

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

**FLUOR**<sup>®</sup>

M4W41-SLF-09-173

May 21, 2009

Mr. M. A. Neely, Manager  
Analytical Services  
CH2M HILL Plateau Remediation Contract  
PO Box 1600 MSIN R3-60  
Richland, WA 99352

Dear Mike:

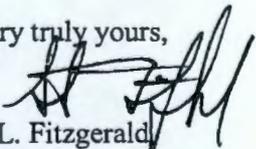
P&D #WSCF90134 - SAMPLE DELIVERY GROUP WSCF90134

- References:
- (1) Letter, SL Fitzgerald to MA Neely, Final Results for SDG WSCF90134, dated May 6, 2009
  - (2) Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, 'FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER'
  - (3) HNF-SD-CD-QAPP-017, Rev. 9, Waste Sampling & Characterization Facility Quality Assurance Plan

This letter contains updated P&D data for sample delivery group WSCF90134 and replaces Reference 1 in its entirety.

If you have any questions, don't hesitate to call on Pauline Mix, telephone 372-1488, for assistance.

Very truly yours,



S. L. Fitzgerald  
WSCF Analytical Lab

SLF/grf

Attachments

- cc: w/Attachments
- |                 |       |                |       |
|-----------------|-------|----------------|-------|
| T. F. Dale      | S3-30 | J. E. Trechter | S3-30 |
| A. J. Kopriva   | S3-30 | S. J. Trent    | R3-50 |
| H. K. Meznarich | S3-30 | File/LB        |       |
| P. D. Mix       | S3-30 |                |       |

**RECEIVED**  
OCT 08 2009  
**EDMC**

M4W41-SLF-09-173

ATTACHMENT 1

**COVER SHEET**

Consisting of 2 pages  
Including cover page

**WSCF SAF Number Cross Reference**

---

Group # WSCF90134  
 Data Deliverable Date 04/12/09

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
F09-019	B1YRK8	90134001	WATER	02/26/09	02/26/09

M4W41-SLF-09-173

ATTACHMENT 2

**NARRATIVE**

Consisting of 4 pages  
Including cover page

## Narrative

POD Corrective Action - This case narrative replaces prior  
submittal in its entirety.

Attachment 2  
Narrative, Rev 1  
WSCF90134

### Introduction

One S&GRP sample was received at the WSCF Laboratory on February 26, 2009. Sample was analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3. "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

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 POD # WSCF90134 is included with this case narrative.* It should be noted that the attached chain of custody was stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving, indicating the presence of ice in the transport container.

The following generic data qualifiers (i.e., B, D, and J) may be applicable to this report, as appropriate

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wetchem analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.

### Analytical Methodology for Requested Analyses

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

### Inorganic Comments

**Anions** – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group.

All QC controls are within the established limits.

**ICP-AES Metals** – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Calcium, Magnesium and Sodium – sample concentrations exceeded spiking levels by a factor of 4. Spike recoveries are not valid. Check standard was analyzed to ensure linearity for those sample results that were greater than the calibration standard.

## Narrative

Attachment 2  
Narrative, Rev 1  
WSCF90134

All other QC controls are within the established limits.

**Radiochemistry Comments**

**Rad Chem** – There are no hold times associated with WSCF's radiochemical methods. A Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group.  
Analytical Note(s): Refer to PID #WSCF90134

- ~~GEA (Bi-212 and Bi-214) Blank result which was > MDA was evaluated and judged to be acceptable.~~
- ~~GEA Several Duplicate Relative Percent Differences (RPDs) exceeded established laboratory limits. The RPD criterion does not apply to results near or below the minimum detectable activity.~~
- Gross Alpha – Blank result was > MDA. Result was evaluated and there was no affect on sample results.
- Gross Beta – Duplicate RPD exceeded established laboratory limits. The RPD criterion does not apply to results near or below the minimum detectable activity.

All other QC controls are within the established limits.

We certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this data package has been authorized by the Analytical Laboratory Manager (or designee) and the Client Services representative as verified by electronic signatures shown on the WSCF ANALYTICAL RESULTS REPORT.

5/12/2009

REVISION 1

Attachment 2  
Narrative, Rev 1  
WSCF90134

**Problem and Discrepancy Report**  
**WSCF**  
**SDG WSCF90134**

---

**1. The data package has the following issues:**

a) Sample B1YRK8 is missing the Cobalt-58 (13981-38-9) and Iron-59 (14596-12-4) results.

**Resolution:** *Provide missing results.*

**Lab Response:**

Please correct the issues and resubmit the hard copy and electronic data package.

**WSCF Response**

Direction provided by Wanda Elliott on May 13, 2009 is as follows

- Co-58 and Fe-59 data are not required for sample# B1YRK8
- Delete all GEA data
- Resubmit hard copy and electronic data package (w/o GEA results)

M4W41-SLF-09-173

ATTACHMENT 3

**ANALYTICAL RESULTS**

Consisting of 14 pages  
Including cover page

## WSCF ANALYTICAL RESULTS REPORT

For

CH2M Hill Plateau Remediation

PO Box 1600  
Richland, WA 99352

Attention: Michael Neely

**Contract #** MOA-FH-CHPRC-2008  
**Group #** WSCF90134  
**Report Date** May 14, 2009

Analytical: Electronically signed by Markus Stauffer  
Client Services: Electronically signed by Pauline Mix

*All radiochemistry results are reported on an "as received" basis.*

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.

**Batch QC List**

Attention Michael Neely  
 Department Inorganic

Group # WSCF90134  
 Project Number F09-019

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
19599	19599	2	BLANK	4801	BLANK		Anions by Ion Chromatography (Water)
19599	19599	3	LCS	4802	LCS		Anions by Ion Chromatography (Water)
19599	19599	5	DUP	4803	B1YJJ1(90132001DUP)	90132001	Anions by Ion Chromatography (Water)
19599	19599	6	MS	4804	B1YJJ1(90132001MS)	90132001	Anions by Ion Chromatography (Water)
19599	19599	7	MSD	4805	B1YJJ1(90132001MSD)	90132001	Anions by Ion Chromatography (Water)
19599	19599	16	SAMPLE	90134001	B1YRK8		Anions by Ion Chromatography (Water)
21333	21736	1	BLANK	5727	BLANK		ICP-6010 - All possible metals
21333	21736	2	LCS	5728	LCS		ICP-6010 - All possible metals
21333	21736	13	MS	5729	B1Y8F6(90125003MS)	90125003	ICP-6010 - All possible metals
21333	21736	14	MSD	5730	B1Y8F6(90125003MSD)	90125003	ICP-6010 - All possible metals
21333	21736	18	SAMPLE	90134001	B1YRK8		ICP-6010 - All possible metals

Batch QC List

Attention Michael Neely  
Department Radiochemistry

Group # WSCF90134  
Project Number F09-019

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
20531	21118	1	BLANK	5264	BLANK		Gross Alpha/Gross Beta
20531	21118	2	LCS	5265	LCS		Gross Alpha/Gross Beta
20531	21118	3	SAMPLE	90134001	B1YRK8		Gross Alpha/Gross Beta
20531	21118	4	SAMPLE	90134001	B1YRK8		Gross Alpha/Gross Beta
20531	21118	5	DUP	5266	B1YRK8(90134001DUP)	90134001	Gross Alpha/Gross Beta

11 of 24

REVISION 1

## Method Reference

---

Attention Michael Neely  
Department Inorganic

Group # WSCF90134  
Project Number F09-019

---

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, industry methods or HEIS 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 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.

