

LABORATORY SECTION

RECEIVED BY

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME

SEPTEMBER 29, 2011

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-057-089 ~A

PAGE 2 OF 3

COLLECTOR

*Rosanne Rust Bacon*

COMPANY CONTACT

RADLOFF, AW

TELEPHONE NO.

376-4554

PROJECT COORDINATOR

RADLOFF, AW

PRICE CODE 8C

Data Turnaround  
15 Days / 15 Days

SAMPLING LOCATION

C8189 (199-N-187); I-025

PROJECT DESIGNATION

100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment

SAF NO.

F11-057

AIR QUALITY

ICE CHEST NO.

FIELD LOGBOOK NO.

*RI-100-503-2 19 116*

ACTUAL SAMPLE DEPTH

*82.0 - 84.5*

COA

300104ES10

METHOD OF SHIPMENT

GOVERNMENT VEHICLE

ORIGINAL

SHIPPED TO

*9/29/11 mmc*  
~~Waste Sampling & Characterization~~ *222-S*

OFFSITE PROPERTY NO.

N/A

BILL OF LADING/AIR BILL NO.

N/A

SPECIAL INSTRUCTIONS

\*\* The CACN for all analytical work at WSCF laboratory is 402057ES20.  \*\* The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

- (1) Alcohols, Glycols, & Ketones - 8015 {1,2-Propanediol, Diethyl ether, Ethanol, Ethyl acetate, Ethylene glycol, Methanol};
- (2) TPH-DieselKerosene Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range};
- (3) TPH-Gasoline Range - WTPH-G {Total petroleum hydrocarbons - gasoline range};
- (4) ICP/MS - 200.8 (100 Area RI/FS); ICP/MS - 200.8 (Add-on 100 Area RI/FS) {Uranium}; ICP Metals - 6010 (100 Area RI/FS); 200.8\_HG - ICPMS {Mercury};
- (5) ~~IC Anions - 300.0 (100 Area RI/FS);~~ Cyanide (Total) - SM4500 {Cyanide};
- (6) Gamma Spectroscopy (100 Area RI/FS); Gamma Spec - Add-on (100 Area RI/FS) {Niobium-94, Silver-108 metastable}; Strontium-89,90 -- Total Sr;
- (7) Americium-241/Curium-244 {Americium-241}; Americium-241/Curium-244 (Add-on) {Curium-243};

SEPTEMBER 29, 2011

F11-057-089 -A

**COLLECTOR**  
*Rosanne Rust Becan*  
**SAMPLING LOCATION**  
 C8189 (199-N-187); I-025  
**ICE CHEST NO.**

**COMPANY CONTACT**  
 RADLOFF, AW  
**TELEPHONE NO.**  
 376-4554  
**PROJECT DESIGNATION**  
 100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment  
**FIELD LOGBOOK NO.**  
 HINTF-11 503-2 P9116 82.0 - 84.5  
**ACTUAL SAMPLE DEPTH**  
**OFFSITE PROPERTY NO.**  
 N/A

**PROJECT COORDINATOR**  
 RADLOFF, AW  
**PRICE CODE**  
 8C  
**SAF NO.**  
 F11-057  
**AIR QUALITY**  
  
**COA**  
 300104ES10  
**METHOD OF SHIPMENT**  
 GOVERNMENT VEHICLE  
**BILL OF LADING/AIR BILL NO.**  
 N/A

**DATA**  
 Data Turnaround  
 15 Days / 15 Days

**ORIGINAL**

**SHIPPED TO** *DOB 6-21-11*  
~~Waste Sampling & Characterization~~ *222.5*

**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 may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

<b>PRESERVATION</b>	None	None
<b>HOLDING TIME</b>	6 Months	6 Months
<b>TYPE OF CONTAINER</b>	G/P	<i>NA</i>
<b>NO. OF CONTAINER(S)</b>	1	<i>DOB 9-21-11</i>
<b>VOLUME</b>	120mL	120mL
<b>SAMPLE ANALYSIS</b>	SEE ITEM (8) IN SPECIAL INSTRUCTIONS	SEE ITEM (9) IN SPECIAL INSTRUCTIONS

