CHPRC - REVIEW COMMENT RECORD (RCR)

1. Date	2. Review No.
05/23/2012	
3. Project No.	Page 1 of 1

5. Document Number(s)/Title(s)	6. Program/Project/Building Number	7. Reviewer	8. Organization/Group	9. Location/Phone
VSR12-009		Scot Fitzgerald	Analytical Support Group	2753/373-7495

17. Comment Submittal Approval	10. Agreement With Indicated Comment Disposition(s)	11. CLOSED
Date / Organization Manager (optional) (print and sign)	Scot Fitzgerald Reviewer/Point of Contact (print and sign) 05/23/2012 Date Author/Originator (print and sign)	Scot Fitzgerald Reviewer/Point of Contact (print and sign) 5/29/2012 Date Author/Originator (print and sign)

12. Item	13a. Comments	13b. Basis	13c. Recommendation	14. Reviewer Concurrence Required (Y or N)	15. Disposition (provide justification if NOT accepted)	16. Status
1	Errors in the referenced SDG numbers throughout the report. Two examples: page 3 of 284 both occurrences of SDG WSCF111054 should be WSCF111504. On page 103 of 284 in the introduction section, WSCF112903 should be WSCF111504.		Please review and correct all occurrences of SDG numbers.	Y	Corrected all SDG numbers.	Closed

CHPRC - REVIEW COMMENT RECORD (RCR)

1. Date	2. Review No.
5/1/2012	RCR-VSR12-009
3. Project No. 100K	Page 1 of 1

5. Document Number(s)/Title(s)	6. Program/Project/Building Number	7. Reviewer	8. Organization/Group	9. Location/Phone
Data validation for 183KW Staging Area	SGRP	SL Huggins	SGRP QA	MO-2216E/A101 373-3630

17. Comment Submittal Approval	10. Agreement With Indicated Comment Disposition(s)	11. CLOSED
5/1/12 Date; SL Huggins Organization Manager (optional) (print and sign)	Date; Reviewer/Point of Contact (print and sign); Author/Originator (print and sign)	5/3/12 Date; Reviewer/Point of Contact (print and sign); SL HUGGINS Author/Originator (print and sign)

12. Item	13a. Comments	13b. Basis	13c. Recommendation	14. Reviewer Concurrence Required (Y or N)	15. Disposition (provide justification if **NOT** accepted)	16. Status
1	Inorganic Data Qualification indicates Ni should be flagged J+, the data results are flagged J-.	Data incorrectly flagged	Flag the Ni results with proper flag.	Y	J- flag corrected to J+ on annotated Form 1s	

REVIEW COMMENT RECORD (RCR)

1. Date	2. Review No.
05/02/2012	
3. Project No.	Page 1 of 1

5. Document Number(s)/Title(s)	6. Program/Project/Building Number	7. Reviewer	8. Organization/Group	9. Location/Phone
Data Validation Report for CH2M Hill Plateau Remediation Company: VSR12-009, Project 100K RA, 183KW Staging Area In-Process Sampling	183KW Staging Area	D. L. Klages	100-K Soil Remediation	(509)942-3947

17. Comment Submittal Approval	10. Agreement With Indicated Comment Disposition(s)	11. CLOSED
Date: ____ Organization Manager (optional) (print and sign): ____	Deanna L. Klages (Reviewer/Point of Contact (print and sign)) 05/02/2012 (Date) Deanna L. Klages (Author/Originator (print and sign))	Deanna L. Klages (Reviewer/Point of Contact (print and sign)) 05/02/2012 (Date) Deanna L. Klages (Author/Originator (print and sign))

12. Item	13a. Comments	13b. Basis	13c. Recommendation	14. Reviewer Concurrence Required (Y or N)	15. Disposition (provide justification if **NOT** accepted)	16. Status
1	General Comment: Headers need to be moved to fit onto the same page as the information addressed.		Headers starting with Table of Contents, Data Quality Objectives, Minor Deficiencies, etc., need to be moved down to fit on the same page.	N	reformatted pages	CLOSED
2	When referencing the SAP on page 3, etc. throughout validation, delete the call out to Volume 1.	There is no Volume 1	Delete the call out to Volume 1.	Y	Deleted Vol. 1 call-outs in SAP references for all memos	CLOSED
	No other issues beyond the ones already listed by other reviewers.					

ANALYTICAL QUALITY ASSOCIATES, INC.
616 Maxine NE
Albuquerque, NM 87123
505-299-5201
www.aqainc.net

Data Validation Report for CH2M Hill Plateau Remediation Company

VSR12-009
183KW Staging Area In-Process Sampling
Project 100 K RA

Chemical & Radiochemical Validation - Level C

Validation Performed By: _____ **Date: 04-25-12**
Kenneth Salaz

Validation reviewed by: _____ **Date: 04-26-12**
Marcia Hilchey

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Date: 25 April 2012
To: CH2M Hill (technical representative)
From: Analytical Quality Associates, Inc.
Project: 100 K RA
Subject: Inorganics - Sample Data Group (SDG) WSCF111504

INTRODUCTION

This memorandum presents the results of data validation for SDG WSCF111504 prepared by WSCF Analytical Laboratories. A list of samples validated along with the analytical methods is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B2BWL2	2/10/11	Soil	C	200.8, 6010
B2BWL1	2/10/11	Soil	C	200.8, 6010
B2BWL0	2/10/11	Soil	C	200.8, 6010
B2BWL3	2/10/11	Soil	C	200.8, 6010
B2BWL4	2/10/11	Soil	C	200.8, 6010
B2BWK0	2/10/11	Soil	C	200.8, 6010
B2BWK1	2/10/11	Soil	C	200.8, 6010
B2BWK2	2/10/11	Soil	C	200.8, 6010
B2BWK3	2/10/11	Soil	C	200.8, 6010
B2BWK4	2/10/11	Soil	C	200.8, 6010
B2BWK5	2/10/11	Soil	C	200.8, 6010
B2BWK6	2/10/11	Soil	C	200.8, 6010
B2BWK7	2/10/11	Soil	C	200.8, 6010
B2BWK8	2/10/11	Soil	C	200.8, 6010
B2BWK9	2/10/11	Soil	C	200.8, 6010
B2BWJ7	2/10/11	Soil	C	200.8, 6010
B2BWJ8	2/10/11	Soil	C	200.8, 6010
B2BWJ9	2/10/11	Soil	C	200.8, 6010

Data validation was conducted in accordance with the CHPRC validation statement of work and the 100 Area Remedial Action Sampling and Analysis Plan, DOE/RL-96-22, Rev. 5 (SAP). Appendices 1 through 6 provide the following information as indicated below:

Appendix 1. Glossary of Data Reporting Qualifiers
Appendix 2. Summary of Data Qualification
Appendix 3. Annotated Laboratory Reports
Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
Appendix 5. Data Validation Supporting Documentation
Appendix 6. Additional Documentation Requested By Client

DATA QUALITY OBJECTIVES

- **Holding Times and Sample Preservation**

Holding times are calculated from Chain-of-Custody forms to determine the validity of the results. The holding time requirement for ICP metals are analysis within 180 days of sample collection, and the holding time requirement for mercury is analysis within 28 days of sample collection. There were no specific preservation required for the inorganic soil sample analysis.

The samples were analyzed within the prescribed holding times.

- **Blanks**

The blank data results are reviewed to assess the extent of contamination introduced through sampling, sample preparation, and analysis.

Laboratory Blanks

All laboratory blank results were acceptable.

Trip Blanks

No trip blanks were submitted for validation.

Field Blanks

No field blanks were submitted for validation.

Equipment Blanks

All equipment blank results were acceptable with the following exceptions. Mn, Ni, Cu, Li, and B were detected in equipment blank B2BWL3.

- **Accuracy**

Accuracy is evaluated by reviewing matrix spike sample results, and laboratory control sample results. According to the SAP, the matrix spike sample accuracy limits are 70% to 130% and the laboratory control sample accuracy limits are ones specified by the DV procedure. The limits for reported analytes not listed in the SAP are specified by the DV procedure.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

All MS/MSD recoveries were acceptable with the following exceptions. The MS/MSD %Rs for Cu were <75% but >30%. The associated sample results were all detects and should be qualified as estimates and flagged “J-“. The MSD %R for Ni was >125%. The associated sample results were all detects and should be qualified as estimates and flagged “J+.”

Laboratory Control Samples (LCSs)

All LCS recoveries were acceptable.

- **Precision**

Precision is evaluated by reviewing MS/MSD results, field duplicate sample results, and field split sample results. These QC results provide information on the laboratory reproducibility and whether sampling activities are adequate to acquire consistent sample results. According to the SAP, the relative percent difference (RPD) limit is 30%. The limits for reported analytes not listed in the SAP are specified by the DV procedure. When duplicate RPDs exceed the limits and associated results are <5X the reporting limit (RL) with absolute differences <2X the RL, no precision infraction occurred.

MS/MSD Samples

All MS/MSD RPD values were acceptable.

Field Duplicate Samples

All field duplicate results were acceptable.

Field Split Samples

No field splits were submitted for validation.

- **Detection Limits**

Reported MDLs are compared against the contractually required detection limits (CRDLs) to ensure that laboratory detection limits meet the required criteria.

All reported sample MDLs with associated non-detected sample results were below the CRDLs.

- **Completeness**

SDG WSCF111504 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

A minor deficiency leading to qualification of Cu and Ni sample results as estimated were due to MS and/or MSD recoveries outside QC acceptance limits. See the table in Appendix 2 for a listing of all affected sample results.

REFERENCES

GRP-GD-003, Rev. 0, Change 0, *Data Validation for Chemical Analyses*, August 2010.

DOE/RL-96-22, Rev. 5, *100 Area Remedial Action Sampling and Analysis Plan*, September 2009.

Appendix 1

Glossary of Data Reporting Qualifiers

Qualifiers that may be applied by data validators in compliance with the CHPRC statement of work are as follows:

- **U** — The constituent was analyzed for, but was not detected. The data should be considered usable for decision-making purposes.

- **UJ** — The constituent was analyzed for and was not detected. Due to a quality control deficiency identified during data validation the value reported may not accurately reflect the RL. The data should be considered usable for decision-making purposes.

- **J** — Indicates the constituent was analyzed for and detected. The associated value is estimated due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J+** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected positive bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J-** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected negative bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **N** — The analysis indicates the presence of an analyte that has been tentatively identified.

- **NJ** — The analysis indicates the presence of an analyte that has been tentatively identified and the associated numerical value represents its approximate concentration.

- **NJ+** — The analysis indicates the presence of an analyte that has been tentatively identified. The associated value is estimated with a suspected positive bias due to a quality control deficiency identified during data validation.

- **NJ-** — The analysis indicates the presence of an analyte that has been tentatively identified. The associated value is estimated with a suspected negative bias due to a quality control deficiency identified during data validation.

- **UR** — Indicates the constituent was analyzed for and not detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

- **R** — Indicates the constituent was analyzed for and detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

Appendix 2

Summary of Data Qualification

Inorganic Data Qualification Summary			
SDG: WSCF111504	Reviewer: AQA	Project: 100 K RA	Page 1 of 1
Analyte(s)	**Qualifier**	**Samples Affected**	**Reason**
Cu	J-	B2BWL2, B2BWL1, B2BWL0, B2BWL3, B2BWL4, B2BWK0, B2BWK1, B2BWK2, B2BWK3, B2BWK4, B2BWK5, B2BWK6, B2BWK7, B2BWK8, B2BWK9, B2BWJ7, B2BWJ8, B2BWJ9	Low MS recovery
Ni	J+	B2BWL2, B2BWL1, B2BWL0, B2BWL3, B2BWL4, B2BWK0, B2BWK1, B2BWK2, B2BWK3, B2BWK4, B2BWK5, B2BWK6, B2BWK7, B2BWK8, B2BWK9, B2BWJ7, B2BWJ8, B2BWJ9	High MSD recovery

Comments: None

Appendix 3

Annotated Laboratory Reports

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504001
SAF# F11-077
Sample ID B2BWL2

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.6		mg/kg	1	1.6	11	02/14/11
Chloride	16887-00-6	LA-533-410	U	<2.3		mg/kg	1	2.3	22	02/14/11
Nitrite-N	NO2-N	LA-533-410	U	<0.98		mg/kg	1	0.98	5.4	02/14/11
Nitrate-N	NO3-N	LA-533-410	U	<1.7		mg/kg	1	1.7	5.4	02/14/11
Sulfate	14808-79-8	LA-533-410	U	<3.6		mg/kg	1	3.6	54	02/14/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	BN	0.113		ug/g	1	0.11	0.55	02/16/11
ICP Prep										**02/14/11**
ICP-AES										
Lithium	7439-93-2	LA-505-411		7.19		mg/kg	1	0.44	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B	9.48		mg/kg	1	4.5	22	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		402		mg/kg	1	0.11	1.1	02/15/11
Nickel	7440-02-0	LA-505-412	N	J+ 13.9		mg/kg	1	0.21	2.1	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.11		mg/kg	1	0.11	1.1	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504001
SAF# F11-077
Sample ID B2BWL2

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Antimony	7440-36-0	LA-505-412	U		<0.32		mg/kg	1	0.32	3.2	02/15/11
Barium	7440-39-3	LA-505-412			70.7		mg/kg	1	0.21	2.1	02/15/11
Beryllium	7440-41-7	LA-505-412	B		0.455		mg/kg	1	0.11	0.53	02/15/11
Cadmium	7440-43-9	LA-505-412	B		0.134		mg/kg	1	0.11	1.1	02/15/11
Chromium	7440-47-3	LA-505-412			11.2		mg/kg	1	0.53	5.3	02/15/11
Cobalt	7440-48-4	LA-505-412			9.78		mg/kg	1	0.11	0.53	02/15/11
Copper	7440-50-8	LA-505-412	N	J-	23.1		mg/kg	1	0.11	1.1	02/15/11
Vanadium	7440-62-2	LA-505-412			59.0		mg/kg	1	0.21	2.1	02/15/11
Zinc	7440-66-6	LA-505-412			48.3		mg/kg	1	0.86	5.3	02/15/11
Lead	7439-92-1	LA-505-412			7.49		mg/kg	1	0.11	1.1	02/15/11
Mercury	7439-97-6	LA-505-412	U		<0.053		mg/kg	1	0.053	0.21	02/15/11
Molybdenum	7439-98-7	LA-505-412	B		0.394		mg/kg	1	0.11	1.1	02/15/11
Strontium	7440-24-6	LA-505-412			27.8		mg/kg	1	0.11	1.1	02/15/11
Tin	7440-31-5	LA-505-412	B		0.518		mg/kg	1	0.11	0.53	02/15/11
Uranium	7440-61-1	LA-505-412	B		0.458		mg/kg	1	0.11	0.53	02/15/11
Arsenic	7440-38-2	LA-505-412	B		3.09		mg/kg	1	0.43	4.3	02/15/11
Selenium	7782-49-2	LA-505-412	B		1.17		mg/kg	1	0.32	3.2	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504002
SAF# F11-077
Sample ID B2BWL1

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.6		mg/kg	1	1.6	11	02/14/11
Chloride	16887-00-6	LA-533-410	U	<2.3		mg/kg	1	2.3	21	02/14/11
Nitrite-N	NO2-N	LA-533-410	U	<0.97		mg/kg	1	0.97	5.3	02/14/11
Nitrate-N	NO3-N	LA-533-410	U	<1.7		mg/kg	1	1.7	5.3	02/14/11
Sulfate	14808-79-8	LA-533-410	B	6.94		mg/kg	1	3.5	53	02/14/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.11		ug/g	1	0.11	0.54	02/16/11
ICP Prep										**02/14/11**
ICP-AES										
Lithium	7439-93-2	LA-505-411		5.02		mg/kg	1	0.43	2.1	02/22/11
Boron	7440-42-8	LA-505-411	B	10.9		mg/kg	1	4.4	22	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		333		mg/kg	1	0.098	0.98	02/15/11
Nickel	7440-02-0	LA-505-412	N	J+ 9.52		mg/kg	1	0.20	2.0	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	02/15/11

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

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
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N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504002
SAF# F11-077
Sample ID B2BWL1

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Antimony	7440-36-0	LA-505-412	U		<0.29		mg/kg	1	0.29	2.9	02/15/11
Barium	7440-39-3	LA-505-412			59.4		mg/kg	1	0.20	2.0	02/15/11
Beryllium	7440-41-7	LA-505-412	B		0.389		mg/kg	1	0.098	0.49	02/15/11
Cadmium	7440-43-9	LA-505-412	U		<0.098		mg/kg	1	0.098	0.98	02/15/11
Chromium	7440-47-3	LA-505-412			7.26		mg/kg	1	0.49	4.9	02/15/11
Cobalt	7440-48-4	LA-505-412			8.85		mg/kg	1	0.098	0.49	02/15/11
Copper	7440-50-8	LA-505-412	N	J-	17.8		mg/kg	1	0.098	0.98	02/15/11
Vanadium	7440-62-2	LA-505-412			58.4		mg/kg	1	0.20	2.0	02/15/11
Zinc	7440-66-6	LA-505-412			43.4		mg/kg	1	0.79	4.9	02/15/11
Lead	7439-92-1	LA-505-412			5.08		mg/kg	1	0.098	0.98	02/15/11
Mercury	7439-97-6	LA-505-412	U		<0.049		mg/kg	1	0.049	0.20	02/15/11
Molybdenum	7439-98-7	LA-505-412	B		0.329		mg/kg	1	0.098	0.98	02/15/11
Strontium	7440-24-6	LA-505-412			36.1		mg/kg	1	0.098	0.98	02/15/11
Tin	7440-31-5	LA-505-412	B		0.474		mg/kg	1	0.098	0.49	02/15/11
Uranium	7440-61-1	LA-505-412			0.494		mg/kg	1	0.098	0.49	02/15/11
Arsenic	7440-38-2	LA-505-412	B		2.84		mg/kg	1	0.39	3.9	02/15/11
Selenium	7782-49-2	LA-505-412	B		1.75		mg/kg	1	0.29	2.9	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504003
SAF# F11-077
Sample ID B2BWL0

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.6		mg/kg	1	1.6	11	02/14/11
Chloride	16887-00-6	LA-533-410	U	<2.3		mg/kg	1	2.3	22	02/14/11
Nitrite-N	NO2-N	LA-533-410	U	<0.98		mg/kg	1	0.98	5.4	02/14/11
Nitrate-N	NO3-N	LA-533-410	U	<1.7		mg/kg	1	1.7	5.4	02/14/11
Sulfate	14808-79-8	LA-533-410	B	4.13		mg/kg	1	3.5	54	02/14/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.11		ug/g	1	0.11	0.54	02/16/11
ICP Prep										**02/14/11**
ICP-AES										
Lithium	7439-93-2	LA-505-411		5.52		mg/kg	1	0.43	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B	9.52		mg/kg	1	4.4	22	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		357		mg/kg	1	0.096	0.96	02/15/11
Nickel	7440-02-0	LA-505-412	N	J+ 10.5		mg/kg	1	0.19	1.9	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504003
SAF# F11-077
Sample ID B2BWL0

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Antimony	7440-36-0	LA-505-412	U		<0.29		mg/kg	1	0.29	2.9	02/15/11
Barium	7440-39-3	LA-505-412			63.0		mg/kg	1	0.19	1.9	02/15/11
Beryllium	7440-41-7	LA-505-412	B		0.328		mg/kg	1	0.096	0.48	02/15/11
Cadmium	7440-43-9	LA-505-412	U		<0.096		mg/kg	1	0.096	0.96	02/15/11
Chromium	7440-47-3	LA-505-412			7.97		mg/kg	1	0.48	4.8	02/15/11
Cobalt	7440-48-4	LA-505-412			9.69		mg/kg	1	0.096	0.48	02/15/11
Copper	7440-50-8	LA-505-412	N	J-	17.9		mg/kg	1	0.096	0.96	02/15/11
Vanadium	7440-62-2	LA-505-412			56.1		mg/kg	1	0.19	1.9	02/15/11
Zinc	7440-66-6	LA-505-412			45.3		mg/kg	1	0.76	4.8	02/15/11
Lead	7439-92-1	LA-505-412			5.58		mg/kg	1	0.096	0.96	02/15/11
Mercury	7439-97-6	LA-505-412	U		<0.048		mg/kg	1	0.048	0.19	02/15/11
Molybdenum	7439-98-7	LA-505-412	B		0.368		mg/kg	1	0.096	0.96	02/15/11
Strontium	7440-24-6	LA-505-412			28.6		mg/kg	1	0.096	0.96	02/15/11
Tin	7440-31-5	LA-505-412	B		0.434		mg/kg	1	0.096	0.48	02/15/11
Uranium	7440-61-1	LA-505-412	B		0.479		mg/kg	1	0.096	0.48	02/15/11
Arsenic	7440-38-2	LA-505-412	B		2.91		mg/kg	1	0.38	3.8	02/15/11
Selenium	7782-49-2	LA-505-412	B		1.54		mg/kg	1	0.29	2.9	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504004
SAF# F11-077
Sample ID B2BWL3

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.5		mg/kg	1	1.5	9.8	02/14/11
Chloride	16887-00-6	LA-533-410	U	<2.1		mg/kg	1	2.1	20	02/14/11
Nitrite-N	NO2-N	LA-533-410	U	<0.89		mg/kg	1	0.89	4.9	02/14/11
Nitrate-N	NO3-N	LA-533-410	U	<1.5		mg/kg	1	1.5	4.9	02/14/11
Sulfate	14808-79-8	LA-533-410	U	<3.2		mg/kg	1	3.2	49	02/14/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10		ug/g	1	0.10	0.50	02/16/11
ICP Prep										**02/14/11**
ICP-AES										
Lithium	7439-93-2	LA-505-411		5.71		mg/kg	1	0.40	2.0	02/22/11
Boron	7440-42-8	LA-505-411	B	8.92		mg/kg	1	4.1	21	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	B	0.339		mg/kg	1	0.095	0.95	02/15/11
Nickel	7440-02-0	LA-505-412	BN	J+ 0.535		mg/kg	1	0.19	1.9	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.095		mg/kg	1	0.095	0.95	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504004
SAF# F11-077
Sample ID B2BWL3

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Antimony	7440-36-0	LA-505-412	U		<0.29		mg/kg	1	0.29	2.9	02/15/11
Barium	7440-39-3	LA-505-412	U		<0.19		mg/kg	1	0.19	1.9	02/15/11
Beryllium	7440-41-7	LA-505-412	U		<0.095		mg/kg	1	0.095	0.48	02/15/11
Cadmium	7440-43-9	LA-505-412	U		<0.095		mg/kg	1	0.095	0.95	02/15/11
Chromium	7440-47-3	LA-505-412	U		<0.48		mg/kg	1	0.48	4.8	02/15/11
Cobalt	7440-48-4	LA-505-412	U		<0.095		mg/kg	1	0.095	0.48	02/15/11
Copper	7440-50-8	LA-505-412	BN	J-	0.323		mg/kg	1	0.095	0.95	02/15/11
Vanadium	7440-62-2	LA-505-412	U		<0.19		mg/kg	1	0.19	1.9	02/15/11
Zinc	7440-66-6	LA-505-412	U		<0.76		mg/kg	1	0.76	4.8	02/15/11
Lead	7439-92-1	LA-505-412	U		<0.095		mg/kg	1	0.095	0.95	02/15/11
Mercury	7439-97-6	LA-505-412	U		<0.048		mg/kg	1	0.048	0.19	02/15/11
Molybdenum	7439-98-7	LA-505-412	U		<0.095		mg/kg	1	0.095	0.95	02/15/11
Strontium	7440-24-6	LA-505-412	B		0.118		mg/kg	1	0.095	0.95	02/15/11
Tin	7440-31-5	LA-505-412	U		<0.095		mg/kg	1	0.095	0.48	02/15/11
Uranium	7440-61-1	LA-505-412	U		<0.095		mg/kg	1	0.095	0.48	02/15/11
Arsenic	7440-38-2	LA-505-412	U		<0.38		mg/kg	1	0.38	3.8	02/15/11
Selenium	7782-49-2	LA-505-412	U		<0.29		mg/kg	1	0.29	2.9	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504005
SAF# F11-077
Sample ID B2BWL4

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.7		mg/kg	1	1.7	11	02/14/11
Chloride	16887-00-6	LA-533-410	U	<2.5		mg/kg	1	2.5	23	02/14/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.7	02/14/11
Nitrate-N	NO3-N	LA-533-410	U	<1.8		mg/kg	1	1.8	5.7	02/14/11
Sulfate	14808-79-8	LA-533-410	B	3.95		mg/kg	1	3.7	57	02/14/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	BN	0.252		ug/g	1	0.11	0.57	02/16/11
ICP Prep										**02/14/11**
ICP-AES										
Lithium	7439-93-2	LA-505-411		6.09		mg/kg	1	0.46	2.3	02/22/11
Boron	7440-42-8	LA-505-411	B	9.07		mg/kg	1	4.7	24	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		371		mg/kg	1	0.10	1.0	02/15/11
Nickel	7440-02-0	LA-505-412	N	J+ 10.1		mg/kg	1	0.20	2.0	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504005
SAF# F11-077
Sample ID B2BWL4