---

LA-505-411	Elemental Analysis by ICP Atomic Emission Spectroscopy (ICP-AES)		
	EPA SW-846	6010C	Inductively Coupled Plasma-Atomic Emission Spectrometry
LA-533-410	HEIS	6010_METALS_ICP	Inductively Coupled Plasma-Atomic Emission Spectrometry
	Anion Analysis by Ion Chromatography		
	EPA-600/R-94-111	300.0	Determination of Inorganic Anions by Ion Chromatography
	HEIS	300.0_ANIONS_IC	Determination of Inorganic Anions by Ion Chromatography

---

Note: A complete list of WSCF analytical procedures and reference regulatory or industry methods is available online at <http://www7.rl.gov/rapidweb/AS-DOL/index.cfm>

## Method Reference

---

**Attention** Michael Neely  
**Department** Radiochemistry

**Group #** WSCF90134  
**Project Number** F09-019

---

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, industry methods or HEIS 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 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.

---

<b>LA-508-415</b>	Operation Of The Protean 2-Inch Alpha/Beta Counting System For Gross Alpha/ Beta Samples	
HEIS	ALPHA_GPC	Gross Alpha by GPC
HEIS	BETA_GPC	Gross Beta by GPC
HEIS	SRTOT_SEP_PRECIP_GPC	Strontium beta isotopic, GPC
<b>LA-508-481</b>	Gamma Energy Analysis using the Canberra Genie Ssystem	
HEIS	GAMMA_GS	Gamma Energy Analysis

---

Note: A complete list of WSCF analytical procedures and reference regulatory or industry methods is available online at <http://www7.rl.gov/rapidweb/AS-DOL/index.cfm>

# WSCF Analytical Results Report

Attention Michael Neely  
 Department Inorganic

Group # WSCF90134  
 Project Number F09-019

Sample # 90134001  
 SAF# F09-019  
 Sample ID B1YRK8

Matrix WATER  
 Sampled 02/26/09  
 Received 02/26/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Anions by IC</b>										<b>02/26/09</b>
<b>Anions by IC</b>										
Fluoride	16984-48-8	LA-533-410	U	<0.023		ug/mL	1	0.023	0.20	02/26/09
Chloride	16887-00-6	LA-533-410	U	<0.047		ug/mL	1	0.047	0.40	02/26/09
Nitrite-N	NO2-N	LA-533-410	U	<0.013		ug/mL	1	0.013	0.10	02/26/09
Nitrate-N	NO3-N	LA-533-410	B	0.0442		ug/mL	1	0.012	0.10	02/26/09
Phosphate-P	PO4-P	LA-533-410	U	<0.061		ug/mL	1	0.061	0.40	02/26/09
Sulfate	14808-79-8	LA-533-410	U	<0.13		ug/mL	1	0.13	1.0	02/26/09
<b>ICP Prep</b>										<b>03/18/09</b>
<b>ICP-AES</b>										
Magnesium	7439-95-4	LA-505-411	U	<50		ug/L	1	50	250	03/25/09
Potassium	7440-09-7	LA-505-411	U	<170		ug/L	1	170	850	03/25/09
Sodium	7440-23-5	LA-505-411	B	152		ug/L	1	51	260	03/25/09
Calcium	7440-70-2	LA-505-411	B	137		ug/L	1	73	360	03/25/09

MDL = Minimum Detection  
 RQ = Result Qualifier  
 TP Err = Total Propagated  
 DF = Dilution Factor  
 + - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL. (Inorganic)  
 C - Analyte was found in the Associated Blank. (Inorganic)  
 D - Analyte was reported at a secondary dilution factor.  
 E - Analyte is an estimate, see comment section.  
 N - MS and/or MSD sample recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.  
 X, Y or Z - See comment detail and/or narrative.

