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: VSR11-057, 100-K Project, Area AG, Zone 1	100K Area, Area AG, 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 09/20/2011	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
VSR11-057, Data Validation Report for CHPRC – 100-K Project, Area AG, Zone 1, Chemical & Radiochemical Validation - Level C	S&GRP Sample Data Group (SDG); WSCF112941, WSCF112976 and WSCF112982	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 / JA Edwards (Reviewer/Point of Contact (print and sign))	JA Edwards / JA Edwards (Reviewer/Point of Contact (print and sign))
	Date: 09/20/2011	Date: 09/20/2011
	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.
09/20/2011	
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
VSR11-057		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): _____	Reviewer/Point of Contact (print and sign): Scot Fitzgerald Date: 09/20/2011 Author/Originator (print and sign): [signature]	Reviewer/Point of Contact (print and sign): Scot Fitzgerald Date: 09/20/2011 Author/Originator (print and sign): [signature]

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.
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Albuquerque, NM 87123
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Data Validation Report for CH2M Hill Plateau Remediation Company

VSR11-057
100-K Project, Area AG, Zone 1

Chemical & Radiochemical Validation - Level C

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

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Date: 20 September 2011
To: CH2M Hill (technical representative)
From: Analytical Quality Associates, Inc.
Project: 100-K Project, Area AG, Zone 1
Subject: Inorganics - Sample Data Groups (SDGs) WSCF112941, WSCF112976 and WSCF112982

INTRODUCTION

This memorandum presents the results of data validation for SDGs WSCF112941, WSCF112976 and WSCF112982 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
B2H011	8/12/2011	Soil	C	200.8
B2H012	8/12/2011	Soil	C	200.8
B2H013	8/12/2011	Soil	C	200.8
B2H014	8/12/2011	Soil	C	200.8
B2H015	8/12/2011	Soil	C	200.8
B2H016	8/12/2011	Soil	C	200.8
B2H017	8/12/2011	Soil	C	200.8
B2H018	8/12/2011	Soil	C	200.8
B2H019	8/12/2011	Soil	C	200.8
B2H020	8/12/2011	Soil	C	200.8
B2H021	8/12/2011	Soil	C	200.8
B2H022	8/12/2011	Soil	C	200.8
B2H023	8/12/2011	Soil	C	200.8
B2H024	8/12/2011	Soil	C	200.8
B2H025	8/12/2011	Soil	C	200.8
B2H026	8/12/2011	Soil	C	200.8
B2H027	8/12/2011	Soil	C	200.8
B2H050	8/12/2011	Soil	C	200.8
B2H051	8/12/2011	Soil	C	200.8
B2H054	8/12/2011	Soil	C	200.8
B2H055	8/12/2011	Soil	C	200.8
B2H028	8/16/2011	Soil	C	200.8
B2H029	8/16/2011	Soil	C	200.8
B2H030	8/16/2011	Soil	C	200.8
B2H031	8/16/2011	Soil	C	200.8
B2H032	8/16/2011	Soil	C	200.8
B2H033	8/16/2011	Soil	C	200.8
B2H034	8/16/2011	Soil	C	200.8
B2H035	8/16/2011	Soil	C	200.8
B2H036	8/16/2011	Soil	C	200.8
B2H037	8/16/2011	Soil	C	200.8

Sample ID	Sample Date	Media	Validation Level	Analytical Method
B2H052	8/16/2011	Soil	C	200.8
B2H056	8/16/2011	Soil	C	200.8
B2H038	8/16/2011	Soil	C	200.8
B2H039	8/17/2011	Soil	C	200.8
B2H040	8/17/2011	Soil	C	200.8
B2H041	8/17/2011	Soil	C	200.8
B2H042	8/17/2011	Soil	C	200.8
B2H043	8/17/2011	Soil	C	200.8
B2H044	8/17/2011	Soil	C	200.8
B2H045	8/17/2011	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. Sample preservation requires chilling to 4 degrees Celsius.

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 WSCF112941, the Cu and V laboratory blank results were > the method detection limits (MDLs) but < the reporting limits (RLs). The Cu and V results for all associated samples *except* B2H054 were well above the RLs and should not be qualified. The Cu result for sample

B2H054 was a detect < the RL and should be qualified as a non-detect at the RL (1.0 mg/kg) and flagged "U." The V result for sample B2H054 was a detect < the RL and should be qualified as a non-detect at the RL (2.0 mg/kg) and flagged "U."

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 WSCF112941, Mn, Ba, Cu, V, Pb and Sr were detected in equipment blank B2H054. It should be noted that the Cu and V results for sample B2H054 have been flagged "U" due to laboratory blank contamination.

For SDG WSCF112941, Mn, Ba, B, Cu, V, Pb and Sr were detected in equipment blank B2H055.

For SDG WSCF112976, Mn, Ba and Sr were detected in equipment blank B2H056.

- **Accuracy**

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

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

All MS/MSD recoveries were acceptable.

Laboratory Control Samples (LCSs)

All LCS recoveries were acceptable with the following exception. For SDG WSCF112976, the LCS recovery for Sb was > the upper acceptance limit. The Sb results for samples B2H028 and B2H030 were detects and should be qualified as estimates and flagged "J+." The Sb results for the remaining associated sample results were non-detects and should not be qualified.

- **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 exception. For SDG WSCF112976, the Mn RPD was above the 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.

Field Duplicate Samples

All field duplicate results were acceptable.

Field Split Samples

No field splits were submitted for validation.

- **Detection Limits**

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

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

- **Completeness**

SDGs WSCF112941, WSCF112976 and WSCF112982 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: WSCF112941, WSCF112976 & WSCF112982	Reviewer: AQA	Project: 100-K Project, Area AG, Zone 1	Page 1 of 1
Analyte(s)	**DV Flag**	**Samples Affected**	**Reason**
Cu	1.0U	B2H054	Lab blank contamination
V	2.0U	B2H054	Lab blank contamination
Sb	J+	B2H028, B2H030	High LCS recovery
Mn	J	B2H028, B2H029, B2H030, B2H031, B2H032, B2H033, B2H034, B2H035, B2H036, B2H037, B2H052, B2H056	Poor MS/MSD precision

Comments: None

Appendix 3

Annotated Laboratory Reports

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112941

Sample # 112941001
SAF# F11-162
Sample ID B2H011

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~**Cr(VI) Prep**~~										~~**08/17/11**~~
~~**Cr(VI)**~~										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~U~~	~~<0.098~~		~~ug/g~~	~~1~~	~~0.098~~	~~0.49~~	~~08/17/11~~
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		373		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		10.4		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		65.5		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.247		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	B	1.25		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	B	0.111		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		8.96		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		9.84		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		16.6		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		68.5		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		55.9		mg/kg	1	0.81	5.1	08/22/11
Lead	7439-92-1	LA-505-412		9.90		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941001
SAF# F11-162
Sample ID B2H011

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.051		mg/kg	1	0.051	0.20	08/22/11
Molybdenum	7439-98-7	LA-505-412	B	0.494		mg/kg	1	0.10	1.0	08/22/11
Strontium	7440-24-6	LA-505-412		28.7		mg/kg	1	0.10	1.0	08/22/11
Tin	7440-31-5	LA-505-412		0.541		mg/kg	1	0.10	0.51	08/22/11
Uranium	7440-61-1	LA-505-412	B	0.488		mg/kg	1	0.10	0.51	08/22/11
Arsenic	7440-38-2	LA-505-412	B	2.67		mg/kg	1	0.40	4.0	08/22/11
Selenium	7782-49-2	LA-505-412	B	0.587		mg/kg	1	0.30	3.0	08/22/11

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 # WSCF112941

Sample # 112941002
SAF# F11-162
Sample ID B2H012

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.098		ug/g	1	0.098	0.49	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		380		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		9.65		mg/kg	1	0.21	2.1	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.31		mg/kg	1	0.31	3.1	08/22/11
Barium	7440-39-3	LA-505-412		60.5		mg/kg	1	0.21	2.1	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.371		mg/kg	1	0.10	0.52	08/22/11
Boron	7440-42-8	LA-505-412	B	0.973		mg/kg	1	0.52	5.2	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		7.02		mg/kg	1	0.52	5.2	08/22/11
Cobalt	7440-48-4	LA-505-412		10.7		mg/kg	1	0.10	0.52	08/22/11
Copper	7440-50-8	LA-505-412		17.8		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		75.2		mg/kg	1	0.21	2.1	08/22/11
Zinc	7440-66-6	LA-505-412		52.9		mg/kg	1	0.83	5.2	08/22/11
Lead	7439-92-1	LA-505-412		5.56		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941002
SAF# F11-162
Sample ID B2H012