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Antimony	7440-36-0	LA-505-412	U		<0.30		mg/kg	1	0.30	3.0	02/15/11
Barium	7440-39-3	LA-505-412			76.9		mg/kg	1	0.20	2.0	02/15/11
Beryllium	7440-41-7	LA-505-412	B		0.338		mg/kg	1	0.10	0.50	02/15/11
Cadmium	7440-43-9	LA-505-412	B		0.102		mg/kg	1	0.10	1.0	02/15/11
Chromium	7440-47-3	LA-505-412			10.5		mg/kg	1	0.50	5.0	02/15/11
Cobalt	7440-48-4	LA-505-412			8.26		mg/kg	1	0.10	0.50	02/15/11
Copper	7440-50-8	LA-505-412	N	J-	14.2		mg/kg	1	0.10	1.0	02/15/11
Vanadium	7440-62-2	LA-505-412			49.0		mg/kg	1	0.20	2.0	02/15/11
Zinc	7440-66-6	LA-505-412			45.2		mg/kg	1	0.80	5.0	02/15/11
Lead	7439-92-1	LA-505-412			6.33		mg/kg	1	0.10	1.0	02/15/11
Mercury	7439-97-6	LA-505-412	U		<0.050		mg/kg	1	0.050	0.20	02/15/11
Molybdenum	7439-98-7	LA-505-412	B		0.353		mg/kg	1	0.10	1.0	02/15/11
Strontium	7440-24-6	LA-505-412			25.0		mg/kg	1	0.10	1.0	02/15/11
Tin	7440-31-5	LA-505-412	B		0.416		mg/kg	1	0.10	0.50	02/15/11
Uranium	7440-61-1	LA-505-412			0.592		mg/kg	1	0.10	0.50	02/15/11
Arsenic	7440-38-2	LA-505-412	B		2.71		mg/kg	1	0.40	4.0	02/15/11
Selenium	7782-49-2	LA-505-412	B		1.22		mg/kg	1	0.30	3.0	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504006
SAF# F11-077
Sample ID B2BWK0

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.7		mg/kg	1	1.7	11	02/14/11
Chloride	16887-00-6	LA-533-410	U	<2.4		mg/kg	1	2.4	22	02/14/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.5	02/14/11
Nitrate-N	NO3-N	LA-533-410	U	<1.7		mg/kg	1	1.7	5.5	02/14/11
Sulfate	14808-79-8	LA-533-410	U	<3.6		mg/kg	1	3.6	55	02/14/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	BN	0.315		ug/g	1	0.11	0.55	02/16/11
ICP Prep										**02/14/11**
ICP-AES										
Lithium	7439-93-2	LA-505-411		6.08		mg/kg	1	0.44	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B	12.2		mg/kg	1	4.5	23	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		376		mg/kg	1	0.10	1.0	02/15/11
Nickel	7440-02-0	LA-505-412	N	J+ 9.92		mg/kg	1	0.20	2.0	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504006
SAF# F11-077
Sample ID B2BWK0

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Antimony	7440-36-0	LA-505-412	U		<0.30		mg/kg	1	0.30	3.0	02/15/11
Barium	7440-39-3	LA-505-412			71.0		mg/kg	1	0.20	2.0	02/15/11
Beryllium	7440-41-7	LA-505-412	B		0.374		mg/kg	1	0.10	0.50	02/15/11
Cadmium	7440-43-9	LA-505-412	B		0.105		mg/kg	1	0.10	1.0	02/15/11
Chromium	7440-47-3	LA-505-412			9.72		mg/kg	1	0.50	5.0	02/15/11
Cobalt	7440-48-4	LA-505-412			8.59		mg/kg	1	0.10	0.50	02/15/11
Copper	7440-50-8	LA-505-412	N	J-	14.9		mg/kg	1	0.10	1.0	02/15/11
Vanadium	7440-62-2	LA-505-412			46.9		mg/kg	1	0.20	2.0	02/15/11
Zinc	7440-66-6	LA-505-412			45.1		mg/kg	1	0.81	5.0	02/15/11
Lead	7439-92-1	LA-505-412			6.64		mg/kg	1	0.10	1.0	02/15/11
Mercury	7439-97-6	LA-505-412	U		<0.050		mg/kg	1	0.050	0.20	02/15/11
Molybdenum	7439-98-7	LA-505-412	B		0.346		mg/kg	1	0.10	1.0	02/15/11
Strontium	7440-24-6	LA-505-412			26.7		mg/kg	1	0.10	1.0	02/15/11
Tin	7440-31-5	LA-505-412	B		0.430		mg/kg	1	0.10	0.50	02/15/11
Uranium	7440-61-1	LA-505-412	B		0.457		mg/kg	1	0.10	0.50	02/15/11
Arsenic	7440-38-2	LA-505-412	B		2.71		mg/kg	1	0.40	4.0	02/15/11
Selenium	7782-49-2	LA-505-412	B		1.24		mg/kg	1	0.30	3.0	02/15/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
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C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504007
SAF# F11-077
Sample ID B2BWK1

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.7		mg/kg	1	1.7	11	02/14/11
Chloride	16887-00-6	LA-533-410		27.0		mg/kg	1	2.4	22	02/14/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.6	02/14/11
Nitrate-N	NO3-N	LA-533-410	U	<1.7		mg/kg	1	1.7	5.6	02/14/11
Sulfate	14808-79-8	LA-533-410	U	<3.7		mg/kg	1	3.7	56	02/14/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.11		ug/g	1	0.11	0.56	02/16/11
ICP Prep										**02/14/11**
ICP-AES										
Lithium	7439-93-2	LA-505-411		6.68		mg/kg	1	0.45	2.3	02/22/11
Boron	7440-42-8	LA-505-411	B	8.03		mg/kg	1	4.6	23	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		409		mg/kg	1	0.11	1.1	02/15/11
Nickel	7440-02-0	LA-505-412	N	J+ 10.8		mg/kg	1	0.21	2.1	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.11		mg/kg	1	0.11	1.1	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504007
SAF# F11-077
Sample ID B2BWK1

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Antimony	7440-36-0	LA-505-412	U		<0.32		mg/kg	1	0.32	3.2	02/15/11
Barium	7440-39-3	LA-505-412			88.4		mg/kg	1	0.21	2.1	02/15/11
Beryllium	7440-41-7	LA-505-412	B		0.370		mg/kg	1	0.11	0.53	02/15/11
Cadmium	7440-43-9	LA-505-412	B		0.121		mg/kg	1	0.11	1.1	02/15/11
Chromium	7440-47-3	LA-505-412			12.3		mg/kg	1	0.53	5.3	02/15/11
Cobalt	7440-48-4	LA-505-412			8.49		mg/kg	1	0.11	0.53	02/15/11
Copper	7440-50-8	LA-505-412	N	J-	14.1		mg/kg	1	0.11	1.1	02/15/11
Vanadium	7440-62-2	LA-505-412			47.5		mg/kg	1	0.21	2.1	02/15/11
Zinc	7440-66-6	LA-505-412			44.0		mg/kg	1	0.85	5.3	02/15/11
Lead	7439-92-1	LA-505-412			5.58		mg/kg	1	0.11	1.1	02/15/11
Mercury	7439-97-6	LA-505-412	U		<0.053		mg/kg	1	0.053	0.21	02/15/11
Molybdenum	7439-98-7	LA-505-412	B		0.336		mg/kg	1	0.11	1.1	02/15/11
Strontium	7440-24-6	LA-505-412			26.8		mg/kg	1	0.11	1.1	02/15/11
Tin	7440-31-5	LA-505-412	B		0.409		mg/kg	1	0.11	0.53	02/15/11
Uranium	7440-61-1	LA-505-412	B		0.526		mg/kg	1	0.11	0.53	02/15/11
Arsenic	7440-38-2	LA-505-412	B		2.69		mg/kg	1	0.43	4.3	02/15/11
Selenium	7782-49-2	LA-505-412	B		0.929		mg/kg	1	0.32	3.2	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504008
SAF# F11-077
Sample ID B2BWK2

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.7		mg/kg	1	1.7	11	02/14/11
Chloride	16887-00-6	LA-533-410	B	2.90		mg/kg	1	2.5	23	02/14/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.7	02/14/11
Nitrate-N	NO3-N	LA-533-410	U	<1.8		mg/kg	1	1.8	5.7	02/14/11
Sulfate	14808-79-8	LA-533-410	B	6.86		mg/kg	1	3.7	57	02/14/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.11		ug/g	1	0.11	0.57	02/16/11
ICP Prep										**02/14/11**
ICP-AES										
Lithium	7439-93-2	LA-505-411		7.11		mg/kg	1	0.46	2.3	02/22/11
Boron	7440-42-8	LA-505-411	B	10.4		mg/kg	1	4.7	23	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		402		mg/kg	1	0.10	1.0	02/15/11
Nickel	7440-02-0	LA-505-412	N	J+ 10.8		mg/kg	1	0.21	2.1	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504008
SAF# F11-077
Sample ID B2BWK2

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Antimony	7440-36-0	LA-505-412	U		<0.31		mg/kg	1	0.31	3.1	02/15/11
Barium	7440-39-3	LA-505-412			79.6		mg/kg	1	0.21	2.1	02/15/11
Beryllium	7440-41-7	LA-505-412	B		0.360		mg/kg	1	0.10	0.51	02/15/11
Cadmium	7440-43-9	LA-505-412	U		<0.10		mg/kg	1	0.10	1.0	02/15/11
Chromium	7440-47-3	LA-505-412			12.4		mg/kg	1	0.51	5.1	02/15/11
Cobalt	7440-48-4	LA-505-412			8.27		mg/kg	1	0.10	0.51	02/15/11
Copper	7440-50-8	LA-505-412	N	J-	15.9		mg/kg	1	0.10	1.0	02/15/11
Vanadium	7440-62-2	LA-505-412			44.5		mg/kg	1	0.21	2.1	02/15/11
Zinc	7440-66-6	LA-505-412			43.4		mg/kg	1	0.82	5.1	02/15/11
Lead	7439-92-1	LA-505-412			5.61		mg/kg	1	0.10	1.0	02/15/11
Mercury	7439-97-6	LA-505-412	U		<0.051		mg/kg	1	0.051	0.21	02/15/11
Molybdenum	7439-98-7	LA-505-412	B		0.290		mg/kg	1	0.10	1.0	02/15/11
Strontium	7440-24-6	LA-505-412			24.8		mg/kg	1	0.10	1.0	02/15/11
Tin	7440-31-5	LA-505-412	B		0.418		mg/kg	1	0.10	0.51	02/15/11
Uranium	7440-61-1	LA-505-412			0.519		mg/kg	1	0.10	0.51	02/15/11
Arsenic	7440-38-2	LA-505-412	B		2.67		mg/kg	1	0.41	4.1	02/15/11
Selenium	7782-49-2	LA-505-412	B		1.05		mg/kg	1	0.31	3.1	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504009
SAF# F11-077
Sample ID B2BWK3

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.7		mg/kg	1	1.7	11	02/14/11
Chloride	16887-00-6	LA-533-410	B	2.43		mg/kg	1	2.4	23	02/14/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.7	02/14/11
Nitrate-N	NO3-N	LA-533-410	U	<1.8		mg/kg	1	1.8	5.7	02/14/11
Sulfate	14808-79-8	LA-533-410	B	3.80		mg/kg	1	3.7	57	02/14/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.11		ug/g	1	0.11	0.57	02/16/11
ICP Prep										**02/14/11**
ICP-AES										
Lithium	7439-93-2	LA-505-411		6.26		mg/kg	1	0.46	2.3	02/22/11
Boron	7440-42-8	LA-505-411	B	8.65		mg/kg	1	4.7	23	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		389		mg/kg	1	0.11	1.1	02/15/11
Nickel	7440-02-0	LA-505-412	N	J+ 10.1		mg/kg	1	0.22	2.2	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.11		mg/kg	1	0.11	1.1	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504009
SAF# F11-077
Sample ID B2BWK3

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Antimony	7440-36-0	LA-505-412	U	<0.33		mg/kg	1	0.33	3.3	02/15/11
Barium	7440-39-3	LA-505-412		77.8		mg/kg	1	0.22	2.2	02/15/11
Beryllium	7440-41-7	LA-505-412	B	0.315		mg/kg	1	0.11	0.55	02/15/11
Cadmium	7440-43-9	LA-505-412	U	<0.11		mg/kg	1	0.11	1.1	02/15/11
Chromium	7440-47-3	LA-505-412		10.8		mg/kg	1	0.55	5.5	02/15/11
Cobalt	7440-48-4	LA-505-412		8.34		mg/kg	1	0.11	0.55	02/15/11
Copper	7440-50-8	LA-505-412	N	J- 14.5		mg/kg	1	0.11	1.1	02/15/11
Vanadium	7440-62-2	LA-505-412		48.5		mg/kg	1	0.22	2.2	02/15/11
Zinc	7440-66-6	LA-505-412		46.1		mg/kg	1	0.88	5.5	02/15/11
Lead	7439-92-1	LA-505-412		5.48		mg/kg	1	0.11	1.1	02/15/11
Mercury	7439-97-6	LA-505-412	U	<0.055		mg/kg	1	0.055	0.22	02/15/11
Molybdenum	7439-98-7	LA-505-412	B	0.360		mg/kg	1	0.11	1.1	02/15/11
Strontium	7440-24-6	LA-505-412		27.9		mg/kg	1	0.11	1.1	02/15/11
Tin	7440-31-5	LA-505-412	B	0.418		mg/kg	1	0.11	0.55	02/15/11
Uranium	7440-61-1	LA-505-412	B	0.463		mg/kg	1	0.11	0.55	02/15/11
Arsenic	7440-38-2	LA-505-412	B	2.67		mg/kg	1	0.44	4.4	02/15/11
Selenium	7782-49-2	LA-505-412	B	0.895		mg/kg	1	0.33	3.3	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504010
SAF# F11-077
Sample ID B2BWK4

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/15/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.7		mg/kg	1	1.7	11	02/15/11
Chloride	16887-00-6	LA-533-410	B	2.72		mg/kg	1	2.4	22	02/15/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.6	02/15/11
Nitrate-N	NO3-N	LA-533-410	U	<1.7		mg/kg	1	1.7	5.6	02/15/11
Sulfate	14808-79-8	LA-533-410	U	<3.7		mg/kg	1	3.7	56	02/15/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.11		ug/g	1	0.11	0.57	02/16/11
ICP Prep										**02/14/11**
ICP-AES										
Lithium	7439-93-2	LA-505-411		6.01		mg/kg	1	0.45	2.3	02/22/11
Boron	7440-42-8	LA-505-411	B	8.28		mg/kg	1	4.7	23	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		404		mg/kg	1	0.10	1.0	02/15/11
Nickel	7440-02-0	LA-505-412	N	J+ 10.3		mg/kg	1	0.20	2.0	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504010
SAF# F11-077
Sample ID B2BWK4

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Antimony	7440-36-0	LA-505-412	U		<0.31		mg/kg	1	0.31	3.1	02/15/11
Barium	7440-39-3	LA-505-412			78.7		mg/kg	1	0.20	2.0	02/15/11
Beryllium	7440-41-7	LA-505-412	B		0.344		mg/kg	1	0.10	0.51	02/15/11
Cadmium	7440-43-9	LA-505-412	U		<0.10		mg/kg	1	0.10	1.0	02/15/11
Chromium	7440-47-3	LA-505-412			9.22		mg/kg	1	0.51	5.1	02/15/11
Cobalt	7440-48-4	LA-505-412			9.00		mg/kg	1	0.10	0.51	02/15/11
Copper	7440-50-8	LA-505-412	N	J-	15.6		mg/kg	1	0.10	1.0	02/15/11
Vanadium	7440-62-2	LA-505-412			48.9		mg/kg	1	0.20	2.0	02/15/11
Zinc	7440-66-6	LA-505-412			47.3		mg/kg	1	0.81	5.1	02/15/11
Lead	7439-92-1	LA-505-412			5.95		mg/kg	1	0.10	1.0	02/15/11
Mercury	7439-97-6	LA-505-412	U		<0.051		mg/kg	1	0.051	0.20	02/15/11
Molybdenum	7439-98-7	LA-505-412	B		0.350		mg/kg	1	0.10	1.0	02/15/11
Strontium	7440-24-6	LA-505-412			24.9		mg/kg	1	0.10	1.0	02/15/11
Tin	7440-31-5	LA-505-412	B		0.412		mg/kg	1	0.10	0.51	02/15/11
Uranium	7440-61-1	LA-505-412	B		0.454		mg/kg	1	0.10	0.51	02/15/11
Arsenic	7440-38-2	LA-505-412	B		2.99		mg/kg	1	0.41	4.1	02/15/11
Selenium	7782-49-2	LA-505-412	B		1.24		mg/kg	1	0.31	3.1	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504011
SAF# F11-077
Sample ID B2BWK5

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/15/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.6		mg/kg	1	1.6	11	02/15/11
Chloride	16887-00-6	LA-533-410	U	<2.3		mg/kg	1	2.3	22	02/15/11
Nitrite-N	NO2-N	LA-533-410	U	<0.98		mg/kg	1	0.98	5.4	02/15/11
Nitrate-N	NO3-N	LA-533-410	U	<1.7		mg/kg	1	1.7	5.4	02/15/11
Sulfate	14808-79-8	LA-533-410	U	<3.6		mg/kg	1	3.6	54	02/15/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	BN	0.461		ug/g	1	0.11	0.54	02/16/11
ICP Prep										**02/14/11**
ICP-AES										
Lithium	7439-93-2	LA-505-411		4.97		mg/kg	1	0.43	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B	10.4		mg/kg	1	4.4	22	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		366		mg/kg	1	0.10	1.0	02/15/11
Nickel	7440-02-0	LA-505-412	N	J+ 10.6		mg/kg	1	0.20	2.0	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504011
SAF# F11-077
Sample ID B2BWK5

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Antimony	7440-36-0	LA-505-412	U		<0.31		mg/kg	1	0.31	3.1	02/15/11
Barium	7440-39-3	LA-505-412			68.0		mg/kg	1	0.20	2.0	02/15/11
Beryllium	7440-41-7	LA-505-412	B		0.339		mg/kg	1	0.10	0.51	02/15/11
Cadmium	7440-43-9	LA-505-412	U		<0.10		mg/kg	1	0.10	1.0	02/15/11
Chromium	7440-47-3	LA-505-412			10.0		mg/kg	1	0.51	5.1	02/15/11
Cobalt	7440-48-4	LA-505-412			8.90		mg/kg	1	0.10	0.51	02/15/11
Copper	7440-50-8	LA-505-412	N	J-	15.5		mg/kg	1	0.10	1.0	02/15/11
Vanadium	7440-62-2	LA-505-412			54.9		mg/kg	1	0.20	2.0	02/15/11
Zinc	7440-66-6	LA-505-412			51.9		mg/kg	1	0.81	5.1	02/15/11
Lead	7439-92-1	LA-505-412			5.45		mg/kg	1	0.10	1.0	02/15/11
Mercury	7439-97-6	LA-505-412	U		<0.051		mg/kg	1	0.051	0.20	02/15/11
Molybdenum	7439-98-7	LA-505-412	B		0.341		mg/kg	1	0.10	1.0	02/15/11
Strontium	7440-24-6	LA-505-412			25.1		mg/kg	1	0.10	1.0	02/15/11
Tin	7440-31-5	LA-505-412	B		0.449		mg/kg	1	0.10	0.51	02/15/11
Uranium	7440-61-1	LA-505-412	B		0.445		mg/kg	1	0.10	0.51	02/15/11
Arsenic	7440-38-2	LA-505-412	B		2.57		mg/kg	1	0.41	4.1	02/15/11
Selenium	7782-49-2	LA-505-412	B		1.56		mg/kg	1	0.31	3.1	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504012
SAF# F11-077
Sample ID B2BWK6

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/15/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.6		mg/kg	1	1.6	11	02/15/11
Chloride	16887-00-6	LA-533-410	U	<2.3		mg/kg	1	2.3	21	02/15/11
Nitrite-N	NO2-N	LA-533-410	U	<0.96		mg/kg	1	0.96	5.3	02/15/11
Nitrate-N	NO3-N	LA-533-410	U	<1.6		mg/kg	1	1.6	5.3	02/15/11
Sulfate	14808-79-8	LA-533-410	U	<3.5		mg/kg	1	3.5	53	02/15/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.11		ug/g	1	0.11	0.54	02/16/11
ICP Prep										**02/14/11**
ICP-AES										
Lithium	7439-93-2	LA-505-411		7.17		mg/kg	1	0.43	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B	8.04		mg/kg	1	4.5	22	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		364		mg/kg	1	0.10	1.0	02/15/11
Nickel	7440-02-0	LA-505-412	N	J+ 11.2		mg/kg	1	0.21	2.1	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504012
SAF# F11-077
Sample ID B2BWK6

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Antimony	7440-36-0	LA-505-412	U		<0.31		mg/kg	1	0.31	3.1	02/15/11
Barium	7440-39-3	LA-505-412			73.6		mg/kg	1	0.21	2.1	02/15/11
Beryllium	7440-41-7	LA-505-412	B		0.347		mg/kg	1	0.10	0.51	02/15/11
Cadmium	7440-43-9	LA-505-412	U		<0.10		mg/kg	1	0.10	1.0	02/15/11
Chromium	7440-47-3	LA-505-412			11.6		mg/kg	1	0.51	5.1	02/15/11
Cobalt	7440-48-4	LA-505-412			8.18		mg/kg	1	0.10	0.51	02/15/11
Copper	7440-50-8	LA-505-412	N	J-	16.1		mg/kg	1	0.10	1.0	02/15/11
Vanadium	7440-62-2	LA-505-412			49.2		mg/kg	1	0.21	2.1	02/15/11
Zinc	7440-66-6	LA-505-412			45.7		mg/kg	1	0.82	5.1	02/15/11
Lead	7439-92-1	LA-505-412			6.36		mg/kg	1	0.10	1.0	02/15/11
Mercury	7439-97-6	LA-505-412	U		<0.051		mg/kg	1	0.051	0.21	02/15/11
Molybdenum	7439-98-7	LA-505-412	B		0.401		mg/kg	1	0.10	1.0	02/15/11
Strontium	7440-24-6	LA-505-412			31.6		mg/kg	1	0.10	1.0	02/15/11
Tin	7440-31-5	LA-505-412	B		0.459		mg/kg	1	0.10	0.51	02/15/11
Uranium	7440-61-1	LA-505-412			0.799		mg/kg	1	0.10	0.51	02/15/11
Arsenic	7440-38-2	LA-505-412	B		3.79		mg/kg	1	0.41	4.1	02/15/11
Selenium	7782-49-2	LA-505-412	B		0.872		mg/kg	1	0.31	3.1	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504013
SAF# F11-077
Sample ID B2BWK7

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/15/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.7		mg/kg	1	1.7	11	02/15/11
Chloride	16887-00-6	LA-533-410	B	7.58		mg/kg	1	2.4	22	02/15/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.5	02/15/11
Nitrate-N	NO3-N	LA-533-410	U	<1.7		mg/kg	1	1.7	5.5	02/15/11
Sulfate	14808-79-8	LA-533-410	U	<3.6		mg/kg	1	3.6	55	02/15/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.11		ug/g	1	0.11	0.56	02/16/11
ICP Prep										**02/14/11**
ICP-AES										
Lithium	7439-93-2	LA-505-411		6.62		mg/kg	1	0.45	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B	8.31		mg/kg	1	4.6	23	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		366		mg/kg	1	0.11	1.1	02/15/11
Nickel	7440-02-0	LA-505-412	N	J+ 11.4		mg/kg	1	0.22	2.2	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.11		mg/kg	1	0.11	1.1	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504013
SAF# F11-077
Sample ID B2BWK7

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Antimony	7440-36-0	LA-505-412	U		<0.33		mg/kg	1	0.33	3.3	02/15/11
Barium	7440-39-3	LA-505-412			59.7		mg/kg	1	0.22	2.2	02/15/11
Beryllium	7440-41-7	LA-505-412	B		0.306		mg/kg	1	0.11	0.55	02/15/11
Cadmium	7440-43-9	LA-505-412	U		<0.11		mg/kg	1	0.11	1.1	02/15/11
Chromium	7440-47-3	LA-505-412			9.23		mg/kg	1	0.55	5.5	02/15/11
Cobalt	7440-48-4	LA-505-412			9.56		mg/kg	1	0.11	0.55	02/15/11
Copper	7440-50-8	LA-505-412	N	J-	19.4		mg/kg	1	0.11	1.1	02/15/11
Vanadium	7440-62-2	LA-505-412			56.8		mg/kg	1	0.22	2.2	02/15/11
Zinc	7440-66-6	LA-505-412			45.1		mg/kg	1	0.88	5.5	02/15/11
Lead	7439-92-1	LA-505-412			5.67		mg/kg	1	0.11	1.1	02/15/11
Mercury	7439-97-6	LA-505-412	U		<0.055		mg/kg	1	0.055	0.22	02/15/11
Molybdenum	7439-98-7	LA-505-412	B		0.354		mg/kg	1	0.11	1.1	02/15/11
Strontium	7440-24-6	LA-505-412			32.7		mg/kg	1	0.11	1.1	02/15/11
Tin	7440-31-5	LA-505-412	B		0.469		mg/kg	1	0.11	0.55	02/15/11
Uranium	7440-61-1	LA-505-412			0.780		mg/kg	1	0.11	0.55	02/15/11
Arsenic	7440-38-2	LA-505-412	B		3.46		mg/kg	1	0.44	4.4	02/15/11
Selenium	7782-49-2	LA-505-412	B		1.55		mg/kg	1	0.33	3.3	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504014
SAF# F11-077
Sample ID B2BWK8

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/15/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.6		mg/kg	1	1.6	11	02/15/11
Chloride	16887-00-6	LA-533-410	U	<2.3		mg/kg	1	2.3	22	02/15/11
Nitrite-N	NO2-N	LA-533-410	U	<0.98		mg/kg	1	0.98	5.4	02/15/11
Nitrate-N	NO3-N	LA-533-410	U	<1.7		mg/kg	1	1.7	5.4	02/15/11
Sulfate	14808-79-8	LA-533-410	U	<3.5		mg/kg	1	3.5	54	02/15/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.11		ug/g	1	0.11	0.54	02/16/11
ICP Prep										**02/14/11**
ICP-AES										
Lithium	7439-93-2	LA-505-411		5.66		mg/kg	1	0.44	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B	11.3		mg/kg	1	4.5	22	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		391		mg/kg	1	0.10	1.0	02/15/11
Nickel	7440-02-0	LA-505-412	N	J+ 10.9		mg/kg	1	0.20	2.0	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504014
SAF# F11-077
Sample ID B2BWK8