REVISED90134 -

**WSCF Analytical Results Report**

**Attention** Michael Neely  
**Department** Radiochemistry

**Group #** WSCF90134  
**Project Number** F09-019

**Sample #** 90134001  
**SAF#** F09-019  
**Sample ID** B1YRK8

**Matrix** WATER  
**Sampled** 02/26/09  
**Received** 02/26/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Alpha/Beta Prep</b>										<b>03/16/09</b>
<b>Gross Alpha/Beta</b>										
Gross Alpha	12587-46-1	LA-508-415	U	0.090	.28	pCi/L	1	0.54		03/23/09
Gross Beta	12587-47-2	LA-508-415		1.5	.91	pCi/L	1	1.4		03/23/09

MDL = Minimum Detection  
 RQ = Result Qualifier  
 TP Err = Total Propagated  
 DF = Dilution Factor  
 + - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE  
 U - Analyzed for but not detected above limiting criteria.  
 N - Spike Recovery is Outside Control Limits.  
 X,Y or Z - See comment detail and/or narrative.

REVISED90134 -

**Quality Control Report**

Attention Michael Neely  
 Department Inorganic

Group # WSCF90134  
 Project Number F09-019

QC Batch 19599 Test Anions by Ion Chromatography (Water)  
 Associated Samples 90134001

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>										
<b>QC Sample #4801</b>										
Fluoride	16984-48-8		<0.023	ug/mL					U	02/26/09
Chloride	16887-00-6		<0.047	ug/mL					U	02/26/09
Nitrite-N	NO2-N		<0.013	ug/mL					U	02/26/09
Nitrate-N	NO3-N		<0.012	ug/mL					U	02/26/09
Phosphate-P	PO4-P		<0.061	ug/mL					U	02/26/09
Sulfate	14808-79-8		<0.13	ug/mL					U	02/26/09
<b>LCS</b>										
<b>QC Sample #4802</b>										
Fluoride	16984-48-8		0.985	ug/mL	98.5	90 - 110				02/26/09
Chloride	16887-00-6		1.96	ug/mL	100.2	90 - 110				02/26/09
Nitrite-N	NO2-N		0.975	ug/mL	99.6	90 - 110				02/26/09
Nitrate-N	NO3-N		0.870	ug/mL	98.8	90 - 110				02/26/09
Phosphate-P	PO4-P		1.87	ug/mL	98.4	90 - 110				02/26/09
Sulfate	14808-79-8		3.89	ug/mL	99.1	90 - 110				02/26/09
<b>DUP</b>										
<b>QC Sample #4803</b>										
<b>Original 90132001</b>										
Fluoride	16984-48-8		0.0806	ug/mL			7.60	20	BD	02/26/09
Chloride	16887-00-6		3.99	ug/mL			3.30	20	D	02/26/09
Nitrite-N	NO2-N		<0.026	ug/mL			0.00	20	UD	02/26/09
Nitrate-N	NO3-N		1.40	ug/mL			1.40	20	D	02/26/09
Phosphate-P	PO4-P		<0.12	ug/mL			0.00	20	UD	02/26/09

REVISED 90134 -

**Quality Control Report**

Attention Michael Neely  
 Department Inorganic

Group # WSCF90134  
 Project Number F09-019

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Sulfate MS	14808-79-8		19.9	ug/mL			1.00	20	D	02/26/09
			<b>QC Sample #4804</b>							
			<b>Original 90132001</b>							
Fluoride	16984-48-8		1.09	ug/mL	98.5	80 - 120			D	02/26/09
Chloride	16887-00-6		5.76	ug/mL	95.2	80 - 120			D	02/26/09
Nitrite-N	NO2-N		0.948	ug/mL	94.9	80 - 120			D	02/26/09
Nitrate-N	NO3-N		2.29	ug/mL	96.7	80 - 120			D	02/26/09
Phosphate-P	PO4-P		1.84	ug/mL	95.2	80 - 120			D	02/26/09
Sulfate MSD	14808-79-8		23.8	ug/mL	92.2	80 - 120			D	02/26/09
			<b>QC Sample #4805</b>							
			<b>Original 90132001</b>							
								<b>Paired 4804</b>		
Fluoride	16984-48-8		1.11	ug/mL	100.7	80 - 120	2.20	20	D	02/26/09
Chloride	16887-00-6		5.77	ug/mL	95.9	80 - 120	0.70	20	D	02/26/09
Nitrite-N	NO2-N		0.949	ug/mL	95	80 - 120	0.10	20	D	02/26/09
Nitrate-N	NO3-N		2.31	ug/mL	98.9	80 - 120	2.20	20	D	02/26/09
Phosphate-P	PO4-P		1.88	ug/mL	97.3	80 - 120	2.20	20	D	02/26/09
Sulfate	14808-79-8		23.9	ug/mL	95.8	80 - 120	3.80	20	D	02/26/09