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.052		mg/kg	1	0.052	0.21	08/22/11
Molybdenum	7439-98-7	LA-505-412	B	0.492		mg/kg	1	0.10	1.0	08/22/11
Strontium	7440-24-6	LA-505-412		27.8		mg/kg	1	0.10	1.0	08/22/11
Tin	7440-31-5	LA-505-412		0.522		mg/kg	1	0.10	0.52	08/22/11
Uranium	7440-61-1	LA-505-412	B	0.489		mg/kg	1	0.10	0.52	08/22/11
Arsenic	7440-38-2	LA-505-412	B	2.38		mg/kg	1	0.41	4.1	08/22/11
Selenium	7782-49-2	LA-505-412	B	0.631		mg/kg	1	0.31	3.1	08/22/11

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 # WSCF112941

Sample # 112941003
SAF# F11-162
Sample ID B2H013

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~**Cr(VI) Prep**~~										~~**08/17/11**~~
Cr(VI)										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~U~~	~~<0.10~~		~~ug/g~~	~~1~~	~~0.10~~	~~0.50~~	~~08/17/11~~
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		391		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		12.5		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		69.5		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.373		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	B	1.46		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		10.5		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		10.2		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		19.4		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		64.4		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		55.5		mg/kg	1	0.81	5.1	08/22/11
Lead	7439-92-1	LA-505-412		6.64		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941003
SAF# F11-162
Sample ID B2H013

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.051		mg/kg	1	0.051	0.20	08/22/11
Molybdenum	7439-98-7	LA-505-412	B	0.449		mg/kg	1	0.10	1.0	08/22/11
Strontium	7440-24-6	LA-505-412		32.4		mg/kg	1	0.10	1.0	08/22/11
Tin	7440-31-5	LA-505-412		0.525		mg/kg	1	0.10	0.51	08/22/11
Uranium	7440-61-1	LA-505-412		0.542		mg/kg	1	0.10	0.51	08/22/11
Arsenic	7440-38-2	LA-505-412	B	3.34		mg/kg	1	0.40	4.0	08/22/11
Selenium	7782-49-2	LA-505-412	B	0.596		mg/kg	1	0.30	3.0	08/22/11

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 # WSCF112941

Sample # 112941004
SAF# F11-162
Sample ID B2H014

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.093		ug/g	1	0.093	0.46	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		391		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		11.4		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		78.6		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.410		mg/kg	1	0.10	0.50	08/22/11
Boron	7440-42-8	LA-505-412	B	1.78		mg/kg	1	0.50	5.0	08/22/11
Cadmium	7440-43-9	LA-505-412	B	0.105		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		9.71		mg/kg	1	0.50	5.0	08/22/11
Cobalt	7440-48-4	LA-505-412		10.1		mg/kg	1	0.10	0.50	08/22/11
Copper	7440-50-8	LA-505-412		17.8		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		69.5		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		53.2		mg/kg	1	0.81	5.0	08/22/11
Lead	7439-92-1	LA-505-412		5.83		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941004
SAF# F11-162
Sample ID B2H014

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.050		mg/kg	1	0.050	0.20	08/22/11
Molybdenum	7439-98-7	LA-505-412	B	0.491		mg/kg	1	0.10	1.0	08/22/11
Strontium	7440-24-6	LA-505-412		30.9		mg/kg	1	0.10	1.0	08/22/11
Tin	7440-31-5	LA-505-412		0.539		mg/kg	1	0.10	0.50	08/22/11
Uranium	7440-61-1	LA-505-412		0.554		mg/kg	1	0.10	0.50	08/22/11
Arsenic	7440-38-2	LA-505-412	B	3.38		mg/kg	1	0.40	4.0	08/22/11
Selenium	7782-49-2	LA-505-412	B	0.757		mg/kg	1	0.30	3.0	08/22/11

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 # WSCF112941

Sample # 112941005
SAF# F11-162
Sample ID B2H015

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		386		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		11.4		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		65.4		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.383		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	B	0.992		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		9.05		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		10.8		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		19.8		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		79.3		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		55.0		mg/kg	1	0.81	5.1	08/22/11
Lead	7439-92-1	LA-505-412		5.07		mg/kg	1	0.10	1.0	08/22/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
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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 # WSCF112941

Sample # 112941005
SAF# F11-162
Sample ID B2H015

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.051		mg/kg	1	0.051	0.20	08/22/11
Molybdenum	7439-98-7	LA-505-412	B	0.553		mg/kg	1	0.10	1.0	08/22/11
Strontium	7440-24-6	LA-505-412		29.5		mg/kg	1	0.10	1.0	08/22/11
Tin	7440-31-5	LA-505-412	B	0.506		mg/kg	1	0.10	0.51	08/22/11
Uranium	7440-61-1	LA-505-412		0.564		mg/kg	1	0.10	0.51	08/22/11
Arsenic	7440-38-2	LA-505-412	B	2.50		mg/kg	1	0.41	4.1	08/22/11
Selenium	7782-49-2	LA-505-412	B	0.586		mg/kg	1	0.30	3.0	08/22/11

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 # WSCF112941

Sample # 112941006
SAF# F11-162
Sample ID B2H016

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.51	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		411		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		12.0		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		77.7		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.494		mg/kg	1	0.10	0.50	08/22/11
Boron	7440-42-8	LA-505-412	B	1.04		mg/kg	1	0.50	5.0	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		8.70		mg/kg	1	0.50	5.0	08/22/11
Cobalt	7440-48-4	LA-505-412		12.0		mg/kg	1	0.10	0.50	08/22/11
Copper	7440-50-8	LA-505-412		21.2		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		80.3		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		60.7		mg/kg	1	0.81	5.0	08/22/11
Lead	7439-92-1	LA-505-412		5.35		mg/kg	1	0.10	1.0	08/22/11

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

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

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 # WSCF112941

Sample # 112941006
SAF# F11-162
Sample ID B2H016

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.050		mg/kg	1	0.050	0.20	08/22/11
Molybdenum	7439-98-7	LA-505-412	B	0.491		mg/kg	1	0.10	1.0	08/22/11
Strontium	7440-24-6	LA-505-412		37.7		mg/kg	1	0.10	1.0	08/22/11
Tin	7440-31-5	LA-505-412		0.574		mg/kg	1	0.10	0.50	08/22/11
Uranium	7440-61-1	LA-505-412		0.618		mg/kg	1	0.10	0.50	08/22/11
Arsenic	7440-38-2	LA-505-412	B	3.09		mg/kg	1	0.40	4.0	08/22/11
Selenium	7782-49-2	LA-505-412	B	0.602		mg/kg	1	0.30	3.0	08/22/11

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 # WSCF112941

Sample # 112941007
SAF# F11-162
Sample ID B2H017

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.098		ug/g	1	0.098	0.49	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		412		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		13.1		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		70.4		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412		0.597		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	B	1.90		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		12.2		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		11.1		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		21.2		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		66.6		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		56.0		mg/kg	1	0.81	5.1	08/22/11
Lead	7439-92-1	LA-505-412		6.17		mg/kg	1	0.10	1.0	08/22/11

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

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
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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 # WSCF112941

Sample # 112941007
SAF# F11-162
Sample ID B2H017

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.051		mg/kg	1	0.051	0.20	08/22/11
Molybdenum	7439-98-7	LA-505-412	B	0.461		mg/kg	1	0.10	1.0	08/22/11
Strontium	7440-24-6	LA-505-412		36.2		mg/kg	1	0.10	1.0	08/22/11
Tin	7440-31-5	LA-505-412		0.549		mg/kg	1	0.10	0.51	08/22/11
Uranium	7440-61-1	LA-505-412		0.563		mg/kg	1	0.10	0.51	08/22/11
Arsenic	7440-38-2	LA-505-412	B	3.09		mg/kg	1	0.40	4.0	08/22/11
Selenium	7782-49-2	LA-505-412	B	0.665		mg/kg	1	0.30	3.0	08/22/11