**SPECIAL HANDLING AND/OR STORAGE**

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B2C7W7	SOIL	8-31-11	0:8:44

**CHAIN OF POSSESSION**

RELINQUISHED BY/REMOVED FROM	DATE/TIME
<i>Larry Rosanne - Tracy Rosanne</i>	<i>8-31-11/1235</i>
<i>A. Q. Beards</i>	<i>9/2/11 1000</i>
RELINQUISHED BY/REMOVED FROM	DATE/TIME

**SIGN/ PRINT NAMES**

RECEIVED BY/STORED IN	DATE/TIME
<i>M. Nelson</i>	<i>8/31/11 1035</i>
<i>R. K. ...</i>	<i>9-21-11 1020</i>
RECEIVED BY/STORED IN	DATE/TIME

**SPECIAL INSTRUCTIONS**

\*\* The CACN for all analytical work at WSCF laboratory is 402057ES20.  \*\* The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.  
 (8) Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238};  
 (9) Isotopic Plutonium {Plutonium-238, Plutonium-239/240};  
 Technetium-99;

*3°C  
 filled  
 9-21-11*

**LABORATORY SECTION** RECEIVED BY  
**FINAL SAMPLE DISPOSITION** DISPOSAL METHOD

**TITLE** DATE/TIME  
**DISPOSED BY** DATE/TIME

SEPTEMBER 29, 2011

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-057-096 ~4

PAGE 1 OF 3

COLLECTOR  
*Larry Rest Christenson*

COMPANY CONTACT  
RADLOFF, AW  
TELEPHONE NO.  
376-4554  
PROJECT DESIGNATION  
100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment

PROJECT COORDINATOR  
RADLOFF, AW  
SAF NO.  
F11-057

PRICE CODE  
8C  
AIR QUALITY

Data Turnaround  
15 Days / 15 Days

SAMPLING LOCATION  
C8189 (199-N-187); I-026  
ICE CHEST NO.

FIELD LOGBOOK NO.  
HNF-N-503-2 pg 117 37.6 90.1  
ACTUAL SAMPLE DEPTH  
OFFSITE PROPERTY NO.  
N/A

COA  
300104E510

METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

ORIGINAL

SHIPPED TO *9-21-11 mmB*  
Waste Sampling & Characterization *222-5*

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 may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

SAMPLE NO. *113078*  
B2C7W8 / SOIL  
MATRIX\*

PRESERVATION	COOL~4C	COOL~4C	COOL~4C	COOL~4C	None	None	COOL~4C	COOL~4C	COOL~4C	None
HOLDING TIME	14 Days	14/40 Days	14/40 Days	14 Days	14/40 Days	6 Months	30 Days	1 yr/1 yr	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G	aG	aG	G	aG	G/P	G/P	aG	aG	P
NO. OF CONTAINER(S)	1	1	1	1	0	1	1	1	1	1
VOLUME	250mL	250mL	250mL	120mL	0mL	250mL	120mL	250mL	250mL	500mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Sem-VOA 8270 (TCL 100 Area RI/FS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	PCBs - 8082 (100 Area RI/FS);	SEE ITEM (6) IN SPECIAL INSTRUCTIONS	SEE ITEM (7) IN SPECIAL INSTRUCTIONS

SAMPLE DATE	SAMPLE TIME
9-1-11	0906

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME
<i>Larry Rest</i>	<i>9-1-11/1505</i>
<i>TH ENAZI</i>	<i>9-21-11 1000</i>
<b>DON BROTHERTON/CHPRC</b>	<i>9-21-11 1020</i>
RELINQUISHED BY/REMOVED FROM	DATE/TIME