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Antimony	7440-36-0	LA-505-412	U		<0.31		mg/kg	1	0.31	3.1	02/15/11
Barium	7440-39-3	LA-505-412			66.9		mg/kg	1	0.20	2.0	02/15/11
Beryllium	7440-41-7	LA-505-412	B		0.320		mg/kg	1	0.10	0.51	02/15/11
Cadmium	7440-43-9	LA-505-412	U		<0.10		mg/kg	1	0.10	1.0	02/15/11
Chromium	7440-47-3	LA-505-412			8.25		mg/kg	1	0.51	5.1	02/15/11
Cobalt	7440-48-4	LA-505-412			9.32		mg/kg	1	0.10	0.51	02/15/11
Copper	7440-50-8	LA-505-412	N	J-	22.1		mg/kg	1	0.10	1.0	02/15/11
Vanadium	7440-62-2	LA-505-412			57.4		mg/kg	1	0.20	2.0	02/15/11
Zinc	7440-66-6	LA-505-412			45.3		mg/kg	1	0.82	5.1	02/15/11
Lead	7439-92-1	LA-505-412			6.29		mg/kg	1	0.10	1.0	02/15/11
Mercury	7439-97-6	LA-505-412	U		<0.051		mg/kg	1	0.051	0.20	02/15/11
Molybdenum	7439-98-7	LA-505-412	B		0.368		mg/kg	1	0.10	1.0	02/15/11
Strontium	7440-24-6	LA-505-412			30.2		mg/kg	1	0.10	1.0	02/15/11
Tin	7440-31-5	LA-505-412	B		0.496		mg/kg	1	0.10	0.51	02/15/11
Uranium	7440-61-1	LA-505-412	B		0.466		mg/kg	1	0.10	0.51	02/15/11
Arsenic	7440-38-2	LA-505-412	B		3.19		mg/kg	1	0.41	4.1	02/15/11
Selenium	7782-49-2	LA-505-412	B		1.52		mg/kg	1	0.31	3.1	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504015
SAF# F11-077
Sample ID B2BWK9

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/15/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.6		mg/kg	1	1.6	11	02/15/11
Chloride	16887-00-6	LA-533-410	B	12.0		mg/kg	1	2.3	22	02/15/11
Nitrite-N	NO2-N	LA-533-410	U	<0.98		mg/kg	1	0.98	5.4	02/15/11
Nitrate-N	NO3-N	LA-533-410	B	1.78		mg/kg	1	1.7	5.4	02/15/11
Sulfate	14808-79-8	LA-533-410	B	9.53		mg/kg	1	3.5	54	02/15/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.11		ug/g	1	0.11	0.54	02/16/11
ICP Prep										**02/14/11**
ICP-AES										
Lithium	7439-93-2	LA-505-411		5.60		mg/kg	1	0.43	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B	9.79		mg/kg	1	4.4	22	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		401		mg/kg	1	0.10	1.0	02/15/11
Nickel	7440-02-0	LA-505-412	N	J+ 11.3		mg/kg	1	0.20	2.0	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504015
SAF# F11-077
Sample ID B2BWK9

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Antimony	7440-36-0	LA-505-412	U		<0.30		mg/kg	1	0.30	3.0	02/15/11
Barium	7440-39-3	LA-505-412			67.1		mg/kg	1	0.20	2.0	02/15/11
Beryllium	7440-41-7	LA-505-412	B		0.338		mg/kg	1	0.10	0.50	02/15/11
Cadmium	7440-43-9	LA-505-412	U		<0.10		mg/kg	1	0.10	1.0	02/15/11
Chromium	7440-47-3	LA-505-412			8.47		mg/kg	1	0.50	5.0	02/15/11
Cobalt	7440-48-4	LA-505-412			10.2		mg/kg	1	0.10	0.50	02/15/11
Copper	7440-50-8	LA-505-412	N	J-	19.7		mg/kg	1	0.10	1.0	02/15/11
Vanadium	7440-62-2	LA-505-412			62.7		mg/kg	1	0.20	2.0	02/15/11
Zinc	7440-66-6	LA-505-412			48.3		mg/kg	1	0.80	5.0	02/15/11
Lead	7439-92-1	LA-505-412			6.02		mg/kg	1	0.10	1.0	02/15/11
Mercury	7439-97-6	LA-505-412			0.424		mg/kg	1	0.050	0.20	02/15/11
Molybdenum	7439-98-7	LA-505-412	B		0.375		mg/kg	1	0.10	1.0	02/15/11
Strontium	7440-24-6	LA-505-412			32.4		mg/kg	1	0.10	1.0	02/15/11
Tin	7440-31-5	LA-505-412	B		0.499		mg/kg	1	0.10	0.50	02/15/11
Uranium	7440-61-1	LA-505-412	B		0.489		mg/kg	1	0.10	0.50	02/15/11
Arsenic	7440-38-2	LA-505-412	B		3.25		mg/kg	1	0.40	4.0	02/15/11
Selenium	7782-49-2	LA-505-412	B		1.42		mg/kg	1	0.30	3.0	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504016
SAF# F11-077
Sample ID B2BWJ7

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/15/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.7		mg/kg	1	1.7	11	02/15/11
Chloride	16887-00-6	LA-533-410	B	2.55		mg/kg	1	2.4	22	02/15/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.6	02/15/11
Nitrate-N	NO3-N	LA-533-410	U	<1.7		mg/kg	1	1.7	5.6	02/15/11
Sulfate	14808-79-8	LA-533-410	B	4.21		mg/kg	1	3.6	56	02/15/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.11		ug/g	1	0.11	0.56	02/16/11
ICP Prep										**02/14/11**
ICP-AES										
Lithium	7439-93-2	LA-505-411		6.36		mg/kg	1	0.45	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B	8.71		mg/kg	1	4.6	23	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		420		mg/kg	1	0.11	1.1	02/15/11
Nickel	7440-02-0	LA-505-412	N	J+ 11.3		mg/kg	1	0.21	2.1	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.11		mg/kg	1	0.11	1.1	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504016
SAF# F11-077
Sample ID B2BWJ7

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Antimony	7440-36-0	LA-505-412	U		<0.32		mg/kg	1	0.32	3.2	02/15/11
Barium	7440-39-3	LA-505-412			79.0		mg/kg	1	0.21	2.1	02/15/11
Beryllium	7440-41-7	LA-505-412	B		0.363		mg/kg	1	0.11	0.54	02/15/11
Cadmium	7440-43-9	LA-505-412	U		<0.11		mg/kg	1	0.11	1.1	02/15/11
Chromium	7440-47-3	LA-505-412			11.4		mg/kg	1	0.54	5.4	02/15/11
Cobalt	7440-48-4	LA-505-412			9.25		mg/kg	1	0.11	0.54	02/15/11
Copper	7440-50-8	LA-505-412	N	J-	15.4		mg/kg	1	0.11	1.1	02/15/11
Vanadium	7440-62-2	LA-505-412			56.8		mg/kg	1	0.21	2.1	02/15/11
Zinc	7440-66-6	LA-505-412			48.7		mg/kg	1	0.86	5.4	02/15/11
Lead	7439-92-1	LA-505-412			6.05		mg/kg	1	0.11	1.1	02/15/11
Mercury	7439-97-6	LA-505-412	U		<0.054		mg/kg	1	0.054	0.21	02/15/11
Molybdenum	7439-98-7	LA-505-412	B		0.405		mg/kg	1	0.11	1.1	02/15/11
Strontium	7440-24-6	LA-505-412			25.7		mg/kg	1	0.11	1.1	02/15/11
Tin	7440-31-5	LA-505-412	B		0.476		mg/kg	1	0.11	0.54	02/15/11
Uranium	7440-61-1	LA-505-412	B		0.515		mg/kg	1	0.11	0.54	02/15/11
Arsenic	7440-38-2	LA-505-412	B		2.69		mg/kg	1	0.43	4.3	02/15/11
Selenium	7782-49-2	LA-505-412	B		1.07		mg/kg	1	0.32	3.2	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504017
SAF# F11-077
Sample ID B2BWJ8

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/15/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.7		mg/kg	1	1.7	11	02/15/11
Chloride	16887-00-6	LA-533-410	B	7.27		mg/kg	1	2.4	22	02/15/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.6	02/15/11
Nitrate-N	NO3-N	LA-533-410	U	<1.7		mg/kg	1	1.7	5.6	02/15/11
Sulfate	14808-79-8	LA-533-410	B	5.23		mg/kg	1	3.7	56	02/15/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.11		ug/g	1	0.11	0.57	02/16/11
ICP Prep										**02/14/11**
ICP-AES										
Lithium	7439-93-2	LA-505-411		7.08		mg/kg	1	0.45	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B	9.44		mg/kg	1	4.6	23	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		446		mg/kg	1	0.11	1.1	02/15/11
Nickel	7440-02-0	LA-505-412	N	J+ 11.8		mg/kg	1	0.21	2.1	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.11		mg/kg	1	0.11	1.1	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504017
SAF# F11-077
Sample ID B2BWJ8

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Antimony	7440-36-0	LA-505-412	U	<0.32		mg/kg	1	0.32	3.2	02/15/11
Barium	7440-39-3	LA-505-412		87.2		mg/kg	1	0.21	2.1	02/15/11
Beryllium	7440-41-7	LA-505-412	B	0.421		mg/kg	1	0.11	0.53	02/15/11
Cadmium	7440-43-9	LA-505-412	B	0.113		mg/kg	1	0.11	1.1	02/15/11
Chromium	7440-47-3	LA-505-412		12.9		mg/kg	1	0.53	5.3	02/15/11
Cobalt	7440-48-4	LA-505-412		9.47		mg/kg	1	0.11	0.53	02/15/11
Copper	7440-50-8	LA-505-412	N	J- 16.1		mg/kg	1	0.11	1.1	02/15/11
Vanadium	7440-62-2	LA-505-412		50.1		mg/kg	1	0.21	2.1	02/15/11
Zinc	7440-66-6	LA-505-412		46.8		mg/kg	1	0.84	5.3	02/15/11
Lead	7439-92-1	LA-505-412		5.81		mg/kg	1	0.11	1.1	02/15/11
Mercury	7439-97-6	LA-505-412	U	<0.053		mg/kg	1	0.053	0.21	02/15/11
Molybdenum	7439-98-7	LA-505-412	B	0.358		mg/kg	1	0.11	1.1	02/15/11
Strontium	7440-24-6	LA-505-412		27.4		mg/kg	1	0.11	1.1	02/15/11
Tin	7440-31-5	LA-505-412	B	0.454		mg/kg	1	0.11	0.53	02/15/11
Uranium	7440-61-1	LA-505-412		0.575		mg/kg	1	0.11	0.53	02/15/11
Arsenic	7440-38-2	LA-505-412	B	2.88		mg/kg	1	0.42	4.2	02/15/11
Selenium	7782-49-2	LA-505-412	B	0.904		mg/kg	1	0.32	3.2	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504018
SAF# F11-077
Sample ID B2BWJ9

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/15/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.7		mg/kg	1	1.7	11	02/15/11
Chloride	16887-00-6	LA-533-410	B	22.3		mg/kg	1	2.4	23	02/15/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.6	02/15/11
Nitrate-N	NO3-N	LA-533-410	U	<1.7		mg/kg	1	1.7	5.6	02/15/11
Sulfate	14808-79-8	LA-533-410	B	6.65		mg/kg	1	3.7	56	02/15/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	N	0.586		ug/g	1	0.11	0.56	02/16/11
ICP Prep										**02/14/11**
ICP-AES										
Lithium	7439-93-2	LA-505-411		6.85		mg/kg	1	0.45	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B	7.97		mg/kg	1	4.6	23	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		396		mg/kg	1	0.10	1.0	02/15/11
Nickel	7440-02-0	LA-505-412	N	J+ 11.2		mg/kg	1	0.21	2.1	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504018
SAF# F11-077
Sample ID B2BWJ9

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Antimony	7440-36-0	LA-505-412	U		<0.31		mg/kg	1	0.31	3.1	02/15/11
Barium	7440-39-3	LA-505-412			85.8		mg/kg	1	0.21	2.1	02/15/11
Beryllium	7440-41-7	LA-505-412	B		0.348		mg/kg	1	0.10	0.52	02/15/11
Cadmium	7440-43-9	LA-505-412	U		<0.10		mg/kg	1	0.10	1.0	02/15/11
Chromium	7440-47-3	LA-505-412			12.3		mg/kg	1	0.52	5.2	02/15/11
Cobalt	7440-48-4	LA-505-412			8.70		mg/kg	1	0.10	0.52	02/15/11
Copper	7440-50-8	LA-505-412	N	J-	14.9		mg/kg	1	0.10	1.0	02/15/11
Vanadium	7440-62-2	LA-505-412			50.8		mg/kg	1	0.21	2.1	02/15/11
Zinc	7440-66-6	LA-505-412			46.1		mg/kg	1	0.83	5.2	02/15/11
Lead	7439-92-1	LA-505-412			5.61		mg/kg	1	0.10	1.0	02/15/11
Mercury	7439-97-6	LA-505-412	B		0.0646		mg/kg	1	0.052	0.21	02/15/11
Molybdenum	7439-98-7	LA-505-412	B		0.347		mg/kg	1	0.10	1.0	02/15/11
Strontium	7440-24-6	LA-505-412			26.7		mg/kg	1	0.10	1.0	02/15/11
Tin	7440-31-5	LA-505-412			0.543		mg/kg	1	0.10	0.52	02/15/11
Uranium	7440-61-1	LA-505-412	B		0.510		mg/kg	1	0.10	0.52	02/15/11
Arsenic	7440-38-2	LA-505-412	B		2.75		mg/kg	1	0.42	4.2	02/15/11
Selenium	7782-49-2	LA-505-412	B		1.22		mg/kg	1	0.31	3.1	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Attachment 2
Narrative
WSCF111504

Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were 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.

It should be noted that the attached chain of custody was not stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving. However, based on procedure LO-090-403 form "NOTICE OF IMPROPER SAMPLE SUBMITTAL" was not submitted and was not stamped "NOT ICED". No anomaly was noted during sample receipt.

The following generic data qualifiers (i.e., B, D, U 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 wet chemical 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.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

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. Analytical Note(s):

- Batch QC 177350

- Sulfate – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results near or below the minimum detectable level. No flags issued.

- All other applicable QC controls are within the established limits.

Hexavalent Chromium – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Matrix Spike recovery is outside established laboratory limits. Affected sample results in this batch were "N" flagged.

- All other applicable 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):

- All applicable QC controls are within the established limits.

ICP-MS 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):

- Copper and Nickel – MS / MSD Relative Percent Difference (RPD) is outside established laboratory limits. The quality control report was flagged for RPD failure.

- Copper and Nickel – Matrix Spike and/or Matrix Spike Duplicate recoveries are outside established laboratory limits. Affected sample results in this batch were "N" flagged.

- Manganese, Barium, Vanadium, Zinc and Strontium – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.

- All other applicable QC controls are within the established limits.

pH – The hold time requirement for this analysis was met. A Duplicate and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – The hold time requirement for this analysis was met. A Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Gross Alpha / Gross Beta:

Narrative

Attachment 2
Narrative
WSCF111504

- Batch QC 176859
- Gross Alpha - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
- Batch QC 178864
- Gross Alpha - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - All other applicable 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.

Sample Receipt

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

F11-077-016 — PAGE 1 OF 2

COLLECTOR	F. Hall
SAMPLING LOCATION	183KW Staging Area Sample 16
ICE CHEST NO.	SML-107
SHIPPED TO	Waste Sampling & Characterization
COMPANY CONTACT	LUKE, SN
TELEPHONE NO.	372-1667
PROJECT COORDINATOR	LUKE, SN
PROJECT DESIGNATION	183KW Staging Area In-Process Sampling - Soil
SAF NO.	F11-077
FIELD LOGBOOK NO.	HNF-N-507-17
ACTUAL SAMPLE DEPTH	0-1'
COA	302682ES10
OFFSITE PROPERTY NO.	N/A
BILL OF LADING/AIR BILL NO.	N/A
PRICE CODE	C01
AIR QUALITY	☐
DATA TURNAROUND	12 Days / 12 Days
METHOD OF SHIPMENT	GOVERNMENT VEHICLE
	ORIGINAL

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)

111504

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS 2005 6010	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS 2.00 pH	SEE ITEM (3) IN SPECIAL INSTRUCTIONS GRAV

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWL2 001	SOIL	2/10/11	1215	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	2/10/11 1600	SSU#1 M01109	2/10/11 1600
SSU#1 M01109	2/11/11 0900	F. Hall	2/11/11 0900
R. Hall	2/11/11 1050	M. Nelson	2/11/11 1050

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-016	PAGE 2 OF 2
COLLECTOR F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 183KW Staging Area Sample 16	PROJECT DESIGNATION 183KW Staging Area In-Process Sampling - Soil		SAF NO. F11-077	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. SAKL 107	FIELD LOGBOOK NO. HNF-N-507-17	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F11-077-015	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01
SAMPLING LOCATION: 183KW Staging Area Sample 15	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A	

DATA TURNAROUND: 12 Days / 12 Days

ORIGINAL

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

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196.	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWL1 002	SOIL	2/10/11	1206	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	2/10/11 1600	SSU#1 MO1109	2/10/11 1600
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SSU#1 MO1109	2/11/11 0900	F. Hall	2/11/11 0900
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	2/11/11 1050	M Nelson	2/11/11 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-015	PAGE 2 OF 2
COLLECTOR 2/9/11 SM F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01	DATA TURNAROUND 12 Days / 12 Days
SAMPLING LOCATION 183KW Staging Area Sample 15	PROJECT DESIGNATION 183KW Staging Area In-Process Sampling - Soil		SAF NO. F11-077	AIR QUALITY ☐	
ICE CHEST NO. SML-107	FIELD LOGBOOK NO. HNF-N-507-17	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-014	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND
SAMPLING LOCATION: 183KW Staging Area Sample 14	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	12 Days / 12 Days
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool--4C	Cool--4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250ml	60ml	120ml	250ml
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWL0 003	SOIL	2/10/11	1200	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall [signature]	2/10/11 1600	SSU#1 M01109	2/10/11 1600
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SSU#1 M01109	2/11/11 0900	F. Hall [signature]	2/11/11 0900
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall [signature]	2/11/11 1050	M. Nelson [signature]	2/11/11 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

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A-5003-018 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-014	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 14	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-017	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 17	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool--4C	Cool--4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWL3 004	SOIL	2/10/11	0735	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: M01109SSU#1	DATE/TIME: 2/10/11 1600
RELINQUISHED BY/REMOVED FROM: M01109SSU#1	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 2/11/11 0900
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M. Nelson	DATE/TIME: 2/11/11 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-017	PAGE 2 OF 2
COLLECTOR F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 183KW Staging Area Sample 17	PROJECT DESIGNATION 183KW Staging Area In Process Sampling Soil		SAF NO. F11-077	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. SML-167	FIELD LOGBOOK NO. HNF-N-507-17	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

PRINTED ON 2/8/2011 A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-018	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 18	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SAL-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool-4C	Cool-4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWL4 005	SOIL	2/10/11	0955	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall [signature] 2/10/11	DATE/TIME: 1600	RECEIVED BY/STORED IN: SSU#1 M01109 2/10/11	DATE/TIME: 1600
RELINQUISHED BY/REMOVED FROM: SSU#1 M01109 2/11/11	DATE/TIME: 0900	RECEIVED BY/STORED IN: F. Hall [signature] 2/11/11	DATE/TIME: 0900
RELINQUISHED BY/REMOVED FROM: F. Hall [signature] 2/11/11	DATE/TIME: 1050	RECEIVED BY/STORED IN: M. Nelson M.Nelson 2/11/11	DATE/TIME: 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-018	PAGE 2 OF 2
COLLECTOR F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01 AIR QUALITY ☐	DATA TURNAROUND 12 Days / 12 Days
SAMPLING LOCATION 183KW Staging Area Sample 18	PROJECT DESIGNATION 183KW Staging Area In-Process Sampling - Soil		SAF NO. F11-077		
ICE CHEST NO. SML-107	FIELD LOGBOOK NO. HNF-N-507-17	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F11-077-004	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01 / DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 4	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE / ORIGINAL
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 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

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196,	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK0 006	SOIL	2/10/11	0933	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. HALL	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: SSU#1 M01109	DATE/TIME: 2/10/11 1600
RELINQUISHED BY/REMOVED FROM: SSU#1 M01109	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. HALL	DATE/TIME: 2/11/11 0900
RELINQUISHED BY/REMOVED FROM: F. HALL	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M. Nelson	DATE/TIME: 2/11/11 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-004	PAGE 2 OF 2
COLLECTOR F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 183KW Staging Area Sample 4	PROJECT DESIGNATION 183KW Staging Area In-Process Sampling - Soil		SAF NO. F11-077	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. SML-107	FIELD LOGBOOK NO. HNF-N-507-17	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F11-077-005	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01 / DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 5	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐
ICE CHEST NO.: SAL-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE / ORIGINAL
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 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

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK1007	SOIL	2/10/11	0940	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall [signature] 2/10/11	DATE/TIME: 1600	RECEIVED BY/STORED IN: SSU #1 M01109 2/10/11	DATE/TIME: 1600
RELINQUISHED BY/REMOVED FROM: SSU #1 M01109 2/11/11	DATE/TIME: 0900	RECEIVED BY/STORED IN: F. Hall [signature] 2/11/11	DATE/TIME: 0900
RELINQUISHED BY/REMOVED FROM: F. Hall [signature] 2/11/11	DATE/TIME: 1050	RECEIVED BY/STORED IN: M. Nelson [signature] 2/11/11	DATE/TIME: 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-005	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 5	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F11-077-006	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01
SAMPLING LOCATION: 183KW Staging Area Sample 6	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A	

DATA TURNAROUND: 12 Days / 12 Days

ORIGINAL

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SF=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

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250ml	60ml	120ml	250ml
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK2 008	SOIL	2/10/11	0945	✓	✓	✓	✓

CHAIN OF POSSESSION: RELINQUISHED BY/REMOVED FROM	DATE/TIME	SIGN/ PRINT NAMES: RECEIVED BY/STORED IN	DATE/TIME
F. Hall	2/10/11 1600	SSU#1 M01109	2/10/11 1600
SSU#1 M01109	2/11/11 0900	F. Hall	2/11/11 0900
F. Hall	2/11/11 1050	M. Nelson	2/11/11 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-006	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 6	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-007	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 7	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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, WT=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

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250ml	60ml	120ml	250ml
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7195;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK3	SOIL	2/10/11	0955	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: SSU#1 MO1109	DATE/TIME: 2/10/11 1600	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: SSU#1 MO1109	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 2/11/11 0900	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M. Nelson	DATE/TIME: 2/11/11 1050	
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

PRINTED ON 2/8/2011

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-007	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 7	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-008	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 8	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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; W1=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

PRESERVATION	None	Cool-4C	Cool-4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK4 010	SOIL	2/10/11	1005	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: SSU#1 MO1109	DATE/TIME: 2/10/11 1600	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: SSU#1 MO1109	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 2/11/11 0900	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M Nelson	DATE/TIME: 2/11/11 1050	
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

PRINTED ON 2/8/2011

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-008	PAGE 2 OF 2
COLLECTOR F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 183KW Staging Area Sample 8	PROJECT DESIGNATION 183KW Staging Area In-Process Sampling - Soil		SAF NO. F11-077	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. SML-107	FIELD LOGBOOK NO. HNF-N-507-17	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-009	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 9	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool-4C	Cool-4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /TSHg	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK5	SOIL	2/10/11	1015	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: SSU#1 M01109	DATE/TIME: 2/10/11 1600
RELINQUISHED BY/REMOVED FROM: SSU#1 M01109	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 2/11/11 0900
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M. Nelson	DATE/TIME: 2/11/11 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-009	PAGE 2 OF 2
COLLECTOR F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 183KW Staging Area Sample 9	PROJECT DESIGNATION 183KW Staging Area In-Process Sampling - Soil		SAF NO. F11-077	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. SML-107	FIELD LOGBOOK NO. HNF-N-507-12	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-010	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 10	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool-4C	Cool-4C	None	
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months	
TYPE OF CONTAINER	G/P	G/P	G/P	G/P	
NO. OF CONTAINER(S)	1	1	1	1	
VOLUME	250mL	60mL	120mL	250mL	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	
SAMPLE NO. / MATRIX* / SAMPLE DATE SAMPLE TIME					
B2BWK6 012 / SOIL / 2/10/11 1020	✓	✓	✓	✓	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	2/10/11 1600	SSU#1 M01109	2/10/11 1600
SSU#1 M01109	2/10/11 0900	F. Hall	2/11/11 0900
F. Hall	2/11/11 1050	M. Nelson	2/11/11 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-010	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 10	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-011	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 11	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK7 013	SOIL	2/10/11	1142	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: F. Hall [signature]	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: SSU#1 M01109	DATE/TIME: 2/10/11 1600	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: SSU#1 M01109	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall [signature]	DATE/TIME: 2/11/11 0900	
RELINQUISHED BY/REMOVED FROM: F. Hall [signature]	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M. Nelson M. Nelson	DATE/TIME: 2/11/11 1050	
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

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-011	PAGE 2 OF 2
COLLECTOR F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 183KW Staging Area Sample 11	PROJECT DESIGNATION 183KW Staging Area In-Process Sampling - Soil		SAF NO. F11-077	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. SML-107	FIELD LOGBOOK NO. HNP-N-507-17	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-012	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 12	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK8 014	SOIL	2/10/11	1149	✓	✓	✓	✓