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 # WSCF112941

Sample # 112941008
SAF# F11-162
Sample ID B2H018

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		391		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		11.6		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		71.4		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.340		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	B	1.43		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		7.25		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		11.5		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		20.9		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		75.9		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		56.4		mg/kg	1	0.81	5.1	08/22/11
Lead	7439-92-1	LA-505-412		5.16		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941008
SAF# F11-162
Sample ID B2H018

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.051		mg/kg	1	0.051	0.20	08/22/11
Molybdenum	7439-98-7	LA-505-412	B	0.498		mg/kg	1	0.10	1.0	08/22/11
Strontium	7440-24-6	LA-505-412		33.5		mg/kg	1	0.10	1.0	08/22/11
Tin	7440-31-5	LA-505-412		0.543		mg/kg	1	0.10	0.51	08/22/11
Uranium	7440-61-1	LA-505-412		0.537		mg/kg	1	0.10	0.51	08/22/11
Arsenic	7440-38-2	LA-505-412	B	2.93		mg/kg	1	0.40	4.0	08/22/11
Selenium	7782-49-2	LA-505-412	B	0.634		mg/kg	1	0.30	3.0	08/22/11

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 # WSCF112941

Sample # 112941009
SAF# F11-162
Sample ID B2H019

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.51	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		414		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		10.4		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		88.9		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.390		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	B	0.812		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		7.85		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		10.2		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		16.4		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		65.6		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		49.3		mg/kg	1	0.81	5.1	08/22/11
Lead	7439-92-1	LA-505-412		4.39		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941009
SAF# F11-162
Sample ID B2H019

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.051		mg/kg	1	0.051	0.20	08/22/11
Molybdenum	7439-98-7	LA-505-412	B	0.412		mg/kg	1	0.10	1.0	08/22/11
Strontium	7440-24-6	LA-505-412		29.7		mg/kg	1	0.10	1.0	08/22/11
Tin	7440-31-5	LA-505-412	B	0.493		mg/kg	1	0.10	0.51	08/22/11
Uranium	7440-61-1	LA-505-412	B	0.450		mg/kg	1	0.10	0.51	08/22/11
Arsenic	7440-38-2	LA-505-412	B	2.54		mg/kg	1	0.40	4.0	08/22/11
Selenium	7782-49-2	LA-505-412	B	0.636		mg/kg	1	0.30	3.0	08/22/11

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 # WSCF112941

Sample # 112941010
SAF# F11-162
Sample ID B2H020

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	B	0.0985		ug/g	1	0.097	0.49	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		355		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		10.8		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		71.5		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.335		mg/kg	1	0.10	0.50	08/22/11
Boron	7440-42-8	LA-505-412	B	1.04		mg/kg	1	0.50	5.0	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		8.29		mg/kg	1	0.50	5.0	08/22/11
Cobalt	7440-48-4	LA-505-412		10.7		mg/kg	1	0.10	0.50	08/22/11
Copper	7440-50-8	LA-505-412		18.1		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		76.6		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		57.3		mg/kg	1	0.81	5.0	08/22/11
Lead	7439-92-1	LA-505-412		4.40		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941010
SAF# F11-162
Sample ID B2H020

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.050		mg/kg	1	0.050	0.20	08/22/11
Molybdenum	7439-98-7	LA-505-412	B	0.489		mg/kg	1	0.10	1.0	08/22/11
Strontium	7440-24-6	LA-505-412		28.8		mg/kg	1	0.10	1.0	08/22/11
Tin	7440-31-5	LA-505-412		0.551		mg/kg	1	0.10	0.50	08/22/11
Uranium	7440-61-1	LA-505-412		0.543		mg/kg	1	0.10	0.50	08/22/11
Arsenic	7440-38-2	LA-505-412	B	2.44		mg/kg	1	0.40	4.0	08/22/11
Selenium	7782-49-2	LA-505-412	B	0.871		mg/kg	1	0.30	3.0	08/22/11

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 # WSCF112941

Sample # 112941011
SAF# F11-162
Sample ID B2H021

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.099		ug/g	1	0.099	0.49	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		386		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		11.9		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		72.8		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.384		mg/kg	1	0.10	0.50	08/22/11
Boron	7440-42-8	LA-505-412	B	0.805		mg/kg	1	0.50	5.0	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		6.49		mg/kg	1	0.50	5.0	08/22/11
Cobalt	7440-48-4	LA-505-412		12.2		mg/kg	1	0.10	0.50	08/22/11
Copper	7440-50-8	LA-505-412		18.0		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		92.2		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		60.1		mg/kg	1	0.81	5.0	08/22/11
Lead	7439-92-1	LA-505-412		3.92		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941011
SAF# F11-162
Sample ID B2H021

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.050		mg/kg	1	0.050	0.20	08/22/11
Molybdenum	7439-98-7	LA-505-412	B	0.542		mg/kg	1	0.10	1.0	08/22/11
Strontium	7440-24-6	LA-505-412		29.2		mg/kg	1	0.10	1.0	08/22/11
Tin	7440-31-5	LA-505-412		0.589		mg/kg	1	0.10	0.50	08/22/11
Uranium	7440-61-1	LA-505-412		0.511		mg/kg	1	0.10	0.50	08/22/11
Arsenic	7440-38-2	LA-505-412	B	2.35		mg/kg	1	0.40	4.0	08/22/11
Selenium	7782-49-2	LA-505-412	B	0.840		mg/kg	1	0.30	3.0	08/22/11

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 # WSCF112941

Sample # 112941012
SAF# F11-162
Sample ID B2H022

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~Cr(VI) Prep~~										**~~08/17/11~~**
Cr(VI)										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~U~~	~~<0.10~~		~~ug/g~~	~~1~~	~~0.10~~	~~0.51~~	~~08/17/11~~
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		416		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		10.2		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		71.9		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.455		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	B	1.02		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		6.85		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		12.2		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		18.2		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		93.6		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		61.0		mg/kg	1	0.81	5.1	08/22/11
Lead	7439-92-1	LA-505-412		4.00		mg/kg	1	0.10	1.0	08/22/11

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

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

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 # WSCF112941

Sample # 112941012
SAF# F11-162
Sample ID B2H022

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.051		mg/kg	1	0.051	0.20	08/22/11
Molybdenum	7439-98-7	LA-505-412	B	0.515		mg/kg	1	0.10	1.0	08/22/11
Strontium	7440-24-6	LA-505-412		33.1		mg/kg	1	0.10	1.0	08/22/11
Tin	7440-31-5	LA-505-412		0.571		mg/kg	1	0.10	0.51	08/22/11
Uranium	7440-61-1	LA-505-412		0.520		mg/kg	1	0.10	0.51	08/22/11
Arsenic	7440-38-2	LA-505-412	B	2.18		mg/kg	1	0.40	4.0	08/22/11
Selenium	7782-49-2	LA-505-412	B	0.835		mg/kg	1	0.30	3.0	08/22/11

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 # WSCF112941

Sample # 112941013
SAF# F11-162
Sample ID B2H023

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.51	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		362		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		9.56		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		67.5		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.312		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	B	1.52		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		6.34		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		11.0		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		18.1		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		80.3		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		57.3		mg/kg	1	0.81	5.1	08/22/11
Lead	7439-92-1	LA-505-412		4.25		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941013
SAF# F11-162
Sample ID B2H023

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.051		mg/kg	1	0.051	0.20	08/22/11
Molybdenum	7439-98-7	LA-505-412	B	0.505		mg/kg	1	0.10	1.0	08/22/11
Strontium	7440-24-6	LA-505-412		28.9		mg/kg	1	0.10	1.0	08/22/11
Tin	7440-31-5	LA-505-412		0.534		mg/kg	1	0.10	0.51	08/22/11
Uranium	7440-61-1	LA-505-412	B	0.457		mg/kg	1	0.10	0.51	08/22/11
Arsenic	7440-38-2	LA-505-412	B	2.35		mg/kg	1	0.40	4.0	08/22/11
Selenium	7782-49-2	LA-505-412	B	0.573		mg/kg	1	0.30	3.0	08/22/11

