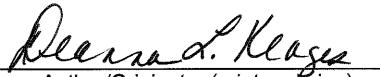
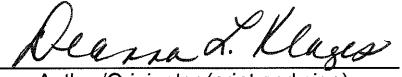
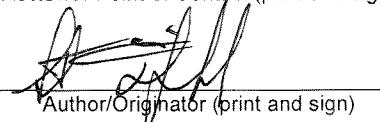


REVIEW COMMENT RECORD (RCR)			1. Date 08/29/2011	2. Review No.		
			3. Project No.		Page 1 of 1	
5. Document Number(s)/Title(s)  Data Validation Report for CH2M Hill Plateau Remediation Company: VSR11-051, Project 100K Area AA	6. Program/Project/Building Number  100K Area AA, Zone 2	7. Reviewer  D. L. Klages	8. Organization/Group  100-K Soil Remediation	9. Location/Phone  (509)942-3947		
17. Comment Submittal Approval  <hr/> Date _____ Organization Manager (optional) (print and sign) _____	10. Agreement With Indicated Comment Disposition(s)  Deanna L. Klages Reviewer/Point of Contact (print and sign)  08/29/2011 Date  Author/Originator (print and sign)	11. CLOSED  08/29/2011 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	Title: please add "Zone 2" after "Project 100K Area AA" and carry this throughout the validation in the reports where Area AA is mentioned.	This sampling activity was only 1 of 4 zones sampled. EPA required us to divide the work into 4 zones.	Title: please add "Zone 2" after "Project 100K Area AA" and carry this throughout the validation in the report where Area AA is mentioned.	Y	"Zone 2" added	Closed
2	For the equipment blank associated with the metals analyses, a statement is made that "All equipment blank results were acceptable with the following exceptions: Mn, Ba, B, Cu, Pb and Sr were detected in equipment blank B2FK25."	Since the values are well below our cleanup standards, a rerun will not be requested, however since the data was "B" flagged, shouldn't it be "J" flagged here?	Flag the data accordingly, or let me know if this is an issue.	Y	Not accepted.  DV qualifiers are not applied to results that are $\geq$ the MDLs but < the PQLs	Closed

## CHPRC - REVIEW COMMENT RECORD (RCR)

		1. Date 07/31/2011		2. Review No.		
		3. Project No.		Page 1 of 1		
5. Document Number(s)/Title(s) VSR11-051		6. Program/Project/Building Number		7. Reviewer Scot Fitzgerald	8. Organization/Group Analytical Support Group	
17. Comment Submittal Approval		10. Agreement With Indicated Comment Disposition(s)  Scot Fitzgerald Reviewer/Point of Contact (print and sign)  07/31/2011 Date   Author/Originator (print and sign)		11. CLOSED  Scot Fitzgerald Reviewer/Point of Contact (print and sign)  07/31/2011 Date   Author/Originator (print and sign)		
12. Item	13a. Comments No issues noted.	13b. Basis	13c. Recommendation	14. Reviewer Concurrence Required (Y or N)	15. Disposition (provide justification if NOT accepted)	16. Status

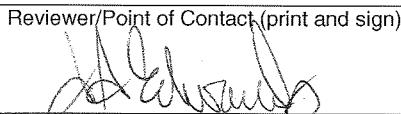
## REVIEW COMMENT RECORD (RCR)

1. Date  
08/01/2011

2. Review No.

3. Project No.

Page 1 of 1

5. Document Number(s)/Title(s)  VSR11-051, Data Validation Report for CHPRC - Project 100K Area AA, Chemical Validation - Level C		6. Program/Project/Building Number  S&GRP Sample Data Group (SDG); WSCF112639	7. Reviewer  JA Edwards	8. Organization/Group  Environmental Quality Assurance (EQA)	9. Location/Phone  2420 Stevens Rm. 345 376-4324	
17. Comment Submittal Approval		10. Agreement With Indicated Comment Disposition(s)  JA Edwards / Reviewer/Point of Contact (print and sign)  08/01/2011 Date  Author/Originator (print and sign)		11. CLOSED  JA Edwards / Reviewer/Point of Contact (print and sign)  08/01/2011 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	There were no issues found in this review	N/A	No additional items found	N	N/A	Closed

Documents:

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

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



616 Maxine NE  
Albuquerque, NM 87123  
505-299-5201  
[www.aqainc.net](http://www.aqainc.net)

## **Data Validation Report for CH2M Hill Plateau Remediation Company**

**VSR11-051  
Project 100K Area AA Zone 2**

**Chemical Validation - Level C**

**Validation Performed By:** Carl Schlosser **Date:** 8-26-2011

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Date: 26 August 2011  
 To: CH2M Hill (technical representative)  
 From: Analytical Quality Associates, Inc.  
 Project: 100K Area AA Zone 2  
 Subject: Inorganics - Sample Data Group (SDG) WSCF112639

## **INTRODUCTION**

This memorandum presents the results of data validation for SDG WSCF112639 prepared by WSCF Analytical Laboratories. A list of samples validated along with the analytical method is provided in the following table.

<b>Sample ID</b>	<b>Sample Date</b>	<b>Media</b>	<b>Validation Level</b>	<b>Analytical Method</b>
B2FK09	7/08/2011	Soil	C	200.8
B2FK10	7/08/2011	Soil	C	200.8
B2FK11	7/08/2011	Soil	C	200.8
B2FK12	7/08/2011	Soil	C	200.8
B2FK13	7/08/2011	Soil	C	200.8
B2FK14	7/08/2011	Soil	C	200.8
B2FK15	7/08/2011	Soil	C	200.8
B2FK16	7/08/2011	Soil	C	200.8
B2FK17	7/08/2011	Soil	C	200.8
B2FK18	7/08/2011	Soil	C	200.8
B2FK19	7/08/2011	Soil	C	200.8
B2FK20	7/08/2011	Soil	C	200.8
B2FK21	7/08/2011	Soil	C	200.8
B2FK22	7/08/2011	Soil	C	200.8
B2FK23	7/08/2011	Soil	C	200.8
B2FK24	7/08/2011	Soil	C	200.8
B2FK25	7/08/2011	Soil	C	200.8
B2FK08	7/08/2011	Soil	C	200.8

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.

The samples were analyzed within the prescribed holding times and properly preserved.

- 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 with the following exception. The Be laboratory blank result was > the MDL but < the RL. The Be results for all samples *except* B2FK10, B2FK11, B2FK12 and B2FK25 were detects < the RL and should be qualified as non-detects at the RL and flagged "U." The Be results for samples B2FK10, B2FK11 and B2FK12 were detects above the RL but <5X the blank result and should be qualified as estimates and flagged "J," based on professional judgment. The Be result for sample B2FK25 was a non-detect and should not be qualified.

### **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, Ba, B, Cu, Pb and Sr were detected in equipment blank B2FK25.

- 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.

### **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) limits are  $\pm 30\%$ . The 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 reporting limits with differences  $<2X$  the reporting limits 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 WSCF112639 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 sample results as estimates was due to a Be laboratory blank infraction. 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**

<b>Inorganic Data Qualification Summary</b>			
SDG: WSCF112639	Reviewer: AQA	Project: 100K Area AA Zone 2	Page 1 of 1
Analyte(s)	DV Flag	Samples Affected	Reason
Be	0.49U	B2FK09	Lab blank contamination
Be	J	B2FK10, B2FK11, B2FK12	Lab blank contamination
Be	0.52U	B2FK13	Lab blank contamination
Be	0.50U	B2FK14	Lab blank contamination
Be	0.48U	B2FK15	Lab blank contamination
Be	0.49U	B2FK16	Lab blank contamination
Be	0.48U	B2FK17	Lab blank contamination
Be	0.51U	B2FK18	Lab blank contamination
Be	0.49U	B2FK19	Lab blank contamination
Be	0.47U	B2FK20	Lab blank contamination
Be	0.49U	B2FK21	Lab blank contamination
Be	0.51U	B2FK22	Lab blank contamination
Be	0.53U	B2FK23	Lab blank contamination
Be	0.55U	B2FK24	Lab blank contamination
Be	0.50U	B2FK08	Lab blank contamination

Comments: None

## **Appendix 3**

### Annotated Laboratory Reports

## WSCF Analytical Results Report

Attention Michael Neely  
Department Inorganic

Group # WSCF112639

Sample # 112639001  
SAF# F11-096  
Sample ID B2FK09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Anions by IC</b>										
<b>Anions by IC</b>										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/11/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/11/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/11/11
Nitrate-N	NO3-N	LA-533-410		5.14		mg/kg	1	0.96	5.0	07/11/11
Sulfate	14808-79-8	LA-533-410	B	7.47		mg/kg	1	3.6	53	07/11/11
<b>Cr(VI) Prep</b>										
<b>Cr(VI)</b>										
Hexavalent chromium	18540-29-9	LA-265-403	B	0.105		ug/g	1	0.10	0.50	07/12/11
<b>ICPMS Prep</b>										
<b>ICP-MS</b>										
Manganese	7439-96-5	LA-505-412		395		mg/kg	1	0.097	0.97	07/18/11
Nickel	7440-02-0	LA-505-412		10.3		mg/kg	1	0.19	1.9	07/18/11
Silver	7440-22-4	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	07/18/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/18/11
Barium	7440-39-3	LA-505-412		65.3		mg/kg	1	0.19	1.9	07/18/11
Beryllium	7440-41-7	LA-505-412	BC	0.238	0.49U	mg/kg	1	0.097	0.49	07/18/11
Boron	7440-42-8	LA-505-412	B	1.63		mg/kg	1	0.49	4.9	07/18/11

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 dilution factor.  
E - Analyte is an estimate, see comment section.  
N - MS and/or MSD recovery outside control limits.

8-26-2011

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)

< 5

**WSCF Analytical Results Report**

<b>Attention</b>	Michael Neely	<b>Group #</b>	WSCF112639
<b>Department</b>	Inorganic		
<b>Sample #</b>	112639001	<b>Matrix</b>	SOIL

**SAF#** F11-096      **Sample ID** B2FK09      **Sampled** 07/08/11      **Received** 07/11/11

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Cadmium	7440-43-9	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	07/18/11
Chromium	7440-47-3	LA-505-412		7.42		mg/kg	1	0.49	4.9	07/18/11
Cobalt	7440-48-4	LA-505-412		12.8		mg/kg	1	0.097	0.49	07/18/11
Copper	7440-50-8	LA-505-412		18.6		mg/kg	1	0.097	0.97	07/18/11
Vanadium	7440-62-2	LA-505-412		96.7		mg/kg	1	0.19	1.9	07/18/11
Zinc	7440-66-6	LA-505-412		61.8		mg/kg	1	0.78	4.9	07/18/11
Lead	7439-92-1	LA-505-412		4.08		mg/kg	1	0.097	0.97	07/18/11
Mercury	7439-97-6	LA-505-412	B	0.0713		mg/kg	1	0.049	0.19	07/18/11
Molybdenum	7439-98-7	LA-505-412	B	0.671		mg/kg	1	0.097	0.97	07/18/11
Strontrium	7440-24-6	LA-505-412		31.1		mg/kg	1	0.097	0.97	07/18/11
Tin	7440-31-5	LA-505-412		0.618		mg/kg	1	0.097	0.49	07/18/11
Uranium	7440-61-1	LA-505-412		0.679		mg/kg	1	0.097	0.49	07/18/11
Arsenic	7440-38-2	LA-505-412	B	2.13		mg/kg	1	0.39	3.9	07/18/11
Selenium	7782-49-2	LA-505-412	B	1.15		mg/kg	1	0.29	2.9	07/18/11

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 dilution 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 # WSCF112639

Sample #	112639002	Matrix	SOIL
SAF#	F11-096	Sampled	07/08/11
Sample ID	B2FK10	Received	07/11/11
<b>Test Performed</b>			
CAS #		Method	RQ
<b>Anions by IC</b>			
Fluoride	16984-48-8	LA-533-410	U
Chloride	16887-00-6	LA-533-410	66.1
Nitrite-N	NO2-N	LA-533-410	<1.0
Nitrate-N	NO3-N	LA-533-410	1.80
Sulfate	14808-79-8	LA-533-410	16.3
<b>Cr(VI) Prep</b>			
<b>Cr(VI)</b>			
Hexavalent chromium	18540-29-9	LA-265-403	U
			<0.10
			ug/g
			1
<b>ICPMS Prep</b>			
<b>ICP-MS</b>			
Manganese	7439-96-5	LA-505-412	413
Nickel	7440-02-0	LA-505-412	12.1
Silver	7440-22-4	LA-505-412	<0.094
Antimony	7440-36-0	LA-505-412	<0.28
Barium	7440-39-3	LA-505-412	74.2
Beryllium	7440-41-7	LA-505-412	0.509 <span style="color:red">J</span>
Boron	7440-42-8	LA-505-412	2.48
			mg/kg
			1
			0.094
			0.94
			0.19
			1.9
			0.094
			0.94
			0.28
			2.8
			0.19
			1.9
			0.094
			0.47
			4.7
			07/18/11
			07/12/11
			07/13/11
			0.51
			07/12/11

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

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D - Analyte was reported at a secondary dilution factor.  
E - Analyte is an estimate, see comment section.  
N - MS and/or MSD recovery outside control limits.

*L*  
8-26-2011

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**

<b>Attention</b>	Michael Neely	<b>Group #</b>	WSCF112639
<b>Department</b>	Inorganic		
<b>Sample #</b>	112639002	<b>Matrix</b>	SOIL

**SAF#** F11-096      **Sample ID** B2FK10

<b>Sample #</b>	112639002	<b>Matrix</b>	SOIL
<b>SAF#</b>	F11-096	<b>Sampled</b>	07/08/11
<b>Sample ID</b>	B2FK10	<b>Received</b>	07/11/11

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Cadmium	7440-43-9	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	07/18/11
Chromium	7440-47-3	LA-505-412		8.06		mg/kg	1	0.47	4.7	07/18/11
Cobalt	7440-48-4	LA-505-412		12.4		mg/kg	1	0.094	0.47	07/18/11
Copper	7440-50-8	LA-505-412		21.1		mg/kg	1	0.094	0.94	07/18/11
Vanadium	7440-62-2	LA-505-412		81.6		mg/kg	1	0.19	1.9	07/18/11
Zinc	7440-66-6	LA-505-412		58.0		mg/kg	1	0.75	4.7	07/18/11
Lead	7439-92-1	LA-505-412		5.69		mg/kg	1	0.094	0.94	07/18/11
Mercury	7439-97-6	LA-505-412	U	<0.047		mg/kg	1	0.047	0.19	07/18/11
Molybdenum	7439-98-7	LA-505-412		0.962		mg/kg	1	0.094	0.94	07/18/11
Srtrontium	7440-24-6	LA-505-412		33.5		mg/kg	1	0.094	0.94	07/18/11
Tin	7440-31-5	LA-505-412		0.783		mg/kg	1	0.094	0.47	07/18/11
Uranium	7440-61-1	LA-505-412		0.663		mg/kg	1	0.094	0.47	07/18/11
Arsenic	7440-38-2	LA-505-412	B	3.05		mg/kg	1	0.38	3.8	07/18/11
Selenium	7782-49-2	LA-505-412	B	1.06		mg/kg	1	0.28	2.8	07/18/11

MDL = Minimum Detection  
RQ = Result Qualifier  
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+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)

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D - Analyte was reported at a secondary dilution 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 # WSCF112639

Sample # 112639003  
SAF# F11-096  
Sample ID B2FK11

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>		
<b>Anions by IC</b>											<b>07/12/11</b>	
<b>Anions by IC</b>												
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/12/11		
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/12/11		
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/12/11		
Nitrate-N	NO3-N	LA-533-410	U	<0.95		mg/kg	1	0.95	4.9	07/12/11		
Sulfate	14808-79-8	LA-533-410	B	19.1		mg/kg	1	3.6	52	07/12/11		
<b>Cr(VI) Prep</b>											<b>07/12/11</b>	
<b>Cr(VI)</b>												
Hexavalent chromium	18540-29-9	LA-265-403		0.862		ug/g	1	0.006	0.48	07/13/11		
<b>ICPMS Prep</b>											<b>07/12/11</b>	
<b>ICP-MS</b>												
Manganese	7439-96-5	LA-505-412		392		mg/kg	1	0.095	0.95	07/18/11		
Nickel	7440-02-0	LA-505-412		9.02		mg/kg	1	0.19	1.9	07/18/11		
Silver	7440-22-4	LA-505-412	U	<0.095		mg/kg	1	0.095	0.95	07/18/11		
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	07/18/11		
Barium	7440-39-3	LA-505-412		62.3		mg/kg	1	0.19	1.9	07/18/11		
Beryllium	7440-41-7	LA-505-412	C	0.486	J	mg/kg	1	0.095	0.47	07/18/11		
Boron	7440-42-8	LA-505-412	B	1.35		mg/kg	1	0.47	4.7	07/18/11		

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 dilution factor.  
E - Analyte is an estimate, see comment section.  
N - MS and/or MSD recovery outside control limits.

8-26-2011

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)

**S**

**WSCF Analytical Results Report**

<b>Attention</b>	Michael Neely	<b>Group #</b>	WSCF112639
<b>Department</b>	Inorganic		
<b>Sample #</b>	112639003	<b>Matrix</b>	SOIL

**SAF#** F11-096      **Sample ID** B2FK11

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Cadmium	7440-43-9	LA-505-412	U	<0.095		mg/kg	1	0.095	0.95	07/18/11
Chromium	7440-47-3	LA-505-412		9.01		mg/kg	1	0.47	4.7	07/18/11
Cobalt	7440-48-4	LA-505-412		12.6		mg/kg	1	0.095	0.47	07/18/11
Copper	7440-50-8	LA-505-412		18.4		mg/kg	1	0.095	0.95	07/18/11
Vanadium	7440-62-2	LA-505-412		91.7		mg/kg	1	0.19	1.9	07/18/11
Zinc	7440-66-6	LA-505-412		59.1		mg/kg	1	0.76	4.7	07/18/11
Lead	7439-92-1	LA-505-412		3.61		mg/kg	1	0.095	0.95	07/18/11
Mercury	7439-97-6	LA-505-412	U	<0.047		mg/kg	1	0.047	0.19	07/18/11
Molybdenum	7439-98-7	LA-505-412	B	0.713		mg/kg	1	0.095	0.95	07/18/11
Srtrontium	7440-24-6	LA-505-412		25.1		mg/kg	1	0.095	0.95	07/18/11
Tin	7440-31-5	LA-505-412		0.551		mg/kg	1	0.095	0.47	07/18/11
Uranium	7440-61-1	LA-505-412		0.550		mg/kg	1	0.095	0.47	07/18/11
Arsenic	7440-38-2	LA-505-412	B	2.00		mg/kg	1	0.38	3.8	07/18/11
Selenium	7782-49-2	LA-505-412	B	0.806		mg/kg	1	0.28	2.8	07/18/11

**MDL** = Minimum Detection      B - Analyte < the PQL(or EQL)but  $\geq$  the IDL/MDL(Inorganic)  
**RQ** = Result Qualifier      C - Analyte was found in the Associated Blank. (Inorganic)  
**TP Err** = Total Propagated      D - Analyte was reported at a secondary dilution factor.  
**DF** = Dilution Factor      E - Analyte is an estimate, see comment section.  
+ - Indicates more than nine qualifier      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 #** WSCF112639

**Sample #** 112639004  
**SAF#** F11-096  
**Sample ID** B2FK12

**Matrix** SOIL  
**Sampled** 07/08/11  
**Received** 07/11/11

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
<b>Anions by IC</b>										
<b>Anions by IC</b>										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/12/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	21	07/12/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/12/11
Nitrate-N	NO3-N	LA-533-410	U	<0.96		mg/kg	1	0.96	5.0	07/12/11
Sulfate	14808-79-8	LA-533-410	B	7.31		mg/kg	1	3.6	53	07/12/11
<b>Cr(VI) Prep</b>										<b>07/12/11</b>
<b>Cr(VI)</b>						ug/g	1			
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10						
<b>ICPMS Prep</b>										<b>07/12/11</b>
<b>ICP-MS</b>										
Manganese	7439-96-5	LA-505-412		487		mg/kg	1	0.097	0.97	07/18/11
Nickel	7440-02-0	LA-505-412		10.4		mg/kg	1	0.19	1.9	07/18/11
Silver	7440-22-4	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	07/18/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/18/11
Barium	7440-39-3	LA-505-412		97.9		mg/kg	1	0.19	1.9	07/18/11
Beryllium	7440-41-7	LA-505-412	C	0.493	J	mg/kg	1	0.097	0.49	07/18/11
Boron	7440-42-8	LA-505-412	B	1.75		mg/kg	1	0.49	4.9	07/18/11

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 dilution factor.  
E - Analyte is an estimate, see comment section.  
N - MS and/or MSD recovery outside control limits.

8-26-2011

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)

**S**

**WSCF Analytical Results Report**

<b>Attention</b>	Michael Neely	<b>Group #</b>	WSCF112639
<b>Department</b>	Inorganic		
<b>Sample #</b>	112639004	<b>Matrix</b>	SOIL

**SAF#** F11-096      **Sample ID** B2FK12

**Matrix Sampled** 07/08/11  
**Matrix Received** 07/11/11

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Cadmium	7440-43-9	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	07/18/11
Chromium	7440-47-3	LA-505-412		7.45		mg/kg	1	0.49	4.9	07/18/11
Cobalt	7440-48-4	LA-505-412		12.6		mg/kg	1	0.097	0.49	07/18/11
Copper	7440-50-8	LA-505-412		21.2		mg/kg	1	0.097	0.97	07/18/11
Vanadium	7440-62-2	LA-505-412		82.4		mg/kg	1	0.19	1.9	07/18/11
Zinc	7440-66-6	LA-505-412		58.2		mg/kg	1	0.78	4.9	07/18/11
Lead	7439-92-1	LA-505-412		7.46		mg/kg	1	0.097	0.97	07/18/11
Mercury	7439-97-6	LA-505-412	U	<0.049		mg/kg	1	0.049	0.19	07/18/11
Molybdenum	7439-98-7	LA-505-412	B	0.643		mg/kg	1	0.097	0.97	07/18/11
Srtrontium	7440-24-6	LA-505-412		32.2		mg/kg	1	0.097	0.97	07/18/11
Tin	7440-31-5	LA-505-412		0.642		mg/kg	1	0.097	0.49	07/18/11
Uranium	7440-61-1	LA-505-412		0.590		mg/kg	1	0.097	0.49	07/18/11
Arsenic	7440-38-2	LA-505-412	B	2.79		mg/kg	1	0.39	3.9	07/18/11
Selenium	7782-49-2	LA-505-412	B	0.898		mg/kg	1	0.29	2.9	07/18/11

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 dilution 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

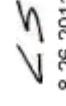
Attention Michael Neely  
Department Inorganic

Group # WSCF112639

Sample #	112639005	Matrix	SOIL
SAF#	F11-096	Sampled	07/08/11
Sample ID	B2FK13	Received	07/11/11
<b>Anions by IC</b>			
Test Performed	CAS #	Method	RQ
Result	TP Err	Units	DF
ICPMS Prep			
<b>ICP-MS</b>			
Manganese	7439-96-5	LA-505-412	395
Nickel	7440-02-0	LA-505-412	11.3
Silver	7440-22-4	LA-505-412	<0.10
Antimony	7440-36-0	LA-505-412	<0.31
Barium	7440-39-3	LA-505-412	73.9
Beryllium	7440-41-7	LA-505-412	0.185 <b>0.52U</b>
Boron	7440-42-8	LA-505-412	2.60

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 dilution factor.  
E - Analyte is an estimate, see comment section.  
N - MS and/or MSD recovery outside control limits.

8-26-2011 

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)

**WSSCF Analytical Results Report**

<b>Attention</b>	Michael Neely	<b>Group #</b>	W/SCCF112639
<b>Department</b>	Inorganic		
<b>Sample #</b>	112639005	<b>Matrix</b>	SOIL

**SAF#** F11-096      **Sample ID** B2FK13      **Sampled** 07/08/11      **Received** 07/11/11

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/18/11
Chromium	7440-47-3	LA-505-412		9.28		mg/kg	1	0.52	5.2	07/18/11
Cobalt	7440-48-4	LA-505-412		11.9		mg/kg	1	0.10	0.52	07/18/11
Copper	7440-50-8	LA-505-412		19.8		mg/kg	1	0.10	1.0	07/18/11
Vanadium	7440-62-2	LA-505-412		78.1		mg/kg	1	0.21	2.1	07/18/11
Zinc	7440-66-6	LA-505-412		58.7		mg/kg	1	0.83	5.2	07/18/11
Lead	7439-92-1	LA-505-412		6.86		mg/kg	1	0.10	1.0	07/18/11
Mercury	7439-97-6	LA-505-412	U	<0.052		mg/kg	1	0.052	0.21	07/18/11
Molybdenum	7439-98-7	LA-505-412	B	0.597		mg/kg	1	0.10	1.0	07/18/11
Srtrontium	7440-24-6	LA-505-412		40.1		mg/kg	1	0.10	1.0	07/18/11
Tin	7440-31-5	LA-505-412		0.566		mg/kg	1	0.10	0.52	07/18/11
Uranium	7440-61-1	LA-505-412		0.731		mg/kg	1	0.10	0.52	07/18/11
Arsenic	7440-38-2	LA-505-412	B	3.23		mg/kg	1	0.41	4.1	07/18/11
Selenium	7782-49-2	LA-505-412	B	0.880		mg/kg	1	0.31	3.1	07/18/11

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 dilution 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 # WSCF112639

Sample # 112639006  
SAF# F11-096  
Sample ID B2FK14

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>		
<b>Anions by IC</b>												<b>07/12/11</b>
<b>Anions by IC</b>												
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/13/11		
Chloride	16887-00-6	LA-533-410	B	10.5		mg/kg	1	3.1	20	07/13/11		
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/13/11		
Nitrate-N	NO3-N	LA-533-410	B	1.94		mg/kg	1	0.96	5.0	07/13/11		
Sulfate	14808-79-8	LA-533-410	B	18.8		mg/kg	1	3.6	53	07/13/11		
<b>Cr(VI) Prep</b>												<b>07/12/11</b>
<b>Cr(VI)</b>												
Hexavalent chromium	18540-29-9	LA-265-403	UD	<0.40		ug/g	4	0.40	2.0	07/13/11		
<b>ICPMS Prep</b>												<b>07/12/11</b>
<b>ICP-MS</b>												
Manganese	7439-96-5	LA-505-412		358		mg/kg	1	0.10	1.0	07/18/11		
Nickel	7440-02-0	LA-505-412		12.1		mg/kg	1	0.20	2.0	07/18/11		
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/18/11		
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/18/11		
Barium	7440-39-3	LA-505-412		73.4		mg/kg	1	0.20	2.0	07/18/11		
Beryllium	7440-41-7	LA-505-412	BC	0.337	<b>0.50U</b>	mg/kg	1	0.10	0.50	07/18/11		
Boron	7440-42-8	LA-505-412	B	1.49		mg/kg	1	0.50	5.0	07/18/11		

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 dilution 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)

*L*  
8-26-2011

**WSSCF Analytical Results Report**

<b>Attention</b>	Michael Neely	<b>Group #</b>	W/SCCF112639
<b>Department</b>	Inorganic		
<b>Sample #</b>	112639006	<b>Matrix</b>	SOIL

**SAF#** F11-096      **Sample ID** B2FK14

<b>Sample #</b>	112639006	<b>Matrix</b>	SOIL
<b>SAF#</b>	F11-096	<b>Sampled</b>	07/08/11
<b>Sample ID</b>	B2FK14	<b>Received</b>	07/11/11

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/18/11
Chromium	7440-47-3	LA-505-412		12.5		mg/kg	1	0.50	5.0	07/18/11
Cobalt	7440-48-4	LA-505-412		11.1		mg/kg	1	0.10	0.50	07/18/11
Copper	7440-50-8	LA-505-412		21.7		mg/kg	1	0.10	1.0	07/18/11
Vanadium	7440-62-2	LA-505-412		84.5		mg/kg	1	0.20	2.0	07/18/11
Zinc	7440-66-6	LA-505-412		61.7		mg/kg	1	0.80	5.0	07/18/11
Lead	7439-92-1	LA-505-412		9.67		mg/kg	1	0.10	1.0	07/18/11
Mercury	7439-97-6	LA-505-412	B	0.126		mg/kg	1	0.050	0.20	07/18/11
Molybdenum	7439-98-7	LA-505-412	B	0.671		mg/kg	1	0.10	1.0	07/18/11
Srtrontium	7440-24-6	LA-505-412		34.0		mg/kg	1	0.10	1.0	07/18/11
Tin	7440-31-5	LA-505-412		0.607		mg/kg	1	0.10	0.50	07/18/11
Uranium	7440-61-1	LA-505-412		0.613		mg/kg	1	0.10	0.50	07/18/11
Arsenic	7440-38-2	LA-505-412	B	2.94		mg/kg	1	0.40	4.0	07/18/11
Selenium	7782-49-2	LA-505-412	B	1.22		mg/kg	1	0.30	3.0	07/18/11

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 dilution 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 #** WSCF112639

**Sample #** 112639007  
**SAF#** F11-096  
**Sample ID** B2FK15

**Matrix** SOIL  
**Sampled** 07/08/11  
**Received** 07/11/11

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
<b>Anions by IC</b>										
<b>Anions by IC</b>										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/13/11
Chloride	16887-00-6	LA-533-410	B	7.36		mg/kg	1	3.1	20	07/13/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/13/11
Nitrate-N	NO3-N	LA-533-410	B	2.11		mg/kg	1	0.95	5.0	07/13/11
Sulfate	14808-79-8	LA-533-410	B	19.8		mg/kg	1	3.6	52	07/13/11
<b>Cr(VI) Prep</b>										
<b>Cr(VI)</b>										
Hexavalent chromium										
	18540-29-9	LA-265-403	U	<0.096		ug/g	1	0.006	0.48	07/13/11
<b>ICPMS Prep</b>										
<b>ICP-MS</b>										
Manganese	7439-96-5	LA-505-412		418		mg/kg	1	0.095	0.95	07/18/11
Nickel	7440-02-0	LA-505-412		11.8		mg/kg	1	0.19	1.9	07/18/11
Silver	7440-22-4	LA-505-412	U	<0.095		mg/kg	1	0.095	0.95	07/18/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/18/11
Barium	7440-39-3	LA-505-412		78.7		mg/kg	1	0.19	1.9	07/18/11
Beryllium	7440-41-7	LA-505-412	BC	0.346	0.48U	mg/kg	1	0.095	0.48	07/18/11
Boron	7440-42-8	LA-505-412	B	1.82		mg/kg	1	0.48	4.8	07/18/11

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 dilution 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)

$\leq$   
8-26-2011

**WSCF Analytical Results Report**

<b>Attention</b>	Michael Neely	<b>Group #</b>	WSCF112639
<b>Department</b>	Inorganic		
<b>Sample #</b>	112639007	<b>Matrix</b>	SOIL