CHAIN OF POSSESSION: RELINQUISHED BY/REMOVED FROM	DATE/TIME	SIGN/ PRINT NAMES: RECEIVED BY/STORED IN	DATE/TIME
F. Hall	2/10/11 1600	SSU*1 M01109	2/10/11 1600
SSU*1 M01109	2/11/11 0900	F. Hall	2/11/11 0900
F. Hall	2/11/11 1050	M. Nelson	2/11/11 1050

SPECIAL INSTRUCTIONS: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-012	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND
SAMPLING LOCATION: 183KW Staging Area Sample 12	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	12 Days / 12 Days
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-077-013 PAGE 1 OF 2

COLLECTOR: F. Hall

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT COORDINATOR: LUKE, SN

PRICE CODE: C01

DATA TURNAROUND: 12 Days / 12 Days

SAMPLING LOCATION: 183KW Staging Area Sample 13

PROJECT DESIGNATION: 183KW Staging Area In Process Sampling - Soil

SAF NO.: F11-077

AIR QUALITY: ☐

ICE CHEST NO.: SML-107

FIELD LOGBOOK NO.: HNF-N-507-17

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302682ES10

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

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 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

PRESERVATION		None	Cool~4C	Cool~4C	None
HOLDING TIME		6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER		G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)		1	1	1	1
VOLUME		250mL	60mL	120mL	250mL
SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196,	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2BWK9 0/5	SOIL	2/10/11	1153	✓	✓ ✓ ✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	2/10/11 1600	SSU #1 M01109	2/10/11 1600
SSU #1 M01109	2/11/11 0900	F. Hall	2/11/11 0900
F. Hall	2/11/11 1050	M. Nolan	2/11/11 1050

SPECIAL INSTRUCTIONS: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION: RECEIVED BY | TITLE | DATE/TIME

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

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-013	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 13	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-077-001 PAGE 1 OF 2

COLLECTOR	F. Hall
SAMPLING LOCATION	183KW Staging Area Sample 1
ICE CHEST NO.	SML-107
SHIPPED TO	Waste Sampling & Characterization
COMPANY CONTACT	LUKE, SN
TELEPHONE NO.	372-1657
PROJECT COORDINATOR	LUKE, SN
PRICE CODE	C01
DATA TURNAROUND	12 Days / 12 Days
AIR QUALITY	☐
PROJECT DESIGNATION	183KW Staging Area In-Process Sampling - Soil
SAF NO.	F11-077
FIELD LOGBOOK NO.	HNF-N-507-17
ACTUAL SAMPLE DEPTH	0-1'
COA	302682ES10
METHOD OF SHIPMENT	GOVERNMENT VEHICLE
ORIGINAL	
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

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWJ7 016	SOIL	2/10/11	0916	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall [signature]	2/10/11 1600	SSU#1 MO-1109	2/10/11 1600
SSU#1 MO-1109	2/11/11 0900	F. Hall [signature]	2/11/11 0900
F. Hall [signature]	2/11/11 1050	M. Nelson [signature]	2/11/11 1050

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-001	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 1	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	ORIGINAL
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-002	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 2	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool-4C	Cool-4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWJ8 017	SOIL	2/10/11	0923	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: SSU#1 M01109	DATE/TIME: 2/10/11 1600	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: SSU#1 M01109	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 2/11/11 0900	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M. Nelson	DATE/TIME: 2/11/11 1050	
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

PRINTED ON 2/8/2011

A-5003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-002	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 2	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-003	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 3	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION			None	Cool-4C	Cool-4C	None
HOLDING TIME			6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER			G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)			1	1	1	1
VOLUME			250mL	60mL	120mL	250mL
SAMPLE ANALYSIS			SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWJ9 018	SOIL	2/10/11	0930	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: F. Hall [signature]	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: SSU#1 M01109	DATE/TIME: 2/10/11 1600	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: SSU#1 M01109	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall [signature]	DATE/TIME: 2/11/11 0900	
RELINQUISHED BY/REMOVED FROM: F. Hall [signature]	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M Nelsamnols	DATE/TIME: 2/11/11 1050	
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

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-003	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND
SAMPLING LOCATION: 183KW Staging Area Sample 3	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	12 Days / 12 Days
ICE CHEST NO.: SMC-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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A-6003-618 (REV 2)

Appendix 5

Data Validation Supporting Documentation

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: 100 K RA			DATA PACKAGE: VSR12-009		
VALIDATOR: Ken Salaz		LAB: WSCF		DATE: 4/25/12	
			SDG: WSCF111504		
ANALYSES PERFORMED					
SW-846/ICP	SW-846/GFAA	SW-846/Hg	SW-846 Cyanide	EPA 200.8 X	EPA 6010 X
SAMPLES/MATRIX Soil Samples					
B2BWL2, B2BWL1, B2BWL0, B2BWL3, B2BWL4, B2BWK0, B2BWK1, B2BWK2, B2BWK3, B2BWK4, B2BWK5, B2BWK6, B2BWK7, B2BWK8, B2BWK9, B2BWJ7, B2BWJ8, B2BWJ9					

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present?..... Yes (No) N/A

Comments: None

2. INSTRUMENT PERFORMANCE AND CALIBRATIONS (Levels D and E)

Initial calibrations performed on all instruments? ..... Yes No N/A

Initial calibrations acceptable? ..... Yes No N/A

ICP interference checks acceptable? ..... Yes No N/A

ICV and CCV checks performed on all instruments? ..... Yes No N/A

ICV and CCV checks acceptable? ..... Yes No N/A

Standards traceable? ..... Yes No N/A

Standards expired? ..... Yes No N/A

Calculation check acceptable? ..... Yes No N/A

Comments:

3. BLANKS (Levels B, C, D, and E)

ICB and CCB checks performed for all applicable analyses? (Levels D, E) ..... Yes No N/A

ICB and CCB results acceptable? (Levels D, E) ..... Yes No N/A

Laboratory blanks analyzed? ..... Yes No N/A

Laboratory blank results acceptable? ..... Yes No N/A

Field blanks analyzed? (Levels C, D, E) ..... Yes No N/A

Field blank results acceptable? (Levels C, D, E) ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments:
EB Sample B2BWL3: Mn 0.339 mg/kg; Ni 0.535 mg/kg; Cu 0.323 mg/kg; Li 5.71 mg/kg; B 8.92 mg/kg

4. ACCURACY (Levels C, D, and E)

MS/MSD samples analyzed? ..... Yes No N/A

MS/MSD results acceptable? ..... Yes No N/A

MS/MSD standards NIST traceable? (Levels D, E) ..... Yes No N/A

MS/MSD standards expired? (Levels D, E) ..... Yes No N/A

LCS/BSS samples analyzed? ..... Yes No N/A

LCS/BSS results acceptable? ..... Yes No N/A

Standards traceable? (Levels D, E) ..... Yes No N/A

Standards expired? (Levels D, E) ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Performance audit sample(s) analyzed? ..... Yes No N/A

Performance audit sample results acceptable? ..... Yes No N/A

Comments:

MS/MSD Samples 48993/4: Cu MS/MSD %R=60/44%; Ni MSD %R=142

5. PRECISION (Levels C, D, and E)

Duplicate RPD values acceptable?..... Yes No N/A

Duplicate results acceptable? ..... Yes No N/A

MS/MSD standards NIST traceable? (Levels D, E) ..... Yes No N/A

MS/MSD standards expired? (Levels D, E) ..... Yes No N/A

Field duplicate RPD values acceptable? ..... Yes No N/A

Field split RPD values acceptable? ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments:_ None

6. ICP QUALITY CONTROL (Levels D and E)

ICP serial dilution samples analyzed? ..... Yes No N/A

ICP serial dilution %D values acceptable? ..... Yes No N/A

ICP post digestion spike required? ..... Yes No N/A

ICP post digestion spike values acceptable? ..... Yes No N/A

Standards traceable? ..... Yes No N/A

Standards expired? ..... Yes No N/A

Transcription/calculation errors? ..... Yes No N/A

Comments:

7. HOLDING TIMES (all levels)

Samples properly preserved? ..... Yes No N/A

Sample holding times acceptable? ..... Yes No N/A

Comments: None

8. RESULT QUANTITATION AND DETECTION LIMITS (all levels)

Results reported for all requested analyses?..... Yes No N/A

Results supported in the raw data? (Levels D, E) ..... Yes No N/A

Samples properly prepared? (Levels D, E)..... Yes No N/A

Detection limits meet RDL?..... Yes No N/A

Transcription/calculation errors? (Levels D, E)..... Yes No N/A

Comments:_ None

Comments (attach additional sheets as necessary):

Appendix 6

Additional Documentation Requested By Client

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

QC Batch 176853 **Test** ICP-2008 MS All possible metal
Associated Samples 111504001, 111504002, 111504003, 111504004, 111504005, 111504006, 111504007, 111504008, 111504009, 111504010, 111504011, 111504012, 111504013, 111504014, 111504015, 111504016, 111504017, 111504018

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			**QC Sample #48992**							
Manganese	7439-96-5		437	mg/kg	101.7	75 - 121				02/15/11
Nickel	7440-02-0		53.5	mg/kg	101.4	74 - 122				02/15/11
Silver	7440-22-4		99.9	mg/kg	104.4	83 - 127				02/15/11
Antimony	7440-36-0		125	mg/kg	145.9	62 - 205				02/15/11
Barium	7440-39-3		299	mg/kg	98.9	78 - 118				02/15/11
Beryllium	7440-41-7		84.3	mg/kg	99.4	77 - 120				02/15/11
Cadmium	7440-43-9		61.1	mg/kg	96.9	76 - 129				02/15/11
Chromium	7440-47-3		67.6	mg/kg	97.8	68 - 119				02/15/11
Cobalt	7440-48-4		71.7	mg/kg	103.5	77 - 122				02/15/11
Copper	7440-50-8		62.5	mg/kg	96.2	67 - 120				02/15/11
Vanadium	7440-62-2		79.4	mg/kg	100.9	67 - 122				02/15/11
Zinc	7440-66-6		167	mg/kg	99.7	73 - 131				02/15/11
Lead	7439-92-1		122	mg/kg	98.6	79 - 124				02/15/11
Mercury	7439-97-6		7.65	mg/kg	97.2	69 - 124				02/15/11
Molybdenum	7439-98-7		49.5	mg/kg	107.1	80 - 125				02/15/11
Strontium	7440-24-6		51.8	mg/kg	100.4	78 - 119				02/15/11
Tin	7440-31-5		180	mg/kg	109.5	84 - 130				02/15/11
Uranium	7440-61-1		378	mg/kg	99.8	86 - 113				02/15/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Arsenic	7440-38-2		127	mg/kg	101.6	79 - 125				02/15/11
Selenium	7782-49-2		158	mg/kg	103.2	82 - 133				02/15/11
MS			**QC Sample #48993**							
			Original 111495001							
Manganese	7439-96-5		-6.73	mg/kg	-191.5	70 - 130			X	02/15/11
Nickel	7440-02-0		3.66	mg/kg	104	70 - 130				02/15/11
Silver	7440-22-4		3.44	mg/kg	98	70 - 130				02/15/11
Antimony	7440-36-0		3.32	mg/kg	94.5	70 - 130				02/15/11
Barium	7440-39-3		-18.8	mg/kg	-534.5	70 - 130			X	02/15/11
Beryllium	7440-41-7		3.48	mg/kg	98.9	70 - 130				02/15/11
Cadmium	7440-43-9		3.50	mg/kg	99.5	70 - 130				02/15/11
Chromium	7440-47-3		3.86	mg/kg	109.8	70 - 130				02/15/11
Cobalt	7440-48-4		2.83	mg/kg	80.6	70 - 130				02/15/11
Copper	7440-50-8		2.10	mg/kg	59.8	70 - 130			N	02/15/11
Vanadium	7440-62-2		-2.81	mg/kg	-80	70 - 130			X	02/15/11
Zinc	7440-66-6		0.863	mg/kg	24.6	70 - 130			X	02/15/11
Lead	7439-92-1		3.34	mg/kg	95.1	70 - 130				02/15/11
Mercury	7439-97-6		0.193	mg/kg	110	70 - 130				02/15/11
Molybdenum	7439-98-7		3.35	mg/kg	95.4	70 - 130				02/15/11
Strontium	7440-24-6		-0.791	mg/kg	-22.5	70 - 130			X	02/15/11
Tin	7440-31-5		3.50	mg/kg	99.6	70 - 130				02/15/11
Uranium	7440-61-1		3.58	mg/kg	101.8	70 - 130				02/15/11
Arsenic	7440-38-2		3.12	mg/kg	88.8	70 - 130				02/15/11
Selenium	7782-49-2		3.13	mg/kg	89	70 - 130				02/15/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
MSD			**QC Sample #48994**								
			Original	**111495001**					**Paired**	**48993**	
Manganese	7439-96-5		-20.2	mg/kg	-581.3	70 - 130	-100.90	30		X	02/15/11
Nickel	7440-02-0		4.94	mg/kg	142.1	70 - 130	31.00	30	*	NX	02/15/11
Silver	7440-22-4		3.41	mg/kg	98	70 - 130	0.00	30			02/15/11
Antimony	7440-36-0		3.40	mg/kg	97.8	70 - 130	3.40	30			02/15/11
Barium	7440-39-3		-19.9	mg/kg	-571.8	70 - 130	-6.70	30		X	02/15/11
Beryllium	7440-41-7		3.32	mg/kg	95.4	70 - 130	3.60	30			02/15/11
Cadmium	7440-43-9		3.42	mg/kg	98.3	70 - 130	1.20	30			02/15/11
Chromium	7440-47-3		3.52	mg/kg	101.2	70 - 130	8.20	30			02/15/11
Cobalt	7440-48-4		2.58	mg/kg	74.3	70 - 130	8.10	30			02/15/11
Copper	7440-50-8		1.52	mg/kg	43.7	70 - 130	31.10	30	*	NX	02/15/11
Vanadium	7440-62-2		-4.60	mg/kg	-132.2	70 - 130	-49.20	30		X	02/15/11
Zinc	7440-66-6		-0.274	mg/kg	-7.9	70 - 130	389.20	30	*	X	02/15/11
Lead	7439-92-1		3.11	mg/kg	89.3	70 - 130	6.30	30			02/15/11
Mercury	7439-97-6		0.174	mg/kg	100	70 - 130	9.50	30			02/15/11
Molybdenum	7439-98-7		3.46	mg/kg	99.5	70 - 130	4.20	30			02/15/11
Strontium	7440-24-6		0.0355	mg/kg	1	70 - 130	-218.60	30		X	02/15/11
Tin	7440-31-5		3.36	mg/kg	96.5	70 - 130	3.20	30			02/15/11
Uranium	7440-61-1		3.43	mg/kg	98.7	70 - 130	3.10	30			02/15/11
Arsenic	7440-38-2		3.65	mg/kg	105	70 - 130	16.70	30			02/15/11
Selenium	7782-49-2		3.14	mg/kg	90.3	70 - 130	1.50	30			02/15/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

QC Batch 176960 **Test** ICP-6010 - All possible metals

Associated Samples 111504001, 111504002, 111504003, 111504004, 111504005, 111504006, 111504007, 111504008, 111504009, 111504010, 111504011, 111504012, 111504013, 111504014, 111504015, 111504016, 111504017, 111504018

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #49103**							
Lithium	7439-93-2		<4.0	ug/L					U	02/22/11
Boron	7440-42-8		<41	ug/L					U	02/22/11
LCS			**QC Sample #49104**							
Lithium	7439-93-2		96.7	mg/kg	93.1	48 - 119				02/22/11
Boron	7440-42-8		95.8	mg/kg	103.4	76 - 151				02/22/11
MS			**QC Sample #49105**							
			Original 111504001							
Lithium	7439-93-2	7.19	100	mg/kg	100.4	75 - 125				02/22/11
Boron	7440-42-8	9.48	194	mg/kg	97.2	75 - 125				02/22/11
MSD			**QC Sample #49106**							
			Original 111504001					**Paired**	**49105**	
Lithium	7439-93-2	7.19	104	mg/kg	104.4	75 - 125	3.90	30		02/22/11
Boron	7440-42-8	9.48	201	mg/kg	101.2	75 - 125	4.00	30		02/22/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

QC Batch 176853 **Test** ICP-2008 MS All possible metal
Associated Samples 111504001, 111504002, 111504003, 111504004, 111504005, 111504006, 111504007, 111504008, 111504009, 111504010, 111504011, 111504012, 111504013, 111504014, 111504015, 111504016, 111504017, 111504018

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #48991**						
Manganese	7439-96-5		<0.10	ug/L				U	02/15/11
Nickel	7440-02-0		<0.20	ug/L				U	02/15/11
Silver	7440-22-4		<0.10	ug/L				U	02/15/11
Antimony	7440-36-0		<0.30	ug/L				U	02/15/11
Barium	7440-39-3		<0.20	ug/L				U	02/15/11
Beryllium	7440-41-7		<0.10	ug/L				U	02/15/11
Cadmium	7440-43-9		<0.10	ug/L				U	02/15/11
Chromium	7440-47-3		<0.50	ug/L				U	02/15/11
Cobalt	7440-48-4		<0.050	ug/L				U	02/15/11
Copper	7440-50-8		<0.10	ug/L				U	02/15/11
Vanadium	7440-62-2		<0.20	ug/L				U	02/15/11
Zinc	7440-66-6		<0.80	ug/L				U	02/15/11
Lead	7439-92-1		<0.10	ug/L				U	02/15/11
Mercury	7439-97-6		<0.050	ug/L				U	02/15/11
Molybdenum	7439-98-7		<0.050	ug/L				U	02/15/11
Strontium	7440-24-6		<0.10	ug/L				U	02/15/11
Tin	7440-31-5		<0.050	ug/L				U	02/15/11
Uranium	7440-61-1		<0.050	ug/L				U	02/15/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Arsenic	7440-38-2		<0.40	ug/L					U	02/15/11
Selenium	7782-49-2		<0.30	ug/L					U	02/15/11

Date: 25 April 2012
To: CH2M Hill (technical representative)
From: Analytical Quality Associates, Inc.
Project: 100 K RA
Subject: General Chemistry - Sample Data Group (SDG) WSCF111504

INTRODUCTION

This memorandum presents the results of data validation for SDG WSCF111504 prepared by WSCF Analytical Laboratories. A list of samples validated along with the analytical methods is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B2BWL2	2/10/11	Soil	C	300.0, 9045, & 7196 (Cr VI)
B2BWL1	2/10/11	Soil	C	300.0, 9045, & 7196 (Cr VI)
B2BWL0	2/10/11	Soil	C	300.0, 9045, & 7196 (Cr VI)
B2BWL3	2/10/11	Soil	C	300.0, 9045, & 7196 (Cr VI)
B2BWL4	2/10/11	Soil	C	300.0, 9045, & 7196 (Cr VI)
B2BWK0	2/10/11	Soil	C	300.0, 9045, & 7196 (Cr VI)
B2BWK1	2/10/11	Soil	C	300.0, 9045, & 7196 (Cr VI)
B2BWK2	2/10/11	Soil	C	300.0, 9045, & 7196 (Cr VI)
B2BWK3	2/10/11	Soil	C	300.0, 9045, & 7196 (Cr VI)
B2BWK4	2/10/11	Soil	C	300.0, 9045, & 7196 (Cr VI)
B2BWK5	2/10/11	Soil	C	300.0, 9045, & 7196 (Cr VI)
B2BWK6	2/10/11	Soil	C	300.0, 9045, & 7196 (Cr VI)
B2BWK7	2/10/11	Soil	C	300.0, 9045, & 7196 (Cr VI)
B2BWK8	2/10/11	Soil	C	300.0, 9045, & 7196 (Cr VI)
B2BWK9	2/10/11	Soil	C	300.0, 9045, & 7196 (Cr VI)
B2BWJ7	2/10/11	Soil	C	300.0, 9045, & 7196 (Cr VI)
B2BWJ8	2/10/11	Soil	C	300.0, 9045, & 7196 (Cr VI)
B2BWJ9	2/10/11	Soil	C	300.0, 9045, & 7196 (Cr VI)

Data validation was conducted in accordance with the CHPRC validation statement of work and the 100 Area Remedial Action Sampling and Analysis Plan, DOE/RL-96-22, Rev. 5 (SAP). Appendices 1 through 6 provide the following information as indicated below:

Appendix 1. Glossary of Data Reporting Qualifiers
Appendix 2. Summary of Data Qualification
Appendix 3. Annotated Laboratory Reports
Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
Appendix 5. Data Validation Supporting Documentation
Appendix 6. Additional Documentation Requested By Client

DATA QUALITY OBJECTIVES

- **Holding Times and Sample Preservation**

Holding times are calculated from Chain-of-Custody forms to determine the validity of the results. The holding time requirements are as follows:

- All anions – extraction within 28 days of sample collection and analysis within 48 hours of extraction
- Hexavalent chromium – extraction of soils within 30 days of sample collection and analysis within 24 hours of extraction

Sample preservation requires chilling to 4 degrees Celsius.

The samples were analyzed within the prescribed holding times and properly preserved with the following exception. All samples were analyzed for pH three days after collection. Therefore, all associated sample results should be qualified as estimates and flagged "J".

- **Blanks**

The blank data results are reviewed to assess the extent of contamination introduced through sampling, sample preparation, and analysis.

Laboratory Blanks

All laboratory blank results were acceptable.

Trip Blanks

No trip blanks were submitted for validation.

Field Blanks

No field blanks were submitted for validation.

Equipment Blanks

All equipment blank results were acceptable.

- **Accuracy**

Accuracy is evaluated by reviewing matrix spike sample results and laboratory control sample results. According to the SAP, the matrix spike sample accuracy limits are 70% to 130% and the laboratory control sample accuracy limits are the ones specified by the DV procedure. The limits for reported analytes not listed in the SAP are specified by the DV procedure.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

All MS/MSD recoveries were acceptable with the following exception. The MS recovery for Cr VI was < the lower acceptance limit. The associated results of samples B2BWL2, B2BWL4, B2BWK0, B2BWK5, and B2BWJ9 were detects and should be qualified as estimates and flagged "J." All other sample results were non-detects and should be qualified as estimates and flagged "UJ." See the table in Appendix 2 for a listing of the affected samples.

Laboratory Control Samples (LCSs)

All LCS recoveries were acceptable.

- **Precision**

Precision is evaluated by reviewing MS/MSD results, laboratory duplicate sample results, field duplicate sample results, and field split sample results. These QC results provide information on the laboratory reproducibility and whether sampling activities are adequate to acquire consistent sample results. According to the SAP, the relative percent difference (RPD) limit is 30%. The RPD limits for reported analytes not listed in the SAP are specified by the DV procedure. When duplicate RPDs exceed the limits and associated results are <5X the reporting limit (RL) with absolute differences <2X the RL, no precision infraction occurred.

MS/MSD Samples

All MS/MSD RPD values were acceptable.

Laboratory Duplicate Samples

All laboratory duplicate results were acceptable with the following exceptions. For Anions batch 177350, the duplicate relative percent differences for nitrate and sulfate were >30%. However, the parent and/or duplicate results were <5X the RL, and the absolute differences were <2X the RL. Therefore, no sample data should be qualified.

Field Duplicate Samples

All field duplicate results were acceptable.

Field Split Samples

No field splits were submitted for validation.

- **Detection Limits**

Reported MDLs are compared against the contractually required detection limits (CRDLs) to ensure that laboratory detection limits meet the required criteria.

All reported sample MDLs with associated non-detected sample results were below the CRDLs.

CRDLs for fluoride, chloride, nitrate-N and nitrite-N were not provided in the SAP.

- **Completeness**

SDG WSCF111504 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

Minor deficiencies leading to qualification of hexavalent chromium sample results as estimates were due matrix spike recovery infractions. See the table in Appendix 2 for a listing of all affected sample results.

REFERENCES

GRP-GD-003, Rev. 0, Change 0, *Data Validation for Chemical Analyses*, August 2010.

DOE/RL-96-22, Rev. 5, *100 Area Remedial Action Sampling and Analysis Plan*, September 2009.

Appendix 1

Glossary of Data Reporting Qualifiers

Qualifiers that may be applied by data validators in compliance with the CHPRC statement of work are as follows:

- **U** — The constituent was analyzed for, but was not detected. The data should be considered usable for decision-making purposes.

- **UJ** — The constituent was analyzed for and was not detected. Due to a quality control deficiency identified during data validation the value reported may not accurately reflect the RL. The data should be considered usable for decision-making purposes.

- **J** — Indicates the constituent was analyzed for and detected. The associated value is estimated due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J+** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected positive bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J-** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected negative bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **N** — The analysis indicates the presence of an analyte that has been tentatively identified.

- **NJ** — The analysis indicates the presence of an analyte that has been tentatively identified and the associated numerical value represents its approximate concentration.

- **NJ+** — The analysis indicates the presence of an analyte that has been tentatively identified. The associated value is estimated with a suspected positive bias due to a quality control deficiency identified during data validation.

- **NJ-** — The analysis indicates the presence of an analyte that has been tentatively identified. The associated value is estimated with a suspected negative bias due to a quality control deficiency identified during data validation.