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 # WSCF112941

Sample # 112941014
SAF# F11-162
Sample ID B2H024

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.091		ug/g	1	0.091	0.46	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		335		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		8.08		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		67.1		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.180		mg/kg	1	0.10	0.50	08/22/11
Boron	7440-42-8	LA-505-412	B	1.01		mg/kg	1	0.50	5.0	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		5.04		mg/kg	1	0.50	5.0	08/22/11
Cobalt	7440-48-4	LA-505-412		10.6		mg/kg	1	0.10	0.50	08/22/11
Copper	7440-50-8	LA-505-412		16.7		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		77.0		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		54.1		mg/kg	1	0.81	5.0	08/22/11
Lead	7439-92-1	LA-505-412		3.46		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941014
SAF# F11-162
Sample ID B2H024

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.050		mg/kg	1	0.050	0.20	08/22/11
Molybdenum	7439-98-7	LA-505-412	B	0.459		mg/kg	1	0.10	1.0	08/22/11
Strontium	7440-24-6	LA-505-412		28.3		mg/kg	1	0.10	1.0	08/22/11
Tin	7440-31-5	LA-505-412	B	0.475		mg/kg	1	0.10	0.50	08/22/11
Uranium	7440-61-1	LA-505-412	B	0.446		mg/kg	1	0.10	0.50	08/22/11
Arsenic	7440-38-2	LA-505-412	B	1.66		mg/kg	1	0.40	4.0	08/22/11
Selenium	7782-49-2	LA-505-412	B	0.650		mg/kg	1	0.30	3.0	08/22/11

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 # WSCF112941

Sample # 112941015
SAF# F11-162
Sample ID B2H025

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.097		ug/g	1	0.097	0.49	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		415		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		9.49		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		82.3		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.428		mg/kg	1	0.10	0.50	08/22/11
Boron	7440-42-8	LA-505-412	B	0.823		mg/kg	1	0.50	5.0	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		12.7		mg/kg	1	0.50	5.0	08/22/11
Cobalt	7440-48-4	LA-505-412		12.3		mg/kg	1	0.10	0.50	08/22/11
Copper	7440-50-8	LA-505-412		20.7		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		85.4		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		60.8		mg/kg	1	0.81	5.0	08/22/11
Lead	7439-92-1	LA-505-412		4.71		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941015
SAF# F11-162
Sample ID B2H025

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	B	0.0559		mg/kg	1	0.050	0.20	08/22/11
Molybdenum	7439-98-7	LA-505-412	B	0.570		mg/kg	1	0.10	1.0	08/22/11
Strontium	7440-24-6	LA-505-412		29.3		mg/kg	1	0.10	1.0	08/22/11
Tin	7440-31-5	LA-505-412		0.682		mg/kg	1	0.10	0.50	08/22/11
Uranium	7440-61-1	LA-505-412		0.541		mg/kg	1	0.10	0.50	08/22/11
Arsenic	7440-38-2	LA-505-412	B	1.93		mg/kg	1	0.40	4.0	08/22/11
Selenium	7782-49-2	LA-505-412	B	1.03		mg/kg	1	0.30	3.0	08/22/11

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 # WSCF112941

Sample # 112941016
SAF# F11-162
Sample ID B2H026

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~**Cr(VI) Prep**~~										~~**08/18/11**~~
Cr(VI)										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~B~~	~~0.103~~		~~ug/g~~	~~1~~	~~0.098~~	~~0.49~~	~~08/18/11~~
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		343		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		8.28		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		63.1		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.300		mg/kg	1	0.10	0.50	08/22/11
Boron	7440-42-8	LA-505-412	B	0.633		mg/kg	1	0.50	5.0	08/22/11
Cadmium	7440-43-9	LA-505-412	B	0.149		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		7.62		mg/kg	1	0.50	5.0	08/22/11
Cobalt	7440-48-4	LA-505-412		10.6		mg/kg	1	0.10	0.50	08/22/11
Copper	7440-50-8	LA-505-412		17.8		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		74.2		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		61.9		mg/kg	1	0.81	5.0	08/22/11
Lead	7439-92-1	LA-505-412		4.36		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941016
SAF# F11-162
Sample ID B2H026

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	B	0.0722		mg/kg	1	0.050	0.20	08/22/11
Molybdenum	7439-98-7	LA-505-412	B	0.484		mg/kg	1	0.10	1.0	08/22/11
Strontium	7440-24-6	LA-505-412		28.1		mg/kg	1	0.10	1.0	08/22/11
Tin	7440-31-5	LA-505-412		0.589		mg/kg	1	0.10	0.50	08/22/11
Uranium	7440-61-1	LA-505-412		0.501		mg/kg	1	0.10	0.50	08/22/11
Arsenic	7440-38-2	LA-505-412	B	2.19		mg/kg	1	0.40	4.0	08/22/11
Selenium	7782-49-2	LA-505-412	B	0.698		mg/kg	1	0.30	3.0	08/22/11

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 # WSCF112941

Sample # 112941017
SAF# F11-162
Sample ID B2H027

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~**Cr(VI) Prep**~~										~~**08/18/11**~~
Cr(VI)										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~U~~	~~<0.097~~		~~ug/g~~	~~1~~	~~0.097~~	~~0.48~~	~~08/18/11~~
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		375		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		8.98		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		68.9		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.299		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	B	1.09		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412	B	5.07		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		12.0		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		19.3		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		81.2		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		57.5		mg/kg	1	0.81	5.1	08/22/11
Lead	7439-92-1	LA-505-412		3.27		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941017
SAF# F11-162
Sample ID B2H027

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.051		mg/kg	1	0.051	0.20	08/22/11
Molybdenum	7439-98-7	LA-505-412	B	0.468		mg/kg	1	0.10	1.0	08/22/11
Strontium	7440-24-6	LA-505-412		27.4		mg/kg	1	0.10	1.0	08/22/11
Tin	7440-31-5	LA-505-412		0.566		mg/kg	1	0.10	0.51	08/22/11
Uranium	7440-61-1	LA-505-412	B	0.482		mg/kg	1	0.10	0.51	08/22/11
Arsenic	7440-38-2	LA-505-412	B	1.87		mg/kg	1	0.40	4.0	08/22/11
Selenium	7782-49-2	LA-505-412	B	0.673		mg/kg	1	0.30	3.0	08/22/11

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 # WSCF112941

Sample # 112941018
SAF# F11-162
Sample ID B2H050

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.099		ug/g	1	0.099	0.49	08/18/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		372		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		12.6		mg/kg	1	0.21	2.1	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.31		mg/kg	1	0.31	3.1	08/22/11
Barium	7440-39-3	LA-505-412		66.6		mg/kg	1	0.21	2.1	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.456		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	B	0.711		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		11.8		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		11.5		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		20.3		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		80.0		mg/kg	1	0.21	2.1	08/22/11
Zinc	7440-66-6	LA-505-412		55.3		mg/kg	1	0.82	5.1	08/22/11
Lead	7439-92-1	LA-505-412		4.49		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941018
SAF# F11-162
Sample ID B2H050

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.051		mg/kg	1	0.051	0.21	08/22/11
Molybdenum	7439-98-7	LA-505-412	B	0.594		mg/kg	1	0.10	1.0	08/22/11
Strontium	7440-24-6	LA-505-412		29.3		mg/kg	1	0.10	1.0	08/22/11
Tin	7440-31-5	LA-505-412		0.589		mg/kg	1	0.10	0.51	08/22/11
Uranium	7440-61-1	LA-505-412	B	0.481		mg/kg	1	0.10	0.51	08/22/11
Arsenic	7440-38-2	LA-505-412	B	2.34		mg/kg	1	0.41	4.1	08/22/11
Selenium	7782-49-2	LA-505-412	B	0.600		mg/kg	1	0.31	3.1	08/22/11

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 # WSCF112941

Sample # 112941019
SAF# F11-162
Sample ID B2H051

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.091		ug/g	1	0.091	0.46	08/18/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		377		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		8.48		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		67.0		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.297		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	U	<0.51		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412	B	4.74		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		11.7		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		19.2		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		82.9		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		56.4		mg/kg	1	0.81	5.1	08/22/11
Lead	7439-92-1	LA-505-412		3.52		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941019
SAF# F11-162
Sample ID B2H051