SIGN/ PRINT NAMES

RECEIVED BY/STORED IN	DATE/TIME
<i>[Signature]</i>	<i>9-1-11 1505</i>
<b>DON BROTHERTON/CHPRC</b>	<i>9-21-11 1000</i>
<i>[Signature]</i>	<i>9-21-11 1020</i>
RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS  
*2225 GRP# 20111496 SAM # 511M000517*  
*30c released 9-21-11*

LABORATORY SECTION RECEIVED BY  
FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE DATE/TIME  
DISPOSED BY DATE/TIME

SEPTEMBER 29, 2011

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-057-096 -A

PAGE 2 OF 3

COLLECTOR

*Rosanne Rust Christensen*

COMPANY CONTACT

RADLOFF, AW

TELEPHONE NO.

376-4554

PROJECT COORDINATOR

RADLOFF, AW

PRICE CODE 8C

Data Turnaround

15 Days / 15 Days

Days

SAMPLING LOCATION

C8189 (199-N-187); I-026

PROJECT DESIGNATION

100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment

SAF NO.

F11-057

AIR QUALITY

ICE CHEST NO.

FIELD LOGBOOK NO.

*INF-N-523-2 pg 117 87.6 40.1*

ACTUAL SAMPLE DEPTH

COA

300104ES10

METHOD OF SHIPMENT

GOVERNMENT VEHICLE

ORIGINAL

SHIPPED TO

*9-21-11 mmm*  
~~Waste Sampling & Characterization~~ *222-S*

OFFSITE PROPERTY NO.

N/A

BILL OF LADING/AIR BILL NO.

N/A

SPECIAL INSTRUCTIONS

\*\* The CACN for all analytical work at WSCF laboratory is 402057ES20. □ \*\* The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

- (1) Alcohols, Glycols, & Ketones - 8015 {1,2-Propanediol, Diethyl ether, Ethanol, Ethyl acetate, Ethylene glycol, Methanol};
- (2) TPH-DieselKerosene Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range};
- (3) TPH-Gasoline Range - WTPH-G {Total petroleum hydrocarbons - gasoline range};
- (4) Semi-VOA - 8270 (Add-On 100 Area RI/FS) {Cyclohexanone, n-Nitrosodimethylamine, Tributyl phosphate};
- (5) ICP/MS - 200.8 (100 Area RI/FS); ICP/MS - 200.8 (Add-on 100 Area RI/FS) {Uranium}; ICP Metals - 6010 (100 Area RI/FS); 200.8\_HG - ICPMS {Mercury};
- (6) ~~IC Anions - 300.8 (100 Area RI/FS);~~ Cyanide (Total) - SM4500 {Cyanide};
- (7) Gamma Spectroscopy (100 Area RI/FS); Gamma Spec - Add-on (100 Area RI/FS) {Niobium-94, Silver-108 metastable}; Strontium-89,90 -- Total Sr;

COLLECTOR  
*Rosanne Rust Christensen*

COMPANY CONTACT  
RADLOFF, AW

TELEPHONE NO.  
376-4554

PROJECT COORDINATOR  
RADLOFF, AW

PRICE CODE 8C  
AIR QUALITY

Data Turnaround  
15 Days / 15 Days

SAMPLING LOCATION  
C8189 (199-N-187); I-026

PROJECT DESIGNATION  
100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment

SAF NO.  
F11-057

FIELD LOGBOOK NO. HNF-N-503-2 pg 117  
ACTUAL SAMPLE DEPTH 87.6 90.1

COA  
300104E510

METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

ORIGINAL

SHIPPED TO *4-21-11 mm*  
~~Waste Sampling & Characterization~~ *222.5*

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 may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

	None	None	None
PRESERVATION	None	None	None
HOLDING TIME	6 Months	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1
VOLUME	120mL	120mL	120mL
SAMPLE ANALYSIS	SEE ITEM (8) IN SPECIAL INSTRUCTIONS	SEE ITEM (9) IN SPECIAL INSTRUCTIONS	SEE ITEM (10) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B2C7W8	SOIL	9-1-11	0900