**SAF#** F11-096      **Sample ID** B2FK15      **Sampled** 07/08/11      **Received** 07/11/11

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Cadmium	7440-43-9	LA-505-412	B	0.133		mg/kg	1	0.095	0.95	07/18/11
Chromium	7440-47-3	LA-505-412		9.88		mg/kg	1	0.48	4.8	07/18/11
Cobalt	7440-48-4	LA-505-412		12.0		mg/kg	1	0.095	0.48	07/18/11
Copper	7440-50-8	LA-505-412		22.4		mg/kg	1	0.095	0.95	07/18/11
Vanadium	7440-62-2	LA-505-412		86.0		mg/kg	1	0.19	1.9	07/18/11
Zinc	7440-66-6	LA-505-412		60.9		mg/kg	1	0.76	4.8	07/18/11
Lead	7439-92-1	LA-505-412		12.4		mg/kg	1	0.095	0.95	07/18/11
Mercury	7439-97-6	LA-505-412	B	0.0791		mg/kg	1	0.048	0.19	07/18/11
Molybdenum	7439-98-7	LA-505-412	B	0.545		mg/kg	1	0.095	0.95	07/18/11
Strontrium	7440-24-6	LA-505-412		33.0		mg/kg	1	0.095	0.95	07/18/11
Tin	7440-31-5	LA-505-412		0.617		mg/kg	1	0.095	0.48	07/18/11
Uranium	7440-61-1	LA-505-412		0.615		mg/kg	1	0.095	0.48	07/18/11
Arsenic	7440-38-2	LA-505-412		4.04		mg/kg	1	0.38	3.8	07/18/11
Selenium	7782-49-2	LA-505-412	B	1.12		mg/kg	1	0.29	2.9	07/18/11

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 dilution 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 # WSCF112639

Sample # 112639008  
SAF# F11-096  
Sample ID B2FK16

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>			
<b>Anions by IC</b>											<b>07/12/11</b>		
<b>Anions by IC</b>													
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.7	07/13/11			
Chloride	16887-00-6	LA-533-410		32.5		mg/kg	1	3.1	21	07/13/11			
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/13/11			
Nitrate-N	NO3-N	LA-533-410		6.38		mg/kg	1	0.96	5.0	07/13/11			
Sulfate	14808-79-8	LA-533-410	B	31.3		mg/kg	1	3.7	53	07/13/11			
<b>Cr(VI) Prep</b>											<b>07/12/11</b>		
<b>Cr(VI)</b>													
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/13/11			
<b>ICPMS Prep</b>											<b>07/12/11</b>		
<b>ICP-MS</b>													
Manganese	7439-96-5	LA-505-412		397		mg/kg	1	0.098	0.98	07/18/11			
Nickel	7440-02-0	LA-505-412		12.9		mg/kg	1	0.20	2.0	07/18/11			
Silver	7440-22-4	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	07/18/11			
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/18/11			
Barium	7440-39-3	LA-505-412		83.9		mg/kg	1	0.20	2.0	07/18/11			
Beryllium	7440-41-7	LA-505-412	BC	0.310	<b>0.49U</b>	mg/kg	1	0.098	0.49	07/18/11			
Boron	7440-42-8	LA-505-412	B	2.50		mg/kg	1	0.49	4.9	07/18/11			

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 dilution 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)

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8-26-2011

**WSCF Analytical Results Report**

<b>Attention</b>	Michael Neely	<b>Group #</b>	WSCF112639
<b>Department</b>	Inorganic		
<b>Sample #</b>	112639008	<b>Matrix</b>	SOIL
<b>SAF#</b>	F11-096	<b>Sampled</b>	07/08/11
<b>Sample ID</b>	B2FK16	<b>Received</b>	07/11/11

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Cadmium	7440-43-9	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	07/18/11
Chromium	7440-47-3	LA-505-412		11.0		mg/kg	1	0.49	4.9	07/18/11
Cobalt	7440-48-4	LA-505-412		11.5		mg/kg	1	0.098	0.49	07/18/11
Copper	7440-50-8	LA-505-412		20.2		mg/kg	1	0.098	0.98	07/18/11
Vanadium	7440-62-2	LA-505-412		79.0		mg/kg	1	0.20	2.0	07/18/11
Zinc	7440-66-6	LA-505-412		58.6		mg/kg	1	0.78	4.9	07/18/11
Lead	7439-92-1	LA-505-412		8.84		mg/kg	1	0.098	0.98	07/18/11
Mercury	7439-97-6	LA-505-412	U	<0.049		mg/kg	1	0.049	0.20	07/18/11
Molybdenum	7439-98-7	LA-505-412	B	0.552		mg/kg	1	0.098	0.98	07/18/11
Strontrium	7440-24-6	LA-505-412		42.2		mg/kg	1	0.098	0.98	07/18/11
Tin	7440-31-5	LA-505-412		0.654		mg/kg	1	0.098	0.49	07/18/11
Uranium	7440-61-1	LA-505-412		0.685		mg/kg	1	0.098	0.49	07/18/11
Arsenic	7440-38-2	LA-505-412	B	3.60		mg/kg	1	0.39	3.9	07/18/11
Selenium	7782-49-2	LA-505-412	B	1.04		mg/kg	1	0.29	2.9	07/18/11

**MDL** = Minimum Detection      B - Analyte < the PQL(or EQL)but  $\geq$  the IDL/MDL(Inorganic)  
**RQ** = Result Qualifier      C - Analyte was found in the Associated Blank. (Inorganic)  
**TP Err** = Total Propagated      D - Analyte was reported at a secondary dilution factor.  
**DF** = Dilution Factor      E - Analyte is an estimate, see comment section.  
+ - Indicates more than nine qualifier      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 # WSCF112639

Sample # 112639009  
SAF# F11-096  
Sample ID B2FK17

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>		
<b>Anions by IC</b>												<b>07/13/11</b>
<b>Anions by IC</b>												
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/13/11		
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	21	07/13/11		
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/13/11		
Nitrate-N	NO3-N	LA-533-410	U	<0.96		mg/kg	1	0.96	5.0	07/13/11		
Sulfate	14808-79-8	LA-533-410	B	8.84		mg/kg	1	3.6	53	07/13/11		
<b>Cr(VI) Prep</b>												<b>07/12/11</b>
<b>Cr(VI)</b>												
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.094		ug/g	1	0.094	0.47	07/13/11		
<b>ICPMS Prep</b>												<b>07/12/11</b>
<b>ICP-MS</b>												
Manganese	7439-96-5	LA-505-412		351		mg/kg	1	0.096	0.96	07/18/11		
Nickel	7440-02-0	LA-505-412		9.49		mg/kg	1	0.19	1.9	07/18/11		
Silver	7440-22-4	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	07/18/11		
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/18/11		
Barium	7440-39-3	LA-505-412		55.3		mg/kg	1	0.19	1.9	07/18/11		
Beryllium	7440-41-7	LA-505-412	BC	0.175	<b>0.48U</b>	mg/kg	1	0.096	0.48	07/18/11		
Boron	7440-42-8	LA-505-412	B	0.894		mg/kg	1	0.48	4.8	07/18/11		

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 dilution factor.  
E - Analyte is an estimate, see comment section.  
N - MS and/or MSD recovery outside control limits.

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8-26-2011

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**

<b>Attention</b>	Michael Neely	<b>Group #</b>	WSCF112639
<b>Department</b>	Inorganic		
<b>Sample #</b>	112639009	<b>Matrix</b>	SOIL

**SAF#** F11-096      **Sample ID** B2FK17

**Matrix Sampled** 07/08/11      **Received** 07/11/11

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Cadmium	7440-43-9	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	07/18/11
Chromium	7440-47-3	LA-505-412		5.01		mg/kg	1	0.48	4.8	07/18/11
Cobalt	7440-48-4	LA-505-412		11.9		mg/kg	1	0.096	0.48	07/18/11
Copper	7440-50-8	LA-505-412		19.1		mg/kg	1	0.096	0.96	07/18/11
Vanadium	7440-62-2	LA-505-412		73.3		mg/kg	1	0.19	1.9	07/18/11
Zinc	7440-66-6	LA-505-412		49.3		mg/kg	1	0.77	4.8	07/18/11
Lead	7439-92-1	LA-505-412		3.33		mg/kg	1	0.096	0.96	07/18/11
Mercury	7439-97-6	LA-505-412	U	<0.048		mg/kg	1	0.048	0.19	07/18/11
Molybdenum	7439-98-7	LA-505-412	B	0.467		mg/kg	1	0.096	0.96	07/18/11
Strontrium	7440-24-6	LA-505-412		28.6		mg/kg	1	0.096	0.96	07/18/11
Tin	7440-31-5	LA-505-412		0.540		mg/kg	1	0.096	0.48	07/18/11
Uranium	7440-61-1	LA-505-412		0.542		mg/kg	1	0.096	0.48	07/18/11
Arsenic	7440-38-2	LA-505-412		13.1		mg/kg	1	0.38	3.8	07/18/11
Selenium	7782-49-2	LA-505-412	B	1.15		mg/kg	1	0.29	2.9	07/18/11

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 dilution 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 # WSCF112639

Sample # 112639010  
SAF# F11-096  
Sample ID B2FK18

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed		
<b>Anions by IC</b>										<b>07/13/11</b>		
<b>Anions by IC</b>												
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/13/11		
Chloride	16887-00-6	LA-533-410	B	3.79		mg/kg	1	3.1	20	07/13/11		
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/13/11		
Nitrate-N	NO3-N	LA-533-410	U	<0.95		mg/kg	1	0.95	5.0	07/13/11		
Sulfate	14808-79-8	LA-533-410	B	4.37		mg/kg	1	3.6	53	07/13/11		
<b>Cr(VI) Prep</b>										<b>07/12/11</b>		
<b>Cr(VI)</b>												
Hexavalent chromium	18540-29-9	LA-265-403	B	0.374		ug/g	1	0.10	0.50	07/13/11		
<b>ICPMS Prep</b>										<b>07/12/11</b>		
<b>ICP-MS</b>												
Manganese	7439-96-5	LA-505-412		433		mg/kg	1	0.10	1.0	07/18/11		
Nickel	7440-02-0	LA-505-412		11.0		mg/kg	1	0.20	2.0	07/18/11		
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/18/11		
Antimony	7440-36-0	LA-505-412	U	<0.31		mg/kg	1	0.31	3.1	07/18/11		
Barium	7440-39-3	LA-505-412		61.4		mg/kg	1	0.20	2.0	07/18/11		
Beryllium	7440-41-7	LA-505-412	BC	0.302	<b>0.51U</b>	mg/kg	1	0.10	0.51	07/18/11		
Boron	7440-42-8	LA-505-412	B	1.54		mg/kg	1	0.51	5.1	07/18/11		

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 dilution factor.  
E - Analyte is an estimate, see comment section.  
N - MS and/or MSD recovery outside control limits.

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8-26-2011

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**

<b>Attention</b>	Michael Neely	<b>Group #</b>	WSCF112639
<b>Department</b>	Inorganic		
<b>Sample #</b>	112639010	<b>Matrix</b>	SOIL
<b>SAF#</b>	F11-096	<b>Sampled</b>	07/08/11
<b>Sample ID</b>	B2FK18	<b>Received</b>	07/11/11

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/18/11
Chromium	7440-47-3	LA-505-412		11.1		mg/kg	1	0.51	5.1	07/18/11
Cobalt	7440-48-4	LA-505-412		13.5		mg/kg	1	0.10	0.51	07/18/11
Copper	7440-50-8	LA-505-412		20.6		mg/kg	1	0.10	1.0	07/18/11
Vanadium	7440-62-2	LA-505-412		91.3		mg/kg	1	0.20	2.0	07/18/11
Zinc	7440-66-6	LA-505-412		61.9		mg/kg	1	0.82	5.1	07/18/11
Lead	7439-92-1	LA-505-412		4.41		mg/kg	1	0.10	1.0	07/18/11
Mercury	7439-97-6	LA-505-412	U	<0.051		mg/kg	1	0.051	0.20	07/18/11
Molybdenum	7439-98-7	LA-505-412	B	0.495		mg/kg	1	0.10	1.0	07/18/11
Strontrium	7440-24-6	LA-505-412		29.1		mg/kg	1	0.10	1.0	07/18/11
Tin	7440-31-5	LA-505-412		0.589		mg/kg	1	0.10	0.51	07/18/11
Uranium	7440-61-1	LA-505-412		0.620		mg/kg	1	0.10	0.51	07/18/11
Arsenic	7440-38-2	LA-505-412	B	2.38		mg/kg	1	0.41	4.1	07/18/11
Selenium	7782-49-2	LA-505-412	B	1.35		mg/kg	1	0.31	3.1	07/18/11

**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 dilution 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 # WSCF112639

Sample #	112639011	Matrix	SOIL
SAF#	F11-096	Sampled	07/08/11
Sample ID	B2FK19	Received	07/11/11
<b>Test Performed</b>			
<b>CAS #</b>			
<b>Method</b>			
<b>RQ</b>			
<b>Result</b>			
<b>TP Err</b>			
<b>Units</b>			
<b>DF</b>			
<b>MDL</b>			
<b>PQL</b>			
<b>Analyzed</b>			
<b>Anions by IC</b>			
<b>Fluoride</b>			
Chloride	16984-48-8	LA-533-410	U
	16887-00-6	LA-533-410	B
Nitrite-N	NO2-N	LA-533-410	U
Nitrate-N	NO3-N	LA-533-410	B
Sulfate	14808-79-8	LA-533-410	B
<b>Cr(VI) Prep</b>			
<b>Cr(VI)</b>			
<b>Hexavalent chromium</b>			
	18540-29-9	LA-265-403	B
			0.218
			ug/g
<b>ICPMS Prep</b>			
<b>ICP-MS</b>			
Manganese	7439-96-5	LA-505-412	412
Nickel	7440-02-0	LA-505-412	10.6
Silver	7440-22-4	LA-505-412	<0.099
Antimony	7440-36-0	LA-505-412	U
			<0.30
Barium	7440-39-3	LA-505-412	71.0
Beryllium	7440-41-7	LA-505-412	0.293
Boron	7440-42-8	LA-505-412	0.49U
			1.37
			mg/kg
			1
<b>MDL = Minimum Detection</b>			
<b>RQ = Result Qualifier</b>			
<b>TP Err = Total Propagated</b>			
<b>DF = Dilution Factor</b>			
+ - Indicates more than nine qualifier			
<b>U</b> - Analyzed for but not detected above limiting criteria.			
<b>X, Y or Z</b> - See comment detail and/or narrative.			
<b>PQL</b> is equivalent to Estimated Quantitation Limit (EQL)			
<b>8-26-2011</b>			

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 dilution factor.  
E - Analyte is an estimate, see comment section.  
N - MS and/or MSD recovery outside control limits.

*L*

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 # WSCF112639

**Sample #** 112639011  
**SAF#** F11-096  
**Sample ID** B2FK19

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	07/18/11
Chromium	7440-47-3	LA-505-412		9.61		mg/kg	1	0.49	4.9	07/18/11
Cobalt	7440-48-4	LA-505-412		13.4		mg/kg	1	0.099	0.49	07/18/11
Copper	7440-50-8	LA-505-412		19.9		mg/kg	1	0.099	0.99	07/18/11
Vanadium	7440-62-2	LA-505-412		92.3		mg/kg	1	0.20	2.0	07/18/11
Zinc	7440-66-6	LA-505-412		61.0		mg/kg	1	0.79	4.9	07/18/11
Lead	7439-92-1	LA-505-412		4.58		mg/kg	1	0.099	0.99	07/18/11
Mercury	7439-97-6	LA-505-412	U	<0.049		mg/kg	1	0.049	0.20	07/18/11
Molybdenum	7439-98-7	LA-505-412	B	0.598		mg/kg	1	0.099	0.99	07/18/11
Strontrium	7440-24-6	LA-505-412		31.6		mg/kg	1	0.099	0.99	07/18/11
Tin	7440-31-5	LA-505-412		0.600		mg/kg	1	0.099	0.49	07/18/11
Uranium	7440-61-1	LA-505-412		0.615		mg/kg	1	0.099	0.49	07/18/11
Arsenic	7440-38-2	LA-505-412	B	2.42		mg/kg	1	0.40	4.0	07/18/11
Selenium	7782-49-2	LA-505-412	B	1.03		mg/kg	1	0.30	3.0	07/18/11

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 dilution 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 # WSCF112639

Sample # 112639012  
SAF# F11-096  
Sample ID B2FK20

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed		
<b>Anions by IC</b>										<b>07/13/11</b>		
<b>Anions by IC</b>												
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/13/11		
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	21	07/13/11		
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/13/11		
Nitrate-N	NO3-N	LA-533-410	B	1.18		mg/kg	1	0.96	5.0	07/13/11		
Sulfate	14808-79-8	LA-533-410		65.2		mg/kg	1	3.6	53	07/13/11		
<b>Cr(VI) Prep</b>										<b>07/12/11</b>		
<b>Cr(VI)</b>												
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.099		ug/g	1	0.000	0.50	07/13/11		
<b>ICPMS Prep</b>										<b>07/12/11</b>		
<b>ICP-MS</b>												
Manganese	7439-96-5	LA-505-412		409		mg/kg	1	0.093	0.93	07/18/11		
Nickel	7440-02-0	LA-505-412		10.4		mg/kg	1	0.19	1.9	07/18/11		
Silver	7440-22-4	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	07/18/11		
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	07/18/11		
Barium	7440-39-3	LA-505-412		69.0		mg/kg	1	0.19	1.9	07/18/11		
Beryllium	7440-41-7	LA-505-412	BC	0.282	<b>0.47U</b>	mg/kg	1	0.093	0.47	07/18/11		
Boron	7440-42-8	LA-505-412	B	1.57		mg/kg	1	0.47	4.7	07/18/11		

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 dilution factor.  
E - Analyte is an estimate, see comment section.  
N - MS and/or MSD recovery outside control limits.

8-26-2011  
*L*

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**

<b>Attention</b>	Michael Neely	<b>Group #</b>	W/SCF112639
<b>Department</b>	Inorganic		
<b>Sample #</b>	112639012	<b>Matrix</b>	SOIL
<b>SAF#</b>	F11-096	<b>Sampled</b>	07/08/11
<b>Sample ID</b>	B2FK20	<b>Received</b>	07/11/11

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Cadmium	7440-43-9	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	07/18/11
Chromium	7440-47-3	LA-505-412		7.06		mg/kg	1	0.47	4.7	07/18/11
Cobalt	7440-48-4	LA-505-412		13.4		mg/kg	1	0.093	0.47	07/18/11
Copper	7440-50-8	LA-505-412		20.4		mg/kg	1	0.093	0.93	07/18/11
Vanadium	7440-62-2	LA-505-412		103		mg/kg	1	0.19	1.9	07/18/11
Zinc	7440-66-6	LA-505-412		64.1		mg/kg	1	0.75	4.7	07/18/11
Lead	7439-92-1	LA-505-412		4.10		mg/kg	1	0.093	0.93	07/18/11
Mercury	7439-97-6	LA-505-412	B	0.120		mg/kg	1	0.047	0.19	07/18/11
Molybdenum	7439-98-7	LA-505-412	B	0.572		mg/kg	1	0.093	0.93	07/18/11
Srtrontium	7440-24-6	LA-505-412		32.3		mg/kg	1	0.093	0.93	07/18/11
Tin	7440-31-5	LA-505-412		0.591		mg/kg	1	0.093	0.47	07/18/11
Uranium	7440-61-1	LA-505-412		0.604		mg/kg	1	0.093	0.47	07/18/11
Arsenic	7440-38-2	LA-505-412	B	2.55		mg/kg	1	0.37	3.7	07/18/11
Selenium	7782-49-2	LA-505-412	B	1.21		mg/kg	1	0.28	2.8	07/18/11

**MDL** = Minimum Detection      B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)  
**RQ** = Result Qualifier      C - Analyte was found in the Associated Blank. (Inorganic)  
**TP Err** = Total Propagated      D - Analyte was reported at a secondary dilution factor.  
**DF** = Dilution Factor      E - Analyte is an estimate, see comment section.  
+ - Indicates more than nine qualifier      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 # WSCF112639

Sample # 112639013  
SAF# F11-096  
Sample ID B2FK21

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>		
<b>Anions by IC</b>											<b>07/13/11</b>	
<b>Anions by IC</b>												
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/13/11		
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/13/11		
Nitrite-N	NO2-N	LA-533-410	U	<0.99		mg/kg	1	0.99	4.9	07/13/11		
Nitrate-N	NO3-N	LA-533-410	U	<0.94		mg/kg	1	0.94	4.9	07/13/11		
Sulfate	14808-79-8	LA-533-410	U	<3.6		mg/kg	1	3.6	52	07/13/11		
<b>Cr(VI) Prep</b>											<b>07/12/11</b>	
<b>Cr(VI)</b>												
Hexavalent chromium	18540-29-9	LA-265-403	B	0.140		ug/g	1	0.007	0.49	07/13/11		
<b>ICPMS Prep</b>											<b>07/12/11</b>	
<b>ICP-MS</b>												
Manganese	7439-96-5	LA-505-412		343		mg/kg	1	0.097	0.97	07/18/11		
Nickel	7440-02-0	LA-505-412		7.94		mg/kg	1	0.19	1.9	07/18/11		
Silver	7440-22-4	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	07/18/11		
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/18/11		
Barium	7440-39-3	LA-505-412		59.7		mg/kg	1	0.19	1.9	07/18/11		
Beryllium	7440-41-7	LA-505-412	BC	0.200	<b>0.49U</b>	mg/kg	1	0.097	0.49	07/18/11		
Boron	7440-42-8	LA-505-412	B	1.23		mg/kg	1	0.49	4.9	07/18/11		

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 dilution 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)

8-26-2011  
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Report ID: 112639  
Group # WSCF112639

**WSCF Analytical Results Report**

Attention Department	Michael Neely Inorganic	Group #	W/SCF112639
Sample #	112639013	Matrix Sampled	SOIL 07/08/11
SAF#	F11-096	Matrix Received	07/11/11
Sample ID	B2FK21		

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	07/18/11
Chromium	7440-47-3	LA-505-412		5.86		mg/kg	1	0.49	4.9	07/18/11
Cobalt	7440-48-4	LA-505-412		10.9		mg/kg	1	0.097	0.49	07/18/11
Copper	7440-50-8	LA-505-412		19.3		mg/kg	1	0.097	0.97	07/18/11
Vanadium	7440-62-2	LA-505-412		76.8		mg/kg	1	0.19	1.9	07/18/11
Zinc	7440-66-6	LA-505-412		50.3		mg/kg	1	0.78	4.9	07/18/11
Lead	7439-92-1	LA-505-412		3.03		mg/kg	1	0.097	0.97	07/18/11
Mercury	7439-97-6	LA-505-412	U	<0.049		mg/kg	1	0.049	0.19	07/18/11
Molybdenum	7439-98-7	LA-505-412	B	0.479		mg/kg	1	0.097	0.97	07/18/11
Srtrontium	7440-24-6	LA-505-412		26.1		mg/kg	1	0.097	0.97	07/18/11
Tin	7440-31-5	LA-505-412	B	0.456		mg/kg	1	0.097	0.49	07/18/11
Uranium	7440-61-1	LA-505-412		0.516		mg/kg	1	0.097	0.49	07/18/11
Arsenic	7440-38-2	LA-505-412	B	1.53		mg/kg	1	0.39	3.9	07/18/11
Selenium	7782-49-2	LA-505-412	B	0.812		mg/kg	1	0.29	2.9	07/18/11

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 dilution 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 # WSCF112639

Sample # 112639014  
SAF# F11-096  
Sample ID B2FK22

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>			
<b>Anions by IC</b>											<b>07/13/11</b>		
<b>Anions by IC</b>													
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6		07/13/11		
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20		07/13/11		
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9		07/13/11		
Nitrate-N	NO3-N	LA-533-410	U	<0.95		mg/kg	1	0.95	5.0		07/13/11		
Sulfate	14808-79-8	LA-533-410	U	<3.6		mg/kg	1	3.6	53		07/13/11		
<b>Cr(VI) Prep</b>											<b>07/12/11</b>		
<b>Cr(VI)</b>												<b>07/13/11</b>	<b>0.49</b>
<b>Hexavalent chromium</b>	18540-29-9	LA-265-403	U	<0.098		ug/g	1	0.098					
<b>ICPMS Prep</b>											<b>07/12/11</b>		
<b>ICP-MS</b>													
Manganese	7439-96-5	LA-505-412		410		mg/kg	1	0.10	1.0		07/18/11		
Nickel	7440-02-0	LA-505-412		9.40		mg/kg	1	0.20	2.0		07/18/11		
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0		07/18/11		
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0		07/18/11		
Barium	7440-39-3	LA-505-412		66.7		mg/kg	1	0.20	2.0		07/18/11		
Beryllium	7440-41-7	LA-505-412	BC	0.254	0.51U	mg/kg	1	0.10	0.51		07/18/11		
Boron	7440-42-8	LA-505-412	B	0.805		mg/kg	1	0.51	5.1		07/18/11		

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 dilution factor.  
E - Analyte is an estimate, see comment section.  
N - MS and/or MSD recovery outside control limits.

8-26-2011

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)

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**WSSCF Analytical Results Report**

<b>Attention</b>	Michael Neely	<b>Group #</b>	W/SCCF112639
<b>Department</b>	Inorganic		
<b>Sample #</b>	112639014	<b>Matrix</b>	SOIL

**SAF#** F11-096      **Sample ID** B2FK22

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/18/11
Chromium	7440-47-3	LA-505-412		5.90		mg/kg	1	0.51	5.1	07/18/11
Cobalt	7440-48-4	LA-505-412		13.4		mg/kg	1	0.10	0.51	07/18/11
Copper	7440-50-8	LA-505-412		19.2		mg/kg	1	0.10	1.0	07/18/11
Vanadium	7440-62-2	LA-505-412		100		mg/kg	1	0.20	2.0	07/18/11
Zinc	7440-66-6	LA-505-412		61.8		mg/kg	1	0.81	5.1	07/18/11
Lead	7439-92-1	LA-505-412		3.41		mg/kg	1	0.10	1.0	07/18/11
Mercury	7439-97-6	LA-505-412	U	<0.051		mg/kg	1	0.051	0.20	07/18/11
Molybdenum	7439-98-7	LA-505-412	B	0.597		mg/kg	1	0.10	1.0	07/18/11
Strontrium	7440-24-6	LA-505-412		27.0		mg/kg	1	0.10	1.0	07/18/11
Tin	7440-31-5	LA-505-412		0.540		mg/kg	1	0.10	0.51	07/18/11
Uranium	7440-61-1	LA-505-412		0.622		mg/kg	1	0.10	0.51	07/18/11
Arsenic	7440-38-2	LA-505-412	B	2.28		mg/kg	1	0.41	4.1	07/18/11
Selenium	7782-49-2	LA-505-412	B	1.39		mg/kg	1	0.30	3.0	07/18/11

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 dilution 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 # WSCF112639

Sample # 112639015  
SAF# F11-096  
Sample ID B2FK23

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>			
<b>Anions by IC</b>											<b>07/13/11</b>		
<b>Anions by IC</b>													
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6		07/13/11		
Chloride	16887-00-6	LA-533-410		50.5		mg/kg	1	3.1	20		07/13/11		
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9		07/13/11		
Nitrate-N	NO3-N	LA-533-410	U	<0.95		mg/kg	1	0.95	4.9		07/13/11		
Sulfate	14808-79-8	LA-533-410	B	9.65		mg/kg	1	3.6	52		07/13/11		
<b>Cr(VI) Prep</b>											<b>07/14/11</b>		
<b>Cr(VI)</b>													
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.098		ug/g	1	0.098	0.49		07/15/11		
<b>ICPMS Prep</b>											<b>07/12/11</b>		
<b>ICP-MS</b>													
Manganese	7439-96-5	LA-505-412		389		mg/kg	1	0.11	1.1		07/18/11		
Nickel	7440-02-0	LA-505-412		10.0		mg/kg	1	0.21	2.1		07/18/11		
Silver	7440-22-4	LA-505-412	U	<0.11		mg/kg	1	0.11	1.1		07/18/11		
Antimony	7440-36-0	LA-505-412	U	<0.32		mg/kg	1	0.32	3.2		07/18/11		
Barium	7440-39-3	LA-505-412		63.7		mg/kg	1	0.21	2.1		07/18/11		
Beryllium	7440-41-7	LA-505-412	BC	0.172	<b>0.53U</b>	mg/kg	1	0.11	0.53		07/18/11		
Boron	7440-42-8	LA-505-412	B	1.15		mg/kg	1	0.53	5.3		07/18/11		

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 dilution factor.  
E - Analyte is an estimate, see comment section.  
N - MS and/or MSD recovery outside control limits.

**≤ 5**  
8-26-2011

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**

<b>Attention</b>	Michael Neely	<b>Group #</b>	WSCF112639
<b>Department</b>	Inorganic		
<b>Sample #</b>	112639015	<b>Matrix</b>	SOIL

**SAF#** F11-096      **Sample ID** B2FK23

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Cadmium	7440-43-9	LA-505-412	U	<0.11		mg/kg	1	0.11	1.1	07/18/11
Chromium	7440-47-3	LA-505-412		7.13		mg/kg	1	0.53	5.3	07/18/11
Cobalt	7440-48-4	LA-505-412		12.6		mg/kg	1	0.11	0.53	07/18/11
Copper	7440-50-8	LA-505-412		18.3		mg/kg	1	0.11	1.1	07/18/11
Vanadium	7440-62-2	LA-505-412		89.8		mg/kg	1	0.21	2.1	07/18/11
Zinc	7440-66-6	LA-505-412		58.8		mg/kg	1	0.85	5.3	07/18/11
Lead	7439-92-1	LA-505-412		4.06		mg/kg	1	0.11	1.1	07/18/11
Mercury	7439-97-6	LA-505-412	U	<0.053		mg/kg	1	0.053	0.21	07/18/11
Molybdenum	7439-98-7	LA-505-412	B	0.513		mg/kg	1	0.11	1.1	07/18/11
Strontrium	7440-24-6	LA-505-412		32.4		mg/kg	1	0.11	1.1	07/18/11
Tin	7440-31-5	LA-505-412		0.565		mg/kg	1	0.11	0.53	07/18/11
Uranium	7440-61-1	LA-505-412		0.572		mg/kg	1	0.11	0.53	07/18/11
Arsenic	7440-38-2	LA-505-412	B	2.29		mg/kg	1	0.42	4.2	07/18/11
Selenium	7782-49-2	LA-505-412	B	1.16		mg/kg	1	0.32	3.2	07/18/11

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 dilution 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 # WSCF112639

**Sample #** 112639016  
**SAF#** F11-096  
**Sample ID** B2FK24

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>		
<b>Anions by IC</b>												<b>07/14/11</b>
<b>Anions by IC</b>												
Fluoride	16984-48-8	LA-533-410	U	<2.0		mg/kg	1	2.0	3.9	07/13/11		
Chloride	16887-00-6	LA-533-410	B	6.48		mg/kg	1	3.4	22	07/13/11		
Nitrite-N	NO2-N	LA-533-410	U	<1.1		mg/kg	1	1.1	5.3	07/13/11		
Nitrate-N	NO3-N	LA-533-410	B	1.12		mg/kg	1	1.0	5.4	07/13/11		
Sulfate	14808-79-8	LA-533-410	B	17.2		mg/kg	1	3.9	57	07/13/11		
<b>Cr(VI) Prep</b>												<b>07/14/11</b>
<b>Cr(VI)</b>												
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.11		ug/g	1	0.11	0.53	07/15/11		
<b>ICPMS Prep</b>												<b>07/12/11</b>
<b>ICP-MS</b>												
Manganese	7439-96-5	LA-505-412		431		mg/kg	1	0.11	1.1	07/18/11		
Nickel	7440-02-0	LA-505-412		11.8		mg/kg	1	0.22	2.2	07/18/11		
Silver	7440-22-4	LA-505-412	U	<0.11		mg/kg	1	0.11	1.1	07/18/11		
Antimony	7440-36-0	LA-505-412	U	<0.33		mg/kg	1	0.33	3.3	07/18/11		
Barium	7440-39-3	LA-505-412		80.2		mg/kg	1	0.22	2.2	07/18/11		
Beryllium	7440-41-7	LA-505-412	BC	0.381	0.55U	mg/kg	1	0.11	0.55	07/18/11		
Boron	7440-42-8	LA-505-412	B	1.70		mg/kg	1	0.55	5.5	07/18/11		

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 dilution factor.  
E - Analyte is an estimate, see comment section.  
N - MS and/or MSD recovery outside control limits.