17 of 24

REVISION 1

**Quality Control Report**

Attention Michael Neely  
 Department Inorganic

Group # WSCF90134  
 Project Number F09-019

QC Batch 21333 Test ICP-6010 - All possible metals  
 Associated Samples 90134001

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>		<b>QC Sample #5727</b>								
Magnesium	7439-95-4		<50	ug/mL					U	03/25/09
Potassium	7440-09-7		<170	ug/mL					U	03/25/09
Sodium	7440-23-5		<51	ug/mL					U	03/25/09
Calcium	7440-70-2		<73	ug/mL					U	03/25/09
<b>LCS</b>		<b>QC Sample #5728</b>								
Magnesium	7439-95-4		1010	ug/mL	101.2	80 - 120				03/25/09
Potassium	7440-09-7		10300	ug/mL	102.7	80 - 120				03/25/09
Sodium	7440-23-5		1070	ug/mL	107.2	80 - 120				03/25/09
Calcium	7440-70-2		977	ug/mL	97.7	80 - 120				03/25/09
<b>MS</b>		<b>QC Sample #5729</b>								
		<b>Original 90125003</b>								
Magnesium	7439-95-4		24500	ug/L	171	75 - 125				03/25/09
Potassium	7440-09-7		15500	ug/L	103.4	75 - 125				03/25/09
Sodium	7440-23-5		22400	ug/L	165	75 - 125				03/25/09
Calcium	7440-70-2		76300	ug/L	104	75 - 125				03/25/09
<b>MSD</b>		<b>QC Sample #5730</b>								
		<b>Original 90125003</b>								
Magnesium	7439-95-4		23700	ug/L	91	75 - 125	61.10	20	*	03/25/09
Potassium	7440-09-7		15100	ug/L	99.4	75 - 125	3.90	20		03/25/09
Sodium	7440-23-5		21400	ug/L	63	75 - 125	89.50	20	*	03/25/09

REVISION 1

18 of 14

# Quality Control Report

Attention Michael Neely  
Department Inorganic

Group # WSCF90134  
Project Number F09-019

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Calcium	7440-70-2		75500	ug/L	26	75 - 125	120.00	20	*	03/25/09

**Quality Control Report**

Attention Michael Neely  
 Department Radiochemistry

Group # WSCF90134  
 Project Number F09-019

QC Batch 20531 Test Gross Alpha/Gross Beta  
 Associated Samples 90134001

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>		<b>QC Sample #5264</b>								
Gross Alpha	12587-46-1	0.71		pCi/L					1X	03/23/09
Gross Beta	12587-47-2	-0.41		pCi/L					U	03/23/09
<b>LCS</b>		<b>QC Sample #5265</b>								
Gross Alpha	12587-46-1	33		pCi/L	101.7	80 - 120				03/23/09
Gross Beta	12587-47-2	120		pCi/L	110	80 - 120				03/23/09
<b>DUP</b>		<b>QC Sample #5266</b>								
		<b>Original 90134001</b>								
Gross Alpha	12587-46-1	0.090	0.090	pCi/L			0.00	-20 - 20		03/23/09
Gross Beta	12587-47-2	1.5	0.38	pCi/L			119.10	-20 - 20	* 1X	03/23/09

20 of 4

**Analytical Comment Report**

Attention Michael Neely

Group # WSCF90134

Project Number F09-019

**90134001 B1YRK8**

ICP-AES: The following elements sample concentration exceed spiking level by a factor of 4. Spike recoveries are not valid: magnesium, sodium, and calcium.