*9/21/11*

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
<i>Harry Roscoe Jerry Roscoe</i>	<i>9-1-11/1500</i>	<i>SAF</i>	<i>9/21/11 1500</i>
<i>T. P. NAZIER</i>	<i>9-21-11 1000</i>	<b>DON BROTHERTON / CHPRC</b>	<i>9/21/11 1000</i>
<b>DON BROTHERTON / CHPRC</b>	<i>9-21-11</i>	<i>Robert R Steele ATC</i>	<i>9-21-11 1020</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

\*\* The CACN for all analytical work at WSCF laboratory is 402057ES20.  \*\* The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.  
(10) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Technetium-99;  
(8) Americium-241/Curium-244 {Americium-241}; Americium-241/Curium-244 (Add-on) {Curium-243};  
(9) Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238};

*300 Robert 9-21-11*

LABORATORY SECTION RECEIVED BY  
FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE DATE/TIME  
DISPOSED BY DATE/TIME

**COLLECTOR**  
Kauer Romo, Wallace  
**SAMPLING LOCATION**  
C8190 (199-N-188); I-020  
**ICE CHEST NO.**

**COMPANY CONTACT**  
RADLOFF, AW  
**TELEPHONE NO.**  
376-4554  
**PROJECT DESIGNATION**  
100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment  
**FIELD LOGBOOK NO.** 1937  
**ACTUAL SAMPLE DEPTH**  
75.7 FT  
**OFFSITE PROPERTY NO.**  
N/A

**PROJECT COORDINATOR**  
RADLOFF, AW  
**SAF NO.**  
F11-057  
**COA**  
300104ES10  
**BILL OF LADING/AIR BILL NO.**  
N/A

**PRICE CODE** 8C  
**AIR QUALITY**

**Data Turnaround**  
15 Days / 15 Days

**METHOD OF SHIPMENT**  
GOVERNMENT VEHICLE

**ORIGINAL**

**SHIPPED TO** DuB 9-21-11  
~~Waste Sampling & Characterization~~ 222-S

**MATRIX\***  
A=Air  
DL=Drum  
L=Liquids  
DS=Drum  
S=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 may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)  
**SPECIAL HANDLING AND/OR STORAGE**  
113136

PRESERVATION	Cool~4C	Cool~4C	None	None	None	Cool~4C	Cool~4C	Cool~4C	None	
HOLDING TIME	14 Days	14/40 Days	14/40 Days	14 Days	6 Months	30 Days	1 yr/1 yr	28 Days/48 Hours	6 Months	
TYPE OF CONTAINER	aGs	G	aG	aG	aGs	G/P	G/P	aG	aG	
NO. OF CONTAINER(S)	5	1	1	1	1	1	1	1	1	
VOLUME	40mL	250mL	250mL	250mL	40mL	250mL	120mL	250mL	250mL	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS	SEE ITEM (6) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	PCBs - 8082 (100 Area RI/FS);	SEE ITEM (7) IN SPECIAL INSTRUCTIONS	SEE ITEM (8) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B2CKW6	SOIL	9-8-11	1237

**CHAIN OF POSSESSION**

RELINQUISHED BY/REMOVED FROM  
Rob Romo, CHPRC  
DATE/TIME  
9-8-11 1410  
RELINQUISHED BY/REMOVED FROM  
TR 5172121  
DATE/TIME  
9-21-11 1000  
RELINQUISHED BY/REMOVED FROM  
DON BROTHERTON/CHPRC  
DATE/TIME  
9-21-11 1021  
RELINQUISHED BY/REMOVED FROM  
DATE/TIME  
RELINQUISHED BY/REMOVED FROM  
DATE/TIME  
RELINQUISHED BY/REMOVED FROM  
DATE/TIME  
RELINQUISHED BY/REMOVED FROM  
DATE/TIME