*< 5*  
8-26-2011

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)

**WSSCF Analytical Results Report**

Attention Department	Michael Neely Inorganic	Group #	W/SCCF112639
Sample #	112639016	Matrix Sampled	SOIL 07/08/11
SAF#	F11-096	Matrix Received	07/11/11
Sample ID	B2FK24		

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	U	<0.11		mg/kg	1	0.11	1.1	07/18/11
Chromium	7440-47-3	LA-505-412		10.7		mg/kg	1	0.55	5.5	07/18/11
Cobalt	7440-48-4	LA-505-412		13.2		mg/kg	1	0.11	0.55	07/18/11
Copper	7440-50-8	LA-505-412		21.3		mg/kg	1	0.11	1.1	07/18/11
Vanadium	7440-62-2	LA-505-412		90.4		mg/kg	1	0.22	2.2	07/18/11
Zinc	7440-66-6	LA-505-412		65.2		mg/kg	1	0.88	5.5	07/18/11
Lead	7439-92-1	LA-505-412		6.28		mg/kg	1	0.11	1.1	07/18/11
Mercury	7439-97-6	LA-505-412	U	<0.055		mg/kg	1	0.055	0.22	07/18/11
Molybdenum	7439-98-7	LA-505-412	B	0.580		mg/kg	1	0.11	1.1	07/18/11
Strontrium	7440-24-6	LA-505-412		37.8		mg/kg	1	0.11	1.1	07/18/11
Tin	7440-31-5	LA-505-412		0.731		mg/kg	1	0.11	0.55	07/18/11
Uranium	7440-61-1	LA-505-412		0.748		mg/kg	1	0.11	0.55	07/18/11
Arsenic	7440-38-2	LA-505-412	B	3.29		mg/kg	1	0.44	4.4	07/18/11
Selenium	7782-49-2	LA-505-412	B	0.715		mg/kg	1	0.33	3.3	07/18/11

**MDL** = Minimum Detection      B - Analyte < the PQL(or EQL)but  $\geq$  the IDL/MDL(Inorganic)  
**RQ** = Result Qualifier      C - Analyte was found in the Associated Blank. (Inorganic)  
**TP Err** = Total Propagated      D - Analyte was reported at a secondary dilution factor.  
**DF** = Dilution Factor      E - Analyte is an estimate, see comment section.  
+ - Indicates more than nine qualifier      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 # WSCF112639

Sample # 112639017  
SAF# F11-096  
Sample ID B2FK25

Matrix SOIL  
Sampled 07/08/11  
Received 07/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Anions by IC</b>										
<b>Anions by IC</b>										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/13/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/13/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/13/11
Nitrate-N	NO3-N	LA-533-410	U	<0.95		mg/kg	1	0.95	4.9	07/13/11
Sulfate	14808-79-8	LA-533-410	U	<3.6		mg/kg	1	3.6	52	07/13/11
<b>Cr(VI) Prep</b>										<b>07/14/11</b>
<b>Cr(VI)</b>						ug/g	1	0.005	0.48	07/15/11
<b>Hexavalent chromium</b>	18540-29-9	LA-265-403	U	<0.095						
<b>ICPMS Prep</b>										
<b>ICP-MS</b>										
Manganese	7439-96-5	LA-505-412	B	0.543		mg/kg	1	0.094	0.94	07/18/11
Nickel	7440-02-0	LA-505-412	U	<0.19		mg/kg	1	0.19	1.9	07/18/11
Silver	7440-22-4	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	07/18/11
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	07/18/11
Barium	7440-39-3	LA-505-412	B	0.265		mg/kg	1	0.19	1.9	07/18/11
Beryllium	7440-41-7	LA-505-412	UC	<0.094		mg/kg	1	0.094	0.47	07/18/11
Boron	7440-42-8	LA-505-412	B	0.528		mg/kg	1	0.47	4.7	07/18/11
<b>MDL = Minimum Detection</b>										
<b>RQ = Result Qualifier</b>										
<b>TP Err = Total Propagated</b>										
<b>DF = Dilution Factor</b>										
+ - Indicates more than nine qualifier										

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 dilution 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)

7-28-2011

**WSCF Analytical Results Report**

<b>Attention</b>	Michael Neely	<b>Group #</b>	WSCF112639
<b>Department</b>	Inorganic		
<b>Sample #</b>	112639017	<b>Matrix</b>	SOIL

**SAF#** F11-096      **Sample ID** B2FK25

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Cadmium	7440-43-9	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	07/18/11
Chromium	7440-47-3	LA-505-412	U	<0.47		mg/kg	1	0.47	4.7	07/18/11
Cobalt	7440-48-4	LA-505-412	U	<0.094		mg/kg	1	0.094	0.47	07/18/11
Copper	7440-50-8	LA-505-412	B	0.342		mg/kg	1	0.094	0.94	07/18/11
Vanadium	7440-62-2	LA-505-412	U	<0.19		mg/kg	1	0.19	1.9	07/18/11
Zinc	7440-66-6	LA-505-412	U	<0.75		mg/kg	1	0.75	4.7	07/18/11
Lead	7439-92-1	LA-505-412	B	0.128		mg/kg	1	0.094	0.94	07/18/11
Mercury	7439-97-6	LA-505-412	U	<0.047		mg/kg	1	0.047	0.19	07/18/11
Molybdenum	7439-98-7	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	07/18/11
Srtrontium	7440-24-6	LA-505-412	B	0.192		mg/kg	1	0.094	0.94	07/18/11
Tin	7440-31-5	LA-505-412	U	<0.094		mg/kg	1	0.094	0.47	07/18/11
Uranium	7440-61-1	LA-505-412	U	<0.094		mg/kg	1	0.094	0.47	07/18/11
Arsenic	7440-38-2	LA-505-412	U	<0.37		mg/kg	1	0.37	3.7	07/18/11
Selenium	7782-49-2	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	07/18/11

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 dilution 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 # WSCF112639

Sample # 112639018  
SAF# F11-096  
Sample ID B2FK08

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>		
<b>Anions by IC</b>											<b>07/13/11</b>	
<b>Anions by IC</b>												
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/13/11		
Chloride	16887-00-6	LA-533-410	B	8.21		mg/kg	1	3.1	21	07/13/11		
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/13/11		
Nitrate-N	NO3-N	LA-533-410	B	1.34		mg/kg	1	0.96	5.0	07/13/11		
Sulfate	14808-79-8	LA-533-410	B	21.6		mg/kg	1	3.6	53	07/13/11		
<b>Cr(VI) Prep</b>											<b>07/14/11</b>	
<b>Hexavalent chromium</b>	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/15/11		
<b>Cr(VI)</b>												
<b>ICPMS Prep</b>											<b>07/12/11</b>	
<b>ICP-MS</b>												
Manganese	7439-96-5	LA-505-412		382		mg/kg	1	0.099	0.99	07/18/11		
Nickel	7440-02-0	LA-505-412		10.1		mg/kg	1	0.20	2.0	07/18/11		
Silver	7440-22-4	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	07/18/11		
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/18/11		
Barium	7440-39-3	LA-505-412		63.4		mg/kg	1	0.20	2.0	07/18/11		
Beryllium	7440-41-7	LA-505-412	BC	0.448	0.50U	mg/kg	1	0.099	0.50	07/18/11		
Boron	7440-42-8	LA-505-412	B	1.29		mg/kg	1	0.50	5.0	07/18/11		

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 dilution factor.  
E - Analyte is an estimate, see comment section.  
N - MS and/or MSD recovery outside control limits.

**8-26-2011**

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)

**< 5**

**WSCF Analytical Results Report**

<b>Attention</b>	Michael Neely	<b>Group #</b>	W/SCF112639
<b>Department</b>	Inorganic		
<b>Sample #</b>	112639018	<b>Matrix</b>	SOIL

**SAF#** F11-096      **Sample ID** B2FK08      **Sampled** 07/08/11      **Received** 07/11/11

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Cadmium	7440-43-9	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	07/18/11
Chromium	7440-47-3	LA-505-412		8.83		mg/kg	1	0.50	5.0	07/18/11
Cobalt	7440-48-4	LA-505-412		11.7		mg/kg	1	0.099	0.50	07/18/11
Copper	7440-50-8	LA-505-412		21.4		mg/kg	1	0.099	0.99	07/18/11
Vanadium	7440-62-2	LA-505-412		80.8		mg/kg	1	0.20	2.0	07/18/11
Zinc	7440-66-6	LA-505-412		56.4		mg/kg	1	0.80	5.0	07/18/11
Lead	7439-92-1	LA-505-412		5.15		mg/kg	1	0.099	0.99	07/18/11
Mercury	7439-97-6	LA-505-412	U	<0.050		mg/kg	1	0.050	0.20	07/18/11
Molybdenum	7439-98-7	LA-505-412	B	0.471		mg/kg	1	0.099	0.99	07/18/11
Srtrontium	7440-24-6	LA-505-412		29.2		mg/kg	1	0.099	0.99	07/18/11
Tin	7440-31-5	LA-505-412		0.541		mg/kg	1	0.099	0.50	07/18/11
Uranium	7440-61-1	LA-505-412		0.580		mg/kg	1	0.099	0.50	07/18/11
Arsenic	7440-38-2	LA-505-412	B	2.64		mg/kg	1	0.40	4.0	07/18/11
Selenium	7782-49-2	LA-505-412	B	0.905		mg/kg	1	0.30	3.0	07/18/11

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 dilution 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

**Narrative**

Attachment 2  
**Narrative**  
 WSCF112639

**P&D Correction – Case Narrative Replaces the Prior Submittal in its Entirety****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. Additionally, a copy of the completed P&D # WSCF112639 is included with this case narrative. 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):

- All applicable QC controls are within the established limits.

**Narrative** 

---

Attachment 2  
**Narrative**  
WSCF112639

**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):

- 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):

- Beryllium was detected in the Blank and was evaluated. Affected sample results in this batch were "C" Flagged.
- Manganese – 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.

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.

**Narrative**

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Attachment 2  
**Narrative**  
WSCF112639

8/15/2011

**Problem and Discrepancy Report**  
**WSCF**  
**SDG WSCF112639**

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

- a) All of the electronic results are missing.

**Resolution:** *Provide missing results*

**Lab Response:** **Report issues have been corrected and the hard copy and electronic data package results have been provided.**

Please correct the issues and resubmit the electronic data package.

**Sample Receipt**

		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			PAGE 1 OF 1	
COLLECTOR	FM Hall CHPRC	COMPANY/CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	C01
SAMPLING LOCATION	LUKE, SN Area AA Zone 2 Sample 2	PROJECT DESIGNATION	371-667	LUKE, SN SAF NO. F11-036	AIR QUALITY	<input type="checkbox"/> 12 Days / 12 Days
ICE CHEST NO.	7	FIELD LOGBOOK NO.	HNP-A-07-22	ACTUAL SAMPLE DEPTH	CDA	METHOD OF SHIPMENT GOVERNMENT VEHICLE
SHIPPED TO	Waste Sampling & Characterization	OPPOSITE PROPERTY NO.	5127700-E	BILL OF LADING/AIR BILL NO.	ORIGINAL	
POSSIBLE SAMPLE HAZARDS/ REMARKS		PRESERVATION	None (Code=4C)			
MATRIX*		HOLDING TIME	6 Months (28 Days/48 Hours)			
A-Air D-Liquid D5-Slurry		TYPE OF CONTAINER	G/P (G/P)			
S-Solids L-Liquid C-Crystalline S-Soil Se-Seawater T-Tissue V-Water W-Water E-Emerg		NO. OF CONTAINER(S)	1			
SPECIAL HANDLING AND/OR STORAGE		VOLUME	120mL (6mL)			
SAMPLE NO.		SAMPLE MATRIX*	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS		
B2FKU9		SOIL	7-8-11 0816			

112639     

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	* The CACH by/removed from area applies to this SAR.	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	Sampling and Analysis GKI applies to this SAR.	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(1) ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc);	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(2) ICP/MS - 200.8 (Add-on) (Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tellurium, Uranium); 200.8 HG - ICPMS (Mercury); Chromium Hex - 7196;	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(2) IC Anions - 300.0 (Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate);	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	REC EIVED BY	DISPOSAL METHOD	DISPOSED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION		PRINTED ON 6/29/2011		A1003-015 (REV 7)	

**Sample Receipt****Chain of Custody**

		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			PAGE 1 OF 1	
COLLECTOR	F.M. Hall CHPRC	COMPANY CONTACT LUXE, SH	TELEPHONE NO. 372-1567	PROJECT COORDINATOR LUXE, SH	PRICE CODE C01	DATA TURNAROUND 12 Days / 12 Days
SAMPLING LOCATION	Area AA Zone 3 - Sample 3	PROJECT DESIGNATION Area AA In Process Sampling - Soil		SAF NO. F11-196	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.	<i>2007-22</i>	FILE NUMBER HAF-N-807- <i>22</i>	ACTUAL SAMPLE DEPTH 5.1 ft TAC	COA 3026/ESW	METHOD OF SHIPMENT GOVERNMENT VEHICLE	<b>ORIGINAL</b>
SHIPPED TO		OPPOSITE PROPERTY NO. N/A			BILL OF LADING/AIR BILL NO. N/A	
Waste Sampling & Characterization						
MATRIX*	POSSIBLE SAMPLE HAZARDS / REMARKS Contains Radioactive Material. All confidential information may or may not be regulated per 46 CFR, IATA Dangerous Goods Regulations but are not releaseable per DOE Order 5400.5 (1990/1993)					
D-A-NP D-S-Ocean I-Soil DS-Ocean Soil L-1-Knaf O-Oil S-Oil Se-a-Sediment T-Tissue V-Vessel/Contain W-Water X-Other						
SPECIAL HANDLING AND/OR STORAGE						
SAMPLE NO.	MATRIX B2FK10 <i>Q</i>	SAMPLE DATE 7-8-11	SAMPLE TIME 0829	X	X	

CHAIN OF POSSESSION							SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM F.M. Hall	RECEIVED BY/STORED IN JUL 8 2011	DATE/TIME 11:02 554 41	RECEIVED BY/STORED IN JUL 8 2011	DATE/TIME 11:02 554 41	RELINQUISHED BY/REMOVED FROM F.M. Hall	RECEIVED BY/STORED IN JUL 8 2011	DATE/TIME 11:02 554 41	** The CACN for all analytical work at WSCF laboratory is 402581ES20. <input type="checkbox"/> ** The CACN for all analytical work at WSCF laboratory is Sampling and Analysis GKI applies to this SAE.
RELINQUISHED BY/REMOVED FROM F.M. Hall	RECEIVED BY/STORED IN JUL 8 2011	DATE/TIME 11:02 554 41	RECEIVED BY/STORED IN JUL 8 2011	DATE/TIME 11:02 554 41	RELINQUISHED BY/REMOVED FROM F.M. Hall	RECEIVED BY/STORED IN JUL 8 2011	DATE/TIME 11:02 554 41	(1) ICP/MS - 200.8 (TAC) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; (2) ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; (2) ICP/MS - 2196; (2) IIC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};
RELINQUISHED BY/REMOVED FROM F.M. Hall	RECEIVED BY/STORED IN JUL 8 2011	DATE/TIME 11:02 554 41	RECEIVED BY/STORED IN JUL 8 2011	DATE/TIME 11:02 554 41	RELINQUISHED BY/REMOVED FROM F.M. Hall	RECEIVED BY/STORED IN JUL 8 2011	DATE/TIME 11:02 554 41	(1) ICP/MS - 200.8 (TAC) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; (2) ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; (2) ICP/MS - 2196; (2) IIC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};
LABORATORY SECTION	RECEIVED BY				DISPOSED BY			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD				TITLE			
PRINTED ON 6/29/2011								

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**Sample Receipt****Chain of Custody**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST					
COLLECTOR	COMPANY/CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	PAGE 1 OF 1
CH2M Hill Plateau Remediation Company FM Hall CHPRC	LURE, SN	372-1567	LURE, SN	C01	DATA TURNAROUND 12 Days / 12 Days
SAMPLING LOCATION	PROJECT DESIGNATION		SAF NO.	AIR QUALITY	
Area AA Zone 2 Sample 4	Area AA In-Process Sampling - Soil		COA	<input type="checkbox"/>	
ICE CHEST NO.	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	METHOD OF SHIPMENT	<input type="checkbox"/>	ORIGINAL
55-11-007-22	55-11-007-22	55-11-007-22	GOVERNMENT VEHICLE	<input type="checkbox"/>	
SHIPPED TO	OPPOSITE PROPERTY NO.	BILL OF LADING/ATE BILL NO.			
Waste Sampling & Characterization					
MATRIX*	POSSIBLE SAMPLE HAZARDS / REMARKS	PRESERVATION	None	Cable-MC	
A=All D=Drain Liquids DS=Drain Soils L=Liquid O=Oil S=Soil Se=Soil/water T=tissue V=vapors W=Water X=Other	Contains Radionuclides Material of concern:ations that may or may not be regulated by regulation per 46 CFR, IATA Dangerous Goods Regulations but are not releaseable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	6 Months	28 Days/HG Ho. et al	
		TYPE OF CONTAINER	G/F	G/P	
		NO. OF CONTAINER(S)	1	1	
		VOLUME	1.2mL	50mL	
		SAMPLE ANALYSIS	SECTION LU IN SPECIAL INSTRUCTIONS	SEE TURH(4) IN SMITH INSTRUCTIONS	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FK11	SOIL	7-8-11	0842	X X	

SPECIAL INSTRUCTIONS					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	**40251ES20. <input type="checkbox"/> ** The CACN for all analytical work at WSCF laboratory is Sampling and Analysis GKI applies to this S.A.F.	
CHPRC	JUL 18 2011	100 Area S&GR Characterization and Monitoring	JUL 18 2011	The 100 Area S&GR Characterization and Monitoring	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc};	
CHPRC	7-11-11	TA Fm 215 N Lure	7-11-11	(1) ICP/MS - 200.8 (Atd-on) {Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8_HG - ICPMS (Mercury); Chromium Hex - 7196;	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};	
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			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DATE/TIME			

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**Sample Receipt****Chain of Custody**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST										PAGE 1 OF 1
COLLECTOR FM Hall	COMPANY CONTACT Luke, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LILKE, SN	PRICE CODE C01	DATA TURNAROUND 12 Day / 12 Days					
SAMPLING LOCATION Area AA Zone 2 Sample 5	PROJECT DESIGNATION Area AA In-Process Sampling - S-5H	ACTUAL SAMPLE DEPTH SurFACE	SAF NO. F11-096	AIR QUALITY <input type="checkbox"/>	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL				
ICE CHEST NO. S-5H-2007- <u>22</u>	FIELD LOGBOOK NO. HNF-N-507- <u>22</u>	OFFSITE PROPERTY NO.	COA 30262ES10	BILL OF LADING/AIR BILL NO. N/A						
Waste Sampling & Characterization										
<b>POSSIBLE SAMPLE HAZARDS/ REMARKS</b> Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993).										
<b>MATRIX*</b> b=Air 2=Drum Liquids 25=Drum Solids l=Liquid o=Gel 2=Soil T=Tissue V=Volatiles W=Water X=Other										
<b>SPECIAL HANDLING AND/OR STORAGE</b>										
SAMPLE NO. B2FK12	MATRIX*	SAMPLE DATE 7-8-11	SAMPLE TIME 0959	X	Y					
<b>CHAIN OF POSSESSION</b>										<b>SIGN/ PRINT NAMES</b>
RELINQUISHED BY/REMOVED FROM CHPRC	DATE/TIME JUL 08 2011	RECEIVED BY/STORED IN SOIL	DATE/TIME JUL 08 2011	SIGN/ PRINT NAMES JUL 08 2011	<b>SPECIAL INSTRUCTIONS</b>					
REMOVED BY/REMOVED FROM HNF N-507 S-5H	DATE/TIME 7-11-11	RECEIVED BY/STORED IN Soil	DATE/TIME 7-11-11	SIGN/ PRINT NAMES 7-11-11						
RELINQUISHED BY/REMOVED FROM F-20-A-2007-22	DATE/TIME 7-11-11	RECEIVED BY/STORED IN Soil	DATE/TIME 7-11-11	SIGN/ PRINT NAMES 7-11-11						
RELINQUISHED BY/REMOVED FROM HNF N-507 S-5H	DATE/TIME 7-11-11	RECEIVED BY/STORED IN Soil	DATE/TIME 7-11-11	SIGN/ PRINT NAMES 7-11-11						
RELINQUISHED BY/REMOVED FROM HNF N-507 S-5H	DATE/TIME 7-11-11	RECEIVED BY/STORED IN Soil	DATE/TIME 7-11-11	SIGN/ PRINT NAMES 7-11-11						
RELINQUISHED BY/REMOVED FROM HNF N-507 S-5H	DATE/TIME 7-11-11	RECEIVED BY/STORED IN Soil	DATE/TIME 7-11-11	SIGN/ PRINT NAMES 7-11-11						
LABORATORY SECTION	RECEIVED BY DISPOSAL METHOD	RECEIVED BY/STORED IN	RECEIVED BY/STORED IN	DATE/TIME	DATE/TIME					
FINAL SAMPLE DISPOSITION	PRINTED ON 6/29/2011			DISPOSED BY	DISPOSED BY					

\*\* The CACN for all analytical work at WSCF laboratory is 402381E20. □ \*\* The 100 Area Skid/GRP Characterization and Monitoring Sampling and Analysis G&I applies to this S.A.F.

(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; (2) ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; (2) HG - ICP/MS (Mercury); Chromium Hex-7196; (2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};

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**Sample Receipt****Chain of Custody**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						F11-096-106	PAGE 1 OF 1
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	C01	DATA TURNAROUND	
CH2M Hill Plateau Remediation Company	LINE, SV	317-1667	LUNE, SV	AIR QUALITY	<input type="checkbox"/>	12 Days / 12 Days	
COLLECTOR	PROJECT DESIGNATION	SAM NO.	SAF NO.				
FM Hall CH2MRC	Area AA In-Process Sampling Soil	F11-096					
SAMPLING LOCATION	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	COA	METHOD OF SHIPMENT	GOVERNMENT VEHICLE	ORIGINAL	
Area AA Zone 2 Sample 6	INF-N-507-22	Sc-18 Face	302682ES10	BILL OF LADING/AIR BILL NO.			
TCE CHEST NO.	OFFSITE PROPERTY NO.	N/A	N/A				
SHIPPED TO	Waste Sampling & Characterization	PRESERVATION	None	Coat-AC			
		HOLDING TIME	6 Months	28 Days/48 Hours			
		TYPE OF CONTAINER	G/F	G/F			
		NO. OF CONTAINER(S)	1	1			
		VOLUME	1.00ML	60ML			
		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX	SAMPLE DATE	SAMPLE TIME				
B2FK13	SOIL	7-8-11	0914	X	X		

**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 releaseable per DOE Order 5400.5 (1996/1993).

**MATRIX:**  
 A=Air  
 D=Drain  
 L=Leads  
 O=Oil  
 S=Soil  
 L=dust  
 Ch=N  
 S=Soil  
 Se=Sealment  
 T=Toxic  
 V=Volatile  
 W=Water  
 X=Whole  
 Y=Unknown

**SPECIAL HANDLING AND/OR STORAGE**

CHAIN OF POSSESSION						SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RELENTS	RELENTS	RELENTS	RELENTS
FM Hall	JUL 8 2011	110 110 554 #1	JUL 08 2011	402581ES20. <input type="checkbox"/> **	The CACN for all analytical work at WSCF laboratory is Sampling and Analysis GKI applies to this SAF.		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	402581ES20. <input checked="" type="checkbox"/> **	Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc;		
110 110 554 #1	7-11-11	Sc-18 Face	7-11-11	ICP/MS - 200 B (Add-3n)	Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium); 200.8 HG - ICPMS (Mercury); Chromium Hex - 7196;		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	ICP/MS - 200 B (Add-3n)	(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};		
FM Hall	7-11-11	Sc-18 Face	7-11-11				
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	DISPOSAL METHOD	DISPOSED BY	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME
FINAL SAMPLE DISPOSITION							
PRINTED ON	6/29/2011						

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**Sample Receipt****Chain of Custody**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			
COLLECTOR	FM Hall CHPRC	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1657
SAMPLING LOCATION Area AA Zone 2 Sample 7	PROJECT DESIGNATION Area AA In-Process Sampling - Soil	PROJECT COORDINATOR LUNE, SN	PRICE CODE CD1
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-507-2-2	ACTUAL SAMPLE DEPTH Soil/face	AIR QUALITY F11.096
SHIPPED TO <i>2220-7</i>	OFFSITE PROPERTY NO. N/A	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE
BILL OF LADING/AIR BILL NO. N/A			
POSSIBLE SAMPLE HAZARDS / REMARKS Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR, IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990) 1993.			
<b>MATRIX*</b> A=Air U=Uranium Liquids DS=Dust Solids L=Liquid D=Dust S=Sediment T=Issue V=Verification W=Water WI=Water X=None			
SPECIAL HANDLING AND/OR STORAGE			
SAMPLE NO.	MATRIX B2FK14	SAMPLE DATE 7-5-11	SAMPLE TIME 07:53

SAMPLE NO.	MATRIX	SAMPLE DATE	SAMPLE TIME
B2FK14	SOIL	7-5-11	07:53

CHAIN OF POSSESSION				SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RElinquished by/removed from CHPRC	DATE/TIME JUL 08 2011	Received by/ stored in CHPRC	DATE/TIME JUL 08 2011	DATE/TIME 07/08/2011	** The CACN for all analytical work at WSCF laboratory is Sampling and Analysis GR1 applies to this SAFC.		
RElinquished by/removed from <i>110 1107 554 #</i>	DATE/TIME 7-11-11	Received by/ stored in <i>For Analy</i>	DATE/TIME 7-11-11	DATE/TIME 7-11-11	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; (2) ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8 HG - ICPMS (Mercury); Chromium Hex - 7196; (2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};		
RElinquished by/removed from <i>Eric Hall</i>	DATE/TIME 7-11-11	Received by/ stored in <i>110 1107 554 #</i>	DATE/TIME 7-11-11	DATE/TIME 7-11-11			
RElinquished by/removed from RElinquished by/removed from	DATE/TIME	Received by/ stored in	DATE/TIME	DATE/TIME			
LABORATORY SECTION FINAL SAMPLE DISPOSITION	RECEIVED BY DISPOSAL METHOD	RECEIVED BY/STORED IN	RECEIVED BY/STORED IN	DATE/TIME	DISPOSED BY		

A-603-618 (REV 2)

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**Sample Receipt****Chain of Custody**

COMPANY CONTACT		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		PAGE 1 OF 1	
PROJECT DESIGNATION	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	C01
Area AA In-Process Sampling - SMI	Luke, SH	372-1657	Luke, SH	AIR QUALITY	<input type="checkbox"/>
FIELD LOGBOOK NO.			SAF NO.	12 DAY / 12 Days	
HNF-AN-507-22			COA		
OFFSITE PROPERTY NO.			METHOD OF SHIPMENT	ORIGINAL	
			GOVERNMENT VEHICLE		
			BILL OF LADING/AIR BILL NO.		
			N/A		
POSSIBLE SAMPLE HAZARDS/ REMARKS		PRESERVATION			
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 (1500/1993)		HOLDING TIME	None	COO=AC	
			6 Months	28 Day/18 Hours	
		TYPE OF CONTAINER	G/P	G/P	
		NO. OF CONTAINER(S)	1	1	
		VOLUME	120ml	60ml	
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSES	SEE ITEM (1) IN SPECIAL INSTRUCTIONS		
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FK15	SOIL	JUL 08 2011	0949	L A	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
MANUFACTURED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** The CACN for all analytical work at WSCF laboratory is 402581E520.LJ ** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GCI applies to this SAF.	
CHPRC	JUL 08 2011	4002 100 JUL 08 2011 #1	JUL 08 2011	(1) ICP/MS - 200.8 (TAI) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8 HG - ICPMS (Mercury); Chromium Hex - 7196; (2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};	
RELIQUISHESED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
Fm, SH	7/11/11	4002 100 JUL 08 2011 #1	7/11/11		
RELIQUISHESED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
Fm, SH	7/11/11	4002 100 JUL 08 2011 #1	7/11/11		
RELIQUISHESED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
Fm, SH	7/11/11	4002 100 JUL 08 2011 #1	7/11/11		
RELIQUISHESED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
Fm, SH	7/11/11	4002 100 JUL 08 2011 #1	7/11/11		
LABORATORY SECTION	RECEIVED BY	TITLE			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DATE/TIME			

