REVIEW COMMENT RECORD (RCR)

1. Date	2. Review No.
09/20/2011	
3. Project No.	Page 1 of 1

5. Document Number(s)/Title(s)	6. Program/Project/Building Number	7. Reviewer	8. Organization/Group	9. Location/Phone
Data Validation Report for CH2M Hill Plateau Remediation Company: VSR11-055, 100-K Project, Area AA, Zone 1	100K Area, Area AA, Zone 1	D. L. Klages	100-K Soil Remediation	(509)942-3947

17. Comment Submittal Approval	10. Agreement With Indicated Comment Disposition(s)	11. CLOSED
Date: _____ Organization Manager (optional) (print and sign): _____	Date: 09/20/2011 Reviewer/Point of Contact (print and sign): Deanna L. Klages Author/Originator (print and sign): Deanna L. Klages	Date: 09/20/2011 Reviewer/Point of Contact (print and sign): Deanna L. Klages Author/Originator (print and sign): Deanna L. Klages

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	No issues noted.					

REVIEW COMMENT RECORD (RCR)	1. Date 09/21/2011	2. Review No.
	3. Project No.	Page 1 of 1

5. Document Number(s)/Title(s)	6. Program/Project/Building Number	7. Reviewer	8. Organization/Group	9. Location/Phone
VSR11-055, Data Validation Report for CHPRC – 100K Project, Area AA, Zone 1, Chemical & Radiochemical Validation - Level C	S&GRP Sample Data Group (SDG); WSCF112687, WSCF112727, WSCF112746 and WSCF112760	JA Edwards	Environmental Quality Assurance (EQA)	2420 Stevens Rm. 345 376-4324

17. Comment Submittal Approval	10. Agreement With Indicated Comment Disposition(s)	11. CLOSED
Date: ____ Organization Manager (optional) (print and sign): ____	JA Edwards / [signature] Reviewer/Point of Contact (print and sign)	JA Edwards / [signature] Reviewer/Point of Contact (print and sign)
	09/21/2011 Date	09/21/2011 Date
	Author/Originator (print and sign)	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-002, Rev. 0, Change 0, *Data Validation for Radiochemical Analyses*, August 2010
GRP-GD-003, Rev. 0, Change 0, *Data Validation for Chemical Analyses*, August 2010

CHPRC - REVIEW COMMENT RECORD (RCR)

1. Date	2. Review No.
09/21/2011	
3. Project No.	Page 1 of 1

5. Document Number(s)/Title(s)	6. Program/Project/Building Number	7. Reviewer	8. Organization/Group	9. Location/Phone
VSR11-055		Scot Fitzgerald	Analytical Support Group	2753/373-7495

17. Comment Submittal Approval	10. Agreement With Indicated Comment Disposition(s)	11. CLOSED
Date / Organization Manager (optional) (print and sign)	Scot Fitzgerald Reviewer/Point of Contact (print and sign) 09/21/2011 Date Author/Originator (print and sign)	Scot Fitzgerald Reviewer/Point of Contact (print and sign) 09/21/2011 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	No issues Noted					

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

Data Validation Report for CH2M Hill Plateau Remediation Company

VSR11-055
Project 100K Area AA Zone 1

Chemical Validation - Level C

Validation Performed By: Carl Schlosser **Date:** 9-20-2011

TABLE OF CONTENTS

Inorganics

Memorandum 3
Appendix 1 – Glossary of Data Reporting Qualifiers 7
Appendix 2 – Summary of Data Qualification 9
Appendix 3 – Annotated Laboratory Reports 11
Appendix 4 – Laboratory Narrative and Chain-of-Custody Documentation 76
Appendix 5 – Data Validation Supporting Documentation 118
Appendix 6 – Additional Documentation Requested By Client 125

General Chemistry

Memorandum 146
Appendix 1 – Glossary of Data Reporting Qualifiers 150
Appendix 2 – Summary of Data Qualification 152
Appendix 3 – Annotated Laboratory Reports 154
Appendix 4 – Laboratory Narrative and Chain-of-Custody Documentation 187
Appendix 5 – Data Validation Supporting Documentation 229
Appendix 6 – Additional Documentation Requested By Client 235

Date: 20 September 2011
To: CH2M Hill (technical representative)
From: Analytical Quality Associates, Inc.
Project: 100K Area AA Zone 1
Subject: Inorganics - Sample Data Groups (SDGs) WSCF112687, WSCF112727, WSCF112746 and WSCF112760

INTRODUCTION

This memorandum presents the results of data validation for SDGs WSCF112687, WSCF112727, WSCF112746 and WSCF112760 prepared by WSCF Analytical Laboratories. A list of samples validated along with the analytical method is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Method
B2FJX2	7/13/2011	Soil	C	200.8
B2FJX3	7/13/2011	Soil	C	200.8
B2FJX4	7/13/2011	Soil	C	200.8
B2FJX5	7/13/2011	Soil	C	200.8
B2FJX6	7/13/2011	Soil	C	200.8
B2FNW9	7/13/2011	Soil	C	200.8
B2FNX0	7/13/2011	Soil	C	200.8
B2FK06	7/18/2011	Soil	C	200.8
B2FK07	7/18/2011	Soil	C	200.8
B2FJX7	7/18/2011	Soil	C	200.8
B2FJX8	7/18/2011	Soil	C	200.8
B2FJX9	7/18/2011	Soil	C	200.8
B2FJY0	7/18/2011	Soil	C	200.8
B2FJY1	7/18/2011	Soil	C	200.8
B2FJY2	7/18/2011	Soil	C	200.8
B2FJY3	7/19/2011	Soil	C	200.8
B2FJY4	7/19/2011	Soil	C	200.8
B2FJY5	7/19/2011	Soil	C	200.8
B2FJY6	7/19/2011	Soil	C	200.8
B2FJY7	7/19/2011	Soil	C	200.8
B2FJY8	7/19/2011	Soil	C	200.8
B2FJY9	7/19/2011	Soil	C	200.8
B2FK00	7/19/2011	Soil	C	200.8
B2FK01	7/19/2011	Soil	C	200.8
B2FK02	7/20/2011	Soil	C	200.8
B2FK03	7/20/2011	Soil	C	200.8
B2FK04	7/20/2011	Soil	C	200.8
B2FK05	7/20/2011	Soil	C	200.8
B2FNW5	7/20/2011	Soil	C	200.8
B2FNW6	7/20/2011	Soil	C	200.8
B2FNW7	7/20/2011	Soil	C	200.8

Sample ID	Sample Date	Media	Validation Level	Analytical Method
B2FNW8	7/20/2011	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 exceptions. For SDG WSCF1112727, the B and Se laboratory blank results were > the method detection limit (MDL) but < the reporting limit (RL). The B and Se results for all samples *except* B2FK06 were detects < the RLs and should be qualified as non-detects at the RLs and flagged "U." The B and Se results for sample B2FK06 were non-detects 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.

For SDG WSCF112687, Mn, Ni, Ba, Cr, Co, Cu, V, Pb, Mo, Sr, U and As were detected in equipment blank B2FNX0.

For SDG WSCF112727, Mn, Ba, Cu, V, Pb and Sr were detected in equipment blank B2FK06.

- **Accuracy**

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

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

All MS/MSD recoveries were acceptable with the following exceptions.

For SDGs WSCF112687 and WSCF112727, the MS or MSD recoveries for Mn were < the lower acceptance limit. All associated Mn sample results were detects and should be qualified as estimates and flagged "J-." See the table in Appendix 2 for a listing of all affected sample results.

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 ±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 with the following exceptions.

For SDG WSCF112687, the Mn RPD was above the acceptance limit. All associated Mn sample results were detects and would be qualified as estimates and flagged "J," but were further flagged

"J-" due to an MSD recovery infraction. See the table in Appendix 2 for a listing of all affected sample results.

For SDGs WSCF112746 and WSCF112760, the Ba RPD was above the acceptance limit. All associated Ba sample results were detects and should be qualified as estimates and flagged "J." See the table in Appendix 2 for a listing of all affected sample results.

Field Duplicate Samples

All field duplicate results were acceptable with the following exception. For SDG WSCF112687, samples B2FJX2 and B2FNW9 had a Ni RPD = 45% and a Pb RPD = 117%.

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**

SDGs WSCF112687, WSCF112727, WSCF112746 and WSCF112760 were 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

Multiple minor deficiencies leading to qualification of sample results as estimates occurred. See the table in Appendix 2 for a listing of all affected sample results.

REFERENCES

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

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

Appendix 1

Glossary of Data Reporting Qualifiers

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

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

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

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

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

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

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

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

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

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

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

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

Appendix 2

Summary of Data Qualification

Inorganic Data Qualification Summary			
SDGs: WSCF112687, WSCF112727, WSCF112746 & WSCF112760	Reviewer: AQA	Project: 100K Area AA Zone 1	Page 1 of 1
Analyte(s)	**DV Flag**	**Samples Affected**	**Reason**
B	4.8U	B2FK07	Lab blank contamination
B	5.1U	B2FJX7	Lab blank contamination
B	4.9U	B2FJX8	Lab blank contamination
B	4.6U	B2FJX9	Lab blank contamination
B	4.7U	B2FJY0	Lab blank contamination
B	4.8U	B2FJY1	Lab blank contamination
B	4.9U	B2FJY2	Lab blank contamination
Se	2.9U	B2FK07	Lab blank contamination
Se	3.0U	B2FJX7	Lab blank contamination
Se	3.0U	B2FJX8	Lab blank contamination
Se	2.8U	B2FJX9	Lab blank contamination
Se	2.8U	B2FJY0	Lab blank contamination
Se	2.9U	B2FJY1	Lab blank contamination
Se	3.0U	B2FJY2	Lab blank contamination
Mn	J-	B2FJX2, B2FJX3, B2FJX4, B2FJX5, B2FJX6, B2FNW9, B2FNX0	Low MSD recovery and poor MS/MSD precision
Mn	J-	B2FK06, B2FK07, B2FJX7, B2FJX8, B2FJX9, B2FJY0, B2FJY1, B2FJY2	Low MS recovery
Ba	J	B2FJY3, B2FJY4, B2FJY5, B2FJY6, B2FJY7, B2FJY8, B2FJY9, B2FK00, B2FK01, B2FK02, B2FK03, B2FK04, B2FK05, B2FNW5, B2FNW6, B2FNW7, B2FNW8	Poor MS/MSD precision

Comments: None

Appendix 3

Annotated Laboratory Reports

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687001
SAF# F11-096
Sample ID B2FJX2

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/14/11
Chloride	16887-00-6	LA-533-410	B	4.23		mg/kg	1	3.1	20	07/14/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/14/11
Nitrate-N	NO3-N	LA-533-410		9.02		mg/kg	1	0.96	5.0	07/14/11
Sulfate	14808-79-8	LA-533-410	B	24.1		mg/kg	1	3.6	53	07/14/11
Cr(VI) Prep										**07/14/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.095		ug/g	1	0.095	0.47	07/15/11
ICPMS Prep										**07/18/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	337	J-	mg/kg	1	0.098	0.98	07/18/11
Nickel	7440-02-0	LA-505-412		23.2		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	B	0.417		mg/kg	1	0.29	2.9	07/18/11
Barium	7440-39-3	LA-505-412		57.7		mg/kg	1	0.20	2.0	07/18/11
Beryllium	7440-41-7	LA-505-412	B	0.130		mg/kg	1	0.098	0.49	07/18/11
Boron	7440-42-8	LA-505-412	B	1.22		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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
9-20-2011

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)

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687001
SAF# F11-096
Sample ID B2FJX2

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	B	0.141		mg/kg	1	0.098	0.98	07/18/11
Chromium	7440-47-3	LA-505-412		10.9		mg/kg	1	0.49	4.9	07/18/11
Cobalt	7440-48-4	LA-505-412		10.9		mg/kg	1	0.098	0.49	07/18/11
Copper	7440-50-8	LA-505-412		23.1		mg/kg	1	0.098	0.98	07/18/11
Vanadium	7440-62-2	LA-505-412		66.4		mg/kg	1	0.20	2.0	07/18/11
Zinc	7440-66-6	LA-505-412		56.4		mg/kg	1	0.78	4.9	07/18/11
Lead	7439-92-1	LA-505-412		25.2		mg/kg	1	0.098	0.98	07/18/11
Mercury	7439-97-6	LA-505-412	B	0.189		mg/kg	1	0.049	0.20	07/18/11
Molybdenum	7439-98-7	LA-505-412		1.04		mg/kg	1	0.098	0.98	07/18/11
Strontium	7440-24-6	LA-505-412		29.1		mg/kg	1	0.098	0.98	07/18/11
Tin	7440-31-5	LA-505-412		1.45		mg/kg	1	0.098	0.49	07/18/11
Uranium	7440-61-1	LA-505-412		0.707		mg/kg	1	0.098	0.49	07/18/11
Arsenic	7440-38-2	LA-505-412	B	3.58		mg/kg	1	0.39	3.9	07/18/11
Selenium	7782-49-2	LA-505-412	B	0.754		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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

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

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687002
SAF# F11-096
Sample ID B2FJX3

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/14/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	21	07/14/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/14/11
Nitrate-N	NO3-N	LA-533-410	B	4.80		mg/kg	1	0.96	5.0	07/14/11
Sulfate	14808-79-8	LA-533-410	B	14.9		mg/kg	1	3.6	53	07/14/11
Cr(VI) Prep										**07/14/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	B	0.124		ug/g	1	0.096	0.48	07/15/11
ICPMS Prep										**07/18/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	391	J-	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	<0.30		mg/kg	1	0.30	3.0	07/18/11
Barium	7440-39-3	LA-505-412		66.0		mg/kg	1	0.20	2.0	07/18/11
Beryllium	7440-41-7	LA-505-412	B	0.247		mg/kg	1	0.10	0.51	07/18/11
Boron	7440-42-8	LA-505-412	B	1.86		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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
9-20-2011

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)

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687002
SAF# F11-096
Sample ID B2FJX3

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
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		10.6		mg/kg	1	0.51	5.1	07/18/11
Cobalt	7440-48-4	LA-505-412		10.4		mg/kg	1	0.10	0.51	07/18/11
Copper	7440-50-8	LA-505-412		18.2		mg/kg	1	0.10	1.0	07/18/11
Vanadium	7440-62-2	LA-505-412		66.9		mg/kg	1	0.20	2.0	07/18/11
Zinc	7440-66-6	LA-505-412		51.4		mg/kg	1	0.81	5.1	07/18/11
Lead	7439-92-1	LA-505-412		13.3		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	0.619		mg/kg	1	0.10	1.0	07/18/11
Strontium	7440-24-6	LA-505-412		33.7		mg/kg	1	0.10	1.0	07/18/11
Tin	7440-31-5	LA-505-412		0.534		mg/kg	1	0.10	0.51	07/18/11
Uranium	7440-61-1	LA-505-412		0.516		mg/kg	1	0.10	0.51	07/18/11
Arsenic	7440-38-2	LA-505-412	B	3.30		mg/kg	1	0.40	4.0	07/18/11
Selenium	7782-49-2	LA-505-412	B	0.724		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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

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

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687003
SAF# F11-096
Sample ID B2FJX4

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.7	07/14/11
Chloride	16887-00-6	LA-533-410	B	4.50		mg/kg	1	3.2	21	07/14/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/14/11
Nitrate-N	NO3-N	LA-533-410	B	4.62		mg/kg	1	0.97	5.0	07/14/11
Sulfate	14808-79-8	LA-533-410	B	25.0		mg/kg	1	3.7	53	07/14/11
Cr(VI) Prep										**07/14/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.51	07/15/11
ICPMS Prep										**07/18/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	345	J-	mg/kg	1	0.098	0.98	07/18/11
Nickel	7440-02-0	LA-505-412		10.3		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		66.9		mg/kg	1	0.20	2.0	07/18/11
Beryllium	7440-41-7	LA-505-412	B	0.241		mg/kg	1	0.098	0.49	07/18/11
Boron	7440-42-8	LA-505-412	B	0.787		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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
9-20-2011

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)

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687003
SAF# F11-096
Sample ID B2FJX4

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	B	0.128		mg/kg	1	0.098	0.98	07/18/11
Chromium	7440-47-3	LA-505-412		10.0		mg/kg	1	0.49	4.9	07/18/11
Cobalt	7440-48-4	LA-505-412		9.83		mg/kg	1	0.098	0.49	07/18/11
Copper	7440-50-8	LA-505-412		17.6		mg/kg	1	0.098	0.98	07/18/11
Vanadium	7440-62-2	LA-505-412		63.3		mg/kg	1	0.20	2.0	07/18/11
Zinc	7440-66-6	LA-505-412		58.3		mg/kg	1	0.78	4.9	07/18/11
Lead	7439-92-1	LA-505-412		12.1		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	0.477		mg/kg	1	0.098	0.98	07/18/11
Strontium	7440-24-6	LA-505-412		32.5		mg/kg	1	0.098	0.98	07/18/11
Tin	7440-31-5	LA-505-412		0.492		mg/kg	1	0.098	0.49	07/18/11
Uranium	7440-61-1	LA-505-412	B	0.482		mg/kg	1	0.098	0.49	07/18/11
Arsenic	7440-38-2	LA-505-412	B	2.63		mg/kg	1	0.39	3.9	07/18/11
Selenium	7782-49-2	LA-505-412	B	0.651		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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

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

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687004
SAF# F11-096
Sample ID B2FJX5

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/14/11
Chloride	16887-00-6	LA-533-410	B	6.06		mg/kg	1	3.1	21	07/14/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/14/11
Nitrate-N	NO3-N	LA-533-410	B	1.34		mg/kg	1	0.96	5.0	07/14/11
Sulfate	14808-79-8	LA-533-410	B	24.1		mg/kg	1	3.6	53	07/14/11
Cr(VI) Prep										**07/14/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.099		ug/g	1	0.099	0.50	07/15/11
ICPMS Prep										**07/18/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	337	J-	mg/kg	1	0.10	1.0	07/18/11
Nickel	7440-02-0	LA-505-412		7.90		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		49.9		mg/kg	1	0.20	2.0	07/18/11
Beryllium	7440-41-7	LA-505-412	B	0.243		mg/kg	1	0.10	0.50	07/18/11
Boron	7440-42-8	LA-505-412	B	0.805		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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
9-20-2011

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)

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687004
SAF# F11-096
Sample ID B2FJX5

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
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	B	4.55		mg/kg	1	0.50	5.0	07/18/11
Cobalt	7440-48-4	LA-505-412		11.3		mg/kg	1	0.10	0.50	07/18/11
Copper	7440-50-8	LA-505-412		15.3		mg/kg	1	0.10	1.0	07/18/11
Vanadium	7440-62-2	LA-505-412		74.1		mg/kg	1	0.20	2.0	07/18/11
Zinc	7440-66-6	LA-505-412		48.0		mg/kg	1	0.81	5.0	07/18/11
Lead	7439-92-1	LA-505-412		3.06		mg/kg	1	0.10	1.0	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	0.499		mg/kg	1	0.10	1.0	07/18/11
Strontium	7440-24-6	LA-505-412		24.0		mg/kg	1	0.10	1.0	07/18/11
Tin	7440-31-5	LA-505-412		0.520		mg/kg	1	0.10	0.50	07/18/11
Uranium	7440-61-1	LA-505-412	B	0.437		mg/kg	1	0.10	0.50	07/18/11
Arsenic	7440-38-2	LA-505-412	B	1.82		mg/kg	1	0.40	4.0	07/18/11
Selenium	7782-49-2	LA-505-412	B	0.741		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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

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

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687005
SAF# F11-096
Sample ID B2FJX6

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/14/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/14/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/14/11
Nitrate-N	NO3-N	LA-533-410	B	2.21		mg/kg	1	0.95	5.0	07/14/11
Sulfate	14808-79-8	LA-533-410	B	10.2		mg/kg	1	3.6	52	07/14/11
Cr(VI) Prep										**07/14/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.51	07/15/11
ICPMS Prep										**07/18/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	325	J-	mg/kg	1	0.094	0.94	07/18/11
Nickel	7440-02-0	LA-505-412		7.67		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		43.1		mg/kg	1	0.19	1.9	07/18/11
Beryllium	7440-41-7	LA-505-412	B	0.231		mg/kg	1	0.094	0.47	07/18/11
Boron	7440-42-8	LA-505-412	B	1.80		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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
9-20-2011

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)

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687005
SAF# F11-096
Sample ID B2FJX6

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	B	0.112		mg/kg	1	0.094	0.94	07/18/11
Chromium	7440-47-3	LA-505-412		5.66		mg/kg	1	0.47	4.7	07/18/11
Cobalt	7440-48-4	LA-505-412		9.46		mg/kg	1	0.094	0.47	07/18/11
Copper	7440-50-8	LA-505-412		14.4		mg/kg	1	0.094	0.94	07/18/11
Vanadium	7440-62-2	LA-505-412		68.0		mg/kg	1	0.19	1.9	07/18/11
Zinc	7440-66-6	LA-505-412		381		mg/kg	1	0.75	4.7	07/18/11
Lead	7439-92-1	LA-505-412		4.69		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	B	0.581		mg/kg	1	0.094	0.94	07/18/11
Strontium	7440-24-6	LA-505-412		24.4		mg/kg	1	0.094	0.94	07/18/11
Tin	7440-31-5	LA-505-412		0.475		mg/kg	1	0.094	0.47	07/18/11
Uranium	7440-61-1	LA-505-412	B	0.442		mg/kg	1	0.094	0.47	07/18/11
Arsenic	7440-38-2	LA-505-412	B	1.78		mg/kg	1	0.38	3.8	07/18/11
Selenium	7782-49-2	LA-505-412	B	1.03		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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

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

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687006
SAF# F11-096
Sample ID B2FNW9

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/14/11
Chloride	16887-00-6	LA-533-410	B	4.28		mg/kg	1	3.1	21	07/14/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/14/11
Nitrate-N	NO3-N	LA-533-410		8.04		mg/kg	1	0.96	5.0	07/14/11
Sulfate	14808-79-8	LA-533-410	B	25.1		mg/kg	1	3.6	53	07/14/11
Cr(VI) Prep										**07/14/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/15/11
ICPMS Prep										**07/18/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	345	J-	mg/kg	1	0.10	1.0	07/18/11
Nickel	7440-02-0	LA-505-412		14.7		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	B	0.371		mg/kg	1	0.30	3.0	07/18/11
Barium	7440-39-3	LA-505-412		58.0		mg/kg	1	0.20	2.0	07/18/11
Beryllium	7440-41-7	LA-505-412	B	0.330		mg/kg	1	0.10	0.50	07/18/11
Boron	7440-42-8	LA-505-412	B	1.04		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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
9-20-2011

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)

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687006
SAF# F11-096
Sample ID B2FNW9

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
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		10.8		mg/kg	1	0.50	5.0	07/18/11
Cobalt	7440-48-4	LA-505-412		10.8		mg/kg	1	0.10	0.50	07/18/11
Copper	7440-50-8	LA-505-412		24.4		mg/kg	1	0.10	1.0	07/18/11
Vanadium	7440-62-2	LA-505-412		68.6		mg/kg	1	0.20	2.0	07/18/11
Zinc	7440-66-6	LA-505-412		57.6		mg/kg	1	0.80	5.0	07/18/11
Lead	7439-92-1	LA-505-412		6.59		mg/kg	1	0.10	1.0	07/18/11
Mercury	7439-97-6	LA-505-412	B	0.152		mg/kg	1	0.050	0.20	07/18/11
Molybdenum	7439-98-7	LA-505-412	B	0.735		mg/kg	1	0.10	1.0	07/18/11
Strontium	7440-24-6	LA-505-412		28.1		mg/kg	1	0.10	1.0	07/18/11
Tin	7440-31-5	LA-505-412		1.62		mg/kg	1	0.10	0.50	07/18/11
Uranium	7440-61-1	LA-505-412		0.629		mg/kg	1	0.10	0.50	07/18/11
Arsenic	7440-38-2	LA-505-412	B	3.67		mg/kg	1	0.40	4.0	07/18/11
Selenium	7782-49-2	LA-505-412	B	0.654		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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

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

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687007
SAF# F11-096
Sample ID B2FNX0

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/14/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/14/11
Nitrite-N	NO2-N	LA-533-410	U	<0.99		mg/kg	1	0.99	4.9	07/14/11
Nitrate-N	NO3-N	LA-533-410	U	<0.94		mg/kg	1	0.94	4.9	07/14/11
Sulfate	14808-79-8	LA-533-410	U	<3.6		mg/kg	1	3.6	52	07/14/11
Cr(VI) Prep										**07/14/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.099		ug/g	1	0.099	0.50	07/15/11
ICPMS Prep										**07/18/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	BN	0.500	J-	mg/kg	1	0.097	0.97	07/18/11
Nickel	7440-02-0	LA-505-412	B	0.551		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	B	0.357		mg/kg	1	0.19	1.9	07/18/11
Beryllium	7440-41-7	LA-505-412	U	<0.097		mg/kg	1	0.097	0.48	07/18/11
Boron	7440-42-8	LA-505-412	U	<0.48		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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
9-20-2011

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)

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687007
SAF# F11-096
Sample ID B2FNX0

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

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	B	0.658		mg/kg	1	0.48	4.8	07/18/11
Cobalt	7440-48-4	LA-505-412	B	0.188		mg/kg	1	0.097	0.48	07/18/11
Copper	7440-50-8	LA-505-412	B	0.592		mg/kg	1	0.097	0.97	07/18/11
Vanadium	7440-62-2	LA-505-412	B	0.379		mg/kg	1	0.19	1.9	07/18/11
Zinc	7440-66-6	LA-505-412	U	<0.77		mg/kg	1	0.77	4.8	07/18/11
Lead	7439-92-1	LA-505-412	B	0.399		mg/kg	1	0.097	0.97	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	0.101		mg/kg	1	0.097	0.97	07/18/11
Strontium	7440-24-6	LA-505-412	B	0.222		mg/kg	1	0.097	0.97	07/18/11
Tin	7440-31-5	LA-505-412	U	<0.097		mg/kg	1	0.097	0.48	07/18/11
Uranium	7440-61-1	LA-505-412	B	0.112		mg/kg	1	0.097	0.48	07/18/11
Arsenic	7440-38-2	LA-505-412	B	0.686		mg/kg	1	0.39	3.9	07/18/11
Selenium	7782-49-2	LA-505-412	U	<0.29		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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

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

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727001
SAF# F11-096
Sample ID B2FK06

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/19/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/19/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/19/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/19/11
Nitrate-N	NO3-N	LA-533-410	U	<0.95		mg/kg	1	0.95	4.9	07/19/11
Sulfate	14808-79-8	LA-533-410	U	<3.6		mg/kg	1	3.6	52	07/19/11
Cr(VI) Prep										**07/19/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.094		ug/g	1	0.094	0.47	07/20/11
ICPMS Prep										**07/20/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	BN	0.781	J-	mg/kg	1	0.096	0.96	07/26/11
Nickel	7440-02-0	LA-505-412	U	<0.19		mg/kg	1	0.19	1.9	07/26/11
Silver	7440-22-4	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	07/26/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/26/11
Barium	7440-39-3	LA-505-412	B	0.429		mg/kg	1	0.19	1.9	07/26/11
Beryllium	7440-41-7	LA-505-412	U	<0.096		mg/kg	1	0.096	0.48	07/26/11
Boron	7440-42-8	LA-505-412	U	<0.48		mg/kg	1	0.48	4.8	07/26/11

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727001
SAF# F11-096
Sample ID B2FK06

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	07/26/11
Chromium	7440-47-3	LA-505-412	U	<0.48		mg/kg	1	0.48	4.8	07/26/11
Cobalt	7440-48-4	LA-505-412	U	<0.096		mg/kg	1	0.096	0.48	07/26/11
Copper	7440-50-8	LA-505-412	B	0.332		mg/kg	1	0.096	0.96	07/26/11
Vanadium	7440-62-2	LA-505-412	B	0.385		mg/kg	1	0.19	1.9	07/26/11
Zinc	7440-66-6	LA-505-412	U	<0.77		mg/kg	1	0.77	4.8	07/26/11
Lead	7439-92-1	LA-505-412	B	0.113		mg/kg	1	0.096	0.96	07/26/11
Mercury	7439-97-6	LA-505-412	U	<0.048		mg/kg	1	0.048	0.19	07/26/11
Molybdenum	7439-98-7	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	07/26/11
Strontium	7440-24-6	LA-505-412	B	0.232		mg/kg	1	0.096	0.96	07/26/11
Tin	7440-31-5	LA-505-412	U	<0.096		mg/kg	1	0.096	0.48	07/26/11
Uranium	7440-61-1	LA-505-412	U	<0.096		mg/kg	1	0.096	0.48	07/26/11
Arsenic	7440-38-2	LA-505-412	U	<0.38		mg/kg	1	0.38	3.8	07/26/11
Selenium	7782-49-2	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/26/11

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

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

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

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727002
SAF# F11-096
Sample ID B2FK07

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/19/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/19/11
Chloride	16887-00-6	LA-533-410	B	3.78		mg/kg	1	3.1	21	07/19/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/19/11
Nitrate-N	NO3-N	LA-533-410	B	4.30		mg/kg	1	0.96	5.0	07/19/11
Sulfate	14808-79-8	LA-533-410	B	34.7		mg/kg	1	3.6	53	07/19/11
Cr(VI) Prep										**07/19/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10		ug/g	1	0.10	0.50	07/20/11
ICPMS Prep										**07/20/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	374	J-	mg/kg	1	0.096	0.96	07/26/11
Nickel	7440-02-0	LA-505-412		10.8		mg/kg	1	0.19	1.9	07/26/11
Silver	7440-22-4	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	07/26/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/26/11
Barium	7440-39-3	LA-505-412		65.9		mg/kg	1	0.19	1.9	07/26/11
Beryllium	7440-41-7	LA-505-412	B	0.277		mg/kg	1	0.096	0.48	07/26/11
Boron	7440-42-8	LA-505-412	BC	1.28	4.8U	mg/kg	1	0.48	4.8	07/26/11

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727002
SAF# F11-096
Sample ID B2FK07

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	B	0.111		mg/kg	1	0.096	0.96	07/26/11
Chromium	7440-47-3	LA-505-412		8.44		mg/kg	1	0.48	4.8	07/26/11
Cobalt	7440-48-4	LA-505-412		10.7		mg/kg	1	0.096	0.48	07/26/11
Copper	7440-50-8	LA-505-412		19.2		mg/kg	1	0.096	0.96	07/26/11
Vanadium	7440-62-2	LA-505-412		72.4		mg/kg	1	0.19	1.9	07/26/11
Zinc	7440-66-6	LA-505-412		54.7		mg/kg	1	0.77	4.8	07/26/11
Lead	7439-92-1	LA-505-412		19.6		mg/kg	1	0.096	0.96	07/26/11
Mercury	7439-97-6	LA-505-412	U	<0.048		mg/kg	1	0.048	0.19	07/26/11
Molybdenum	7439-98-7	LA-505-412	B	0.489		mg/kg	1	0.096	0.96	07/26/11
Strontium	7440-24-6	LA-505-412		31.3		mg/kg	1	0.096	0.96	07/26/11
Tin	7440-31-5	LA-505-412		0.572		mg/kg	1	0.096	0.48	07/26/11
Uranium	7440-61-1	LA-505-412		0.509		mg/kg	1	0.096	0.48	07/26/11
Arsenic	7440-38-2	LA-505-412	B	2.97		mg/kg	1	0.38	3.8	07/26/11
Selenium	7782-49-2	LA-505-412	BC	1.14	2.9U	mg/kg	1	0.29	2.9	07/26/11

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727003
SAF# F11-096
Sample ID B2FJX7

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/19/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/19/11
Chloride	16887-00-6	LA-533-410	B	3.40		mg/kg	1	3.1	21	07/19/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/19/11
Nitrate-N	NO3-N	LA-533-410	B	3.15		mg/kg	1	0.96	5.0	07/19/11
Sulfate	14808-79-8	LA-533-410	B	28.1		mg/kg	1	3.6	53	07/19/11
Cr(VI) Prep										**07/19/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	BN	0.149		ug/g	1	0.10	0.50	07/20/11
ICPMS Prep										**07/20/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	420	J-	mg/kg	1	0.10	1.0	07/26/11
Nickel	7440-02-0	LA-505-412		10.1		mg/kg	1	0.20	2.0	07/26/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/26/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/26/11
Barium	7440-39-3	LA-505-412		77.7		mg/kg	1	0.20	2.0	07/26/11
Beryllium	7440-41-7	LA-505-412	B	0.287		mg/kg	1	0.10	0.51	07/26/11
Boron	7440-42-8	LA-505-412	BC	1.09	5.1U	mg/kg	1	0.51	5.1	07/26/11