**SIGN/ PRINT NAMES**

RECEIVED BY/STORED IN  
Rob Romo  
DATE/TIME  
9/8/11 1410  
RECEIVED BY/STORED IN  
DON BROTHERTON/CHPRC  
DATE/TIME  
9/21/11 1000  
RECEIVED BY/STORED IN  
RHS  
DATE/TIME  
9-21-11 1020  
RECEIVED BY/STORED IN  
DATE/TIME  
RECEIVED BY/STORED IN  
DATE/TIME  
RECEIVED BY/STORED IN  
DATE/TIME  
RECEIVED BY/STORED IN  
DATE/TIME

**SPECIAL INSTRUCTIONS**

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

3°C  
Held  
9-21-11  
222S  
GRP# 20111496  
SAM# S11M000518

**LABORATORY SECTION**

RECEIVED BY

**FINAL SAMPLE DISPOSITION**

DISPOSAL METHOD

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME

19 of 24

SEPTEMBER 29, 2011

CH2M Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-057-101 *MA*

PAGE 2 OF 3

COLLECTOR  
*Kevin Romo, Wallace*

COMPANY CONTACT  
RADLOFF, AW

TELEPHONE NO.  
376-4554

PROJECT COORDINATOR  
RADLOFF, AW

PRICE CODE  
8C

Data Turnaround  
15 Days / 15 Days

SAMPLING LOCATION  
C8190 (199-N-188); I-020

PROJECT DESIGNATION  
100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment

SAF NO.  
F11-057

AIR QUALITY

ICE CHEST NO.

FIELD LOGBOOK NO. *p. 35*

ACTUAL SAMPLE DEPTH

COA  
300104ES10

METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

ORIGINAL

SHIPPED TO *4-21-11 mnc*  
~~Waste Sampling & Characterization~~ *222-5*

*HNF-N 491-14*  
OFFSITE PROPERTY NO.  
N/A

*75.7 FT*

BILL OF LADING/AIR BILL NO.  
N/A

SPECIAL INSTRUCTIONS

\*\* The CACN for all analytical work at WSCF laboratory is 402057ES20.  \*\* The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

- (1) VOA - 5035/8260 (LOW LEVEL 100 Area RI/FS); VOA - 5035/8260 (LOW LEVEL) - (Add-On 100 Area RI/FS) {1,4-Dichlorobenzene, 1-Butanol};
- (2) Alcohols, Glycols, & Ketones - 8015 {1,2-Propanediol, Diethyl ether, Ethanol, Ethyl acetate, Ethylene glycol, Methanol};
- (3) Semi-VOA - 8270 (TCL 100 Area RI/FS); Semi-VOA - 8270 (Add-On 100 Area RI/FS) {Cyclohexanone, n-Nitrosodimethylamine, Tributyl phosphate};
- (4) TPH-DieselKerosene Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range};
- (5) TPH-Gasoline Range - WTPH-G {Total petroleum hydrocarbons - gasoline range};
- (6) ICP/MS - 200.8 (100 Area RI/FS); ICP/MS - 200.8 (Add-on 100 Area RI/FS) {Uranium}; ICP Metals - 6010 (100 Area RI/FS); 200.8\_HG - ICPMS {Mercury};
- ~~(7) IC Anions - 300.0 (100 Area RI/FS); Cyanide (Total) - SM4500 {Cyanide};~~
- (8) Gamma Spectroscopy (100 Area RI/FS); Gamma Spec - Add-on (100 Area RI/FS) {Niobium-94, Silver-108 metastable}; Strontium-89,90 -- Total Sr;

*4/21-11*

SEPTEMBER 29, 2011

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-057-101 -A

PAGE 3 OF 3

COLLECTOR  
*Karen Romo Walker*

COMPANY CONTACT  
RADLOFF, AW

TELEPHONE NO.  
376-4554

PROJECT COORDINATOR  
RADLOFF, AW

PRICE CODE  
8C

Data Turnaround  
15 Days / 15 Days

SAMPLING LOCATION  
CB190 (199-N-188); I-020

PROJECT DESIGNATION  
100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment

SAF NO.  
F11-057

AIR QUALITY

ICE CHEST NO.