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**Sample Receipt****Chain of Custody**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						F11-096-109	PAGE 1 OF 1
COLLECTOR PM Hall CHPRC	COMPANY CONTACT LUKE, SN	PROJECT DESIGNATION Area IA In-Process Sampling - Soil	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUNE, SN	PRICE CODE C01	AIR QUALITY	DATA TURNAROUND 12 Days / 12 Days
SAMPLING LOCATION Area AA Zone 2 Sample 9		FIELD LOGBOOK NO. HNF-NA-507-22		ACTUAL SAMPLE DEPTH 54/R/RF4C	COA 302682E510	METHOD OF SHIPMENT GOVERNMENT VEHICLE	<b>ORIGINAL</b>
ICE CHEST NO. <i>Cooler S - C-007</i>		OFFSITE PROPERTY NO.				BILL OF LADING/AIR BILL NO. N/A	
SHIPPED TO Waste Sampling & Characterization		MATRIX <sup>a</sup> A-Air D-Drum L-Liquid S-Soln L-Liquid D-Dust S-Soln T-Tissue Y-Yogurtation W-Water Wt-Wgt X-Other	POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / TATA Dangerous Goods Regulations but are not releaseable per DOE Order 5400.5 (1990/1993)	PRESERVATION None	HOLDING TIME 6 Month(s) 28 Days/8 Hours G/P	COLLECTOR None	
				TYPE OF CONTAINER G/P	NO. OF CONTAINER(S) 1	1	
				VOLUME 1.00ml		60ml	
				SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO. B2FK13	MATRIX <sup>b</sup> S	SAMPLE DATE JUL 8 2011	SAMPLE TIME 1007		X	X	

CHAIN OF POSSESSION						SIGN/PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM PM Hall	DATE/TIME 11/09/2011	RECEIVED BY/STORED IN JUL 8 2011	DATE/TIME 11/09/2011	RECEIVED BY/STORED IN JUL 8 2011	DATE/TIME 11/09/2011	RECEIVED BY/STORED IN JUL 8 2011	** The CACN for all analytical work at WSCF laboratory is 402581E520. □ ** The 100 Area S&GR Characterization and Monitoring Sampling and Analysis GRL applies to this S&AF.
RELINQUISHED BY/REMOVED FROM HNF-NA-507-22	DATE/TIME 7-1-11	RECEIVED BY/STORED IN JUL 8 2011	DATE/TIME 7-1-11	RECEIVED BY/STORED IN JUL 8 2011	DATE/TIME 7-1-11	RECEIVED BY/STORED IN JUL 8 2011	(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, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8 HG - ICPMS (Mercury); Chromium Hex - 7196;
RELINQUISHED BY/REMOVED FROM HNF-NA-507-22	DATE/TIME 7-1-11	RECEIVED BY/STORED IN JUL 8 2011	DATE/TIME 7-1-11	RECEIVED BY/STORED IN JUL 8 2011	DATE/TIME 7-1-11	RECEIVED BY/STORED IN JUL 8 2011	(2) IC Anions -300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RECEIVED BY/STORED IN	
LABORATORY SECTION	RECEIVED BY						TITLE
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD						DISPOSED BY
						DATE/TIME	DATE/TIME
						PRINTED ON 6/29/2011	PRINTED ON 6/29/2011

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**Sample Receipt****Chain of Custody**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST										PAGE 1 OF 1
COLLECTOR	FM Hall CHPRC	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE F01	C01	DATA TURNAROUND 12 Days / 12 Days			
SAMPLING LOCATION	Area AA Zone 7 Sample 10 ICE CHEST NO.	PROJECT DESIGNATION Area AA In-Process Sampling - Soil	FIELD LOGBOOK NO. HNF-N-607-22	ACTUAL SAMPLE DEPTH <i>Sur Face</i>	AIR QUALITY <input checked="" type="checkbox"/>	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL			
SHIPPED TO	<i>Waste Sampling &amp; Characterization</i>	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A							
POSITIVE 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)										
MATRIX* A=Air D=Drum L=Liquid S=Solvent I=Inxic O=Oil S-Sol SE=Sediment V=Vug W=Water Wt=WP X=Other										
SPECIAL HANDLING AND/OR STORAGE										
SAMPLE NO.	MATRIX*	SAMPLE DATE B2HK17 9	SAMPLE TIME JUL 08 2011	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011
SIGN / PRINT NAMES <i>FM Hall</i> <i>JUL 08 2011</i> <i>Spec #1</i> <i>JUL 08 2011</i> <i>402581ES/20</i> <i>** The GACN for all analytical work at WSCF laboratory is 402581ES/20. ** The 100 Area S&amp;CRP Characterization and Monitoring Sampling and Analysis GAK applies to this S&amp;A.</i>										
SPECIAL INSTRUCTIONS <i>(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, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8_HG - ICPMS {Mercury}; Chromium Hex - 7196;</i> <i>(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};</i>										
RELINQUISHED BY/REMOVED FROM FM Hall	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	
RELINQUISHED BY/REMOVED FROM Waste Sampling & Characterization	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	
RELINQUISHED BY/REMOVED FROM Waste Sampling & Characterization	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	
RELINQUISHED BY/REMOVED FROM Waste Sampling & Characterization	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	
RELINQUISHED BY/REMOVED FROM Waste Sampling & Characterization	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-8-11	RECEIVED BY/STORED IN JUL 08 2011	
LABORATORY SECTION	RECEIVED BY	DATE/TIME								
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DATE/TIME								

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**Sample Receipt****Chain of Custody**

<b>COLLECTOR</b>	F.M.Hall	<b>COMPANY CONTACT</b>	LUNE, SR	<b>TELEPHONE NO.</b>	372-1667	<b>PROJECT COORDINATOR</b>	LUKE, SR	<b>PAGE 1 OF 1</b>
<b>CHPRC</b>		<b>PROJECT DESIGNATION</b>	Area AA In-Process Sampling - Soil	<b>SAF NO.</b>	F11-096	<b>PRICE CODE</b>	C01	<b>DATA TURNAROUND</b>
<b>SAMPLING LOCATION</b>	Area AA Zone 2 Sample 11	<b>FIELD LOGBOOK NO.</b>	HMF-N-507- 22-	<b>ACTUAL SAMPLE DEPTH</b>	SURFACE	<b>AIR QUALITY</b>	<input type="checkbox"/>	12 Days / 12 Days
<b>ICE CHEST NO.</b>	GLASS - 002- 7	<b>OPPOSITE PROPERTY NO.</b>	N/A	<b>METHOD OF SHIPMENT</b>	COA	<b>GOVERNMENT VEHICLE</b>	ORIGINAL	<b>BILL OF LADING/AIR BILL NO.</b>
<b>SHIPPED TO</b>	Waste Sampling & Characterization							

**POSSIBLE SAMPLE HAZARDS/ REMARKS**MATRIX\*  
A=Air  
G=Ground  
L=Liquid  
S=Semi-Solid  
U=Solid

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 DOD Order 5400.5 (1990/1993)

S=Solvent  
T=Toxic  
V=Vegetation  
W=Water  
X=Other**SPECIAL HANDLING AND/OR STORAGE**

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	RECEIVED BY	DATE/TIME	DISPOSED BY	DATE/TIME
B2FK18	SOIL	JUL 08 2011	12:32	X			

<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>	<b>PROJECT COORDINATOR</b>	<b>PRICING CODE</b>	<b>PAGE 1-111</b>
LUKE, SR	LUKE, SR	C01	F11-096-111
<b>FIELD LOGBOOK NO.</b>	<b>SAF NO.</b>	<b>AIR QUALITY</b>	<b>PAGE 1 OF 1</b>
HMF-N-507- 22-	F11-096	<input type="checkbox"/>	DATA TURNAROUND
<b>OPPOSITE PROPERTY NO.</b>	<b>ACTUAL SAMPLE DEPTH</b>	<b>METHOD OF SHIPMENT</b>	<b>12 Days / 12 Days</b>
N/A	SURFACE	COA	
<b>SHIPPED TO</b>	<b>PROJECT DESIGNATION</b>	<b>GOVERNMENT VEHICLE</b>	<b>ORIGINAL</b>
Waste Sampling & Characterization	Area AA In-Process Sampling - Soil		
<b>POSSIBLE SAMPLE HAZARDS/ REMARKS</b>	<b>PREPARATION</b>	<b>COOL/AC</b>	
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 DOD Order 5400.5 (1990/1993)	<b>HOLDING TIME</b>	6 Months	25 Days/16 Hours
	<b>TYPE OF CONTAINER</b>	G/P	G/P
	<b>NO. OF CONTAINER(S)</b>	1	1
	<b>VOLUME</b>	120mL	CC/mL
	<b>SPECIAL INSTRUCTIONS</b>	Specimen in special instructions	Specimen in special instructions
	<b>SAMPLE ANALYSIS</b>		
	<b>SAMPLE DATE</b>	JUL 08 2011	
	<b>SAMPLE TIME</b>	12:32	
	<b>RECEIVED BY</b>	X	X
	<b>DATE/TIME</b>		

**CHAIN OF POSSESSION**

<b>RELINQUISHED BY/REMOVED FROM</b>	<b>DATE/TIME</b>	<b>RECEIVED BY/STORED IN</b>	<b>DATE/TIME</b>
CHPRC	JUL 08 2011	REC'D 5/22/11	JUL 08 2011
<b>RELINQUISHED BY/REMOVED FROM</b>	<b>DATE/TIME</b>	<b>RECEIVED BY/STORED IN</b>	<b>DATE/TIME</b>
CHPRC	2010-07-09 08:00	REC'D 7/11/11	2010-07-11 08:00
<b>RELINQUISHED BY/REMOVED FROM</b>	<b>DATE/TIME</b>	<b>RECEIVED BY/STORED IN</b>	<b>DATE/TIME</b>
F.M.Hall	2010-07-09 08:00	REC'D 7/11/11	2010-07-11 08:00
<b>RELINQUISHED BY/REMOVED FROM</b>	<b>DATE/TIME</b>	<b>RECEIVED BY/STORED IN</b>	<b>DATE/TIME</b>
F.M.Hall	2010-07-09 08:00	REC'D 7/11/11	2010-07-11 08:00
<b>RELINQUISHED BY/REMOVED FROM</b>	<b>DATE/TIME</b>	<b>RECEIVED BY/STORED IN</b>	<b>DATE/TIME</b>
F.M.Hall	2010-07-09 08:00	REC'D 7/11/11	2010-07-11 08:00
<b>RELINQUISHED BY/REMOVED FROM</b>	<b>DATE/TIME</b>	<b>RECEIVED BY/STORED IN</b>	<b>DATE/TIME</b>
F.M.Hall	2010-07-09 08:00	REC'D 7/11/11	2010-07-11 08:00
<b>RELINQUISHED BY/REMOVED FROM</b>	<b>DATE/TIME</b>	<b>RECEIVED BY/STORED IN</b>	<b>DATE/TIME</b>
F.M.Hall	2010-07-09 08:00	REC'D 7/11/11	2010-07-11 08:00
<b>LABORATORY SECTION</b>	<b>RECEIVED BY</b>	<b>DATE/TIME</b>	<b>DATE/TIME</b>
FINAL SAMPLE DISPOSITION			
PRINTED ON 6/29/2011			A-600-1613 (REV 2)

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**Sample Receipt****Chain of Custody**

CHANNII Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			PROJECT COORDINATOR		FL1-996-112	PAGE 1 OF 1
COLLECTOR	FM Hall CHPRC	COMPANY CONTACT	LUKE, SN	TELEPHONE NO.	373-1667	PRICE CODE	C01	DATA TURNAROUND
SAMPLING LOCATION	Area AA Zone 2 Sample 12	PROJECT DESIGNATION	Area AA In-Process Sampling - Soil	SAF NO.	F11-096	AIR QUALITY	<input type="checkbox"/>	12 Days / 12 Days
ICE CHEST NO.	CG-05-007-22	FIELD LOGBOOK NO.	NP-N-807-22	ACTUAL SAMPLE DEPTH	3' Ur Face E	METHOD OF SHIPMENT	GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO	Offsite Property No.	OFFSITE PROPERTY NO.	N/A	BILL OF LADING/AIR BILL NO.				
Waste Sampling & Characterization		PRESERVATION	None	COO-IC				
		HOLDING TIME	6 Months	28 Days/18 Hours				
		TYPE OF CONTAINER	G/P	G/P				
		NO. OF CONTAINERS(S)	1	1				
		VOLUME	120mL	60mL				
POSSIBLE SAMPLE HAZARDS / REMARKS		SEE ITEM 1 IN SPECIAL INSTRUCTIONS						
<b>MATRIX*</b> A=Air L=Liquid Liquids S=Soln Solns L=Liquid S=Soln T=True V=Vigorous W=Water Wt=Water X=Other								
SPECIAL HANDLING AND/OR STORAGE								
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	DATE/TIME				
92FK19	SOIL	JUL 08 2011	12:40	X	X			

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELIQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** The GACN for all analytical work at WSCF laboratory is 402581ES20. <input type="checkbox"/> ** The LO0 Area SS/GRP Characterization and Monitoring Sampling and Analysis GKL applies to this SAFC.	
FM Hall	7-11-11	SSC 07/11/11	JUL 08 2011	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, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8_HG - ICPMS (Mercury); Chromium Hex - 7196;	
FM Hall	7-11-11	SSC 07/11/11	7-11-11	2) TC Atoms- 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};	
RELIQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELIQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELABORATORY SECTION	RECEIVED BY	DISPOSAL METHOD	DISPOSED BY		
PRINTED ON 6/29/2011					

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**Sample Receipt****Chain of Custody**

CHM/Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			PAGE 1 OF 1
COLLECTOR	FM Hall CHPRC	COMPANY CONTACT	LUKE, SN	TELEPHONE NO.	F11-095-113
SAMPLING LOCATION	Area AA Zone 2 Sample 13	PROJECT DESIGNATION		PROJECT COORDINATOR	PRICE CODE C01
ICE CHEST NO.		FIELD LOGBOOK NO.	In Process Sampling - Soil	SAF NO.	AIR QUALITY
SHIPPED TO	HNF-A-007-2-Z.	ACTUAL SAMPLE DEPTH	<i>Soil Elevation</i>	COA	METHOD OF SHIPMENT
Waste Sampling & Characterization	N/A	OFFSITE PROPERTY NO.	N/A	302687ES10	GOVERNMENT VEHICLE
		PRESCRIPTION	None	BILL OF LADING/AIR BILL NO.	ORIGINAL
		HOLDING TIME	6 Months	N/A	
POSSIBLE SAMPLE HAZARDS / REMARKS	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR 173.140(d). Goods Regulated but are not released per D.O.E. Order 5400.5 (1990) (1993)	TYPE OF CONTAINER	G/P		
MATRIX*	D=Drum L=Liquid D+D/Homogeneous S=Solids L+S=Liquid/Solids S+S=Sludge T=Tissue V=Vegetation W=Water W+W=Water X=Other	NO. OF CONTAINER(S)	1	COD-C	
SPECIAL HANDLING AND/OR STORAGE		VOLUME	125mL		
SAMPLE NO.	B2FK20	SAMPLE DATE	JUL 08 2011	SECTION(s) IN SPECIAL INSTRUCTIONS	
MATRIX*	SOIL	SAMPLE TIME	1251		
			X		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall	<i>July 08 2011</i>	<i>110 10:09 SSG ZL</i>	<i>JUL 08 2011</i>
CHPRC BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
HNP 1/07	<i>7/11/11</i>	<i>FMS Hall</i>	<i>7/11/11</i>
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall	<i>7/11/11</i>	<i>JUL 08 2011</i>	<i>7/11/11</i>
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall	<i>7/11/11</i>	<i>JUL 08 2011</i>	<i>7/11/11</i>
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LABORATORY SECTION	RECEIVED BY	DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DATE/TIME	

\* \* The CACN for all analytical work at WSCF laboratory is 402581E5/20.  \* The 100 Area S&G/P Characterization and Monitoring Sampling and Analysis GKI applies to this S&G.  
 (1) ICP/MS - 200.8 (TA) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc};  
 (2) ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8 HG - ICPMS {Mercury}; Chromium Hex - 7196;  
 (2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}.

PRINTED ON 6/29/2011

A 6003 015 (REV 2)

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**Sample Receipt****Chain of Custody**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST					
COLLECTOR FM Hall CPRC	COMPANY CONTACT Luke, SN	TELEPHONE NO. 272-1667	PROJECT COORDINATOR URL, SN SAF NO. F11-096	PRICE CODE CO1	DATA TURNAROUND 12 Days / 12 Days
SAMPLING LOCATION Area A/ Zone 1A ICE CHEST NO. CEC-5-027	PROJECT DESIGNATION Area A In-Process Sampling - S2R	FIELD LOGBOOK NO. 4NF-N-507-22	ACTUAL SAMPLE DEPTH <i>Surf free</i>	COA 302682E510	METHOD OF SHIPMENT GOVERNMENT VEHICLE BILL OF LADING/AIR BILL NO. N/A
SHIPPED TO Water Sampling & Characterization					
MATRIX* A-Air H-Drum Liquids DS-Drum Solids L-Liquid D-Oil S-Sol SF-Sediment T-Trace V-Vibration W-Water WL-Wire X-Other	POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 40 CFR / UTA Dangerous Goods Regulation's but are not releasable per DOE Order 3400.5 (1990/1993)	PRESERVATION None	Name (initials)		
HOLDING TIME 5 Months 76 Days/41 Hours GRP					
TYPE OF CONTAINER GRP					
NO. OF CONTAINER(S) 1      1					
VOLUME 120mL 60mL SEE ITEM 11 IN SPECIAL INSTRUCTIONS					
SPECIAL HANDLING AND/OR STORAGE SAMPLE ANALYSIS					
SAMPLE NO. B2FK21	MATRIX# 3	SAMPLE DATE JUL 08 2011	SAMPLE TIME 301	X	X

CHAIN OF POSSESSION						SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM FM Hall	DATE/TIME 08 JUL 09 2011	RECEIVED BY/STORED IN SAC 1107 SCL 41	DATE/TIME JUL 08 2011	** The CACN for all analytical work at WSCF laboratory is 402531E520. □ ** The 100 Area SGRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAE.					
RELINQUISHED BY/REMOVED FROM CPRC 11/09 554 41	DATE/TIME 7-1-11	RECEIVED BY/STORED IN SAC 1107 SCL 41	DATE/TIME 7-1-11	Sampling (1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS 200.8 (Add-on) {Arsenic, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; (2) HG - 7196. (Mercury); Chromium Hex - 7196.					
RELINQUISHED BY/REMOVED FROM CPRC	DATE/TIME 7/1/11	RECEIVED BY/STORED IN SAC 1107 SCL 41	DATE/TIME 7-1-11	ICP/MS 200.8 (Add-on) {Arsenic, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; (2) HG - 7196.					
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	TIME		DATE/TIME					
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME					

A 5003.51.B (REV 2)

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**Sample Receipt****Chain of Custody**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR
FM Hall CHPRC	LURE, SN	372-1657	LUKE, SH SAF NO. F11-096
SAMPLING LOCATION	PROJECT DESIGNATION		PRICE CODE C01 <input type="checkbox"/> AIR QUALITY <input type="checkbox"/>
Area AA Zone 2 Sample 15	Area AA In-Process Sampling - Soil		
ICE CHEST NO.	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	METHOD OF SHIPMENT GOVERNMENT / VPHOF
C-2-C-45-17	HIF-N-507-22	SURFACE	ORIGINAL
SHIPPED TO	OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.
Waste Sampling & Characterization	N/A		N/A
<b>Possible Sample Hazards/ Remarks</b> Contains Radionuclides. Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not released per DOE Order 5400.5 (1990/1993). <b>MATRIX*</b> A=Air D=Drum L=Drum DS=Drum S=Soil L=Liquid S=Oil S=Soil ST=Soil/Steel V=Vessel W=Water WL=Water X=Other			
<b>PRESERVATION</b> None <b>HOLDING TIME</b> 6 Months 20 Days/48 Hours <b>TYPE OF CONTAINER</b> G/P G/P <b>NO. OF CONTAINER(S)</b> 1 <b>VOLUME</b> 120mL 60mL <b>SAMPLE ANALYSIS</b> SELECTED (1) IN SPECIAL INSTRUCTIONS IN SPECIAL INSTRUCTIONS IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B2FK2	SOIL	JUL 08 2011	13:11
		X	X

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August 24, 2011 11:08:38

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CHAIN OF POSSESSION				SIGN/PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM FM Hall	DATE/TIME JUL 08 2011	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME JUL 08 2011	RECEIVED BY/STORED IN JUL 08 2011	** The CACN for all analytical work at WSCF laboratory is 402581ESZ0. <input type="checkbox"/> ** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this S&F.
RELINQUISHED BY/REMOVED FROM HIF-N-507-22	DATE/TIME 7/11/11	RECEIVED BY/STORED IN 7/11/11	DATE/TIME 7/11/11	RECEIVED BY/STORED IN 7/11/11	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Argon, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8_HG - ICPMS (Mercury); Chromium Hex - 7196;
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RECEIVED BY/STORED IN	(2) I.C. Atoms - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RECEIVED BY/STORED IN	
LABORATORY SECTION	RECEIVED BY			TITLE	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD			DISPOSED BY	
PRINTED ON 6/29/2011					

A-501-618 (Rev 2)

3004.1.1084.3

Report ID: 112639

Group # WSCF112639

**Sample Receipt****Chain of Custody**

CHAMHill Pictbau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				PAGE 1 OF 1	
COLLECTOR:	FM Hall CHPRC	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	C01	DATA TURNAROUND
SAMPLING LOCATION	Area AA Zone 3 Sample 16	LURE, SN	372-1667	LURE, SN	AIR QUALITY	<input type="checkbox"/>	12 Days - 12 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	SAF NO.	COA	METHOD OF SHIPMENT	GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO	OFFSITE PROPERTY NO.	SURFACE	H11496	302628511	BILL OF LADING/AIR BILL NO.	N/A	N/A
White Sampling & Characterization							
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 releaseable DOE Order 5400.5 (1990/1993)							
MATRIX: A-Air D-Liquid L-Solids S-Solids I-Soil O-Oil S-Sediment T-Tissue V-Vapor W-Water X-Waste Y-Other							
SPECIAL HANDLING AND/OR STORAGE							
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	SAMPLE INSTRUCTIONS			
B2FK23	SOIL	JUL 08 2011	13:16	*	X	X	

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SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME RECEIVED BY/STORED IN	DATE/TIME	402581120. <input checked="" type="checkbox"/> ** The CACN for all analytical work at WSCF laboratory is Sampling and Analysis GKT applies to this SAF.
FM Hall	JUL 08 2011	JUL 08 2011	(1) ICP/MS - 200.8 (TIA) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8 HG - ICP/MS (Mercury); Chromium Hex - 7195; (2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};
RELINQUISHED BY/REMOVED FROM	DATE/TIME RECEIVED BY/STORED IN	DATE/TIME	
FM Hall	JUL 08 2011	JUL 08 2011	
RELINQUISHED BY/REMOVED FROM	DATE/TIME RECEIVED BY/STORED IN	DATE/TIME	
FM Hall	JUL 08 2011	JUL 08 2011	
RELINQUISHED BY/REMOVED FROM	DATE/TIME RECEIVED BY/STORED IN	DATE/TIME	
FM Hall	JUL 08 2011	JUL 08 2011	
RELINQUISHED BY/REMOVED FROM	DATE/TIME RECEIVED BY/STORED IN	DATE/TIME	
FM Hall	JUL 08 2011	JUL 08 2011	
LABORATORY SECTION	RECEIVED BY	DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DATE/TIME	
PRINTED ON 6/19/2011			

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**Sample Receipt****Chain of Custody**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				PAGE 1 OF 1		
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	C01	DATA TURNAROUND
CH2Milli Plateau Remediation Company	FM Hall CHPRC	LUKE, SN 372-1667	LURE, SN SAF NO. F11-096	AIR QUALITY	12 Days / 12 Days	
SAMPLING LOCATION	PROJECT DESIGNATION	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	COA	METHOD OF SHIPMENT	ORIGINAL
Area AA Zone 2, Sample 17	Area AA, In-Process Sampling - Soil	HNF-N-S07-22	Sur Face	302682TS10	GOVERNMENT VEHICLE	
ICE CHEST NO.	OFFSITE PROPERTY NO.	N/A	BILL OF LADING/AIR BILL NO.	N/A		
SHIPPED TO				Waste Sampling & Characterization		
POSSIBLE SAMPLE HAZARDS/ REMARKS				PRESERVATION		
A=Alt D=Drum Liquid U=Drum Soil L-Liquid O-Oil S=Soil SC=Scalene T-Tissue V-Vogulation W-Water Wt=Work X-Cross				None C00-HC 20 Days/4 Hrs		
				HOLDING TIME	6 Months	
				TYPE OF CONTAINER	4xP G/P	
				NO. OF CONTAINER(S)	1	
				VOLUME	120mL 60mL	
SPECIAL HANDLING AND/OR STORAGE				SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	
SAMPLE NO.	MATRIX#	SAMPLE DATE	SAMPLE TIME			
62FK24	SOIL	7-8-11	0759	X	X	

SPECIAL INSTRUCTIONS	
RECEIVED BY/STORED IN FM Hall DATE/TIME 07-08-2011 08:55:42 / RELINQUISHED BY/REMOVED FROM M4 1109 S04 1 DATE/TIME 07-11-11 08:54:11 / RELINQUISHED BY/REMOVED FROM F400 1109 1109 DATE/TIME 07-11-11 08:54:21 / RELINQUISHED BY/REMOVED FROM RELINQUISHED BY/REMOVED FROM RELINQUISHED BY/REMOVED FROM RELINQUISHED BY/REMOVED FROM LABORATORY SECTION	
RECEIVED BY/STORED IN DATE/TIME 07-08-2011 08:55:42 / RECEIVED BY/STORED IN DATE/TIME 07-11-11 08:54:11 / RECEIVED BY/STORED IN DATE/TIME 07-11-11 08:54:21 / DISPOSED BY DATE/TIME	
RECEIVED BY/STORED IN DATE/TIME 07-08-2011 08:55:42 / RECEIVED BY/STORED IN DATE/TIME 07-11-11 08:54:11 / RECEIVED BY/STORED IN DATE/TIME 07-11-11 08:54:21 / RECEIVED BY/STORED IN DATE/TIME 07-11-11 08:54:21 / RECEIVED BY/STORED IN DATE/TIME 07-11-11 08:54:21 / DISPOSED BY DATE/TIME	

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## Sample Receipt

## Chain of Custody

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				PROJECT COORDINATOR				PAGE 1 OF 1	
COLLECTOR	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT DESIGNATION Area AA In-Process Sampling - Soil	LUKE, SN	SAF NO. F1-L-956	PRICE CODE <input type="checkbox"/> AIR QUALITY	C01	DATA TURNAROUND 12 Days / 12 Days	
SAMPLING LOCATION	FIELD LOGBOOK NO. 4400-92-007			ACTUAL SAMPLE DEPTH Soil Face	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL		
ICE CHEST NO.	SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	PRESCRIPTION None	HOLDING TIME 6 Months	COA NO. F1-L-956	BILL OF LADING/AIR BILL NO. N/A			
<b>Possible Sample Hazards / Remarks</b> Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releaseable per DOE Order 5400.5 (1990/1993)				TYPE OF CONTAINER G/P	NO. OF CONTAINER(S) 1	G/P			
				VOLUME 120mL	SECTION (1) IN SPECIAL INSTRUCTIONS INSTRUCTIONS				
<b>SPECIAL HANDLING AND/OR STORAGE</b> V-Nuggeton W-Water X-Xerow				SAMPLE ANALYSIS					
SAMPLE NO.	MATRIX*	SAMPLE DATE 7-8-11	SAMPLE TIME 06:40						
BZFK25 17	Soil								

CHAIN OF POSSESSION		SIGN / PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM CHPRC	DATE/TIME RECEIVED BY/STORED IN JUL 08 2011 1600 PM / 109 SMC #1	DATE/TIME RECEIVED BY/STORED IN JUL 19 2011 11:11 AM / 109 SMC #1	SIGNATURE	** The CACN for all analytical work at WSCF laboratory is 402681ES10. ** The 100 Area S&GR Characterization and Monitoring Sampling and Analysis (GKI) applies to this SAF.	
RELINQUISHED BY/REMOVED FROM N/A 1/10/11	DATE/TIME RECEIVED BY/STORED IN JUL 11 2011 09:11 AM / 109 SMC #1	DATE/TIME RECEIVED BY/STORED IN JUL 12 2011 12:00 PM / 109 SMC #1	SIGNATURE	(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, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8_HG - ICPMS (Mercury); Chromium Hex 7196;	
RELINQUISHED BY/REMOVED FROM CHPRC	DATE/TIME RECEIVED BY/STORED IN JUL 12 2011 12:00 PM / 109 SMC #1	DATE/TIME RECEIVED BY/STORED IN JUL 12 2011 12:00 PM / 109 SMC #1	SIGNATURE	(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};	
RELINQUISHED BY/REMOVED FROM CHPRC	DATE/TIME RECEIVED BY/STORED IN JUL 12 2011 12:00 PM / 109 SMC #1	DATE/TIME RECEIVED BY/STORED IN JUL 12 2011 12:00 PM / 109 SMC #1	SIGNATURE		
LABORATORY SECTION FINAL SAMPLE DISPOSITION	RECEIVED BY DISPOSAL METHOD	RECEIVED BY PRINTED ON 6/29/2011	TITLE DATE/TIME DATE/TIME DATE/TIME	DISPOSED BY DATE/TIME	

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**Sample Receipt****Chain of Custody**

CHIMMILL Plateau Remediation Company		CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST			
COLLECTOR	FM Hall CHPRC	COMPANY CONTACT LINE, SN	TELEPHONE NO. 372-1657	PROJECT COORDINATOR LUKE, SN	DATA TURNAROUND
SAMPLING LOCATION	Area AA In-Process Sampling - Soil			AIR QUALITY	12 Days / 12 Days
ICE CHEST NO.	HNF-N-507-22	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH S11FA4CE	METHOD OF SHIPMENT	ORIGINAL
SHIPPED TO	Chimmill, 120 P	OFFSITE PROPERTY NO.		GOVERNMENT VEHICLE	
Waste Sampling & Characterization		PRESERVATION	None	BILL OF LADING/AIR BILL NO.	
MATRIX*					N/A
POSSIBLE HAZARDS / REMARKS					
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR 173A Dangerous Goods Regulations but are not acceptable per DOE Order 5400.5 (1990/1993)					
D=Drum	Liquid	HOLDING TIME	5 Months	28 Days/48 Hours	
Solid	Solid	TYPE OF CONTAINER	C/P	C/P	
N=N	S=L	NO. OF CONTAINER(S)	1	1	
S=Soil	S=Soil	VOLUME	120mL	50mL	
S=Vegetation	V=Vegetation	SAMPLE ANALYSIS	REF ID: M1111 IN SPECIAL INSTRUCTIONS		
W=Water	W=Water	SAMPLE DATE	7-18-11	SAMPLE TIME	0759
X=Other	X=Other				X
SAMPLE NO. B2FK08		MATRIX 10	SOIL		