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727003
SAF# F11-096
Sample ID B2FJX7

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/26/11
Chromium	7440-47-3	LA-505-412		7.28		mg/kg	1	0.51	5.1	07/26/11
Cobalt	7440-48-4	LA-505-412		11.2		mg/kg	1	0.10	0.51	07/26/11
Copper	7440-50-8	LA-505-412		18.9		mg/kg	1	0.10	1.0	07/26/11
Vanadium	7440-62-2	LA-505-412		75.6		mg/kg	1	0.20	2.0	07/26/11
Zinc	7440-66-6	LA-505-412		57.3		mg/kg	1	0.81	5.1	07/26/11
Lead	7439-92-1	LA-505-412		16.0		mg/kg	1	0.10	1.0	07/26/11
Mercury	7439-97-6	LA-505-412	U	<0.051		mg/kg	1	0.051	0.20	07/26/11
Molybdenum	7439-98-7	LA-505-412	B	0.556		mg/kg	1	0.10	1.0	07/26/11
Strontium	7440-24-6	LA-505-412		32.1		mg/kg	1	0.10	1.0	07/26/11
Tin	7440-31-5	LA-505-412		0.543		mg/kg	1	0.10	0.51	07/26/11
Uranium	7440-61-1	LA-505-412		0.542		mg/kg	1	0.10	0.51	07/26/11
Arsenic	7440-38-2	LA-505-412	B	2.74		mg/kg	1	0.41	4.1	07/26/11
Selenium	7782-49-2	LA-505-412	BC	1.07	3.0U	mg/kg	1	0.30	3.0	07/26/11

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727004
SAF# F11-096
Sample ID B2FJX8

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/19/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/19/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	21	07/19/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/19/11
Nitrate-N	NO3-N	LA-533-410	B	1.22		mg/kg	1	0.96	5.0	07/19/11
Sulfate	14808-79-8	LA-533-410	B	7.38		mg/kg	1	3.6	53	07/19/11
Cr(VI) Prep										**07/19/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.099		ug/g	1	0.099	0.50	07/20/11
ICPMS Prep										**07/20/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	398	J-	mg/kg	1	0.099	0.99	07/26/11
Nickel	7440-02-0	LA-505-412		10.8		mg/kg	1	0.20	2.0	07/26/11
Silver	7440-22-4	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	07/26/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/26/11
Barium	7440-39-3	LA-505-412		66.8		mg/kg	1	0.20	2.0	07/26/11
Beryllium	7440-41-7	LA-505-412	B	0.361		mg/kg	1	0.099	0.49	07/26/11
Boron	7440-42-8	LA-505-412	BC	1.54	4.9U	mg/kg	1	0.49	4.9	07/26/11

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727004
SAF# F11-096
Sample ID B2FJX8

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

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	07/26/11
Chromium	7440-47-3	LA-505-412		8.64		mg/kg	1	0.49	4.9	07/26/11
Cobalt	7440-48-4	LA-505-412		11.6		mg/kg	1	0.099	0.49	07/26/11
Copper	7440-50-8	LA-505-412		17.7		mg/kg	1	0.099	0.99	07/26/11
Vanadium	7440-62-2	LA-505-412		75.9		mg/kg	1	0.20	2.0	07/26/11
Zinc	7440-66-6	LA-505-412		52.5		mg/kg	1	0.79	4.9	07/26/11
Lead	7439-92-1	LA-505-412		5.39		mg/kg	1	0.099	0.99	07/26/11
Mercury	7439-97-6	LA-505-412	U	<0.049		mg/kg	1	0.049	0.20	07/26/11
Molybdenum	7439-98-7	LA-505-412	B	0.486		mg/kg	1	0.099	0.99	07/26/11
Strontium	7440-24-6	LA-505-412		32.4		mg/kg	1	0.099	0.99	07/26/11
Tin	7440-31-5	LA-505-412		0.605		mg/kg	1	0.099	0.49	07/26/11
Uranium	7440-61-1	LA-505-412		0.508		mg/kg	1	0.099	0.49	07/26/11
Arsenic	7440-38-2	LA-505-412	B	3.04		mg/kg	1	0.40	4.0	07/26/11
Selenium	7782-49-2	LA-505-412	BC	1.05	3.0U	mg/kg	1	0.30	3.0	07/26/11

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727005
SAF# F11-096
Sample ID B2FJX9

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/20/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UN	<1.8		mg/kg	1	1.8	3.6	07/20/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/20/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/20/11
Nitrate-N	NO3-N	LA-533-410	B	1.28		mg/kg	1	0.95	5.0	07/20/11
Sulfate	14808-79-8	LA-533-410	BN	3.91		mg/kg	1	3.6	53	07/20/11
Cr(VI) Prep										**07/19/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10		ug/g	1	0.10	0.50	07/20/11
ICPMS Prep										**07/20/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	373	J-	mg/kg	1	0.093	0.93	07/26/11
Nickel	7440-02-0	LA-505-412		10.5		mg/kg	1	0.19	1.9	07/26/11
Silver	7440-22-4	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	07/26/11
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	07/26/11
Barium	7440-39-3	LA-505-412		61.3		mg/kg	1	0.19	1.9	07/26/11
Beryllium	7440-41-7	LA-505-412		0.470		mg/kg	1	0.093	0.46	07/26/11
Boron	7440-42-8	LA-505-412	BC	0.949	4.6U	mg/kg	1	0.46	4.6	07/26/11

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727005
SAF# F11-096
Sample ID B2FJX9

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	07/26/11
Chromium	7440-47-3	LA-505-412		8.62		mg/kg	1	0.46	4.6	07/26/11
Cobalt	7440-48-4	LA-505-412		10.9		mg/kg	1	0.093	0.46	07/26/11
Copper	7440-50-8	LA-505-412		17.1		mg/kg	1	0.093	0.93	07/26/11
Vanadium	7440-62-2	LA-505-412		76.6		mg/kg	1	0.19	1.9	07/26/11
Zinc	7440-66-6	LA-505-412		53.1		mg/kg	1	0.74	4.6	07/26/11
Lead	7439-92-1	LA-505-412		4.83		mg/kg	1	0.093	0.93	07/26/11
Mercury	7439-97-6	LA-505-412	U	<0.046		mg/kg	1	0.046	0.19	07/26/11
Molybdenum	7439-98-7	LA-505-412	B	0.458		mg/kg	1	0.093	0.93	07/26/11
Strontium	7440-24-6	LA-505-412		31.3		mg/kg	1	0.093	0.93	07/26/11
Tin	7440-31-5	LA-505-412		0.535		mg/kg	1	0.093	0.46	07/26/11
Uranium	7440-61-1	LA-505-412		0.554		mg/kg	1	0.093	0.46	07/26/11
Arsenic	7440-38-2	LA-505-412	B	2.63		mg/kg	1	0.37	3.7	07/26/11
Selenium	7782-49-2	LA-505-412	BC	1.12	2.8U	mg/kg	1	0.28	2.8	07/26/11

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727006
SAF# F11-096
Sample ID B2FJY0

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/20/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UN	<1.8		mg/kg	1	1.8	3.6	07/20/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/20/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/20/11
Nitrate-N	NO3-N	LA-533-410	B	2.82		mg/kg	1	0.95	5.0	07/20/11
Sulfate	14808-79-8	LA-533-410	BN	17.6		mg/kg	1	3.6	53	07/20/11
Cr(VI) Prep										**07/19/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10		ug/g	1	0.10	0.50	07/20/11
ICPMS Prep										**07/20/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	384	J-	mg/kg	1	0.093	0.93	07/26/11
Nickel	7440-02-0	LA-505-412		11.6		mg/kg	1	0.19	1.9	07/26/11
Silver	7440-22-4	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	07/26/11
Antimony	7440-36-0	LA-505-412	B	0.343		mg/kg	1	0.28	2.8	07/26/11
Barium	7440-39-3	LA-505-412		62.8		mg/kg	1	0.19	1.9	07/26/11
Beryllium	7440-41-7	LA-505-412	B	0.186		mg/kg	1	0.093	0.47	07/26/11
Boron	7440-42-8	LA-505-412	BC	0.810	4.7U	mg/kg	1	0.47	4.7	07/26/11

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727006
SAF# F11-096
Sample ID B2FJY0

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	07/26/11
Chromium	7440-47-3	LA-505-412		9.69		mg/kg	1	0.47	4.7	07/26/11
Cobalt	7440-48-4	LA-505-412		10.7		mg/kg	1	0.093	0.47	07/26/11
Copper	7440-50-8	LA-505-412		18.3		mg/kg	1	0.093	0.93	07/26/11
Vanadium	7440-62-2	LA-505-412		65.8		mg/kg	1	0.19	1.9	07/26/11
Zinc	7440-66-6	LA-505-412		55.4		mg/kg	1	0.75	4.7	07/26/11
Lead	7439-92-1	LA-505-412		7.46		mg/kg	1	0.093	0.93	07/26/11
Mercury	7439-97-6	LA-505-412	U	<0.047		mg/kg	1	0.047	0.19	07/26/11
Molybdenum	7439-98-7	LA-505-412	B	0.464		mg/kg	1	0.093	0.93	07/26/11
Strontium	7440-24-6	LA-505-412		35.7		mg/kg	1	0.093	0.93	07/26/11
Tin	7440-31-5	LA-505-412		0.553		mg/kg	1	0.093	0.47	07/26/11
Uranium	7440-61-1	LA-505-412		0.645		mg/kg	1	0.093	0.47	07/26/11
Arsenic	7440-38-2	LA-505-412		3.91		mg/kg	1	0.37	3.7	07/26/11
Selenium	7782-49-2	LA-505-412	BC	0.998	2.8U	mg/kg	1	0.28	2.8	07/26/11

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727007
SAF# F11-096
Sample ID B2FJY1

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/20/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UN	<1.8		mg/kg	1	1.8	3.6	07/20/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	21	07/20/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/20/11
Nitrate-N	NO3-N	LA-533-410	B	1.09		mg/kg	1	0.96	5.0	07/20/11
Sulfate	14808-79-8	LA-533-410	BN	12.5		mg/kg	1	3.6	53	07/20/11
Cr(VI) Prep										**07/19/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.098		ug/g	1	0.098	0.49	07/20/11
ICPMS Prep										**07/20/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	349	J-	mg/kg	1	0.097	0.97	07/26/11
Nickel	7440-02-0	LA-505-412		10.7		mg/kg	1	0.19	1.9	07/26/11
Silver	7440-22-4	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	07/26/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/26/11
Barium	7440-39-3	LA-505-412		57.1		mg/kg	1	0.19	1.9	07/26/11
Beryllium	7440-41-7	LA-505-412	B	0.240		mg/kg	1	0.097	0.48	07/26/11
Boron	7440-42-8	LA-505-412	BC	0.890	4.8U	mg/kg	1	0.48	4.8	07/26/11

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727007
SAF# F11-096
Sample ID B2FJY1

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

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	07/26/11
Chromium	7440-47-3	LA-505-412		6.13		mg/kg	1	0.48	4.8	07/26/11
Cobalt	7440-48-4	LA-505-412		10.6		mg/kg	1	0.097	0.48	07/26/11
Copper	7440-50-8	LA-505-412		17.6		mg/kg	1	0.097	0.97	07/26/11
Vanadium	7440-62-2	LA-505-412		74.5		mg/kg	1	0.19	1.9	07/26/11
Zinc	7440-66-6	LA-505-412		50.7		mg/kg	1	0.77	4.8	07/26/11
Lead	7439-92-1	LA-505-412		4.34		mg/kg	1	0.097	0.97	07/26/11
Mercury	7439-97-6	LA-505-412	U	<0.048		mg/kg	1	0.048	0.19	07/26/11
Molybdenum	7439-98-7	LA-505-412	B	0.489		mg/kg	1	0.097	0.97	07/26/11
Strontium	7440-24-6	LA-505-412		29.4		mg/kg	1	0.097	0.97	07/26/11
Tin	7440-31-5	LA-505-412	B	0.468		mg/kg	1	0.097	0.48	07/26/11
Uranium	7440-61-1	LA-505-412		0.547		mg/kg	1	0.097	0.48	07/26/11
Arsenic	7440-38-2	LA-505-412	B	2.38		mg/kg	1	0.39	3.9	07/26/11
Selenium	7782-49-2	LA-505-412	BC	0.900	2.9U	mg/kg	1	0.29	2.9	07/26/11

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727008
SAF# F11-096
Sample ID B2FJY2

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/20/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UN	<1.8		mg/kg	1	1.8	3.6	07/20/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	21	07/20/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/20/11
Nitrate-N	NO3-N	LA-533-410	U	<0.96		mg/kg	1	0.96	5.0	07/20/11
Sulfate	14808-79-8	LA-533-410	BN	41.7		mg/kg	1	3.6	53	07/20/11
Cr(VI) Prep										**07/19/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10		ug/g	1	0.10	0.50	07/20/11
ICPMS Prep										**07/20/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	393	J-	mg/kg	1	0.099	0.99	07/26/11
Nickel	7440-02-0	LA-505-412		10.4		mg/kg	1	0.20	2.0	07/26/11
Silver	7440-22-4	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	07/26/11
Antimony	7440-36-0	LA-505-412	B	1.71		mg/kg	1	0.30	3.0	07/26/11
Barium	7440-39-3	LA-505-412		73.2		mg/kg	1	0.20	2.0	07/26/11
Beryllium	7440-41-7	LA-505-412	B	0.371		mg/kg	1	0.099	0.49	07/26/11
Boron	7440-42-8	LA-505-412	BC	0.992	4.9U	mg/kg	1	0.49	4.9	07/26/11

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727008
SAF# F11-096
Sample ID B2FJY2

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

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	07/26/11
Chromium	7440-47-3	LA-505-412		7.92		mg/kg	1	0.49	4.9	07/26/11
Cobalt	7440-48-4	LA-505-412		11.7		mg/kg	1	0.099	0.49	07/26/11
Copper	7440-50-8	LA-505-412		20.6		mg/kg	1	0.099	0.99	07/26/11
Vanadium	7440-62-2	LA-505-412		88.9		mg/kg	1	0.20	2.0	07/26/11
Zinc	7440-66-6	LA-505-412		95.7		mg/kg	1	0.79	4.9	07/26/11
Lead	7439-92-1	LA-505-412		7.87		mg/kg	1	0.099	0.99	07/26/11
Mercury	7439-97-6	LA-505-412		5.56		mg/kg	1	0.049	0.20	07/26/11
Molybdenum	7439-98-7	LA-505-412	B	0.739		mg/kg	1	0.099	0.99	07/26/11
Strontium	7440-24-6	LA-505-412		38.9		mg/kg	1	0.099	0.99	07/26/11
Tin	7440-31-5	LA-505-412		0.938		mg/kg	1	0.099	0.49	07/26/11
Uranium	7440-61-1	LA-505-412		0.643		mg/kg	1	0.099	0.49	07/26/11
Arsenic	7440-38-2	LA-505-412		6.46		mg/kg	1	0.39	3.9	07/26/11
Selenium	7782-49-2	LA-505-412	BC	1.94	3.0U	mg/kg	1	0.30	3.0	07/26/11

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746001
SAF# F11-096
Sample ID B2FJY3

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/20/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UN	<1.8		mg/kg	1	1.8	3.6	07/20/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/20/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/20/11
Nitrate-N	NO3-N	LA-533-410	U	<0.96		mg/kg	1	0.96	5.0	07/20/11
Sulfate	14808-79-8	LA-533-410	BN	5.87		mg/kg	1	3.6	53	07/20/11
Cr(VI) Prep										**07/20/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10		ug/g	1	0.10	0.50	07/20/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		386		mg/kg	1	0.10	1.0	07/29/11
Nickel	7440-02-0	LA-505-412		9.53		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.31		mg/kg	1	0.31	3.1	07/29/11
Barium	7440-39-3	LA-505-412		58.1 J		mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.270		mg/kg	1	0.10	0.51	07/29/11
Boron	7440-42-8	LA-505-412	B	1.44		mg/kg	1	0.51	5.1	07/29/11

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

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

LS
9-20-2011

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

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746001
SAF# F11-096
Sample ID B2FJY3

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	B	0.213		mg/kg	1	0.10	1.0	07/29/11
Chromium	7440-47-3	LA-505-412		7.21		mg/kg	1	0.51	5.1	07/29/11
Cobalt	7440-48-4	LA-505-412		11.3		mg/kg	1	0.10	0.51	07/29/11
Copper	7440-50-8	LA-505-412		17.6		mg/kg	1	0.10	1.0	07/29/11
Vanadium	7440-62-2	LA-505-412		73.7		mg/kg	1	0.20	2.0	07/29/11
Zinc	7440-66-6	LA-505-412		56.1		mg/kg	1	0.82	5.1	07/29/11
Lead	7439-92-1	LA-505-412		4.42		mg/kg	1	0.10	1.0	07/29/11
Mercury	7439-97-6	LA-505-412	B	0.0650		mg/kg	1	0.051	0.20	07/29/11
Molybdenum	7439-98-7	LA-505-412	B	0.768		mg/kg	1	0.10	1.0	07/29/11
Strontium	7440-24-6	LA-505-412		27.1		mg/kg	1	0.10	1.0	07/29/11
Tin	7440-31-5	LA-505-412		0.659		mg/kg	1	0.10	0.51	07/29/11
Uranium	7440-61-1	LA-505-412		0.555		mg/kg	1	0.10	0.51	07/29/11
Arsenic	7440-38-2	LA-505-412	B	2.55		mg/kg	1	0.41	4.1	07/29/11
Selenium	7782-49-2	LA-505-412	B	0.665		mg/kg	1	0.31	3.1	07/29/11

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

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746002
SAF# F11-096
Sample ID B2FJY4

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/20/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UN	<1.8		mg/kg	1	1.8	3.6	07/20/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/20/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/20/11
Nitrate-N	NO3-N	LA-533-410	B	1.33		mg/kg	1	0.95	5.0	07/20/11
Sulfate	14808-79-8	LA-533-410	BN	7.16		mg/kg	1	3.6	53	07/20/11
Cr(VI) Prep										**07/20/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10		ug/g	1	0.10	0.50	07/20/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		366		mg/kg	1	0.097	0.97	07/29/11
Nickel	7440-02-0	LA-505-412		9.51		mg/kg	1	0.19	1.9	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/29/11
Barium	7440-39-3	LA-505-412		60.7	J	mg/kg	1	0.19	1.9	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.278		mg/kg	1	0.097	0.49	07/29/11
Boron	7440-42-8	LA-505-412	B	0.654		mg/kg	1	0.49	4.9	07/29/11

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

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

LS
9-20-2011

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

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746002
SAF# F11-096
Sample ID B2FJY4

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	B	0.0983		mg/kg	1	0.097	0.97	07/29/11
Chromium	7440-47-3	LA-505-412		7.21		mg/kg	1	0.49	4.9	07/29/11
Cobalt	7440-48-4	LA-505-412		11.3		mg/kg	1	0.097	0.49	07/29/11
Copper	7440-50-8	LA-505-412		18.2		mg/kg	1	0.097	0.97	07/29/11
Vanadium	7440-62-2	LA-505-412		78.8		mg/kg	1	0.19	1.9	07/29/11
Zinc	7440-66-6	LA-505-412		56.4		mg/kg	1	0.78	4.9	07/29/11
Lead	7439-92-1	LA-505-412		5.50		mg/kg	1	0.097	0.97	07/29/11
Mercury	7439-97-6	LA-505-412	U	<0.049		mg/kg	1	0.049	0.19	07/29/11
Molybdenum	7439-98-7	LA-505-412	B	0.545		mg/kg	1	0.097	0.97	07/29/11
Strontium	7440-24-6	LA-505-412		27.5		mg/kg	1	0.097	0.97	07/29/11
Tin	7440-31-5	LA-505-412		0.552		mg/kg	1	0.097	0.49	07/29/11
Uranium	7440-61-1	LA-505-412		0.529		mg/kg	1	0.097	0.49	07/29/11
Arsenic	7440-38-2	LA-505-412	B	2.87		mg/kg	1	0.39	3.9	07/29/11
Selenium	7782-49-2	LA-505-412	B	1.00		mg/kg	1	0.29	2.9	07/29/11

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

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746003
SAF# F11-096
Sample ID B2FJY5

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/20/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UN	<1.8		mg/kg	1	1.8	3.6	07/20/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	21	07/20/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/20/11
Nitrate-N	NO3-N	LA-533-410	B	1.09		mg/kg	1	0.96	5.0	07/20/11
Sulfate	14808-79-8	LA-533-410	BN	14.1		mg/kg	1	3.6	53	07/20/11
Cr(VI) Prep										**07/20/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10		ug/g	1	0.10	0.51	07/20/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		367		mg/kg	1	0.098	0.98	07/29/11
Nickel	7440-02-0	LA-505-412		9.31		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/29/11
Barium	7440-39-3	LA-505-412		56.7	J	mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.401		mg/kg	1	0.098	0.49	07/29/11
Boron	7440-42-8	LA-505-412	B	0.656		mg/kg	1	0.49	4.9	07/29/11

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

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

LS
9-20-2011

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

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746003
SAF# F11-096
Sample ID B2FJY5

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	07/29/11
Chromium	7440-47-3	LA-505-412		6.72		mg/kg	1	0.49	4.9	07/29/11
Cobalt	7440-48-4	LA-505-412		11.5		mg/kg	1	0.098	0.49	07/29/11
Copper	7440-50-8	LA-505-412		18.0		mg/kg	1	0.098	0.98	07/29/11
Vanadium	7440-62-2	LA-505-412		85.1		mg/kg	1	0.20	2.0	07/29/11
Zinc	7440-66-6	LA-505-412		58.3		mg/kg	1	0.78	4.9	07/29/11
Lead	7439-92-1	LA-505-412		4.73		mg/kg	1	0.098	0.98	07/29/11
Mercury	7439-97-6	LA-505-412	U	<0.049		mg/kg	1	0.049	0.20	07/29/11
Molybdenum	7439-98-7	LA-505-412	B	0.546		mg/kg	1	0.098	0.98	07/29/11
Strontium	7440-24-6	LA-505-412		27.8		mg/kg	1	0.098	0.98	07/29/11
Tin	7440-31-5	LA-505-412		0.614		mg/kg	1	0.098	0.49	07/29/11
Uranium	7440-61-1	LA-505-412		0.548		mg/kg	1	0.098	0.49	07/29/11
Arsenic	7440-38-2	LA-505-412	B	2.70		mg/kg	1	0.39	3.9	07/29/11
Selenium	7782-49-2	LA-505-412	B	0.814		mg/kg	1	0.29	2.9	07/29/11

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

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746004
SAF# F11-096
Sample ID B2FJY6

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/20/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UN	<1.8		mg/kg	1	1.8	3.6	07/20/11
Chloride	16887-00-6	LA-533-410	B	3.11		mg/kg	1	3.1	20	07/20/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/20/11
Nitrate-N	NO3-N	LA-533-410	B	1.18		mg/kg	1	0.96	5.0	07/20/11
Sulfate	14808-79-8	LA-533-410	N	75.1		mg/kg	1	3.6	53	07/20/11
Cr(VI) Prep										**07/20/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10		ug/g	1	0.10	0.50	07/20/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		356		mg/kg	1	0.094	0.94	07/29/11
Nickel	7440-02-0	LA-505-412		8.51		mg/kg	1	0.19	1.9	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	07/29/11
Barium	7440-39-3	LA-505-412		47.4 J		mg/kg	1	0.19	1.9	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.246		mg/kg	1	0.094	0.47	07/29/11
Boron	7440-42-8	LA-505-412	U	<0.47		mg/kg	1	0.47	4.7	07/29/11

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

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

LS
9-20-2011

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

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746004
SAF# F11-096
Sample ID B2FJY6

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	07/29/11
Chromium	7440-47-3	LA-505-412	B	4.15		mg/kg	1	0.47	4.7	07/29/11
Cobalt	7440-48-4	LA-505-412		11.4		mg/kg	1	0.094	0.47	07/29/11
Copper	7440-50-8	LA-505-412		18.8		mg/kg	1	0.094	0.94	07/29/11
Vanadium	7440-62-2	LA-505-412		76.0		mg/kg	1	0.19	1.9	07/29/11
Zinc	7440-66-6	LA-505-412		53.5		mg/kg	1	0.75	4.7	07/29/11
Lead	7439-92-1	LA-505-412		3.55		mg/kg	1	0.094	0.94	07/29/11
Mercury	7439-97-6	LA-505-412	U	<0.047		mg/kg	1	0.047	0.19	07/29/11
Molybdenum	7439-98-7	LA-505-412	B	0.499		mg/kg	1	0.094	0.94	07/29/11
Strontium	7440-24-6	LA-505-412		25.6		mg/kg	1	0.094	0.94	07/29/11
Tin	7440-31-5	LA-505-412		0.543		mg/kg	1	0.094	0.47	07/29/11
Uranium	7440-61-1	LA-505-412		0.498		mg/kg	1	0.094	0.47	07/29/11
Arsenic	7440-38-2	LA-505-412	B	1.98		mg/kg	1	0.38	3.8	07/29/11
Selenium	7782-49-2	LA-505-412	B	0.905		mg/kg	1	0.28	2.8	07/29/11

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

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746005
SAF# F11-096
Sample ID B2FJY7

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/20/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UN	<1.8		mg/kg	1	1.8	3.6	07/20/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	21	07/20/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/20/11
Nitrate-N	NO3-N	LA-533-410	U	<0.96		mg/kg	1	0.96	5.0	07/20/11
Sulfate	14808-79-8	LA-533-410	BN	6.95		mg/kg	1	3.6	53	07/20/11
Cr(VI) Prep										**07/20/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10		ug/g	1	0.10	0.50	07/20/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		396		mg/kg	1	0.099	0.99	07/29/11
Nickel	7440-02-0	LA-505-412		9.57		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/29/11
Barium	7440-39-3	LA-505-412		65.2	J	mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.260		mg/kg	1	0.099	0.49	07/29/11
Boron	7440-42-8	LA-505-412	U	<0.49		mg/kg	1	0.49	4.9	07/29/11

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

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

LS
9-20-2011

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

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746005
SAF# F11-096
Sample ID B2FJY7

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

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	07/29/11
Chromium	7440-47-3	LA-505-412		6.17		mg/kg	1	0.49	4.9	07/29/11
Cobalt	7440-48-4	LA-505-412		12.1		mg/kg	1	0.099	0.49	07/29/11
Copper	7440-50-8	LA-505-412		18.5		mg/kg	1	0.099	0.99	07/29/11
Vanadium	7440-62-2	LA-505-412		88.1		mg/kg	1	0.20	2.0	07/29/11
Zinc	7440-66-6	LA-505-412		57.9		mg/kg	1	0.79	4.9	07/29/11
Lead	7439-92-1	LA-505-412		4.46		mg/kg	1	0.099	0.99	07/29/11
Mercury	7439-97-6	LA-505-412	U	<0.049		mg/kg	1	0.049	0.20	07/29/11
Molybdenum	7439-98-7	LA-505-412	B	0.535		mg/kg	1	0.099	0.99	07/29/11
Strontium	7440-24-6	LA-505-412		30.9		mg/kg	1	0.099	0.99	07/29/11
Tin	7440-31-5	LA-505-412		0.632		mg/kg	1	0.099	0.49	07/29/11
Uranium	7440-61-1	LA-505-412		0.565		mg/kg	1	0.099	0.49	07/29/11
Arsenic	7440-38-2	LA-505-412	B	2.57		mg/kg	1	0.40	4.0	07/29/11
Selenium	7782-49-2	LA-505-412	B	1.42		mg/kg	1	0.30	3.0	07/29/11

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

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746006
SAF# F11-096
Sample ID B2FJY8

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/20/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UN	<1.8		mg/kg	1	1.8	3.6	07/20/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/20/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/20/11
Nitrate-N	NO3-N	LA-533-410	B	1.08		mg/kg	1	0.95	5.0	07/20/11
Sulfate	14808-79-8	LA-533-410	BN	6.02		mg/kg	1	3.6	53	07/20/11
Cr(VI) Prep										**07/20/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10		ug/g	1	0.10	0.50	07/20/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		412		mg/kg	1	0.10	1.0	07/29/11
Nickel	7440-02-0	LA-505-412		9.84		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/29/11
Barium	7440-39-3	LA-505-412		62.8	J	mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.321		mg/kg	1	0.10	0.51	07/29/11
Boron	7440-42-8	LA-505-412	U	<0.51		mg/kg	1	0.51	5.1	07/29/11

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

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

LS
9-20-2011

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

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746006
SAF# F11-096
Sample ID B2FJY8

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/29/11
Chromium	7440-47-3	LA-505-412		6.83		mg/kg	1	0.51	5.1	07/29/11
Cobalt	7440-48-4	LA-505-412		12.2		mg/kg	1	0.10	0.51	07/29/11
Copper	7440-50-8	LA-505-412		18.9		mg/kg	1	0.10	1.0	07/29/11
Vanadium	7440-62-2	LA-505-412		92.4		mg/kg	1	0.20	2.0	07/29/11
Zinc	7440-66-6	LA-505-412		59.3		mg/kg	1	0.81	5.1	07/29/11
Lead	7439-92-1	LA-505-412		4.62		mg/kg	1	0.10	1.0	07/29/11
Mercury	7439-97-6	LA-505-412	U	<0.051		mg/kg	1	0.051	0.20	07/29/11
Molybdenum	7439-98-7	LA-505-412	B	0.552		mg/kg	1	0.10	1.0	07/29/11
Strontium	7440-24-6	LA-505-412		28.9		mg/kg	1	0.10	1.0	07/29/11
Tin	7440-31-5	LA-505-412		0.629		mg/kg	1	0.10	0.51	07/29/11
Uranium	7440-61-1	LA-505-412		0.569		mg/kg	1	0.10	0.51	07/29/11
Arsenic	7440-38-2	LA-505-412	B	2.42		mg/kg	1	0.40	4.0	07/29/11
Selenium	7782-49-2	LA-505-412	B	1.00		mg/kg	1	0.30	3.0	07/29/11

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

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746007
SAF# F11-096
Sample ID B2FJY9

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/21/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/21/11
Chloride	16887-00-6	LA-533-410	B	3.74		mg/kg	1	3.1	20	07/21/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/21/11
Nitrate-N	NO3-N	LA-533-410	B	1.99		mg/kg	1	0.95	5.0	07/21/11
Sulfate	14808-79-8	LA-533-410	B	34.5		mg/kg	1	3.6	53	07/21/11
Cr(VI) Prep										**07/20/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10		ug/g	1	0.10	0.50	07/20/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		416		mg/kg	1	0.098	0.98	07/29/11
Nickel	7440-02-0	LA-505-412		11.2		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/29/11
Barium	7440-39-3	LA-505-412		82.1 J		mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.277		mg/kg	1	0.098	0.49	07/29/11
Boron	7440-42-8	LA-505-412	B	0.520		mg/kg	1	0.49	4.9	07/29/11

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

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

LS
9-20-2011

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

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746007
SAF# F11-096
Sample ID B2FJY9

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	07/29/11
Chromium	7440-47-3	LA-505-412		8.84		mg/kg	1	0.49	4.9	07/29/11
Cobalt	7440-48-4	LA-505-412		12.2		mg/kg	1	0.098	0.49	07/29/11
Copper	7440-50-8	LA-505-412		19.1		mg/kg	1	0.098	0.98	07/29/11
Vanadium	7440-62-2	LA-505-412		82.4		mg/kg	1	0.20	2.0	07/29/11
Zinc	7440-66-6	LA-505-412		61.3		mg/kg	1	0.78	4.9	07/29/11
Lead	7439-92-1	LA-505-412		6.53		mg/kg	1	0.098	0.98	07/29/11
Mercury	7439-97-6	LA-505-412	U	<0.049		mg/kg	1	0.049	0.20	07/29/11
Molybdenum	7439-98-7	LA-505-412	B	0.562		mg/kg	1	0.098	0.98	07/29/11
Strontium	7440-24-6	LA-505-412		32.7		mg/kg	1	0.098	0.98	07/29/11
Tin	7440-31-5	LA-505-412		0.662		mg/kg	1	0.098	0.49	07/29/11
Uranium	7440-61-1	LA-505-412		0.653		mg/kg	1	0.098	0.49	07/29/11
Arsenic	7440-38-2	LA-505-412	B	3.68		mg/kg	1	0.39	3.9	07/29/11
Selenium	7782-49-2	LA-505-412	B	1.34		mg/kg	1	0.29	2.9	07/29/11