**Quality Control Comments**

Department Radiochemistry

5264 BLANK for HBN 20531 [RADP/1286]

Analyte Gross Alpha - Gross Alpha/Gross Beta  
[1] The blank is above MDC but is acceptable.

Department Radiochemistry

5266 B1YRK8(90134001DUP)

Analyte Gross Beta - Gross Alpha/Gross Beta  
[1] Duplicate RPD out-of-limits. RPD limit does not apply to results near the Minimum Detectable Concentration.

21 of 24

REVISION 1

M4W41-SLF-09-173

ATTACHMENT 4

**SAMPLE RECEIPT**

Consisting of 3 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**

**ACKNOWLEDGEMENT OF SAMPLES RECEIVED**

**WSCF Laboratory**  
 PO Box 1000 S3-30  
 Richland, WA 99352

ATTN: Michael Neely

Customer Code: CHPRC  
 PO #: 131280  
 Work Order #: 90134  
 Profile #: F09-019-001  
 Proj. Mgr.:  
 Phone:

The following samples were received from you on 2/26/2009 2:10:00 PM. 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	Matrix	Collected	Received
90134001	B1YRK8	WATER	2/26/2009 13:30	2/26/2009 14:
Tests scheduled				
6010-W; GAB-AO-W; GAB-BO-W; GEA-W; IC-W				

**Test Acronym Description**

Test Acronym	Description
6010-W	ICP-AES (W)
GAB-AO-W	Gross Alpha/Beta (A only)(W)
GAB-BO-W	Gross Alpha/Beta (B only)(W)
GEA-W	Gamma Energy Analysis (W)
IC-W	Anions by IC (W)

CH2MHILL Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F09-019-001	PAGE 1 OF 1
COLLECTOR <i>Kauss</i>	COMPANY CONTACT WIDRIG, DL	TELEPHONE NO. 376-2858	PROJECT COORDINATOR WIDRIG, DL	PRICE CODE 7N	DATA TURNAROUND 45 Days / 45 Days	
SAMPLING LOCATION C7047; EB-1-009	PROJECT DESIGNATION 700-BC-1 DVZ Soil Desiccation -QC Sampling	SAF NO. F09-019	AIR QUALITY			
ICE CHEST NO.	FIELD LOGBOOK NO. <i>HAF-N-585-326</i>	ACTUAL SAMPLE DEPTH <i>N/A</i>	COA 301405ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OPPOSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A				
MATRIX* A=Air DL=Drum L=Liquid DS=Drum S=Solids L=Liquid O=Oil S=Soil ST=Soil rem 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 resalable per DOE Order 3400.5 (1990/1953)	PRESERVATION HMDS to pH <2	Coal-AC	HMDS to pH <2	HMDS to pH <2	
		TYPE OF CONTAINER GYP		GYP	GYP	
		NO. OF CONTAINER(S)				
	<i>90134</i>	VOLUME 500ml	500ml	500ml	500ml	
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS Carroll Search activity	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	<b>ICED</b>
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1YRKB	<i>801</i> WATER	<i>2-26-09</i>	<i>13:30</i>	✓	✓	✓
CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS		
RELINQUISHED BY/REMOVED FROM <i>Ed Kauss</i>	DATE/TIME <i>2-26-09 1410</i>	RECEIVED BY/STORED IN <i>Mark Rossler</i>	DATE/TIME <i>2-26-09 1410</i>	** 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	(1)ICP Metals - 6010B (TAL) (Calcium, Magnesium, Potassium, Sodium)		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(2)IC Anions - 300.D (Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate)		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(3)Gross Alpha and Gross Beta (Alpha Discrete) (Gross alpha, Gross beta)		
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			

Thursday, February 26, 2009 7:47:17 PM  
Page 2 of 2

May 14, 2009 15:05:30

REVISED90134 -  
Page 23 of 23

24 of 24

3004.1.1084.3  
Report ID: 90134  
Group # WSCF90134