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CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM CHPRC	DATE/TIME RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME RECEIVED BY/STORED IN JUL 08 2011	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME RECEIVED BY/STORED IN JUL 08 2011	** The CACN for all analytical work at WSCF laboratory is 4025B1ES20. □ ** The 100 Area Skgrp Characterization and Monitoring Sampling and Analysis GIC applies to this SAR.
RELINQUISHED BY/REMOVED FROM HNF-N-507-22	7-11-11	7-11-11	7-11-11	7-11-11	(1) ICP/MS - 200.8 (TA) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; (2) ICP/MS - 200.8 (Add-on) {Arsenic, Benzene, Bohen, Lead, Molybdenum, Selenium, Strontium, Th, Uranium}; 200.8_HG - ICPOES (Mercury); Chromium Hex - 7196;
RELINQUISHED BY/REMOVED FROM F-10	7-11-11	7-11-11	7-11-11	7-11-11	(2) ICP Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};
RELINQUISHED BY/REMOVED FROM	DATE/TIME	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELABORATORY SECTION	RECEIVED BY			TITLE	
FINAL SAMPLE METHOD	DISPOSED BY			DATE/TIME	
PRINTED ON 6/29/2011					

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## **Appendix 5**

Data Validation Supporting Documentation

Rev. 0, Chg. 0

**GRP-GD-003**

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**Data Validation for Chemical Analyses****Published Date: 08/16/10****Effective Date: 08/16/10**

<u>VALIDATION LEVEL:</u>	A	B	(C)	D	E
PROJECT: 100K Area AA Zone 2			DATA PACKAGE: VSR11-051		
VALIDATOR: Carl Schloesslin		LAB: WSCF		DATE: 8-26-2011	
			SDG: WSCF112639		
ANALYSES PERFORMED					
SW-846/ICP	SW-846/GFAA	SW-846/Hg	-	EPA 200.8 <input checked="" type="checkbox"/> X	
<u>SAMPLES/MATRIX</u> Soil samples B2FK09, B2FK10, B2FK11, B2FK12, B2FK13, B2FK14, B2FK15, B2FK16, B2FK17, B2FK18, B2FK19, B2FK20, B2FK21, B2FK22, B2FK23, B2FK24, B2FK25, B2FK08					

**1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE**

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

Comments: None

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**Data Validation for Chemical Analyses****Published Date: 08/16/10****Effective Date: 08/16/10****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:

MB Hit: Be 0.133 mg/kg  
 EB B2FK25 Hits: Mn 0.543 mg/kg, Ba 0.265 mg/kg, B 0.528 mg/kg, Cu 0.342 mg/kg, Pb 0.128 mg/kg,  
 Sr 0.192 mg/kg

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**Data Validation for Chemical Analyses****Published Date: 08/16/10****Effective Date: 08/16/10****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:

None

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**Data Validation for Chemical Analyses****Published Date:** 08/16/10**Effective Date:** 08/16/10**5. PRECISION (Levels C, D, and E)**Duplicate RPD values acceptable? .....  Yes  No  N/ADuplicate results acceptable? .....  Yes  No  N/AMS/MSD standards NIST traceable? (Levels D, E) .....  Yes  No  N/AMS/MSD standards expired? (Levels D, E) .....  Yes  No  N/AField duplicate RPD values acceptable? .....  Yes  No  N/AField split RPD values acceptable? .....  Yes  No  N/ATranscription/calculation errors? (Levels D, E) .....  Yes  No  N/A

Comments:

None

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**Data Validation for Chemical Analyses****Published Date: 08/16/10****Effective Date: 08/16/10****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

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**Data Validation for Chemical Analyses****Published Date:** 08/16/10**Effective Date:** 08/16/10**8. RESULT QUANTITATION AND DETECTION LIMITS (all levels)**Results reported for all requested analyses?..... Yes  No  N/AResults supported in the raw data? (Levels D, E) ..... Yes  No  N/ASamples properly prepared? (Levels D, E)..... Yes  No  N/ADetection limits meet RDL?..... Yes  No  N/ATranscription/calculation errors? (Levels D, E)..... Yes  No  N/A

Comments: None

## **Appendix 6**

Additional Documentation Requested By Client

**Quality Control Report**

**Attention** Michael Neely  
**Department** Inorganic

Group # WSCF112639

<b>QC Batch</b>	185464	<b>Test</b>	ICP-2008 MS All possible metal
<b>Associated Samples</b>	112639001, 112639002, 112639003, 112639004, 112639005, 112639006, 112639007, 112639008, 112639009, 112639010, 112639011, 112639012, 112639013, 112639014, 112639015, 112639016, 112639017, 112639018		

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>LCS</b>										
Manganese	7439-96-5	315		mg/kg		110		75 - 121		07/18/11
Nickel	7440-02-0	63.6		mg/kg		107.5		74 - 122		07/18/11
Silver	7440-22-4	38.2		mg/kg		111.1		83 - 127		07/18/11
Antimony	7440-36-0	156		mg/kg		127.9		62 - 205		07/18/11
Barium	7440-39-3	181		mg/kg		107.1		78 - 118		07/18/11
Beryllium	7440-41-7	66.5		mg/kg		106.6		77 - 120		07/18/11
Cadmium	7440-43-9	64.3		mg/kg		104		76 - 129		07/18/11
Chromium	7440-47-3	79.8		mg/kg		112		68 - 119		07/18/11
Cobalt	7440-48-4	113		mg/kg		109.7		77 - 122		07/18/11
Copper	7440-50-8	86.4		mg/kg		106.4		67 - 120		07/18/11
Vanadium	7440-62-2	69.7		mg/kg		117.7		67 - 122		07/18/11
Zinc	7440-66-6	152		mg/kg		108		73 - 131		07/18/11
Lead	7439-92-1	101		mg/kg		108.9		79 - 124		07/18/11
Mercury	7439-97-6	3.91		mg/kg		103.7		69 - 124		07/18/11
Molybdenum	7439-98-7	48.2		mg/kg		113.1		80 - 125		07/18/11
Strontium	7440-24-6	72.3		mg/kg		99.9		78 - 119		07/18/11
Tin	7440-31-5	121		mg/kg		113.5		84 - 130		07/18/11
Uranium	7440-61-1	357		mg/kg		89.1		86 - 113		07/18/11

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**Quality Control Report**

**Attention** Michael Neely  
**Department** Inorganic

**Group #** WSCF112639

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Arsenic	7440-38-2	98.7	mg/kg	106.6	79 - 125					07/18/11
Selenium	7782-49-2	95.3	mg/kg	106.5	82 - 133					07/18/11
<b>MS</b>					<b>QC Sample #60149</b>					
Manganese	7439-96-5	395	118	mg/kg	123.1	70 - 130				X
Nickel	7440-02-0	10.3	98.9	mg/kg	102.7	70 - 130				07/18/11
Silver	7440-22-4	<0.097	102	mg/kg	105.7	70 - 130				07/18/11
Antimony	7440-36-0	<0.29	90.8	mg/kg	94.3	70 - 130				07/18/11
Barium	7440-39-3	65.3	104	mg/kg	108.1	70 - 130				07/18/11
Beryllium	7440-41-7	0.238	103	mg/kg	107.5	70 - 130				07/18/11
Cadmium	7440-43-9	<0.097	101	mg/kg	104.7	70 - 130				07/18/11
Chromium	7440-47-3	7.42	101	mg/kg	105.2	70 - 130				07/18/11
Cobalt	7440-48-4	12.8	99.6	mg/kg	103.5	70 - 130				07/18/11
Copper	7440-50-8	18.6	101	mg/kg	105.1	70 - 130				07/18/11
Vanadium	7440-62-2	96.7	88.6	mg/kg	92.1	70 - 130				07/18/11
Zinc	7440-66-6	61.8	93.3	mg/kg	96.9	70 - 130				07/18/11
Lead	7439-92-1	4.08	102	mg/kg	106.2	70 - 130				07/18/11
Mercury	7439-97-6	0.0713	1.92	mg/kg	99.8	70 - 130				07/18/11
Molybdenum	7439-98-7	0.671	103	mg/kg	106.5	70 - 130				07/18/11
Strontium	7440-24-6	31.1	101	mg/kg	104.5	70 - 130				07/18/11
Tin	7440-31-5	0.618	103	mg/kg	107.5	70 - 130				07/18/11
Uranium	7440-61-1	0.679	102	mg/kg	105.6	70 - 130				07/18/11
Arsenic	7440-38-2	2.13	99.4	mg/kg	103.3	70 - 130				07/18/11
Selenium	7782-49-2	1.15	98.3	mg/kg	102.1	70 - 130				07/18/11

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**Quality Control Report**Attention Michael Neely  
Department Inorganic

Group # WSCF112639

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>MSD</b>										
Manganese	7439-96-5	395	64.2	mg/kg	66.8	70 - 130	59.30	30	*	X
Nickel	7440-02-0	10.3	96.6	mg/kg	100.5	70 - 130	2.20	30		07/18/11
Silver	7440-22-4	<0.097	99.8	mg/kg	103.9	70 - 130	1.70	30		07/18/11
Antimony	7440-36-0	<0.29	90.9	mg/kg	94.6	70 - 130	0.30	30		07/18/11
Barium	7440-39-3	65.3	96.6	mg/kg	100.5	70 - 130	7.30	30		07/18/11
Beryllium	7440-41-7	0.238	100	mg/kg	104.3	70 - 130	3.00	30		07/18/11
Cadmium	7440-43-9	<0.097	98.9	mg/kg	102.9	70 - 130	1.70	30		07/18/11
Chromium	7440-47-3	7.42	99.8	mg/kg	103.8	70 - 130	1.30	30		07/18/11
Cobalt	7440-48-4	12.8	98.0	mg/kg	102	70 - 130	1.50	30		07/18/11
Copper	7440-50-8	18.6	98.8	mg/kg	102.8	70 - 130	2.20	30		07/18/11
Vanadium	7440-62-2	96.7	89.3	mg/kg	92.9	70 - 130	0.90	30		07/18/11
Zinc	7440-66-6	61.8	90.9	mg/kg	94.6	70 - 130	2.40	30		07/18/11
Lead	7439-92-1	4.08	100	mg/kg	104.2	70 - 130	1.90	30		07/18/11
Mercury	7439-97-6	0.0713	1.94	mg/kg	100.8	70 - 130	1.00	30		07/18/11
Molybdenum	7439-98-7	0.671	101	mg/kg	104.8	70 - 130	1.60	30		07/18/11
Strontium	7440-24-6	31.1	98.4	mg/kg	102.4	70 - 130	2.00	30		07/18/11
Tin	7440-31-5	0.618	101	mg/kg	105.6	70 - 130	1.80	30		07/18/11
Uranium	7440-61-1	0.679	99.4	mg/kg	103.5	70 - 130	2.00	30		07/18/11
Arsenic	7440-38-2	2.13	97.9	mg/kg	101.9	70 - 130	1.40	30		07/18/11
Selenium	7782-49-2	1.15	95.9	mg/kg	99.8	70 - 130	2.30	30		07/18/11

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**Quality Control Report**

**Attention** Michael Neely  
**Department** Inorganic

**Group #** WSCF112639

<b>QC Batch</b>	185464	<b>Test</b>	ICP-2008 MS All possible metal
<b>Associated Samples</b>	112639001, 112639002, 112639003, 112639004, 112639005, 112639006, 112639007, 112639008, 112639009, 112639010, 112639011, 112639012, 112639013, 112639014, 112639015, 112639016, 112639017, 112639018		

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>										
Manganese	7439-96-5			<0.10		ug/L				07/18/11
Nickel	7440-02-0			<0.20		ug/L				07/18/11
Silver	7440-22-4			<0.050		ug/L				07/18/11
Antimony	7440-36-0			<0.050		ug/L				07/18/11
Barium	7440-39-3			<0.20		ug/L				07/18/11
Beryllium	7440-41-7			0.0668		ug/L				07/18/11
Boron	7440-42-8			<0.50		ug/L				07/18/11
Cadmium	7440-43-9			<0.050		ug/L				07/18/11
Chromium	7440-47-3			<0.10		ug/L				07/18/11
Cobalt	7440-48-4			<0.10		ug/L				07/18/11
Copper	7440-50-8			<0.10		ug/L				07/18/11
Vanadium	7440-62-2			<0.20		ug/L				07/18/11
Zinc	7440-66-6			<0.80		ug/L				07/18/11
Lead	7439-92-1			<0.10		ug/L				07/18/11
Mercury	7439-97-6			<0.030		ug/L				07/18/11
Molybdenum	7439-98-7			<0.10		ug/L				07/18/11
Strontium	7440-24-6			<0.10		ug/L				07/18/11
Tin	7440-31-5			<0.10		ug/L				07/18/11

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**Quality Control Report**

**Attention** Michael Neely  
**Department** Inorganic

**Group #** WSCF112639

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Uranium	7440-61-1	<0.10		ug/L					U	07/18/11
Arsenic	7440-38-2	<0.40		ug/L					U	07/18/11
Selenium	7782-49-2	<0.30		ug/L					U	07/18/11
<b>LCS</b>										
Boron	7440-42-8	123		mg/kg	116.4	64 - 136				07/18/11
<b>MS</b>										
Boron	7440-42-8	1.63	102	mg/kg	106.2	70 - 130				07/18/11
<b>MSD</b>										
Boron	7440-42-8	1.63	102	mg/kg	105.7	70 - 130	0.50	30		07/18/11

Date: 28 July 2011  
 To: CH2M Hill (technical representative)  
 From: Analytical Quality Associates, Inc.  
 Project: 100K Area AA Zone 2  
 Subject: General Chemistry - Sample Data Group (SDG) WSCF112639

## **INTRODUCTION**

This memorandum presents the results of data validation for SDG WSCF112639 prepared by WSCF Analytical Laboratories. A list of samples validated along with the analytical methods is provided in the following table.

<b>Sample ID</b>	<b>Sample Date</b>	<b>Media</b>	<b>Validation Level</b>	<b>Analytical Methods</b>
B2FK09	7/08/2011	Soil	C	300.0 & 7196A
B2FK10	7/08/2011	Soil	C	300.0 & 7196A
B2FK11	7/08/2011	Soil	C	300.0 & 7196A
B2FK12	7/08/2011	Soil	C	300.0 & 7196A
B2FK13	7/08/2011	Soil	C	300.0 & 7196A
B2FK14	7/08/2011	Soil	C	300.0 & 7196A
B2FK15	7/08/2011	Soil	C	300.0 & 7196A
B2FK16	7/08/2011	Soil	C	300.0 & 7196A
B2FK17	7/08/2011	Soil	C	300.0 & 7196A
B2FK18	7/08/2011	Soil	C	300.0 & 7196A
B2FK19	7/08/2011	Soil	C	300.0 & 7196A
B2FK20	7/08/2011	Soil	C	300.0 & 7196A
B2FK21	7/08/2011	Soil	C	300.0 & 7196A
B2FK22	7/08/2011	Soil	C	300.0 & 7196A
B2FK23	7/08/2011	Soil	C	300.0 & 7196A
B2FK24	7/08/2011	Soil	C	300.0 & 7196A
B2FK25	7/08/2011	Soil	C	300.0 & 7196A
B2FK08	7/08/2011	Soil	C	300.0 & 7196A

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 except nitrate, nitrite, and phosphate – analysis within 28 days of sample collection
- Nitrate, nitrite, and phosphate – extraction within 28 days of sample collection and analysis within 48 hours of extraction
- Hexavalent chromium – analysis within 30 days of sample collection

Sample preservation for anions requires chilling to 4 degrees Celsius.

The samples were extracted and analyzed within the prescribed holding times and properly preserved.

### **• 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 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.

### **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) limits are  $\pm 30\%$ . 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 reporting limits with differences  $<2X$  the reporting limits no precision infraction occurred.

### **MS/MSD Samples**

All MS/MSD RPD values were acceptable.

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

All reported sample MDLs were below the CRDLs.

- Completeness**

SDG WSCF112639 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-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**

<b>General Chemistry Data Qualification Summary</b>			
SDG: WSCF112639	Reviewer: AQA	Project: 100K Area AA Zone 2	Page 1 of 1
<b>Analyte(s)</b>	<b>DV Flag</b>	<b>Samples Affected</b>	<b>Reason</b>
Anions & Cr(VI)	None	N/A	N/A

Comments: None

## **Appendix 3**

### Annotated Laboratory Reports

## WSCF Analytical Results Report

Attention Michael Neely  
Department Inorganic

Group # WSCF112639

Sample #	112639001	Matrix	SOIL
SAF#	F11-096	Sampled	07/08/11
Sample ID	B2FK09	Received	07/11/11
<b>Test Performed</b>			
<b>CAS #</b>			
<b>Method</b>			
<b>RQ</b>			
<b>Result</b>			
<b>TP Err</b>			
<b>Units</b>			
<b>DF</b>			
<b>MDL</b>			
<b>PQL</b>			
<b>Analyzed</b>			
<b>07/11/11</b>			
<b>Anions by IC</b>			
<b>Anions by IC</b>			
Fluoride	16984-48-8	LA-533-410	U
Chloride	16887-00-6	LA-533-410	U
Nitrite-N	NO2-N	LA-533-410	U
Nitrate-N	NO3-N	LA-533-410	5.14
Sulfate	14808-79-8	LA-533-410	B
			7.47
<b>Cr(VI) Prep</b>			
<b>Cr(VI)</b>			
Hexavalent chromium	18540-29-9	LA-265-403	B
			0.105
<b>ICP-MS Prep</b>			
<b>ICP-MS</b>			
Manganese	7439-96-5	LA-505-412	395
Nickel	7440-02-0	LA-505-412	10.3
Silver	7440-22-4	LA-505-412	<0.097
Antimony	7440-36-0	LA-505-412	<0.29
Barium	7440-39-3	LA-505-412	65.3
Beryllium	7440-41-7	LA-505-412	0.238
Boron	7440-42-8	LA-505-412	B
			1.63
			mg/kg
			1
			0.10
			0.50
			07/13/11
<b>07/12/11</b>			
<b>ICP-MS</b>			
Manganese	7439-96-5	LA-505-412	395
Nickel	7440-02-0	LA-505-412	10.3
Silver	7440-22-4	LA-505-412	<0.097
Antimony	7440-36-0	LA-505-412	<0.29
Barium	7440-39-3	LA-505-412	65.3
Beryllium	7440-41-7	LA-505-412	0.238
Boron	7440-42-8	LA-505-412	B
			1.63
			mg/kg
			1
			0.10
			0.50
			07/13/11
<b>07/12/11</b>			

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 dilution 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 # WSCF112639

Sample # 112639002  
SAF# F11-096  
Sample ID B2FK10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	Matrix Sampled	SOIL 07/08/11	Group #										
										WSCF112639										
								Sampled	Received											
<b>Anions by IC</b>																				
<b>Anions by IC</b>																				
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.7	07/12/11										
Chloride	16887-00-6	LA-533-410		66.1		mg/kg	1	3.2	21	07/12/11										
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/12/11										
Nitrate-N	NO3-N	LA-533-410	B	1.80		mg/kg	1	0.97	5.1	07/12/11										
Sulfate	14808-79-8	LA-533-410	B	16.3		mg/kg	1	3.7	54	07/12/11										
<b>Cr(VI) Prep</b>										<b>07/12/11</b>										
<b>Cr(VI)</b>																				
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.51	07/13/11										
<b>ICP-MS Prep</b>										<b>07/12/11</b>										
<b>ICP-MS</b>																				
Manganese	7439-96-5	LA-505-412		413		mg/kg	1	0.094	0.94	07/18/11										
Nickel	7440-02-0	LA-505-412		12.1		mg/kg	1	0.19	1.9	07/18/11										
Silver	7440-22-4	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	07/18/11										
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	07/18/11										
Barium	7440-39-3	LA-505-412		74.2		mg/kg	1	0.19	1.9	07/18/11										
Beryllium	7440-41-7	LA-505-412	C	0.509		mg/kg	1	0.094	0.47	07/18/11										
Boron	7440-42-8	LA-505-412	B	2.48		mg/kg	1	0.47	4.7	07/18/11										
MDL = Minimum Detection	B - Analyte < the PQL(or EQL)but => the IDL/MDL(Inorganic)																			
RQ = Result Qualifier	C - Analyte was found in the Associated Blank. (Inorganic)																			
TP Err = Total Propagated	D - Analyte was reported at a secondary dilution factor.																			
DF = Dilution Factor	E - Analyte is an estimate, see comment section.																			
+ - Indicates more than nine qualifier	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)

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

## WSCF Analytical Results Report

Attention Michael Neely  
Department Inorganic

Group # WSCF112639

**Sample #** 112639003  
**SAF#** F11-096  
**Sample ID** B2FK11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	Matrix Sampled	SOIL 07/08/11	Group #										
										07/12/11	Analyzed									
<b>Anions by IC</b>																				
<b>Anions by IC</b>																				
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/12/11										
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/12/11										
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/12/11										
Nitrate-N	NO3-N	LA-533-410	U	<0.95		mg/kg	1	0.95	4.9	07/12/11										
Sulfate	14808-79-8	LA-533-410	B	19.1		mg/kg	1	3.6	52	07/12/11										
<b>Cr(VI) Prep</b>										<b>07/12/11</b>										
<b>Cr(VI)</b>																				
Hexavalent chromium	18540-29-9	LA-265-403		0.862		ug/g	1	0.096	0.48	07/13/11										
<b>ICP-MS Prep</b>										<b>07/12/11</b>										
<b>ICP-MS</b>																				
Manganese	7439-96-5	LA-505-412		392		mg/kg	1	0.095	0.95	07/18/11										
Nickel	7440-02-0	LA-505-412		9.02		mg/kg	1	0.19	1.9	07/18/11										
Silver	7440-22-4	LA-505-412	U	<0.095		mg/kg	1	0.095	0.95	07/18/11										
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	07/18/11										
Barium	7440-39-3	LA-505-412		62.3	7-28-2011	mg/kg	1	0.19	1.9	07/18/11										
Beryllium	7440-41-7	LA-505-412	C	0.486		mg/kg	1	0.095	0.47	07/18/11										
Boron	7440-42-8	LA-505-412	B	1.35		mg/kg	1	0.47	4.7	07/18/11										

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 dilution 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 # WSCF112639

**Sample #** 112639004  
**SAF#** F11-096  
**Sample ID** B2FK12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	Matrix Sampled	SOIL 07/08/11	Analyzed										
										07/12/11	07/12/11									
<b>Anions by IC</b>																				
<b>Anions by IC</b>																				
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/12/11										
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	21	07/12/11										
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/12/11										
Nitrate-N	NO3-N	LA-533-410	U	<0.96		mg/kg	1	0.96	5.0	07/12/11										
Sulfate	14808-79-8	LA-533-410	B	7.31		mg/kg	1	3.6	53	07/12/11										
<b>Cr(VI) Prep</b>																				
<b>Cr(VI)</b>																				
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/13/11										
<b>ICP-MS Prep</b>																				
<b>ICP-MS</b>																				
Manganese	7439-96-5	LA-505-412		487		mg/kg	1	0.097	0.97	07/18/11										
Nickel	7440-02-0	LA-505-412		10.4		mg/kg	1	0.19	1.9	07/18/11										
Silver	7440-22-4	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	07/18/11										
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/18/11										
Barium	7440-39-3	LA-505-412		97.9	7-28-2011	mg/kg	1	0.19	1.9	07/18/11										
Beryllium	7440-41-7	LA-505-412	C	0.493		mg/kg	1	0.097	0.49	07/18/11										
Boron	7440-42-8	LA-505-412	B	1.75		mg/kg	1	0.49	4.9	07/18/11										

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 dilution 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 # WSCF112639

**Sample #** 112639005  
**SAF#** F11-096  
**Sample ID** B2FK13

**Matrix** SOIL  
**Sampled** 07/08/11  
**Received** 07/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Anions by IC</b>										
<b>Anions by IC</b>										
<b>Cr(VI) Prep</b>										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.7	07/13/11
Chloride	16887-00-6	LA-533-410		22.5		mg/kg	1	3.2	21	07/13/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/13/11
Nitrate-N	NO3-N	LA-533-410	B	3.58		mg/kg	1	0.97	5.1	07/13/11
Sulfate	14808-79-8	LA-533-410		321		mg/kg	1	3.7	54	07/13/11
<b>Cr(VI)</b>										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.51	07/13/11
<b>ICP-MS Prep</b>										
<b>ICP-MS</b>										
Manganese	7439-96-5	LA-505-412		395		mg/kg	1	0.10	1.0	07/18/11
Nickel	7440-02-0	LA-505-412		11.3		mg/kg	1	0.21	2.1	07/18/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/18/11
Antimony	7440-36-0	LA-505-412	U	<0.31		mg/kg	1	0.31	3.1	07/18/11
Barium	7440-39-3	LA-505-412		73.9	7-28-2011	mg/kg	1	0.21	2.1	07/18/11
Beryllium	7440-41-7	LA-505-412	BC	0.185		mg/kg	1	0.10	0.52	07/18/11
Boron	7440-42-8	LA-505-412	B	2.60		mg/kg	1	0.52	5.2	07/18/11
<b>MDL = Minimum Detection</b>										
<b>RQ = Result Qualifier</b>										
<b>TP Err = Total Propagated</b>										
<b>DF = Dilution Factor</b>										
+ - Indicates more than nine qualifier										

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 dilution 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 # WSCF112639

**Sample #** 112639006  
**SAF#** F11-096  
**Sample ID** B2FK14

**Matrix** SOIL  
**Sampled** 07/08/11  
**Received** 07/11/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Anions by IC</b>										
<b>Anions by IC</b>										
Fluoride LA-533-410 U <1.8 mg/kg 1 1.8 3.6 07/13/11										
Chloride LA-533-410 B 10.5 mg/kg 1 3.1 20 07/13/11										
Nitrite-N LA-533-410 U <1.0 mg/kg 1 1.0 4.9 07/13/11										
Nitrate-N LA-533-410 B 1.94 mg/kg 1 0.96 5.0 07/13/11										
Sulfate LA-533-410 B 18.8 mg/kg 1 3.6 53 07/13/11										
<b>Cr(VI) Prep</b>										
<b>Cr(VI)</b>										
Hexavalent chromium 18540-29-9 LA-265-403 UD <0.40 ug/g 4 0.40 2.0 07/13/11										
<b>ICP-MS Prep</b>										
<b>ICP-MS</b>										
Manganese	7439-96-5	LA-505-412		358		mg/kg	1	0.10	1.0	07/18/11
Nickel	7440-02-0	LA-505-412		12.1		mg/kg	1	0.20	2.0	07/18/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/18/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/18/11
Barium	7440-39-3	LA-505-412		73.4	7-28-2011	mg/kg	1	0.20	2.0	07/18/11
Beryllium	7440-41-7	LA-505-412	BC	0.337		mg/kg	1	0.10	0.50	07/18/11
Boron	7440-42-8	LA-505-412	B	1.49		mg/kg	1	0.50	5.0	07/18/11

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 dilution 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 # WSCF112639

Sample #	112639007	Matrix	SOIL
SAF#	F11-096	Sampled	07/08/11
Sample ID	B2FK15	Received	07/11/11
<b>Test Performed</b>			
<b>CAS #</b>			
<b>Method</b>			
<b>RQ</b>			
<b>Result</b>			
<b>TP Err</b>			
<b>Units</b>			
<b>DF</b>			
<b>MDL</b>			
<b>PQL</b>			
<b>Analyzed</b>			
<b>07/12/11</b>			
<b>Anions by IC</b>			
<b>Anions by IC</b>			
Fluoride	16984-48-8	LA-533-410	U
Chloride	16887-00-6	LA-533-410	B
Nitrite-N	NO2-N	LA-533-410	U
Nitrate-N	NO3-N	LA-533-410	B
Sulfate	14808-79-8	LA-533-410	B
<b>Cr(VI) Prep</b>			
<b>Cr(VI)</b>			
Hexavalent chromium	18540-29-9	LA-265-403	U
<b>ICP-MS Prep</b>			
<b>ICP-MS</b>			
Manganese	7439-96-5	LA-505-412	418
Nickel	7440-02-0	LA-505-412	11.8
Silver	7440-22-4	LA-505-412	<0.095
Antimony	7440-36-0	LA-505-412	U
Barium	7440-39-3	LA-505-412	U
Beryllium	7440-41-7	LA-505-412	BC
Boron	7440-42-8	LA-505-412	B
<b>07/12/11</b>			
<b>U - Analyzed for but not detected above limiting criteria.</b>			
<b>X, Y or Z - See comment detail and/or narrative.</b>			
<b>PQL is equivalent to Estimated Quantitation Limit (EQL)</b>			
<b>B - Analyte &lt; the PQL(or EQL)but =&gt; the MDL/MDL(Inorganic)</b>			
<b>C - Analyte was found in the Associated Blank. (Inorganic)</b>			
<b>D - Analyte was reported at a secondary dilution factor.</b>			
<b>E - Analyte is an estimate, see comment section.</b>			
<b>N - MS and/or MSD recovery outside control limits.</b>			

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

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 # WSCF112639

Sample # 112639008  
SAF# F11-096  
Sample ID B2FK16

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	Matrix Sampled	SOIL 07/08/11	Group #										
										WSCF112639										
								Sampled	Received											
<b>Anions by IC</b>																				
<b>Anions by IC</b>																				
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.7	07/13/11										
Chloride	16887-00-6	LA-533-410		32.5		mg/kg	1	3.1	21	07/13/11										
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/13/11										
Nitrate-N	NO3-N	LA-533-410		6.38		mg/kg	1	0.96	5.0	07/13/11										
Sulfate	14808-79-8	LA-533-410	B	31.3		mg/kg	1	3.7	53	07/13/11										
<b>Cr(VI) Prep</b>																				
<b>Cr(VI)</b>																				
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/13/11										
<b>ICP-MS Prep</b>																				
<b>ICP-MS</b>																				
Manganese	7439-96-5	LA-505-412		397		mg/kg	1	0.098	0.98	07/18/11										
Nickel	7440-02-0	LA-505-412		12.9		mg/kg	1	0.20	2.0	07/18/11										
Silver	7440-22-4	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	07/18/11										
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/18/11										
Barium	7440-39-3	LA-505-412		83.9		mg/kg	1	0.20	2.0	07/18/11										
Beryllium	7440-41-7	LA-505-412	BC	0.310		mg/kg	1	0.098	0.49	07/18/11										
Boron	7440-42-8	LA-505-412	B	2.50		mg/kg	1	0.49	4.9	07/18/11										

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 dilution 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 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 # WSCF112639