FIELD LOGBOOK NO. *0939*

ACTUAL SAMPLE DEPTH  
*75.7 FT*

COA  
300104ES10

METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

ORIGINAL

SHIPPED TO  
*DWB 9-21-11*  
Waste Sampling & Characterization *222.5*

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 may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

	None	None	None
PRESERVATION	None	None	None
HOLDING TIME	6 Months	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1
VOLUME	120mL	120mL	120mL
SAMPLE ANALYSIS	SEE ITEM (9) IN SPECIAL INSTRUCTIONS	SEE ITEM (10) IN SPECIAL INSTRUCTIONS	SEE ITEM (11) IN SPECIAL INSTRUCTIONS

SPECIAL HANDLING AND/OR STORAGE

SAMPLE NO. B2CKW6 MATRIX\* SOIL

SAMPLE DATE 9-8-11 SAMPLE TIME 1237

Handwritten notes and signatures in a grid format, including a large signature and date *9/24/11*.

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
<i>Rob Romo, CH2M Hill</i>	<i>9-8-11 1410</i>	<i>Michael Murray</i>	<i>9/8/11 1410</i>
<i>TA F102 121</i>	<i>9-21-11 1000</i>	<i>Don Brotherton</i>	<i>9/21/11 1000</i>
<b>DON BROTHERTON / CH2M</b>	<i>9-21-11 1020</i>	<i>RT Steek</i>	<i>9-21-11 1050</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

\*\* The CACN for all analytical work at WSCF laboratory is 402057ES20.  \*\* The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.  
(10) Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238};  
(11) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Technetium-99;  
(9) Americium-241/Curium-244 {Americium-241}; Americium-241/Curium-244 (Add-on) {Curium-243};

*Handwritten notes:*  
*9-21-11 306*

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE DATE/TIME

DISPOSED BY DATE/TIME

21 of 24

SEPTEMBER 29, 2011

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-057-105

PAGE 1 OF 3

COLLECTOR KAUER, Romo, KAUER  
SAMPLING LOCATION C8190 (199-N-188); I-021  
ICE CHEST NO.

COMPANY CONTACT RADLOFF, AW  
TELEPHONE NO. 376-4554  
PROJECT DESIGNATION 100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment  
FIELD LOGBOOK NO. PS 45  
HNF-N- 491-14  
ACTUAL SAMPLE DEPTH 81.0 to 83.5 FT  
OFFSITE PROPERTY NO. N/A

PROJECT COORDINATOR RADLOFF, AW  
SAF NO. F11-057  
COA 300104ES10  
BILL OF LADING/AIR BILL NO. N/A

PRICE CODE C05  
AIR QUALITY   
METHOD OF SHIPMENT GOVERNMENT VEHICLE

Data Turnaround 7 Days / 7 Days

ORIGINAL

SHIPPED TO JWB 9-21-11  
Waste Sampling & Characterization - 222-5

MATRIX\* POSSIBLE SAMPLE HAZARDS/ REMARKS  
A=Air Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)  
DL=Drum  
Liquids  
DS=Drum  
Solids  
L=Liquid  
O=Oil  
S=Soil  
SE=Sediment  
T=Tissue  
V=Vegetation  
W=Water  
WI=Wipe  
X=Other

113174

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Frozen/Cool <-7C and >-20C	Cool~4C	Cool~4C	None	None	None	Cool~4C	Cool~4C	Cool~4C	None
HOLDING TIME	14 Days	14 Days	14/40 Days	14/40 Days	14 Days	6 Months	30 Days	1 yr/1 yr	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	aGs	G	aG	aG	aGs	G/P	G/P	aG	aG	p
NO. OF CONTAINER(S)	5	1	1	3	1	1	1	1	1	1
VOLUME	40mL	250mL	250mL	250mL	40mL	250mL	120mL	250mL	250mL	500mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS	SEE ITEM (6) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	PCBs - 8087 (100 Area RI/F5);	SEE ITEM (7) IN SPECIAL INSTRUCTIONS	SEE ITEM (8) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B2CKW7	SOIL	9-13-11	1217