- **UR** — Indicates the constituent was analyzed for and not detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

- **R** — Indicates the constituent was analyzed for and detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

Appendix 2

Summary of Data Qualification

General Chemistry Data Qualification Summary			
SDG: WSCF111504	Reviewer: AQA	Project: 100 K RA	Page 1 of 1
Analyte(s)	**Qualifier**	**Samples Affected**	**Reason**
pH	J	B2BWL2, B2BWL1, B2BWL0, B2BWL3, B2BWL4, B2BWK0, B2BWK1, B2BWK2, B2BWK3, B2BWK4, B2BWK5, B2BWK6, B2BWK7, B2BWK8, B2BWK9, B2BWJ7, B2BWJ8, B2BWJ9	Analysis past holding time
Cr (VI)	J	B2BWL2, B2BWL4, B2BWK0, B2BWK5, B2BWJ9	Low MS recovey
Cr (VI)	UJ	B2BWL1, B2BWL0, B2BWL3, B2BWK1, B2BWK2, B2BWK3, B2BWK4, B2BWK6, B2BWK7, B2BWK8, B2BWK9, B2BWJ7, B2BWJ8	Low MS recovery

Comments: None

Appendix 3

Annotated Laboratory Reports

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504001
SAF# F11-077
Sample ID B2BWL2

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC											**02/14/11**
Anions by IC											
Fluoride	16984-48-8	LA-533-410	U		<1.6		mg/kg	1	1.6	11	02/14/11
Chloride	16887-00-6	LA-533-410	U		<2.3		mg/kg	1	2.3	22	02/14/11
Nitrite-N	NO2-N	LA-533-410	U		<0.98		mg/kg	1	0.98	5.4	02/14/11
Nitrate-N	NO3-N	LA-533-410	U		<1.7		mg/kg	1	1.7	5.4	02/14/11
Sulfate	14808-79-8	LA-533-410	U		<3.6		mg/kg	1	3.6	54	02/14/11
Cr(VI) Prep											**02/15/11**
Cr(VI)											
Hexavalent chromium	18540-29-9	LA-265-403	BN	J	0.113		ug/g	1	0.11	0.55	02/16/11
~~**ICP Prep**~~											~~**02/14/11**~~
ICP-AES											
Lithium	7439-93-2	LA-505-411			7.19		mg/kg	1	0.44	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B		9.48		mg/kg	1	4.5	22	02/22/11
ICPMS Prep											**02/14/11**
ICP-MS											
Manganese	7439-96-5	LA-505-412			402		mg/kg	1	0.11	1.1	02/15/11
Nickel	7440-02-0	LA-505-412	N		13.9		mg/kg	1	0.21	2.1	02/15/11
Silver	7440-22-4	LA-505-412	U		<0.11		mg/kg	1	0.11	1.1	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504002
SAF# F11-077
Sample ID B2BWL1

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC											**02/14/11**
Anions by IC											
Fluoride	16984-48-8	LA-533-410	U		<1.6		mg/kg	1	1.6	11	02/14/11
Chloride	16887-00-6	LA-533-410	U		<2.3		mg/kg	1	2.3	21	02/14/11
Nitrite-N	NO2-N	LA-533-410	U		<0.97		mg/kg	1	0.97	5.3	02/14/11
Nitrate-N	NO3-N	LA-533-410	U		<1.7		mg/kg	1	1.7	5.3	02/14/11
Sulfate	14808-79-8	LA-533-410	B		6.94		mg/kg	1	3.5	53	02/14/11
Cr(VI) Prep											**02/15/11**
Cr(VI)											
Hexavalent chromium	18540-29-9	LA-265-403	UN	UJ	<0.11		ug/g	1	0.11	0.54	02/16/11
ICP Prep											**02/14/11**
ICP-AES											
Lithium	7439-93-2	LA-505-411			5.02		mg/kg	1	0.43	2.1	02/22/11
Boron	7440-42-8	LA-505-411	B		10.9		mg/kg	1	4.4	22	02/22/11
ICPMS Prep											**02/14/11**
ICP-MS											
Manganese	7439-96-5	LA-505-412			333		mg/kg	1	0.098	0.98	02/15/11
Nickel	7440-02-0	LA-505-412	N		9.52		mg/kg	1	0.20	2.0	02/15/11
Silver	7440-22-4	LA-505-412	U		<0.098		mg/kg	1	0.098	0.98	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504003
SAF# F11-077
Sample ID B2BWL0

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC											**02/14/11**
Anions by IC											
Fluoride	16984-48-8	LA-533-410	U		<1.6		mg/kg	1	1.6	11	02/14/11
Chloride	16887-00-6	LA-533-410	U		<2.3		mg/kg	1	2.3	22	02/14/11
Nitrite-N	NO2-N	LA-533-410	U		<0.98		mg/kg	1	0.98	5.4	02/14/11
Nitrate-N	NO3-N	LA-533-410	U		<1.7		mg/kg	1	1.7	5.4	02/14/11
Sulfate	14808-79-8	LA-533-410	B		4.13		mg/kg	1	3.5	54	02/14/11
Cr(VI) Prep											**02/15/11**
Cr(VI)											
Hexavalent chromium	18540-29-9	LA-265-403	UN	UJ	<0.11		ug/g	1	0.11	0.54	02/16/11
~~**ICP Prep**~~											~~**02/14/11**~~
~~**ICP-AES**~~											
~~Lithium~~	~~7439-93-2~~	~~LA-505-411~~			~~5.52~~		~~mg/kg~~	~~1~~	~~0.43~~	~~2.2~~	~~02/22/11~~
~~Boron~~	~~7440-42-8~~	~~LA-505-411~~	~~B~~		~~9.52~~		~~mg/kg~~	~~1~~	~~4.4~~	~~22~~	~~02/22/11~~
~~**ICPMS Prep**~~											~~**02/14/11**~~
~~**ICP-MS**~~											
~~Manganese~~	~~7439-96-5~~	~~LA-505-412~~			~~357~~		~~mg/kg~~	~~1~~	~~0.096~~	~~0.96~~	~~02/15/11~~
~~Nickel~~	~~7440-02-0~~	~~LA-505-412~~	~~N~~		~~10.5~~		~~mg/kg~~	~~1~~	~~0.19~~	~~1.9~~	~~02/15/11~~
~~Silver~~	~~7440-22-4~~	~~LA-505-412~~	~~U~~		~~<0.096~~		~~mg/kg~~	~~1~~	~~0.096~~	~~0.96~~	~~02/15/11~~

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504004
SAF# F11-077
Sample ID B2BWL3

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC											**02/14/11**
Anions by IC											
Fluoride	16984-48-8	LA-533-410	U		<1.5		mg/kg	1	1.5	9.8	02/14/11
Chloride	16887-00-6	LA-533-410	U		<2.1		mg/kg	1	2.1	20	02/14/11
Nitrite-N	NO2-N	LA-533-410	U		<0.89		mg/kg	1	0.89	4.9	02/14/11
Nitrate-N	NO3-N	LA-533-410	U		<1.5		mg/kg	1	1.5	4.9	02/14/11
Sulfate	14808-79-8	LA-533-410	U		<3.2		mg/kg	1	3.2	49	02/14/11
Cr(VI) Prep											**02/15/11**
Cr(VI)											
Hexavalent chromium	18540-29-9	LA-265-403	UN	UJ	<0.10		ug/g	1	0.10	0.50	02/16/11
~~**ICP Prep**~~											~~**02/14/11**~~
ICP-AES											
Lithium	7439-93-2	LA-505-411			5.71		mg/kg	1	0.40	2.0	02/22/11
Boron	7440-42-8	LA-505-411	B		8.92		mg/kg	1	4.1	21	02/22/11
ICPMS Prep											**02/14/11**
ICP-MS											
Manganese	7439-96-5	LA-505-412	B		0.339		mg/kg	1	0.095	0.95	02/15/11
Nickel	7440-02-0	LA-505-412	BN		0.535		mg/kg	1	0.19	1.9	02/15/11
Silver	7440-22-4	LA-505-412	U		<0.095		mg/kg	1	0.095	0.95	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504005
SAF# F11-077
Sample ID B2BWL4

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC											**02/14/11**
Anions by IC											
Fluoride	16984-48-8	LA-533-410	U		<1.7		mg/kg	1	1.7	11	02/14/11
Chloride	16887-00-6	LA-533-410	U		<2.5		mg/kg	1	2.5	23	02/14/11
Nitrite-N	NO2-N	LA-533-410	U		<1.0		mg/kg	1	1.0	5.7	02/14/11
Nitrate-N	NO3-N	LA-533-410	U		<1.8		mg/kg	1	1.8	5.7	02/14/11
Sulfate	14808-79-8	LA-533-410	B		3.95		mg/kg	1	3.7	57	02/14/11
Cr(VI) Prep											**02/15/11**
Cr(VI)											
Hexavalent chromium	18540-29-9	LA-265-403	BN	J	0.252		ug/g	1	0.11	0.57	02/16/11
ICP Prep											**02/14/11**
ICP-AES											
Lithium	7439-93-2	LA-505-411			6.09		mg/kg	1	0.46	2.3	02/22/11
Boron	7440-42-8	LA-505-411	B		9.07		mg/kg	1	4.7	24	02/22/11
ICPMS Prep											**02/14/11**
ICP-MS											
Manganese	7439-96-5	LA-505-412			371		mg/kg	1	0.10	1.0	02/15/11
Nickel	7440-02-0	LA-505-412	N		10.1		mg/kg	1	0.20	2.0	02/15/11
Silver	7440-22-4	LA-505-412	U		<0.10		mg/kg	1	0.10	1.0	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504006
SAF# F11-077
Sample ID B2BWK0

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC											**02/14/11**
Anions by IC											
Fluoride	16984-48-8	LA-533-410	U		<1.7		mg/kg	1	1.7	11	02/14/11
Chloride	16887-00-6	LA-533-410	U		<2.4		mg/kg	1	2.4	22	02/14/11
Nitrite-N	NO2-N	LA-533-410	U		<1.0		mg/kg	1	1.0	5.5	02/14/11
Nitrate-N	NO3-N	LA-533-410	U		<1.7		mg/kg	1	1.7	5.5	02/14/11
Sulfate	14808-79-8	LA-533-410	U		<3.6		mg/kg	1	3.6	55	02/14/11
Cr(VI) Prep											**02/15/11**
Cr(VI)											
Hexavalent chromium	18540-29-9	LA-265-403	BN	J	0.315		ug/g	1	0.11	0.55	02/16/11
~~**ICP Prep**~~											~~**02/14/11**~~
ICP-AES											
Lithium	7439-93-2	LA-505-411			6.08		mg/kg	1	0.44	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B		12.2		mg/kg	1	4.5	23	02/22/11
ICPMS Prep											**02/14/11**
ICP-MS											
Manganese	7439-96-5	LA-505-412			376		mg/kg	1	0.10	1.0	02/15/11
Nickel	7440-02-0	LA-505-412	N		9.92		mg/kg	1	0.20	2.0	02/15/11
Silver	7440-22-4	LA-505-412	U		<0.10		mg/kg	1	0.10	1.0	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504007
SAF# F11-077
Sample ID B2BWK1

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC											**02/14/11**
Anions by IC											
Fluoride	16984-48-8	LA-533-410	U		<1.7		mg/kg	1	1.7	11	02/14/11
Chloride	16887-00-6	LA-533-410			27.0		mg/kg	1	2.4	22	02/14/11
Nitrite-N	NO2-N	LA-533-410	U		<1.0		mg/kg	1	1.0	5.6	02/14/11
Nitrate-N	NO3-N	LA-533-410	U		<1.7		mg/kg	1	1.7	5.6	02/14/11
Sulfate	14808-79-8	LA-533-410	U		<3.7		mg/kg	1	3.7	56	02/14/11
Cr(VI) Prep											**02/15/11**
Cr(VI)											
Hexavalent chromium	18540-29-9	LA-265-403	UN	UJ	<0.11		ug/g	1	0.11	0.56	02/16/11
ICP Prep											**02/14/11**
ICP-AES											
Lithium	7439-93-2	LA-505-411			6.68		mg/kg	1	0.45	2.3	02/22/11
Boron	7440-42-8	LA-505-411	B		8.03		mg/kg	1	4.6	23	02/22/11
ICPMS Prep											**02/14/11**
ICP-MS											
Manganese	7439-96-5	LA-505-412			409		mg/kg	1	0.11	1.1	02/15/11
Nickel	7440-02-0	LA-505-412	N		10.8		mg/kg	1	0.21	2.1	02/15/11
Silver	7440-22-4	LA-505-412	U		<0.11		mg/kg	1	0.11	1.1	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504008
SAF# F11-077
Sample ID B2BWK2

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC											**02/14/11**
Anions by IC											
Fluoride	16984-48-8	LA-533-410	U		<1.7		mg/kg	1	1.7	11	02/14/11
Chloride	16887-00-6	LA-533-410	B		2.90		mg/kg	1	2.5	23	02/14/11
Nitrite-N	NO2-N	LA-533-410	U		<1.0		mg/kg	1	1.0	5.7	02/14/11
Nitrate-N	NO3-N	LA-533-410	U		<1.8		mg/kg	1	1.8	5.7	02/14/11
Sulfate	14808-79-8	LA-533-410	B		6.86		mg/kg	1	3.7	57	02/14/11
Cr(VI) Prep											**02/15/11**
Cr(VI)											
Hexavalent chromium	18540-29-9	LA-265-403	UN	UJ	<0.11		ug/g	1	0.11	0.57	02/16/11
~~**ICP Prep**~~											~~**02/14/11**~~
ICP-AES											
Lithium	7439-93-2	LA-505-411			7.11		mg/kg	1	0.46	2.3	02/22/11
Boron	7440-42-8	LA-505-411	B		10.4		mg/kg	1	4.7	23	02/22/11
ICPMS Prep											**02/14/11**
ICP-MS											
Manganese	7439-96-5	LA-505-412			402		mg/kg	1	0.10	1.0	02/15/11
Nickel	7440-02-0	LA-505-412	N		10.8		mg/kg	1	0.21	2.1	02/15/11
Silver	7440-22-4	LA-505-412	U		<0.10		mg/kg	1	0.10	1.0	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504009
SAF# F11-077
Sample ID B2BWK3

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC											**02/14/11**
Anions by IC											
Fluoride	16984-48-8	LA-533-410	U		<1.7		mg/kg	1	1.7	11	02/14/11
Chloride	16887-00-6	LA-533-410	B		2.43		mg/kg	1	2.4	23	02/14/11
Nitrite-N	NO2-N	LA-533-410	U		<1.0		mg/kg	1	1.0	5.7	02/14/11
Nitrate-N	NO3-N	LA-533-410	U		<1.8		mg/kg	1	1.8	5.7	02/14/11
Sulfate	14808-79-8	LA-533-410	B		3.80		mg/kg	1	3.7	57	02/14/11
Cr(VI) Prep											**02/15/11**
Cr(VI)											
Hexavalent chromium	18540-29-9	LA-265-403	UN	UJ	<0.11		ug/g	1	0.11	0.57	02/16/11
ICP Prep											**02/14/11**
ICP-AES											
Lithium	7439-93-2	LA-505-411			6.26		mg/kg	1	0.46	2.3	02/22/11
Boron	7440-42-8	LA-505-411	B		8.65		mg/kg	1	4.7	23	02/22/11
ICPMS Prep											**02/14/11**
ICP-MS											
Manganese	7439-96-5	LA-505-412			389		mg/kg	1	0.11	1.1	02/15/11
Nickel	7440-02-0	LA-505-412	N		10.1		mg/kg	1	0.22	2.2	02/15/11
Silver	7440-22-4	LA-505-412	U		<0.11		mg/kg	1	0.11	1.1	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504010
SAF# F11-077
Sample ID B2BWK4

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/15/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.7		mg/kg	1	1.7	11	02/15/11
Chloride	16887-00-6	LA-533-410	B	2.72		mg/kg	1	2.4	22	02/15/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.6	02/15/11
Nitrate-N	NO3-N	LA-533-410	U	<1.7		mg/kg	1	1.7	5.6	02/15/11
Sulfate	14808-79-8	LA-533-410	U	<3.7		mg/kg	1	3.7	56	02/15/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	UJ <0.11		ug/g	1	0.11	0.57	02/16/11
~~**ICP Prep**~~										~~**02/14/11**~~
ICP-AES										
Lithium	7439-93-2	LA-505-411		6.01		mg/kg	1	0.45	2.3	02/22/11
Boron	7440-42-8	LA-505-411	B	8.28		mg/kg	1	4.7	23	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		404		mg/kg	1	0.10	1.0	02/15/11
Nickel	7440-02-0	LA-505-412	N	10.3		mg/kg	1	0.20	2.0	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504011
SAF# F11-077
Sample ID B2BWK5

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC											**02/15/11**
Anions by IC											
Fluoride	16984-48-8	LA-533-410	U		<1.6		mg/kg	1	1.6	11	02/15/11
Chloride	16887-00-6	LA-533-410	U		<2.3		mg/kg	1	2.3	22	02/15/11
Nitrite-N	NO2-N	LA-533-410	U		<0.98		mg/kg	1	0.98	5.4	02/15/11
Nitrate-N	NO3-N	LA-533-410	U		<1.7		mg/kg	1	1.7	5.4	02/15/11
Sulfate	14808-79-8	LA-533-410	U		<3.6		mg/kg	1	3.6	54	02/15/11
Cr(VI) Prep											**02/15/11**
Cr(VI)											
Hexavalent chromium	18540-29-9	LA-265-403	BN	J	0.461		ug/g	1	0.11	0.54	02/16/11
ICP Prep											**02/14/11**
ICP-AES											
Lithium	7439-93-2	LA-505-411			4.97		mg/kg	1	0.43	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B		10.4		mg/kg	1	4.4	22	02/22/11
ICPMS Prep											**02/14/11**
ICP-MS											
Manganese	7439-96-5	LA-505-412			366		mg/kg	1	0.10	1.0	02/15/11
Nickel	7440-02-0	LA-505-412	N		10.6		mg/kg	1	0.20	2.0	02/15/11
Silver	7440-22-4	LA-505-412	U		<0.10		mg/kg	1	0.10	1.0	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504012
SAF# F11-077
Sample ID B2BWK6

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/15/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.6		mg/kg	1	1.6	11	02/15/11
Chloride	16887-00-6	LA-533-410	U	<2.3		mg/kg	1	2.3	21	02/15/11
Nitrite-N	NO2-N	LA-533-410	U	<0.96		mg/kg	1	0.96	5.3	02/15/11
Nitrate-N	NO3-N	LA-533-410	U	<1.6		mg/kg	1	1.6	5.3	02/15/11
Sulfate	14808-79-8	LA-533-410	U	<3.5		mg/kg	1	3.5	53	02/15/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	UJ <0.11		ug/g	1	0.11	0.54	02/16/11
~~**ICP Prep**~~										~~**02/14/11**~~
ICP-AES										
Lithium	7439-93-2	LA-505-411		7.17		mg/kg	1	0.43	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B	8.04		mg/kg	1	4.5	22	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		364		mg/kg	1	0.10	1.0	02/15/11
Nickel	7440-02-0	LA-505-412	N	11.2		mg/kg	1	0.21	2.1	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504013
SAF# F11-077
Sample ID B2BWK7

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC											**02/15/11**
Anions by IC											
Fluoride	16984-48-8	LA-533-410	U		<1.7		mg/kg	1	1.7	11	02/15/11
Chloride	16887-00-6	LA-533-410	B		7.58		mg/kg	1	2.4	22	02/15/11
Nitrite-N	NO2-N	LA-533-410	U		<1.0		mg/kg	1	1.0	5.5	02/15/11
Nitrate-N	NO3-N	LA-533-410	U		<1.7		mg/kg	1	1.7	5.5	02/15/11
Sulfate	14808-79-8	LA-533-410	U		<3.6		mg/kg	1	3.6	55	02/15/11
Cr(VI) Prep											**02/15/11**
Cr(VI)											
Hexavalent chromium	18540-29-9	LA-265-403	UN	UJ	<0.11		ug/g	1	0.11	0.56	02/16/11
ICP Prep											**02/14/11**
ICP-AES											
Lithium	7439-93-2	LA-505-411			6.62		mg/kg	1	0.45	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B		8.31		mg/kg	1	4.6	23	02/22/11
ICPMS Prep											**02/14/11**
ICP-MS											
Manganese	7439-96-5	LA-505-412			366		mg/kg	1	0.11	1.1	02/15/11
Nickel	7440-02-0	LA-505-412	N		11.4		mg/kg	1	0.22	2.2	02/15/11
Silver	7440-22-4	LA-505-412	U		<0.11		mg/kg	1	0.11	1.1	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504014
SAF# F11-077
Sample ID B2BWK8

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC											**02/15/11**
Anions by IC											
Fluoride	16984-48-8	LA-533-410	U		<1.6		mg/kg	1	1.6	11	02/15/11
Chloride	16887-00-6	LA-533-410	U		<2.3		mg/kg	1	2.3	22	02/15/11
Nitrite-N	NO2-N	LA-533-410	U		<0.98		mg/kg	1	0.98	5.4	02/15/11
Nitrate-N	NO3-N	LA-533-410	U		<1.7		mg/kg	1	1.7	5.4	02/15/11
Sulfate	14808-79-8	LA-533-410	U		<3.5		mg/kg	1	3.5	54	02/15/11
Cr(VI) Prep											**02/15/11**
Cr(VI)											
Hexavalent chromium	18540-29-9	LA-265-403	UN	UJ	<0.11		ug/g	1	0.11	0.54	02/16/11
~~**ICP Prep**~~											~~**02/14/11**~~
ICP-AES											
Lithium	7439-93-2	LA-505-411			5.66		mg/kg	1	0.44	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B		11.3		mg/kg	1	4.5	22	02/22/11
ICPMS Prep											**02/14/11**
ICP-MS											
Manganese	7439-96-5	LA-505-412			391		mg/kg	1	0.10	1.0	02/15/11
Nickel	7440-02-0	LA-505-412	N		10.9		mg/kg	1	0.20	2.0	02/15/11
Silver	7440-22-4	LA-505-412	U		<0.10		mg/kg	1	0.10	1.0	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504015
SAF# F11-077
Sample ID B2BWK9

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**02/15/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.6		mg/kg	1	1.6	11	02/15/11
Chloride	16887-00-6	LA-533-410	B	12.0		mg/kg	1	2.3	22	02/15/11
Nitrite-N	NO2-N	LA-533-410	U	<0.98		mg/kg	1	0.98	5.4	02/15/11
Nitrate-N	NO3-N	LA-533-410	B	1.78		mg/kg	1	1.7	5.4	02/15/11
Sulfate	14808-79-8	LA-533-410	B	9.53		mg/kg	1	3.5	54	02/15/11
Cr(VI) Prep										**02/15/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	UJ <0.11		ug/g	1	0.11	0.54	02/16/11
~~**ICP Prep**~~										~~**02/14/11**~~
ICP-AES										
Lithium	7439-93-2	LA-505-411		5.60		mg/kg	1	0.43	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B	9.79		mg/kg	1	4.4	22	02/22/11
ICPMS Prep										**02/14/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		401		mg/kg	1	0.10	1.0	02/15/11
Nickel	7440-02-0	LA-505-412	N	11.3		mg/kg	1	0.20	2.0	02/15/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504016
SAF# F11-077
Sample ID B2BWJ7

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC											**02/15/11**
Anions by IC											
Fluoride	16984-48-8	LA-533-410	U		<1.7		mg/kg	1	1.7	11	02/15/11
Chloride	16887-00-6	LA-533-410	B		2.55		mg/kg	1	2.4	22	02/15/11
Nitrite-N	NO2-N	LA-533-410	U		<1.0		mg/kg	1	1.0	5.6	02/15/11
Nitrate-N	NO3-N	LA-533-410	U		<1.7		mg/kg	1	1.7	5.6	02/15/11
Sulfate	14808-79-8	LA-533-410	B		4.21		mg/kg	1	3.6	56	02/15/11
Cr(VI) Prep											**02/15/11**
Cr(VI)											
Hexavalent chromium	18540-29-9	LA-265-403	UN	UJ	<0.11		ug/g	1	0.11	0.56	02/16/11
~~**ICP Prep**~~											~~**02/14/11**~~
ICP-AES											
Lithium	7439-93-2	LA-505-411			6.36		mg/kg	1	0.45	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B		8.71		mg/kg	1	4.6	23	02/22/11
ICPMS Prep											**02/14/11**
ICP-MS											
Manganese	7439-96-5	LA-505-412			420		mg/kg	1	0.11	1.1	02/15/11
Nickel	7440-02-0	LA-505-412	N		11.3		mg/kg	1	0.21	2.1	02/15/11
Silver	7440-22-4	LA-505-412	U		<0.11		mg/kg	1	0.11	1.1	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504017
SAF# F11-077
Sample ID B2BWJ8

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC											**02/15/11**
Anions by IC											
Fluoride	16984-48-8	LA-533-410	U		<1.7		mg/kg	1	1.7	11	02/15/11
Chloride	16887-00-6	LA-533-410	B		7.27		mg/kg	1	2.4	22	02/15/11
Nitrite-N	NO2-N	LA-533-410	U		<1.0		mg/kg	1	1.0	5.6	02/15/11
Nitrate-N	NO3-N	LA-533-410	U		<1.7		mg/kg	1	1.7	5.6	02/15/11
Sulfate	14808-79-8	LA-533-410	B		5.23		mg/kg	1	3.7	56	02/15/11
Cr(VI) Prep											**02/15/11**
Cr(VI)											
Hexavalent chromium	18540-29-9	LA-265-403	UN	UJ	<0.11		ug/g	1	0.11	0.57	02/16/11
~~**ICP Prep**~~											~~**02/14/11**~~
ICP-AES											
Lithium	7439-93-2	LA-505-411			7.08		mg/kg	1	0.45	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B		9.44		mg/kg	1	4.6	23	02/22/11
ICPMS Prep											**02/14/11**
ICP-MS											
Manganese	7439-96-5	LA-505-412			446		mg/kg	1	0.11	1.1	02/15/11
Nickel	7440-02-0	LA-505-412	N		11.8		mg/kg	1	0.21	2.1	02/15/11
Silver	7440-22-4	LA-505-412	U		<0.11		mg/kg	1	0.11	1.1	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Sample # 111504018
SAF# F11-077
Sample ID B2BWJ9