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

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746008
SAF# F11-096
Sample ID B2FK00

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/21/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.7	07/21/11
Chloride	16887-00-6	LA-533-410	U	<3.2		mg/kg	1	3.2	21	07/21/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/21/11
Nitrate-N	NO3-N	LA-533-410	B	1.69		mg/kg	1	0.97	5.0	07/21/11
Sulfate	14808-79-8	LA-533-410		286		mg/kg	1	3.7	53	07/21/11
Cr(VI) Prep										**07/20/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10		ug/g	1	0.10	0.51	07/20/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		374		mg/kg	1	0.097	0.97	07/29/11
Nickel	7440-02-0	LA-505-412		10.9		mg/kg	1	0.19	1.9	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	07/29/11
Antimony	7440-36-0	LA-505-412	B	0.765		mg/kg	1	0.29	2.9	07/29/11
Barium	7440-39-3	LA-505-412		81.7	J	mg/kg	1	0.19	1.9	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.354		mg/kg	1	0.097	0.49	07/29/11
Boron	7440-42-8	LA-505-412	U	<0.49		mg/kg	1	0.49	4.9	07/29/11

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

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

LS
9-20-2011

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

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746008
SAF# F11-096
Sample ID B2FK00

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

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	07/29/11
Chromium	7440-47-3	LA-505-412		8.60		mg/kg	1	0.49	4.9	07/29/11
Cobalt	7440-48-4	LA-505-412		11.1		mg/kg	1	0.097	0.49	07/29/11
Copper	7440-50-8	LA-505-412		20.2		mg/kg	1	0.097	0.97	07/29/11
Vanadium	7440-62-2	LA-505-412		76.1		mg/kg	1	0.19	1.9	07/29/11
Zinc	7440-66-6	LA-505-412		62.7		mg/kg	1	0.78	4.9	07/29/11
Lead	7439-92-1	LA-505-412		6.45		mg/kg	1	0.097	0.97	07/29/11
Mercury	7439-97-6	LA-505-412	U	<0.049		mg/kg	1	0.049	0.19	07/29/11
Molybdenum	7439-98-7	LA-505-412	B	0.525		mg/kg	1	0.097	0.97	07/29/11
Strontium	7440-24-6	LA-505-412		36.8		mg/kg	1	0.097	0.97	07/29/11
Tin	7440-31-5	LA-505-412		0.946		mg/kg	1	0.097	0.49	07/29/11
Uranium	7440-61-1	LA-505-412		0.624		mg/kg	1	0.097	0.49	07/29/11
Arsenic	7440-38-2	LA-505-412		4.43		mg/kg	1	0.39	3.9	07/29/11
Selenium	7782-49-2	LA-505-412	B	1.04		mg/kg	1	0.29	2.9	07/29/11

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

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746009
SAF# F11-096
Sample ID B2FK01

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/21/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/21/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	21	07/21/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/21/11
Nitrate-N	NO3-N	LA-533-410	B	1.84		mg/kg	1	0.96	5.0	07/21/11
Sulfate	14808-79-8	LA-533-410	B	9.04		mg/kg	1	3.6	53	07/21/11
Cr(VI) Prep										**07/20/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10		ug/g	1	0.10	0.50	07/20/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		433		mg/kg	1	0.10	1.0	07/29/11
Nickel	7440-02-0	LA-505-412		11.2		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/29/11
Barium	7440-39-3	LA-505-412		95.5	J	mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.431		mg/kg	1	0.10	0.51	07/29/11
Boron	7440-42-8	LA-505-412	B	0.728		mg/kg	1	0.51	5.1	07/29/11

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

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

LS
9-20-2011

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

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746009
SAF# F11-096
Sample ID B2FK01

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/29/11
Chromium	7440-47-3	LA-505-412		9.02		mg/kg	1	0.51	5.1	07/29/11
Cobalt	7440-48-4	LA-505-412		11.7		mg/kg	1	0.10	0.51	07/29/11
Copper	7440-50-8	LA-505-412		19.6		mg/kg	1	0.10	1.0	07/29/11
Vanadium	7440-62-2	LA-505-412		76.1		mg/kg	1	0.20	2.0	07/29/11
Zinc	7440-66-6	LA-505-412		53.4		mg/kg	1	0.81	5.1	07/29/11
Lead	7439-92-1	LA-505-412		5.93		mg/kg	1	0.10	1.0	07/29/11
Mercury	7439-97-6	LA-505-412	U	<0.051		mg/kg	1	0.051	0.20	07/29/11
Molybdenum	7439-98-7	LA-505-412	B	0.558		mg/kg	1	0.10	1.0	07/29/11
Strontium	7440-24-6	LA-505-412		29.6		mg/kg	1	0.10	1.0	07/29/11
Tin	7440-31-5	LA-505-412		0.644		mg/kg	1	0.10	0.51	07/29/11
Uranium	7440-61-1	LA-505-412		0.583		mg/kg	1	0.10	0.51	07/29/11
Arsenic	7440-38-2	LA-505-412	B	3.14		mg/kg	1	0.41	4.1	07/29/11
Selenium	7782-49-2	LA-505-412	B	0.941		mg/kg	1	0.30	3.0	07/29/11

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

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760001
SAF# F11-096
Sample ID B2FK02

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/21/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/21/11
Chloride	16887-00-6	LA-533-410	B	3.53		mg/kg	1	3.1	21	07/21/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/21/11
Nitrate-N	NO3-N	LA-533-410	B	1.40		mg/kg	1	0.96	5.0	07/21/11
Sulfate	14808-79-8	LA-533-410	B	39.3		mg/kg	1	3.6	53	07/21/11
Cr(VI) Prep										**07/26/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/26/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		422		mg/kg	1	0.098	0.98	07/29/11
Nickel	7440-02-0	LA-505-412		8.11		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/29/11
Barium	7440-39-3	LA-505-412		56.4	J	mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.423		mg/kg	1	0.098	0.49	07/29/11
Boron	7440-42-8	LA-505-412	U	<0.49		mg/kg	1	0.49	4.9	07/29/11

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

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

LS
9-20-2011

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)

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760001
SAF# F11-096
Sample ID B2FK02

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	07/29/11
Chromium	7440-47-3	LA-505-412	B	4.83		mg/kg	1	0.49	4.9	07/29/11
Cobalt	7440-48-4	LA-505-412		11.1		mg/kg	1	0.098	0.49	07/29/11
Copper	7440-50-8	LA-505-412		16.7		mg/kg	1	0.098	0.98	07/29/11
Vanadium	7440-62-2	LA-505-412		82.2		mg/kg	1	0.20	2.0	07/29/11
Zinc	7440-66-6	LA-505-412		52.6		mg/kg	1	0.78	4.9	07/29/11
Lead	7439-92-1	LA-505-412		3.80		mg/kg	1	0.098	0.98	07/29/11
Mercury	7439-97-6	LA-505-412	U	<0.049		mg/kg	1	0.049	0.20	07/29/11
Molybdenum	7439-98-7	LA-505-412	B	0.632		mg/kg	1	0.098	0.98	07/29/11
Strontium	7440-24-6	LA-505-412		26.0		mg/kg	1	0.098	0.98	07/29/11
Tin	7440-31-5	LA-505-412		0.526		mg/kg	1	0.098	0.49	07/29/11
Uranium	7440-61-1	LA-505-412		0.503		mg/kg	1	0.098	0.49	07/29/11
Arsenic	7440-38-2	LA-505-412	B	2.40		mg/kg	1	0.39	3.9	07/29/11
Selenium	7782-49-2	LA-505-412	B	1.21		mg/kg	1	0.29	2.9	07/29/11

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

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

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

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760002
SAF# F11-096
Sample ID B2FK03

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/21/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/21/11
Chloride	16887-00-6	LA-533-410	B	3.13		mg/kg	1	3.1	20	07/21/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/21/11
Nitrate-N	NO3-N	LA-533-410	B	1.33		mg/kg	1	0.95	5.0	07/21/11
Sulfate	14808-79-8	LA-533-410	B	13.1		mg/kg	1	3.6	52	07/21/11
Cr(VI) Prep										**07/26/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/26/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		415		mg/kg	1	0.10	1.0	07/29/11
Nickel	7440-02-0	LA-505-412		8.36		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/29/11
Barium	7440-39-3	LA-505-412		53.4	J	mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.412		mg/kg	1	0.10	0.50	07/29/11
Boron	7440-42-8	LA-505-412	U	<0.50		mg/kg	1	0.50	5.0	07/29/11

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

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

LS
9-20-2011

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)

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760002
SAF# F11-096
Sample ID B2FK03

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/29/11
Chromium	7440-47-3	LA-505-412		5.15		mg/kg	1	0.50	5.0	07/29/11
Cobalt	7440-48-4	LA-505-412		11.6		mg/kg	1	0.10	0.50	07/29/11
Copper	7440-50-8	LA-505-412		16.6		mg/kg	1	0.10	1.0	07/29/11
Vanadium	7440-62-2	LA-505-412		94.4		mg/kg	1	0.20	2.0	07/29/11
Zinc	7440-66-6	LA-505-412		56.7		mg/kg	1	0.81	5.0	07/29/11
Lead	7439-92-1	LA-505-412		2.96		mg/kg	1	0.10	1.0	07/29/11
Mercury	7439-97-6	LA-505-412	U	<0.050		mg/kg	1	0.050	0.20	07/29/11
Molybdenum	7439-98-7	LA-505-412	B	0.641		mg/kg	1	0.10	1.0	07/29/11
Strontium	7440-24-6	LA-505-412		25.6		mg/kg	1	0.10	1.0	07/29/11
Tin	7440-31-5	LA-505-412	B	0.480		mg/kg	1	0.10	0.50	07/29/11
Uranium	7440-61-1	LA-505-412	B	0.490		mg/kg	1	0.10	0.50	07/29/11
Arsenic	7440-38-2	LA-505-412	B	1.62		mg/kg	1	0.40	4.0	07/29/11
Selenium	7782-49-2	LA-505-412	B	0.913		mg/kg	1	0.30	3.0	07/29/11

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

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

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

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760003
SAF# F11-096
Sample ID B2FK04

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/21/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/21/11
Chloride	16887-00-6	LA-533-410	B	4.47		mg/kg	1	3.1	21	07/21/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/21/11
Nitrate-N	NO3-N	LA-533-410	B	1.94		mg/kg	1	0.96	5.0	07/21/11
Sulfate	14808-79-8	LA-533-410	B	21.8		mg/kg	1	3.6	53	07/21/11
Cr(VI) Prep										**07/26/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/26/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		389		mg/kg	1	0.094	0.94	07/29/11
Nickel	7440-02-0	LA-505-412		12.6		mg/kg	1	0.19	1.9	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	07/29/11
Barium	7440-39-3	LA-505-412		78.4 J		mg/kg	1	0.19	1.9	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.384		mg/kg	1	0.094	0.47	07/29/11
Boron	7440-42-8	LA-505-412	B	1.63		mg/kg	1	0.47	4.7	07/29/11

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

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

LS
9-20-2011

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)

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760003
SAF# F11-096
Sample ID B2FK04

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	07/29/11
Chromium	7440-47-3	LA-505-412		11.1		mg/kg	1	0.47	4.7	07/29/11
Cobalt	7440-48-4	LA-505-412		11.1		mg/kg	1	0.094	0.47	07/29/11
Copper	7440-50-8	LA-505-412		19.8		mg/kg	1	0.094	0.94	07/29/11
Vanadium	7440-62-2	LA-505-412		73.2		mg/kg	1	0.19	1.9	07/29/11
Zinc	7440-66-6	LA-505-412		68.9		mg/kg	1	0.75	4.7	07/29/11
Lead	7439-92-1	LA-505-412		23.1		mg/kg	1	0.094	0.94	07/29/11
Mercury	7439-97-6	LA-505-412	B	0.0585		mg/kg	1	0.047	0.19	07/29/11
Molybdenum	7439-98-7	LA-505-412	B	0.550		mg/kg	1	0.094	0.94	07/29/11
Strontium	7440-24-6	LA-505-412		34.6		mg/kg	1	0.094	0.94	07/29/11
Tin	7440-31-5	LA-505-412		0.549		mg/kg	1	0.094	0.47	07/29/11
Uranium	7440-61-1	LA-505-412		0.575		mg/kg	1	0.094	0.47	07/29/11
Arsenic	7440-38-2	LA-505-412	B	3.49		mg/kg	1	0.38	3.8	07/29/11
Selenium	7782-49-2	LA-505-412	B	0.858		mg/kg	1	0.28	2.8	07/29/11

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

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

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

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760004
SAF# F11-096
Sample ID B2FK05

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/21/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/21/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/21/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/21/11
Nitrate-N	NO3-N	LA-533-410	B	1.23		mg/kg	1	0.96	5.0	07/21/11
Sulfate	14808-79-8	LA-533-410	B	8.52		mg/kg	1	3.6	53	07/21/11
Cr(VI) Prep										**07/26/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/26/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		440		mg/kg	1	0.099	0.99	07/29/11
Nickel	7440-02-0	LA-505-412		18.8		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/29/11
Barium	7440-39-3	LA-505-412		78.3 J		mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.202		mg/kg	1	0.099	0.49	07/29/11
Boron	7440-42-8	LA-505-412	B	1.22		mg/kg	1	0.49	4.9	07/29/11

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

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

LS
9-20-2011

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)

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760004
SAF# F11-096
Sample ID B2FK05

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

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	07/29/11
Chromium	7440-47-3	LA-505-412		22.2		mg/kg	1	0.49	4.9	07/29/11
Cobalt	7440-48-4	LA-505-412		12.3		mg/kg	1	0.099	0.49	07/29/11
Copper	7440-50-8	LA-505-412		20.8		mg/kg	1	0.099	0.99	07/29/11
Vanadium	7440-62-2	LA-505-412		74.6		mg/kg	1	0.20	2.0	07/29/11
Zinc	7440-66-6	LA-505-412		57.1		mg/kg	1	0.79	4.9	07/29/11
Lead	7439-92-1	LA-505-412		5.72		mg/kg	1	0.099	0.99	07/29/11
Mercury	7439-97-6	LA-505-412	U	<0.049		mg/kg	1	0.049	0.20	07/29/11
Molybdenum	7439-98-7	LA-505-412	B	0.475		mg/kg	1	0.099	0.99	07/29/11
Strontium	7440-24-6	LA-505-412		35.5		mg/kg	1	0.099	0.99	07/29/11
Tin	7440-31-5	LA-505-412		0.538		mg/kg	1	0.099	0.49	07/29/11
Uranium	7440-61-1	LA-505-412		0.668		mg/kg	1	0.099	0.49	07/29/11
Arsenic	7440-38-2	LA-505-412	B	3.19		mg/kg	1	0.39	3.9	07/29/11
Selenium	7782-49-2	LA-505-412	B	0.886		mg/kg	1	0.30	3.0	07/29/11

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

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

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

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760005
SAF# F11-096
Sample ID B2FNW5

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/21/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/21/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/21/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/21/11
Nitrate-N	NO3-N	LA-533-410	U	<0.96		mg/kg	1	0.96	5.0	07/21/11
Sulfate	14808-79-8	LA-533-410	B	10.2		mg/kg	1	3.6	53	07/21/11
Cr(VI) Prep										**07/26/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/26/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		476		mg/kg	1	0.097	0.97	07/29/11
Nickel	7440-02-0	LA-505-412		10.3		mg/kg	1	0.19	1.9	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/29/11
Barium	7440-39-3	LA-505-412		70.8 J		mg/kg	1	0.19	1.9	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.333		mg/kg	1	0.097	0.48	07/29/11
Boron	7440-42-8	LA-505-412	B	0.661		mg/kg	1	0.48	4.8	07/29/11

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

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

LS
9-20-2011

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)

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760005
SAF# F11-096
Sample ID B2FNW5

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

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	07/29/11
Chromium	7440-47-3	LA-505-412		7.79		mg/kg	1	0.48	4.8	07/29/11
Cobalt	7440-48-4	LA-505-412		12.6		mg/kg	1	0.097	0.48	07/29/11
Copper	7440-50-8	LA-505-412		18.7		mg/kg	1	0.097	0.97	07/29/11
Vanadium	7440-62-2	LA-505-412		88.2		mg/kg	1	0.19	1.9	07/29/11
Zinc	7440-66-6	LA-505-412		61.6		mg/kg	1	0.77	4.8	07/29/11
Lead	7439-92-1	LA-505-412		5.12		mg/kg	1	0.097	0.97	07/29/11
Mercury	7439-97-6	LA-505-412	B	0.0763		mg/kg	1	0.048	0.19	07/29/11
Molybdenum	7439-98-7	LA-505-412	B	0.493		mg/kg	1	0.097	0.97	07/29/11
Strontium	7440-24-6	LA-505-412		31.0		mg/kg	1	0.097	0.97	07/29/11
Tin	7440-31-5	LA-505-412		0.598		mg/kg	1	0.097	0.48	07/29/11
Uranium	7440-61-1	LA-505-412		0.620		mg/kg	1	0.097	0.48	07/29/11
Arsenic	7440-38-2	LA-505-412	B	2.93		mg/kg	1	0.39	3.9	07/29/11
Selenium	7782-49-2	LA-505-412	B	0.864		mg/kg	1	0.29	2.9	07/29/11

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

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

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

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760006
SAF# F11-096
Sample ID B2FNW6

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/21/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/21/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/21/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/21/11
Nitrate-N	NO3-N	LA-533-410	B	0.991		mg/kg	1	0.96	5.0	07/21/11
Sulfate	14808-79-8	LA-533-410	B	10.4		mg/kg	1	3.6	53	07/21/11
Cr(VI) Prep										**07/26/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/26/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		360		mg/kg	1	0.098	0.98	07/29/11
Nickel	7440-02-0	LA-505-412		9.86		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	07/29/11
Antimony	7440-36-0	LA-505-412	B	0.438		mg/kg	1	0.29	2.9	07/29/11
Barium	7440-39-3	LA-505-412		57.5 J		mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.321		mg/kg	1	0.098	0.49	07/29/11
Boron	7440-42-8	LA-505-412	U	<0.49		mg/kg	1	0.49	4.9	07/29/11

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

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

LS
9-20-2011

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)

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760006
SAF# F11-096
Sample ID B2FNW6

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	07/29/11
Chromium	7440-47-3	LA-505-412		7.06		mg/kg	1	0.49	4.9	07/29/11
Cobalt	7440-48-4	LA-505-412		10.8		mg/kg	1	0.098	0.49	07/29/11
Copper	7440-50-8	LA-505-412		17.9		mg/kg	1	0.098	0.98	07/29/11
Vanadium	7440-62-2	LA-505-412		71.8		mg/kg	1	0.20	2.0	07/29/11
Zinc	7440-66-6	LA-505-412		52.8		mg/kg	1	0.78	4.9	07/29/11
Lead	7439-92-1	LA-505-412		11.0		mg/kg	1	0.098	0.98	07/29/11
Mercury	7439-97-6	LA-505-412	B	0.0588		mg/kg	1	0.049	0.20	07/29/11
Molybdenum	7439-98-7	LA-505-412	B	0.459		mg/kg	1	0.098	0.98	07/29/11
Strontium	7440-24-6	LA-505-412		28.4		mg/kg	1	0.098	0.98	07/29/11
Tin	7440-31-5	LA-505-412		0.613		mg/kg	1	0.098	0.49	07/29/11
Uranium	7440-61-1	LA-505-412		0.628		mg/kg	1	0.098	0.49	07/29/11
Arsenic	7440-38-2	LA-505-412	B	2.98		mg/kg	1	0.39	3.9	07/29/11
Selenium	7782-49-2	LA-505-412	B	1.16		mg/kg	1	0.29	2.9	07/29/11

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

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

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

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760007
SAF# F11-096
Sample ID B2FNW7

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/21/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/21/11
Chloride	16887-00-6	LA-533-410	B	3.59		mg/kg	1	3.1	21	07/21/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/21/11
Nitrate-N	NO3-N	LA-533-410	B	1.17		mg/kg	1	0.96	5.0	07/21/11
Sulfate	14808-79-8	LA-533-410	B	16.1		mg/kg	1	3.6	53	07/21/11
Cr(VI) Prep										**07/26/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/26/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		413		mg/kg	1	0.098	0.98	07/29/11
Nickel	7440-02-0	LA-505-412		8.88		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/29/11
Barium	7440-39-3	LA-505-412		63.1 J		mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.227		mg/kg	1	0.098	0.49	07/29/11
Boron	7440-42-8	LA-505-412	U	<0.49		mg/kg	1	0.49	4.9	07/29/11

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

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

LS
9-20-2011

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)

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760007
SAF# F11-096
Sample ID B2FNW7

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cadmium	7440-43-9	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	07/29/11
Chromium	7440-47-3	LA-505-412		4.99		mg/kg	1	0.49	4.9	07/29/11
Cobalt	7440-48-4	LA-505-412		11.5		mg/kg	1	0.098	0.49	07/29/11
Copper	7440-50-8	LA-505-412		17.5		mg/kg	1	0.098	0.98	07/29/11
Vanadium	7440-62-2	LA-505-412		93.3		mg/kg	1	0.20	2.0	07/29/11
Zinc	7440-66-6	LA-505-412		56.9		mg/kg	1	0.79	4.9	07/29/11
Lead	7439-92-1	LA-505-412		3.74		mg/kg	1	0.098	0.98	07/29/11
Mercury	7439-97-6	LA-505-412	U	<0.049		mg/kg	1	0.049	0.20	07/29/11
Molybdenum	7439-98-7	LA-505-412	B	0.586		mg/kg	1	0.098	0.98	07/29/11
Strontium	7440-24-6	LA-505-412		28.0		mg/kg	1	0.098	0.98	07/29/11
Tin	7440-31-5	LA-505-412		0.530		mg/kg	1	0.098	0.49	07/29/11
Uranium	7440-61-1	LA-505-412		0.520		mg/kg	1	0.098	0.49	07/29/11
Arsenic	7440-38-2	LA-505-412	B	2.46		mg/kg	1	0.39	3.9	07/29/11
Selenium	7782-49-2	LA-505-412	B	0.745		mg/kg	1	0.29	2.9	07/29/11

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

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

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

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760008
SAF# F11-096
Sample ID B2FNW8

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/25/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/25/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/25/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/25/11
Nitrate-N	NO3-N	LA-533-410	U	<0.95		mg/kg	1	0.95	4.9	07/25/11
Sulfate	14808-79-8	LA-533-410	B	23.0		mg/kg	1	3.6	52	07/25/11
Cr(VI) Prep										**07/26/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/26/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		386		mg/kg	1	0.099	0.99	07/29/11
Nickel	7440-02-0	LA-505-412		9.16		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/29/11
Barium	7440-39-3	LA-505-412		63.1 J		mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.370		mg/kg	1	0.099	0.49	07/29/11
Boron	7440-42-8	LA-505-412	U	<0.49		mg/kg	1	0.49	4.9	07/29/11

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

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

LS
9-20-2011

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)

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760008
SAF# F11-096
Sample ID B2FNW8

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

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	07/29/11
Chromium	7440-47-3	LA-505-412		6.67		mg/kg	1	0.49	4.9	07/29/11
Cobalt	7440-48-4	LA-505-412		11.9		mg/kg	1	0.099	0.49	07/29/11
Copper	7440-50-8	LA-505-412		17.8		mg/kg	1	0.099	0.99	07/29/11
Vanadium	7440-62-2	LA-505-412		88.9		mg/kg	1	0.20	2.0	07/29/11
Zinc	7440-66-6	LA-505-412		57.5		mg/kg	1	0.79	4.9	07/29/11
Lead	7439-92-1	LA-505-412		25.4		mg/kg	1	0.099	0.99	07/29/11
Mercury	7439-97-6	LA-505-412	B	0.0854		mg/kg	1	0.049	0.20	07/29/11
Molybdenum	7439-98-7	LA-505-412	B	0.558		mg/kg	1	0.099	0.99	07/29/11
Strontium	7440-24-6	LA-505-412		29.6		mg/kg	1	0.099	0.99	07/29/11
Tin	7440-31-5	LA-505-412		0.549		mg/kg	1	0.099	0.49	07/29/11
Uranium	7440-61-1	LA-505-412		0.492		mg/kg	1	0.099	0.49	07/29/11
Arsenic	7440-38-2	LA-505-412	B	2.53		mg/kg	1	0.40	4.0	07/29/11
Selenium	7782-49-2	LA-505-412	B	0.910		mg/kg	1	0.30	3.0	07/29/11

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

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

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

REVISED112760 -

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Attachment 2
Narrative
WSCF112687

Revision: This report has been revised to include Boron QC results that were missing from the original report.

Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

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

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

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

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

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

Inorganic Comments

Anions – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Narrative

Attachment 2
Narrative
WSCF112687

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):

- Manganese –Matrix Spike Duplicate recovery was outside established laboratory limits. Affected sample results in this batch were "N" flagged.
- All other applicable QC controls are within the established limits.

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

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-075

PAGE 1 OF 1

COLLECTOR: FM Hall

SAMPLING LOCATION: CHPRC

Area AA Zone 1 Sample 1

ICE CHEST NO.: N/A

SHIPPED TO: Waste Sampling & Characterization

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT DESIGNATION: Area AA In-Process Sampling - Soil

FIELD LOGBOOK NO.: HNF-N-507

ACTUAL SAMPLE DEPTH: Surface

OFFSITE PROPERTY NO.: N/A

PROJECT COORDINATOR: LUKE, SN

SAF NO.: F11-096

COA: 302682ES10

BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: C01

AIR QUALITY: ☐

DATA TURNAROUND: 12 Days / 12 Days

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

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

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

112687

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJX2	1	SOIL	JUL 13 2011	1249	X	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 13 2011 1420	Victor Burns	JUL 13 2011 1420

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.

** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

LABORATORY SECTION: RECEIVED BY | TITLE | DATE/TIME

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

PRINTED ON 6/29/2011

A-5003-018 (REV 2)

Friday, July 15, 2011 11:36:16 AM

Page 2 of 8

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-096-076 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AA Zone 1 Sample 2	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096
ICE CHEST NO.: N/A	FIELD LOGBOOK NO.: HNF-N-607-22	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

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

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJX3	2 SOIL	JUL 13 2011	1309	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 13 2011 1430	Victor Silva	JUL 13 2011 1430

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011 — A 6003.618 (REV 7)

Friday, July 15, 2011 11:36:16 AM
Page 3 of 8

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-077

PAGE 1 OF 1

COLLECTOR: FM Hall, CHPRC

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT COORDINATOR: LUKE, SN

PRICE CODE: C01

DATA TURNAROUND: 12 Days / 12 Days

SAMPLING LOCATION: Area AA Zone 1 Sample 3

PROJECT DESIGNATION: Area AA In-Process Sampling - Soil

SAF NO.: F11-096

AIR QUALITY:

ICE CHEST NO.: N/A

FIELD LOGBOOK NO.: HNF-N-507-22

ACTUAL SAMPLE DEPTH: Surface

COA: 302682E510

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

SHIPPED TO: Waste Sampling & Characterization

OFFSITE PROPERTY NO.: N/A

BILL OF LADING/AIR BILL NO.: N/A

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJX4	SOIL	JUL 13 2011	1320	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 13 2011 1130	Victor Silms	JUL 13 2011 1130

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011

A-6002-618 (REV 2)

Friday, July 15, 2011 11:36:16 AM
Page 4 of 8

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-078

PAGE 1 OF 1

COLLECTOR: FM Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01
SAMPLING LOCATION: Area AA Zone 1 Sample 4	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096	AIR QUALITY: ☐
ICE CHEST NO.: N/A	FIELD LOGBOOK NO.: HNF-N-507	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A	

DATA TURNAROUND: 12 Days / 12 Days

ORIGINAL

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME	[redacted]	
B2FJX5	4	SOIL	JUL 13 2011	1331	X	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 13 2011 1430	Victor [illegible]	JUL 13 2011 1430

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011

A-6003-618 (REV 2)

Friday, July 15, 2011 11:36:16 AM
Page 5 of 8

REVISED112687 -

Chain of Custody

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | F11-096-079 | PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days		
SAMPLING LOCATION: Area AA Zone 1 Sample 5	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil	SAF NO.: F11-096	AIR QUALITY:
ICE CHEST NO.: N/A	FIELD LOGBOOK NO.: HNF-N-507-22	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10
METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL		
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJX6 5	SOIL	JUL 13 2011	1344	X	

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 13 2011 1130	Victor	JUL 13 2011 1130

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKT applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011

A-6003-618 (REV 2)

Friday, July 15, 2011 11:36:16 AM
Page 6 of 8

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-096-137	PAGE 1 OF 1
COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: Area AA Zone 1 Sample 31	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096	AIR QUALITY: ☐	
ICE CHEST NO.: N/A	FIELD LOGBOOK NO.: HNF-N-507-22	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FNW9	SOIL	JUL 1 3 2011	1049	X	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: FM Hall CHPRC	DATE/TIME: JUL 1 3 2011 1130	RECEIVED BY/STORED IN: Victor Silva	DATE/TIME: JUL 1 3 2011 1130
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

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) (Arsenic, Beryllium, 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};

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

PRINTED ON 7/11/2011

A-6003-618 (REV 2)

Friday, July 15, 2011 11:36:16 AM
Page 7 of 8

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-096-138	PAGE 1 OF 1
COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND
SAMPLING LOCATION: Area AA Zone 1 Sample 32	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096	AIR QUALITY: ☐	12 Days / 12 Days
ICE CHEST NO.: N/A	FIELD LOGBOOK NO.: HNF-N-507-22	ACTUAL SAMPLE DEPTH: N/A	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

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

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

112687

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FNX0 7	SOIL	JUL 13 2011	1230	X	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: FM Hall CHPRC	DATE/TIME: 1515 JUL 13 2011	RECEIVED BY/STORED IN: C Johnson	DATE/TIME: 1515 JUL 13 2011
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

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKT applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) (Arsenic, Beryllium, 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};

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

PRINTED ON 7/11/2011

4-6003-618 (REV 2)

Friday, July 15, 2011 11:36:16 AM
Page 8 of 8

REVISED112687 -

Attachment 2
Narrative
WSCF112727

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 # WSCF112727 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):

- Batch 186656

- Fluoride and Sulfate – Matrix Spike and/or Matrix Spike Duplicate recoveries are outside established laboratory limits. Affected sample results in this batch were "N" flagged.
- All other applicable QC controls are within the established limits.

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

- The Matrix Spike recovery is outside established laboratory limits. Affected sample results in this batch were "N" flagged.
- All other applicable QC controls are within the established limits.

ICP-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):

- Manganese – Matrix Spike and/or Matrix Spike Duplicate recoveries are outside established laboratory limits. Affected sample results in this batch were "N" flagged.
- Boron and Selenium – Detected in the Blank and evaluated. Affected sample results in this batch were "C" Flagged.
- 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
WSCF112727

8/15/2011

Problem and Discrepancy Report

WSCF

SDG WSCF112727

---

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.