<input checked="" type="checkbox"/>										
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CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM DATE/TIME  
Ed Kauer C11 PACEL 9-13-11 1415  
RELINQUISHED BY/REMOVED FROM DATE/TIME  
TA F102127 9-21-11 1000  
RELINQUISHED BY/REMOVED FROM DATE/TIME  
DON BROTHERTON / CHPRC 9-21-11 1020  
RELINQUISHED BY/REMOVED FROM DATE/TIME  
RELINQUISHED BY/REMOVED FROM DATE/TIME  
RELINQUISHED BY/REMOVED FROM DATE/TIME  
RELINQUISHED BY/REMOVED FROM DATE/TIME  
RELINQUISHED BY/REMOVED FROM DATE/TIME

SIGN/ PRINT NAMES

RECEIVED BY/STORED IN DATE/TIME  
VBernal JBernal 9/13/11 1415  
RECEIVED BY/STORED IN DATE/TIME  
DON BROTHERTON / CHPRC 9/21/11 1000  
RECEIVED BY/STORED IN DATE/TIME  
Riteg RTSteele ATL 9-21-11 1020  
RECEIVED BY/STORED IN DATE/TIME  
RECEIVED BY/STORED IN DATE/TIME  
RECEIVED BY/STORED IN DATE/TIME  
RECEIVED BY/STORED IN DATE/TIME

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

306  
Riteg  
9-21-11

2225  
GRPH 20111496  
SAM # 511M000519

LABORATORY SECTION RECEIVED BY  
FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE DATE/TIME  
DISPOSED BY

DATE/TIME 22 of 24

113176

SEPTEMBER 29, 2011

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-057-105-A

PAGE 2 OF 3

COLLECTOR  
KAUER, PLAMO, KAUER  
SAMPLING LOCATION  
C8190 (199-N-188); I-021  
ICE CHEST NO.

COMPANY CONTACT  
RADLOFF, AW  
TELEPHONE NO.  
376-4554  
PROJECT DESIGNATION  
100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment

PROJECT COORDINATOR  
RADLOFF, AW  
SAF NO.  
F11-057

PRICE CODE C05  
AIR QUALITY   
Data Turnaround  
7 Days / 7 Days

FIELD LOGBOOK NO. P 45  
HNF-N-491.14  
ACTUAL SAMPLE DEPTH  
81.0 to 83.5 FT  
OFFSITE PROPERTY NO.  
N/A

COA  
300104ES10  
BILL OF LADING/AIR BILL NO.  
N/A

METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

ORIGINAL

SHIPPED TO 9-21-11  
Waste Sampling & Characterization 222-S

SPECIAL INSTRUCTIONS

- \*\* The CACN for all analytical work at WSCF laboratory is 402057ES20.  \*\* The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
- (1) VOA - 5035/8260 (LOW LEVEL 100 Area RI/FS); VOA - 5035/8260 (LOW LEVEL) - (Add-On 100 Area RI/FS) {1,4-Dichlorobenzene, 1-Butanol};
  - (2) Alcohols, Glycols, & Ketones - 8015 {1,2-Propanediol, Diethyl ether, Ethanol, Ethyl acetate, Ethylene glycol, Methanol};
  - (3) Semi-VOA - 8270 (TCL 100 Area RI/FS); Semi-VOA - 8270 (Add-On 100 Area RI/FS) {Cyclohexanone, n-Nitrosodimethylamine, Tributyl phosphate};
  - (4) TPH-Diesel/Kerosene Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range};
  - (5) TPH-Gasoline Range - WTPH-G {Total petroleum hydrocarbons - gasoline range};
  - (6) ICP/MS - 200.8 (100 Area RI/FS); ICP/MS - 200.8 (Add-on 100 Area RI/FS) {Uranium}; ICP Metals - 6010 (100 Area RI/FS); 200.8\_HG - ICPMS {Mercury};
  - (7) ~~IC Anions - 300.0 (100 Area RI/FS);~~ Cyanide (Total) - SM4500 {Cyanide};
  - (8) Gamma Spectroscopy (100 Area RI/FS); Gamma Spec - Add-on (100 Area RI/FS) {Niobium-94, Silver-108 metastable}; Strontium-89,90 -- Total Sr;