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ		Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC											**02/15/11**
Anions by IC											
Fluoride	16984-48-8	LA-533-410	U		<1.7		mg/kg	1	1.7	11	02/15/11
Chloride	16887-00-6	LA-533-410	B		22.3		mg/kg	1	2.4	23	02/15/11
Nitrite-N	NO2-N	LA-533-410	U		<1.0		mg/kg	1	1.0	5.6	02/15/11
Nitrate-N	NO3-N	LA-533-410	U		<1.7		mg/kg	1	1.7	5.6	02/15/11
Sulfate	14808-79-8	LA-533-410	B		6.65		mg/kg	1	3.7	56	02/15/11
Cr(VI) Prep											**02/15/11**
Cr(VI)											
Hexavalent chromium	18540-29-9	LA-265-403	N	J	0.586		ug/g	1	0.11	0.56	02/16/11
~~**ICP Prep**~~											~~**02/14/11**~~
ICP-AES											
Lithium	7439-93-2	LA-505-411			6.85		mg/kg	1	0.45	2.2	02/22/11
Boron	7440-42-8	LA-505-411	B		7.97		mg/kg	1	4.6	23	02/22/11
ICPMS Prep											**02/14/11**
ICP-MS											
Manganese	7439-96-5	LA-505-412			396		mg/kg	1	0.10	1.0	02/15/11
Nickel	7440-02-0	LA-505-412	N		11.2		mg/kg	1	0.21	2.1	02/15/11
Silver	7440-22-4	LA-505-412	U		<0.10		mg/kg	1	0.10	1.0	02/15/11

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

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

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111504

Sample # 111504001
SAF# F11-077
Sample ID B2BWL2

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**02/14/11**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		91		percent	1			02/14/11
pH on Solids										**02/14/11**
pH on Solids										
pH	PH	LA-212-411	J	8.93		unitless	1	0.010	0.50	02/14/11

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.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111504

Sample # 111504002
SAF# F11-077
Sample ID B2BWL1

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**02/14/11**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		93		percent	1			02/14/11
pH on Solids										**02/14/11**
pH on Solids										
pH	PH	LA-212-411	J	9.06		unitless	1	0.010	0.50	02/14/11

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.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111504

Sample # 111504003
SAF# F11-077
Sample ID B2BWL0

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**02/14/11**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		92		percent	1			02/14/11
pH on Solids										**02/14/11**
pH on Solids										
pH	PH	LA-212-411	J	8.90		unitless	1	0.010	0.50	02/14/11

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.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111504

Sample # 111504004
SAF# F11-077
Sample ID B2BWL3

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**02/14/11**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		100		percent	1			02/14/11
pH on Solids										**02/14/11**
pH on Solids										
pH	PH	LA-212-411	J	6.47		unitless	1	0.010	0.50	02/14/11

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.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111504

Sample # 111504005
SAF# F11-077
Sample ID B2BWL4

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**02/14/11**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		87		percent	1			02/14/11
pH on Solids										**02/14/11**
pH on Solids										
pH	PH	LA-212-411	J	8.21		unitless	1	0.010	0.50	02/14/11

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.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111504

Sample # 111504006
SAF# F11-077
Sample ID B2BWK0

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**02/14/11**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		90		percent	1			02/14/11
pH on Solids										**02/14/11**
pH on Solids										
pH	PH	LA-212-411	J	8.38		unitless	1	0.010	0.50	02/14/11

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.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111504

Sample # 111504007
SAF# F11-077
Sample ID B2BWK1

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**02/14/11**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		88		percent	1			02/14/11
pH on Solids										**02/14/11**
pH on Solids										
pH	PH	LA-212-411	J	7.47		unitless	1	0.010	0.50	02/14/11

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.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111504

Sample # 111504008
SAF# F11-077
Sample ID B2BWK2

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**02/14/11**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		87		percent	1			02/14/11
pH on Solids										**02/14/11**
pH on Solids										
pH	PH	LA-212-411	J	7.23		unitless	1	0.010	0.50	02/14/11

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.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111504

Sample # 111504009
SAF# F11-077
Sample ID B2BWK3

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**02/14/11**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		87		percent	1			02/14/11
pH on Solids										**02/14/11**
pH on Solids										
pH	PH	LA-212-411	J	8.41		unitless	1	0.010	0.50	02/14/11

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.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111504

Sample # 111504010
SAF# F11-077
Sample ID B2BWK4

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**02/14/11**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		88		percent	1			02/14/11
pH on Solids										**02/14/11**
pH on Solids										
pH	PH	LA-212-411	J	8.48		unitless	1	0.010	0.50	02/14/11

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.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111504

Sample # 111504011
SAF# F11-077
Sample ID B2BWK5

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**02/14/11**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		92		percent	1			02/14/11
pH on Solids										**02/14/11**
pH on Solids										
pH	PH	LA-212-411	J	7.97		unitless	1	0.010	0.50	02/14/11

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.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111504

Sample # 111504012
SAF# F11-077
Sample ID B2BWK6

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**02/14/11**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		92		percent	1			02/14/11
pH on Solids										**02/14/11**
pH on Solids										
pH	PH	LA-212-411	J	8.94		unitless	1	0.010	0.50	02/14/11

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.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111504

Sample # 111504013
SAF# F11-077
Sample ID B2BWK7

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**02/14/11**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		89		percent	1			02/14/11
pH on Solids										**02/14/11**
pH on Solids										
pH	PH	LA-212-411	J	8.86		unitless	1	0.010	0.50	02/14/11

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.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111504

Sample # 111504014
SAF# F11-077
Sample ID B2BWK8

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**02/14/11**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		92		percent	1			02/14/11
pH on Solids										**02/14/11**
pH on Solids										
pH	PH	LA-212-411	J	8.78		unitless	1	0.010	0.50	02/14/11

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.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111504

Sample # 111504015
SAF# F11-077
Sample ID B2BWK9

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**02/14/11**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		92		percent	1			02/14/11
pH on Solids										**02/14/11**
pH on Solids										
pH	PH	LA-212-411	J	8.75		unitless	1	0.010	0.50	02/14/11

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.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111504

Sample # 111504016
SAF# F11-077
Sample ID B2BWJ7

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**02/14/11**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		89		percent	1			02/14/11
pH on Solids										**02/14/11**
pH on Solids										
pH	PH	LA-212-411	J	7.88		unitless	1	0.010	0.50	02/14/11

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.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111504

Sample # 111504017
SAF# F11-077
Sample ID B2BWJ8

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**02/14/11**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		88		percent	1			02/14/11
pH on Solids										**02/14/11**
pH on Solids										
pH	PH	LA-212-411	J	7.58		unitless	1	0.010	0.50	02/14/11

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.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111504

Sample # 111504018
SAF# F11-077
Sample ID B2BWJ9

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**02/14/11**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		88		percent	1			02/14/11
pH on Solids										**02/14/11**
pH on Solids										
pH	PH	LA-212-411	J	7.06		unitless	1	0.010	0.50	02/14/11

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.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Attachment 2
Narrative
WSCF111504

Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were 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.

It should be noted that the attached chain of custody was not stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving. However, based on procedure LO-090-403 form "NOTICE OF IMPROPER SAMPLE SUBMITTAL" was not submitted and was not stamped "NOT ICED". No anomaly was noted during sample receipt.

The following generic data qualifiers (i.e., B, D, U 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 wet chemical 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.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

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. Analytical Note(s):

- Batch QC 177350

- Sulfate – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results near or below the minimum detectable level. No flags issued.

- All other applicable QC controls are within the established limits.

Hexavalent Chromium – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Matrix Spike recovery is outside established laboratory limits. Affected sample results in this batch were "N" flagged.

- All other applicable 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):

- All applicable QC controls are within the established limits.

ICP-MS 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):

- Copper and Nickel – MS / MSD Relative Percent Difference (RPD) is outside established laboratory limits. The quality control report was flagged for RPD failure.

- Copper and Nickel – Matrix Spike and/or Matrix Spike Duplicate recoveries are outside established laboratory limits. Affected sample results in this batch were "N" flagged.

- Manganese, Barium, Vanadium, Zinc and Strontium – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.

- All other applicable QC controls are within the established limits.

pH – The hold time requirement for this analysis was met. A Duplicate and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – The hold time requirement for this analysis was met. A Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Gross Alpha / Gross Beta:

Narrative

Attachment 2
Narrative
WSCF111504

- Batch QC 176859
- Gross Alpha - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
- Batch QC 178864
- Gross Alpha - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - All other applicable 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.

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-077-016 — PAGE 1 OF 2

COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: 183KW Staging Area Sample 16	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: C01 — AIR QUALITY: ☐ — DATA TURNAROUND: 12 Days / 12 Days — METHOD OF SHIPMENT: GOVERNMENT VEHICLE — **ORIGINAL**

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)

111504

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS 300.8 6010	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS 300 PH	SEE ITEM (3) IN SPECIAL INSTRUCTIONS GRAC

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWL2 001	SOIL	2/10/11	1215	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	2/10/11 1600	SSU#1 M01109	2/10/11 1600
SSU#1 M01109	2/11/11 0900	F. Hall	2/11/11 0900
R. Hall	2/11/11 1050	M. Nelson	2/11/11 1050

SPECIAL INSTRUCTIONS: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-016	PAGE 2 OF 2
COLLECTOR F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 183KW Staging Area Sample 16	PROJECT DESIGNATION 183KW Staging Area In-Process Sampling - Soil		SAF NO. F11-077	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. SAKL 107	FIELD LOGBOOK NO. HNF-N-507-17	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

PRINTED ON 2/8/2011 A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F11-077-015	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01
SAMPLING LOCATION: 183KW Staging Area Sample 15	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A	

DATA TURNAROUND: 12 Days / 12 Days

ORIGINAL

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

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196.	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWL1002	SOIL	2/10/11	1206	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	2/10/11 1600	SSU#1 MO1109	2/10/11 1600
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SSU#1 MO1109	2/11/11 0900	F. Hall	2/11/11 0900
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	2/11/11 1050	M Nelson	2/11/11 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-015	PAGE 2 OF 2
COLLECTOR 2/9/11 SM F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01	DATA TURNAROUND 12 Days / 12 Days
SAMPLING LOCATION 183KW Staging Area Sample 15	PROJECT DESIGNATION 183KW Staging Area In-Process Sampling - Soil		SAF NO. F11-077	AIR QUALITY ☐	
ICE CHEST NO. SML-107	FIELD LOGBOOK NO. HNF-N-507-17	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

PRINTED ON 2/8/2011 A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-014	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 14	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-11	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool--4C	Cool--4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250ml	60ml	120ml	250ml
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWL0 003	SOIL	2/10/11	1200	✓	✓	✓	✓

CHAIN OF POSSESSION: RELINQUISHED BY/REMOVED FROM	DATE/TIME	SIGN/ PRINT NAMES: RECEIVED BY/STORED IN	DATE/TIME
F. Hall	2/10/11 1600	SSU#1 M01109	2/10/11 1600
SSU#1 M01109	2/11/11 0900	F. Hall	2/11/11 0900
F. Hall	2/11/11 1050	M. Nelson	2/11/11 1050

SPECIAL INSTRUCTIONS: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011 A-3003-C18 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-014	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 14	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

PRINTED ON 2/8/2011 A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-017	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 17	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool--4C	Cool--4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWL3 004	SOIL	2/10/11	0735	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: M01109SSU#1	DATE/TIME: 2/10/11 1600	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: M01109SSU#1	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 2/11/11 0900	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M. Nelson	DATE/TIME: 2/11/11 1050	
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

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-017	PAGE 2 OF 2
COLLECTOR F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 183KW Staging Area Sample 17	PROJECT DESIGNATION 183KW Staging Area In Process Sampling Soil		SAF NO. F11-077	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. SML-167	FIELD LOGBOOK NO. HNF-N-507-17	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 4025B1ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-018	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 18	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SAL-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool-4C	Cool-4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWL4 005	SOIL	2/10/11	0955	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall [signature] 2/10/11	DATE/TIME: 1600	RECEIVED BY/STORED IN: SSU#1 M01109 2/10/11	DATE/TIME: 1600
RELINQUISHED BY/REMOVED FROM: SSU#1 M01109 2/11/11	DATE/TIME: 0900	RECEIVED BY/STORED IN: F. Hall [signature] 2/11/11	DATE/TIME: 0900
RELINQUISHED BY/REMOVED FROM: F. Hall [signature] 2/11/11	DATE/TIME: 1050	RECEIVED BY/STORED IN: M. Nelson [signature] 2/11/11	DATE/TIME: 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-018	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 18	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F11-077-004	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01 / DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 4	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE / ORIGINAL
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 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

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196,	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK0 006	SOIL	2/10/11	0933	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: SSU#1 M01109	DATE/TIME: 2/10/11 1600
RELINQUISHED BY/REMOVED FROM: SSU#1 M01109	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 2/11/11 0900
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M. Nelson	DATE/TIME: 2/11/11 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

A-6003-518 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-004	PAGE 2 OF 2
COLLECTOR F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 183KW Staging Area Sample 4	PROJECT DESIGNATION 183KW Staging Area In-Process Sampling - Soil		SAF NO. F11-077	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. SML-107	FIELD LOGBOOK NO. HNF-N-507-17	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F11-077-005	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01 / DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 5	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐
ICE CHEST NO.: SAIL-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE / ORIGINAL
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 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

PRESERVATION	None	Cool<4C	Cool<4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK1007	SOIL	2/10/11	0940	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall [signature] 2/10/11	DATE/TIME: 1600	RECEIVED BY/STORED IN: SSU#1 M01109 2/10/11	DATE/TIME: 1600
RELINQUISHED BY/REMOVED FROM: SSU#1 M01109 2/11/11	DATE/TIME: 0900	RECEIVED BY/STORED IN: F. Hall [signature] 2/11/11	DATE/TIME: 0900
RELINQUISHED BY/REMOVED FROM: F. Hall [signature] 2/11/11	DATE/TIME: 1050	RECEIVED BY/STORED IN: M. Nelson [signature] 2/11/11	DATE/TIME: 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-005	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 5	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-077-006 — PAGE 1 OF 2

COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: 183KW Staging Area Sample 6	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: C01
AIR QUALITY: ☐
METHOD OF SHIPMENT: GOVERNMENT VEHICLE
DATA TURNAROUND: 12 Days / 12 Days
ORIGINAL

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SF=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

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250ml	60ml	120ml	250ml
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK2 008	SOIL	2/10/11	0945	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall [signature]	2/10/11 1600	SSU#1 MO1109	2/10/11 1600
SSU#1 MO1109	2/11/11 0900	F. Hall [signature]	2/11/11 0900
F. Hall [signature]	2/11/11 1050	M. Nelson [signature]	2/11/11 1050
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
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011 — A 6003 618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-006	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND
SAMPLING LOCATION: 183KW Staging Area Sample 6	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	12 Days / 12 Days
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-007	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 7	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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, WT=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

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7195;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK3	SOIL	2/10/11	0955	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: SSU#1 MO1109	DATE/TIME: 2/10/11 1600	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: SSU#1 MO1109	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 2/11/11 0900	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M. Nelson	DATE/TIME: 2/11/11 1050	
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

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-007	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 7	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-008	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND
SAMPLING LOCATION: 183KW Staging Area Sample 8	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	12 Days / 12 Days
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool-4C	Cool-4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK4 010	SOIL	2/10/11	1005	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: SSU#1 MO1109	DATE/TIME: 2/10/11 1600	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: SSU#1 MO1109	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 2/11/11 0900	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M Nelson	DATE/TIME: 2/11/11 1050	
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

PRINTED ON 2/8/2011

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-008	PAGE 2 OF 2
COLLECTOR F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01 AIR QUALITY ☐	DATA TURNAROUND 12 Days / 12 Days
SAMPLING LOCATION 183KW Staging Area Sample 8	PROJECT DESIGNATION 183KW Staging Area In-Process Sampling - Soil		SAF NO. F11-077		
ICE CHEST NO. SML-107	FIELD LOGBOOK NO. HNF-N-507-17	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-009	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 9	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool-4C	Cool-4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /TSHg	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK5	SOIL	2/10/11	1015	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	2/10/11 1600	SSU#1 M01109	2/10/11 1600
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SSU#1 M01109	2/11/11 0900	F. Hall	2/11/11 0900
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	2/11/11 1050	M. Nelson	2/11/11 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-009	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 9	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-12	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-010	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 10	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool-4C	Cool-4C	None	
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months	
TYPE OF CONTAINER	G/P	G/P	G/P	G/P	
NO. OF CONTAINER(S)	1	1	1	1	
VOLUME	250mL	60mL	120mL	250mL	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	
SAMPLE NO. / MATRIX* / SAMPLE DATE SAMPLE TIME					
B2BWK6 012 / SOIL / 2/10/11 1020	✓	✓	✓	✓	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	2/10/11 1600	SSU#1 M01109	2/10/11 1600
SSU#1 M01109	2/10/11 0900	F. Hall	2/11/11 0900
F. Hall	2/11/11 1050	M. Nelson	2/11/11 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-010	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 10	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-011	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 11	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK7 013	SOIL	2/10/11	1142	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: F. Hall [signature]	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: SSU#1 M01109	DATE/TIME: 2/10/11 1600	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: SSU#1 M01109	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall [signature]	DATE/TIME: 2/11/11 0900	
RELINQUISHED BY/REMOVED FROM: F. Hall [signature]	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M. Nelson M. Nelson	DATE/TIME: 2/11/11 1050	
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

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-011	PAGE 2 OF 2
COLLECTOR F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 183KW Staging Area Sample 11	PROJECT DESIGNATION 183KW Staging Area In-Process Sampling - Soil		SAF NO. F11-077	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. SML-107	FIELD LOGBOOK NO. HNP-N-507-17	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-012	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 12	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK8 014	SOIL	2/10/11	1149	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall [signature]	2/10/11 1600	SSU*1 M01109	2/10/11 1600
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SSU*1 M01109	2/11/11 0900	F. Hall [signature]	2/11/11 0900
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall [signature]	2/11/11 1050	M. Nelson [signature]	2/11/11 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-012	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND
SAMPLING LOCATION: 183KW Staging Area Sample 12	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	12 Days / 12 Days
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-077-013 PAGE 1 OF 2

COLLECTOR: F. Hall

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT COORDINATOR: LUKE, SN

PRICE CODE: C01

DATA TURNAROUND: 12 Days / 12 Days

SAMPLING LOCATION: 183KW Staging Area Sample 13

PROJECT DESIGNATION: 183KW Staging Area In Process Sampling - Soil

SAF NO.: F11-077

AIR QUALITY: ☐

ICE CHEST NO.: SML-107

FIELD LOGBOOK NO.: HNF-N-507-17

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302682ES10

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

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 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

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196,	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK9 015	SOIL	2/10/11	1153	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	2/10/11 1600	SSU #1 M01109	2/10/11 1600
SSU #1 M01109	2/11/11 0900	F. Hall	2/11/11 0900
F. Hall	2/11/11 1050	M. Nolan	2/11/11 1050

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION: RECEIVED BY | TITLE | DATE/TIME

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

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-013	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 13	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-11	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-077-001 PAGE 1 OF 2

COLLECTOR: F. Hall

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1657

PROJECT COORDINATOR: LUKE, SN

PRICE CODE: C01

DATA TURNAROUND: 12 Days / 12 Days

SAMPLING LOCATION: 183KW Staging Area Sample 1

PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil

SAF NO.: F11-077

AIR QUALITY: ☐

ICE CHEST NO.: SML-107

FIELD LOGBOOK NO.: HNF-N-507-17

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302682ES10

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

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 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

PRESERVATION		None	Cool~4C	Cool~4C	None
HOLDING TIME		6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER		G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)		1	1	1	1
VOLUME		250mL	60mL	120mL	250mL
SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2BWJ7 016	SOIL	2/10/11	0916	✓	✓ ✓ ✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall [signature]	2/10/11 1600	SSU#1 MO-1109	2/10/11 1600
SSU#1 MO-1109	2/11/11 0900	F. Hall [signature]	2/11/11 0900
F. Hall [signature]	2/11/11 1050	M. Nelson [signature]	2/11/11 1050

SPECIAL INSTRUCTIONS: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION: RECEIVED BY | TITLE | DATE/TIME

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

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-001	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 1	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	ORIGINAL
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-002	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 2	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool-4C	Cool-4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWJ8 017	SOIL	2/10/11	0923	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: SSU#1 M01109	DATE/TIME: 2/10/11 1600
RELINQUISHED BY/REMOVED FROM: SSU#1 M01109	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 2/11/11 0900
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M. Nelson	DATE/TIME: 2/11/11 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

A-5003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-002	PAGE 2 OF 2
COLLECTOR F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 183KW Staging Area Sample 2	PROJECT DESIGNATION 183KW Staging Area In-Process Sampling - Soil		SAF NO. F11-077	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. SML-107	FIELD LOGBOOK NO. HNF-N-507-17	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-003	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 3	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool-4C	Cool-4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWJ9 018	SOIL	2/10/11	0930	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: F. Hall [signature]	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: SSU#1 M01109	DATE/TIME: 2/10/11 1600	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: SSU#1 M01109	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall [signature]	DATE/TIME: 2/11/11 0900	
RELINQUISHED BY/REMOVED FROM: F. Hall [signature]	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M Nelsamnols	DATE/TIME: 2/11/11 1050	
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

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-003	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND
SAMPLING LOCATION: 183KW Staging Area Sample 3	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	12 Days / 12 Days
ICE CHEST NO.: SMC-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Appendix 5

Data Validation Supporting Documentation

VALIDATION LEVEL:	A	B	(C)	D	E
PROJECT: 100 K RA			DATA PACKAGE: VSR12-009		
VALIDATOR: Ken Salaz		LAB: WSCF		DATE: 4/25/12	
			SDG: WSCF111504		
ANALYSES PERFORMED					
Anions/IC X	TOC	TOX	TPH-418.1	Oil and Grease	Alkalinity
Ammonia	BOD/COD	Chloride	Chromium-VI X	pH X	NO_3/NO_2
Sulfate	TDS	TKN	Phosphate		
SAMPLES/MATRIX Soil Samples					
B2BWL2, B2BWL1, B2BWL0, B2BWL3, B2BWL4, B2BWK0, B2BWK1, B2BWK2, B2BWK3, B2BWK4, B2BWK5, B2BWK6, B2BWK7, B2BWK8, B2BWK9, B2BWJ7, B2BWJ8, B2BWJ9					

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present?..... Yes (No) N/A

Comments: None

2. INSTRUMENT PERFORMANCE AND CALIBRATIONS (Levels D and E)

Initial calibrations performed on all instruments? ..... Yes No N/A

Initial calibrations acceptable? ..... Yes No N/A

ICV and CCV checks performed on all instruments? ..... Yes No N/A

ICV and CCV checks acceptable? ..... Yes No N/A

Standards traceable? ..... Yes No N/A

Standards expired? ..... Yes No N/A

Calculation check acceptable? ..... Yes No N/A

Comments:

3. BLANKS (Levels B, C, D, and E)

ICB and CCB checks performed for all applicable analyses? (Levels D, E) ..... Yes No N/A

ICB and CCB results acceptable? (Levels D, E) ..... Yes No N/A

Laboratory blanks analyzed? ..... Yes No N/A

Laboratory blank results acceptable? ..... Yes No N/A

Field blanks analyzed? (Levels C, D, E) ..... Yes No N/A

Field blank results acceptable? (Levels C, D, E) ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments:__ None

4. ACCURACY (Levels C, D, and E)

Spike samples analyzed? ..... Yes No N/A

Spike recoveries acceptable? ..... Yes No N/A

Spike standards NIST traceable? (Levels D, E) ..... Yes No N/A

Spike standards expired? (Levels D, E) ..... Yes No N/A

LCS/BSS samples analyzed? ..... Yes No N/A

LCS/BSS results acceptable? ..... Yes No N/A

Standards traceable? (Levels D, E) ..... Yes No N/A

Standards expired? (Levels D, E) ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Performance audit sample(s) analyzed? ..... Yes No N/A

Performance audit sample results acceptable? ..... Yes No N/A

Comments:__

Cr VI MS %R=43%

5. PRECISION (Levels C, D, and E)

Duplicate RPD values acceptable? ..... Yes (No) N/A

Duplicate results acceptable? ..... (Yes) No N/A

MS/MSD standards NIST traceable? (Levels D, E) ..... Yes No (N/A)

MS/MSD standards expired? (Levels D, E) ..... Yes No (N/A)

Field duplicate RPD values acceptable? ..... (Yes) No N/A

Field split RPD values acceptable? ..... Yes No (N/A)

Transcription/calculation errors? (Levels D, E) ..... Yes No (N/A)

Comments:

Anions batch 177350: nitrate and sulfate RPDs >30%, parent and/or duplicate results <5X the RL, differences <2X the RL

6. HOLDING TIMES (all levels)

Samples properly preserved? ..... (Yes) No N/A

Sample holding times acceptable? ..... Yes (No) N/A

Comments:
All samples analyzed for pH 3 days after collection.