3

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-096-099 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days		
SAMPLING LOCATION: Area AA Zone 1 Sample 25	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096
AIR QUALITY: ☐			
ICE CHEST NO.: 1A	FIELD LOGBOOK NO.: HNF-N-507-22	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10
METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL		
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

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

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

SPECIAL HANDLING AND/OR STORAGE: 112727

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FK06	SOIL	JUL 18 2011	1210	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 18 2011 1830		JUL 18 2011 1830

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 8/29/2011 — A-6003-618 (REV 2)

Monday, July 18, 2011 4:42:12 PM
Page 3 of 10

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F11-096-100	PAGE 1 OF 1
COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01 / DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: Area AA Zone 1 Sample 26	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096	AIR QUALITY: ☐
ICE CHEST NO.: NA	FIELD LOGBOOK NO.: HNF-N-507 22	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE / ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A	

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

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

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

SPECIAL HANDLING AND/OR STORAGE

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FK07 2	SOIL	JUL 18 2011	1218	X	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: FM Hall CHPRC	DATE/TIME: JUL 18 2011 1430	RECEIVED BY/STORED IN: Victor Bing	DATE/TIME: JUL 18 2011 1730
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

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011

A-6003-618 (REV 7)

Monday, July 18, 2011 4:42:12 PM
Page 4 of 10

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-080

PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT COORDINATOR: LUKE, SN

PRICE CODE: C01

DATA TURNAROUND: 12 Days / 12 Days

SAMPLING LOCATION: Area AA Zone 1 Sample 6

PROJECT DESIGNATION: Area AA In-Process Sampling - Soil

SAF NO.: F11-096

AIR QUALITY:

ICE CHEST NO.: NA

FIELD LOGBOOK NO.: HNF-N-507-22

ACTUAL SAMPLE DEPTH: Surface

COA: 302682ES10

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

SHIPPED TO: Waste Sampling & Characterization

OFFSITE PROPERTY NO.: N/A

BILL OF LADING/AIR BILL NO.: N/A

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJX7	SOIL	JUL 18 2011	1218	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 18 2011 1130	Victor Sing	JUL 18 2011 1130

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

LABORATORY SECTION — RECEIVED BY — TITLE — DATE/TIME

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

PRINTED ON 6/29/2011

A-6003-618 (REV 2)

Monday, July 18, 2011 4:42:12 PM
Page 5 of 10

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-096-081 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days		
SAMPLING LOCATION: Area AA Zone 1 Sample 7	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096
AIR QUALITY: ☐			
ICE CHEST NO.: N/A	FIELD LOGBOOK NO.: HNF-N-507	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10
METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL		
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

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

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

SPECIAL HANDLING AND/OR STORAGE:

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJX8 4	SOIL	JUL 18 2011	1238	X	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: FM Hall CHPRC	DATE/TIME: JUL 18 2011 1430	RECEIVED BY/STORED IN: [signature]	DATE/TIME: JUL 18 2011 1430
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011 — A-6003-618 (REV 2)

Monday, July 18, 2011 4:42:12 PM
Page 6 of 10

Chain of Custody

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F11-096-082** | **PAGE 1 OF 1**

COLLECTOR FM Hall CHPRC	**COMPANY CONTACT** LUKE, SN	**TELEPHONE NO.** 372-1667	**PROJECT COORDINATOR** LUKE, SN
PRICE CODE C01	**DATA TURNAROUND** 12 Days / 12 Days		
SAMPLING LOCATION Area AA Zone 1 Sample 8	**PROJECT DESIGNATION** Area AA In-Process Sampling - Soil		**SAF NO.** F11-096
AIR QUALITY ☐			
ICE CHEST NO. N/A	**FIELD LOGBOOK NO.** HNF-N-507-22	**ACTUAL SAMPLE DEPTH** Surface	**COA** 302682ES10
METHOD OF SHIPMENT GOVERNMENT VEHICLE	**ORIGINAL**		
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJX9 5	SOIL	JUL 18 2011	1226	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 18 2011 1430	Victor Sims	JUL 18 2011 1430

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011 — A-6005-518 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-083

PAGE 1 OF 1

COLLECTOR: FM Hall, CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days		
SAMPLING LOCATION: Area AA Zone 1 Sample 9	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil	SAF NO.: F11-096	AIR QUALITY: [ ]
ICE CHEST NO.: AA	FIELD LOGBOOK NO.: HNF-N-507-22	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10
METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL		
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

MATRIX*: A=Air, D1=Drum Liquids, D5=Drum Solids, L=Liquid, O=Oil, S=Soil, ST=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJY0 6	SOIL	JUL 18 2011	1254	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 18 2011 1430	Victor Ruiz	JUL 18 2011 1430

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GK1 applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011

A-6003-618 (REV 2)

Monday, July 18, 2011 4:42:12 PM
Page 8 of 10

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-096-084 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days		
SAMPLING LOCATION: Area AA Zone 1 Sample 10	PROJECT DESIGNATION: Area AA In Process Sampling Soil		SAF NO.: F11-096
AIR QUALITY: ☐			
ICE CHEST NO.: AA	FIELD LOGBOOK NO.: HNF-N-507-22	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10
METHOD OF SHIPMENT: GOVERNMENT VEHICLE			
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

ORIGINAL

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJY1	SOIL	JUL 18 2011	1363	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 18 2011 1430	Victor Bim	JUL 18 2011 1730

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011

A-6003-618 (REV 7)

Monday, July 18, 2011 4:42:12 PM
Page 9 of 10

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-085

PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT COORDINATOR: LUKE, SN

PRICE CODE: C01

DATA TURNAROUND: 12 Days / 12 Days

SAMPLING LOCATION: Area AA Zone 1 Sample 11

PROJECT DESIGNATION: Area AA In-Process Sampling - Soil

SAF NO.: F11-096

AIR QUALITY:

ICE CHEST NO.: NA

FIELD LOGBOOK NO.: HNF-N-507-22

ACTUAL SAMPLE DEPTH: Surface

COA: 302682ES10

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

SHIPPED TO: Waste Sampling & Characterization

OFFSITE PROPERTY NO.: N/A

BILL OF LADING/AIR BILL NO.: N/A

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

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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	Cool-4C
HOLDING TIME	6 Months	28 Days/48 Hours
TYPE OF CONTAINER	G/P	G/P
NO. OF CONTAINER(S)	1	1
VOLUME	120mL	62mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJY2	SOIL	JUL 18 2011	1310	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 18 2011 1430		JUL 18 2011 1430

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8_HG - ICPMS {Mercury}; Chromium Hex - 7196;
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen n Nitrate, Nitrogen in Nitrite, Sulfate};

LABORATORY SECTION — RECEIVED BY — TITLE — DATE/TIME

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

PRINTED ON 6/29/2011

A-6003-618 (REV 2)

Monday, July 18, 2011 4:42:12 PM
Page 10 of 10

Attachment 2
Narrative
WSCF112746

Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

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

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

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

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

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

Inorganic Comments

Anions – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

Attachment 2
Narrative
WSCF112746

- Batch QC 186656
  - Fluoride and Sulfate – Matrix Spike and/or Matrix Spike Duplicate recoveries are outside established laboratory limits. Affected sample results in this batch were "N" flagged.
- Batch QC 186804
  - Chloride – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results near or below the minimum detectable level. No flags issued.
  - All other applicable QC controls are within the established limits.

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

- Matrix Spike and/or Matrix Spike Duplicate recoveries are outside established laboratory limits. Affected sample results in this batch were "N" flagged.
- All other 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):

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

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-086 | PAGE 1 OF 1

COLLECTOR: DJ Sparks CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AA Zone 1 Sample 12	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096
ICE CHEST NO.: NA	FIELD LOGBOOK NO.: HNF-N-507-22	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10
SHIPPED TO: Waste Sampling & Characterization NA	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

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

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

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

112746

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJY3	SOIL	JUL 19 2011	1157	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
DJ Sparks CHPRC	JUL 19 2011		JUL 19 2011 1430

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011

A-6003 613 (REV 2)

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-096-087 — PAGE 1 OF 1

COLLECTOR: DJ Sparks CHPRC

SAMPLING LOCATION: Area AA Zone 1 Sample 13

ICE CHEST NO.: NA

SHIPPED TO: Waste Sampling & Characterization

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT DESIGNATION: Area AA In-Process Sampling - Soil

FIELD LOGBOOK NO.: HNF-N-507-22

ACTUAL SAMPLE DEPTH: Surface

OFFSITE PROPERTY NO.: N/A

PROJECT COORDINATOR: LUKE, SN

SAF NO.: F11-096

COA: 302682ES10

BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: C01

AIR QUALITY:

DATA TURNAROUND: 12 Days / 12 Days

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJY4 2	SOIL	JUL 19 2011	1206	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
DJ Sparks CHPRC	JUL 19 2011 1430	[illegible]	JUL 19 2011 1430

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-088

PAGE 1 OF 1

COLLECTOR: DJ Sparks CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AA Zone 1 Sample 14	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096
ICE CHEST NO.: AA	FIELD LOGBOOK NO.: HNF-N-502-22	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: C01

AIR QUALITY: ☐

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

DATA TURNAROUND: 12 Days / 12 Days

ORIGINAL

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJY5	3	SOIL	JUL 19 2011	1818	X	X

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
DJ Sparks CHPRC	JUL 19 2011 1430	[illegible]	JUL 19 2011 1430

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011

A-6003-618 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-089

PAGE 1 OF 1

COLLECTOR: DJ Sparks CHPRC

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT COORDINATOR: LUKE, SN

PRICE CODE: C01

DATA TURNAROUND: 12 Days / 12 Days

SAMPLING LOCATION: Area AA Zone 1 Sample 15

PROJECT DESIGNATION: Area AA In-Process Sampling - Soil

SAF NO.: F11-096

AIR QUALITY: ☐

ICE CHEST NO.: 111

FIELD LOGBOOK NO.: HNF-N-807-22

ACTUAL SAMPLE DEPTH: Surface

COA: 302682ES10

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

SHIPPED TO: Waste Sampling & Characterization

OFFSITE PROPERTY NO.: N/A

BILL OF LADING/AIR BILL NO.: N/A

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJY6 4	SOIL	JUL 19 2011	1326	X	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
DJ Sparks CHPRC	JUL 19 2011 1430	[illegible] 1430	JUL 19 2011

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

LABORATORY SECTION — RECEIVED BY — TITLE — DATE/TIME

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

PRINTED ON 6/29/2011

A-6003-61R (REV 2)

Chain of Custody

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

F11-096-090 — PAGE 1 OF 1

COLLECTOR: DJ Sp CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1567	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AA Zone 1 Sample 16	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096
ICE CHEST NO.: NA	FIELD LOGBOOK NO.: HNF-N-507-22	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

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

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJY7	5	SOIL	JUL 19 2011	1234	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
DJ Sparks CHPRC	1430 JUL 19 2011		1430 JUL 19 2011

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011 — A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-096-091 — PAGE 1 OF 1

COLLECTOR: DJ Sparks CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days		
SAMPLING LOCATION: Area AA Zone 1 Sample 17	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil	SAF NO.: F11-096	AIR QUALITY: ☐
ICE CHEST NO.: NA	FIELD LOGBOOK NO.: HNF-N-807	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10
METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL		
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJY8	SOIL	JUL 19 2011	1847	+	+

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
DJ Sparks CHPRC	1430 JUL 19 2011	[illegible]	1430 JUL 19 2011

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKT applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-092

PAGE 1 OF 1

COLLECTOR: DJ Sparks CHPRC

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT COORDINATOR: LUKE, SN

PRICE CODE: C01

DATA TURNAROUND: 12 Days / 12 Days

SAMPLING LOCATION: Area AA Zone 1 Sample 18

PROJECT DESIGNATION: Area AA In-Process Sampling - Soil

SAF NO.: F11-096

AIR QUALITY: ☐

ICE CHEST NO.: NA

FIELD LOGBOOK NO.: HNF-N-507

ACTUAL SAMPLE DEPTH: Surface

COA: 302682ES10

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

SHIPPED TO: Waste Sampling & Characterization

OFFSITE PROPERTY NO.: N/A

BILL OF LADING/AIR BILL NO.: N/A

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJY9	7	SOIL	JUL 19 2011	1353	X	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
DJ Sparks CHPRC	JUL 19 2011 1430	[illegible]	JUL 19 2011 1430

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011

A-6003-618 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-093 | PAGE 1 OF 1

COLLECTOR: DJ Sparks CHPRC

SAMPLING LOCATION: Area AA Zone 1 Sample 19

ICE CHEST NO.: NA

SHIPPED TO: Waste Sampling & Characterization

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1867

PROJECT COORDINATOR: LUKE, SN

PROJECT DESIGNATION: Area AA In-Process Sampling - Soil

SAF NO.: F11-096

FIELD LOGBOOK NO.: ~~HNF-N-507-~~ 22

ACTUAL SAMPLE DEPTH: Surface

COA: 302682ES10

OFFSITE PROPERTY NO.: N/A

BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: C01

AIR QUALITY: ☐

DATA TURNAROUND: 12 Days / 12 Days

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FK00	SOIL	JUL 19 2011	1340	X	X

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
DJ Sparks CHPRC	JUL 19 2011 1430	[illegible]	JUL 19 2011 1430

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011

A-6003-518 (REV 2)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F11-096-094** | **PAGE 1 OF 1**

COLLECTOR DJ Sparks CHPRC	**COMPANY CONTACT** LUKE, SN	**TELEPHONE NO.** 372-1667	**PROJECT COORDINATOR** LUKE, SN
PRICE CODE C01	**DATA TURNAROUND** 12 Days / 12 Days	**SAMPLING LOCATION** Area AA Zone 1 Sample 20	**PROJECT DESIGNATION** Area AA In-Process Sampling - Soil
SAF NO. F11-096	**AIR QUALITY** ☐	**ICE CHEST NO.** N/A	**FIELD LOGBOOK NO.** HNF-N-507-22
ACTUAL SAMPLE DEPTH Surface	**COA** 302682ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	**ORIGINAL**
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A	**BILL OF LADING/AIR BILL NO.** N/A	

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	**MATRIX***	**SAMPLE DATE**	**SAMPLE TIME**		
B2FK01 9	SOIL	JUL 19 2011	1303	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
DJ Sparks CHPRC	JUL 19 2011 1430	[illegible]	JUL 19 2011 1430

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKT applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011 | A-6003-618 (REV 7)

Attachment 2
Narrative, Rev. 1
WSCF112760

Revision: This report has been revised to include Boron QC results that were missing from the original report.

Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

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

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

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

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

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

Inorganic Comments

Anions – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Batch QC 186804

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

- Batch QC 186865
  - Chloride and Nitrate – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results near or below the minimum detectable level. No flags issued.
  - All other applicable QC controls are within the established limits.

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

- 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):

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

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-096-095	PAGE 1 OF 1
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: Area AA Zone 1 Sample 21	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096	AIR QUALITY: ☐	
ICE CHEST NO.: SML-777	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302602ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

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

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

112760

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FK02	SOIL	7/20/11	1308	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 7/20/11 1300	RECEIVED BY/STORED IN: SSU#1 MO1109	DATE/TIME: 7/20/11 1500
RELINQUISHED BY/REMOVED FROM: SSU#1 MO1109	DATE/TIME: 7/21/11 0800	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 7/21/11 0800
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 7/21/11 1005	RECEIVED BY/STORED IN: [illegible]	DATE/TIME: 7/21/11 1005
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011

A-6003-518 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-096-096 — PAGE 1 OF 1

COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days		
SAMPLING LOCATION: Area AA Zone 1 Sample 22	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096
AIR QUALITY: ☐			
ICE CHEST NO.: SML-777	FIELD LOGBOOK NO.: HNF-N-807-23	ACTUAL SAMPLE DEPTH: 0 - 1	COA: 302682ES10
METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL		
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FK03	2	SOIL	7/20/11	1322	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	7/20/11 1500	SSU #1 MO1109	7/20/11 1500
SSU#1 MO1109	7/21/11 0800	F. Hall	7/21/11 0800
F. Hall	7/21/11 1005	[illegible]	7/21/11 1005

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

LABORATORY SECTION — RECEIVED BY — TITLE — DATE/TIME

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

PRINTED ON 6/29/2011 — A-6003-618 (REV 2)

Thursday, July 21, 2011 11:47:00 AM
Page 4 of 10

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST F11-096-097 PAGE 1 OF 1

COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days	SAMPLING LOCATION: Area AA Zone 1 Sample 23	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil
SAF NO.: F11-096	AIR QUALITY:	ICE CHEST NO.: SMC-777	FIELD LOGBOOK NO.: HNF-N-507-23
ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FK04	3	SOIL	7/20/11	1331	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	7/20/11 1500	M01109SSU#1	7/20/11 1500
M01109SSU#1	7/21/11 0800	F. Hall	7/21/11 0800
F. Hall	7/21/11 1005	[illegible]	7/21/11 1005

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011 A-6003-516 (REV 2)

Thursday, July 21, 2011 11:47:00 AM
Page 5 of 10

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-096-098 — PAGE 1 OF 1

COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AA Zone 1 Sample 24	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096
ICE CHEST NO.: SMC-777	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1	COA: 302682ES10
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

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

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FK05	4	SOIL	7/20/11	1347	✓	✓

CHAIN OF POSSESSION	DATE/TIME	SIGN/ PRINT NAMES	DATE/TIME
RELINQUISHED BY/REMOVED FROM: F. Hall	7/20/11 1500	RECEIVED BY/STORED IN: M01109 SSU#1	7/20/11 1500
RELINQUISHED BY/REMOVED FROM: M01109 SSU#1	7/21/11 0800	RECEIVED BY/STORED IN: F. Hall	7/21/11 0800
RELINQUISHED BY/REMOVED FROM: F. Hall	7/21/11 1005	RECEIVED BY/STORED IN: [illegible]	7/21/11 1005
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011 — A-6003-618 (REV 2)

Thursday, July 21, 2011 11:47:00 AM
Page 6 of 10

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F11-096-133	PAGE 1 OF 1
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01 / DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: Area AA Zone 1 Sample 27	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096	AIR QUALITY: ☐
ICE CHEST NO.: SML-777	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE / ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A	

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FNW5 5	SOIL	7/20/11	1359	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 7/20/11 1500	RECEIVED BY/STORED IN: MO1109 SSU#1	DATE/TIME: 7/20/11 1500
RELINQUISHED BY/REMOVED FROM: MO1109 SSU#1	DATE/TIME: 7/21/11 0800	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 7/21/11 0800
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 7/21/11 1005	RECEIVED BY/STORED IN: [signature]	DATE/TIME: 7/21/11 1005
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKJ applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 7/11/2011

A-6003-618 (REV 2)

Thursday, July 21, 2011 11:47:00 AM
Page 7 of 10

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-096-134	PAGE 1 OF 1
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND
SAMPLING LOCATION: Area AA Zone 1 Sample 28	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096	AIR QUALITY: ☐	12 Days / 12 Days
ICE CHEST NO.: SML-777	FIELD LOGBOOK NO.: HNF-N-507-28	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, Ti=Tissue, V=Vegetation, W=Water, Wi=Wipe, X=Other

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

SPECIAL HANDLING AND/OR STORAGE:

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FNW6	SOIL	7/20/11	1409	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 7/20/11 1500	RECEIVED BY/STORED IN: SSU#1 MC1109	DATE/TIME: 7/20/11 1500
RELINQUISHED BY/REMOVED FROM: SSU#1 MC1109	DATE/TIME: 7/21/11 0800	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 7/21/11 0800
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 7/21/11 1005	RECEIVED BY/STORED IN: [illegible]	DATE/TIME: 7/21/11 1005
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 7/11/2011

A-6003-61B (REV 2)

Thursday, July 21, 2011 11:47:00 AM
Page 8 of 10

REVISED112760 -

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-096-135	PAGE 1 OF 1
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01 / AIR QUALITY: ☐	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: Area AA Zone 1 Sample 29	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096		
ICE CHEST NO.: SML-777	FIELD LOGBOOK NO.: HNF-N-807-23	ACTUAL SAMPLE DEPTH: 0-11	COA: 302GB2E510	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FNW7 7	SOIL	7/20/11	1418	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 7/20/11 1500	RECEIVED BY/STORED IN: MO1109SSU#1	DATE/TIME: 7/20/11 1500
RELINQUISHED BY/REMOVED FROM: MO1109SSU#1	DATE/TIME: 7/21/11 0800	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 7/21/11 0800
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 7/21/11 1005	RECEIVED BY/STORED IN: [illegible]	DATE/TIME: 7/21/11 1005
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 7/11/2011

A-6003-618 (REV 2)

Thursday, July 21, 2011 11:47:00 AM
Page 9 of 10

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-096-136	PAGE 1 OF 1
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: Area AA Zone 1 Sample 30	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096	AIR QUALITY: ☐	
ICE CHEST NO.: SML-777	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FNW8 8	SOIL	7/20/11	1429	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 7/20/11 1500	RECEIVED BY/STORED IN: M01109SSU#1	DATE/TIME: 7/20/11 1500
RELINQUISHED BY/REMOVED FROM: M01109SSU#1	DATE/TIME: 7/21/11 0800	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 7/21/11 0800
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 7/21/11 1005	RECEIVED BY/STORED IN: [illegible]	DATE/TIME: 7/21/11 1005
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 7/11/2011

4-6003-618 (REV 2)

Thursday, July 21, 2011 11:47:00 AM
Page 10 of 10

Appendix 5

Data Validation Supporting Documentation

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: 100K Area AA Zone 1			DATA PACKAGE: VSR11-055		
VALIDATOR: Carl Schloesslin		LAB: WSCF		DATE: 9-20-2011	
			SDG: WSCF-112687, -112727, -112746, -112760		
ANALYSES PERFORMED					
SW-846/ICP	SW-846/GFAA	SW-846/Hg		EPA 200.8 X	

SAMPLES/MATRIX Soil samples

SDG WSCF112687: B2FJX2, B2FJX3, B2FJX4, B2FJX5, B2FJX6, B2FNW9, B2FNX0

SDG WSCF112727: B2FK06, B2FK07, B2FJX7, B2FJX8, B2FJX9, B2FJY0, B2FJY1, B2FJY2

SDG WSCF112746: B2FJY3, B2FJY4, B2FJY5, B2FJY6, B2FJY7, B2FJY8, B2FJY9, B2FK00, B2FK01

SDG WSCF112760: B2FK02, B2FK03, B2FK04, B2FK05, B2FNW5, B2FNW6, B2FNW7, B2FNW8

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

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

Comments: None

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

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

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

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

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

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

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

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

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

Comments:

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

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

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

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

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

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

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

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

Comments:

WSCF112687 EB B2FNX0 Hits (mg/kg): Mn 0.50, Ni 0.55, Ba 0.36, Cr 0.66, Co 0.19, Cu 0.59, V 0.38, Pb 0.40, Mo 0.10, Sr 0.22, U 0.11, As 0.69
WSCF112727 MB Hits (mg/kg): B 0.61, Se 0.42
WSCF112727 EB B2FK06 Hits (mg/kg): Mn 0.78, Ba 0.43, Cu 0.33, V 0.39, Pb 0.11, Sr 0.23

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:

WSCF112687: Mn MSD %R = 47%
WSCF112727: Mn MS %R = 68%

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:

WSCF112687: Mn MS/MSD RPD = 63%
Field duplicates B2FJX2 & B2FNW9 Ni RPD = 45%, Pb RPD = 117%

WSCF112746 & WSCF112760: Ba MS/MSD RPD = 36%

6. ICP QUALITY CONTROL (Levels D and E)

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

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

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

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

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

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

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

Comments:

7. HOLDING TIMES (all levels)

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

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

Comments: None

8. RESULT QUANTITATION AND DETECTION LIMITS (all levels)

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

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

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

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

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

Comments: None

Appendix 6

Additional Documentation Requested By Client

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

QC Batch 185961 **Test** ICP-2008 MS All possible metal
Associated Samples 112687001, 112687002, 112687003, 112687004, 112687005, 112687006, 112687007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			**QC Sample #60710**							
Manganese	7439-96-5		270	mg/kg	94.4	75 - 121				07/18/11
Nickel	7440-02-0		56.0	mg/kg	94.7	74 - 122				07/18/11
Silver	7440-22-4		32.2	mg/kg	93.6	83 - 127				07/18/11
Antimony	7440-36-0		182	mg/kg	149.1	62 - 205				07/18/11
Barium	7440-39-3		152	mg/kg	89.7	78 - 118				07/18/11
Beryllium	7440-41-7		58.4	mg/kg	93.6	77 - 120				07/18/11
Cadmium	7440-43-9		59.3	mg/kg	96	76 - 129				07/18/11
Chromium	7440-47-3		69.5	mg/kg	97.5	68 - 119				07/18/11
Cobalt	7440-48-4		99.0	mg/kg	96.1	77 - 122				07/18/11
Copper	7440-50-8		75.3	mg/kg	92.7	67 - 120				07/18/11
Vanadium	7440-62-2		58.7	mg/kg	99.2	67 - 122				07/18/11
Zinc	7440-66-6		131	mg/kg	93.1	73 - 131				07/18/11
Lead	7439-92-1		86.6	mg/kg	93.7	79 - 124				07/18/11
Mercury	7439-97-6		3.42	mg/kg	90.8	69 - 124				07/18/11
Molybdenum	7439-98-7		45.4	mg/kg	106.5	80 - 125				07/18/11
Strontium	7440-24-6		64.2	mg/kg	88.6	78 - 119				07/18/11
Tin	7440-31-5		104	mg/kg	97.3	84 - 130				07/18/11
Uranium	7440-61-1		327	mg/kg	81.7	86 - 113				07/18/11
Arsenic	7440-38-2		87.5	mg/kg	94.5	79 - 125				07/18/11

REVISED112687 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Selenium	7782-49-2		86.8	mg/kg	97	82 - 133				07/18/11
MS			**QC Sample #60711**							
			Original 112670001							
Manganese	7439-96-5		86.8	mg/kg	90.8	70 - 130				07/18/11
Nickel	7440-02-0		88.0	mg/kg	92	70 - 130				07/18/11
Silver	7440-22-4		89.5	mg/kg	93.6	70 - 130				07/18/11
Antimony	7440-36-0		84.2	mg/kg	88	70 - 130				07/18/11
Barium	7440-39-3		95.4	mg/kg	99.7	70 - 130				07/18/11
Beryllium	7440-41-7		89.8	mg/kg	93.9	70 - 130				07/18/11
Cadmium	7440-43-9		88.8	mg/kg	92.8	70 - 130				07/18/11
Chromium	7440-47-3		90.5	mg/kg	94.6	70 - 130				07/18/11
Cobalt	7440-48-4		85.7	mg/kg	89.6	70 - 130				07/18/11
Copper	7440-50-8		83.5	mg/kg	87.3	70 - 130				07/18/11
Vanadium	7440-62-2		89.9	mg/kg	94	70 - 130				07/18/11
Zinc	7440-66-6		86.7	mg/kg	90.6	70 - 130				07/18/11
Lead	7439-92-1		90.3	mg/kg	94.4	70 - 130				07/18/11
Mercury	7439-97-6		1.67	mg/kg	87.5	70 - 130				07/18/11
Molybdenum	7439-98-7		91.9	mg/kg	96.1	70 - 130				07/18/11
Strontium	7440-24-6		88.3	mg/kg	92.3	70 - 130				07/18/11
Tin	7440-31-5		92.0	mg/kg	96.2	70 - 130				07/18/11
Uranium	7440-61-1		90.8	mg/kg	94.9	70 - 130				07/18/11
Arsenic	7440-38-2		90.5	mg/kg	94.6	70 - 130				07/18/11
Selenium	7782-49-2		91.8	mg/kg	96	70 - 130				07/18/11
MSD			**QC Sample #60712**							
			Original 112670001					**Paired**	**60711**	

REVISED112687 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
Manganese	7439-96-5		44.8	mg/kg	47.4	70 - 130	62.80	30	*	NX	07/18/11
Nickel	7440-02-0		81.1	mg/kg	85.8	70 - 130	7.00	30			07/18/11
Silver	7440-22-4		87.6	mg/kg	92.8	70 - 130	0.90	30			07/18/11
Antimony	7440-36-0		82.3	mg/kg	87.2	70 - 130	0.90	30			07/18/11
Barium	7440-39-3		92.5	mg/kg	98	70 - 130	1.70	30			07/18/11
Beryllium	7440-41-7		84.9	mg/kg	89.9	70 - 130	4.40	30			07/18/11
Cadmium	7440-43-9		87.2	mg/kg	92.4	70 - 130	0.40	30			07/18/11
Chromium	7440-47-3		84.9	mg/kg	89.9	70 - 130	5.10	30			07/18/11
Cobalt	7440-48-4		82.3	mg/kg	87.2	70 - 130	2.70	30			07/18/11
Copper	7440-50-8		78.7	mg/kg	83.3	70 - 130	4.70	30			07/18/11
Vanadium	7440-62-2		82.4	mg/kg	87.3	70 - 130	7.40	30			07/18/11
Zinc	7440-66-6		81.0	mg/kg	85.7	70 - 130	5.60	30			07/18/11
Lead	7439-92-1		88.6	mg/kg	93.8	70 - 130	0.60	30			07/18/11
Mercury	7439-97-6		1.57	mg/kg	83	70 - 130	5.30	30			07/18/11
Molybdenum	7439-98-7		89.7	mg/kg	94.9	70 - 130	1.30	30			07/18/11
Strontium	7440-24-6		85.5	mg/kg	90.5	70 - 130	2.00	30			07/18/11
Tin	7440-31-5		89.7	mg/kg	95	70 - 130	1.30	30			07/18/11
Uranium	7440-61-1		89.2	mg/kg	94.4	70 - 130	0.50	30			07/18/11
Arsenic	7440-38-2		88.3	mg/kg	93.5	70 - 130	1.20	30			07/18/11
Selenium	7782-49-2		89.3	mg/kg	94.6	70 - 130	1.50	30			07/18/11
BLANK			**QC Sample #60709**								
Manganese	7439-96-5		<0.10	ug/L						U	07/18/11
Nickel	7440-02-0		<0.20	ug/L						U	07/18/11
Silver	7440-22-4		<0.050	ug/L						U	07/18/11

REVISED112687 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Antimony	7440-36-0		<0.050	ug/L					U	07/18/11
Barium	7440-39-3		<0.20	ug/L					U	07/18/11
Beryllium	7440-41-7		<0.050	ug/L					U	07/18/11
Boron	7440-42-8		<0.50	ug/L					U	07/18/11
Cadmium	7440-43-9		<0.050	ug/L					U	07/18/11
Chromium	7440-47-3		<0.10	ug/L					U	07/18/11
Cobalt	7440-48-4		<0.10	ug/L					U	07/18/11
Copper	7440-50-8		<0.10	ug/L					U	07/18/11
Vanadium	7440-62-2		<0.20	ug/L					U	07/18/11
Zinc	7440-66-6		<0.80	ug/L					U	07/18/11
Lead	7439-92-1		<0.10	ug/L					U	07/18/11
Mercury	7439-97-6		<0.030	ug/L					U	07/18/11
Molybdenum	7439-98-7		<0.10	ug/L					U	07/18/11
Strontium	7440-24-6		<0.10	ug/L					U	07/18/11
Tin	7440-31-5		<0.10	ug/L					U	07/18/11
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
LCS			**QC Sample #60710**							
Boron	7440-42-8		103	mg/kg	97.2	64 - 136				07/18/11
MS			**QC Sample #60711**							
			Original 112670001							
Boron	7440-42-8		88.8	mg/kg	92.8	70 - 130				07/18/11

REVISED112687 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
MSD			**QC Sample #60712**							
			Original 112670001					**Paired**	**60711**	
Boron	7440-42-8		80.4	mg/kg	85.1	70 - 130	8.70	30		07/18/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

QC Batch 186462 **Test** ICP-2008 MS All possible metal
Associated Samples 112727001, 112727002, 112727003, 112727004, 112727005, 112727006, 112727007, 112727008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			**QC Sample #60882**							
Manganese	7439-96-5		257	mg/kg	89.8	75 - 121				07/26/11
Nickel	7440-02-0		54.6	mg/kg	92.4	74 - 122				07/26/11
Silver	7440-22-4		31.1	mg/kg	90.3	83 - 127				07/26/11
Antimony	7440-36-0		172	mg/kg	141.3	62 - 205				07/26/11
Barium	7440-39-3		156	mg/kg	92.5	78 - 118				07/26/11
Beryllium	7440-41-7		57.3	mg/kg	91.8	77 - 120				07/26/11
Cadmium	7440-43-9		57.7	mg/kg	93.4	76 - 129				07/26/11
Chromium	7440-47-3		63.7	mg/kg	89.4	68 - 119				07/26/11
Cobalt	7440-48-4		93.6	mg/kg	90.9	77 - 122				07/26/11
Copper	7440-50-8		71.9	mg/kg	88.6	67 - 120				07/26/11
Vanadium	7440-62-2		53.7	mg/kg	90.8	67 - 122				07/26/11
Zinc	7440-66-6		132	mg/kg	93.6	73 - 131				07/26/11
Lead	7439-92-1		88.0	mg/kg	95.3	79 - 124				07/26/11
Mercury	7439-97-6		3.67	mg/kg	97.3	69 - 124				07/26/11
Molybdenum	7439-98-7		45.7	mg/kg	107.3	80 - 125				07/26/11
Strontium	7440-24-6		64.2	mg/kg	88.7	78 - 119				07/26/11
Tin	7440-31-5		98.9	mg/kg	92.4	84 - 130				07/26/11
Uranium	7440-61-1		348	mg/kg	87	86 - 113				07/26/11
Arsenic	7440-38-2		83.6	mg/kg	90.3	79 - 125				07/26/11