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.051		mg/kg	1	0.051	0.20	08/22/11
Molybdenum	7439-98-7	LA-505-412	B	0.512		mg/kg	1	0.10	1.0	08/22/11
Strontium	7440-24-6	LA-505-412		31.4		mg/kg	1	0.10	1.0	08/22/11
Tin	7440-31-5	LA-505-412		0.565		mg/kg	1	0.10	0.51	08/22/11
Uranium	7440-61-1	LA-505-412	B	0.462		mg/kg	1	0.10	0.51	08/22/11
Arsenic	7440-38-2	LA-505-412	B	1.81		mg/kg	1	0.40	4.0	08/22/11
Selenium	7782-49-2	LA-505-412	B	0.719		mg/kg	1	0.30	3.0	08/22/11

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 # WSCF112941

Sample # 112941020
SAF# F11-162
Sample ID B2H054

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~**Cr(VI) Prep**~~										~~**08/18/11**~~
Cr(VI)										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~U~~	~~<0.093~~		~~ug/g~~	~~1~~	~~0.093~~	~~0.46~~	~~08/18/11~~
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	B	0.469		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412	U	<0.20		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412	B	0.226		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	U	<0.10		mg/kg	1	0.10	0.50	08/22/11
Boron	7440-42-8	LA-505-412	U	<0.50		mg/kg	1	0.50	5.0	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412	U	<0.50		mg/kg	1	0.50	5.0	08/22/11
Cobalt	7440-48-4	LA-505-412	U	<0.10		mg/kg	1	0.10	0.50	08/22/11
Copper	7440-50-8	LA-505-412	BC	0.522	1.0U	mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412	BC	0.246	2.0U	mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412	U	<0.80		mg/kg	1	0.80	5.0	08/22/11
Lead	7439-92-1	LA-505-412	B	0.104		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941020
SAF# F11-162
Sample ID B2H054

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.050		mg/kg	1	0.050	0.20	08/22/11
Molybdenum	7439-98-7	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Strontium	7440-24-6	LA-505-412	B	0.199		mg/kg	1	0.10	1.0	08/22/11
Tin	7440-31-5	LA-505-412	U	<0.10		mg/kg	1	0.10	0.50	08/22/11
Uranium	7440-61-1	LA-505-412	U	<0.10		mg/kg	1	0.10	0.50	08/22/11
Arsenic	7440-38-2	LA-505-412	U	<0.40		mg/kg	1	0.40	4.0	08/22/11
Selenium	7782-49-2	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11

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 # WSCF112941

Sample # 112941021
SAF# F11-162
Sample ID B2H055

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~**Cr(VI) Prep**~~										~~**08/18/11**~~
~~**Cr(VI)**~~										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~U~~	~~<0.094~~		~~ug/g~~	~~1~~	~~0.094~~	~~0.47~~	~~08/18/11~~
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	B	0.336		mg/kg	1	0.099	0.99	08/16/11
Nickel	7440-02-0	LA-505-412	U	<0.20		mg/kg	1	0.20	2.0	08/16/11
Silver	7440-22-4	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	08/16/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/16/11
Barium	7440-39-3	LA-505-412	B	0.311		mg/kg	1	0.20	2.0	08/16/11
Beryllium	7440-41-7	LA-505-412	U	<0.099		mg/kg	1	0.099	0.50	08/16/11
Boron	7440-42-8	LA-505-412	B	0.795		mg/kg	1	0.50	5.0	08/16/11
Cadmium	7440-43-9	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	08/16/11
Chromium	7440-47-3	LA-505-412	U	<0.50		mg/kg	1	0.50	5.0	08/16/11
Cobalt	7440-48-4	LA-505-412	U	<0.099		mg/kg	1	0.099	0.50	08/16/11
Copper	7440-50-8	LA-505-412	B	0.135		mg/kg	1	0.099	0.99	08/16/11
Vanadium	7440-62-2	LA-505-412	B	0.404		mg/kg	1	0.20	2.0	08/16/11
Zinc	7440-66-6	LA-505-412	U	<0.79		mg/kg	1	0.79	5.0	08/16/11
Lead	7439-92-1	LA-505-412	B	0.128		mg/kg	1	0.099	0.99	08/16/11

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 # WSCF112941

Sample # 112941021
SAF# F11-162
Sample ID B2H055

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.050		mg/kg	1	0.050	0.20	08/16/11
Molybdenum	7439-98-7	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	08/16/11
Strontium	7440-24-6	LA-505-412	B	0.132		mg/kg	1	0.099	0.99	08/16/11
Tin	7440-31-5	LA-505-412	U	<0.099		mg/kg	1	0.099	0.50	08/16/11
Uranium	7440-61-1	LA-505-412	U	<0.099		mg/kg	1	0.099	0.50	08/16/11
Arsenic	7440-38-2	LA-505-412	U	<0.40		mg/kg	1	0.40	4.0	08/16/11
Selenium	7782-49-2	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/16/11

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 # WSCF112976

Sample # 112976001
SAF# F11-162
Sample ID B2H028

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~**Cr(VI) Prep**~~										~~**08/18/11**~~
~~**Cr(VI)**~~										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~U~~	~~<0.10~~		~~ug/g~~	~~1~~	~~0.10~~	~~0.51~~	~~08/18/11~~
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		360 J		mg/kg	1	0.094	0.94	08/23/11
Nickel	7440-02-0	LA-505-412		11.1		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	08/23/11
Antimony	7440-36-0	LA-505-412	B	0.453 J+		mg/kg	1	0.28	2.8	08/23/11
Barium	7440-39-3	LA-505-412		67.0		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.272		mg/kg	1	0.094	0.47	08/23/11
Boron	7440-42-8	LA-505-412	B	1.79		mg/kg	1	0.47	4.7	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	08/23/11
Chromium	7440-47-3	LA-505-412		11.7		mg/kg	1	0.47	4.7	08/23/11
Cobalt	7440-48-4	LA-505-412		9.59		mg/kg	1	0.094	0.47	08/23/11
Copper	7440-50-8	LA-505-412		17.0		mg/kg	1	0.094	0.94	08/23/11
Vanadium	7440-62-2	LA-505-412		67.1		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		54.1		mg/kg	1	0.75	4.7	08/23/11
Lead	7439-92-1	LA-505-412		5.92		mg/kg	1	0.094	0.94	08/23/11

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 # WSCF112976

Sample # 112976001
SAF# F11-162
Sample ID B2H028

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.047		mg/kg	1	0.047	0.19	08/23/11
Molybdenum	7439-98-7	LA-505-412	B	0.560		mg/kg	1	0.094	0.94	08/23/11
Strontium	7440-24-6	LA-505-412		30.3		mg/kg	1	0.094	0.94	08/23/11
Tin	7440-31-5	LA-505-412		0.579		mg/kg	1	0.094	0.47	08/23/11
Uranium	7440-61-1	LA-505-412		0.540		mg/kg	1	0.094	0.47	08/23/11
Arsenic	7440-38-2	LA-505-412	B	3.16		mg/kg	1	0.37	3.7	08/23/11
Selenium	7782-49-2	LA-505-412	B	0.540		mg/kg	1	0.28	2.8	08/23/11

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 # WSCF112976

Sample # 112976002
SAF# F11-162
Sample ID B2H029

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	B	0.161		ug/g	1	0.10	0.51	08/18/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		438 J		mg/kg	1	0.096	0.96	08/23/11
Nickel	7440-02-0	LA-505-412		12.1		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	08/23/11
Barium	7440-39-3	LA-505-412		79.8		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.176		mg/kg	1	0.096	0.48	08/23/11
Boron	7440-42-8	LA-505-412	B	1.51		mg/kg	1	0.48	4.8	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	08/23/11
Chromium	7440-47-3	LA-505-412		13.9		mg/kg	1	0.48	4.8	08/23/11
Cobalt	7440-48-4	LA-505-412		12.7		mg/kg	1	0.096	0.48	08/23/11
Copper	7440-50-8	LA-505-412		20.6		mg/kg	1	0.096	0.96	08/23/11
Vanadium	7440-62-2	LA-505-412		83.3		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		65.0		mg/kg	1	0.77	4.8	08/23/11
Lead	7439-92-1	LA-505-412		5.59		mg/kg	1	0.096	0.96	08/23/11