Sample # 112639009  
SAF# F11-096  
Sample ID B2FK17

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	Matrix Sampled	SOIL 07/08/11	Analyzed
07/13/11										07/12/11
<b>Anions by IC</b>										
<b>Anions by IC</b>										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/13/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	21	07/13/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/13/11
Nitrate-N	NO3-N	LA-533-410	U	<0.96		mg/kg	1	0.96	5.0	07/13/11
Sulfate	14808-79-8	LA-533-410	B	8.84		mg/kg	1	3.6	53	07/13/11
<b>Cr(VI) Prep</b>										07/12/11
<b>Cr(VI)</b>										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.094		ug/g	1	0.094	0.47	07/13/11
<b>ICP-MS Prep</b>										07/12/11
<b>ICP-MS</b>										
Manganese	7439-96-5	LA-505-412		351		mg/kg	1	0.036	0.96	07/18/11
Nickel	7440-02-0	LA-505-412		9.49		mg/kg	1	0.19	1.9	07/18/11
Silver	7440-22-4	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	07/18/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/18/11
Barium	7440-39-3	LA-505-412		55.3	7-28-2011	mg/kg	1	0.19	1.9	07/18/11
Beryllium	7440-41-7	LA-505-412	BC	0.175		mg/kg	1	0.096	0.48	07/18/11
Boron	7440-42-8	LA-505-412	B	0.894		mg/kg	1	0.48	4.8	07/18/11

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 dilution 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 # WSCF112639

Sample #	112639010	Matrix	SOIL
SAF#	F11-096	Sampled	07/08/11
Sample ID	B2FK18	Received	07/11/11
<b>Test Performed</b>			
<b>CAS #</b>			
<b>Method</b>			
<b>RQ</b>			
<b>Result</b>			
<b>TP Err</b>			
<b>Units</b>			
<b>DF</b>			
<b>MDL</b>			
<b>PQL</b>			
<b>Analyzed</b>			
<b>07/13/11</b>			
<b>Anions by IC</b>			
<b>Anions by IC</b>			
Fluoride	16984-48-8	LA-533-410	U
Chloride	16887-00-6	LA-533-410	B
Nitrite-N	NO2-N	LA-533-410	U
Nitrate-N	NO3-N	LA-533-410	U
Sulfate	14808-79-8	LA-533-410	B
<b>Cr(VI) Prep</b>			
<b>Cr(VI)</b>			
Hexavalent chromium	18540-29-9	LA-265-403	B
			0.374
<b>ICP-MS Prep</b>			
<b>ICP-MS</b>			
Manganese	7439-96-5	LA-505-412	433
Nickel	7440-02-0	LA-505-412	11.0
Silver	7440-22-4	LA-505-412	<0.10
Antimony	7440-36-0	LA-505-412	<0.31
Barium	7440-39-3	LA-505-412	61.4
Beryllium	7440-41-7	LA-505-412	0.302
Boron	7440-42-8	LA-505-412	1.54

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 dilution 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 # WSCF112639

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed	
<b>Anions by IC</b>											<b>07/13/11</b>
<b>Anions by IC</b>											<b>07/14/11</b>
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.7	07/13/11	
Chloride	16887-00-6	LA-533-410	B	3.60		mg/kg	1	3.2	21	07/13/11	
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/13/11	
Nitrate-N	NO3-N	LA-533-410	B	1.72		mg/kg	1	0.97	5.0	07/13/11	
Sulfate	14808-79-8	LA-533-410	B	13.8		mg/kg	1	3.7	53	07/13/11	
<b>Cr(VI) Prep</b>											<b>07/12/11</b>
<b>Cr(VI)</b>						ug/g	1	0.097	0.49	07/13/11	
Hexavalent chromium	18540-29-9	LA-265-403	B	0.218							
<b>ICP-MS Prep</b>											<b>07/14/11</b>
<b>ICP-MS</b>											
Manganese	7439-96-5	LA-505-412		412		mg/kg	1	0.099	0.99	07/18/11	
Nickel	7440-02-0	LA-505-412		10.6		mg/kg	1	0.20	2.0	07/18/11	
Silver	7440-22-4	LA-505-412	U	<0.090		mg/kg	1	0.099	0.99	07/18/11	
Antimony	7440-36-0	LA-505-412	U	<0.30	<i>&lt;5</i>	mg/kg	1	0.30	3.0	07/18/11	
Barium	7440-39-3	LA-505-412		71.0	7-28-2011	mg/kg	1	0.20	2.0	07/18/11	
Beryllium	7440-41-7	LA-505-412	BC	0.293		mg/kg	1	0.099	0.49	07/18/11	
Boron	7440-42-8	LA-505-412	B	1.37		mg/kg	1	0.49	4.9	07/18/11	

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 dilution 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 # WSCF112639

Sample # 112639012  
SAF# F11-096  
Sample ID B2FK20

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
07/13/11										
<b>Anions by IC</b>										
<b>Anions by IC</b>										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/13/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	21	07/13/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/13/11
Nitrate-N	NO3-N	LA-533-410	B	1.18		mg/kg	1	0.96	5.0	07/13/11
Sulfate	14808-79-8	LA-533-410		65.2		mg/kg	1	3.6	53	07/13/11
<b>Cr(VI) Prep</b>										
<b>Cr(VI)</b>										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.099		ug/g	1	0.099	0.50	07/13/11
<b>ICP-MS Prep</b>										<b>07/12/11</b>
<b>ICP-MS</b>										
Manganese	7439-96-5	LA-505-412		409		mg/kg	1	0.093	0.93	07/18/11
Nickel	7440-02-0	LA-505-412		10.4		mg/kg	1	0.19	1.9	07/18/11
Silver	7440-22-4	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	07/18/11
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	07/18/11
Barium	7440-39-3	LA-505-412		69.0	7-28-2011	mg/kg	1	0.19	1.9	07/18/11
Beryllium	7440-41-7	LA-505-412	BC	0.282		mg/kg	1	0.093	0.47	07/18/11
Boron	7440-42-8	LA-505-412	B	1.57		mg/kg	1	0.47	4.7	07/18/11

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 dilution 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)

## WSSCF Analytical Results Report

Attention Michael Neely  
 Department Inorganic

Group # WSCF112639

Sample # 112639013  
 SAF# F11-096  
 Sample ID B2FK21

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	Matrix Sampled	SOIL 07/08/11	Analyzed
<b>Anions by IC</b>										<b>07/13/11</b>
<b>Anions by IC</b>										<b>07/12/11</b>
<b>Cr(VI) Prep</b>										
<b>Cr(VI)</b>										
Hexavalent chromium	18540-29-9	LA-265-403	B	0.140		ug/g	1	0.097	0.49	07/13/11
<b>ICP-MS Prep</b>										<b>07/12/11</b>
<b>ICP-MS</b>										
Manganese	7439-96-5	LA-505-412		343		mg/kg	1	0.097	0.97	07/18/11
Nickel	7440-02-0	LA-505-412		7.94		mg/kg	1	0.19	1.9	07/18/11
Silver	7440-22-4	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	07/18/11
Antimony	7440-36-0	LA-505-412	U	<0.29	< 5	mg/kg	1	0.29	2.9	07/18/11
Barium	7440-39-3	LA-505-412		59.7	7-28-2011	mg/kg	1	0.19	1.9	07/18/11
Beryllium	7440-41-7	LA-505-412	BC	0.200		mg/kg	1	0.097	0.49	07/18/11
Boron	7440-42-8	LA-505-412	B	1.23		mg/kg	1	0.49	4.9	07/18/11

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

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)

C - Analyte was found in the Associated Blank. (Inorganic)

D - Analyte was reported at a secondary dilution factor.

E - Analyte is an estimate, see comment section.  
 N - MS and/or MSD recovery outside control limits.

# WSSCF Analytical Results Report

Attention Michael Neely  
Department Inorganic

Group # WSCF112639

Sample # 112639014  
SAF# F11-096  
Sample ID B2FK22

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>07/13/11</b>										
<b>Anions by IC</b>										
<b>Anions by IC</b>										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/13/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/13/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/13/11
Nitrate-N	NO3-N	LA-533-410	U	<0.95		mg/kg	1	0.95	5.0	07/13/11
Sulfate	14808-79-8	LA-533-410	U	<3.6		mg/kg	1	3.6	53	07/13/11
<b>Cr(VI) Prep</b>										<b>07/12/11</b>
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.098		ug/g	1	0.098	0.49	07/13/11
<b>ICP-MS Prep</b>										<b>07/12/11</b>
<b>ICP-MS</b>										
Manganese	7439-96-5	LA-505-412		410		mg/kg	1	0.10	1.0	07/18/11
Nickel	7440-02-0	LA-505-412		9.40		mg/kg	1	0.20	2.0	07/18/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/18/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/18/11
Barium	7440-39-3	LA-505-412		66.7	<5	mg/kg	1	0.20	2.0	07/18/11
Beryllium	7440-41-7	LA-505-412	BC	0.254	7-28-2011	mg/kg	1	0.10	0.51	07/18/11
Boron	7440-42-8	LA-505-412	B	0.805		mg/kg	1	0.51	5.1	07/18/11

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 dilution 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 # WSCF112639

Sample # 112639015  
SAF# F11-096  
Sample ID B2FK23

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	Matrix Sampled	SOIL 07/08/11	Analyzed										
										07/13/11	07/14/11									
<b>Anions by IC</b>																				
<b>Anions by IC</b>																				
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/13/11										
Chloride	16887-00-6	LA-533-410		50.5		mg/kg	1	3.1	20	07/13/11										
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/13/11										
Nitrate-N	NO3-N	LA-533-410	U	<0.95		mg/kg	1	0.95	4.9	07/13/11										
Sulfate	14808-79-8	LA-533-410	B	9.65		mg/kg	1	3.6	52	07/13/11										
<b>Cr(VI) Prep</b>																				
<b>Cr(VI)</b>																				
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.098		ug/g	1	0.098	0.49	07/15/11										
<b>ICP-MS Prep</b>																				
<b>ICP-MS</b>																				
Manganese	7439-96-5	LA-505-412		389		mg/kg	1	0.11	1.1	07/18/11										
Nickel	7440-02-0	LA-505-412		10.0		mg/kg	1	0.21	2.1	07/18/11										
Silver	7440-22-4	LA-505-412	U	<0.11		mg/kg	1	0.11	1.1	07/18/11										
Antimony	7440-36-0	LA-505-412	U	<0.32		mg/kg	1	0.32	3.2	07/18/11										
Barium	7440-39-3	LA-505-412		63.7	≤ 5	mg/kg	1	0.21	2.1	07/18/11										
Beryllium	7440-41-7	LA-505-412	BC	0.172	7-28-2011	mg/kg	1	0.11	0.53	07/18/11										
Boron	7440-42-8	LA-505-412	B	1.15		mg/kg	1	0.53	5.3	07/18/11										

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 dilution 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 # WSCF112639

Sample # 112639016  
SAF# F11-096  
Sample ID B2FK24

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	Matrix Sampled	SOIL 07/08/11	Analyzed										
										07/13/11	07/14/11									
<b>Anions by IC</b>																				
<b>Anions by IC</b>																				
Fluoride	16984-48-8	LA-533-410	U	<2.0		mg/kg	1	2.0	3.9	07/13/11										
Chloride	16887-00-6	LA-533-410	B	6.48		mg/kg	1	3.4	22	07/13/11										
Nitrite-N	NO2-N	LA-533-410	U	<1.1		mg/kg	1	1.1	5.3	07/13/11										
Nitrate-N	NO3-N	LA-533-410	B	1.12		mg/kg	1	1.0	5.4	07/13/11										
Sulfate	14808-79-8	LA-533-410	B	17.2		mg/kg	1	3.9	57	07/13/11										
<b>Cr(VI) Prep</b>																				
<b>Cr(VI)</b>																				
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.11		ug/g	1	0.11	0.53	07/15/11										
<b>ICP-MS Prep</b>																				
<b>ICP-MS</b>																				
Manganese	7439-96-5	LA-505-412		431		mg/kg	1	0.11	1.1	07/18/11										
Nickel	7440-02-0	LA-505-412		11.8		mg/kg	1	0.22	2.2	07/18/11										
Silver	7440-22-4	LA-505-412	U	<0.11		mg/kg	1	0.11	1.1	07/18/11										
Antimony	7440-36-0	LA-505-412	U	<0.33		mg/kg	1	0.33	3.3	07/18/11										
Barium	7440-39-3	LA-505-412		<5		mg/kg	1	0.22	2.2	07/18/11										
Beryllium	7440-41-7	LA-505-412	BC	80.2	7-28-2011	mg/kg	1	0.11	0.55	07/18/11										
Boron	7440-42-8	LA-505-412	B	0.381		mg/kg	1	0.55	5.5	07/18/11										
				1.70		mg/kg	1													

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 dilution 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 # WSCF112639

Sample #	112639017	Matrix	SOIL
SAF#	F11-096	Sampled	07/08/11
Sample ID	B2FK25	Received	07/11/11
<b>Test Performed</b>			
<b>CAS #</b>			
<b>Method</b>			
<b>RQ</b>			
<b>Result</b>			
<b>TP Err</b>			
<b>Units</b>			
<b>DF</b>			
<b>MDL</b>			
<b>PQL</b>			
<b>Analyzed</b>			
<b>07/13/11</b>			
<b>Anions by IC</b>			
<b>Anions by IC</b>			
Fluoride	16984-48-8	LA-533-410	U
Chloride	16887-00-6	LA-533-410	U
Nitrite-N	NO2-N	LA-533-410	U
Nitrate-N	NO3-N	LA-533-410	U
Sulfate	14808-79-8	LA-533-410	U
<b>Cr(VI) Prep</b>			
<b>Cr(VI)</b>			
Hexavalent chromium	18540-29-9	LA-265-403	U
<b>ICP-MS Prep</b>			
<b>ICP-MS</b>			
Manganese	7439-96-5	LA-505-412	B
Nickel	7440-02-0	LA-505-412	U
Silver	7440-22-4	LA-505-412	U
Antimony	7440-36-0	LA-505-412	U
Barium	7440-39-3	LA-505-412	B
Beryllium	7440-41-7	LA-505-412	UC
Boron	7440-42-8	LA-505-412	B
<b>07/14/11</b>			
<b>07/12/11</b>			
<b>U - Analyzed for but not detected above limiting criteria.</b>			
<b>X, Y or Z - See comment detail and/or narrative.</b>			
<b>PQL is equivalent to Estimated Quantitation Limit (EQL)</b>			
<b>B - Analyte &lt; the PQL(or EQL)but =&gt; the MDL/MDL(Inorganic)</b>			
<b>C - Analyte was found in the Associated Blank. (Inorganic)</b>			
<b>D - Analyte was reported at a secondary dilution factor.</b>			
<b>E - Analyte is an estimate, see comment section.</b>			
<b>N - MS and/or MSD recovery outside control limits.</b>			
<b>+ - Indicates more than nine qualifier</b>			

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 MDL/MDL(Inorganic)

C - Analyte was found in the Associated Blank. (Inorganic)

D - Analyte was reported at a secondary dilution factor.

E - Analyte is an estimate, see comment section.

N - MS and/or MSD 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 # WSCF112639

Sample # 112639018  
SAF# F11-096  
Sample ID B2FK08

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	Matrix Sampled	SOIL 07/08/11	Group #												
								PQL	Analyzed	07/13/11												
<b>Anions by IC</b>																						
<b>Anions by IC</b>																						
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/13/11												
Chloride	16887-00-6	LA-533-410	B	8.21		mg/kg	1	3.1	21	07/13/11												
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/13/11												
Nitrate-N	NO3-N	LA-533-410	B	1.34		mg/kg	1	0.96	5.0	07/13/11												
Sulfate	14808-79-8	LA-533-410	B	21.6		mg/kg	1	3.6	53	07/13/11												
<b>Cr(VI) Prep</b>										<b>07/14/11</b>												
<b>Cr(VI)</b>																						
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/15/11												
<b>ICP-MS Prep</b>										<b>07/14/11</b>												
<b>ICP-MS</b>																						
Manganese	7439-96-5	LA-505-412		382		mg/kg	1	0.099	0.99	07/18/11												
Nickel	7440-02-0	LA-505-412		10.1		mg/kg	1	0.20	2.0	07/18/11												
Silver	7440-22-4	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	07/18/11												
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/18/11												
Barium	7440-39-3	LA-505-412		63.4		mg/kg	1	0.20	2.0	07/18/11												
Beryllium	7440-41-7	LA-505-412	BC	0.448		mg/kg	1	0.099	0.50	07/18/11												
Boron	7440-42-8	LA-505-412	B	1.29		mg/kg	1	0.50	5.0	07/18/11												

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 dilution 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

**Narrative**

Attachment 2  
**Narrative**  
 WSCF112639

**P&D Correction – Case Narrative Replaces the Prior Submittal in its Entirety****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. Additionally, a copy of the completed P&D # WSCF112639 is included with this case narrative. 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):

- All applicable QC controls are within the established limits.

**Narrative** 

---

Attachment 2  
**Narrative**  
WSCF112639

**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):

- 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):

- Beryllium was detected in the Blank and was evaluated. Affected sample results in this batch were "C" Flagged.
- Manganese – 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.

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.

**Narrative**

---

Attachment 2  
**Narrative**  
WSCF112639

8/15/2011

**Problem and Discrepancy Report**  
**WSCF**  
**SDG WSCF112639**

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

- a) All of the electronic results are missing.

**Resolution:** *Provide missing results*

**Lab Response:** **Report issues have been corrected and the hard copy and electronic data package results have been provided.**

Please correct the issues and resubmit the electronic data package.

**Sample Receipt**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				PAGE 1 OF 1	
COLLECTOR	FM Hall CHPRC	COMPANY/CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE COL.
SAMPLING LOCATION	LUKE, SN Area AA Zone 2 Sample 2	PROJECT DESIGNATION	371-667	LUIK, SN SAF NO. F11-096	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO.	Container - 2017	FIELD LOGBOOK NO.	<u>NN-A-07-22</u>	ACTUAL SAMPLE DEPTH	COA 31262ES10
SHIPPED TO	Opposite Property No.	OFFSITE PROPERTY NO.	N/A	BILL OF LADING/AIR BILL NO.	N/A
Waste Sampling & Characterization					
MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS				
A-Au D-Liquid D5-Liquid Solids L-Liquid S-Sol Soil T-Tissue V-Water W-Water X-Ether	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not exemptable per DOE Order 5400.5 (1990/1993)				
SPECIAL HANDLING AND/OR STORAGE					
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	SIGN/ PRINT NAMES	
E2FKU9	SOIL	7-8-11	0816	JUL 07 2011 4023H1E520, □**	JUL 07 2011 4023H1E520, □**
RECEIVED BY/STORED IN					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SPECIAL INSTRUCTIONS	
FM Hall	7-11-11	FM Hall	7-11-11	* The CACH at WSCF laboratory is 4023H1E520, □**. The 100 Area SGRP Characterization and Monitoring Sampling and Analysis GRL applies to this SAR.	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(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, Boron, Lead, Molybdenum, Selenium, Strontium, Tellurium, Uranium); 200.8 HG - ICPMS (Mercury); Chromium Hex - 7196.	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(2) IC Anions - 300.0 (Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate);	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	REC EIVED BY	DISPOSAL METHOD	DISPOSED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	PRINTED ON 6/29/2011				

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**Sample Receipt****Chain of Custody**

CH2MHILL Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST																																							
COLLECTOR	F.M. Hall CHPRC	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PAGE 1 OF 1																																				
SAMPLING LOCATION	Area AA Zone 3 - Sample 3	PROJECT DESIGNATION	372-1567	LURE, SJ	PRICE CODE C01																																				
ICE CHEST NO.	<i>Ice chest - 2007</i>	AREA IN PROCESS Sampling - Soil		SAF NO. F11-196	AIR QUALITY <input type="checkbox"/>																																				
SHIPPED TO		FILE NUMBER HAF-N-807-22	ACTUAL SAMPLE DEPTH 5.125' TAC	COA 3026R/ESW	METHOD OF SHIPMENT AIR																																				
Waste Sampling & Characterization		OPPOSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.	GOVERNMENT VEHICLE ORIGINAL																																				
<table border="1"> <thead> <tr> <th colspan="2">POSSIBLE SAMPLE HAZARDS / REMARKS</th> <th colspan="4">SPECIAL HANDLING AND/OR STORAGE</th> </tr> </thead> <tbody> <tr> <td colspan="2"> <b>MATRIX*</b>            A=AP            D=Drum            I=Liquid            DS=Drum            Solids            L=1-Know!            O=Oil            S=Soil            Se=Sediment            T=Toxic            V=Very Toxic            H-Hazard            M=WP            X=Other         </td> <td colspan="4">           Contains Radioactive Material &amp; confidential information that may or may not be regulated per 46 CFR, IATA Dangerous Goods Regulations but are not releaseable per DOE Order 5400.5 (1990/1993)         </td> </tr> <tr> <td colspan="2"></td> <td colspan="4"></td> </tr> <tr> <td colspan="2"></td> <td colspan="4"></td> </tr> <tr> <td>SAMPLE NO.</td> <td>MATRIX</td> <td>SAMPLE DATE</td> <td>SAMPLE TIME</td> <td colspan="2"></td> </tr> <tr> <td>B2FK10</td> <td>SOIL</td> <td>7-8-11</td> <td>0829</td> <td>X</td> <td>X</td> </tr> </tbody> </table>						POSSIBLE SAMPLE HAZARDS / REMARKS		SPECIAL HANDLING AND/OR STORAGE				<b>MATRIX*</b> A=AP D=Drum I=Liquid DS=Drum Solids L=1-Know! O=Oil S=Soil Se=Sediment T=Toxic V=Very Toxic H-Hazard M=WP X=Other		Contains Radioactive Material & confidential information that may or may not be regulated per 46 CFR, IATA Dangerous Goods Regulations but are not releaseable per DOE Order 5400.5 (1990/1993)																SAMPLE NO.	MATRIX	SAMPLE DATE	SAMPLE TIME			B2FK10	SOIL	7-8-11	0829	X	X
POSSIBLE SAMPLE HAZARDS / REMARKS		SPECIAL HANDLING AND/OR STORAGE																																							
<b>MATRIX*</b> A=AP D=Drum I=Liquid DS=Drum Solids L=1-Know! O=Oil S=Soil Se=Sediment T=Toxic V=Very Toxic H-Hazard M=WP X=Other		Contains Radioactive Material & confidential information that may or may not be regulated per 46 CFR, IATA Dangerous Goods Regulations but are not releaseable per DOE Order 5400.5 (1990/1993)																																							
SAMPLE NO.	MATRIX	SAMPLE DATE	SAMPLE TIME																																						
B2FK10	SOIL	7-8-11	0829	X	X																																				

CHAIN OF POSSESSION		SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	JUL 08 2011	RECEIVED BY/STORED IN	11/09 554 #1	DATE/TIME	JUL 08 2011	DATE/TIME	** The CACN for all analytical work at WSCF laboratory is 402581ES20. <input type="checkbox"/> ** The CACN for all analytical work at WSCF laboratory is 402581ES20. <input checked="" type="checkbox"/> ** The 100 Area S&G/P Characterization and Monitoring Sampling and Analysis G&K applies to this S&F.
RELINQUISHED BY/REMOVED FROM	NO 1109 554 #1	RECEIVED BY/STORED IN	<i>F.M. Hall</i>	DATE/TIME	<i>7-11-11</i>	DATE/TIME	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; (2) ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; (2) ICP/MS - 7196; (2) ICP Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};
RELINQUISHED BY/REMOVED FROM	<i>F.M. Hall</i>	RECEIVED BY/STORED IN	<i>PLA 182. Lure, SJ</i>	DATE/TIME	<i>7-11-11</i>	DATE/TIME	
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN		DATE/TIME		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN		DATE/TIME		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN		DATE/TIME		DATE/TIME	
LABORATORY SECTION	RECEIVED BY	DISPOSAL METHOD		TITLE		DISPOSED BY	DATE/TIME
FINAL SAMPLE DISPOSITION							

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**Sample Receipt****Chain of Custody**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST					
COLLECTOR	COMPANY/CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	PAGE 1 OF 1
CH2MHill Plateau Remediation Company FM Hall CHPRC	Luke S/N Area AA Zone 2 Sample 4	372-1667	Luke, SV SAF NO. F11-1496	C01 AIR QUALITY	DATA TURNAROUND 12 Days / 12 Days
SAMPLING LOCATION ICE CHEST NO.	PROJECT DESIGNATION Area AA In-Process Sampling - Soil	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH <i>SAF E</i>	METHOD OF SHIPMENT GOVERNMENT VEHICLE	<b>ORIGINAL</b>
SHIPPED TO <i>CH2MHill Plateau Remediation</i>	OPPOSITE PROPERTY NO. N/A			BILL OF LADING/ATE BILL NO. N/A	
<b>POSSIBLE SAMPLE HAZARDS / REMARKS</b> Contains Radon-222 Material at concentrations that may or may not be regulation per 46 CFR, IATA Dangerous Goods Regulations but are not releaseable per DOE Order 5400.5 (1990/1993) X=Air L=Liquid O=Oil S=Soil Se=Seawater T=tissue V=vapors W=Water X=Other					
<b>SPECIAL HANDLING AND/OR STORAGE</b> SAMPLE ANALYSIS SECTION LU IN SPECIAL INSTRUCTIONS					
SAMPLE NO.	MATRIX	SAMPLE DATE	SAMPLE TIME	DATE/TIME	TITLE
B2FK11	SOIL	7-8-11	0842	X	

SPECIAL INSTRUCTIONS					
RELINQUISHED BY/REMOVED FROM CHPRC	DATE/TIME <i>JUL 18 2011</i>	RECEIVED BY/STORED IN CHPRC	DATE/TIME <i>JUL 18 2011</i>	DATE/TIME <i>JUL 18 2011</i>	** The CACN for all analytical work at WSCF laboratory is 402581E520. <input checked="" type="checkbox"/> The 100 Area SR&GR Characterization and Monitoring Sampling and Analysis GRL applies to this CACN.
RELINQUISHED BY/REMOVED FROM <i>CH2MHill Plateau Remediation</i>	DATE/TIME <i>7-11-11</i>	RECEIVED BY/STORED IN <i>CH2MHill Plateau Remediation</i>	DATE/TIME <i>7-11-11</i>	DATE/TIME <i>7-11-11</i>	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Ato-on) {Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8 HG - ICPMS {Mercury}; Chromium Hex - 7196; (2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};
RELINQUISHED BY/REMOVED FROM RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	DATE/TIME	
LABORATORY SECTION	RECEIVED BY	DISPOSAL METHOD	DATE/TIME	DATE/TIME	
FINAL SAMPLE DISPOSITION					A-6003-610 (REV 2)

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**Sample Receipt****Chain of Custody**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST										PAGE 1 OF 1
COLLECTOR FM Hall	COMPANY CONTACT Luke, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LILKE, SN	PRICE CODE C01	DATA TURNAROUND 12 Day / 12 Days					
SAMPLING LOCATION Area AA Zone 2 Sample 5	PROJECT DESIGNATION Area AA In-Process Sampling - S-5H	ACTUAL SAMPLE DEPTH Surf-Face	SAF NO. F11-096	AIR QUALITY <input type="checkbox"/>	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL				
ICE CHEST NO. S-5H-2007-22	FIELD LOGBOOK NO. HNF-N-507-22	OFFSITE PROPERTY NO.	COA 30262ES10	BILL OF LADING/AIR BILL NO. N/A						
Waste Sampling & Characterization										
<b>POSSIBLE SAMPLE HAZARDS/ REMARKS</b> Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993).										
<b>MATRIX*</b> b=Air 2=Drum Liquids 25=Drum Solids l=Liquid o=Gel 2=Soil T=Tissue V=Volatiles W=Water X=Other										
<b>SPECIAL HANDLING AND/OR STORAGE</b>										
SAMPLE NO. B2FK12	MATRIX*	SAMPLE DATE 7-8-11	SAMPLE TIME 0959	X	Y					
<b>CHAIN OF POSSESSION</b>										<b>SIGN/ PRINT NAMES</b>
RELINQUISHED BY/REMOVED FROM CHPRC	DATE/TIME JUL 08 2011	RECEIVED BY/STORED IN SOIL	DATE/TIME JUL 08 2011	SIGN/ PRINT NAMES JUL 08 2011	<b>SPECIAL INSTRUCTIONS</b>					
REMOVED BY/REMOVED FROM HNF N-507-22	DATE/TIME 7-11-11	RECEIVED BY/STORED IN Soil	DATE/TIME 7-11-11	JUL 08 2011	** The CACN for all analytical work at WSCF laboratory is 402381E20. □ ** The 100 Area Skid/GRP Characterization and Monitoring Sampling and Analysis GKI applies to this S.A.F.					
RELINQUISHED BY/REMOVED FROM F-507-2007-22	DATE/TIME 7-11-11	RECEIVED BY/STORED IN Soil	DATE/TIME 7-11-11	JUL 08 2011	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; (2) ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; (3) HG - 10PPM (Mercury); Chromium Hex-7196; (2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};					
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	RECEIVED BY/STORED IN	DATE/TIME							
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD		DATE/TIME							
										PRINTED ON 6/29/2011

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**Sample Receipt****Chain of Custody**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						F11-096-106	PAGE 1 OF 1
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	C01	DATA TURNAROUND	
CH2M Hill Plateau Remediation Company	LUNE, SV	317-1667	LUNE, SV SAF NO. F11-096	AIR QUALITY	<input type="checkbox"/>	12 Days / 12 Days	
COLLECTOR	PROJECT DESIGNATION	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	METHOD OF SHIPMENT	GOVERNMENT VEHICLE	ORIGINAL	
FM Hall CH2MRC	Area AA In-Process Sampling Soil	INF-N-507-22	Sc-18 Face	COA	302682ES10	BILL OF LADING/AIR BILL NO. N/A	
SAMPLING LOCATION	OFFSITE PROPERTY NO.						
Area AA Zone 2 Sample 6	N/A						
TCE CHEST NO.							
SHIPPED TO							
Waste Sampling & Characterization							
MATRIX:	POSSIBLE SAMPLE HAZARDS / REMARKS						
A=Ali D=Drain L=Leads O=Oil S=Solids L=dust C=Oil S=Soil T=Soil V=Aspiration W=Water X=Whole Y=Whole	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR, IATA Dangerous Goods Regulations but are not releaseable per DOE Order 5400.5 (1996/1993).						
SPECIAL HANDLING AND/OR STORAGE							
SAMPLE NO.	MATRIX	SAMPLE DATE	SAMPLE TIME				
B2FK13	SOIL	7-8-11	0914	X	X		

CHAIN OF POSSESSION						SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RELENTS BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall	JUL 8 2011	110 110 554 #1	JUL 08 2011	FM Hall	JUL 08 2011	110 110 554 #1	JUL 08 2011
110 110 554 #1	7-11-11	RECEIVED BY/STORED IN	7-11-11	110 110 554 #1	7-11-11	RECEIVED BY/STORED IN	7-11-11
FM Hall	7-11-11	RECEIVED BY/STORED IN	7-11-11	FM Hall	7-11-11	RECEIVED BY/STORED IN	7-11-11
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall	7-11-11	RECEIVED BY/STORED IN	7-11-11	FM Hall	7-11-11	RECEIVED BY/STORED IN	7-11-11
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall	7-11-11	RECEIVED BY/STORED IN	7-11-11	FM Hall	7-11-11	RECEIVED BY/STORED IN	7-11-11
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall	7-11-11	RECEIVED BY/STORED IN	7-11-11	FM Hall	7-11-11	RECEIVED BY/STORED IN	7-11-11
LABORATORY SECTION	RECEIVED BY	DISPOSAL METHOD	DISPOSED BY	PRINTED ON	6/29/2011	DATE/TIME	DATE/TIME
FINAL SAMPLE DISPOSITION							