REVISED112727 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Selenium	7782-49-2		86.6	mg/kg	96.7	82 - 133				07/26/11
MS			**QC Sample #60883**							
			Original 112717001							
Manganese	7439-96-5		67.9	mg/kg	67.8	70 - 130			N	07/26/11
Nickel	7440-02-0		89.3	mg/kg	89.2	70 - 130				07/26/11
Silver	7440-22-4		99.5	mg/kg	99.4	70 - 130				07/26/11
Antimony	7440-36-0		90.6	mg/kg	90.5	70 - 130				07/26/11
Barium	7440-39-3		108	mg/kg	108	70 - 130				07/26/11
Beryllium	7440-41-7		94.3	mg/kg	94.2	70 - 130				07/26/11
Cadmium	7440-43-9		99.9	mg/kg	99.8	70 - 130				07/26/11
Chromium	7440-47-3		92.5	mg/kg	92.4	70 - 130				07/26/11
Cobalt	7440-48-4		90.2	mg/kg	90.1	70 - 130				07/26/11
Copper	7440-50-8		87.7	mg/kg	87.7	70 - 130				07/26/11
Vanadium	7440-62-2		96.0	mg/kg	95.9	70 - 130				07/26/11
Zinc	7440-66-6		97.1	mg/kg	97	70 - 130				07/26/11
Lead	7439-92-1		96.4	mg/kg	96.3	70 - 130				07/26/11
Mercury	7439-97-6		1.92	mg/kg	95.7	70 - 130				07/26/11
Molybdenum	7439-98-7		102	mg/kg	101.7	70 - 130				07/26/11
Strontium	7440-24-6		101	mg/kg	100.6	70 - 130				07/26/11
Tin	7440-31-5		101	mg/kg	101.3	70 - 130				07/26/11
Uranium	7440-61-1		98.5	mg/kg	98.4	70 - 130				07/26/11
Arsenic	7440-38-2		98.8	mg/kg	98.7	70 - 130				07/26/11
Selenium	7782-49-2		102	mg/kg	102	70 - 130				07/26/11
MSD			**QC Sample #60884**							
			Original 112717001					**Paired**	**60883**	

REVISED112727 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Manganese	7439-96-5		87.1	mg/kg	87.4	70 - 130	25.30	30		07/26/11
Nickel	7440-02-0		84.4	mg/kg	84.7	70 - 130	5.20	30		07/26/11
Silver	7440-22-4		96.3	mg/kg	96.7	70 - 130	2.80	30		07/26/11
Antimony	7440-36-0		86.9	mg/kg	87.2	70 - 130	3.70	30		07/26/11
Barium	7440-39-3		103	mg/kg	103.5	70 - 130	4.30	30		07/26/11
Beryllium	7440-41-7		90.4	mg/kg	90.7	70 - 130	3.80	30		07/26/11
Cadmium	7440-43-9		96.8	mg/kg	97.2	70 - 130	2.60	30		07/26/11
Chromium	7440-47-3		87.6	mg/kg	88	70 - 130	4.90	30		07/26/11
Cobalt	7440-48-4		85.6	mg/kg	85.9	70 - 130	4.80	30		07/26/11
Copper	7440-50-8		81.8	mg/kg	82.1	70 - 130	6.60	30		07/26/11
Vanadium	7440-62-2		88.6	mg/kg	89	70 - 130	7.50	30		07/26/11
Zinc	7440-66-6		72.5	mg/kg	72.8	70 - 130	28.50	30		07/26/11
Lead	7439-92-1		96.6	mg/kg	97	70 - 130	0.70	30		07/26/11
Mercury	7439-97-6		1.92	mg/kg	96.6	70 - 130	0.90	30		07/26/11
Molybdenum	7439-98-7		99.1	mg/kg	99.5	70 - 130	2.20	30		07/26/11
Strontium	7440-24-6		97.2	mg/kg	97.6	70 - 130	3.00	30		07/26/11
Tin	7440-31-5		96.5	mg/kg	96.9	70 - 130	4.40	30		07/26/11
Uranium	7440-61-1		98.2	mg/kg	98.6	70 - 130	0.20	30		07/26/11
Arsenic	7440-38-2		97.8	mg/kg	98.2	70 - 130	0.50	30		07/26/11
Selenium	7782-49-2		97.5	mg/kg	97.9	70 - 130	4.10	30		07/26/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

QC Batch 186462 **Test** ICP-2008 MS All possible metal
Associated Samples 112727001, 112727002, 112727003, 112727004, 112727005, 112727006, 112727007, 112727008

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #60881**						
Manganese	7439-96-5		<0.10	ug/L				U	07/26/11
Nickel	7440-02-0		<0.20	ug/L				U	07/26/11
Silver	7440-22-4		<0.050	ug/L				U	07/26/11
Antimony	7440-36-0		<0.050	ug/L				U	07/26/11
Barium	7440-39-3		<0.20	ug/L				U	07/26/11
Boron	7440-42-8		0.606	ug/L				B	07/26/11
Beryllium	7440-41-7		<0.050	ug/L				U	07/26/11
Cadmium	7440-43-9		<0.050	ug/L				U	07/26/11
Chromium	7440-47-3		<0.10	ug/L				U	07/26/11
Cobalt	7440-48-4		<0.10	ug/L				U	07/26/11
Copper	7440-50-8		<0.10	ug/L				U	07/26/11
Vanadium	7440-62-2		<0.20	ug/L				U	07/26/11
Zinc	7440-66-6		<0.80	ug/L				U	07/26/11
Lead	7439-92-1		<0.10	ug/L				U	07/26/11
Mercury	7439-97-6		<0.030	ug/L				U	07/26/11
Molybdenum	7439-98-7		<0.10	ug/L				U	07/26/11
Strontium	7440-24-6		<0.10	ug/L				U	07/26/11
Tin	7440-31-5		<0.10	ug/L				U	07/26/11
Uranium	7440-61-1		<0.10	ug/L				U	07/26/11

REVISED112727 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Arsenic	7440-38-2		<0.40	ug/L					U	07/26/11
Selenium	7782-49-2		0.416	ug/L					B	07/26/11
LCS			**QC Sample #60882**							
Boron	7440-42-8		102	mg/kg	96	64 - 136				07/26/11
MS			**QC Sample #60883**							
			Original 112717001							
Boron	7440-42-8		99.1	mg/kg	99	70 - 130				07/26/11
MSD			**QC Sample #60884**							
			Original 112717001					**Paired**	**60883**	
Boron	7440-42-8		95.6	mg/kg	96	70 - 130	3.10	30		07/26/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112746

QC Batch 186895 **Test** ICP-2008 MS All possible metal
Associated Samples 112746001, 112746002, 112746003, 112746004, 112746005, 112746006, 112746007, 112746008, 112746009

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			**QC Sample #61548**							
Manganese	7439-96-5		283	mg/kg	98.9	75 - 121				07/29/11
Nickel	7440-02-0		58.9	mg/kg	99.7	74 - 122				07/29/11
Silver	7440-22-4		35.3	mg/kg	102.5	83 - 127				07/29/11
Antimony	7440-36-0		163	mg/kg	133.8	62 - 205				07/29/11
Beryllium	7440-41-7		59.0	mg/kg	94.5	77 - 120				07/29/11
Cadmium	7440-43-9		65.0	mg/kg	105.1	76 - 129				07/29/11
Chromium	7440-47-3		69.0	mg/kg	96.8	68 - 119				07/29/11
Cobalt	7440-48-4		102	mg/kg	99.3	77 - 122				07/29/11
Copper	7440-50-8		77.8	mg/kg	95.8	67 - 120				07/29/11
Vanadium	7440-62-2		58.6	mg/kg	99	67 - 122				07/29/11
Zinc	7440-66-6		136	mg/kg	96.6	73 - 131				07/29/11
Lead	7439-92-1		93.7	mg/kg	101.4	79 - 124				07/29/11
Mercury	7439-97-6		3.71	mg/kg	98.5	69 - 124				07/29/11
Molybdenum	7439-98-7		48.0	mg/kg	112.8	80 - 125				07/29/11
Strontium	7440-24-6		71.9	mg/kg	99.3	78 - 119				07/29/11
Tin	7440-31-5		110	mg/kg	103.1	84 - 130				07/29/11
Uranium	7440-61-1		373	mg/kg	93.4	86 - 113				07/29/11
Arsenic	7440-38-2		96.4	mg/kg	104.1	79 - 125				07/29/11
Selenium	7782-49-2		96.7	mg/kg	108.1	82 - 133				07/29/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
MS			**QC Sample #61549**								
			Original	**112720001**							
Manganese	7439-96-5		493	mg/kg	509.8	70 - 130				X	07/29/11
Nickel	7440-02-0		93.8	mg/kg	97	70 - 130					07/29/11
Silver	7440-22-4		100	mg/kg	103.9	70 - 130					07/29/11
Antimony	7440-36-0		80.8	mg/kg	83.6	70 - 130					07/29/11
Beryllium	7440-41-7		97.3	mg/kg	100.7	70 - 130					07/29/11
Cadmium	7440-43-9		100	mg/kg	103.9	70 - 130					07/29/11
Chromium	7440-47-3		95.6	mg/kg	99	70 - 130					07/29/11
Cobalt	7440-48-4		94.0	mg/kg	97.3	70 - 130					07/29/11
Copper	7440-50-8		89.6	mg/kg	92.7	70 - 130					07/29/11
Vanadium	7440-62-2		95.5	mg/kg	98.9	70 - 130					07/29/11
Zinc	7440-66-6		89.2	mg/kg	92.3	70 - 130					07/29/11
Lead	7439-92-1		99.8	mg/kg	103.3	70 - 130					07/29/11
Mercury	7439-97-6		2.00	mg/kg	103.5	70 - 130					07/29/11
Molybdenum	7439-98-7		100	mg/kg	103.6	70 - 130					07/29/11
Strontium	7440-24-6		104	mg/kg	108.1	70 - 130					07/29/11
Tin	7440-31-5		100	mg/kg	103.5	70 - 130					07/29/11
Uranium	7440-61-1		98.6	mg/kg	102.1	70 - 130					07/29/11
Arsenic	7440-38-2		98.2	mg/kg	101.7	70 - 130					07/29/11
Selenium	7782-49-2		97.5	mg/kg	100.8	70 - 130					07/29/11
MSD			**QC Sample #61550**								
			Original	**112720001**					**Paired**	**61549**	
Manganese	7439-96-5		132	mg/kg	142.4	70 - 130	112.70	30	*	X	07/29/11
Nickel	7440-02-0		76.8	mg/kg	82.7	70 - 130	15.90	30			07/29/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Silver	7440-22-4		90.0	mg/kg	97	70 - 130	6.90	30		07/29/11
Antimony	7440-36-0		66.7	mg/kg	71.9	70 - 130	15.00	30		07/29/11
Beryllium	7440-41-7		85.8	mg/kg	92.4	70 - 130	8.60	30		07/29/11
Cadmium	7440-43-9		87.0	mg/kg	93.7	70 - 130	10.30	30		07/29/11
Chromium	7440-47-3		80.2	mg/kg	86.3	70 - 130	13.70	30		07/29/11
Cobalt	7440-48-4		79.4	mg/kg	85.5	70 - 130	12.90	30		07/29/11
Copper	7440-50-8		75.0	mg/kg	80.8	70 - 130	13.70	30		07/29/11
Vanadium	7440-62-2		74.4	mg/kg	80.1	70 - 130	21.00	30		07/29/11
Zinc	7440-66-6		70.6	mg/kg	76	70 - 130	19.40	30		07/29/11
Lead	7439-92-1		87.7	mg/kg	94.5	70 - 130	8.90	30		07/29/11
Mercury	7439-97-6		1.89	mg/kg	102	70 - 130	1.50	30		07/29/11
Molybdenum	7439-98-7		84.6	mg/kg	91.1	70 - 130	12.80	30		07/29/11
Strontium	7440-24-6		74.7	mg/kg	80.5	70 - 130	29.30	30		07/29/11
Tin	7440-31-5		88.4	mg/kg	95.2	70 - 130	8.40	30		07/29/11
Uranium	7440-61-1		87.4	mg/kg	94.1	70 - 130	8.20	30		07/29/11
Arsenic	7440-38-2		86.0	mg/kg	92.7	70 - 130	9.30	30		07/29/11
Selenium	7782-49-2		89.2	mg/kg	96.1	70 - 130	4.80	30		07/29/11
BLANK			**QC Sample #61547**							
Manganese	7439-96-5		<0.10	ug/L					U	07/29/11
Nickel	7440-02-0		<0.20	ug/L					U	07/29/11
Silver	7440-22-4		<0.050	ug/L					U	07/29/11
Antimony	7440-36-0		<0.050	ug/L					U	07/29/11
Barium	7440-39-3		<0.20	ug/L					U	07/29/11
Beryllium	7440-41-7		<0.050	ug/L					U	07/29/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Boron	7440-42-8		<0.50	ug/L					U	07/29/11
Cadmium	7440-43-9		<0.050	ug/L					U	07/29/11
Chromium	7440-47-3		<0.10	ug/L					U	07/29/11
Cobalt	7440-48-4		<0.10	ug/L					U	07/29/11
Copper	7440-50-8		<0.10	ug/L					U	07/29/11
Vanadium	7440-62-2		<0.20	ug/L					U	07/29/11
Zinc	7440-66-6		<0.80	ug/L					U	07/29/11
Lead	7439-92-1		<0.10	ug/L					U	07/29/11
Mercury	7439-97-6		<0.030	ug/L					U	07/29/11
Molybdenum	7439-98-7		<0.10	ug/L					U	07/29/11
Strontium	7440-24-6		<0.10	ug/L					U	07/29/11
Tin	7440-31-5		<0.10	ug/L					U	07/29/11
Uranium	7440-61-1		<0.10	ug/L					U	07/29/11
Arsenic	7440-38-2		<0.40	ug/L					U	07/29/11
Selenium	7782-49-2		<0.30	ug/L					U	07/29/11
LCS			**QC Sample #61548**							
Barium	7440-39-3		165	mg/kg	97.4	78 - 118				07/29/11
Boron	7440-42-8		109	mg/kg	102.9	64 - 136				07/29/11
MS			**QC Sample #61549**							
			Original 112720001							
Barium	7440-39-3		123	mg/kg	127.3	70 - 130				07/29/11
Boron	7440-42-8		92.6	mg/kg	95.8	70 - 130				07/29/11
MSD			**QC Sample #61550**							
			Original 112720001					**Paired**	**61549**	

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
Barium	7440-39-3		82.3	mg/kg	88.6	70 - 130	35.80	30	*	X	07/29/11
Boron	7440-42-8		75.3	mg/kg	81	70 - 130	16.70	30			07/29/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

QC Batch 186895 **Test** ICP-2008 MS All possible metal
Associated Samples 112760001, 112760002, 112760003, 112760004, 112760005, 112760006, 112760007, 112760008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			**QC Sample #61548**							
Manganese	7439-96-5		283	mg/kg	98.9	75 - 121				07/29/11
Nickel	7440-02-0		58.9	mg/kg	99.7	74 - 122				07/29/11
Silver	7440-22-4		35.3	mg/kg	102.5	83 - 127				07/29/11
Antimony	7440-36-0		163	mg/kg	133.8	62 - 205				07/29/11
Beryllium	7440-41-7		59.0	mg/kg	94.5	77 - 120				07/29/11
Cadmium	7440-43-9		65.0	mg/kg	105.1	76 - 129				07/29/11
Chromium	7440-47-3		69.0	mg/kg	96.8	68 - 119				07/29/11
Cobalt	7440-48-4		102	mg/kg	99.3	77 - 122				07/29/11
Copper	7440-50-8		77.8	mg/kg	95.8	67 - 120				07/29/11
Vanadium	7440-62-2		58.6	mg/kg	99	67 - 122				07/29/11
Zinc	7440-66-6		136	mg/kg	96.6	73 - 131				07/29/11
Lead	7439-92-1		93.7	mg/kg	101.4	79 - 124				07/29/11
Mercury	7439-97-6		3.71	mg/kg	98.5	69 - 124				07/29/11
Molybdenum	7439-98-7		48.0	mg/kg	112.8	80 - 125				07/29/11
Strontium	7440-24-6		71.9	mg/kg	99.3	78 - 119				07/29/11
Tin	7440-31-5		110	mg/kg	103.1	84 - 130				07/29/11
Uranium	7440-61-1		373	mg/kg	93.4	86 - 113				07/29/11
Arsenic	7440-38-2		96.4	mg/kg	104.1	79 - 125				07/29/11
Selenium	7782-49-2		96.7	mg/kg	108.1	82 - 133				07/29/11

REVISED112760 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
MS			**QC Sample #61549**								
			Original	**112720001**							
Manganese	7439-96-5		493	mg/kg	509.8	70 - 130				X	07/29/11
Nickel	7440-02-0		93.8	mg/kg	97	70 - 130					07/29/11
Silver	7440-22-4		100	mg/kg	103.9	70 - 130					07/29/11
Antimony	7440-36-0		80.8	mg/kg	83.6	70 - 130					07/29/11
Beryllium	7440-41-7		97.3	mg/kg	100.7	70 - 130					07/29/11
Cadmium	7440-43-9		100	mg/kg	103.9	70 - 130					07/29/11
Chromium	7440-47-3		95.6	mg/kg	99	70 - 130					07/29/11
Cobalt	7440-48-4		94.0	mg/kg	97.3	70 - 130					07/29/11
Copper	7440-50-8		89.6	mg/kg	92.7	70 - 130					07/29/11
Vanadium	7440-62-2		95.5	mg/kg	98.9	70 - 130					07/29/11
Zinc	7440-66-6		89.2	mg/kg	92.3	70 - 130					07/29/11
Lead	7439-92-1		99.8	mg/kg	103.3	70 - 130					07/29/11
Mercury	7439-97-6		2.00	mg/kg	103.5	70 - 130					07/29/11
Molybdenum	7439-98-7		100	mg/kg	103.6	70 - 130					07/29/11
Strontium	7440-24-6		104	mg/kg	108.1	70 - 130					07/29/11
Tin	7440-31-5		100	mg/kg	103.5	70 - 130					07/29/11
Uranium	7440-61-1		98.6	mg/kg	102.1	70 - 130					07/29/11
Arsenic	7440-38-2		98.2	mg/kg	101.7	70 - 130					07/29/11
Selenium	7782-49-2		97.5	mg/kg	100.8	70 - 130					07/29/11
MSD			**QC Sample #61550**								
			Original	**112720001**					**Paired**	**61549**	
Manganese	7439-96-5		132	mg/kg	142.4	70 - 130	112.70	30	*	X	07/29/11
Nickel	7440-02-0		76.8	mg/kg	82.7	70 - 130	15.90	30			07/29/11

REVISED112760 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Silver	7440-22-4		90.0	mg/kg	97	70 - 130	6.90	30		07/29/11
Antimony	7440-36-0		66.7	mg/kg	71.9	70 - 130	15.00	30		07/29/11
Beryllium	7440-41-7		85.8	mg/kg	92.4	70 - 130	8.60	30		07/29/11
Cadmium	7440-43-9		87.0	mg/kg	93.7	70 - 130	10.30	30		07/29/11
Chromium	7440-47-3		80.2	mg/kg	86.3	70 - 130	13.70	30		07/29/11
Cobalt	7440-48-4		79.4	mg/kg	85.5	70 - 130	12.90	30		07/29/11
Copper	7440-50-8		75.0	mg/kg	80.8	70 - 130	13.70	30		07/29/11
Vanadium	7440-62-2		74.4	mg/kg	80.1	70 - 130	21.00	30		07/29/11
Zinc	7440-66-6		70.6	mg/kg	76	70 - 130	19.40	30		07/29/11
Lead	7439-92-1		87.7	mg/kg	94.5	70 - 130	8.90	30		07/29/11
Mercury	7439-97-6		1.89	mg/kg	102	70 - 130	1.50	30		07/29/11
Molybdenum	7439-98-7		84.6	mg/kg	91.1	70 - 130	12.80	30		07/29/11
Strontium	7440-24-6		74.7	mg/kg	80.5	70 - 130	29.30	30		07/29/11
Tin	7440-31-5		88.4	mg/kg	95.2	70 - 130	8.40	30		07/29/11
Uranium	7440-61-1		87.4	mg/kg	94.1	70 - 130	8.20	30		07/29/11
Arsenic	7440-38-2		86.0	mg/kg	92.7	70 - 130	9.30	30		07/29/11
Selenium	7782-49-2		89.2	mg/kg	96.1	70 - 130	4.80	30		07/29/11
BLANK			**QC Sample #61547**							
Manganese	7439-96-5		<0.10	ug/L					U	07/29/11
Nickel	7440-02-0		<0.20	ug/L					U	07/29/11
Silver	7440-22-4		<0.050	ug/L					U	07/29/11
Antimony	7440-36-0		<0.050	ug/L					U	07/29/11
Barium	7440-39-3		<0.20	ug/L					U	07/29/11
Boron	7440-42-8		<0.50	ug/L					U	07/29/11

REVISED112760 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Beryllium	7440-41-7		<0.050	ug/L					U	07/29/11
Cadmium	7440-43-9		<0.050	ug/L					U	07/29/11
Chromium	7440-47-3		<0.10	ug/L					U	07/29/11
Cobalt	7440-48-4		<0.10	ug/L					U	07/29/11
Copper	7440-50-8		<0.10	ug/L					U	07/29/11
Vanadium	7440-62-2		<0.20	ug/L					U	07/29/11
Zinc	7440-66-6		<0.80	ug/L					U	07/29/11
Lead	7439-92-1		<0.10	ug/L					U	07/29/11
Mercury	7439-97-6		<0.030	ug/L					U	07/29/11
Molybdenum	7439-98-7		<0.10	ug/L					U	07/29/11
Strontium	7440-24-6		<0.10	ug/L					U	07/29/11
Tin	7440-31-5		<0.10	ug/L					U	07/29/11
Uranium	7440-61-1		<0.10	ug/L					U	07/29/11
Arsenic	7440-38-2		<0.40	ug/L					U	07/29/11
Selenium	7782-49-2		<0.30	ug/L					U	07/29/11
LCS			**QC Sample #61548**							
Barium	7440-39-3		165	mg/kg	97.4	78 - 118				07/29/11
Boron	7440-42-8		109	mg/kg	102.9	64 - 136				07/29/11
MS			**QC Sample #61549**							
			Original 112720001							
Barium	7440-39-3		123	mg/kg	127.3	70 - 130				07/29/11
Boron	7440-42-8		92.6	mg/kg	95.8	70 - 130				07/29/11
MSD			**QC Sample #61550**							
			Original 112720001					**Paired**	**61549**	

REVISED112760 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
Barium	7440-39-3		82.3	mg/kg	88.6	70 - 130	35.80	30	*	X	07/29/11
Boron	7440-42-8		75.3	mg/kg	81	70 - 130	16.70	30			07/29/11

Date: 20 September 2011
To: CH2M Hill (technical representative)
From: Analytical Quality Associates, Inc.
Project: 100K Area AA Zone 1
Subject: General Chemistry - Sample Data Groups (SDGs) WSCF112687, WSCF112727, WSCF112746 and WSCF112760

INTRODUCTION

This memorandum presents the results of data validation for SDGs WSCF112687, WSCF112727, WSCF112746 and WSCF112760 prepared by WSCF Analytical Laboratories. A list of samples validated along with the analytical method is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B2FJX2	7/13/2011	Soil	C	300.0 & 7196A
B2FJX3	7/13/2011	Soil	C	300.0 & 7196A
B2FJX4	7/13/2011	Soil	C	300.0 & 7196A
B2FJX5	7/13/2011	Soil	C	300.0 & 7196A
B2FJX6	7/13/2011	Soil	C	300.0 & 7196A
B2FNW9	7/13/2011	Soil	C	300.0 & 7196A
B2FNX0	7/13/2011	Soil	C	300.0 & 7196A
B2FK06	7/18/2011	Soil	C	300.0 & 7196A
B2FK07	7/18/2011	Soil	C	300.0 & 7196A
B2FJX7	7/18/2011	Soil	C	300.0 & 7196A
B2FJX8	7/18/2011	Soil	C	300.0 & 7196A
B2FJX9	7/18/2011	Soil	C	300.0 & 7196A
B2FJY0	7/18/2011	Soil	C	300.0 & 7196A
B2FJY1	7/18/2011	Soil	C	300.0 & 7196A
B2FJY2	7/18/2011	Soil	C	300.0 & 7196A
B2FJY3	7/19/2011	Soil	C	300.0 & 7196A
B2FJY4	7/19/2011	Soil	C	300.0 & 7196A
B2FJY5	7/19/2011	Soil	C	300.0 & 7196A
B2FJY6	7/19/2011	Soil	C	300.0 & 7196A
B2FJY7	7/19/2011	Soil	C	300.0 & 7196A
B2FJY8	7/19/2011	Soil	C	300.0 & 7196A
B2FJY9	7/19/2011	Soil	C	300.0 & 7196A
B2FK00	7/19/2011	Soil	C	300.0 & 7196A
B2FK01	7/19/2011	Soil	C	300.0 & 7196A
B2FK02	7/20/2011	Soil	C	300.0 & 7196A
B2FK03	7/20/2011	Soil	C	300.0 & 7196A
B2FK04	7/20/2011	Soil	C	300.0 & 7196A
B2FK05	7/20/2011	Soil	C	300.0 & 7196A
B2FNW5	7/20/2011	Soil	C	300.0 & 7196A
B2FNW6	7/20/2011	Soil	C	300.0 & 7196A
B2FNW7	7/20/2011	Soil	C	300.0 & 7196A

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B2FNW8	7/20/2011	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 with the following exceptions.

For SDGs WSCF112727 and WSCF112746, batch 186657, the MSD recovery for fluoride was < the lower acceptance limit. All associated fluoride sample results were non-detects and should be qualified as estimates and flagged "UJ." See the table in Appendix 2 for a listing of all affected sample results.

For SDGs WSCF112727 and WSCF112746, the MS recoveries for hexavalent chromium were < the lower acceptance limit. All associated hexavalent chromium sample results *except* sample B2FJX7 were non-detects and should be qualified as estimates and flagged "UJ." The hexavalent chromium result for sample B2FJX7 was a detect and should be qualified as an estimate and flagged "J." See the table in Appendix 2 for a listing of all affected sample results.

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 ±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**

SDGs WSCF112687, WSCF112727, WSCF112746 and WSCF112760 were submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

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

REFERENCES

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

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

Appendix 1

Glossary of Data Reporting Qualifiers

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

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

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

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

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

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

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

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

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

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

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

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

Appendix 2

Summary of Data Qualification

General Chemistry Data Qualification Summary			
SDGs: WSCF112687, WSCF112727, WSCF112746 & WSCF112760	Reviewer: AQA	Project: 100K Area AA Zone 1	Page 1 of 1
Analyte(s)	**DV Flag**	**Samples Affected**	**Reason**
Fluoride	UJ	B2FJX9, B2FJY0, B2FJY1, B2FJY2, B2FJY3, B2FJY4, B2FJY5, B2FJY6, B2FJY7, B2FJY8	Low MSD recovery
Cr(VI)	UJ	B2FK06, B2FK07, B2FJX8, B2FJX9, B2FJY0, B2FJY1, B2FJY2, B2FJY3, B2FJY4, B2FJY5, B2FJY6, B2FJY7, B2FJY8, B2FJY9, B2FK00, B2FK01	Low MS recovery
Cr(VI)	J	B2FJX7	Low MS recovery

Comments: None

Appendix 3

Annotated Laboratory Reports

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687001
SAF# F11-096
Sample ID B2FJX2

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/14/11
Chloride	16887-00-6	LA-533-410	B	4.23		mg/kg	1	3.1	20	07/14/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/14/11
Nitrate-N	NO3-N	LA-533-410		9.02		mg/kg	1	0.96	5.0	07/14/11
Sulfate	14808-79-8	LA-533-410	B	24.1		mg/kg	1	3.6	53	07/14/11
Cr(VI) Prep										**07/14/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.095		ug/g	1	0.095	0.47	07/15/11
~~**ICPMS Prep**~~										~~**07/18/11**~~
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	337		mg/kg	1	0.098	0.98	07/18/11
Nickel	7440-02-0	LA-505-412		23.2		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	B	0.417		mg/kg	1	0.29	2.9	07/18/11
Barium	7440-39-3	LA-505-412		57.7		mg/kg	1	0.20	2.0	07/18/11
Beryllium	7440-41-7	LA-505-412	B	0.130		mg/kg	1	0.098	0.49	07/18/11
Boron	7440-42-8	LA-505-412	B	1.22		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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
9-20-2011

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)

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687002
SAF# F11-096
Sample ID B2FJX3

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/14/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	21	07/14/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/14/11
Nitrate-N	NO3-N	LA-533-410	B	4.80		mg/kg	1	0.96	5.0	07/14/11
Sulfate	14808-79-8	LA-533-410	B	14.9		mg/kg	1	3.6	53	07/14/11
Cr(VI) Prep										**07/14/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	B	0.124		ug/g	1	0.096	0.48	07/15/11
~~**ICPMS Prep**~~										~~**07/18/11**~~
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	391		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	<0.30		mg/kg	1	0.30	3.0	07/18/11
Barium	7440-39-3	LA-505-412		66.0		mg/kg	1	0.20	2.0	07/18/11
Beryllium	7440-41-7	LA-505-412	B	0.247		mg/kg	1	0.10	0.51	07/18/11
~~Boron~~	~~7440-42-8~~	~~LA-505-412~~	~~B~~	~~1.86~~		~~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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
9-20-2011

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)

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687003
SAF# F11-096
Sample ID B2FJX4

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.7	07/14/11
Chloride	16887-00-6	LA-533-410	B	4.50		mg/kg	1	3.2	21	07/14/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/14/11
Nitrate-N	NO3-N	LA-533-410	B	4.62		mg/kg	1	0.97	5.0	07/14/11
Sulfate	14808-79-8	LA-533-410	B	25.0		mg/kg	1	3.7	53	07/14/11
Cr(VI) Prep										**07/14/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.51	07/15/11
ICPMS Prep										**07/18/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	345		mg/kg	1	0.098	0.98	07/18/11
Nickel	7440-02-0	LA-505-412		10.3		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		66.9		mg/kg	1	0.20	2.0	07/18/11
Beryllium	7440-41-7	LA-505-412	B	0.241		mg/kg	1	0.098	0.49	07/18/11
Boron	7440-42-8	LA-505-412	B	0.787		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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
9-20-2011

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)

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687004
SAF# F11-096
Sample ID B2FJX5

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/14/11
Chloride	16887-00-6	LA-533-410	B	6.06		mg/kg	1	3.1	21	07/14/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/14/11
Nitrate-N	NO3-N	LA-533-410	B	1.34		mg/kg	1	0.96	5.0	07/14/11
Sulfate	14808-79-8	LA-533-410	B	24.1		mg/kg	1	3.6	53	07/14/11
Cr(VI) Prep										**07/14/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.099		ug/g	1	0.099	0.50	07/15/11
~~**ICPMS Prep**~~										~~**07/18/11**~~
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	337		mg/kg	1	0.10	1.0	07/18/11
Nickel	7440-02-0	LA-505-412		7.90		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		49.9		mg/kg	1	0.20	2.0	07/18/11
Beryllium	7440-41-7	LA-505-412	B	0.243		mg/kg	1	0.10	0.50	07/18/11
~~Boron~~	~~7440-42-8~~	~~LA-505-412~~	~~B~~	~~0.805~~		~~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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
9-20-2011

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)

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687005
SAF# F11-096
Sample ID B2FJX6