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 # WSCF112976

Sample # 112976002
SAF# F11-162
Sample ID B2H029

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	B	0.103		mg/kg	1	0.048	0.19	08/23/11
Molybdenum	7439-98-7	LA-505-412	B	0.745		mg/kg	1	0.096	0.96	08/23/11
Strontium	7440-24-6	LA-505-412		31.7		mg/kg	1	0.096	0.96	08/23/11
Tin	7440-31-5	LA-505-412		0.680		mg/kg	1	0.096	0.48	08/23/11
Uranium	7440-61-1	LA-505-412		0.516		mg/kg	1	0.096	0.48	08/23/11
Arsenic	7440-38-2	LA-505-412	B	2.26		mg/kg	1	0.39	3.9	08/23/11
Selenium	7782-49-2	LA-505-412	B	0.627		mg/kg	1	0.29	2.9	08/23/11

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 # WSCF112976

Sample # 112976003
SAF# F11-162
Sample ID B2H030

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~Cr(VI) Prep~~										**~~08/18/11~~**
Cr(VI)										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~B~~	~~0.173~~		~~ug/g~~	~~1~~	~~0.10~~	~~0.50~~	~~08/18/11~~
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		347 J		mg/kg	1	0.094	0.94	08/23/11
Nickel	7440-02-0	LA-505-412		11.1		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	08/23/11
Antimony	7440-36-0	LA-505-412	B	0.976 J+		mg/kg	1	0.28	2.8	08/23/11
Barium	7440-39-3	LA-505-412		66.2		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.333		mg/kg	1	0.094	0.47	08/23/11
Boron	7440-42-8	LA-505-412	B	1.98		mg/kg	1	0.47	4.7	08/23/11
Cadmium	7440-43-9	LA-505-412	B	0.105		mg/kg	1	0.094	0.94	08/23/11
Chromium	7440-47-3	LA-505-412		13.8		mg/kg	1	0.47	4.7	08/23/11
Cobalt	7440-48-4	LA-505-412		10.2		mg/kg	1	0.094	0.47	08/23/11
Copper	7440-50-8	LA-505-412		19.5		mg/kg	1	0.094	0.94	08/23/11
Vanadium	7440-62-2	LA-505-412		71.0		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		55.9		mg/kg	1	0.76	4.7	08/23/11
Lead	7439-92-1	LA-505-412		7.27		mg/kg	1	0.094	0.94	08/23/11

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 # WSCF112976

Sample # 112976003
SAF# F11-162
Sample ID B2H030

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.047		mg/kg	1	0.047	0.19	08/23/11
Molybdenum	7439-98-7	LA-505-412		1.08		mg/kg	1	0.094	0.94	08/23/11
Strontium	7440-24-6	LA-505-412		28.7		mg/kg	1	0.094	0.94	08/23/11
Tin	7440-31-5	LA-505-412		0.811		mg/kg	1	0.094	0.47	08/23/11
Uranium	7440-61-1	LA-505-412	B	0.445		mg/kg	1	0.094	0.47	08/23/11
Arsenic	7440-38-2	LA-505-412		11.0		mg/kg	1	0.38	3.8	08/23/11
Selenium	7782-49-2	LA-505-412	B	0.582		mg/kg	1	0.28	2.8	08/23/11

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 # WSCF112976

Sample # 112976004
SAF# F11-162
Sample ID B2H031

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	08/18/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		331	J	mg/kg	1	0.097	0.97	08/23/11
Nickel	7440-02-0	LA-505-412		8.91		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	08/23/11
Barium	7440-39-3	LA-505-412		55.0		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.279		mg/kg	1	0.097	0.48	08/23/11
Boron	7440-42-8	LA-505-412	B	1.17		mg/kg	1	0.48	4.8	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	08/23/11
Chromium	7440-47-3	LA-505-412		6.36		mg/kg	1	0.48	4.8	08/23/11
Cobalt	7440-48-4	LA-505-412		9.98		mg/kg	1	0.097	0.48	08/23/11
Copper	7440-50-8	LA-505-412		15.2		mg/kg	1	0.097	0.97	08/23/11
Vanadium	7440-62-2	LA-505-412		68.9		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		50.0		mg/kg	1	0.78	4.8	08/23/11
Lead	7439-92-1	LA-505-412		4.08		mg/kg	1	0.097	0.97	08/23/11

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 # WSCF112976

Sample # 112976004
SAF# F11-162
Sample ID B2H031

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.048		mg/kg	1	0.048	0.19	08/23/11
Molybdenum	7439-98-7	LA-505-412	B	0.436		mg/kg	1	0.097	0.97	08/23/11
Strontium	7440-24-6	LA-505-412		24.8		mg/kg	1	0.097	0.97	08/23/11
Tin	7440-31-5	LA-505-412	B	0.464		mg/kg	1	0.097	0.48	08/23/11
Uranium	7440-61-1	LA-505-412	B	0.474		mg/kg	1	0.097	0.48	08/23/11
Arsenic	7440-38-2	LA-505-412	B	2.08		mg/kg	1	0.39	3.9	08/23/11
Selenium	7782-49-2	LA-505-412	B	0.401		mg/kg	1	0.29	2.9	08/23/11

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 # WSCF112976

Sample # 112976005
SAF# F11-162
Sample ID B2H032

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	08/18/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		394	J	mg/kg	1	0.098	0.98	08/23/11
Nickel	7440-02-0	LA-505-412		12.7		mg/kg	1	0.20	2.0	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	08/23/11
Barium	7440-39-3	LA-505-412		70.6		mg/kg	1	0.20	2.0	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.393		mg/kg	1	0.098	0.49	08/23/11
Boron	7440-42-8	LA-505-412	B	1.52		mg/kg	1	0.49	4.9	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	08/23/11
Chromium	7440-47-3	LA-505-412		11.1		mg/kg	1	0.49	4.9	08/23/11
Cobalt	7440-48-4	LA-505-412		10.7		mg/kg	1	0.098	0.49	08/23/11
Copper	7440-50-8	LA-505-412		18.6		mg/kg	1	0.098	0.98	08/23/11
Vanadium	7440-62-2	LA-505-412		67.3		mg/kg	1	0.20	2.0	08/23/11
Zinc	7440-66-6	LA-505-412		54.9		mg/kg	1	0.78	4.9	08/23/11
Lead	7439-92-1	LA-505-412		8.10		mg/kg	1	0.098	0.98	08/23/11

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 # WSCF112976

Sample # 112976005
SAF# F11-162
Sample ID B2H032

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.049		mg/kg	1	0.049	0.20	08/23/11
Molybdenum	7439-98-7	LA-505-412	B	0.567		mg/kg	1	0.098	0.98	08/23/11
Strontium	7440-24-6	LA-505-412		31.0		mg/kg	1	0.098	0.98	08/23/11
Tin	7440-31-5	LA-505-412		0.552		mg/kg	1	0.098	0.49	08/23/11
Uranium	7440-61-1	LA-505-412		0.607		mg/kg	1	0.098	0.49	08/23/11
Arsenic	7440-38-2	LA-505-412	B	3.40		mg/kg	1	0.39	3.9	08/23/11
Selenium	7782-49-2	LA-505-412	B	0.475		mg/kg	1	0.29	2.9	08/23/11

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 # WSCF112976

Sample # 112976006
SAF# F11-162
Sample ID B2H033

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	B	0.174		ug/g	1	0.10	0.51	08/18/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		390	J	mg/kg	1	0.099	0.99	08/23/11
Nickel	7440-02-0	LA-505-412		12.9		mg/kg	1	0.20	2.0	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/23/11
Barium	7440-39-3	LA-505-412		69.6		mg/kg	1	0.20	2.0	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.292		mg/kg	1	0.099	0.49	08/23/11
Boron	7440-42-8	LA-505-412	B	1.20		mg/kg	1	0.49	4.9	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	08/23/11
Chromium	7440-47-3	LA-505-412		30.9		mg/kg	1	0.49	4.9	08/23/11
Cobalt	7440-48-4	LA-505-412		11.0		mg/kg	1	0.099	0.49	08/23/11
Copper	7440-50-8	LA-505-412		17.8		mg/kg	1	0.099	0.99	08/23/11
Vanadium	7440-62-2	LA-505-412		70.7		mg/kg	1	0.20	2.0	08/23/11
Zinc	7440-66-6	LA-505-412		69.7		mg/kg	1	0.79	4.9	08/23/11
Lead	7439-92-1	LA-505-412		6.43		mg/kg	1	0.099	0.99	08/23/11