7. RESULT QUANTITATION AND DETECTION LIMITS (all levels)

Results reported for all requested analyses?..... Yes No N/A

Results supported in the raw data? (Levels D, E) ..... Yes No N/A

Samples properly prepared? (Levels D, E)..... Yes No N/A

Detection limits meet RDL?..... Yes No N/A

Transcription/calculation errors? (Levels D, E)..... Yes No N/A

Comments:__ None

Comments (attach additional sheets as necessary):

Appendix 6

Additional Documentation Requested By Client

Quality Control Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111504

QC Batch 176966 **Test** Soil And Waste pH Measurement
Associated Samples 111504001, 111504002, 111504003, 111504004, 111504005, 111504006, 111504007, 111504008, 111504009, 111504010, 111504011, 111504012, 111504013, 111504014, 111504015, 111504016, 111504017, 111504018

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			**QC Sample #49121**							
pH	PH		7.96	unitless	99.6	98.75 - 101.25				02/14/11
DUP			**QC Sample #49122**							
			Original 111504001							
pH	PH	8.93	9.92	unitless			0.80	30		02/14/11
LCS			**QC Sample #49125**							
pH	PH		7.95	unitless	99.4	98.75 - 101.25				02/14/11
LCS			**QC Sample #49132**							
pH	PH		7.96	unitless	99.6	98.75 - 101.25				02/14/11
DUP			**QC Sample #49133**							
			Original 111504011							
pH	PH	7.97	8.54	unitless			1.10	30		02/14/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

QC Batch 177255 **Test** Hexavalent chromium
Associated Samples 111504001, 111504002, 111504003, 111504004, 111504005, 111504006, 111504007, 111504008, 111504009, 111504010, 111504011, 111504012, 111504013, 111504014, 111504015, 111504016, 111504017, 111504018

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #49322**							
Hexavalent chromium	18540-29-9		<0.10	ug/g					U	02/16/11
LCS			**QC Sample #49323**							
Hexavalent chromium	18540-29-9		3.66	ug/g	91.6	80 - 120				02/16/11
DUP			**QC Sample #49324**							
			Original 111504001							
Hexavalent chromium	18540-29-9	0.113	0.128	ug/g			11.90	20	B	02/16/11
MS			**QC Sample #49325**							
			Original 111504001							
Hexavalent chromium	18540-29-9	0.113	1.70	ug/g	42.6	75 - 125			N	02/16/11
PSTSPK			**QC Sample #49326**							
Hexavalent chromium	18540-29-9		0.0565	ug/g	106.2	85 - 115				02/16/11
IMS			**QC Sample #49327**							
			Original 111504001							
Hexavalent chromium	18540-29-9	0.113	278	ug/g	80.9	75 - 125			D	02/16/11

Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF111504

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
177255	177256	7	DUP	49324	B2BWL2(111504001DUP)	111504001	Hexavalent chromium
177255	177256	8	MS	49325	B2BWL2(111504001MS)	111504001	Hexavalent chromium
177255	177256	9	PSTSPK	49326	PSTSPK		Hexavalent chromium
177255	177256	10	IMS	49327	B2BWL2(111504001IMS)	111504001	Hexavalent chromium
177255	177256	11	SAMPLE	111504001	B2BWL2		Hexavalent chromium
177255	177256	12	SAMPLE	111504002	B2BWL1		Hexavalent chromium
177255	177256	13	SAMPLE	111504003	B2BWL0		Hexavalent chromium
177255	177256	14	SAMPLE	111504004	B2BWL3		Hexavalent chromium
177255	177256	15	SAMPLE	111504005	B2BWL4		Hexavalent chromium
177255	177256	16	SAMPLE	111504006	B2BWK0		Hexavalent chromium
177255	177256	17	SAMPLE	111504007	B2BWK1		Hexavalent chromium
177255	177256	18	SAMPLE	111504008	B2BWK2		Hexavalent chromium
177255	177256	19	SAMPLE	111504009	B2BWK3		Hexavalent chromium
177255	177256	20	SAMPLE	111504010	B2BWK4		Hexavalent chromium
177255	177256	21	SAMPLE	111504011	B2BWK5		Hexavalent chromium
177255	177256	22	SAMPLE	111504012	B2BWK6		Hexavalent chromium
177255	177256	23	SAMPLE	111504013	B2BWK7		Hexavalent chromium
177255	177256	24	SAMPLE	111504014	B2BWK8		Hexavalent chromium
177255	177256	25	SAMPLE	111504015	B2BWK9		Hexavalent chromium
177255	177256	26	SAMPLE	111504016	B2BWJ7		Hexavalent chromium
177255	177256	27	SAMPLE	111504017	B2BWJ8		Hexavalent chromium
177255	177256	28	SAMPLE	111504018	B2BWJ9		Hexavalent chromium
177350	177456	1	BLANK	49425	BLANK		Anions by Ion Chromatography (Solid)

Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF111504

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
177350	177456	3	LCS	49426	LCS		Anions by Ion Chromatography (Solid)
177350	177456	4	MS	49427	B2BWL2(111504001MS)	111504001	Anions by Ion Chromatography (Solid)
177350	177456	5	MSD	49428	B2BWL2(111504001MSD)	111504001	Anions by Ion Chromatography (Solid)
177350	177456	6	DUP	49429	B2BWL2(111504001DUP)	111504001	Anions by Ion Chromatography (Solid)
177350	177456	7	SAMPLE	111504001	B2BWL2		Anions by Ion Chromatography (Solid)
177350	177456	8	SAMPLE	111504002	B2BWL1		Anions by Ion Chromatography (Solid)
177350	177456	9	SAMPLE	111504003	B2BWL0		Anions by Ion Chromatography (Solid)
177350	177456	10	SAMPLE	111504004	B2BWL3		Anions by Ion Chromatography (Solid)
177350	177456	11	SAMPLE	111504005	B2BWL4		Anions by Ion Chromatography (Solid)
177350	177456	12	SAMPLE	111504006	B2BWK0		Anions by Ion Chromatography (Solid)
177350	177456	13	SAMPLE	111504007	B2BWK1		Anions by Ion Chromatography (Solid)
177350	177456	14	SAMPLE	111504008	B2BWK2		Anions by Ion Chromatography (Solid)
177350	177456	15	SAMPLE	111504009	B2BWK3		Anions by Ion Chromatography (Solid)
177351	177459	1	BLANK	49430	BLANK		Anions by Ion Chromatography (Solid)
177351	177459	3	LCS	49431	LCS		Anions by Ion Chromatography (Solid)
177351	177459	4	MS	49432	B2BWK5(111504011MS)	111504011	Anions by Ion Chromatography (Solid)
177351	177459	5	MSD	49433	B2BWK5(111504011MSD	111504011	Anions by Ion Chromatography (Solid)
177351	177459	6	DUP	49434	B2BWK5(111504011DUP)	111504011	Anions by Ion Chromatography (Solid)
177351	177459	7	SAMPLE	111504010	B2BWK4		Anions by Ion Chromatography (Solid)
177351	177459	8	SAMPLE	111504011	B2BWK5		Anions by Ion Chromatography (Solid)
177351	177459	9	SAMPLE	111504012	B2BWK6		Anions by Ion Chromatography (Solid)
177351	177459	10	SAMPLE	111504013	B2BWK7		Anions by Ion Chromatography (Solid)
177351	177459	11	SAMPLE	111504014	B2BWK8		Anions by Ion Chromatography (Solid)

Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF111504

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
177351	177459	12	SAMPLE	111504015	B2BWK9		Anions by Ion Chromatography (Solid)
177351	177459	13	SAMPLE	111504016	B2BWJ7		Anions by Ion Chromatography (Solid)
177351	177459	14	SAMPLE	111504017	B2BWJ8		Anions by Ion Chromatography (Solid)
177351	177459	15	SAMPLE	111504018	B2BWJ9		Anions by Ion Chromatography (Solid)

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

QC Batch 177350 **Test** Anions by Ion Chromatography (Solid)
Associated Samples 111504001, 111504002, 111504003, 111504004, 111504005, 111504006, 111504007, 111504008, 111504009

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #49425**							
Fluoride	16984-48-8		<0.044	ug/mL					U	02/14/11
Chloride	16887-00-6		<0.042	ug/mL					U	02/14/11
Nitrite-N	NO2-N		<0.018	ug/mL					U	02/14/11
Nitrate-N	NO3-N		<9.7E-3	ug/mL					U	02/14/11
Sulfate	14808-79-8		<0.083	ug/mL					U	02/14/11
LCS			**QC Sample #49426**							
Fluoride	16984-48-8		0.941	ug/mL	95	90 - 110				02/14/11
Chloride	16887-00-6		1.86	ug/mL	93.7	90 - 110				02/14/11
Nitrite-N	NO2-N		0.969	ug/mL	99	90 - 110				02/14/11
Nitrate-N	NO3-N		0.902	ug/mL	101.8	90 - 110				02/14/11
Sulfate	14808-79-8		3.79	ug/mL	96.5	90 - 110				02/14/11
MS			**QC Sample #49427**							
			Original 111504001							
Fluoride	16984-48-8	<1.6	20.8	mg/kg	82.8	80 - 120				02/14/11
Chloride	16887-00-6	<2.3	45.6	mg/kg	90.8	80 - 120				02/14/11
Nitrite-N	NO2-N	<0.98	23.6	mg/kg	95.2	80 - 120				02/14/11
Nitrate-N	NO3-N	<1.7	23.4	mg/kg	104	80 - 120				02/14/11
Sulfate	14808-79-8	<3.6	95.9	mg/kg	96.4	80 - 120				02/14/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
MSD			**QC Sample #49428**								
			Original	**111504001**					**Paired**	**49427**	
Fluoride	16984-48-8	<1.6	21.1	mg/kg	84.3	80 - 120	1.80	30			02/14/11
Chloride	16887-00-6	<2.3	46.0	mg/kg	91.8	80 - 120	1.10	30			02/14/11
Nitrite-N	NO2-N	<0.98	23.9	mg/kg	96.3	80 - 120	1.10	30			02/14/11
Nitrate-N	NO3-N	<1.7	23.4	mg/kg	104.3	80 - 120	0.30	30			02/14/11
Sulfate	14808-79-8	<3.6	96.5	mg/kg	97.3	80 - 120	0.90	30			02/14/11
DUP			**QC Sample #49429**								
			Original	**111504001**							
Fluoride	16984-48-8	<1.6	<1.6	mg/kg			0.00	30		U	02/14/11
Chloride	16887-00-6	<2.3	<2.3	mg/kg			2.40	30		U	02/14/11
Nitrite-N	NO2-N	<0.98	<0.99	mg/kg			0.00	30		U	02/14/11
Nitrate-N	NO3-N	<1.7	<1.7	mg/kg			43.70	30	*	UX	02/14/11
Sulfate	14808-79-8	<3.6	4.08	mg/kg			34.10	30	*	BX	02/14/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

QC Batch 177351 **Test** Anions by Ion Chromatography (Solid)
Associated Samples 111504010, 111504011, 111504012, 111504013, 111504014, 111504015, 111504016, 111504017, 111504018

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #49430**							
Fluoride	16984-48-8		<0.044	ug/mL					U	02/15/11
Chloride	16887-00-6		<0.042	ug/mL					U	02/15/11
Nitrite-N	NO2-N		<0.018	ug/mL					U	02/15/11
Nitrate-N	NO3-N		<9.7E-3	ug/mL					U	02/15/11
Sulfate	14808-79-8		<0.083	ug/mL					U	02/15/11
LCS			**QC Sample #49431**							
Fluoride	16984-48-8		0.955	ug/mL	96.5	90 - 110				02/15/11
Chloride	16887-00-6		1.87	ug/mL	94.4	90 - 110				02/15/11
Nitrite-N	NO2-N		0.988	ug/mL	101	90 - 110				02/15/11
Nitrate-N	NO3-N		0.916	ug/mL	103.4	90 - 110				02/15/11
Sulfate	14808-79-8		3.78	ug/mL	96.4	90 - 110				02/15/11
MS			**QC Sample #49432**							
			Original	**111504011**						
Fluoride	16984-48-8	<1.6	20.9	mg/kg	83.5	80 - 120				02/15/11
Chloride	16887-00-6	<2.3	46.9	mg/kg	93.7	80 - 120				02/15/11
Nitrite-N	NO2-N	<0.98	24.8	mg/kg	100.2	80 - 120				02/15/11
Nitrate-N	NO3-N	<1.7	23.4	mg/kg	104.7	80 - 120				02/15/11
Sulfate	14808-79-8	<3.6	95.0	mg/kg	95.8	80 - 120				02/15/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111504

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
MSD			**QC Sample #49433**							
			Original	**111504011**					**Paired**	**49432**
Fluoride	16984-48-8	<1.6	20.6	mg/kg	83.3	80 - 120	0.20	30		02/15/11
Chloride	16887-00-6	<2.3	44.7	mg/kg	90.4	80 - 120	3.60	30		02/15/11
Nitrite-N	NO2-N	<0.98	23.3	mg/kg	95.6	80 - 120	4.70	30		02/15/11
Nitrate-N	NO3-N	<1.7	22.6	mg/kg	102.2	80 - 120	2.40	30		02/15/11
Sulfate	14808-79-8	<3.6	94.9	mg/kg	97	80 - 120	1.20	30		02/15/11
DUP			**QC Sample #49434**							
			Original	**111504011**						
Fluoride	16984-48-8	<1.6	<1.6	mg/kg			0.00	30	U	02/15/11
Chloride	16887-00-6	<2.3	<2.3	mg/kg			16.30	30	U	02/15/11
Nitrite-N	NO2-N	<0.98	<0.97	mg/kg			0.00	30	U	02/15/11
Nitrate-N	NO3-N	<1.7	<1.7	mg/kg			6.00	30	U	02/15/11
Sulfate	14808-79-8	<3.6	<3.5	mg/kg			26.10	30	U	02/15/11

Date: 25 April 2012
To: CH2M Hill (technical representative)
From: Analytical Quality Associates, Inc.
Project: 100 K RA
Subject: Radiochemical - Sample Data Group (SDG) WSCF111504

INTRODUCTION

This memorandum presents the results of data validation for SDG WSCF111504 prepared by WSCF Laboratories. A list of samples validated along with the analytical methods is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B2BWL2	2/10/11	Soil	C	Gross αβ
B2BWL1	2/10/11	Soil	C	Gross αβ
B2BWL0	2/10/11	Soil	C	Gross αβ
B2BWL3	2/10/11	Soil	C	Gross αβ
B2BWL4	2/10/11	Soil	C	Gross αβ
B2BWK0	2/10/11	Soil	C	Gross αβ
B2BWK1	2/10/11	Soil	C	Gross αβ
B2BWK2	2/10/11	Soil	C	Gross αβ
B2BWK3	2/10/11	Soil	C	Gross αβ
B2BWK4	2/10/11	Soil	C	Gross αβ
B2BWK5	2/10/11	Soil	C	Gross αβ
B2BWK6	2/10/11	Soil	C	Gross αβ
B2BWK7	2/10/11	Soil	C	Gross αβ
B2BWK8	2/10/11	Soil	C	Gross αβ
B2BWK9	2/10/11	Soil	C	Gross αβ
B2BWJ7	2/10/11	Soil	C	Gross αβ
B2BWJ8	2/10/11	Soil	C	Gross αβ
B2BWJ9	2/10/11	Soil	C	Gross αβ

Data validation was conducted in accordance with the CHPRC validation statement of work and the 100 Area Remedial Action Sampling and Analysis Plan, DOE/RL-96-22, Rev. 5 (SAP). Appendices 1 through 6 provide the following information as indicated below:

Appendix 1. Glossary of Data Reporting Qualifiers
Appendix 2. Summary of Data Qualification
Appendix 3. Annotated Laboratory Reports
Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
Appendix 5. Data Validation Supporting Documentation
Appendix 6. Additional Documentation Requested By Client

DATA QUALITY OBJECTIVES

- **Holding Times and Sample Preservation**

Holding times are calculated from Chain-of-Custody forms to determine the validity of the results. The maximum holding time for radiochemical analysis is 180 days. There are no specific preservation requirements for radiochemical soil analysis.

The samples were analyzed within the prescribed holding times.

- **Blanks**

The blank data results are reviewed to assess the extent of contamination introduced through sampling, sample preparation, and analysis.

Laboratory Blanks

All laboratory blank results were acceptable.

Trip Blanks

No trip blanks were submitted for validation.

Field Blanks

No field blanks were submitted for validation.

Equipment Blanks

All equipment blank results were acceptable.

- **Accuracy**

Accuracy is evaluated by reviewing matrix spike sample results, laboratory control sample results, and chemical recovery factors. Chemical recovery factors are determined through use of a carrier or tracer and provide assessment of the chemical separation process that is affected by the laboratory procedure, sample matrix, and/or interference. Chemical recovery factors are used to correct sample concentration, uncertainty, and MDC results. According to the SAP, the laboratory control sample accuracy limits are 70% to 130%. The limits for reported analytes not listed in the SAP are specified by the DV procedure.

Matrix Spike (MS) Samples

MS analyses are not required for the methods performed.

Laboratory Control Samples (LCSs)

All LCS recoveries were acceptable.

Carrier/Tracer Recovery Factors

All carrier/tracer recovery factors were acceptable.

- **Precision**

Precision is evaluated by reviewing laboratory duplicate, field duplicate, and field split sample results. These QC results provide information on the laboratory reproducibility and whether sampling activities are adequate to acquire consistent sample results. According to the SAP, the relative percent difference (RPD) limit is 30%. The RPD limits for reported analytes not listed in the SAP are specified by the DV procedure. When duplicate RPDs exceed the limits and have associated results <5X the MDCs the precision limits are ones specified by the DV procedure.

Laboratory Duplicate Samples

All laboratory duplicate results were acceptable.

Field Duplicate Samples

All field duplicate results were acceptable.

Field Split Samples

No field splits were submitted for validation.

- **Detection Limits**

Reported MDCs are compared against the contractually required detection limits (CRDLs) to ensure that laboratory detection limits meet the required criteria.

All reported sample MDCs with associated non-detected sample results were below the CRDLs.

- **Completeness**

SDG WSCF111504 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

None found.

REFERENCES

GRP-GD-002, Rev. 0, Change 0, *Data Validation for Radiochemical Analyses*, August 2010.

DOE/RL-96-22, Rev. 5, *100 Area Remedial Action Sampling and Analysis Plan*, September 2009.

Appendix 1

Glossary of Data Reporting Qualifiers

Qualifiers that may be applied by data validators in compliance with the CHPRC statement of work are as follows:

- **U** — The constituent was analyzed for and was not detected. The data should be considered usable for decision-making purposes.

- **UJ** — The constituent was analyzed for and was not detected. Due to a quality control deficiency identified during data validation the value reported may not accurately reflect the MDC. The data should be considered usable for decision-making purposes.

- **J** — Indicates the constituent was analyzed for and detected. The associated value is estimated due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J+** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected positive bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J-** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected negative bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **UR** — Indicates the constituent was analyzed for and not detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

- **R** — Indicates the constituent was analyzed for and detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

Appendix 2

Summary of Data Qualification

Radiochemical Data Qualification Summary			
SDG: WSCF111504	Reviewer: AQA	Project: 100 K RA	Page 1 of 1
Analyte(s)	**Qualifier**	**Samples Affected**	**Reason**
None			

Comments: None

Appendix 3

Annotated Laboratory Reports

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

Sample # 111504001
SAF# F11-077
Sample ID B2BWL2

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**02/15/11**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415		2.9	.89	pCi/g	1	0.86		02/22/11
Gross Beta	12587-47-2	LA-508-415		3.4	1.1	pCi/g	1	1.8		02/22/11

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.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

Sample # 111504002
SAF# F11-077
Sample ID B2BWL1

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**02/15/11**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415		1.3	.67	pCi/g	1	0.86		02/22/11
Gross Beta	12587-47-2	LA-508-415		2.5	1.1	pCi/g	1	1.7		02/22/11

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.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

Sample # 111504003
SAF# F11-077
Sample ID B2BWL0

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**02/15/11**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415		2.3	.84	pCi/g	1	0.89		02/22/11
Gross Beta	12587-47-2	LA-508-415		2.2	1.1	pCi/g	1	1.8		02/22/11

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.

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

Sample # 111504004
SAF# F11-077
Sample ID B2BWL3

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**02/15/11**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415	U	0.46	.43	pCi/g	1	0.64		02/22/11
Gross Beta	12587-47-2	LA-508-415	U	-0.026	.91	pCi/g	1	1.6		02/22/11

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.

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

Sample # 111504005
SAF# F11-077
Sample ID B2BWL4

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**02/15/11**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415		2.1	.74	pCi/g	1	0.86		02/22/11
Gross Beta	12587-47-2	LA-508-415		2.1	1.1	pCi/g	1	1.9		02/22/11

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.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

Sample # 111504006
SAF# F11-077
Sample ID B2BWK0

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**02/15/11**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415		1.2	.63	pCi/g	1	0.88		02/22/11
Gross Beta	12587-47-2	LA-508-415	U	1.5	1	pCi/g	1	1.8		02/22/11

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.

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

Sample # 111504007
SAF# F11-077
Sample ID B2BWK1

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**02/15/11**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415		2.2	.77	pCi/g	1	0.87		02/22/11
Gross Beta	12587-47-2	LA-508-415		3.6	1.1	pCi/g	1	1.8		02/22/11

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.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

Sample # 111504008
SAF# F11-077
Sample ID B2BWK2

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**02/15/11**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415		2.0	.77	pCi/g	1	0.93		02/22/11
Gross Beta	12587-47-2	LA-508-415		3.7	1.2	pCi/g	1	1.9		02/22/11

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.

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

Sample # 111504009
SAF# F11-077
Sample ID B2BWK3

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**02/15/11**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415		0.98	.57	pCi/g	1	0.86		02/22/11
Gross Beta	12587-47-2	LA-508-415		2.4	1	pCi/g	1	1.8		02/22/11

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.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

Sample # 111504010
SAF# F11-077
Sample ID B2BWK4

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**02/15/11**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415		2.2	.72	pCi/g	1	0.65		02/22/11
Gross Beta	12587-47-2	LA-508-415		3.3	1.1	pCi/g	1	1.7		02/22/11

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.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

Sample # 111504011
SAF# F11-077
Sample ID B2BWK5

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**02/15/11**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415		2.6	.81	pCi/g	1	0.64		02/22/11
Gross Beta	12587-47-2	LA-508-415		3.7	1.1	pCi/g	1	1.7		02/22/11

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.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

Sample # 111504012
SAF# F11-077
Sample ID B2BWK6

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**02/15/11**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415		2.4	.79	pCi/g	1	0.64		02/22/11
Gross Beta	12587-47-2	LA-508-415		2.6	1.1	pCi/g	1	1.7		02/22/11

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.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

Sample # 111504013
SAF# F11-077
Sample ID B2BWK7

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**02/15/11**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415		2.1	.71	pCi/g	1	0.64		02/22/11
Gross Beta	12587-47-2	LA-508-415		4.4	1.2	pCi/g	1	1.7		02/22/11

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.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

Sample # 111504014
SAF# F11-077
Sample ID B2BWK8

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**02/15/11**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415		2.4	.8	pCi/g	1	0.67		02/22/11
Gross Beta	12587-47-2	LA-508-415		3.5	1.1	pCi/g	1	1.7		02/22/11

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.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

Sample # 111504015
SAF# F11-077
Sample ID B2BWK9

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**02/15/11**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415		1.8	.68	pCi/g	1	0.64		02/22/11
Gross Beta	12587-47-2	LA-508-415		2.4	1	pCi/g	1	1.6		02/22/11

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.

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

Sample # 111504016
SAF# F11-077
Sample ID B2BWJ7

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**02/15/11**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415		2.5	.8	pCi/g	1	0.83		02/22/11
Gross Beta	12587-47-2	LA-508-415		2.3	1.1	pCi/g	1	1.8		02/22/11

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.

KS
04/25/12

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

Sample # 111504017
SAF# F11-077
Sample ID B2BWJ8

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**02/15/11**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415		2.2	.77	pCi/g	1	0.88		02/22/11
Gross Beta	12587-47-2	LA-508-415		4.0	1.2	pCi/g	1	1.8		02/22/11

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.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

Sample # 111504018
SAF# F11-077
Sample ID B2BWJ9

Matrix SOIL
Sampled 02/10/11
Received 02/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**02/15/11**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415		1.7	.71	pCi/g	1	0.90		02/22/11
Gross Beta	12587-47-2	LA-508-415		3.6	1.2	pCi/g	1	1.8		02/22/11

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.

KS
04/25/12

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Attachment 2
Narrative
WSCF111504

Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were 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.

It should be noted that the attached chain of custody was not stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving. However, based on procedure LO-090-403 form "NOTICE OF IMPROPER SAMPLE SUBMITTAL" was not submitted and was not stamped "NOT ICED". No anomaly was noted during sample receipt.

The following generic data qualifiers (i.e., B, D, U 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 wet chemical 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.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

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. Analytical Note(s):

- Batch QC 177350

- Sulfate – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results near or below the minimum detectable level. No flags issued.

- All other applicable QC controls are within the established limits.

Hexavalent Chromium – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Matrix Spike recovery is outside established laboratory limits. Affected sample results in this batch were "N" flagged.

- All other applicable 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):

- All applicable QC controls are within the established limits.

ICP-MS 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):

- Copper and Nickel – MS / MSD Relative Percent Difference (RPD) is outside established laboratory limits. The quality control report was flagged for RPD failure.

- Copper and Nickel – Matrix Spike and/or Matrix Spike Duplicate recoveries are outside established laboratory limits. Affected sample results in this batch were "N" flagged.

- Manganese, Barium, Vanadium, Zinc and Strontium – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.

- All other applicable QC controls are within the established limits.

pH – The hold time requirement for this analysis was met. A Duplicate and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – The hold time requirement for this analysis was met. A Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Gross Alpha / Gross Beta:

Narrative

Attachment 2
Narrative
WSCF111504

- Batch QC 176859
- Gross Alpha - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
- Batch QC 178864
- Gross Alpha - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
    - All other applicable 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.