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/14/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/14/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/14/11
Nitrate-N	NO3-N	LA-533-410	B	2.21		mg/kg	1	0.95	5.0	07/14/11
Sulfate	14808-79-8	LA-533-410	B	10.2		mg/kg	1	3.6	52	07/14/11
Cr(VI) Prep										**07/14/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.51	07/15/11
ICPMS Prep										**07/18/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	325		mg/kg	1	0.094	0.94	07/18/11
Nickel	7440-02-0	LA-505-412		7.67		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		43.1		mg/kg	1	0.19	1.9	07/18/11
Beryllium	7440-41-7	LA-505-412	B	0.231		mg/kg	1	0.094	0.47	07/18/11
Boron	7440-42-8	LA-505-412	B	1.80		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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
9-20-2011

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)

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687006
SAF# F11-096
Sample ID B2FNW9

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/14/11
Chloride	16887-00-6	LA-533-410	B	4.28		mg/kg	1	3.1	21	07/14/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/14/11
Nitrate-N	NO3-N	LA-533-410		8.04		mg/kg	1	0.96	5.0	07/14/11
Sulfate	14808-79-8	LA-533-410	B	25.1		mg/kg	1	3.6	53	07/14/11
Cr(VI) Prep										**07/14/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/15/11
ICPMS Prep										**07/18/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	345		mg/kg	1	0.10	1.0	07/18/11
Nickel	7440-02-0	LA-505-412		14.7		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	B	0.371		mg/kg	1	0.30	3.0	07/18/11
Barium	7440-39-3	LA-505-412		58.0		mg/kg	1	0.20	2.0	07/18/11
Beryllium	7440-41-7	LA-505-412	B	0.330		mg/kg	1	0.10	0.50	07/18/11
Boron	7440-42-8	LA-505-412	B	1.04		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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
9-20-2011

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)

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Sample # 112687007
SAF# F11-096
Sample ID B2FNX0

Matrix SOIL
Sampled 07/13/11
Received 07/13/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/14/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/14/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/14/11
Nitrite-N	NO2-N	LA-533-410	U	<0.99		mg/kg	1	0.99	4.9	07/14/11
Nitrate-N	NO3-N	LA-533-410	U	<0.94		mg/kg	1	0.94	4.9	07/14/11
Sulfate	14808-79-8	LA-533-410	U	<3.6		mg/kg	1	3.6	52	07/14/11
Cr(VI) Prep										**07/14/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.099		ug/g	1	0.099	0.50	07/15/11
ICPMS Prep										**07/18/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	BN	0.500		mg/kg	1	0.097	0.97	07/18/11
Nickel	7440-02-0	LA-505-412	B	0.551		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	B	0.357		mg/kg	1	0.19	1.9	07/18/11
Beryllium	7440-41-7	LA-505-412	U	<0.097		mg/kg	1	0.097	0.48	07/18/11
Boron	7440-42-8	LA-505-412	U	<0.48		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 diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
9-20-2011

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)

REVISED112687 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727001
SAF# F11-096
Sample ID B2FK06

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/19/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/19/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/19/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/19/11
Nitrate-N	NO3-N	LA-533-410	U	<0.95		mg/kg	1	0.95	4.9	07/19/11
Sulfate	14808-79-8	LA-533-410	U	<3.6		mg/kg	1	3.6	52	07/19/11
Cr(VI) Prep										**07/19/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.094	UJ	ug/g	1	0.094	0.47	07/20/11
ICPMS Prep										**07/20/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	BN	0.781		mg/kg	1	0.096	0.96	07/26/11
Nickel	7440-02-0	LA-505-412	U	<0.19		mg/kg	1	0.19	1.9	07/26/11
Silver	7440-22-4	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	07/26/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/26/11
Barium	7440-39-3	LA-505-412	B	0.429		mg/kg	1	0.19	1.9	07/26/11
Beryllium	7440-41-7	LA-505-412	U	<0.096		mg/kg	1	0.096	0.48	07/26/11
Boron	7440-42-8	LA-505-412	U	<0.48		mg/kg	1	0.48	4.8	07/26/11

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727002
SAF# F11-096
Sample ID B2FK07

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/19/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/19/11
Chloride	16887-00-6	LA-533-410	B	3.78		mg/kg	1	3.1	21	07/19/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/19/11
Nitrate-N	NO3-N	LA-533-410	B	4.30		mg/kg	1	0.96	5.0	07/19/11
Sulfate	14808-79-8	LA-533-410	B	34.7		mg/kg	1	3.6	53	07/19/11
Cr(VI) Prep										**07/19/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10	UJ	ug/g	1	0.10	0.50	07/20/11
ICPMS Prep										**07/20/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	374		mg/kg	1	0.096	0.96	07/26/11
Nickel	7440-02-0	LA-505-412		10.8		mg/kg	1	0.19	1.9	07/26/11
Silver	7440-22-4	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	07/26/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/26/11
Barium	7440-39-3	LA-505-412		65.9		mg/kg	1	0.19	1.9	07/26/11
Beryllium	7440-41-7	LA-505-412	B	0.277		mg/kg	1	0.096	0.48	07/26/11
Boron	7440-42-8	LA-505-412	BC	1.28		mg/kg	1	0.48	4.8	07/26/11

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727003
SAF# F11-096
Sample ID B2FJX7

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/19/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/19/11
Chloride	16887-00-6	LA-533-410	B	3.40		mg/kg	1	3.1	21	07/19/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/19/11
Nitrate-N	NO3-N	LA-533-410	B	3.15		mg/kg	1	0.96	5.0	07/19/11
Sulfate	14808-79-8	LA-533-410	B	28.1		mg/kg	1	3.6	53	07/19/11
Cr(VI) Prep										**07/19/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	BN	0.149	J	ug/g	1	0.10	0.50	07/20/11
ICPMS Prep										**07/20/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	420		mg/kg	1	0.10	1.0	07/26/11
Nickel	7440-02-0	LA-505-412		10.1		mg/kg	1	0.20	2.0	07/26/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/26/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/26/11
Barium	7440-39-3	LA-505-412		77.7		mg/kg	1	0.20	2.0	07/26/11
Beryllium	7440-41-7	LA-505-412	B	0.287		mg/kg	1	0.10	0.51	07/26/11
Boron	7440-42-8	LA-505-412	BC	1.09		mg/kg	1	0.51	5.1	07/26/11

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727004
SAF# F11-096
Sample ID B2FJX8

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/19/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/19/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	21	07/19/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/19/11
Nitrate-N	NO3-N	LA-533-410	B	1.22		mg/kg	1	0.96	5.0	07/19/11
Sulfate	14808-79-8	LA-533-410	B	7.38		mg/kg	1	3.6	53	07/19/11
Cr(VI) Prep										**07/19/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.099	UJ	ug/g	1	0.099	0.50	07/20/11
~~**ICPMS Prep**~~										~~**07/20/11**~~
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	398		mg/kg	1	0.099	0.99	07/26/11
Nickel	7440-02-0	LA-505-412		10.8		mg/kg	1	0.20	2.0	07/26/11
Silver	7440-22-4	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	07/26/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/26/11
Barium	7440-39-3	LA-505-412		66.8		mg/kg	1	0.20	2.0	07/26/11
Beryllium	7440-41-7	LA-505-412	B	0.361		mg/kg	1	0.099	0.49	07/26/11
~~Boron~~	~~7440-42-8~~	~~LA-505-412~~	~~BC~~	~~1.54~~		~~mg/kg~~	~~1~~	~~0.49~~	~~4.9~~	~~07/26/11~~

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727005
SAF# F11-096
Sample ID B2FJX9

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/20/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UN	<1.8 UJ		mg/kg	1	1.8	3.6	07/20/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/20/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/20/11
Nitrate-N	NO3-N	LA-533-410	B	1.28		mg/kg	1	0.95	5.0	07/20/11
Sulfate	14808-79-8	LA-533-410	BN	3.91		mg/kg	1	3.6	53	07/20/11
Cr(VI) Prep										**07/19/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10 UJ		ug/g	1	0.10	0.50	07/20/11
~~**ICPMS Prep**~~										~~**07/20/11**~~
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	373		mg/kg	1	0.093	0.93	07/26/11
Nickel	7440-02-0	LA-505-412		10.5		mg/kg	1	0.19	1.9	07/26/11
Silver	7440-22-4	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	07/26/11
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	07/26/11
Barium	7440-39-3	LA-505-412		61.3		mg/kg	1	0.19	1.9	07/26/11
Beryllium	7440-41-7	LA-505-412		0.470		mg/kg	1	0.093	0.46	07/26/11
Boron	7440-42-8	LA-505-412	BC	0.949		mg/kg	1	0.46	4.6	07/26/11

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727006
SAF# F11-096
Sample ID B2FJY0

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/20/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UN	<1.8 UJ		mg/kg	1	1.8	3.6	07/20/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/20/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/20/11
Nitrate-N	NO3-N	LA-533-410	B	2.82		mg/kg	1	0.95	5.0	07/20/11
Sulfate	14808-79-8	LA-533-410	BN	17.6		mg/kg	1	3.6	53	07/20/11
Cr(VI) Prep										**07/19/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10 UJ		ug/g	1	0.10	0.50	07/20/11
~~**ICPMS Prep**~~										~~**07/20/11**~~
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	384		mg/kg	1	0.093	0.93	07/26/11
Nickel	7440-02-0	LA-505-412		11.6		mg/kg	1	0.19	1.9	07/26/11
Silver	7440-22-4	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	07/26/11
Antimony	7440-36-0	LA-505-412	B	0.343		mg/kg	1	0.28	2.8	07/26/11
Barium	7440-39-3	LA-505-412		62.8		mg/kg	1	0.19	1.9	07/26/11
Beryllium	7440-41-7	LA-505-412	B	0.186		mg/kg	1	0.093	0.47	07/26/11
~~Boron~~	~~7440-42-8~~	~~LA-505-412~~	~~BC~~	~~0.810~~		~~mg/kg~~	~~1~~	~~0.47~~	~~4.7~~	~~07/26/11~~

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727007
SAF# F11-096
Sample ID B2FJY1

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/20/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UN	<1.8	UJ	mg/kg	1	1.8	3.6	07/20/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	21	07/20/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/20/11
Nitrate-N	NO3-N	LA-533-410	B	1.09		mg/kg	1	0.96	5.0	07/20/11
Sulfate	14808-79-8	LA-533-410	BN	12.5		mg/kg	1	3.6	53	07/20/11
Cr(VI) Prep										**07/19/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.098	UJ	ug/g	1	0.098	0.49	07/20/11
~~**ICPMS Prep**~~										~~**07/20/11**~~
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	349		mg/kg	1	0.097	0.97	07/26/11
Nickel	7440-02-0	LA-505-412		10.7		mg/kg	1	0.19	1.9	07/26/11
Silver	7440-22-4	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	07/26/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/26/11
Barium	7440-39-3	LA-505-412		57.1		mg/kg	1	0.19	1.9	07/26/11
Beryllium	7440-41-7	LA-505-412	B	0.240		mg/kg	1	0.097	0.48	07/26/11
~~Boron~~	~~7440-42-8~~	~~LA-505-412~~	~~BC~~	~~0.890~~		~~mg/kg~~	~~1~~	~~0.48~~	~~4.8~~	~~07/26/11~~

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Sample # 112727008
SAF# F11-096
Sample ID B2FJY2

Matrix SOIL
Sampled 07/18/11
Received 07/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/20/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UN	<1.8 UJ		mg/kg	1	1.8	3.6	07/20/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	21	07/20/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/20/11
Nitrate-N	NO3-N	LA-533-410	U	<0.96		mg/kg	1	0.96	5.0	07/20/11
Sulfate	14808-79-8	LA-533-410	BN	41.7		mg/kg	1	3.6	53	07/20/11
Cr(VI) Prep										**07/19/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10 UJ		ug/g	1	0.10	0.50	07/20/11
ICPMS Prep										**07/20/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	393		mg/kg	1	0.099	0.99	07/26/11
Nickel	7440-02-0	LA-505-412		10.4		mg/kg	1	0.20	2.0	07/26/11
Silver	7440-22-4	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	07/26/11
Antimony	7440-36-0	LA-505-412	B	1.71		mg/kg	1	0.30	3.0	07/26/11
Barium	7440-39-3	LA-505-412		73.2		mg/kg	1	0.20	2.0	07/26/11
Beryllium	7440-41-7	LA-505-412	B	0.371		mg/kg	1	0.099	0.49	07/26/11
Boron	7440-42-8	LA-505-412	BC	0.992		mg/kg	1	0.49	4.9	07/26/11

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

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

LS
9-20-2011

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)

REVISED112727 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746001
SAF# F11-096
Sample ID B2FJY3

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/20/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UN	<1.8	UJ	mg/kg	1	1.8	3.6	07/20/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/20/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/20/11
Nitrate-N	NO3-N	LA-533-410	U	<0.96		mg/kg	1	0.96	5.0	07/20/11
Sulfate	14808-79-8	LA-533-410	BN	5.87		mg/kg	1	3.6	53	07/20/11
Cr(VI) Prep										**07/20/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10	UJ	ug/g	1	0.10	0.50	07/20/11
~~**ICPMS Prep**~~										~~**07/27/11**~~
ICP-MS										
Manganese	7439-96-5	LA-505-412		386		mg/kg	1	0.10	1.0	07/29/11
Nickel	7440-02-0	LA-505-412		9.53		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.31		mg/kg	1	0.31	3.1	07/29/11
Barium	7440-39-3	LA-505-412		58.1		mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.270		mg/kg	1	0.10	0.51	07/29/11
~~Boron~~	~~7440-42-8~~	~~LA-505-412~~	~~B~~	~~1.44~~		~~mg/kg~~	~~1~~	~~0.51~~	~~5.1~~	~~07/29/11~~

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

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

LS
9-20-2011

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

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746002
SAF# F11-096
Sample ID B2FJY4

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/20/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UN	<1.8	UJ	mg/kg	1	1.8	3.6	07/20/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/20/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/20/11
Nitrate-N	NO3-N	LA-533-410	B	1.33		mg/kg	1	0.95	5.0	07/20/11
Sulfate	14808-79-8	LA-533-410	BN	7.16		mg/kg	1	3.6	53	07/20/11
Cr(VI) Prep										**07/20/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10	UJ	ug/g	1	0.10	0.50	07/20/11
~~**ICPMS Prep**~~										~~**07/27/11**~~
ICP-MS										
Manganese	7439-96-5	LA-505-412		366		mg/kg	1	0.097	0.97	07/29/11
Nickel	7440-02-0	LA-505-412		9.51		mg/kg	1	0.19	1.9	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/29/11
Barium	7440-39-3	LA-505-412		60.7		mg/kg	1	0.19	1.9	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.278		mg/kg	1	0.097	0.49	07/29/11
~~Boron~~	~~7440-42-8~~	~~LA-505-412~~	~~B~~	~~0.654~~		~~mg/kg~~	~~1~~	~~0.49~~	~~4.9~~	~~07/29/11~~

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

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

LS
9-20-2011

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

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746003
SAF# F11-096
Sample ID B2FJY5

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/20/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UN	<1.8	UJ	mg/kg	1	1.8	3.6	07/20/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	21	07/20/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/20/11
Nitrate-N	NO3-N	LA-533-410	B	1.09		mg/kg	1	0.96	5.0	07/20/11
Sulfate	14808-79-8	LA-533-410	BN	14.1		mg/kg	1	3.6	53	07/20/11
Cr(VI) Prep										**07/20/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10	UJ	ug/g	1	0.10	0.51	07/20/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		367		mg/kg	1	0.098	0.98	07/29/11
Nickel	7440-02-0	LA-505-412		9.31		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/29/11
Barium	7440-39-3	LA-505-412		56.7		mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.401		mg/kg	1	0.098	0.49	07/29/11
Boron	7440-42-8	LA-505-412	B	0.656		mg/kg	1	0.49	4.9	07/29/11

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

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

LS
9-20-2011

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

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746004
SAF# F11-096
Sample ID B2FJY6

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/20/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UN	<1.8 UJ		mg/kg	1	1.8	3.6	07/20/11
Chloride	16887-00-6	LA-533-410	B	3.11		mg/kg	1	3.1	20	07/20/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/20/11
Nitrate-N	NO3-N	LA-533-410	B	1.18		mg/kg	1	0.96	5.0	07/20/11
Sulfate	14808-79-8	LA-533-410	N	75.1		mg/kg	1	3.6	53	07/20/11
Cr(VI) Prep										**07/20/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10 UJ		ug/g	1	0.10	0.50	07/20/11
~~**ICPMS Prep**~~										~~**07/27/11**~~
ICP-MS										
Manganese	7439-96-5	LA-505-412		356		mg/kg	1	0.094	0.94	07/29/11
Nickel	7440-02-0	LA-505-412		8.51		mg/kg	1	0.19	1.9	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	07/29/11
Barium	7440-39-3	LA-505-412		47.4		mg/kg	1	0.19	1.9	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.246		mg/kg	1	0.094	0.47	07/29/11
~~Boron~~	~~7440-42-8~~	~~LA-505-412~~	~~U~~	~~<0.47~~		~~mg/kg~~	~~1~~	~~0.47~~	~~4.7~~	~~07/29/11~~

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

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

LS
9-20-2011

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

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746005
SAF# F11-096
Sample ID B2FJY7

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/20/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UN	<1.8 UJ		mg/kg	1	1.8	3.6	07/20/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	21	07/20/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/20/11
Nitrate-N	NO3-N	LA-533-410	U	<0.96		mg/kg	1	0.96	5.0	07/20/11
Sulfate	14808-79-8	LA-533-410	BN	6.95		mg/kg	1	3.6	53	07/20/11
Cr(VI) Prep										**07/20/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10 UJ		ug/g	1	0.10	0.50	07/20/11
~~**ICPMS Prep**~~										~~**07/27/11**~~
ICP-MS										
Manganese	7439-96-5	LA-505-412		396		mg/kg	1	0.099	0.99	07/29/11
Nickel	7440-02-0	LA-505-412		9.57		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/29/11
Barium	7440-39-3	LA-505-412		65.2		mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.260		mg/kg	1	0.099	0.49	07/29/11
~~Boron~~	~~7440-42-8~~	~~LA-505-412~~	~~U~~	~~<0.49~~		~~mg/kg~~	~~1~~	~~0.49~~	~~4.9~~	~~07/29/11~~

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

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

LS
9-20-2011

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

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746006
SAF# F11-096
Sample ID B2FJY8

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/20/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UN	<1.8	UJ	mg/kg	1	1.8	3.6	07/20/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/20/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/20/11
Nitrate-N	NO3-N	LA-533-410	B	1.08		mg/kg	1	0.95	5.0	07/20/11
Sulfate	14808-79-8	LA-533-410	BN	6.02		mg/kg	1	3.6	53	07/20/11
Cr(VI) Prep										**07/20/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10	UJ	ug/g	1	0.10	0.50	07/20/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		412		mg/kg	1	0.10	1.0	07/29/11
Nickel	7440-02-0	LA-505-412		9.84		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/29/11
Barium	7440-39-3	LA-505-412		62.8		mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.321		mg/kg	1	0.10	0.51	07/29/11
Boron	7440-42-8	LA-505-412	U	<0.51		mg/kg	1	0.51	5.1	07/29/11

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

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

LS
9-20-2011

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

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746007
SAF# F11-096
Sample ID B2FJY9

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/21/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/21/11
Chloride	16887-00-6	LA-533-410	B	3.74		mg/kg	1	3.1	20	07/21/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/21/11
Nitrate-N	NO3-N	LA-533-410	B	1.99		mg/kg	1	0.95	5.0	07/21/11
Sulfate	14808-79-8	LA-533-410	B	34.5		mg/kg	1	3.6	53	07/21/11
Cr(VI) Prep										**07/20/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10	UJ	ug/g	1	0.10	0.50	07/20/11
~~**ICPMS Prep**~~										~~**07/27/11**~~
ICP-MS										
Manganese	7439-96-5	LA-505-412		416		mg/kg	1	0.098	0.98	07/29/11
Nickel	7440-02-0	LA-505-412		11.2		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/29/11
Barium	7440-39-3	LA-505-412		82.1		mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.277		mg/kg	1	0.098	0.49	07/29/11
~~Boron~~	~~7440-42-8~~	~~LA-505-412~~	~~B~~	~~0.520~~		~~mg/kg~~	~~1~~	~~0.49~~	~~4.9~~	~~07/29/11~~

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

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

LS
9-20-2011

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

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746008
SAF# F11-096
Sample ID B2FK00

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/21/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.7	07/21/11
Chloride	16887-00-6	LA-533-410	U	<3.2		mg/kg	1	3.2	21	07/21/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/21/11
Nitrate-N	NO3-N	LA-533-410	B	1.69		mg/kg	1	0.97	5.0	07/21/11
Sulfate	14808-79-8	LA-533-410		286		mg/kg	1	3.7	53	07/21/11
Cr(VI) Prep										**07/20/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10	UJ	ug/g	1	0.10	0.51	07/20/11
~~**ICPMS Prep**~~										~~**07/27/11**~~
ICP-MS										
Manganese	7439-96-5	LA-505-412		374		mg/kg	1	0.097	0.97	07/29/11
Nickel	7440-02-0	LA-505-412		10.9		mg/kg	1	0.19	1.9	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	07/29/11
Antimony	7440-36-0	LA-505-412	B	0.765		mg/kg	1	0.29	2.9	07/29/11
Barium	7440-39-3	LA-505-412		81.7		mg/kg	1	0.19	1.9	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.354		mg/kg	1	0.097	0.49	07/29/11
~~Boron~~	~~7440-42-8~~	~~LA-505-412~~	~~U~~	~~<0.49~~		~~mg/kg~~	~~1~~	~~0.49~~	~~4.9~~	~~07/29/11~~

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

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

LS
9-20-2011

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

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Sample # 112746009
SAF# F11-096
Sample ID B2FK01

Matrix SOIL
Sampled 07/19/11
Received 07/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/21/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/21/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	21	07/21/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.0	07/21/11
Nitrate-N	NO3-N	LA-533-410	B	1.84		mg/kg	1	0.96	5.0	07/21/11
Sulfate	14808-79-8	LA-533-410	B	9.04		mg/kg	1	3.6	53	07/21/11
Cr(VI) Prep										**07/20/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10	UJ	ug/g	1	0.10	0.50	07/20/11
~~**ICPMS Prep**~~										~~**07/27/11**~~
ICP-MS										
Manganese	7439-96-5	LA-505-412		433		mg/kg	1	0.10	1.0	07/29/11
Nickel	7440-02-0	LA-505-412		11.2		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/29/11
Barium	7440-39-3	LA-505-412		95.5		mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.431		mg/kg	1	0.10	0.51	07/29/11
~~Boron~~	~~7440-42-8~~	~~LA-505-412~~	~~B~~	~~0.728~~		~~mg/kg~~	~~1~~	~~0.51~~	~~5.1~~	~~07/29/11~~

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

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

LS
9-20-2011

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

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760001
SAF# F11-096
Sample ID B2FK02

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/21/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/21/11
Chloride	16887-00-6	LA-533-410	B	3.53		mg/kg	1	3.1	21	07/21/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/21/11
Nitrate-N	NO3-N	LA-533-410	B	1.40		mg/kg	1	0.96	5.0	07/21/11
Sulfate	14808-79-8	LA-533-410	B	39.3		mg/kg	1	3.6	53	07/21/11
Cr(VI) Prep										**07/26/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/26/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		422		mg/kg	1	0.098	0.98	07/29/11
Nickel	7440-02-0	LA-505-412		8.11		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/29/11
Barium	7440-39-3	LA-505-412		56.4		mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.423		mg/kg	1	0.098	0.49	07/29/11
Boron	7440-42-8	LA-505-412	U	<0.49		mg/kg	1	0.49	4.9	07/29/11

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

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

LS
9-20-2011

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)

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760002
SAF# F11-096
Sample ID B2FK03

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/21/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/21/11
Chloride	16887-00-6	LA-533-410	B	3.13		mg/kg	1	3.1	20	07/21/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/21/11
Nitrate-N	NO3-N	LA-533-410	B	1.33		mg/kg	1	0.95	5.0	07/21/11
Sulfate	14808-79-8	LA-533-410	B	13.1		mg/kg	1	3.6	52	07/21/11
Cr(VI) Prep										**07/26/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/26/11
~~**ICPMS Prep**~~										~~**07/27/11**~~
ICP-MS										
Manganese	7439-96-5	LA-505-412		415		mg/kg	1	0.10	1.0	07/29/11
Nickel	7440-02-0	LA-505-412		8.36		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/29/11
Barium	7440-39-3	LA-505-412		53.4		mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.412		mg/kg	1	0.10	0.50	07/29/11
~~Boron~~	~~7440-42-8~~	~~LA-505-412~~	~~U~~	~~<0.50~~		~~mg/kg~~	~~1~~	~~0.50~~	~~5.0~~	~~07/29/11~~

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

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

LS
9-20-2011

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)

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760003
SAF# F11-096
Sample ID B2FK04

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/21/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/21/11
Chloride	16887-00-6	LA-533-410	B	4.47		mg/kg	1	3.1	21	07/21/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/21/11
Nitrate-N	NO3-N	LA-533-410	B	1.94		mg/kg	1	0.96	5.0	07/21/11
Sulfate	14808-79-8	LA-533-410	B	21.8		mg/kg	1	3.6	53	07/21/11
Cr(VI) Prep										**07/26/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/26/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		389		mg/kg	1	0.094	0.94	07/29/11
Nickel	7440-02-0	LA-505-412		12.6		mg/kg	1	0.19	1.9	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	07/29/11
Barium	7440-39-3	LA-505-412		78.4		mg/kg	1	0.19	1.9	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.384		mg/kg	1	0.094	0.47	07/29/11
Boron	7440-42-8	LA-505-412	B	1.63		mg/kg	1	0.47	4.7	07/29/11

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

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

LS
9-20-2011

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)

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760004
SAF# F11-096
Sample ID B2FK05

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/21/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/21/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/21/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/21/11
Nitrate-N	NO3-N	LA-533-410	B	1.23		mg/kg	1	0.96	5.0	07/21/11
Sulfate	14808-79-8	LA-533-410	B	8.52		mg/kg	1	3.6	53	07/21/11
Cr(VI) Prep										**07/26/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/26/11
~~**ICPMS Prep**~~										~~**07/27/11**~~
ICP-MS										
Manganese	7439-96-5	LA-505-412		440		mg/kg	1	0.099	0.99	07/29/11
Nickel	7440-02-0	LA-505-412		18.8		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/29/11
Barium	7440-39-3	LA-505-412		78.3		mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.202		mg/kg	1	0.099	0.49	07/29/11
~~Boron~~	~~7440-42-8~~	~~LA-505-412~~	~~B~~	~~1.22~~		~~mg/kg~~	~~1~~	~~0.49~~	~~4.9~~	~~07/29/11~~

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

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

LS
9-20-2011

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)

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760005
SAF# F11-096
Sample ID B2FNW5

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/21/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/21/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/21/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/21/11
Nitrate-N	NO3-N	LA-533-410	U	<0.96		mg/kg	1	0.96	5.0	07/21/11
Sulfate	14808-79-8	LA-533-410	B	10.2		mg/kg	1	3.6	53	07/21/11
Cr(VI) Prep										**07/26/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/26/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		476		mg/kg	1	0.097	0.97	07/29/11
Nickel	7440-02-0	LA-505-412		10.3		mg/kg	1	0.19	1.9	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/29/11
Barium	7440-39-3	LA-505-412		70.8		mg/kg	1	0.19	1.9	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.333		mg/kg	1	0.097	0.48	07/29/11
Boron	7440-42-8	LA-505-412	B	0.661		mg/kg	1	0.48	4.8	07/29/11

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

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

LS
9-20-2011

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)

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760006
SAF# F11-096
Sample ID B2FNW6

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/21/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/21/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/21/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/21/11
Nitrate-N	NO3-N	LA-533-410	B	0.991		mg/kg	1	0.96	5.0	07/21/11
Sulfate	14808-79-8	LA-533-410	B	10.4		mg/kg	1	3.6	53	07/21/11
Cr(VI) Prep										**07/26/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/26/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		360		mg/kg	1	0.098	0.98	07/29/11
Nickel	7440-02-0	LA-505-412		9.86		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	07/29/11
Antimony	7440-36-0	LA-505-412	B	0.438		mg/kg	1	0.29	2.9	07/29/11
Barium	7440-39-3	LA-505-412		57.5		mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.321		mg/kg	1	0.098	0.49	07/29/11
Boron	7440-42-8	LA-505-412	U	<0.49		mg/kg	1	0.49	4.9	07/29/11

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

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

LS
9-20-2011

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)

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760007
SAF# F11-096
Sample ID B2FNW7

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/21/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/21/11
Chloride	16887-00-6	LA-533-410	B	3.59		mg/kg	1	3.1	21	07/21/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/21/11
Nitrate-N	NO3-N	LA-533-410	B	1.17		mg/kg	1	0.96	5.0	07/21/11
Sulfate	14808-79-8	LA-533-410	B	16.1		mg/kg	1	3.6	53	07/21/11
Cr(VI) Prep										**07/26/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/26/11
ICPMS Prep										**07/27/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		413		mg/kg	1	0.098	0.98	07/29/11
Nickel	7440-02-0	LA-505-412		8.88		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	07/29/11
Barium	7440-39-3	LA-505-412		63.1		mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.227		mg/kg	1	0.098	0.49	07/29/11
Boron	7440-42-8	LA-505-412	U	<0.49		mg/kg	1	0.49	4.9	07/29/11

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

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

LS
9-20-2011

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)

REVISED112760 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Sample # 112760008
SAF# F11-096
Sample ID B2FNW8

Matrix SOIL
Sampled 07/20/11
Received 07/21/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/25/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	U	<1.8		mg/kg	1	1.8	3.6	07/25/11
Chloride	16887-00-6	LA-533-410	U	<3.1		mg/kg	1	3.1	20	07/25/11
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	4.9	07/25/11
Nitrate-N	NO3-N	LA-533-410	U	<0.95		mg/kg	1	0.95	4.9	07/25/11
Sulfate	14808-79-8	LA-533-410	B	23.0		mg/kg	1	3.6	52	07/25/11
Cr(VI) Prep										**07/26/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	07/26/11
~~**ICPMS Prep**~~										~~**07/27/11**~~
ICP-MS										
Manganese	7439-96-5	LA-505-412		386		mg/kg	1	0.099	0.99	07/29/11
Nickel	7440-02-0	LA-505-412		9.16		mg/kg	1	0.20	2.0	07/29/11
Silver	7440-22-4	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	07/29/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	07/29/11
Barium	7440-39-3	LA-505-412		63.1		mg/kg	1	0.20	2.0	07/29/11
Beryllium	7440-41-7	LA-505-412	B	0.370		mg/kg	1	0.099	0.49	07/29/11
~~Boron~~	~~7440-42-8~~	~~LA-505-412~~	~~U~~	~~<0.49~~		~~mg/kg~~	~~1~~	~~0.49~~	~~4.9~~	~~07/29/11~~

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

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

LS
9-20-2011

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)

REVISED112760 -

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Attachment 2
Narrative
WSCF112687

Revision: This report has been revised to include Boron QC results that were missing from the original report.

Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

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

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

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

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

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

Inorganic Comments

Anions – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Narrative

Attachment 2
Narrative
WSCF112687

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):

- Manganese –Matrix Spike Duplicate recovery was outside established laboratory limits. Affected sample results in this batch were "N" flagged.
- All other applicable QC controls are within the established limits.