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 # WSCF112976

Sample # 112976006
SAF# F11-162
Sample ID B2H033

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	B	0.0929		mg/kg	1	0.049	0.20	08/23/11
Molybdenum	7439-98-7	LA-505-412	B	0.492		mg/kg	1	0.099	0.99	08/23/11
Strontium	7440-24-6	LA-505-412		28.9		mg/kg	1	0.099	0.99	08/23/11
Tin	7440-31-5	LA-505-412		0.524		mg/kg	1	0.099	0.49	08/23/11
Uranium	7440-61-1	LA-505-412		0.576		mg/kg	1	0.099	0.49	08/23/11
Arsenic	7440-38-2	LA-505-412	B	3.37		mg/kg	1	0.40	4.0	08/23/11
Selenium	7782-49-2	LA-505-412	B	0.482		mg/kg	1	0.30	3.0	08/23/11

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 # WSCF112976

Sample # 112976007
SAF# F11-162
Sample ID B2H034

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~**Cr(VI) Prep**~~										~~**08/18/11**~~
Cr(VI)										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~U~~	~~<0.10~~		~~ug/g~~	~~1~~	~~0.10~~	~~0.50~~	~~08/18/11~~
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		265	J	mg/kg	1	0.094	0.94	08/23/11
Nickel	7440-02-0	LA-505-412		11.2		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	08/23/11
Barium	7440-39-3	LA-505-412		51.2		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.116		mg/kg	1	0.094	0.47	08/23/11
Boron	7440-42-8	LA-505-412	B	0.883		mg/kg	1	0.47	4.7	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	08/23/11
Chromium	7440-47-3	LA-505-412		9.76		mg/kg	1	0.47	4.7	08/23/11
Cobalt	7440-48-4	LA-505-412		7.20		mg/kg	1	0.094	0.47	08/23/11
Copper	7440-50-8	LA-505-412		12.9		mg/kg	1	0.094	0.94	08/23/11
Vanadium	7440-62-2	LA-505-412		46.7		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		38.0		mg/kg	1	0.75	4.7	08/23/11
Lead	7439-92-1	LA-505-412		3.52		mg/kg	1	0.094	0.94	08/23/11

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 # WSCF112976

Sample # 112976007
SAF# F11-162
Sample ID B2H034

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.047		mg/kg	1	0.047	0.19	08/23/11
Molybdenum	7439-98-7	LA-505-412	B	0.341		mg/kg	1	0.094	0.94	08/23/11
Strontium	7440-24-6	LA-505-412		22.4		mg/kg	1	0.094	0.94	08/23/11
Tin	7440-31-5	LA-505-412	B	0.382		mg/kg	1	0.094	0.47	08/23/11
Uranium	7440-61-1	LA-505-412	B	0.415		mg/kg	1	0.094	0.47	08/23/11
Arsenic	7440-38-2	LA-505-412	B	1.85		mg/kg	1	0.38	3.8	08/23/11
Selenium	7782-49-2	LA-505-412	B	0.317		mg/kg	1	0.28	2.8	08/23/11

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 # WSCF112976

Sample # 112976008
SAF# F11-162
Sample ID B2H035

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	08/18/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		361	J	mg/kg	1	0.097	0.97	08/23/11
Nickel	7440-02-0	LA-505-412		8.21		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	08/23/11
Barium	7440-39-3	LA-505-412		57.2		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.213		mg/kg	1	0.097	0.49	08/23/11
Boron	7440-42-8	LA-505-412	B	0.584		mg/kg	1	0.49	4.9	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	08/23/11
Chromium	7440-47-3	LA-505-412	B	4.44		mg/kg	1	0.49	4.9	08/23/11
Cobalt	7440-48-4	LA-505-412		10.4		mg/kg	1	0.097	0.49	08/23/11
Copper	7440-50-8	LA-505-412		16.6		mg/kg	1	0.097	0.97	08/23/11
Vanadium	7440-62-2	LA-505-412		73.0		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		50.3		mg/kg	1	0.78	4.9	08/23/11
Lead	7439-92-1	LA-505-412		2.56		mg/kg	1	0.097	0.97	08/23/11

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 # WSCF112976

Sample # 112976008
SAF# F11-162
Sample ID B2H035

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.049		mg/kg	1	0.049	0.19	08/23/11
Molybdenum	7439-98-7	LA-505-412	B	0.483		mg/kg	1	0.097	0.97	08/23/11
Strontium	7440-24-6	LA-505-412		22.8		mg/kg	1	0.097	0.97	08/23/11
Tin	7440-31-5	LA-505-412		0.524		mg/kg	1	0.097	0.49	08/23/11
Uranium	7440-61-1	LA-505-412	B	0.397		mg/kg	1	0.097	0.49	08/23/11
Arsenic	7440-38-2	LA-505-412	B	1.90		mg/kg	1	0.39	3.9	08/23/11
Selenium	7782-49-2	LA-505-412	B	0.681		mg/kg	1	0.29	2.9	08/23/11

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 # WSCF112976

Sample # 112976009
SAF# F11-162
Sample ID B2H036

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~**Cr(VI) Prep**~~										~~**08/18/11**~~
Cr(VI)										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~U~~	~~<0.10~~		~~ug/g~~	~~1~~	~~0.10~~	~~0.50~~	~~08/18/11~~
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		362	J	mg/kg	1	0.098	0.98	08/23/11
Nickel	7440-02-0	LA-505-412		9.51		mg/kg	1	0.20	2.0	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	08/23/11
Barium	7440-39-3	LA-505-412		60.4		mg/kg	1	0.20	2.0	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.188		mg/kg	1	0.098	0.49	08/23/11
Boron	7440-42-8	LA-505-412	B	0.753		mg/kg	1	0.49	4.9	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	08/23/11
Chromium	7440-47-3	LA-505-412		7.65		mg/kg	1	0.49	4.9	08/23/11
Cobalt	7440-48-4	LA-505-412		11.3		mg/kg	1	0.098	0.49	08/23/11
Copper	7440-50-8	LA-505-412		16.7		mg/kg	1	0.098	0.98	08/23/11
Vanadium	7440-62-2	LA-505-412		85.5		mg/kg	1	0.20	2.0	08/23/11
Zinc	7440-66-6	LA-505-412		56.0		mg/kg	1	0.79	4.9	08/23/11
Lead	7439-92-1	LA-505-412		3.23		mg/kg	1	0.098	0.98	08/23/11

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 # WSCF112976

Sample # 112976009
SAF# F11-162
Sample ID B2H036

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.049		mg/kg	1	0.049	0.20	08/23/11
Molybdenum	7439-98-7	LA-505-412	B	0.485		mg/kg	1	0.098	0.98	08/23/11
Strontium	7440-24-6	LA-505-412		27.1		mg/kg	1	0.098	0.98	08/23/11
Tin	7440-31-5	LA-505-412		0.537		mg/kg	1	0.098	0.49	08/23/11
Uranium	7440-61-1	LA-505-412	B	0.415		mg/kg	1	0.098	0.49	08/23/11
Arsenic	7440-38-2	LA-505-412	B	1.83		mg/kg	1	0.39	3.9	08/23/11
Selenium	7782-49-2	LA-505-412	B	0.722		mg/kg	1	0.29	2.9	08/23/11

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 # WSCF112976

Sample # 112976010
SAF# F11-162
Sample ID B2H037

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~**Cr(VI) Prep**~~										~~**08/18/11**~~
Cr(VI)										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~U~~	~~<0.10~~		~~ug/g~~	~~1~~	~~0.10~~	~~0.52~~	~~08/18/11~~
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		444	J	mg/kg	1	0.10	1.0	08/23/11
Nickel	7440-02-0	LA-505-412		12.8		mg/kg	1	0.20	2.0	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/23/11
Barium	7440-39-3	LA-505-412		79.3		mg/kg	1	0.20	2.0	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.287		mg/kg	1	0.10	0.51	08/23/11
Boron	7440-42-8	LA-505-412	B	1.39		mg/kg	1	0.51	5.1	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/23/11
Chromium	7440-47-3	LA-505-412		11.1		mg/kg	1	0.51	5.1	08/23/11
Cobalt	7440-48-4	LA-505-412		10.1		mg/kg	1	0.10	0.51	08/23/11
Copper	7440-50-8	LA-505-412		17.4		mg/kg	1	0.10	1.0	08/23/11
Vanadium	7440-62-2	LA-505-412		66.6		mg/kg	1	0.20	2.0	08/23/11
Zinc	7440-66-6	LA-505-412		53.9		mg/kg	1	0.81	5.1	08/23/11
Lead	7439-92-1	LA-505-412		6.95		mg/kg	1	0.10	1.0	08/23/11