sta/ 9-21-11

113176

SEPTEMBER 29, 2011

F11-057-105-A

COLLECTOR  
KAUER, ROMO, KAUER  
SAMPLING LOCATION  
C8190 (199-N-188); I-021  
ICE CHEST NO.

COMPANY CONTACT  
RADLOFF, AW  
TELEPHONE NO.  
376-4554  
PROJECT DESIGNATION  
100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment  
FIELD LOGBOOK NO. P545  
HNF-N-491-14  
ACTUAL SAMPLE DEPTH  
81.6 to 83.5 ft  
OFFSITE PROPERTY NO.  
N/A

PROJECT COORDINATOR  
RADLOFF, AW  
SAF NO.  
F11-057  
COA  
300104ES10  
BILL OF LADING/AIR BILL NO.  
N/A

PRICE CODE C05  
AIR QUALITY   
METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

Data Turnaround  
7 Days / 7 Days

ORIGINAL

SHIPPED TO DWB 9-21-11  
Waste Sampling & Characterization 222-S

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 may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)  
SPECIAL HANDLING AND/OR STORAGE

	None	None	None
PRESERVATION			
HOLDING TIME	6 Months	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1
VOLUME	120mL	120mL	120mL
SAMPLE ANALYSIS	SEE ITEM (9) IN SPECIAL INSTRUCTIONS	SEE ITEM (10) IN SPECIAL INSTRUCTIONS	SEE ITEM (11) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B2CKW7	SOIL	9-13-11	1217

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM  
E. KAUER / CHPRC  
DATE/TIME  
9-13-11 1415

RELINQUISHED BY/REMOVED FROM  
DON BROTHERTON / CHPRC  
DATE/TIME  
9-21-11 1000

RELINQUISHED BY/REMOVED FROM  
DON BROTHERTON / CHPRC  
DATE/TIME  
9-21-11 1020

RELINQUISHED BY/REMOVED FROM  
DATE/TIME

RELINQUISHED BY/REMOVED FROM  
DATE/TIME

RELINQUISHED BY/REMOVED FROM  
DATE/TIME

RELINQUISHED BY/REMOVED FROM  
DATE/TIME

SIGN/ PRINT NAMES

RECEIVED BY/STORED IN  
DON BROTHERTON / CHPRC  
DATE/TIME  
9-13-11 1415

RECEIVED BY/STORED IN  
DON BROTHERTON / CHPRC  
DATE/TIME  
9-21-11 1000

RECEIVED BY/STORED IN  
DATE/TIME  
9-21-11 1020

RECEIVED BY/STORED IN  
DATE/TIME

RECEIVED BY/STORED IN  
DATE/TIME

RECEIVED BY/STORED IN  
DATE/TIME

RECEIVED BY/STORED IN  
DATE/TIME

SPECIAL INSTRUCTIONS

\*\* The CACN for all analytical work at WSCF laboratory is 402057ES20.  \*\* The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.  
(10) Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238};  
(11) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Technetium-99;  
(9) Americium-241/Curium-244 {Americium-241}; Americium-241/Curium-244 (Add-on) {Curium-243};  
30C  
relined  
9-21-11

LABORATORY SECTION RECEIVED BY  
FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE DATE/TIME  
DISPOSED BY DATE/TIME