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

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-075

PAGE 1 OF 1

COLLECTOR: FM Hall

SAMPLING LOCATION: CHPRC

Area AA Zone 1 Sample 1

ICE CHEST NO.: N/A

SHIPPED TO: Waste Sampling & Characterization

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT DESIGNATION: Area AA In-Process Sampling - Soil

FIELD LOGBOOK NO.: HNF-N-507

ACTUAL SAMPLE DEPTH: Surface

OFFSITE PROPERTY NO.: N/A

PROJECT COORDINATOR: LUKE, SN

SAF NO.: F11-096

COA: 302682ES10

BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: C01

AIR QUALITY: ☐

DATA TURNAROUND: 12 Days / 12 Days

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

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

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

112687

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJX2	1	SOIL	JUL 13 2011	1249	X	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 13 2011 1420	Victor Burns	JUL 13 2011 1420

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc};
ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

LABORATORY SECTION: RECEIVED BY | TITLE | DATE/TIME

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

PRINTED ON 6/29/2011

A-5003-018 (REV 2)

Friday, July 15, 2011 11:36:16 AM
Page 2 of 8

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-096-076 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AA Zone 1 Sample 2	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096
ICE CHEST NO.: N/A	FIELD LOGBOOK NO.: HNF-N-607-22	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

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

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJX3	2 SOIL	JUL 13 2011	1309	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 13 2011 1430	Victor Silva	JUL 13 2011 1430

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011 — A 6003.618 (REV 7)

Friday, July 15, 2011 11:36:16 AM
Page 3 of 8

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-077

PAGE 1 OF 1

COLLECTOR: FM Hall, CHPRC

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT COORDINATOR: LUKE, SN

PRICE CODE: C01

DATA TURNAROUND: 12 Days / 12 Days

SAMPLING LOCATION: Area AA Zone 1 Sample 3

PROJECT DESIGNATION: Area AA In-Process Sampling - Soil

SAF NO.: F11-096

AIR QUALITY:

ICE CHEST NO.: N/A

FIELD LOGBOOK NO.: HNF-N-507-22

ACTUAL SAMPLE DEPTH: Surface

COA: 302682E510

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

SHIPPED TO: Waste Sampling & Characterization

OFFSITE PROPERTY NO.: N/A

BILL OF LADING/AIR BILL NO.: N/A

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJX4	SOIL	JUL 13 2011	1320	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 13 2011 1320	Victor Silms	JUL 13 2011 1330

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011

A-6002-618 (REV 2)

Friday, July 15, 2011 11:36:16 AM
Page 4 of 8

REVISED112687 -

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-078

PAGE 1 OF 1

COLLECTOR: FM Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AA Zone 1 Sample 4	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096
ICE CHEST NO.: N/A	FIELD LOGBOOK NO.: HNF-N-507-72	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: C01

AIR QUALITY: ☐

DATA TURNAROUND: 12 Days / 12 Days

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME	[redacted]	
B2FJX5	4	SOIL	JUL 13 2011	1331	X	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 13 2011 1430	Victor [illegible]	JUL 13 2011 1430

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

LABORATORY SECTION: RECEIVED BY | TITLE | DATE/TIME

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

PRINTED ON 6/29/2011

A-6003-618 (REV 2)

Friday, July 15, 2011 11:36:16 AM
Page 5 of 8

Chain of Custody

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | F11-096-079 | PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days		
SAMPLING LOCATION: Area AA Zone 1 Sample 5	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil	SAF NO.: F11-096	AIR QUALITY:
ICE CHEST NO.: N/A	FIELD LOGBOOK NO.: HNF-N-507-22	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10
METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL		
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJX6 5	SOIL	JUL 1 3 2011	1344	X	

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 1 3 2011 1430	Victor	JUL 1 3 2011 1430

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKT applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011

A-6003-618 (REV 2)

Friday, July 15, 2011 11:36:16 AM
Page 6 of 8

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-096-137	PAGE 1 OF 1
COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: Area AA Zone 1 Sample 31	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096	AIR QUALITY: ☐	
ICE CHEST NO.: N/A	FIELD LOGBOOK NO.: HNF-N-507-22	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FNW9	SOIL	JUL 13 2011	1049	X	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: FM Hall CHPRC	DATE/TIME: JUL 13 2011 1130	RECEIVED BY/STORED IN: Victor Silva	DATE/TIME: JUL 13 2011 1130
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

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) (Arsenic, Beryllium, 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};

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

PRINTED ON 7/11/2011

A-6003-618 (REV 2)

Friday, July 15, 2011 11:36:16 AM
Page 7 of 8

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-096-138	PAGE 1 OF 1
COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND
SAMPLING LOCATION: Area AA Zone 1 Sample 32	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096	AIR QUALITY: ☐	12 Days / 12 Days
ICE CHEST NO.: N/A	FIELD LOGBOOK NO.: HNF-N-507-22	ACTUAL SAMPLE DEPTH: N/A	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

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

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

112687

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FNX0 7	SOIL	JUL 13 2011	1230	X	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: FM Hall CHPRC	DATE/TIME: 1515 JUL 13 2011	RECEIVED BY/STORED IN: C Johnson	DATE/TIME: 1515 JUL 13 2011
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

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKT applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) (Arsenic, Beryllium, 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};

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

PRINTED ON 7/11/2011

A-6003-618 (REV 2)

Friday, July 15, 2011 11:36:16 AM
Page 8 of 8

REVISED112687 -

Attachment 2
Narrative
WSCF112727

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 # WSCF112727 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):

- Batch 186656

- Fluoride and Sulfate – Matrix Spike and/or Matrix Spike Duplicate recoveries are outside established laboratory limits. Affected sample results in this batch were "N" flagged.
- All other applicable QC controls are within the established limits.

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

- The Matrix Spike recovery is outside established laboratory limits. Affected sample results in this batch were "N" flagged.
- All other applicable QC controls are within the established limits.

ICP-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):

- Manganese – Matrix Spike and/or Matrix Spike Duplicate recoveries are outside established laboratory limits. Affected sample results in this batch were "N" flagged.
- Boron and Selenium – Detected in the Blank and evaluated. Affected sample results in this batch were "C" Flagged.
- 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
WSCF112727

8/15/2011

Problem and Discrepancy Report

WSCF

SDG WSCF112727

---

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.

3

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

F11-096-099 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AA Zone 1 Sample 25	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096
ICE CHEST NO.: 1A	FIELD LOGBOOK NO.: HNF-N-507-22	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

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

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

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

SPECIAL HANDLING AND/OR STORAGE: 112727

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FK06	SOIL	JUL 18 2011	1210	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 18 2011 1830		JUL 18 2011 1830

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc};
ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 8/29/2011 — A-6003-618 (REV 2)

Monday, July 18, 2011 4:42:12 PM
Page 3 of 10

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F11-096-100	PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AA Zone 1 Sample 26	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096
ICE CHEST NO.: NA	FIELD LOGBOOK NO.: HNF-N-507-22	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

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

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FK07 2	SOIL	JUL 18 2011	1218	X	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: FM Hall CHPRC	DATE/TIME: JUL 18 2011 1430	RECEIVED BY/STORED IN: Victor Bing	DATE/TIME: JUL 18 2011 1730
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

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011

A-6003-618 (REV 7)

Monday, July 18, 2011 4:42:12 PM
Page 4 of 10

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-080

PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT COORDINATOR: LUKE, SN

PRICE CODE: C01

DATA TURNAROUND: 12 Days / 12 Days

SAMPLING LOCATION: Area AA Zone 1 Sample 6

PROJECT DESIGNATION: Area AA In-Process Sampling - Soil

SAF NO.: F11-096

AIR QUALITY:

ICE CHEST NO.: NA

FIELD LOGBOOK NO.: HNF-N-507-22

ACTUAL SAMPLE DEPTH: Surface

COA: 302682ES10

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

SHIPPED TO: Waste Sampling & Characterization

OFFSITE PROPERTY NO.: N/A

BILL OF LADING/AIR BILL NO.: N/A

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJX7	SOIL	JUL 18 2011	1218	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 18 2011 1130	Victor Sing	JUL 18 2011 1130

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

LABORATORY SECTION: RECEIVED BY | TITLE | DATE/TIME

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

PRINTED ON 6/29/2011

A-6003-618 (REV 2)

Monday, July 18, 2011 4:42:12 PM
Page 5 of 10

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-096-081 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days		
SAMPLING LOCATION: Area AA Zone 1 Sample 7	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096
AIR QUALITY: ☐			
ICE CHEST NO.: N/A	FIELD LOGBOOK NO.: HNF-N-507	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10
METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL		
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

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

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

SPECIAL HANDLING AND/OR STORAGE:

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJX8 4	SOIL	JUL 18 2011	1238	X	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 18 2011 1430		JUL 18 2011 1430

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011 — A-6003-618 (REV 2)

Monday, July 18, 2011 4:42:12 PM
Page 6 of 10

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-096-082 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days	SAMPLING LOCATION: Area AA Zone 1 Sample 8	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil
SAF NO.: F11-096	AIR QUALITY: ☐	ICE CHEST NO.: N/A	FIELD LOGBOOK NO.: HNF-N-507-22
ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJX9 5	SOIL	JUL 18 2011	1226	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 18 2011 1430	Victor Sanchez	JUL 18 2011 1430

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011 — A-6005-518 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-083

PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT COORDINATOR: LUKE, SN

PRICE CODE: C01

DATA TURNAROUND: 12 Days / 12 Days

SAMPLING LOCATION: Area AA Zone 1 Sample 9

PROJECT DESIGNATION: Area AA In-Process Sampling - Soil

SAF NO.: F11-096

AIR QUALITY: ☐

ICE CHEST NO.: AA4

FIELD LOGBOOK NO.: HNF-N-507-22

ACTUAL SAMPLE DEPTH: Surface

COA: 302682ES10

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

SHIPPED TO: Waste Sampling & Characterization

OFFSITE PROPERTY NO.: N/A

BILL OF LADING/AIR BILL NO.: N/A

MATRIX*: A=Air, D1=Drum Liquids, D5=Drum Solids, L=Liquid, O=Oil, S=Soil, ST=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	[redacted]	
B2FJY0 6	SOIL	JUL 18 2011	1254	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 18 2011 1430	Victor Ruiz	JUL 18 2011 1430

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GK1 applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

LABORATORY SECTION: RECEIVED BY | TITLE | DATE/TIME

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

PRINTED ON 6/29/2011

A-6003-619 (REV 2)

Monday, July 18, 2011 4:42:12 PM
Page 8 of 10

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-096-084 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days	SAMPLING LOCATION: Area AA Zone 1 Sample 10	PROJECT DESIGNATION: Area AA In Process Sampling Soil
SAF NO.: F11-096	AIR QUALITY: ☐	ICE CHEST NO.: AA	FIELD LOGBOOK NO.: HNF-N-507-22
ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJY1	SOIL	JUL 18 2011	1363	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 18 2011 1430	Victor Bilm	JUL 18 2011 1730

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011 — A-6003-618 (REV 7)

Monday, July 18, 2011 4:42:12 PM
Page 9 of 10

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-085

PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC

SAMPLING LOCATION: Area AA Zone 1 Sample 11

ICE CHEST NO.: NA

SHIPPED TO: Waste Sampling & Characterization

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT DESIGNATION: Area AA In-Process Sampling - Soil

FIELD LOGBOOK NO.: HNF-N-507-22

ACTUAL SAMPLE DEPTH: Surface

OFFSITE PROPERTY NO.: N/A

PROJECT COORDINATOR: LUKE, SN

SAF NO.: F11-096

COA: 302682ES10

BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: C01

AIR QUALITY:

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

DATA TURNAROUND: 12 Days / 12 Days

ORIGINAL

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

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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	Cool-4C
HOLDING TIME	6 Months	28 Days/48 Hours
TYPE OF CONTAINER	G/P	G/P
NO. OF CONTAINER(S)	1	1
VOLUME	120mL	62mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJY2	SOIL	JUL 18 2011	1310	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	JUL 18 2011 1430	[illegible]	JUL 18 2011 1430

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Boron, Lead, Molybdenum, Selenium, Strontium, Tin, Uranium}; 200.8_HG - ICPMS {Mercury}; Chromium Hex - 7196;
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen n Nitrate, Nitrogen in Nitrite, Sulfate};

LABORATORY SECTION — RECEIVED BY — TITLE — DATE/TIME

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

PRINTED ON 6/29/2011

A-6003-618 (REV 2)

Monday, July 18, 2011 4:42:12 PM
Page 10 of 10

Attachment 2
Narrative
WSCF112746

Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

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

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

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

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

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

Inorganic Comments

Anions – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

Attachment 2
Narrative
WSCF112746

- Batch QC 186656
  - Fluoride and Sulfate – Matrix Spike and/or Matrix Spike Duplicate recoveries are outside established laboratory limits. Affected sample results in this batch were "N" flagged.
- Batch QC 186804
  - Chloride – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results near or below the minimum detectable level. No flags issued.
  - All other applicable QC controls are within the established limits.

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

- Matrix Spike and/or Matrix Spike Duplicate recoveries are outside established laboratory limits. Affected sample results in this batch were "N" flagged.
- All other 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):

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

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

F11-096-086 — PAGE 1 OF 1

COLLECTOR: DJ Sparks CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AA Zone 1 Sample 12	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096
ICE CHEST NO.: NA	FIELD LOGBOOK NO.: HNF-N-507-22	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10
SHIPPED TO: Waste Sampling & Characterization NA	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

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

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

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

112746

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJY3	SOIL	JUL 19 2011	1157	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
DJ Sparks CHPRC	JUL 19 2011		JUL 19 2011 1430

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011 — A-6003 613 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-087 PAGE 1 OF 1

COLLECTOR: DJ Sparks CHPRC

SAMPLING LOCATION: Area AA Zone 1 Sample 13

ICE CHEST NO.: NA

SHIPPED TO: Waste Sampling & Characterization

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT DESIGNATION: Area AA In-Process Sampling - Soil

FIELD LOGBOOK NO.: HNF-N-507-22

ACTUAL SAMPLE DEPTH: Surface

OFFSITE PROPERTY NO.: N/A

PROJECT COORDINATOR: LUKE, SN

SAF NO.: F11-096

COA: 302682ES10

BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: C01

AIR QUALITY:

DATA TURNAROUND: 12 Days / 12 Days

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJY4	2	SOIL	JUL 19 2011	1206	X	X

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
DJ Sparks CHPRC	JUL 19 2011 1430	[illegible]	JUL 19 2011 1430

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-088

PAGE 1 OF 1

COLLECTOR: DJ Sparks CHPRC

SAMPLING LOCATION: Area AA Zone 1 Sample 14

ICE CHEST NO.: N/A

SHIPPED TO: Waste Sampling & Characterization

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT DESIGNATION: Area AA In-Process Sampling - Soil

FIELD LOGBOOK NO.: HNF-N-502-22

ACTUAL SAMPLE DEPTH: Surface

OFFSITE PROPERTY NO.: N/A

PROJECT COORDINATOR: LUKE, SN

SAF NO.: F11-096

COA: 302682ES10

BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: C01

AIR QUALITY: ☐

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

DATA TURNAROUND: 12 Days / 12 Days

ORIGINAL

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJY5	3	SOIL	JUL 19 2011	1818	X	X

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
DJ Sparks CHPRC	JUL 19 2011 1430	[illegible]	JUL 19 2011 1430

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

LABORATORY SECTION — RECEIVED BY — TITLE — DATE/TIME

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

PRINTED ON 6/29/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-089

PAGE 1 OF 1

COLLECTOR: DJ Sparks CHPRC

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT COORDINATOR: LUKE, SN

PRICE CODE: C01

DATA TURNAROUND: 12 Days / 12 Days

SAMPLING LOCATION: Area AA Zone 1 Sample 15

PROJECT DESIGNATION: Area AA In-Process Sampling - Soil

SAF NO.: F11-096

AIR QUALITY: ☐

ICE CHEST NO.: 111

FIELD LOGBOOK NO.: HNF-N-507-22

ACTUAL SAMPLE DEPTH: Surface

COA: 302682ES10

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

SHIPPED TO: Waste Sampling & Characterization

OFFSITE PROPERTY NO.: N/A

BILL OF LADING/AIR BILL NO.: N/A

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJY6	4	SOIL	JUL 19 2011	1326	X	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
DJ Sparks CHPRC	JUL 19 2011 1430	[illegible] 1430	JUL 19 2011

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

LABORATORY SECTION — RECEIVED BY — TITLE — DATE/TIME

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

PRINTED ON 6/29/2011

A-6003-61R (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-096-090	PAGE 1 OF 1
COLLECTOR: DJ Sp CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1567	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: Area AA Zone 1 Sample 16	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096	AIR QUALITY: ☐	
ICE CHEST NO.: NA	FIELD LOGBOOK NO.: HNF-N-507-22	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJY7 5	SOIL	JUL 19 2011	1234	X	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: DJ Sparks CHPRC	DATE/TIME: 1430 JUL 19 2011	RECEIVED BY/STORED IN: [illegible]	DATE/TIME: 1430 JUL 19 2011
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

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-096-091	PAGE 1 OF 1
COLLECTOR: DJ Sparks CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: Area AA Zone 1 Sample 17	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096	AIR QUALITY: ☐	
ICE CHEST NO.: NA	FIELD LOGBOOK NO.: HNF-N-807	ACTUAL SAMPLE DEPTH: Surface	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJY8	SOIL	JUL 19 2011	1847	X	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: DJ Sparks CHPRC	DATE/TIME: 1430 JUL 19 2011	RECEIVED BY/STORED IN:	DATE/TIME: 1430 JUL 19 2011
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

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKT applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-092

PAGE 1 OF 1

COLLECTOR: DJ Sparks CHPRC

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT COORDINATOR: LUKE, SN

PRICE CODE: C01

DATA TURNAROUND: 12 Days / 12 Days

SAMPLING LOCATION: Area AA Zone 1 Sample 18

PROJECT DESIGNATION: Area AA In-Process Sampling - Soil

SAF NO.: F11-096

AIR QUALITY: ☐

ICE CHEST NO.: NA

FIELD LOGBOOK NO.: HNF-N-507

ACTUAL SAMPLE DEPTH: Surface

COA: 302682ES10

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

SHIPPED TO: Waste Sampling & Characterization

OFFSITE PROPERTY NO.: N/A

BILL OF LADING/AIR BILL NO.: N/A

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FJY9	7	SOIL	JUL 19 2011	1353	X	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
DJ Sparks CHPRC	JUL 19 2011 1430	[illegible]	JUL 19 2011 1430

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-093 | PAGE 1 OF 1

COLLECTOR: DJ Sparks CHPRC

SAMPLING LOCATION: Area AA Zone 1 Sample 19

ICE CHEST NO.: NA

SHIPPED TO: Waste Sampling & Characterization

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1867

PROJECT DESIGNATION: Area AA In-Process Sampling - Soil

FIELD LOGBOOK NO.: ~~HNF-N-507-~~ 22

ACTUAL SAMPLE DEPTH: Surface

OFFSITE PROPERTY NO.: N/A

PROJECT COORDINATOR: LUKE, SN

SAF NO.: F11-096

COA: 302682ES10

BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: C01

AIR QUALITY: ☐

DATA TURNAROUND: 12 Days / 12 Days

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FK00	SOIL	JUL 19 2011	1430	X	X

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
DJ Sparks CHPRC	JUL 19 2011 1430	[illegible]	1430 JUL 19 2011

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011

A-6003-518 (REV 2)

Tuesday, July 19, 2011 3:49:16 PM
Page 10 of 11

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-096-094 | PAGE 1 OF 1

COLLECTOR: DJ Sparks, CHPRC

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT COORDINATOR: LUKE, SN

PRICE CODE: C01

DATA TURNAROUND: 12 Days / 12 Days

SAMPLING LOCATION: Area AA Zone 1 Sample 20

PROJECT DESIGNATION: Area AA In-Process Sampling - Soil

SAF NO.: F11-096

AIR QUALITY: ☐

ICE CHEST NO.: N/A

FIELD LOGBOOK NO.: HNF-N-507 22

ACTUAL SAMPLE DEPTH: Surface

COA: 302682ES10

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

SHIPPED TO: Waste Sampling & Characterization

OFFSITE PROPERTY NO.: N/A

BILL OF LADING/AIR BILL NO.: N/A

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FK01 9	SOIL	JUL 19 2011	1303	X	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
DJ Sparks CHPRC	JUL 19 2011 1430	[illegible]	JUL 19 2011 1430

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKT applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011

A-6003-618 (REV 2)

Attachment 2
Narrative, Rev. 1
WSCF112760

Revision: This report has been revised to include Boron QC results that were missing from the original report.

Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

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

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

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

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

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

Inorganic Comments

Anions – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Batch QC 186804

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

- Batch QC 186865
  - Chloride and Nitrate – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results near or below the minimum detectable level. No flags issued.
  - All other applicable QC controls are within the established limits.

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

- 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):

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

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-096-095 — PAGE 1 OF 1

COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AA Zone 1 Sample 21	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096
ICE CHEST NO.: SML-777	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302602ES10
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

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

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

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

112760

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	Cool+IC
HOLDING TIME	6 Months	28 Days/48 Hours
TYPE OF CONTAINER	G/P	G/P
NO. OF CONTAINER(S)	1	1
VOLUME	120mL	60mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FK02	SOIL	7/20/11	1308	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	7/20/11 1300	SSU#1 MO1109	7/20/11 1500
SSU#1 MO1109	7/21/11 0800	F. Hall	7/21/11 0800
F. Hall	7/21/11 1005	[illegible]	7/21/11 1005

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

LABORATORY SECTION — RECEIVED BY — TITLE — DATE/TIME

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

PRINTED ON 6/29/2011 — A-6003-518 (REV 2)

Thursday, July 21, 2011 11:47:00 AM
Page 3 of 10

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-096-096 — PAGE 1 OF 1

COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days		
SAMPLING LOCATION: Area AA Zone 1 Sample 22	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096
AIR QUALITY: ☐			
ICE CHEST NO.: SML-777	FIELD LOGBOOK NO.: HNF-N-807-23	ACTUAL SAMPLE DEPTH: 0 - 1	COA: 302682ES10
METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL		
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FK03	2	SOIL	7/20/11	1322	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	7/20/11 1500	SSU #1 MC1109	7/20/11 1500
SSU#1 MC1109	7/21/11 0800	F. Hall	7/21/11 0800
F. Hall	7/21/11 1005		7/21/11 1005

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011 — A-6003-618 (REV 2)

Thursday, July 21, 2011 11:47:00 AM
Page 4 of 10

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST F11-096-097 PAGE 1 OF 1

COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days	SAMPLING LOCATION: Area AA Zone 1 Sample 23	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil
SAF NO.: F11-096	AIR QUALITY	ICE CHEST NO.: SMC-777	FIELD LOGBOOK NO.: HNF-N-507-23
ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FK04	3	SOIL	7/20/11	1331	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	7/20/11 1500	M01109SSU#1	7/20/11 1500
M01109SSU#1	7/21/11 0800	F. Hall	7/21/11 0800
F. Hall	7/21/11 1005	[illegible]	7/21/11 1005

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011 A-6003-516 (REV 2)

Thursday, July 21, 2011 11:47:00 AM
Page 5 of 10

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-096-098 — PAGE 1 OF 1

COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AA Zone 1 Sample 24	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096
ICE CHEST NO.: SMC-777	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1	COA: 302682ES10
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

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

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FK05	4	SOIL	7/20/11	1347	✓	✓

CHAIN OF POSSESSION	DATE/TIME	SIGN/ PRINT NAMES	DATE/TIME
RELINQUISHED BY/REMOVED FROM: F. Hall	7/20/11 1500	RECEIVED BY/STORED IN: M01109 SSU#1	7/20/11 1500
RELINQUISHED BY/REMOVED FROM: M01109 SSU#1	7/21/11 0800	RECEIVED BY/STORED IN: F. Hall	7/21/11 0800
RELINQUISHED BY/REMOVED FROM: F. Hall	7/21/11 1005	RECEIVED BY/STORED IN: [illegible]	7/21/11 1005
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.
** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 6/29/2011 — A-6003-618 (REV 2)

Thursday, July 21, 2011 11:47:00 AM
Page 6 of 10

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F11-096-133	PAGE 1 OF 1
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01 DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: Area AA Zone 1 Sample 27	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil	SAF NO.: F11-096	AIR QUALITY: ☐
ICE CHEST NO.: SML-777	FIELD LOGBOOK NO.: HNF-N-507-23 ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE **ORIGINAL**
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FNW5 5	SOIL	7/20/11	1359	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 7/20/11 1500	RECEIVED BY/STORED IN: MO1109 SSU#1	DATE/TIME: 7/20/11 1500
RELINQUISHED BY/REMOVED FROM: MO1109 SSU#1	DATE/TIME: 7/21/11 0800	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 7/21/11 0800
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 7/21/11 1005	RECEIVED BY/STORED IN: [signature]	DATE/TIME: 7/21/11 1005
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 7/11/2011

A-6003-618 (REV 2)

Thursday, July 21, 2011 11:47:00 AM
Page 7 of 10

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-096-134	PAGE 1 OF 1
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND
SAMPLING LOCATION: Area AA Zone 1 Sample 28	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096	AIR QUALITY: ☐	12 Days / 12 Days
ICE CHEST NO.: SML-777	FIELD LOGBOOK NO.: HNF-N-507-28	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, Ti=Tissue, V=Vegetation, W=Water, Wi=Wipe, X=Other

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FNW6	SOIL	7/20/11	1409	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 7/20/11 / 1500	RECEIVED BY/STORED IN: SSU#1 MC1109	DATE/TIME: 7/20/11 / 1500
RELINQUISHED BY/REMOVED FROM: SSU#1 MC1109	DATE/TIME: 7/21/11 0800	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 7/21/11 0800
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 7/21/11 1005	RECEIVED BY/STORED IN: [illegible]	DATE/TIME: 7/21/11 1005
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 7/11/2011

A-6003-618 (REV 2)

Thursday, July 21, 2011 11:47:00 AM
Page 8 of 10

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-096-135	PAGE 1 OF 1
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1867	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01 / AIR QUALITY: ☐	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: Area AA Zone 1 Sample 29	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096		
ICE CHEST NO.: SML-777	FIELD LOGBOOK NO.: HNF-N-807-23	ACTUAL SAMPLE DEPTH: 0-11	COA: 302GB2E510	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FNW7 7	SOIL	7/20/11	1418	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 7/20/11 1500	RECEIVED BY/STORED IN: M01109SSU#1	DATE/TIME: 7/20/11 1500
RELINQUISHED BY/REMOVED FROM: M01109SSU#1	DATE/TIME: 7/21/11 0800	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 7/21/11 0800
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 7/21/11 1005	RECEIVED BY/STORED IN: [illegible]	DATE/TIME: 7/21/11 1005
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 7/11/2011

A-6003-618 (REV 2)

Thursday, July 21, 2011 11:47:00 AM
Page 9 of 10

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-096-136	PAGE 1 OF 1
COLLECTOR: F. Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN	PRICE CODE: C01	DATA TURNAROUND: 12 Days / 12 Days
SAMPLING LOCATION: Area AA Zone 1 Sample 30	PROJECT DESIGNATION: Area AA In-Process Sampling - Soil		SAF NO.: F11-096	AIR QUALITY: ☐	
ICE CHEST NO.: SML-777	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302682ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2FNW8 8	SOIL	7/20/11	1429	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 7/20/11 1500	RECEIVED BY/STORED IN: M01109SSU#1	DATE/TIME: 7/20/11 1500
RELINQUISHED BY/REMOVED FROM: M01109SSU#1	DATE/TIME: 7/21/11 0800	RECEIVED BY/STORED IN: F. Hall	DATE/TIME: 7/21/11 0800
RELINQUISHED BY/REMOVED FROM: F. Hall	DATE/TIME: 7/21/11 1005	RECEIVED BY/STORED IN: [illegible]	DATE/TIME: 7/21/11 1005
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402581ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc}; ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, 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};

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

PRINTED ON 7/11/2011

4-6003-618 (REV 2)

Thursday, July 21, 2011 11:47:00 AM
Page 10 of 10

Appendix 5

Data Validation Supporting Documentation

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: 100K Area AA Zone 1			DATA PACKAGE: VSR11-055		
VALIDATOR: Carl Schloesslin		LAB: WSCF		DATE: 9-20-2011	
			SDG: WSCF-112687, -112727, -112746, -112760		
ANALYSES PERFORMED					
Anions/IC X	TOC	TOX	TPH-418.1	Oil and Grease	Alkalinity
Ammonia	BOD/COD	Chloride	Chromium-VI X	pH	NO_3/NO_2
Sulfate	TDS	TKN	Phosphate	Cyanide	

SAMPLES/MATRIX Soil samples

SDG WSCF112687: B2FJX2, B2FJX3, B2FJX4, B2FJX5, B2FJX6, B2FNW9, B2FNX0

SDG WSCF112727: B2FK06, B2FK07, B2FJX7, B2FJX8, B2FJX9, B2FJY0, B2FJY1, B2FJY2

SDG WSCF112746: B2FJY3, B2FJY4, B2FJY5, B2FJY6, B2FJY7, B2FJY8, B2FJY9, B2FK00, B2FK01

SDG WSCF112760: B2FK02, B2FK03, B2FK04, B2FK05, B2FNW5, B2FNW6, B2FNW7, B2FNW8

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

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

Comments: None

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

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

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

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

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

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

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

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

Comments:

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

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

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

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

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

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

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

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

Comments:

None

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

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

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

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

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

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

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

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

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

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

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

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

Comments:

WSCF112727: Batch 186657 fluoride MSD %R = 67%
Cr(VI) MS %R = 47%

WSCF112746: Batch 186657 fluoride MSD %R = 67%
Cr(VI) MS %R = 61%

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

7. RESULT QUANTITATION AND DETECTION LIMITS (all levels)

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

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

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

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

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

Comments: None

Appendix 6

Additional Documentation Requested By Client

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

QC Batch 185912 **Test** Hexavalent chromium
Associated Samples 112687001, 112687002, 112687003, 112687004, 112687005, 112687006, 112687007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #60569**							
Hexavalent chromium	18540-29-9		<0.098	ug/g					U	07/15/11
LCS			**QC Sample #60570**							
Hexavalent chromium	18540-29-9		3.98	ug/g	102.2	80 - 120				07/15/11
DUP			**QC Sample #60571**							
			Original 112639015							
Hexavalent chromium	18540-29-9		<0.099	ug/g			1.60	30	U	07/15/11
MS			**QC Sample #60572**							
			Original 112639015							
Hexavalent chromium	18540-29-9		3.54	ug/g	89.6	75 - 125				07/15/11
PSTSPK			**QC Sample #60573**							
Hexavalent chromium	18540-29-9		0.0487	ug/g	97.4	85 - 115				07/15/11
IMS			**QC Sample #60574**							
			Original 112639015							
Hexavalent chromium	18540-29-9		355	ug/g	104.2	75 - 125				07/15/11

REVISED112687 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

QC Batch 185938 **Test** Anions by Ion Chromatography (Solid)
Associated Samples 112687001, 112687002, 112687003, 112687004, 112687005, 112687006, 112687007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #60632**							
Fluoride	16984-48-8		<0.036	ug/mL					U	07/14/11
Chloride	16887-00-6		<0.062	ug/mL					U	07/14/11
Nitrite-N	NO2-N		<0.020	ug/mL					U	07/14/11
Nitrate-N	NO3-N		<0.019	ug/mL					U	07/14/11
Sulfate	14808-79-8		<0.072	ug/mL					U	07/14/11
LCS			**QC Sample #60634**							
Fluoride	16984-48-8		0.923	ug/mL	93.2	90 - 110				07/14/11
Chloride	16887-00-6		1.84	ug/mL	93.1	90 - 110				07/14/11
Nitrite-N	NO2-N		0.969	ug/mL	99	90 - 110				07/14/11
Nitrate-N	NO3-N		0.861	ug/mL	97.2	90 - 110				07/14/11
Sulfate	14808-79-8		3.59	ug/mL	91.6	90 - 110				07/14/11
MS			**QC Sample #60635**							
			Original 112687004							
Fluoride	16984-48-8	<1.8	20.7	mg/kg	82.4	80 - 120				07/14/11
Chloride	16887-00-6	6.06	43.7	mg/kg	86.9	80 - 120				07/14/11
Nitrite-N	NO2-N	<1.0	23.6	mg/kg	95.3	80 - 120				07/14/11
Nitrate-N	NO3-N	1.34	21.1	mg/kg	94	80 - 120				07/14/11
Sulfate	14808-79-8	24.1	84.3	mg/kg	84.7	80 - 120				07/14/11

REVISED112687 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112687

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
MSD			**QC Sample #60636**							
			Original 112687004					**Paired 60635**		
Fluoride	16984-48-8	<1.8	20.7	mg/kg	82.6	80 - 120	0.20	30		07/14/11
Chloride	16887-00-6	6.06	43.7	mg/kg	87	80 - 120	0.10	30		07/14/11
Nitrite-N	NO2-N	<1.0	23.6	mg/kg	95.3	80 - 120	0.00	30		07/14/11
Nitrate-N	NO3-N	1.34	21.1	mg/kg	94.1	80 - 120	0.10	30		07/14/11
Sulfate	14808-79-8	24.1	83.5	mg/kg	84	80 - 120	0.80	30		07/14/11
DUP			**QC Sample #60637**							
			Original 112687004							
Fluoride	16984-48-8	<1.8	<1.8	mg/kg			0.00	30	U	07/14/11
Chloride	16887-00-6	6.06	6.41	mg/kg			5.70	30	B	07/14/11
Nitrite-N	NO2-N	<1.0	<1.0	mg/kg			0.00	30	U	07/14/11
Nitrate-N	NO3-N	1.34	1.28	mg/kg			3.90	30	B	07/14/11
Sulfate	14808-79-8	24.1	28.7	mg/kg			17.20	30	B	07/14/11

Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF112727

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
186559	186560	27	SAMPLE	112727006	B2FJY0		Hexavalent chromium
186559	186560	28	SAMPLE	112727007	B2FJY1		Hexavalent chromium
186559	186560	29	SAMPLE	112727008	B2FJY2		Hexavalent chromium
186656	186657	2	BLANK	60999	BLANK		Anions by Ion Chromatography (Solid)
186656	186657	3	LCS	61000	LCS		Anions by Ion Chromatography (Solid)
186656	186657	4	MS	61001	B2FJY2(112727008MS)	112727008	Anions by Ion Chromatography (Solid)
186656	186657	5	MSD	61002	B2FJY2(112727008MSD)	112727008	Anions by Ion Chromatography (Solid)
186656	186657	6	DUP	61003	B2FJY2(112727008DUP)	112727008	Anions by Ion Chromatography (Solid)
186656	186657	7	SAMPLE	112727008	B2FJY2		Anions by Ion Chromatography (Solid)
186656	186657	8	SAMPLE	112727005	B2FJX9		Anions by Ion Chromatography (Solid)
186656	186657	9	SAMPLE	112727006	B2FJY0		Anions by Ion Chromatography (Solid)
186656	186657	10	SAMPLE	112727007	B2FJY1		Anions by Ion Chromatography (Solid)
186665	186668	2	BLANK	61031	BLANK		Anions by Ion Chromatography (Solid)
186665	186668	3	LCS	61032	LCS		Anions by Ion Chromatography (Solid)
186665	186668	4	MS	61033	B2FJW8(112717006MS)	112717006	Anions by Ion Chromatography (Solid)
186665	186668	5	MSD	61034	B2FJW8(112717006MSD)	112717006	Anions by Ion Chromatography (Solid)
186665	186668	6	DUP	61035	B2FJW8(112717006DUP)	112717006	Anions by Ion Chromatography (Solid)
186665	186668	13	SAMPLE	112727001	B2FK06		Anions by Ion Chromatography (Solid)
186665	186668	14	SAMPLE	112727002	B2FK07		Anions by Ion Chromatography (Solid)
186665	186668	15	SAMPLE	112727003	B2FJX7		Anions by Ion Chromatography (Solid)
186665	186668	16	SAMPLE	112727004	B2FJX8		Anions by Ion Chromatography (Solid)

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

QC Batch 186559 **Test** Hexavalent chromium
Associated Samples 112727001, 112727002, 112727003, 112727004, 112727005, 112727006, 112727007, 112727008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #60944**							
Hexavalent chromium	18540-29-9		<0.099	ug/g					U	07/20/11
LCS			**QC Sample #60945**							
Hexavalent chromium	18540-29-9		3.83	ug/g	98.3	80 - 120				07/20/11
DUP			**QC Sample #60946**							
			Original 112717001							
Hexavalent chromium	18540-29-9		<0.10	ug/g			0.90	30	U	07/20/11
MS			**QC Sample #60947**							
			Original 112717001							
Hexavalent chromium	18540-29-9		1.85	ug/g	46.8	75 - 125			N	07/20/11
PSTSPK			**QC Sample #60948**							
Hexavalent chromium	18540-29-9		0.0558	ug/g	111.6	85 - 115				07/20/11
IMS			**QC Sample #60949**							
			Original 112717001							
Hexavalent chromium	18540-29-9		310	ug/g	87.8	75 - 125				07/20/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

QC Batch 186656
Associated Samples 112727005, 112727006, 112727007, 112727008

Test Anions by Ion Chromatography (Solid)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #60999**							
Fluoride	16984-48-8		<0.036	ug/mL					U	07/20/11
Chloride	16887-00-6		<0.062	ug/mL					U	07/20/11
Nitrite-N	NO2-N		<0.020	ug/mL					U	07/20/11
Nitrate-N	NO3-N		<0.019	ug/mL					U	07/20/11
Sulfate	14808-79-8		<0.072	ug/mL					U	07/20/11
LCS			**QC Sample #61000**							
Fluoride	16984-48-8		0.896	ug/mL	90.5	90 - 110				07/20/11
Chloride	16887-00-6		1.83	ug/mL	92.4	90 - 110				07/20/11
Nitrite-N	NO2-N		0.931	ug/mL	95.2	90 - 110				07/20/11
Nitrate-N	NO3-N		0.854	ug/mL	96.5	90 - 110				07/20/11
Sulfate	14808-79-8		3.70	ug/mL	94.3	90 - 110				07/20/11
MS			**QC Sample #61001**							
			Original	**112727008**						
Fluoride	16984-48-8	<1.8	17.9	mg/kg	71.2	80 - 120			N	07/20/11
Chloride	16887-00-6	<3.1	43.1	mg/kg	85.8	80 - 120				07/20/11
Nitrite-N	NO2-N	<1.0	20.9	mg/kg	84.3	80 - 120				07/20/11
Nitrate-N	NO3-N	<0.96	19.7	mg/kg	87.6	80 - 120				07/20/11
Sulfate	14808-79-8	41.7	75.7	mg/kg	76.1	80 - 120			N	07/20/11

REVISED112727 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
MSD			**QC Sample #61002**								
			Original	**112727008**					**Paired**	**61001**	
Fluoride	16984-48-8	<1.8	16.7	mg/kg	66.6	80 - 120	6.70	30		N	07/20/11
Chloride	16887-00-6	<3.1	43.1	mg/kg	85.8	80 - 120	0.00	30			07/20/11
Nitrite-N	NO2-N	<1.0	21.0	mg/kg	84.5	80 - 120	0.20	30			07/20/11
Nitrate-N	NO3-N	<0.96	20.0	mg/kg	89.3	80 - 120	1.90	30			07/20/11
Sulfate	14808-79-8	41.7	75.2	mg/kg	75.6	80 - 120	0.70	30		N	07/20/11
DUP			**QC Sample #61003**								
			Original	**112727008**							
Fluoride	16984-48-8	<1.8	<1.8	mg/kg			0.00	30		U	07/20/11
Chloride	16887-00-6	<3.1	<3.1	mg/kg			31.30	30	*	UX	07/20/11
Nitrite-N	NO2-N	<1.0	<1.0	mg/kg			0.00	30		U	07/20/11
Nitrate-N	NO3-N	<0.96	<0.96	mg/kg			30.00	30		U	07/20/11
Sulfate	14808-79-8	41.7	34.1	mg/kg			20.00	30		B	07/20/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

QC Batch 186665
Associated Samples 112727001, 112727002, 112727003, 112727004

Test Anions by Ion Chromatography (Solid)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #61031**							
Fluoride	16984-48-8		<0.036	ug/mL					U	07/19/11
Chloride	16887-00-6		<0.062	ug/mL					U	07/19/11
Nitrite-N	NO2-N		<0.020	ug/mL					U	07/19/11
Nitrate-N	NO3-N		<0.019	ug/mL					U	07/19/11
Sulfate	14808-79-8		<0.072	ug/mL					U	07/19/11
LCS			**QC Sample #61032**							
Fluoride	16984-48-8		0.904	ug/mL	91.2	90 - 110				07/19/11
Chloride	16887-00-6		1.78	ug/mL	90	90 - 110				07/19/11
Nitrite-N	NO2-N		0.950	ug/mL	97.1	90 - 110				07/19/11
Nitrate-N	NO3-N		0.872	ug/mL	98.6	90 - 110				07/19/11
Sulfate	14808-79-8		3.62	ug/mL	92.2	90 - 110				07/19/11
MS			**QC Sample #61033**							
			Original 112717006							
Fluoride	16984-48-8		21.5	mg/kg	85.4	80 - 120				07/19/11
Chloride	16887-00-6		45.9	mg/kg	91.2	80 - 120				07/19/11
Nitrite-N	NO2-N		23.4	mg/kg	94.3	80 - 120				07/19/11
Nitrate-N	NO3-N		21.4	mg/kg	95	80 - 120				07/19/11
Sulfate	14808-79-8		89.9	mg/kg	90.2	80 - 120				07/19/11

REVISED112727 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112727

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
MSD			**QC Sample #61034**							
			Original 112717006					**Paired**	**61033**	
Fluoride	16984-48-8		23.4	mg/kg	93.5	80 - 120	9.10	30		07/19/11
Chloride	16887-00-6		46.1	mg/kg	91.8	80 - 120	0.70	30		07/19/11
Nitrite-N	NO2-N		23.7	mg/kg	95.7	80 - 120	1.50	30		07/19/11
Nitrate-N	NO3-N		22.3	mg/kg	99.6	80 - 120	4.70	30		07/19/11
Sulfate	14808-79-8		88.1	mg/kg	88.7	80 - 120	1.70	30		07/19/11
DUP			**QC Sample #61035**							
			Original 112717006							
Fluoride	16984-48-8		<1.8	mg/kg			0.00	30	U	07/19/11
Chloride	16887-00-6		<3.1	mg/kg			3.90	30	U	07/19/11
Nitrite-N	NO2-N		<0.99	mg/kg			0.00	30	U	07/19/11
Nitrate-N	NO3-N		<0.94	mg/kg			29.70	30	U	07/19/11
Sulfate	14808-79-8		<3.6	mg/kg			6.30	30	U	07/19/11

Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF112746

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
186656	186657	2	BLANK	60999	BLANK		Anions by Ion Chromatography (Solid)
186656	186657	3	LCS	61000	LCS		Anions by Ion Chromatography (Solid)
186656	186657	4	MS	61001	B2FJY2(112727008MS)	112727008	Anions by Ion Chromatography (Solid)
186656	186657	5	MSD	61002	B2FJY2(112727008MSD)	112727008	Anions by Ion Chromatography (Solid)
186656	186657	6	DUP	61003	B2FJY2(112727008DUP)	112727008	Anions by Ion Chromatography (Solid)
186656	186657	11	SAMPLE	112746001	B2FJY3		Anions by Ion Chromatography (Solid)
186656	186657	12	SAMPLE	112746002	B2FJY4		Anions by Ion Chromatography (Solid)
186656	186657	13	SAMPLE	112746003	B2FJY5		Anions by Ion Chromatography (Solid)
186656	186657	14	SAMPLE	112746004	B2FJY6		Anions by Ion Chromatography (Solid)
186656	186657	15	SAMPLE	112746005	B2FJY7		Anions by Ion Chromatography (Solid)
186656	186657	16	SAMPLE	112746006	B2FJY8		Anions by Ion Chromatography (Solid)
186666	186667	1	BLANK	61037	BLANK		Hexavalent chromium
186666	186667	4	LCS	61038	LCS		Hexavalent chromium
186666	186667	5	DUP	61039	B2FJY3(112746001DUP)	112746001	Hexavalent chromium
186666	186667	6	MS	61040	B2FJY3(112746001MS)	112746001	Hexavalent chromium
186666	186667	7	PSTSPK	61041	PSTSPK		Hexavalent chromium
186666	186667	8	IMS	61042	B2FJY3(112746001IMS)	112746001	Hexavalent chromium
186666	186667	9	SAMPLE	112746001	B2FJY3		Hexavalent chromium
186666	186667	10	SAMPLE	112746002	B2FJY4		Hexavalent chromium
186666	186667	11	SAMPLE	112746003	B2FJY5		Hexavalent chromium
186666	186667	12	SAMPLE	112746004	B2FJY6		Hexavalent chromium
186666	186667	13	SAMPLE	112746005	B2FJY7		Hexavalent chromium
186666	186667	14	SAMPLE	112746006	B2FJY8		Hexavalent chromium

Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF112746

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
186666	186667	15	SAMPLE	112746007	B2FJY9		Hexavalent chromium
186666	186667	16	SAMPLE	112746008	B2FK00		Hexavalent chromium
186666	186667	17	SAMPLE	112746009	B2FK01		Hexavalent chromium
186804	186805	2	BLANK	61286	BLANK		Anions by Ion Chromatography (Solid)
186804	186805	3	LCS	61287	LCS		Anions by Ion Chromatography (Solid)
186804	186805	4	MS	61288	B2FK02(112760001MS)	112760001	Anions by Ion Chromatography (Solid)
186804	186805	5	MSD	61289	B2FK02(112760001MSD)	112760001	Anions by Ion Chromatography (Solid)
186804	186805	6	DUP	61290	B2FK02(112760001DUP)	112760001	Anions by Ion Chromatography (Solid)
186804	186805	8	SAMPLE	112746007	B2FJY9		Anions by Ion Chromatography (Solid)
186804	186805	9	SAMPLE	112746008	B2FK00		Anions by Ion Chromatography (Solid)
186804	186805	10	SAMPLE	112746009	B2FK01		Anions by Ion Chromatography (Solid)
186895	186896	4	BLANK	61547	BLANK		ICP-2008 MS All possible metal
186895	186896	5	LCS	61548	LCS		ICP-2008 MS All possible metal
186895	186896	6	MS	61549	B2C4P6(112720001MS)	112720001	ICP-2008 MS All possible metal
186895	186896	7	MSD	61550	B2C4P6(112720001MSD)	112720001	ICP-2008 MS All possible metal
186895	186896	9	SAMPLE	112746001	B2FJY3		ICP-2008 MS All possible metal
186895	186896	10	SAMPLE	112746002	B2FJY4		ICP-2008 MS All possible metal
186895	186896	11	SAMPLE	112746003	B2FJY5		ICP-2008 MS All possible metal
186895	186896	12	SAMPLE	112746004	B2FJY6		ICP-2008 MS All possible metal
186895	186896	13	SAMPLE	112746005	B2FJY7		ICP-2008 MS All possible metal
186895	186896	16	SAMPLE	112746006	B2FJY8		ICP-2008 MS All possible metal
186895	186896	17	SAMPLE	112746007	B2FJY9		ICP-2008 MS All possible metal
186895	186896	18	SAMPLE	112746008	B2FK00		ICP-2008 MS All possible metal

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112746

QC Batch 186656 **Test** Anions by Ion Chromatography (Solid)
Associated Samples 112746001, 112746002, 112746003, 112746004, 112746005, 112746006

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #60999**							
Fluoride	16984-48-8		<0.036	ug/mL					U	07/20/11
Chloride	16887-00-6		<0.062	ug/mL					U	07/20/11
Nitrite-N	NO2-N		<0.020	ug/mL					U	07/20/11
Nitrate-N	NO3-N		<0.019	ug/mL					U	07/20/11
Sulfate	14808-79-8		<0.072	ug/mL					U	07/20/11
LCS			**QC Sample #61000**							
Fluoride	16984-48-8		0.896	ug/mL	90.5	90 - 110				07/20/11
Chloride	16887-00-6		1.83	ug/mL	92.4	90 - 110				07/20/11
Nitrite-N	NO2-N		0.931	ug/mL	95.2	90 - 110				07/20/11
Nitrate-N	NO3-N		0.854	ug/mL	96.5	90 - 110				07/20/11
Sulfate	14808-79-8		3.70	ug/mL	94.3	90 - 110				07/20/11
MS			**QC Sample #61001**							
			Original	**112727008**						
Fluoride	16984-48-8		17.9	mg/kg	71.2	80 - 120			N	07/20/11
Chloride	16887-00-6		43.1	mg/kg	85.8	80 - 120				07/20/11
Nitrite-N	NO2-N		20.9	mg/kg	84.3	80 - 120				07/20/11
Nitrate-N	NO3-N		19.7	mg/kg	87.6	80 - 120				07/20/11
Sulfate	14808-79-8		75.7	mg/kg	76.1	80 - 120			N	07/20/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
MSD			**QC Sample #61002**								
			Original	**112727008**					**Paired**	**61001**	
Fluoride	16984-48-8		16.7	mg/kg	66.6	80 - 120	6.70	30		N	07/20/11
Chloride	16887-00-6		43.1	mg/kg	85.8	80 - 120	0.00	30			07/20/11
Nitrite-N	NO2-N		21.0	mg/kg	84.5	80 - 120	0.20	30			07/20/11
Nitrate-N	NO3-N		20.0	mg/kg	89.3	80 - 120	1.90	30			07/20/11
Sulfate	14808-79-8		75.2	mg/kg	75.6	80 - 120	0.70	30		N	07/20/11
DUP			**QC Sample #61003**								
			Original	**112727008**							
Fluoride	16984-48-8		<1.8	mg/kg			0.00	30		U	07/20/11
Chloride	16887-00-6		<3.1	mg/kg			31.30	30	*	UX	07/20/11
Nitrite-N	NO2-N		<1.0	mg/kg			0.00	30		U	07/20/11
Nitrate-N	NO3-N		<0.96	mg/kg			30.00	30		U	07/20/11
Sulfate	14808-79-8		34.1	mg/kg			20.00	30		B	07/20/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112746

QC Batch 186666 **Test** Hexavalent chromium
Associated Samples 112746001, 112746002, 112746003, 112746004, 112746005, 112746006, 112746007, 112746008, 112746009

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #61037**							
Hexavalent chromium	18540-29-9		<0.098	ug/g					U	07/20/11
LCS			**QC Sample #61038**							
Hexavalent chromium	18540-29-9		4.05	ug/g	101.3	80 - 120				07/20/11
DUP			**QC Sample #61039**							
			Original 112746001							
Hexavalent chromium	18540-29-9	<0.10	<0.10	ug/g			0.40	30	U	07/20/11
MS			**QC Sample #61040**							
			Original 112746001							
Hexavalent chromium	18540-29-9	<0.10	2.42	ug/g	61.3	75 - 125			N	07/20/11
PSTSPK			**QC Sample #61041**							
Hexavalent chromium	18540-29-9		0.0504	ug/g	100.8	85 - 115				07/20/11
IMS			**QC Sample #61042**							
			Original 112746001							
Hexavalent chromium	18540-29-9	<0.10	280	ug/g	86.7	75 - 125				07/20/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112746

QC Batch 186804
Associated Samples 112746007, 112746008, 112746009

Test Anions by Ion Chromatography (Solid)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #61286**							
Fluoride	16984-48-8		<0.036	ug/mL					U	07/21/11
Chloride	16887-00-6		<0.062	ug/mL					U	07/21/11
Nitrite-N	NO2-N		<0.020	ug/mL					U	07/21/11
Nitrate-N	NO3-N		<0.019	ug/mL					U	07/21/11
Sulfate	14808-79-8		<0.072	ug/mL					U	07/21/11
LCS			**QC Sample #61287**							
Fluoride	16984-48-8		0.929	ug/mL	93.8	90 - 110				07/21/11
Chloride	16887-00-6		1.84	ug/mL	93	90 - 110				07/21/11
Nitrite-N	NO2-N		0.953	ug/mL	97.4	90 - 110				07/21/11
Nitrate-N	NO3-N		0.875	ug/mL	98.8	90 - 110				07/21/11
Sulfate	14808-79-8		3.57	ug/mL	91	90 - 110				07/21/11
MS			**QC Sample #61288**							
			Original 112760001							
Fluoride	16984-48-8		21.0	mg/kg	83.7	80 - 120				07/21/11
Chloride	16887-00-6		44.8	mg/kg	89.1	80 - 120				07/21/11
Nitrite-N	NO2-N		23.6	mg/kg	95	80 - 120				07/21/11
Nitrate-N	NO3-N		21.7	mg/kg	96.8	80 - 120				07/21/11
Sulfate	14808-79-8		87.9	mg/kg	88.3	80 - 120				07/21/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112746

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
MSD			**QC Sample #61289**								
			Original	**112760001**					**Paired**	**61288**	
Fluoride	16984-48-8		20.8	mg/kg	83.2	80 - 120	0.60	30			07/21/11
Chloride	16887-00-6		44.4	mg/kg	88.6	80 - 120	0.60	30			07/21/11
Nitrite-N	NO2-N		23.5	mg/kg	94.9	80 - 120	0.10	30			07/21/11
Nitrate-N	NO3-N		21.7	mg/kg	97.1	80 - 120	0.30	30			07/21/11
Sulfate	14808-79-8		88.4	mg/kg	89.1	80 - 120	0.90	30			07/21/11
DUP			**QC Sample #61290**								
			Original	**112760001**							
Fluoride	16984-48-8		<1.8	mg/kg			0.00	30		U	07/21/11
Chloride	16887-00-6		4.84	mg/kg			31.40	30	*	BX	07/21/11
Nitrite-N	NO2-N		<1.0	mg/kg			0.00	30		U	07/21/11
Nitrate-N	NO3-N		1.44	mg/kg			2.10	30		B	07/21/11
Sulfate	14808-79-8		38.0	mg/kg			3.70	30		B	07/21/11

Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF112760

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
186804	186805	2	BLANK	61286	BLANK		Anions by Ion Chromatography (Solid)
186804	186805	3	LCS	61287	LCS		Anions by Ion Chromatography (Solid)
186804	186805	4	MS	61288	B2FK02(112760001MS)	112760001	Anions by Ion Chromatography (Solid)
186804	186805	5	MSD	61289	B2FK02(112760001MSD)	112760001	Anions by Ion Chromatography (Solid)
186804	186805	6	DUP	61290	B2FK02(112760001DUP)	112760001	Anions by Ion Chromatography (Solid)
186804	186805	7	SAMPLE	112760001	B2FK02		Anions by Ion Chromatography (Solid)
186804	186805	11	SAMPLE	112760002	B2FK03		Anions by Ion Chromatography (Solid)
186804	186805	12	SAMPLE	112760003	B2FK04		Anions by Ion Chromatography (Solid)
186804	186805	13	SAMPLE	112760004	B2FK05		Anions by Ion Chromatography (Solid)
186804	186805	14	SAMPLE	112760005	B2FNW5		Anions by Ion Chromatography (Solid)
186804	186805	15	SAMPLE	112760006	B2FNW6		Anions by Ion Chromatography (Solid)
186804	186805	16	SAMPLE	112760007	B2FNW7		Anions by Ion Chromatography (Solid)
186837	186844	3	BLANK	61394	BLANK		Hexavalent chromium
186837	186844	4	LCS	61395	LCS		Hexavalent chromium
186837	186844	5	DUP	61396	B2FK02(112760001DUP)	112760001	Hexavalent chromium
186837	186844	6	MS	61397	B2FK02(112760001MS)	112760001	Hexavalent chromium
186837	186844	7	PSTSPK	61398	PSTSPK		Hexavalent chromium
186837	186844	8	IMS	61399	B2FK02(112760001IMS)	112760001	Hexavalent chromium
186837	186844	9	SAMPLE	112760001	B2FK02		Hexavalent chromium
186837	186844	10	SAMPLE	112760002	B2FK03		Hexavalent chromium
186837	186844	11	SAMPLE	112760003	B2FK04		Hexavalent chromium
186837	186844	12	SAMPLE	112760004	B2FK05		Hexavalent chromium
186837	186844	13	SAMPLE	112760005	B2FNW5		Hexavalent chromium

REVISED112760 -

Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF112760

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
186837	186844	14	SAMPLE	112760006	B2FNW6		Hexavalent chromium
186837	186844	15	SAMPLE	112760007	B2FNW7		Hexavalent chromium
186837	186844	16	SAMPLE	112760008	B2FNW8		Hexavalent chromium
186865	186866	2	BLANK	61493	BLANK		Anions by Ion Chromatography (Solid)
186865	186866	3	LCS	61494	LCS		Anions by Ion Chromatography (Solid)
186865	186866	4	MS	61495	B2FNW8(112760008MS)	112760008	Anions by Ion Chromatography (Solid)
186865	186866	5	MSD	61496	B2FNW8(112760008MSD	112760008	Anions by Ion Chromatography (Solid)
186865	186866	6	DUP	61497	B2FNW8(112760008DUP	112760008	Anions by Ion Chromatography (Solid)
186865	186866	7	SAMPLE	112760008	B2FNW8		Anions by Ion Chromatography (Solid)
186895	186896	4	BLANK	61547	BLANK		ICP-2008 MS All possible metal
186895	186896	5	LCS	61548	LCS		ICP-2008 MS All possible metal
186895	186896	6	MS	61549	B2C4P6(112720001MS)	112720001	ICP-2008 MS All possible metal
186895	186896	7	MSD	61550	B2C4P6(112720001MSD)	112720001	ICP-2008 MS All possible metal
186895	186896	21	SAMPLE	112760001	B2FK02		ICP-2008 MS All possible metal
186895	186896	22	SAMPLE	112760002	B2FK03		ICP-2008 MS All possible metal
186895	186896	23	SAMPLE	112760003	B2FK04		ICP-2008 MS All possible metal
186895	186896	24	SAMPLE	112760004	B2FK05		ICP-2008 MS All possible metal
186895	186896	25	SAMPLE	112760005	B2FNW5		ICP-2008 MS All possible metal
186895	186896	28	SAMPLE	112760006	B2FNW6		ICP-2008 MS All possible metal
186895	186896	29	SAMPLE	112760007	B2FNW7		ICP-2008 MS All possible metal
186895	186896	30	SAMPLE	112760008	B2FNW8		ICP-2008 MS All possible metal

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

QC Batch 186804 **Test** Anions by Ion Chromatography (Solid)
Associated Samples 112760001, 112760002, 112760003, 112760004, 112760005, 112760006, 112760007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #61286**							
Fluoride	16984-48-8		<0.036	ug/mL					U	07/21/11
Chloride	16887-00-6		<0.062	ug/mL					U	07/21/11
Nitrite-N	NO2-N		<0.020	ug/mL					U	07/21/11
Nitrate-N	NO3-N		<0.019	ug/mL					U	07/21/11
Sulfate	14808-79-8		<0.072	ug/mL					U	07/21/11
LCS			**QC Sample #61287**							
Fluoride	16984-48-8		0.929	ug/mL	93.8	90 - 110				07/21/11
Chloride	16887-00-6		1.84	ug/mL	93	90 - 110				07/21/11
Nitrite-N	NO2-N		0.953	ug/mL	97.4	90 - 110				07/21/11
Nitrate-N	NO3-N		0.875	ug/mL	98.8	90 - 110				07/21/11
Sulfate	14808-79-8		3.57	ug/mL	91	90 - 110				07/21/11
MS			**QC Sample #61288**							
			Original 112760001							
Fluoride	16984-48-8	<1.8	21.0	mg/kg	83.7	80 - 120				07/21/11
Chloride	16887-00-6	3.53	44.8	mg/kg	89.1	80 - 120				07/21/11
Nitrite-N	NO2-N	<1.0	23.6	mg/kg	95	80 - 120				07/21/11
Nitrate-N	NO3-N	1.40	21.7	mg/kg	96.8	80 - 120				07/21/11
Sulfate	14808-79-8	39.3	87.9	mg/kg	88.3	80 - 120				07/21/11

REVISED112760 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
MSD			**QC Sample #61289**								
			Original	**112760001**					**Paired**	**61288**	
Fluoride	16984-48-8	<1.8	20.8	mg/kg	83.2	80 - 120	0.60	30			07/21/11
Chloride	16887-00-6	3.53	44.4	mg/kg	88.6	80 - 120	0.60	30			07/21/11
Nitrite-N	NO2-N	<1.0	23.5	mg/kg	94.9	80 - 120	0.10	30			07/21/11
Nitrate-N	NO3-N	1.40	21.7	mg/kg	97.1	80 - 120	0.30	30			07/21/11
Sulfate	14808-79-8	39.3	88.4	mg/kg	89.1	80 - 120	0.90	30			07/21/11
DUP			**QC Sample #61290**								
			Original	**112760001**							
Fluoride	16984-48-8	<1.8	<1.8	mg/kg			0.00	30		U	07/21/11
Chloride	16887-00-6	3.53	4.84	mg/kg			31.40	30	*	BX	07/21/11
Nitrite-N	NO2-N	<1.0	<1.0	mg/kg			0.00	30		U	07/21/11
Nitrate-N	NO3-N	1.40	1.44	mg/kg			2.10	30		B	07/21/11
Sulfate	14808-79-8	39.3	38.0	mg/kg			3.70	30		B	07/21/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

QC Batch 186837 **Test** Hexavalent chromium
Associated Samples 112760001, 112760002, 112760003, 112760004, 112760005, 112760006, 112760007, 112760008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #61394**								
Hexavalent chromium	18540-29-9		<0.10	ug/g						U	07/26/11
LCS			**QC Sample #61395**								
Hexavalent chromium	18540-29-9		4.09	ug/g	102.3	80 - 120					07/26/11
DUP			**QC Sample #61396**								
			Original 112760001								
Hexavalent chromium	18540-29-9	<0.10	<0.10	ug/g			50.40	30	*	UX	07/26/11
MS			**QC Sample #61397**								
			Original 112760001								
Hexavalent chromium	18540-29-9	<0.10	3.57	ug/g	89.4	75 - 125					07/26/11
PSTSPK			**QC Sample #61398**								
Hexavalent chromium	18540-29-9		0.0479	ug/g	95.8	85 - 115					07/26/11
IMS			**QC Sample #61399**								
			Original 112760001								
Hexavalent chromium	18540-29-9	<0.10	309	ug/g	93.4	75 - 125				D	07/26/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

QC Batch 186865
Associated Samples 112760008

Test Anions by Ion Chromatography (Solid)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #61493**							
Fluoride	16984-48-8		<0.036	ug/mL					U	07/25/11
Chloride	16887-00-6		<0.062	ug/mL					U	07/25/11
Nitrite-N	NO2-N		<0.020	ug/mL					U	07/25/11
Nitrate-N	NO3-N		<0.019	ug/mL					U	07/25/11
Sulfate	14808-79-8		<0.072	ug/mL					U	07/25/11
LCS			**QC Sample #61494**							
Fluoride	16984-48-8		0.935	ug/mL	94.5	90 - 110				07/25/11
Chloride	16887-00-6		1.84	ug/mL	92.9	90 - 110				07/25/11
Nitrite-N	NO2-N		0.959	ug/mL	98	90 - 110				07/25/11
Nitrate-N	NO3-N		0.880	ug/mL	99.4	90 - 110				07/25/11
Sulfate	14808-79-8		3.65	ug/mL	93	90 - 110				07/25/11
MS			**QC Sample #61495**							
			Original	**112760008**						
Fluoride	16984-48-8	<1.8	20.9	mg/kg	82.7	80 - 120				07/25/11
Chloride	16887-00-6	<3.1	49.8	mg/kg	98.7	80 - 120				07/25/11
Nitrite-N	NO2-N	<1.0	23.8	mg/kg	95.6	80 - 120				07/25/11
Nitrate-N	NO3-N	<0.95	23.5	mg/kg	104	80 - 120				07/25/11
Sulfate	14808-79-8	23.0	81.1	mg/kg	81.2	80 - 120				07/25/11

REVISED112760 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112760

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
MSD			**QC Sample #61496**								
			Original	**112760008**					**Paired**	**61495**	
Fluoride	16984-48-8	<1.8	21.2	mg/kg	84.6	80 - 120	2.30	30			07/25/11
Chloride	16887-00-6	<3.1	48.9	mg/kg	97.8	80 - 120	0.90	30			07/25/11
Nitrite-N	NO2-N	<1.0	23.6	mg/kg	95.6	80 - 120	0.00	30			07/25/11
Nitrate-N	NO3-N	<0.95	23.1	mg/kg	103.3	80 - 120	0.70	30			07/25/11
Sulfate	14808-79-8	23.0	80.4	mg/kg	81.2	80 - 120	0.00	30			07/25/11
DUP			**QC Sample #61497**								
			Original	**112760008**							
Fluoride	16984-48-8	<1.8	<1.8	mg/kg			0.00	30		U	07/25/11
Chloride	16887-00-6	<3.1	6.06	mg/kg			103.90	30	*	BX	07/25/11
Nitrite-N	NO2-N	<1.0	<1.0	mg/kg			0.00	30		U	07/25/11
Nitrate-N	NO3-N	<0.95	1.28	mg/kg			118.10	30	*	BX	07/25/11
Sulfate	14808-79-8	23.0	18.2	mg/kg			23.00	30		B	07/25/11