Sample Receipt

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-016	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 16	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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)

111504

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS 2000.8 6010	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS 2.00 pH	SEE ITEM (3) IN SPECIAL INSTRUCTIONS GRAV

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWL2 001	SOIL	2/10/11	1215	✓	✓	✓	✓

CHAIN OF POSSESSION: RELINQUISHED BY/REMOVED FROM	DATE/TIME	SIGN/ PRINT NAMES: RECEIVED BY/STORED IN	DATE/TIME
F. Hall	2/10/11 1600	SSU#1 M01109	2/10/11 1600
SSU#1 M01109	2/11/11 0900	F. Hall	2/11/11 0900
R. Hall	2/11/11 1050	M. Nelson	2/11/11 1050

SPECIAL INSTRUCTIONS: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-016	PAGE 2 OF 2
COLLECTOR F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 183KW Staging Area Sample 16	PROJECT DESIGNATION 183KW Staging Area In-Process Sampling - Soil		SAF NO. F11-077	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. SAKL 107	FIELD LOGBOOK NO. HNF-N-507-17	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

PRINTED ON 2/8/2011 A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-077-015 — PAGE 1 OF 2

COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days		
SAMPLING LOCATION: 183KW Staging Area Sample 15	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil	SAF NO.: F11-077	AIR QUALITY: ☐
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10
METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL		
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 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

PRESERVATION	None	Cool-4C	Cool-4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196.	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWL1 002	SOIL	2/10/11	1206	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	2/10/11 1600	SSU#1 M01109	2/10/11 1600
SSU#1 M01109	2/11/11 0900	F. Hall	2/11/11 0900
F. Hall	2/11/11 1050	M Nelson	2/11/11 1050

SPECIAL INSTRUCTIONS: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-015	PAGE 2 OF 2
COLLECTOR 2/9/11 SM F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01	DATA TURNAROUND 12 Days / 12 Days
SAMPLING LOCATION 183KW Staging Area Sample 15	PROJECT DESIGNATION 183KW Staging Area In-Process Sampling - Soil		SAF NO. F11-077	AIR QUALITY ☐	
ICE CHEST NO. SML-107	FIELD LOGBOOK NO. HNF-N-507-17	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-014	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND
SAMPLING LOCATION: 183KW Staging Area Sample 14	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	12 Days / 12 Days
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool--4C	Cool--4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250ml	60ml	120ml	250ml
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWL0 003	SOIL	2/10/11	1200	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
F. Hall [signature]	2/10/11 1600	SSU#1 M01109	2/10/11 1600	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
SSU#1 M01109	2/11/11 0900	F. Hall [signature]	2/11/11 0900	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
F. Hall [signature]	2/11/11 1050	M. Nelson [signature]	2/11/11 1050	
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

PRINTED ON 2/8/2011

A-5003-018 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-014	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 14	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-017	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 17	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool--4C	Cool--4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWL3 004	SOIL	2/10/11	0735	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: M01109SSU#1	DATE/TIME: 2/10/11 1600
RELINQUISHED BY/REMOVED FROM: M01109SSU#1	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 2/11/11 0900
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M. Nelson	DATE/TIME: 2/11/11 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-017	PAGE 2 OF 2
COLLECTOR F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 183KW Staging Area Sample 17	PROJECT DESIGNATION 183KW Staging Area In Process Sampling Soil		SAF NO. F11-077	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. SML-167	FIELD LOGBOOK NO. HNF-N-507-17	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 4025B1ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-018	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 18	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SAL-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool-4C	Cool-4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWL4 005	SOIL	2/10/11	0955	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall [signature] 2/10/11	DATE/TIME: 1600	RECEIVED BY/STORED IN: SSU#1 M01109 2/10/11	DATE/TIME: 1600
RELINQUISHED BY/REMOVED FROM: SSU#1 M01109 2/11/11	DATE/TIME: 0900	RECEIVED BY/STORED IN: F. Hall [signature] 2/11/11	DATE/TIME: 0900
RELINQUISHED BY/REMOVED FROM: F. Hall [signature] 2/11/11	DATE/TIME: 1050	RECEIVED BY/STORED IN: M. Nelson M.Nelson 2/11/11	DATE/TIME: 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-018	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 18	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F11-077-004	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01 / DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 4	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE / ORIGINAL
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 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:

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196,	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK0 006	SOIL	2/10/11	0933	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	2/10/11 1600	SSU#1 M01109	2/10/11 1600
SSU#1 M01109	2/11/11 0900	F. Hall	2/11/11 0900
F. Hall	2/11/11 1050	M. Nelson	2/11/11 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

A-6003-518 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-004	PAGE 2 OF 2
COLLECTOR F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 183KW Staging Area Sample 4	PROJECT DESIGNATION 183KW Staging Area In-Process Sampling - Soil		SAF NO. F11-077	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. SML-107	FIELD LOGBOOK NO. HNF-N-507-17	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F11-077-005	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01 / DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 5	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐
ICE CHEST NO.: SAIL-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE / ORIGINAL
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 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

PRESERVATION	None	Cool<4C	Cool<4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK1007	SOIL	2/10/11	0940	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall [signature] 2/10/11	DATE/TIME: 1600	RECEIVED BY/STORED IN: SSU #1 M01109 2/10/11	DATE/TIME: 1600
RELINQUISHED BY/REMOVED FROM: SSU #1 M01109 2/11/11	DATE/TIME: 0900	RECEIVED BY/STORED IN: F. Hall [signature] 2/11/11	DATE/TIME: 0900
RELINQUISHED BY/REMOVED FROM: F. Hall [signature] 2/11/11	DATE/TIME: 1050	RECEIVED BY/STORED IN: M. Nelson [signature] 2/11/11	DATE/TIME: 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-005	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 5	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-077-006 — PAGE 1 OF 2

COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: 183KW Staging Area Sample 6	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: C01
AIR QUALITY: ☐
METHOD OF SHIPMENT: GOVERNMENT VEHICLE
DATA TURNAROUND: 12 Days / 12 Days
ORIGINAL

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SF=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

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250ml	60ml	120ml	250ml
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK2 008	SOIL	2/10/11	0945	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	2/10/11 1600	SSU#1 MO1109	2/10/11 1600
SSU#1 MO1109	2/11/11 0900	F. Hall	2/11/11 0900
F. Hall	2/11/11 1050	M. Nelson	2/11/11 1050

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011 — A 6003.618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-006	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND
SAMPLING LOCATION: 183KW Staging Area Sample 6	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	12 Days / 12 Days
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-007	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 7	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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, WT=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

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250ml	60ml	120ml	250ml
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7195;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK3	SOIL	2/10/11	0955	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: SSU#1 MO1109	DATE/TIME: 2/10/11 1600	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: SSU#1 MO1109	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 2/11/11 0900	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M. Nelson	DATE/TIME: 2/11/11 1050	
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

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-007	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 7	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-008	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND
SAMPLING LOCATION: 183KW Staging Area Sample 8	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	12 Days / 12 Days
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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; W1=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

PRESERVATION	None	Cool-4C	Cool-4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK4 010	SOIL	2/10/11	1005	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: SSU#1 MO1109	DATE/TIME: 2/10/11 1600	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: SSU#1 MO1109	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 2/11/11 0900	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M Nelson	DATE/TIME: 2/11/11 1050	
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

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-008	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 8	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-009	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 9	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool-4C	Cool-4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /TSHg	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK5	SOIL	2/10/11	1015	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: SSU#1 MO1109	DATE/TIME: 2/10/11 1600
RELINQUISHED BY/REMOVED FROM: SSU#1 MO1109	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 2/11/11 0900
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M. Nelson	DATE/TIME: 2/11/11 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-009	PAGE 2 OF 2
COLLECTOR F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 183KW Staging Area Sample 9	PROJECT DESIGNATION 183KW Staging Area In-Process Sampling - Soil		SAF NO. F11-077	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. SML-107	FIELD LOGBOOK NO. HNF-N-507-12	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-010	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 10	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool-4C	Cool-4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK6 012	SOIL	2/10/11	1020	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall ~~[illegible]~~	2/10/11 1600	SSU#1 M01109	2/10/11 1600
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SSU#1 M01109	2/10/11 0900	F. Hall ~~[illegible]~~	2/11/11 0900
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall ~~[illegible]~~	2/11/11 1050	M. Nelson M.N.	2/11/11 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

A 6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-010	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 10	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-011	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 11	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK7 013	SOIL	2/10/11	1142	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: F. Hall [signature]	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: SSU#1 M01109	DATE/TIME: 2/10/11 1600	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: SSU#1 M01109	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall [signature]	DATE/TIME: 2/11/11 0900	
RELINQUISHED BY/REMOVED FROM: F. Hall [signature]	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M. Nelson M. Nelson	DATE/TIME: 2/11/11 1050	
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

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-011	PAGE 2 OF 2
COLLECTOR F. Hall	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 183KW Staging Area Sample 11	PROJECT DESIGNATION 183KW Staging Area In-Process Sampling - Soil		SAF NO. F11-077	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. SML-107	FIELD LOGBOOK NO. HNP-N-507-17	ACTUAL SAMPLE DEPTH 0-1'	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-012	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 12	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWK8 014	SOIL	2/10/11	1149	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall [signature]	2/10/11 1600	SSU*1 M01109	2/10/11 1600
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SSU*1 M01109	2/11/11 0900	F. Hall [signature]	2/11/11 0900
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall [signature]	2/11/11 1050	M. Nelson [signature]	2/11/11 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-012	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND
SAMPLING LOCATION: 183KW Staging Area Sample 12	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	12 Days / 12 Days
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-077-013 PAGE 1 OF 2

COLLECTOR: F. Hall

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT COORDINATOR: LUKE, SN

PRICE CODE: C01

DATA TURNAROUND: 12 Days / 12 Days

SAMPLING LOCATION: 183KW Staging Area Sample 13

PROJECT DESIGNATION: 183KW Staging Area In Process Sampling - Soil

SAF NO.: F11-077

AIR QUALITY: ☐

ICE CHEST NO.: SML-107

FIELD LOGBOOK NO.: HNF-N-507-17

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302682ES10

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

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 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

PRESERVATION		None	Cool~4C	Cool~4C	None
HOLDING TIME		6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER		G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)		1	1	1	1
VOLUME		250mL	60mL	120mL	250mL
SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196,	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2BWK9 0/5	SOIL	2/10/11	1153	✓	✓ ✓ ✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	2/10/11 1600	SSU #1 M01109	2/10/11 1600
SSU #1 M01109	2/11/11 0900	F. Hall	2/11/11 0900
F. Hall	2/11/11 1050	M. Nolan	2/11/11 1050

SPECIAL INSTRUCTIONS: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION: RECEIVED BY | TITLE | DATE/TIME

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

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-013	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 13	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-11	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

F11-077-001 — PAGE 1 OF 2

COLLECTOR: F. Hall

COMPANY CONTACT: LUKE, SN — TELEPHONE NO.: 372-1657 — PROJECT COORDINATOR: LUKE, SN — PRICE CODE: C01 — DATA TURNAROUND: 12 Days / 12 Days

SAMPLING LOCATION: 183KW Staging Area Sample 1 — PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil — SAF NO.: F11-077 — AIR QUALITY: ☐

ICE CHEST NO.: SML-107 — FIELD LOGBOOK NO.: HNF-N-507-17 — ACTUAL SAMPLE DEPTH: 0-1' — COA: 302682ES10 — METHOD OF SHIPMENT: GOVERNMENT VEHICLE — ORIGINAL

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 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

PRESERVATION	None	Cool~4C	Cool~4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWJ7 016	SOIL	2/10/11	0916	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall [signature]	2/10/11 1600	SSU#1 MO-1109	2/10/11 1600
SSU#1 MO-1109	2/11/11 0900	F. Hall [signature]	2/11/11 0900
F. Hall [signature]	2/11/11 1050	M. Nelson [signature]	2/11/11 1050

SPECIAL INSTRUCTIONS: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION — RECEIVED BY — TITLE — DATE/TIME

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

PRINTED ON 2/8/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-001	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 1	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	ORIGINAL
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-002	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 2	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION	None	Cool-4C	Cool-4C	None
HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	120mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWJ8 017	SOIL	2/10/11	0923	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: SSU#1 M01109	DATE/TIME: 2/10/11 1600
RELINQUISHED BY/REMOVED FROM: SSU#1 M01109	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 2/11/11 0900
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M. Nelson	DATE/TIME: 2/11/11 1050
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: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

PRINTED ON 2/8/2011

A-5003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-002	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND
SAMPLING LOCATION: 183KW Staging Area Sample 2	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	12 Days / 12 Days
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-003	PAGE 1 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: 183KW Staging Area Sample 3	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	
ICE CHEST NO.: SML-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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 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

PRESERVATION			None	Cool-4C	Cool-4C	None
HOLDING TIME			6 Months	30 Days	28 Days/48 Hours	6 Months
TYPE OF CONTAINER			G/P	G/P	G/P	G/P
NO. OF CONTAINER(S)			1	1	1	1
VOLUME			250mL	60mL	120mL	250mL
SAMPLE ANALYSIS			SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2BWJ9 018	SOIL	2/10/11	0930	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: F. Hall [signature]	DATE/TIME: 2/10/11 1600	RECEIVED BY/STORED IN: SSU#1 M01109	DATE/TIME: 2/10/11 1600	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: SSU#1 M01109	DATE/TIME: 2/11/11 0900	RECEIVED BY/STORED IN: F. Hall [signature]	DATE/TIME: 2/11/11 0900	
RELINQUISHED BY/REMOVED FROM: F. Hall [signature]	DATE/TIME: 2/11/11 1050	RECEIVED BY/STORED IN: M Nelsamnels	DATE/TIME: 2/11/11 1050	
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

PRINTED ON 2/8/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-077-003	PAGE 2 OF 2
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND
SAMPLING LOCATION: 183KW Staging Area Sample 3	PROJECT DESIGNATION: 183KW Staging Area In-Process Sampling - Soil		SAF NO.: F11-077	AIR QUALITY: ☐	12 Days / 12 Days
ICE CHEST NO.: SMC-107	FIELD LOGBOOK NO.: HNF-N-507-17	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	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 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP Metals - 6010 (Add-On) {Boron, Lithium}; 200.8_HG - ICPMS {Mercury};
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; pH (Soil) - 9045;
(3) Gross Alpha {Gross alpha}; Gross Beta {Gross beta};

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A-6003-618 (REV 2)

Appendix 5

Data Validation Supporting Documentation

Appendix B - Radiochemical Data Validation Checklist

RADIOCHEMICAL DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	(C)	D	E
PROJECT: 100 K RA			DATA PACKAGE: VSR12-009		
VALIDATOR: Ken Salaz		LAB: WSCF		DATE: 4/25/12	
			SDG: WSCF111504		
ANALYSES PERFORMED					
Gross Alpha/Beta X	Strontium-90	Technetium-99	Alpha Spectroscopy	Gamma Spectroscopy	
Total Uranium	Radium-22	Tritium			
SAMPLES/MATRIX Soil Samples					
B2BWL2, B2BWL1, B2BWL0, B2BWL3, B2BWL4, B2BWK0, B2BWK1, B2BWK2, B2BWK3, B2BWK4, B2BWK5, B2BWK6, B2BWK7, B2BWK8, B2BWK9, B2BWJ7, B2BWJ8, B2BWJ9					

1. Completeness ..... ☐ N/A

Technical verification forms present? ..... Yes (No) N/A

Comments: None

2. Initial Calibration (Levels D, E) ..... ☒ N/A

Instruments/detectors calibrated? ..... Yes No N/A

Initial calibration acceptable? ..... Yes No N/A

Standards NIST traceable? ..... Yes No N/A

Standards Expired? ..... Yes No N/A

Calculation check acceptable? ..... Yes No N/A

Comments:

3. Continuing Calibration (Levels D, E) ☒ N/A

Calibration checked within required frequency? Yes No N/A

Calibration check acceptable? Yes No N/A

Calibration check standards traceable? Yes No N/A

Calibration check standards expired? Yes No N/A

Calculation check acceptable? Yes No N/A

Comments:

4. Background Counts (Levels D, E) ☒ N/A

Background Counts checked within required frequency? Yes No N/A

Background Counts acceptable? Yes No N/A

Calculation check acceptable? Yes No N/A

Comments:

5. Blanks (Levels B, C, D, E) ..... ☐ N/A

Method blank analyzed within required frequency? ..... Yes No N/A

Method blank results acceptable? ..... Yes No N/A

Analytes detected in method blank? ..... Yes No N/A

Field blank(s) analyzed? ..... Yes No N/A

Field blank results acceptable? ..... Yes No N/A

Analytes detected in field blank(s)? ..... Yes No N/A

Transcription/Calculation Errors? (Levels D, E) ..... Yes No N/A

Comments:

6. Laboratory Control Samples or Blank Spike Samples (Levels C, D, E) ..... ☐ N/A

LCS /BSS analyzed within required frequency? ..... Yes No N/A

LCS/BSS recoveries acceptable? ..... Yes No N/A

LCS/BSS traceable? (Levels D,E) ..... Yes No N/A

LCS/BSS expired? (Levels D,E) ..... Yes No N/A

LCS/BSS levels correct? (Levels D,E) ..... Yes No N/A

Transcription/Calculation Errors? (Levels D, E) ..... Yes No N/A

Comments:

7. Chemical Carrier Recovery (Levels C, D, E) ..... ☒ N/A

Chemical carrier added? ..... Yes No N/A

Chemical recovery acceptable? ..... Yes No N/A

Chemical carrier traceable? (Levels D, E) ..... Yes No N/A

Chemical carrier expired? (Levels D, E) ..... Yes No N/A

Transcription/Calculation errors? (Levels D, E) ..... Yes No N/A

Comments:

8. Tracer Recovery (Levels C, D, E) ..... ☒ N/A

Tracer added? ..... Yes No N/A

Tracer recovery acceptable? ..... Yes No N/A

Tracer traceable? (Levels D, E) ..... Yes No N/A

Tracer expired? (Levels D, E) ..... Yes No N/A

Transcription/Calculation errors? (Levels D, E) ..... Yes No N/A

Comments:

9. Matrix Spikes (Levels C, D, E)..... ☒ N/A

Matrix spike analyzed?..... Yes No N/A

Spike recoveries acceptable? ..... Yes No N/A

Spike source traceable? (Levels D, E) ..... Yes No N/A

Spike source expired? Levels D, E) ..... Yes No N/A

Transcription/Calculation Errors? (Levels D, E)..... Yes No N/A

Comments:

10. Duplicates (Levels C, D, E) ..... ☐ N/A

Duplicates Analyzed at required frequency? ..... Yes No N/A

RPD Values Acceptable?..... Yes No N/A

Transcription/Calculation Errors? (Levels D, E)..... Yes No N/A

Comments:

11. Field QC Samples (Levels C, D E) ..... ☐ N/A

Field duplicate sample(s) analyzed? ..... Yes No N/A

Field duplicate RPD values acceptable? ..... Yes No N/A

Field split sample(s) analyzed? ..... Yes No N/A

Field split RPD values acceptable? ..... Yes No N/A

Performance audit sample(s) analyzed? ..... Yes No N/A

Performance audit sample results acceptable? ..... Yes No N/A

Comments:

12. Holding Times (All levels)

Are sample holding times acceptable? ..... Yes No N/A

Comments: None

13. Results and Detection Limits (All Levels) ..... ☐ N/A

Results reported for all required sample analyses? ..... Yes No N/A

Results supported in raw data?(Levels D, E) ..... Yes No N/A

Results Acceptable? (Levels D, E) ..... Yes No N/A

Transcription/Calculation errors? (Levels D, E) ..... Yes No N/A

MDA's meet required detection limits? ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments:

Appendix 6

Additional Documentation Requested By Client

Batch QC List

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
176859	177086	1	BLANK	49032	BLANK		Gross Alpha/Gross Beta
176859	177086	2	LCS	49033	LCS		Gross Alpha/Gross Beta
176859	177086	3	SAMPLE	111504001	B2BWL2		Gross Alpha/Gross Beta
176859	177086	4	SAMPLE	111504001	B2BWL2		Gross Alpha/Gross Beta
176859	177086	5	DUP	49034	B2BWL1(111504002DUP)	111504002	Gross Alpha/Gross Beta
176859	177086	6	SAMPLE	111504002	B2BWL1		Gross Alpha/Gross Beta
176859	177086	7	SAMPLE	111504002	B2BWL1		Gross Alpha/Gross Beta
176859	177086	8	SAMPLE	111504003	B2BWL0		Gross Alpha/Gross Beta
176859	177086	9	SAMPLE	111504003	B2BWL0		Gross Alpha/Gross Beta
176859	177086	10	SAMPLE	111504004	B2BWL3		Gross Alpha/Gross Beta
176859	177086	11	SAMPLE	111504004	B2BWL3		Gross Alpha/Gross Beta
176859	177086	12	SAMPLE	111504005	B2BWL4		Gross Alpha/Gross Beta
176859	177086	13	SAMPLE	111504005	B2BWL4		Gross Alpha/Gross Beta
176859	177086	14	SAMPLE	111504006	B2BWK0		Gross Alpha/Gross Beta
176859	177086	15	SAMPLE	111504006	B2BWK0		Gross Alpha/Gross Beta
176861	177084	1	BLANK	49039	BLANK		Gross Alpha/Gross Beta
176861	177084	2	LCS	49040	LCS		Gross Alpha/Gross Beta
176861	177084	3	SAMPLE	111504010	B2BWK4		Gross Alpha/Gross Beta
176861	177084	4	SAMPLE	111504010	B2BWK4		Gross Alpha/Gross Beta
176861	177084	5	DUP	49041	B2BWK5(111504011DUP)	111504011	Gross Alpha/Gross Beta
176861	177084	6	SAMPLE	111504011	B2BWK5		Gross Alpha/Gross Beta
176861	177084	7	SAMPLE	111504011	B2BWK5		Gross Alpha/Gross Beta
176861	177084	8	SAMPLE	111504012	B2BWK6		Gross Alpha/Gross Beta

Batch QC List

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
176861	177084	9	SAMPLE	111504012	B2BWK6		Gross Alpha/Gross Beta
176861	177084	10	SAMPLE	111504013	B2BWK7		Gross Alpha/Gross Beta
176861	177084	11	SAMPLE	111504013	B2BWK7		Gross Alpha/Gross Beta
176861	177084	12	SAMPLE	111504014	B2BWK8		Gross Alpha/Gross Beta
176861	177084	13	SAMPLE	111504014	B2BWK8		Gross Alpha/Gross Beta
176861	177084	14	SAMPLE	111504015	B2BWK9		Gross Alpha/Gross Beta
176861	177084	15	SAMPLE	111504015	B2BWK9		Gross Alpha/Gross Beta
176864	177085	1	BLANK	49055	BLANK		Gross Alpha/Gross Beta
176864	177085	2	LCS	49056	LCS		Gross Alpha/Gross Beta
176864	177085	3	SAMPLE	111504007	B2BWK1		Gross Alpha/Gross Beta
176864	177085	4	SAMPLE	111504007	B2BWK1		Gross Alpha/Gross Beta
176864	177085	5	DUP	49057	B2BWK2(111504008DUP)	111504008	Gross Alpha/Gross Beta
176864	177085	6	SAMPLE	111504008	B2BWK2		Gross Alpha/Gross Beta
176864	177085	7	SAMPLE	111504008	B2BWK2		Gross Alpha/Gross Beta
176864	177085	8	SAMPLE	111504009	B2BWK3		Gross Alpha/Gross Beta
176864	177085	9	SAMPLE	111504009	B2BWK3		Gross Alpha/Gross Beta
176864	177085	10	SAMPLE	111504016	B2BWJ7		Gross Alpha/Gross Beta
176864	177085	11	SAMPLE	111504016	B2BWJ7		Gross Alpha/Gross Beta
176864	177085	12	SAMPLE	111504017	B2BWJ8		Gross Alpha/Gross Beta
176864	177085	13	SAMPLE	111504017	B2BWJ8		Gross Alpha/Gross Beta
176864	177085	14	SAMPLE	111504018	B2BWJ9		Gross Alpha/Gross Beta
176864	177085	15	SAMPLE	111504018	B2BWJ9		Gross Alpha/Gross Beta

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

QC Batch 176859 **Test** Gross Alpha/Gross Beta
Associated Samples 111504001, 111504002, 111504003, 111504004, 111504005, 111504006

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #49032**								
Gross Alpha	12587-46-1		-0.13	pCi/g						U	02/22/11
Gross Beta	12587-47-2		-0.52	pCi/g						U	02/22/11
LCS			**QC Sample #49033**								
Gross Alpha	12587-46-1		7.3	pCi/g	89.8	80 - 120					02/22/11
Gross Beta	12587-47-2		25	pCi/g	110.7	80 - 120					02/22/11
DUP			**QC Sample #49034**								
			Original 111504002								
Gross Alpha	12587-46-1	1.3	2.3	pCi/g			58.80	30	*	X	02/22/11
Gross Beta	12587-47-2	2.5	1.9	pCi/g			24.40	30			02/22/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

QC Batch 176861 **Test** Gross Alpha/Gross Beta
Associated Samples 111504010, 111504011, 111504012, 111504013, 111504014, 111504015

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #49039**							
Gross Alpha	12587-46-1		0.088	pCi/g					U	02/22/11
Gross Beta	12587-47-2		-0.76	pCi/g					U	02/22/11
LCS			**QC Sample #49040**							
Gross Alpha	12587-46-1		7.6	pCi/g	93.9	80 - 120				02/22/11
Gross Beta	12587-47-2		25	pCi/g	114.3	80 - 120				02/22/11
DUP			**QC Sample #49041**							
			Original 111504011							
Gross Alpha	12587-46-1	2.6	2.7	pCi/g			0.00	30		02/22/11
Gross Beta	12587-47-2	3.7	3.1	pCi/g			19.40	30		02/22/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111504

QC Batch 176864 **Test** Gross Alpha/Gross Beta
Associated Samples 111504007, 111504008, 111504009, 111504016, 111504017, 111504018

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #49055**								
Gross Alpha	12587-46-1		-0.044	pCi/g						U	02/22/11
Gross Beta	12587-47-2		-0.39	pCi/g						U	02/22/11
LCS			**QC Sample #49056**								
Gross Alpha	12587-46-1		7.2	pCi/g	88.3	80 - 120					02/22/11
Gross Beta	12587-47-2		24	pCi/g	110.1	80 - 120					02/22/11
DUP			**QC Sample #49057**								
			Original 111504008								
Gross Alpha	12587-46-1	2.0	3.0	pCi/g			41.90	30	*	X	02/22/11
Gross Beta	12587-47-2	3.7	4.3	pCi/g			14.10	30			02/22/11