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**Sample Receipt****Chain of Custody**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			
COLLECTOR	FM Hall CHPRC	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1657
SAMPLING LOCATION Area AA Zone 2 Sample 7	PROJECT DESIGNATION Area AA In-Process Sampling - Soil	PROJECT COORDINATOR LUNE, SN	PRICE CODE CD1
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-507-2-2	ACTUAL SAMPLE DEPTH Soil Face	AIR QUALITY F11.096
SHIPPED TO <i>C-105-220-7</i>	OFFSITE PROPERTY NO. N/A	COA 302682ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE
BILL OF LADING/AIR BILL NO N/A			
ORIGINAL			
<b>POSSIBLE SAMPLE HAZARDS / REMARKS</b> Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR, IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990) 1993.			
<b>SPECIAL HANDLING AND/OR STORAGE</b> A=Air U=Uranium L=Liquid DS=Drum S=Sacks L-Liquid D-Dust S-Sediment T=Issue V=Evaporation W=Water WI-Wipe X=None			
SAMPLE NO. B2FK14	MATRIX SOIL	PRESERVATION None	DATE/TIME 28 Day/48 hrs
<b>HOLDING TIME</b> DATE/TIME 5 Months			
<b>TYPE OF CONTAINER</b> DATE/TIME G/P Q/P			
<b>NO. OF CONTAINER(S)</b> DATE/TIME 1			
<b>VOLUME</b> DATE/TIME 10mL 50mL			
<b>SAMPLE ANALYSIS</b> DATE/TIME SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO. B2FK14	MATRIX SOIL	SAMPLE DATE 7-5-11	SAMPLE TIME 07:53 X X

SPECIAL INSTRUCTIONS			
** The CACN for all analytical work at WSCF laboratory is 402581ES20.** The 100 Area SKGRP Characterization and Monitoring Sampling and Analysis GR1 applies to this SAFC.			
RECEIVED BY/REMOVED FROM CHPRC	DATE/TIME JUL 08 2011 09:35 AM	RECEIVED BY/STORED IN FM Hall	DATE/TIME JUL 08 2011 09:35 AM
RELINQUISHED BY/REMOVED FROM HNF-N-507-2-2	DATE/TIME 7-5-11	RECEIVED BY/STORED IN FM Hall	DATE/TIME 7-5-11
RELINQUISHED BY/REMOVED FROM <i>Fm Hall</i>	DATE/TIME 7-5-11	RECEIVED BY/STORED IN HNF-N-507-2-2	DATE/TIME 7-5-11
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 FINAL SAMPLE DISPOSITION	RECEIVED BY DISPOSAL METHOD	RECEIVED BY/STORED IN	DATE/TIME
		DISPOSED BY	DATE/TIME
			402581ES20 (REV 2)
PRINTED ON 6/29/2011			

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**Sample Receipt****Chain of Custody**

COMPANY CONTACT		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		PAGE 1 OF 1	
COMPANY NAME	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	C01
CHM/Hill Plateau Remediation Company COLLEGiate Hall CHPRC	Luke, SH	372-1657	Luke, SH	SAF NO.	DATA TURNAROUND 12 DAY / 12 Days
SAMPLING LOCATION	Area AA In-Process Sampling - Soil	ACTUAL SAMPLE DEPTH	COA	AIR QUALITY	METHOD OF SHIPMENT GOVERNMENT VEHICLE
FIELD LOGBOOK NO.	HNF-AN-507-22	5V.R.FTC	31268ES10	BILL OF LADING/AIR BILL NO.	ORIGINAL
ICE CHEST NO.	Crates - 027	OFFSITE PROPERTY NO.	N/A		
SHIPPED TO	Waste Sampling & Characterization	PRESERVATION	None	COO=AC	
MATRIX*	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 (1500/1993)	HOLDING TIME	6 Months	28 Day/18 Hours	
		TYPE OF CONTAINER	G/P	G/P	
		NO. OF CONTAINER(S)	1	1	
		VOLUME	120ml	60ml	
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSES	SEE ITEM (1) IN SPECIAL INSTRUCTIONS		
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FK15	SOIL	JUL 08 2011	0949	L A	

POSSIBLE SAMPLE HAZARDS/ REMARKS		SPECIAL INSTRUCTIONS	
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 (1500/1993)		** The CACN for all analytical work at WSCF laboratory is 402581ES20.LJ ** The 100 Area SKGRP Characterization and Monitoring Sampling and Analysis GCI applies to this SAF.	
A-Ar G-Gem L-Liquid D-Dust S-Solid L-Liquid C-CO S-SW I-Inert V-Volatile W-Water W-Water X-Other		(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, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8 HG - ICPMS (Mercury); Chromium Hex - 7196; (2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};	

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**Sample Receipt****Chain of Custody**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST								PAGE 1 OF 1	
COLLECTOR PM Hall CHPRC	COMPANY CONTACT LUKE, SN	PROJECT DESIGNATION Area 1A In-Process Sampling - Soil	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUNE, SN	PRICE CODE F11-096	C01 AIR QUALITY	DATA TURNAROUND 12 Days / 12 Days		
SAMPLING LOCATION Area 1A, Zone 2 Sample 9	FIELD LOGBOOK NO. HNF-A4-507-22	ACTUAL SAMPLE DEPTH 54/RFT/HC	COA 302682E510	METHOD OF SHIPMENT GOVERNMENT VEHICLE			ORIGINAL		
ICE CHEST NO. <i>Collected - C-07</i>	OFFSITE PROPERTY NO.	N/A	BILL OF LADING/AIR BILL NO. N/A						
<b>MATRIX<sup>a</sup></b> A=Air D=Drum L=Liquid S=Soil L=Liquid D=Dust S=Soil T=Tissue Y=Yogurtation W=Water Wt=Water X=Other	<b>Possible Sample Hazards/ Remarks</b> Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / TATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	<b>PRESERVATION</b> None	<b>COLLECTOR</b>						
		<b>HOLDING TIME</b> 6 Month/ 28 Days/8 Hours							
		<b>TYPE OF CONTAINER</b> Glass							
		<b>NO. OF CONTAINER(S)</b> 1							
		<b>VOLUME</b> 1.00ml							
		<b>SAMPLE ANALYSIS</b> See Item 1) in Special Instructions							
<b>SAMPLE NO.</b> B2FK13	<b>MATRIX<sup>a</sup></b> S	<b>SAMPLE DATE</b> JUL 08 2011	<b>SAMPLE TIME</b> 1007	X	X				

CHAIN OF POSSESSION								SPECIAL INSTRUCTIONS	
<b>RELINQUISHED BY/REMOVED FROM PM Hall</b>	<b>DATE/TIME</b> 11/09/2011	<b>RECEIVED BY/STORED IN</b> JUL 08 2011	<b>DATE/TIME</b> 11/09/2011	<b>RELINQUISHED BY/REMOVED FROM HNF-A4-507-22</b>	<b>DATE/TIME</b> 11/09/2011	<b>RECEIVED BY/STORED IN</b> JUL 08 2011	<b>DATE/TIME</b> 11/09/2011	<b>SPECIAL INSTRUCTIONS</b> ** The CACN for all analytical work at WSCF laboratory is 402581E520. ** The 100 Area S&GR Characterization and Monitoring Sampling and Analysis GRL applies to this SAF. (1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; (CP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; (2) HG - ICPMS (Mercury); Chromium Hex - 7196; (2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};	
<b>RELINQUISHED BY/REMOVED FROM</b>	<b>DATE/TIME</b>	<b>RECEIVED BY/STORED IN</b>	<b>DATE/TIME</b>	<b>RELINQUISHED BY/REMOVED FROM</b>	<b>DATE/TIME</b>	<b>RECEIVED BY/STORED IN</b>	<b>DATE/TIME</b>		
<b>LABORATORY SECTION</b>	<b>RECEIVED BY</b>	<b>DISPOSAL METHOD</b>	<b>TITLE</b>						
<b>FINAL SAMPLE DISPOSITION</b>			<b>DISPOSED BY</b>						
PRINTED ON 6/29/2011									

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**Sample Receipt****Chain of Custody**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST										PAGE 1 OF 1
COLLECTOR	FM Hall CHPRC	COMPANY CONTACT LUKE, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR LUKE, SN	PRICE CODE F11-096	C01	DATA TURNAROUND 12 Days / 12 Days			
SAMPLING LOCATION	Area AA Zone 7 Sample 10 ICE CHEST NO.	PROJECT DESIGNATION Area AA In-Process Sampling - Soil	FIELD LOGBOOK NO. HNF-N-607-22	ACTUAL SAMPLE DEPTH <i>Sur Face</i>	AIR QUALITY		METHOD OF SHIPMENT GOVERNMENT VEHICLE			
SHIPPED TO	<i>ice chest</i>	OFFSITE PROPERTY NO.	N/A	BILL OF LADING/AIR BILL NO. N/A	ORIGINAL					
Waste Sampling & Characterization										
<b>POSSIBLE SAMPLE HAZARDS/ REMARKS</b> Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993).										
<b>MATRIX*</b> A=Air D=Drum Liquid DS=Drum Solid L=Liquid N=N S=Sol SE=Sediment V=Vug W=Water WI=WP X=Other										
<b>SPECIAL HANDLING AND/OR STORAGE</b>										
SAMPLE NO.	MATRIX*	SAMPLE DATE B2HK17 9	SAMPLE TIME JUL 08 2011	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-11-11	SIGN/PRINT NAMES <i>See #1</i>	SPECIAL INSTRUCTIONS ** The GACN for all analytical work at WSCF laboratory is 402581ES/20. ** The GACN for all analytical work at WSCF laboratory is 402581ES/20. The 100 Area S&CRP Characterization and Monitoring Sampling and Analysis GAK applies to this S&A.			
RELIQUISHEd BY/REMOVED FROM FM Hall	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-11-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-11-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-11-11	(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, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8_HG - ICPMS {Mercury}; Chromium Hex - 7196;			
RELIQUISHEd BY/REMOVED FROM FM Hall	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-11-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-11-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-11-11	(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};			
RELIQUISHEd BY/REMOVED FROM FM Hall	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-11-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-11-11	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME 7-11-11				
LABORATORY SECTION	RECEIVED BY						DISPOSED BY			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD						DATE/TIME			

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REVISED112639 -

**Sample Receipt****Chain of Custody**

<b>COLLECTOR</b>	F.M.Hall	<b>COMPANY CONTACT</b>	LUNE, SR	<b>TELEPHONE NO.</b>	372-1667	<b>PROJECT COORDINATOR</b>	LUKE, SR	<b>PAGE 1 OF 1</b>
<b>CHPRC</b>		<b>PROJECT DESIGNATION</b>	Area AA In-Process Sampling - Soil	<b>SAF NO.</b>	F11-096	<b>PRICE CODE</b>	C01	<b>DATA TURNAROUND</b>
<b>SAMPLING LOCATION</b>	Area AA Zone 2 Sample 11	<b>FIELD LOGBOOK NO.</b>	HMF-N-507-22-	<b>ACTUAL SAMPLE DEPTH</b>	SURFACE	<b>AIR QUALITY</b>	<input type="checkbox"/>	12 Days / 12 Days
<b>ICE CHEST NO.</b>	GL-125-7	<b>OPPOSITE PROPERTY NO.</b>	N/A	<b>METHOD OF SHIPMENT</b>	COA	<b>GOVERNMENT VEHICLE</b>	ORIGINAL	
<b>SHIPPED TO</b>	Waste Sampling & Characterization							

**POSSIBLE HAZARDS/REMARKS**

MATRIX\*  
 A=Air  
 G=Ground  
 L=Liquid  
 S=Semi-Solid  
 U=Solid  
 D=Oil  
 S=Soil  
 Sc=Sorbent  
 T=Trace  
 V=Vegetation  
 W=Water  
 Ws=Waste  
 X=Other

**SPECIAL HANDLING AND/OR STORAGE**

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	RECEIVED BY	DATE/TIME	DISPOSED BY	DATE/TIME
B2FK18	SOIL	JUL 08 2011	12:32	X			

**CHAIN OF POSSESSION**

<b>RELINQUISHED BY/REMOVED FROM</b>	<b>DATE/TIME</b>	<b>RECEIVED BY/STORED IN</b>	<b>DATE/TIME</b>
CHPRC	JUL 08 2011	REC'D 5/22/11	JUL 08 2011
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
CHPRC	2000	2000	2000
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
CHPRC	7/11/11	7/11/11	7/11/11
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
CHPRC	7/11/11	7/11/11	7/11/11
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
CHPRC	7/11/11	7/11/11	7/11/11
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
CHPRC	7/11/11	7/11/11	7/11/11
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
CHPRC	7/11/11	7/11/11	7/11/11
<b>LABORATORY SECTION</b>	<b>RECEIVED BY</b>	<b>DATE/TIME</b>	<b>DISPOSED BY</b>
FINAL SAMPLE DISPOSITION			
PRINTED ON	6/29/2011		

**SPECIAL INSTRUCTIONS**

\* \* The CACN for all analytical work at WSCF laboratory is 402581ES20. \*\* The 100 Area SRGPP Characterization and Monitoring Sampling and Analysis (TAL) (Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc); ICP/MS - 200.8 (Add-on) (Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium); 200.8 HG - ICP/MS (Mercury); Chromium Hex - 7196; (2) IC Anions - 300.0 (Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate);

<b>TITLE</b>	<b>DATE/TIME</b>

A-600-1613 (REV 2)

**Sample Receipt****Chain of Custody**

CHANNII Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			PROJECT COORDINATOR		PAGE 1 OF 1	
COLLECTOR	FM Hall CHPRC	COMPANY CONTACT	LUKE, SN	TELEPHONE NO.	373-1663	PRICE CODE	C01	DATA TURNAROUND
SAMPLING LOCATION	Area AA Zone 2 Sample 12	PROJECT DESIGNATION	Area AA In-Process Sampling - Soil	SAF NO.	F11-096	AIR QUALITY	<input type="checkbox"/>	12 Days / 12 Days
ICE CHEST NO.	CS-05-007-22	FIELD LOGBOOK NO.	N/A	ACTUAL SAMPLE DEPTH	3' SURFACE	METHOD OF SHIPMENT	GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO	Waste Sampling & Characterization	OFFSITE PROPERTY NO.	N/A	BILL OF LADING/AIR BILL NO.	N/A			
<b>Possible Sample Hazards / Remarks</b> Contains radioactive material or 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) T=Toxic N=Nitrogen W=Water WE-Water K=Other		PRESERVATION	None	COO=IC				
		HOLDING TIME	6 Months	28 Days/18 Hours				
		TYPE OF CONTAINER	G/P	G/P				
		NO. OF CONTAINERS(S)	1	1				
		VOLUME	120mL	60mL				
		SPECIAL HANDLING AND/OR STORAGE	SEE ITEM 1 IN SPECIAL INSTRUCTIONS	SEE ITEM 2 IN SPECIAL INSTRUCTIONS				
SAMPLE NO.	MATRIX <sup>a</sup>	SAMPLE DATE	SAMPLE TIME	DATE/TIME	DATE/TIME			
92FK19	SOIL	JUL 08 2011	12:40	X	X			

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELIQUISHE D BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** The GACN for all analytical work at WSCF laboratory is 402581E520. <input type="checkbox"/> ** The LO0 Area SS/GRP Characterization and Monitoring Sampling and Analysis GKL applies to this SAF.	
RELIQUISHE D BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(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, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8_HG - ICPMS (Mercury); Chromium Hex - 7196;	
RELIQUISHE D BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(2) TC Aroms- 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};	
RELIQUISHE D BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELIQUISHE D 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**

CHM/Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST					PAGE 1 OF 1	
<b>COLLECTOR</b>	FM Hall CHPRC	<b>COMPANY CONTACT</b>	LURE, SN	<b>TELEPHONE NO.</b>	372-1667	<b>PROJECT COORDINATOR</b>	LUKE, SN	<b>DATA TURNAROUND</b>
<b>SAMPLING LOCATION</b>		<b>PROJECT DESIGNATION</b>			SAF NO.	<b>AIR QUALITY</b>	F11-095-113	12 Days / 12 Days
Area AA Zone 2 Sample 1.3		Area AA In Process Sampling - Soil			F11-096			
ICE CHEST NO.		FIELD LOGBOOK NO.			COA			
HNF-A-007-2-Z.		HNF-A-007-2-Z.			302687ES10			
<b>SHIPPED TO</b>		<b>ACTUAL SAMPLE DEPTH</b>			<b>METHOD OF SHIPMENT</b>	<b>ORIGINAL</b>		
Waste Sampling & Characterization		Offset Property No.			GOVERNMENT VEHICLE			
SAMPLE NO.		N/A			BILL OF LADING/AIR BILL NO.			
MATRIX*		PRESERVATION			None	N/A		
A=Air D=Drum L=Liquid D+Drum S=Sorb L+L S+SL S+SL T=Soil V=Vegetation W=Water W+W=Soil K=Other		HOLDING TIME			6 Months	Code=C		
POSSIBLE SAMPLE HAZARDS / REMARKS		TYPE OF CONTAINER			C/P	2E Days/48 Hours		
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR 173.400(c). Goods Regulated but are not hazardous per D.O.E. Order: 5400.5 (1999) (1993)		NO. OF CONTAINER(S)			1	GP		
SPECIAL HANDLING AND/OR STORAGE		VOLUME			125mL			
SAMPLE NO.		SAMPLE DATE			JUL 08 2011	65mL		
B2FK20		SAMPLE TIME			1251	SECTION(s) IN SPECIAL INSTRUCTIONS		
					X			
					X			

CHAIN OF POSSESSION				SIGN/PRINT NAMES				SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** The CACN for all analytical work at WSCF laboratory is 402581ES10. <input checked="" type="checkbox"/> ** The 100 Area S&GP Characterization and Monitoring Sampling and Analysis GCI applies to this S&F.	
FM Hall	JUL 08 2011	100-Area S&GP	JUL 08 2011	CHPRC	100-Area S&GP	100-Area S&GP	JUL 08 2011	(1) ICP/MS - 200.8 (TA) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; (2) ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200-B HG - ICPMS (Mercury); Chromium Hex - 7196;	
H2D	7/11/11	Soil	7/11/11	Fm Hall	7/11/11	Soil	7/11/11	(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}.	
FM Hall	7/11/11	Soil	7/11/11	CHPRC	7/11/11	Soil	7/11/11		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	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	DATE/TIME		DISPOSED BY		DATE/TIME		
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD							

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**Sample Receipt****Chain of Custody**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST					
COLLECTOR FM Hall CHPRC	COMPANY CONTACT Luke, SN	TELEPHONE NO. 372-1667	PROJECT COORDINATOR URL, SN SAF NO. F11-096	PRICE CODE CO1	DATA TURNAROUND 12 Days / 12 Days
SAMPLING LOCATION Area Aa Zone 1H	PROJECT DESIGNATION Area Aa In-Process Sampling - S2R	FIELD LOGBOOK NO. 4NF-N-507-22	ACTUAL SAMPLE DEPTH <i>Surf free</i>	AIR QUALITY <input type="checkbox"/>	METHOD OF SHIPMENT GOVERNMENT VEHICLE
ICE CHEST NO. C-005-0027	OFFSITE PROPERTY NO. N/A	PRESERVATION N/A	Name (initials)	ORIGINAL	
POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 40 CFR / UTA Dangerous Goods Regulation's but are not releasable per DOE Order 3400.5 (1990) (993)					
Waste Sampling & Characterization					
MATRIX* A-Air H-Household L-Liquid D-Drum S-Solids L-Liquid O-Oil S-Sediment T-Tissue V-Vessel W-Water W-Wire X-Other	SPECIAL HANDLING AND/OR STORAGE				
SAMPLE NO. B2FK21 3	MATRIX* SOIL	SAMPLE DATE JUL 08 2011	SAMPLE TIME 301	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CHAIN OF POSSESSION						SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM FM Hall	DATE/TIME 10/13/2011 09:54:50 AM	RECEIVED BY/STORED IN SAF 11/09 554 41	DATE/TIME JUL 08 2011	<input checked="" type="checkbox"/> ** The CACN for all analytical work at WSCF laboratory is 402531E50. <input type="checkbox"/> ** The 100 Area SGRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAE.			
RELINQUISHED BY/REMOVED FROM CHPRC	DATE/TIME 10/13/2011 09:54:51	RECEIVED BY/STORED IN FM Hall	DATE/TIME 7-1-11	<input checked="" type="checkbox"/> (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, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; (2) HG - 7196. {Mercury}; Chromium Hex - 7196.			
RELINQUISHED BY/REMOVED FROM FM Hall	DATE/TIME 10/13/2011 09:54:52	RECEIVED BY/STORED IN SAF 11/09 554 41	DATE/TIME 7-1-11				
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	DATE/TIME	DISPOSED BY	DATE/TIME			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	PRINTED ON 6/29/2011	A 5003.51.B (REV 2)				

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**Sample Receipt****Chain of Custody**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR
FM Hall CHPRC	LURE, SN	372-1657	LUKE, SH SAF NO. F11-096
SAMPLING LOCATION	PROJECT DESIGNATION		PRICE CODE C01 AIR QUALITY <input type="checkbox"/>
Area AA Zone 2 Sample 15	Area AA In-Process Sampling - Soil		PAGE 1 OF 1 DATA TURNAROUND 12 Days / 12 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	METHOD OF SHIPMENT GOVERNMENT / WHOLE F BILL OF LADING/AIR BILL NO. N/A
	HIF-N-507-22	SURFACE	ORIGINAL
SHIPPED TO	OFFSITE PROPERTY NO.		
Waste Sampling & Characterization			
MATRIX*	POSSIBLE HAZARDS/ REMARKS	PRESERVATION	
A=Air D=Drum L=Drum DS=Drum S=Soil L-Liquid S-Cali S=Soil ST=Soil/Resid V=Vegetation W=Water WL=Water X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not regulated per DOE Order 5400.5 (1990/1993)	HOLDING TIME	None 6 Months 20 Days/48 Hours G/P G/P
		TYPE OF CONTAINER	
		NO. OF CONTAINER(S)	1 1
		VOLUME	120mL 60mL
		SAMPLE ANALYSIS	SELECTED (1) IN SPECIAL INSTRUCTIONS INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B2FK2	SOIL	JUL 08 2011	13:11 X Y

CHAIN OF POSSESSION				SIGN / PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY / REMOVED FROM	DATE/TIME	RECEIVED BY / STORED IN	DATE/TIME	DATE/TIME	RECEIVED BY / STORED IN	DATE/TIME	** The CACN for all analytical work at WSCF laboratory is 402581ESZ0. <input type="checkbox"/> ** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this S&F.
FM Hall	JUL 08 2011	13:09:55C # 1	JUL 08 2011	JUL 08 2011	JUL 08 2011	JUL 08 2011	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Argon, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; ICP/MS (Mercury); Chromium Hex - 7196;
RELINQUISHED BY / REMOVED FROM	DATE/TIME	RECEIVED BY / STORED IN	DATE/TIME	DATE/TIME	RECEIVED BY / STORED IN	DATE/TIME	(2) I.C. Aetkins - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};
RELINQUISHED BY / REMOVED FROM	DATE/TIME	RECEIVED BY / STORED IN	DATE/TIME	DATE/TIME	RECEIVED BY / STORED IN	DATE/TIME	
RELINQUISHED BY / REMOVED FROM	DATE/TIME	RECEIVED BY / STORED IN	DATE/TIME	DATE/TIME	RECEIVED BY / STORED IN	DATE/TIME	
LABORATORY SECTION	RECEIVED BY	DISPOSAL METHOD	FINAL SAMPLE DISPOSITION	DISPOSED BY	TITLE	DATE/TIME	
			PRINTED ON 6/29/2011				A-500-618 (REV 2)

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**Sample Receipt****Chain of Custody**

CHAMHill Pictbau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				PAGE 1 OF 1	
COLLECTOR:	FM Hall CHPRC	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	C01	DATA TURNAROUND
SAMPLING LOCATION	Area AA Zone 3 Sample 16	LURE, SN	372-1667	LURE, SN	AIR QUALITY	<input type="checkbox"/>	12 Days - 12 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	SAF NO.	COA	METHOD OF SHIPMENT	GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO	OFFSITE PROPERTY NO.	SURFACE	H11496	302628511	BILL OF LADING/AIR BILL NO.	N/A	N/A
Waste Sampling & Characterization							
MATRIX:	POSSIBLE SAMPLE HAZARDS / REMARKS						
As/Air	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releaseable DOE Order 5400.5 (1990/1993)						
Ds-Dust							
Solids							
I-liquid							
O-Oil							
S-Soil							
Se-Sediment							
T-Tissue							
V-Vapor							
W-Water							
Wt-WP-							
Y-Other							
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS					
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	SECTION (1) IN SPECIAL INSTRUCTIONS			
B2FK23	SOIL	JUL 08 2011	13:16	X	X		

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CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** The CACN for all analytical work at WSCF laboratory is 402581E20. □** The 100 Area S&GPR Characterization and Monitoring Sampling and Analysis GKT applies to this S&F.	
FM Hall	07/11/11 11:11:11	REC'D 07/11/11 11:11:11	07/11/11 11:11:11	(1) ICP/MS - 200.8 (TIA) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8 HG - ICP/MS (Mercury); Chromium Hex - 7195; (2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
FM Hall	07/11/11 11:11:11	REC'D 07/11/11 11:11:11	07/11/11 11:11:11		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
FM Hall	07/11/11 11:11:11	REC'D 07/11/11 11:11:11	07/11/11 11:11:11		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
FM Hall	07/11/11 11:11:11	REC'D 07/11/11 11:11:11	07/11/11 11:11:11		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
FM Hall	07/11/11 11:11:11	REC'D 07/11/11 11:11:11	07/11/11 11:11:11		
LABORATORY SECTION	RECEIVED BY	DISPOSAL METHOD	DISPOSED BY	DATE/TIME	DATE/TIME
FINAL SAMPLE DISPOSITION					
PRINTED ON 6/79/2011					

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**Sample Receipt****Chain of Custody**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				PAGE 1 OF 1		
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	C01	DATA TURNAROUND
CH2M Hill Plateau Remediation Company	FM Hall CHPRC	LUKE, SN 372-1667	LURE, SN SAF NO. F11-096	AIR QUALITY		12 Days / 12 Days
SAMPLING LOCATION	PROJECT DESIGNATION	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	COA	METHOD OF SHIPMENT	ORIGINAL
Area AA Zone 2, Sample 17	Area AA, In-Process Sampling - Soil	HNF-N-S07-22	Sur Face	302682TS10	GOVERNMENT VEHICLE	
ICE CHEST NO.	OFFSITE PROPERTY NO.	N/A	BILL OF LADING/AIR BILL NO.	N/A		
SHIPPED TO				Waste Sampling & Characterization		
POSSIBLE SAMPLE HAZARDS/ REMARKS				PRESERVATION		
A=Alt D=Drum Liquid U=Drum Soil L-Liquid O-Oil S=Soil SC=Scalene T=Tissue W=Water W-Water X=Contam				None C004-C 6 Month 20 Days/4 Hrs/3 G/P 1 1 120mL 60mL		
SPECIAL HANDLING AND/OR STORAGE				SAMPLE ANALYSIS		
SAMPLE NO.	MATRIX#	SAMPLE DATE	SAMPLE TIME	SEE ITEM (1) IN SPECIAL INSTRUCTIONS		
62FK24 16	SOIL	7-8-11	0759	X	X	

CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RECEIVED BY/STORED IN	
FM Hall	07-08-2011 11:02	5542-21	JUL 08 2011 11:02	40258LES20.0	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RECEIVED BY/STORED IN	
ME 1109 S04	7-11-11 11:11	74	7-11-11 11:11	The CACN for all analytical work at WSCF laboratory is 40258LES20.0. The 100 Area SAGRP Characterization and Monitoring Sampling and Analysis GRL applies to this SAF.	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; (2) ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8_HG - ICPNS (Mercury); Chromium Hex - 7196;	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(2) IC Aicons 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};	
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	DISPOSED BY	DATE/TIME	
FINAL SAMPLE DISPOSITION				DATE/TIME	
PRINTED ON 6/29/2011					

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**Sample Receipt****Chain of Custody**

		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				PAGE 1 OF 1	
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	C01	DATA TURNAROUND	
FM Hall CHPRC	LURE, SN	372-1667	LURE, SN	AIR QUALITY	<input type="checkbox"/>	12 Days / 12 Days	
SAMPLING LOCATION	PROJECT DESIGNATION	SAF NO.					
Area AA 2 Sample 16	Area AA In-Process Sampling - Soil	F1-L49c					
ICE CHEST NO.	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	COA	METHOD OF SHIPMENT			
	4400-92	5" L x F A/C	302682ES10	GOVERNMENT VEHICLE			
SHIPPED TO	OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.					
Waste Sampling & Characterization	N/A	N/A					
POSSIBLE SAMPLE HAZARDS / REMARKS		SPECIAL INSTRUCTIONS					
<p>MATRIX* A-Air D-Drum L-Liquid S-Soln L-Liquid U-Uar S-Sol SE-Sediment T-Tiss. V-Vegetation W-Water Wt-Wire X-Cube</p>		<p>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)</p> <p>** The CACN for all analytical work at WSCF laboratory is 402681ES10. ** The 100 Area S&amp;GP Characterization and Monitoring Sampling and Analysis (GK) applies to this SAF.</p> <p>(1) ICP/MS - 200.8 (TAU) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8_HG - ICPMS (Mercury); Chromium Hex - 7196;</p> <p>(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};</p>					
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2FK25	Soil	7-8-11	06:40				
SPECIAL HANDLING AND/OR STORAGE		SIGN / PRINT NAMES					
		<p>RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME</p> <p>CHPRC JUL 08 2011 16:00 PM 11/09 2011 JUL 19 2011</p> <p>RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME</p> <p>CHPRC 7-11-11 5:54 PM 7-11-11</p> <p>RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME</p> <p>CHPRC 7-11-11 5:54 PM 7-11-11</p> <p>RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME</p> <p>CHPRC 7-11-11 5:54 PM 7-11-11</p> <p>RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME</p> <p>CHPRC 7-11-11 5:54 PM 7-11-11</p> <p>RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME</p> <p>CHPRC 7-11-11 5:54 PM 7-11-11</p> <p>RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME</p> <p>CHPRC 7-11-11 5:54 PM 7-11-11</p>					
LABORATORY SECTION	RECEIVED BY	DATE/TIME		DATE/TIME			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD						
PRINTED ON 6/29/2013							

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**Sample Receipt****Chain of Custody**

CHIMMILL Plateau Remediation Company		CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST			
COLLECTOR	FM Hall CHPRC	COMPANY CONTACT LINE, SN	TELEPHONE NO. 372-1657	PROJECT COORDINATOR LUKE, SN	DATA TURNAROUND 12 Days / 12 Days
SAMPLING LOCATION	Area AA In-Process Sampling - Soil	PROJECT DESIGNATION		AIR QUALITY	<input type="checkbox"/>
ICE CHEST NO.	CHI-145-1207	FIELD LOGBOOK NO. HNF-N-507-22	ACTUAL SAMPLE DEPTH S1/SF A/C E	METHOD OF SHIPMENT	ORIGINAL
SHIPPED TO		OFFSITE PROPERTY NO.		GOVERNMENT VEHICLE	
Waste Sampling & Characterization		PRESERVATION	None	BILL OF LADING/AIR BILL NO.	
		HOLDING TIME	5 Months	N/A	
		TYPE OF CONTAINER	L/P	L/P	
		NO. OF CONTAINER(S)	1	1	
		VOLUME	120mL	50mL	
		SAMPLE ANALYSIS	REF ID: (1) IN SPECIAL INSTRUCTIONS	IN SPECIAL INSTRUCTIONS	
		SAMPLE DATE	7-18-11	7-18-11	
		SAMPLE TIME	0759	X	
		SAMPLE NO.	18	X	
MATRIX*		MATRIX**	11111	11111	
A=Air D=Drum Liquid Soil Liquid N=N S=Soln Se=Solid T=Tissue V=Vegetation W=Water W=Waste X=Other		POSSIBLE SAMPLE HAZARDS / REMARKS	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR 173.147A Dangerous Goods Regulations but are not acceptable per DOE Order 5400.5 (1990/1993)		
SPECIAL HANDLING AND/OR STORAGE		H24538 (B7111)			
SAMPLE NO.		B2FK08	SOIL	7-18-11	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM CHPRC	DATE/TIME RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME RECEIVED BY/STORED IN JUL 08 2011	RECEIVED BY/STORED IN JUL 08 2011	DATE/TIME RECEIVED BY/STORED IN JUL 08 2011	** The CACN for all analytical work at WSCF laboratory is 4025B1ES20. □ ** The 100 Area Skgrp Characterization and Monitoring Sampling and Analysis GIC applies to this SAR.
RELINQUISHED BY/REMOVED FROM HNF-N-507-22	7-11-11	7-11-11	RECEIVED BY/STORED IN 7-11-11	7-11-11	(1) ICP/MS - 200.8 (TA) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Benzene, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8_HG - ICPMS (Mercury); Chromium Hex - 7196;
RELINQUISHED BY/REMOVED FROM FAC	7-11-11	7-11-11	RECEIVED BY/STORED IN 7-11-11	7-11-11	(2) ICP Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};
RELINQUISHED BY/REMOVED FROM	DATE/TIME	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM PREM	DATE/TIME	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
LABORATORY SECTION	RECEIVED BY		DISPOSED BY		DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD		DISPOSED ON		DATE/TIME

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## **Appendix 5**

Data Validation Supporting Documentation

Rev. 0, Chg. 0

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**Data Validation for Chemical Analyses****Published Date:** 08/16/10**Effective Date:** 08/16/10

VALIDATION LEVEL:	A	B	<input checked="" type="radio"/> C	D	E
PROJECT: 100K Area AA Zone 2		DATA PACKAGE: VSR11-051			
VALIDATOR: Carl Schloesslin	LAB: WSCF			DATE: 7-28-2011	
		SDG: WSCF112639			
ANALYSES PERFORMED					
Anions/IC <input checked="" type="checkbox"/>	TOC	TOX	TPH-418.1	Oil and Grease	Alkalinity
Ammonia	BOD/COD	Chloride	Chromium-VI <input checked="" type="checkbox"/>	pH	NO <sub>3</sub> /NO <sub>2</sub>
Sulfate	TDS	TKN	Phosphate	Cyanide	
SAMPLES/MATRIX Soil samples B2FK09, B2FK10, B2FK11, B2FK12, B2FK13, B2FK14, B2FK15, B2FK16, B2FK17, B2FK18, B2FK19, B2FK20, B2FK21, B2FK22, B2FK23, B2FK24, B2FK25, B2FK08					

**1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE**Technical verification documentation present? .....  Yes No N/A

Comments: None

Rev. 0, Chg. 0

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**Data Validation for Chemical Analyses****Published Date:** 08/16/10**Effective Date:** 08/16/10**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

**Data Validation for Chemical Analyses****Published Date:** 08/16/10**Effective Date:** 08/16/10**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: None

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**Data Validation for Chemical Analyses****Published Date: 08/16/10****Effective Date: 08/16/10****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. HOLDING TIMES (all levels)**

- Samples properly preserved? .....  Yes  No  N/A
- Sample holding times acceptable? .....  Yes  No  N/A

Comments: None

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**Data Validation for Chemical Analyses**Published Date: 08/16/10Effective Date: 08/16/10**7. RESULT QUANTITATION AND DETECTION LIMITS (all levels)**Results reported for all requested analyses?..... Yes  No  N/AResults supported in the raw data? (Levels D, E) ..... Yes  No  N/ASamples properly prepared? (Levels D, E)..... Yes  No  N/ADetection limits meet RDL?..... Yes  No  N/ATranscription/calculation errors? (Levels D, E) ..... Yes  No  N/A

Comments: None

## **Appendix 6**

Additional Documentation Requested By Client

**Batch QC List**

Attention Michael Neely  
Department Inorganic

Group # WSCF112639

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
185464	185465	4	BLANK	60147	BLANK	ICP-2008 MS All possible metal	
185464	185465	5	LCS	60148	LCS	ICP-2008 MS All possible metal	
185464	185465	6	SAMPLE	112639001	B2FK09	ICP-2008 MS All possible metal	
185464	185465	7	MS	60149	B2FK09(112639001MS)	112639001	ICP-2008 MS All possible metal
185464	185465	8	MSD	60150	B2FK09(112639001MSD)	112639001	ICP-2008 MS All possible metal
185464	185465	9	SAMPLE	112639002	B2FK10	ICP-2008 MS All possible metal	
185464	185465	10	SAMPLE	112639003	B2FK11	ICP-2008 MS All possible metal	
185464	185465	11	SAMPLE	112639004	B2FK12	ICP-2008 MS All possible metal	
185464	185465	12	SAMPLE	112639005	B2FK13	ICP-2008 MS All possible metal	
185464	185465	13	SAMPLE	112639006	B2FK14	ICP-2008 MS All possible metal	
185464	185465	16	SAMPLE	112639007	B2FK15	ICP-2008 MS All possible metal	
185464	185465	17	SAMPLE	112639008	B2FK16	ICP-2008 MS All possible metal	
185464	185465	18	SAMPLE	112639009	B2FK17	ICP-2008 MS All possible metal	
185464	185465	19	SAMPLE	112639010	B2FK18	ICP-2008 MS All possible metal	
185464	185465	20	SAMPLE	112639011	B2FK19	ICP-2008 MS All possible metal	
185464	185465	21	SAMPLE	112639012	B2FK20	ICP-2008 MS All possible metal	
185464	185465	22	SAMPLE	112639013	B2FK21	ICP-2008 MS All possible metal	
185464	185465	23	SAMPLE	112639014	B2FK22	ICP-2008 MS All possible metal	
185464	185465	24	SAMPLE	112639015	B2FK23	ICP-2008 MS All possible metal	
185464	185465	25	SAMPLE	112639016	B2FK24	ICP-2008 MS All possible metal	
185464	185465	28	SAMPLE	112639017	B2FK25	ICP-2008 MS All possible metal	
185464	185465	29	SAMPLE	112639018	B2FK08	ICP-2008 MS All possible metal	
185710	185711	1	BLANK	60300	BLANK	Anions by Ion Chromatography (Solid)	

**Batch QC List**

Attention Michael Neely  
Department Inorganic

Group # WSCF112639

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
185710	185711	3	LCS	60302	LCS		Anions by Ion Chromatography (Solid)
185710	185711	4	MS	60303	B2FK09(112639001MS)	112639001	Anions by Ion Chromatography (Solid)
185710	185711	5	MSD	60304	B2FK09(112639001MSD)	112639001	Anions by Ion Chromatography (Solid)
185710	185711	6	DUP	60305	B2FK09(112639001DUP)	112639001	Anions by Ion Chromatography (Solid)
185710	185711	7	SAMPLE	112639001	B2FK09		Anions by Ion Chromatography (Solid)
185765	185766	1	BLANK	60416	BLANK		Hexavalent chromium
185765	185766	4	LCS	60417	LCS		Hexavalent chromium
185765	185766	5	DUP	60418	B2FK30(112631005DUP)	112631005	Hexavalent chromium
185765	185766	6	MS	60419	B2FK30(112631005MS)	112631005	Hexavalent chromium
185765	185766	7	PSTSPK	60420	PSTSPK		Hexavalent chromium
185765	185766	8	IMS	60421	B2FK30(112631005IMS)	112631005	Hexavalent chromium
185765	185766	15	SAMPLE	112639001	B2FK09		Hexavalent chromium
185765	185766	16	SAMPLE	112639002	B2FK10		Hexavalent chromium
185765	185766	17	SAMPLE	112639003	B2FK11		Hexavalent chromium
185765	185766	18	SAMPLE	112639004	B2FK12		Hexavalent chromium
185765	185766	20	SAMPLE	112639005	B2FK13		Hexavalent chromium
185765	185766	21	SAMPLE	112639006	B2FK14		Hexavalent chromium
185765	185766	22	SAMPLE	112639007	B2FK15		Hexavalent chromium
185765	185766	23	SAMPLE	112639008	B2FK16		Hexavalent chromium
185765	185766	24	SAMPLE	112639009	B2FK17		Hexavalent chromium
185765	185766	25	SAMPLE	112639010	B2FK18		Hexavalent chromium
185765	185766	26	SAMPLE	112639011	B2FK19		Hexavalent chromium
185765	185766	27	SAMPLE	112639012	B2FK20		Hexavalent chromium

**Batch QC List**

Attention Michael Neely  
Department Inorganic

Group # WSCF112639

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
185765	185766	28	SAMPLE	112639013	B2FK21		Hexavalent chromium
185765	185766	29	SAMPLE	112639014	B2FK22		Hexavalent chromium
185773	185774	1	BLANK		BLANK		Anions by Ion Chromatography (Solid)
185773	185774	3	LCS	60440	LCS		Anions by Ion Chromatography (Solid)
185773	185774	4	MS	60442			Anions by Ion Chromatography (Solid)
185773	185774	5	MSD	60443	B2FK11(112639003MS)	112639003	Anions by Ion Chromatography (Solid)
185773	185774	6	DUP	60444	B2FK11(112639003MSD)	112639003	Anions by Ion Chromatography (Solid)
185773	185774	7	SAMPLE	60445	B2FK11(112639003DUP)	112639003	Anions by Ion Chromatography (Solid)
185773	185774	11	SAMPLE		B2FK11		Anions by Ion Chromatography (Solid)
185773	185774	12	SAMPLE		B2FK10		Anions by Ion Chromatography (Solid)
185773	185774	13	SAMPLE		B2FK12		Anions by Ion Chromatography (Solid)
185773	185774	14	SAMPLE		B2FK13		Anions by Ion Chromatography (Solid)
185773	185774	15	SAMPLE		B2FK14		Anions by Ion Chromatography (Solid)
185773	185774	16	SAMPLE		B2FK15		Anions by Ion Chromatography (Solid)
185829	185830	2	BLANK	60557	B2FK16		Anions by Ion Chromatography (Solid)
185829	185830	3	LCS	60558	BLANK		Anions by Ion Chromatography (Solid)
185829	185830	4	MS	60559	LCS		Anions by Ion Chromatography (Solid)
185829	185830	5	MSD	60560			Anions by Ion Chromatography (Solid)
185829	185830	6	DUP	60561			Anions by Ion Chromatography (Solid)
185829	185830	7	SAMPLE	60559	B2FK17(112639009MS)	112639009	Anions by Ion Chromatography (Solid)
185829	185830	8	SAMPLE	60560	B2FK17(112639009MSD)	112639009	Anions by Ion Chromatography (Solid)
185829	185830	9	SAMPLE	60561	B2FK17(112639009DUP)	112639009	Anions by Ion Chromatography (Solid)
185829	185830	10	SAMPLE	60559	B2FK17		Anions by Ion Chromatography (Solid)
185829	185830	11	SAMPLE	60560	B2FK18		Anions by Ion Chromatography (Solid)
185829	185830	12	SAMPLE	60561	B2FK19		Anions by Ion Chromatography (Solid)
185829	185830	13	SAMPLE	60559	B2FK20		Anions by Ion Chromatography (Solid)

**Batch QC List**

Attention Michael Neely  
Department Inorganic

Group # WSCF112639

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
185829	185830	11	SAMPLE	112639013	B2FK21		Anions by Ion Chromatography (Solid)
185829	185830	12	SAMPLE	112639014	B2FK22		Anions by Ion Chromatography (Solid)
185829	185830	13	SAMPLE	112639015	B2FK23		Anions by Ion Chromatography (Solid)
185829	185830	14	SAMPLE	112639016	B2FK24		Anions by Ion Chromatography (Solid)
185829	185830	15	SAMPLE	112639017	B2FK25		Anions by Ion Chromatography (Solid)
185829	185830	16	SAMPLE	112639018	B2FK08		Anions by Ion Chromatography (Solid)
185912	185913	1	BLANK	60569	BLANK		Hexavalent chromium
185912	185913	4	LCS	60570	LCS		Hexavalent chromium
185912	185913	5	DUP	60571	B2FK23(112639015DUP)	112639015	Hexavalent chromium
185912	185913	6	MS	60572	B2FK23(112639015MS)	112639015	Hexavalent chromium
185912	185913	7	PSTSPK	60573	PSTSPK		Hexavalent chromium
185912	185913	8	IMS	60574	B2FK23(112639015IMS)	112639015	Hexavalent chromium
185912	185913	9	SAMPLE	112639015	B2FK23		Hexavalent chromium
185912	185913	10	SAMPLE	112639016	B2FK24		Hexavalent chromium
185912	185913	11	SAMPLE	112639017	B2FK25		Hexavalent chromium
185912	185913	12	SAMPLE	112639018	B2FK08		Hexavalent chromium

**Quality Control Report**

Attention Michael Neely  
Department Inorganic  
**Associated Samples** 112639001

**Group #** WSCF112639

Test							Anions by Ion Chromatography (Solid)		
Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD Limit	RQ	Analyzed
<b>BLANK</b>							<b>QC Sample #60300</b>		
Fluoride	16984-48-8	<0.036	ug/mL						07/11/11
Chloride	16887-00-6	<0.062	ug/mL						07/11/11
Nitrite-N	NO2-N	<0.020	ug/mL						07/11/11
Nitrate-N	NO3-N	<0.019	ug/mL						07/11/11
Sulfate	14808-79-8	<0.072	ug/mL						07/11/11
<b>LCS</b>							<b>QC Sample #60302</b>		
Fluoride	16984-48-8	0.916	ug/mL						07/11/11
Chloride	16887-00-6	1.84	ug/mL						07/11/11
Nitrite-N	NO2-N	0.965	ug/mL						07/11/11
Nitrate-N	NO3-N	0.874	ug/mL						07/11/11
Sulfate	14808-79-8	3.59	ug/mL						07/11/11
<b>MS</b>							<b>QC Sample #60303</b>		
Fluoride	16984-48-8	<1.8	20.6	mg/kg					07/11/11
Chloride	16887-00-6	<3.1	46.1	mg/kg					07/11/11
Nitrite-N	NO2-N	<1.0	22.9	mg/kg					07/11/11
Nitrate-N	NO3-N	5.14	20.6	mg/kg					07/11/11
Sulfate	14808-79-8	7.47	87.9	mg/kg					07/11/11
<b>Original</b>							<b>Original</b> 112639001		
Fluoride	16984-48-8	<1.8	20.6	mg/kg					07/11/11
Chloride	16887-00-6	<3.1	46.1	mg/kg					07/11/11
Nitrite-N	NO2-N	<1.0	22.9	mg/kg					07/11/11
Nitrate-N	NO3-N	5.14	20.6	mg/kg					07/11/11
Sulfate	14808-79-8	7.47	87.9	mg/kg					07/11/11

**Quality Control Report**Attention Michael Neely  
Department Inorganic**Group #** WSCF112639

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>MSD</b>										
Fluoride	16984-48-8	<1.8	20.8	mg/kg	82.9	80 - 120	0.70	30		07/11/11
Chloride	16887-00-6	<3.1	46.2	mg/kg	92.2	80 - 120	0.00	30		07/11/11
Nitrite-N	NO2-N	<1.0	22.8	mg/kg	92.2	80 - 120	0.50	30		07/11/11
Nitrate-N	NO3-N	5.14	20.9	mg/kg	93.4	80 - 120	1.30	30		07/11/11
Sulfate	14808-79-8	7.47	89.6	mg/kg	90.3	80 - 120	1.80	30		07/11/11
<b>DUP</b>										
Fluoride	16984-48-8	<1.8	<1.8	mg/kg	0.00	30	U			07/11/11
Chloride	16887-00-6	<3.1	<3.1	mg/kg	34.50	30	*	UX		07/11/11
Nitrite-N	NO2-N	<1.0	<1.0	mg/kg	0.00	30	U			07/11/11
Nitrate-N	NO3-N	5.14	4.40	mg/kg	15.40	30	B			07/11/11
Sulfate	14808-79-8	7.47	8.80	mg/kg	16.30	30	B			07/11/11
<b>Paired</b> 60303										
Fluoride	16984-48-8	<1.8	20.8	mg/kg	82.9	80 - 120	0.70	30		07/11/11
Chloride	16887-00-6	<3.1	46.2	mg/kg	92.2	80 - 120	0.00	30		07/11/11
Nitrite-N	NO2-N	<1.0	22.8	mg/kg	92.2	80 - 120	0.50	30		07/11/11
Nitrate-N	NO3-N	5.14	20.9	mg/kg	93.4	80 - 120	1.30	30		07/11/11
Sulfate	14808-79-8	7.47	89.6	mg/kg	90.3	80 - 120	1.80	30		07/11/11
<b>QC Sample #60304</b>										
Fluoride	16984-48-8	<1.8	20.8	mg/kg	82.9	80 - 120	0.70	30		07/11/11
Chloride	16887-00-6	<3.1	46.2	mg/kg	92.2	80 - 120	0.00	30		07/11/11
Nitrite-N	NO2-N	<1.0	22.8	mg/kg	92.2	80 - 120	0.50	30		07/11/11
Nitrate-N	NO3-N	5.14	20.9	mg/kg	93.4	80 - 120	1.30	30		07/11/11
Sulfate	14808-79-8	7.47	89.6	mg/kg	90.3	80 - 120	1.80	30		07/11/11
<b>QC Sample #60305</b>										
Fluoride	16984-48-8	<1.8	<1.8	mg/kg	0.00	30	U			07/11/11
Chloride	16887-00-6	<3.1	<3.1	mg/kg	34.50	30	*	UX		07/11/11
Nitrite-N	NO2-N	<1.0	<1.0	mg/kg	0.00	30	U			07/11/11
Nitrate-N	NO3-N	5.14	4.40	mg/kg	15.40	30	B			07/11/11
Sulfate	14808-79-8	7.47	8.80	mg/kg	16.30	30	B			07/11/11

**Quality Control Report**

Attention Michael Neely  
 Department Inorganic  
 Group # WSCF112639

QC Batch	185765	Test	Hexavalent chromium							
<b>Associated Samples</b>	112639001, 112639002, 112639003, 112639004, 112639005, 112639006, 112639007, 112639008, 112639009, 112639010, 112639011, 112639012, 112639013, 112639014									
Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>										
Hexavalent chromium	18540-29-9	<0.099	ug/g							U
<b>LCS</b>										07/13/11
Hexavalent chromium	18540-29-9	4.08	ug/g		102.4	80 - 120				07/13/11
<b>DUP</b>										
Hexavalent chromium	18540-29-9	<0.099	ug/g							07/13/11
<b>MS</b>										
Hexavalent chromium	18540-29-9	3.69	ug/g		94	75 - 125				07/13/11
<b>PSTSPK</b>										
Hexavalent chromium	18540-29-9	0.0489	ug/g		97.8	85 - 115				07/13/11
<b>IMS</b>										
Hexavalent chromium	18540-29-9	333	ug/g		97.9	75 - 125				07/13/11

**Quality Control Report**

**Attention** Michael Neely  
**Department** Inorganic

**Group #** WSCF112639

<b>QC Batch</b>	185773	<b>Test</b>	Anions by Ion Chromatography (Solid)
<b>Associated Samples</b>	112639002, 112639003, 112639004, 112639005, 112639006, 112639007, 112639008		

Analyte	CAS #	Original Found	QC Found	Units	% Recov	RPD Limits	RPD	RQ	Analyzed
<b>BLANK</b>									
Fluoride	16984-48-8	<0.036	ug/mL						07/12/11
Chloride	16887-00-6	<0.062	ug/mL						07/12/11
Nitrite-N	NO2-N	<0.020	ug/mL						07/12/11
Nitrate-N	NO3-N	<0.019	ug/mL						07/12/11
Sulfate	14808-79-8	<0.072	ug/mL						07/12/11
<b>LCS</b>									
Fluoride	16984-48-8	0.931	ug/mL	94	90 - 110				07/12/11
Chloride	16887-00-6	1.83	ug/mL	92.2	90 - 110				07/12/11
Nitrite-N	NO2-N	0.996	ug/mL	101.8	90 - 110				07/12/11
Nitrate-N	NO3-N	0.880	ug/mL	99.5	90 - 110				07/12/11
Sulfate	14808-79-8	3.58	ug/mL	91.3	90 - 110				07/12/11
<b>MS</b>									
Fluoride	16984-48-8	<1.8	20.9	mg/kg	82.8	80 - 120			07/12/11
Chloride	16887-00-6	<3.1	42.7	mg/kg	84.6	80 - 120			07/12/11
Nitrite-N	NO2-N	<1.0	23.7	mg/kg	95.2	80 - 120			07/12/11
Nitrate-N	NO3-N	<0.95	21.3	mg/kg	94.3	80 - 120			07/12/11
Sulfate	14808-79-8	19.1	86.7	mg/kg	86.8	80 - 120			07/12/11
<b>QC Sample #60440</b>									
Fluoride	16984-48-8	16.984	ug/mL	94	90 - 110				07/12/11
Chloride	16887-00-6	16.887	ug/mL	92.2	90 - 110				07/12/11
Nitrite-N	NO2-N	1.6887	ug/mL	101.8	90 - 110				07/12/11
Nitrate-N	NO3-N	1.6984	ug/mL	99.5	90 - 110				07/12/11
Sulfate	14808-79-8	14.808	ug/mL	91.3	90 - 110				07/12/11
<b>QC Sample #60442</b>									
Fluoride	16984-48-8	16.984	ug/mL	94	90 - 110				07/12/11
Chloride	16887-00-6	16.887	ug/mL	92.2	90 - 110				07/12/11
Nitrite-N	NO2-N	1.6887	ug/mL	101.8	90 - 110				07/12/11
Nitrate-N	NO3-N	1.6984	ug/mL	99.5	90 - 110				07/12/11
Sulfate	14808-79-8	14.808	ug/mL	91.3	90 - 110				07/12/11
<b>QC Sample #60443</b>									
Fluoride	16984-48-8	16.984	ug/mL	94	90 - 110				07/12/11
Chloride	16887-00-6	16.887	ug/mL	92.2	90 - 110				07/12/11
Nitrite-N	NO2-N	1.6887	ug/mL	101.8	90 - 110				07/12/11
Nitrate-N	NO3-N	1.6984	ug/mL	99.5	90 - 110				07/12/11
Sulfate	14808-79-8	14.808	ug/mL	91.3	90 - 110				07/12/11
<b>Original 112639003</b>									
Fluoride	16984-48-8	16.984	ug/mL	94	90 - 110				07/12/11
Chloride	16887-00-6	16.887	ug/mL	92.2	90 - 110				07/12/11
Nitrite-N	NO2-N	1.6887	ug/mL	101.8	90 - 110				07/12/11
Nitrate-N	NO3-N	1.6984	ug/mL	99.5	90 - 110				07/12/11
Sulfate	14808-79-8	14.808	ug/mL	91.3	90 - 110				07/12/11

**Quality Control Report**

**Attention** Michael Neely  
**Department** Inorganic

**Group #** WSCF112639

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>MSD</b>										
<b>DUP</b>										
Fluoride	16984-48-8	<1.8	20.4	mg/kg	81.2	80 - 120	2.00	30		07/12/11
Chloride	16887-00-6	<3.1	42.7	mg/kg	85	80 - 120	0.50	30		07/12/11
Nitrite-N	NO2-N	<1.0	23.4	mg/kg	94.4	80 - 120	0.80	30		07/12/11
Nitrate-N	NO3-N	<0.95	20.9	mg/kg	93.1	80 - 120	1.30	30		07/12/11
Sulfate	14808-79-8	19.1	84.2	mg/kg	84.7	80 - 120	2.40	30		07/12/11
<b>Paired</b>										
<b>Paired 60443</b>										
Fluoride	16984-48-8	<1.8	<1.8	mg/kg	0.00	30			U	07/12/11
Chloride	16887-00-6	<3.1	<3.1	mg/kg	35.20	30	*	UX		07/12/11
Nitrite-N	NO2-N	<1.0	<1.0	mg/kg	0.00	30		U		07/12/11
Nitrate-N	NO3-N	<0.95	<0.95	mg/kg	19.10	30		U		07/12/11
Sulfate	14808-79-8	19.1	14.2	mg/kg	29.60	30		B		07/12/11

## Quality Control Report

Attention Michael Neely  
Department Inorganic

Group # WSCF112639

QC Batch	185829	Test	Anions by Ion Chromatography (Solid)
Associated Samples	112639009, 112639010, 112639011, 112639012, 112639013, 112639014, 112639015, 112639016, 112639017, 112639018		

Analyte	CAS #	Original Found	QC Found	Units	% Recov	RPD Limits	RPD	RQ	Analyzed
BLANK									
QC Sample #60557									
Fluoride	16984-48-8	<0.036		ug/mL					07/13/11
Chloride	16887-00-6	<0.062		ug/mL					07/13/11
Nitrite-N	NO2-N	<0.020		ug/mL					07/13/11
Nitrate-N	NO3-N	<0.019		ug/mL					07/13/11
Sulfate	14808-79-8	<0.072		ug/mL					07/13/11
LCS									
Fluoride	16984-48-8	0.935		ug/mL		94.5	90 - 110		07/13/11
Chloride	16887-00-6	1.85		ug/mL		93.3	90 - 110		07/13/11
Nitrite-N	NO2-N	0.961		ug/mL		98.2	90 - 110		07/13/11
Nitrate-N	NO3-N	0.869		ug/mL		98.1	90 - 110		07/13/11
Sulfate	14808-79-8	3.59		ug/mL		91.5	90 - 110		07/13/11
MS									
QC Sample #60559									
Original 112639009									
Fluoride	16984-48-8	<1.8	21.8	mg/kg		86.9	80 - 120		07/13/11
Chloride	16887-00-6	<3.1	45.3	mg/kg		90.4	80 - 120		07/13/11
Nitrite-N	NO2-N	<1.0	23.5	mg/kg		94.9	80 - 120		07/13/11
Nitrate-N	NO3-N	<0.96	21.5	mg/kg		96.1	80 - 120		07/13/11
Sulfate	14808-79-8	8.84	84.5	mg/kg		85.1	80 - 120		07/13/11

**Quality Control Report**

**Attention** Michael Neely  
**Department** Inorganic

**Group #** WSCF112639

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>MSD</b>										
Fluoride	16984-48-8	<1.8	21.9	mg/kg	87	80 - 120	0.10	30		07/13/11
Chloride	16887-00-6	<3.1	45.5	mg/kg	90.3	80 - 120	0.10	30		07/13/11
Nitrite-N	NO2-N	<1.0	23.6	mg/kg	94.7	80 - 120	0.20	30		07/13/11
Nitrate-N	NO3-N	<0.96	21.9	mg/kg	97.4	80 - 120	1.30	30		07/13/11
Sulfate	14808-79-8	8.84	84.8	mg/kg	85.1	80 - 120	0.00	30		07/13/11
<b>DUP</b>										
Fluoride	16984-48-8	<1.8	<1.8	mg/kg	0.00	30	U			07/13/11
Chloride	16887-00-6	<3.1	<3.1	mg/kg	10.90	30	U			07/13/11
Nitrite-N	NO2-N	<1.0	<1.0	mg/kg	0.00	30	U			07/13/11
Nitrate-N	NO3-N	<0.96	<0.96	mg/kg	20.00	30	U			07/13/11
Sulfate	14808-79-8	8.84	7.77	mg/kg	12.90	30	B			07/13/11
<b>Paired</b> 60559										
Fluoride	16984-48-8	<1.8	<1.8	mg/kg	0.00	30	U			07/13/11
Chloride	16887-00-6	<3.1	<3.1	mg/kg	10.90	30	U			07/13/11
Nitrite-N	NO2-N	<1.0	<1.0	mg/kg	0.00	30	U			07/13/11
Nitrate-N	NO3-N	<0.96	<0.96	mg/kg	20.00	30	U			07/13/11
Sulfate	14808-79-8	8.84	7.77	mg/kg	12.90	30	B			07/13/11

## Quality Control Report

Attention Michael Neely  
Department Inorganic  
**Associated Samples** 112639015, 112639016, 112639017, 112639018

**Group #** WSCF112639

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	Limit	RQ	Analyzed
BLANK										
Hexavalent chromium	18540-29-9	<0.098	ug/g	QC Sample #60569						07/15/11
<b>LCS</b>				QC Sample #60570						
Hexavalent chromium	18540-29-9	3.98	ug/g	QC Sample #60571						07/15/11
<b>DUP</b>				Original	112639015					
Hexavalent chromium	18540-29-9	<0.098	<0.099	ug/g	QC Sample #60572					07/15/11
<b>MS</b>				Original	112639015					
Hexavalent chromium	18540-29-9	<0.098	3.54	ug/g	89.6	75 - 125				07/15/11
<b>PSTSPK</b>				QC Sample #60573						
Hexavalent chromium	18540-29-9	0.0487	ug/g	QC Sample #60574						07/15/11
<b>IMS</b>				Original	112639015					
Hexavalent chromium	18540-29-9	<0.098	355	ug/g	104.2	75 - 125				07/15/11