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 # WSCF112976

Sample # 112976010
SAF# F11-162
Sample ID B2H037

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.051		mg/kg	1	0.051	0.20	08/23/11
Molybdenum	7439-98-7	LA-505-412	B	0.415		mg/kg	1	0.10	1.0	08/23/11
Strontium	7440-24-6	LA-505-412		33.4		mg/kg	1	0.10	1.0	08/23/11
Tin	7440-31-5	LA-505-412		0.558		mg/kg	1	0.10	0.51	08/23/11
Uranium	7440-61-1	LA-505-412		0.530		mg/kg	1	0.10	0.51	08/23/11
Arsenic	7440-38-2	LA-505-412		4.10		mg/kg	1	0.41	4.1	08/23/11
Selenium	7782-49-2	LA-505-412	B	0.612		mg/kg	1	0.30	3.0	08/23/11

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 # WSCF112976

Sample # 112976011
SAF# F11-162
Sample ID B2H052

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	08/18/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		297	J	mg/kg	1	0.095	0.95	08/23/11
Nickel	7440-02-0	LA-505-412		10.4		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.095		mg/kg	1	0.095	0.95	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	08/23/11
Barium	7440-39-3	LA-505-412		52.2		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.131		mg/kg	1	0.095	0.47	08/23/11
Boron	7440-42-8	LA-505-412	B	0.822		mg/kg	1	0.47	4.7	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.095		mg/kg	1	0.095	0.95	08/23/11
Chromium	7440-47-3	LA-505-412		8.84		mg/kg	1	0.47	4.7	08/23/11
Cobalt	7440-48-4	LA-505-412		7.32		mg/kg	1	0.095	0.47	08/23/11
Copper	7440-50-8	LA-505-412		12.3		mg/kg	1	0.095	0.95	08/23/11
Vanadium	7440-62-2	LA-505-412		48.4		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		38.3		mg/kg	1	0.76	4.7	08/23/11
Lead	7439-92-1	LA-505-412		3.88		mg/kg	1	0.095	0.95	08/23/11

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 # WSCF112976

Sample # 112976011
SAF# F11-162
Sample ID B2H052

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.047		mg/kg	1	0.047	0.19	08/23/11
Molybdenum	7439-98-7	LA-505-412	B	0.347		mg/kg	1	0.095	0.95	08/23/11
Strontium	7440-24-6	LA-505-412		24.2		mg/kg	1	0.095	0.95	08/23/11
Tin	7440-31-5	LA-505-412	B	0.382		mg/kg	1	0.095	0.47	08/23/11
Uranium	7440-61-1	LA-505-412	B	0.415		mg/kg	1	0.095	0.47	08/23/11
Arsenic	7440-38-2	LA-505-412	B	2.00		mg/kg	1	0.38	3.8	08/23/11
Selenium	7782-49-2	LA-505-412	B	0.353		mg/kg	1	0.28	2.8	08/23/11

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 # WSCF112976

Sample # 112976012
SAF# F11-162
Sample ID B2H056

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~**Cr(VI) Prep**~~										~~**08/18/11**~~
~~**Cr(VI)**~~										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~U~~	~~<0.10~~		~~ug/g~~	~~1~~	~~0.10~~	~~0.50~~	~~08/18/11~~
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	B	0.269	J	mg/kg	1	0.095	0.95	08/23/11
Nickel	7440-02-0	LA-505-412	U	<0.19		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.095		mg/kg	1	0.095	0.95	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	08/23/11
Barium	7440-39-3	LA-505-412	B	0.205		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	U	<0.095		mg/kg	1	0.095	0.48	08/23/11
Boron	7440-42-8	LA-505-412	U	<0.48		mg/kg	1	0.48	4.8	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.095		mg/kg	1	0.095	0.95	08/23/11
Chromium	7440-47-3	LA-505-412	U	<0.48		mg/kg	1	0.48	4.8	08/23/11
Cobalt	7440-48-4	LA-505-412	U	<0.095		mg/kg	1	0.095	0.48	08/23/11
Copper	7440-50-8	LA-505-412	U	<0.095		mg/kg	1	0.095	0.95	08/23/11
Vanadium	7440-62-2	LA-505-412	U	<0.19		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412	U	<0.76		mg/kg	1	0.76	4.8	08/23/11
Lead	7439-92-1	LA-505-412	U	<0.095		mg/kg	1	0.095	0.95	08/23/11

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 # WSCF112976

Sample # 112976012
SAF# F11-162
Sample ID B2H056

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.048		mg/kg	1	0.048	0.19	08/23/11
Molybdenum	7439-98-7	LA-505-412	U	<0.095		mg/kg	1	0.095	0.95	08/23/11
Strontium	7440-24-6	LA-505-412	B	0.124		mg/kg	1	0.095	0.95	08/23/11
Tin	7440-31-5	LA-505-412	U	<0.095		mg/kg	1	0.095	0.48	08/23/11
Uranium	7440-61-1	LA-505-412	U	<0.095		mg/kg	1	0.095	0.48	08/23/11
Arsenic	7440-38-2	LA-505-412	U	<0.38		mg/kg	1	0.38	3.8	08/23/11
Selenium	7782-49-2	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	08/23/11

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 # WSCF112982

Sample # 112982001
SAF# F11-162
Sample ID B2H038

Matrix SOIL
Sampled 08/16/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~**Cr(VI) Prep**~~										~~**08/23/11**~~
Cr(VI)										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~UN~~	~~<0.098~~		~~ug/g~~	~~1~~	~~0.098~~	~~0.49~~	~~08/24/11~~
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		394		mg/kg	1	0.093	0.93	08/23/11
Nickel	7440-02-0	LA-505-412		12.0		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	08/23/11
Barium	7440-39-3	LA-505-412		72.1		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.347		mg/kg	1	0.093	0.46	08/23/11
Boron	7440-42-8	LA-505-412	B	1.18		mg/kg	1	0.46	4.6	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	08/23/11
Chromium	7440-47-3	LA-505-412		8.99		mg/kg	1	0.46	4.6	08/23/11
Cobalt	7440-48-4	LA-505-412		11.9		mg/kg	1	0.093	0.46	08/23/11
Copper	7440-50-8	LA-505-412		18.4		mg/kg	1	0.093	0.93	08/23/11
Vanadium	7440-62-2	LA-505-412		77.2		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		55.7		mg/kg	1	0.74	4.6	08/23/11
Lead	7439-92-1	LA-505-412		4.29		mg/kg	1	0.093	0.93	08/23/11

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 # WSCF112982

Sample # 112982001
SAF# F11-162
Sample ID B2H038

Matrix SOIL
Sampled 08/16/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.046		mg/kg	1	0.046	0.19	08/23/11
Molybdenum	7439-98-7	LA-505-412	B	0.548		mg/kg	1	0.093	0.93	08/23/11
Strontium	7440-24-6	LA-505-412		34.6		mg/kg	1	0.093	0.93	08/23/11
Tin	7440-31-5	LA-505-412		0.580		mg/kg	1	0.093	0.46	08/23/11
Uranium	7440-61-1	LA-505-412		0.475		mg/kg	1	0.093	0.46	08/23/11
Arsenic	7440-38-2	LA-505-412	B	2.93		mg/kg	1	0.37	3.7	08/23/11
Selenium	7782-49-2	LA-505-412	B	0.610		mg/kg	1	0.28	2.8	08/23/11

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 # WSCF112982

Sample # 112982002
SAF# F11-162
Sample ID B2H039

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~**Cr(VI) Prep**~~										~~**08/23/11**~~
~~**Cr(VI)**~~										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~BN~~	~~0.186~~		~~ug/g~~	~~1~~	~~0.089~~	~~0.45~~	~~08/24/11~~
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		338		mg/kg	1	0.096	0.96	08/23/11
Nickel	7440-02-0	LA-505-412		8.41		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	08/23/11
Barium	7440-39-3	LA-505-412		66.0		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.221		mg/kg	1	0.096	0.48	08/23/11
Boron	7440-42-8	LA-505-412	B	1.16		mg/kg	1	0.48	4.8	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	08/23/11
Chromium	7440-47-3	LA-505-412		16.6		mg/kg	1	0.48	4.8	08/23/11
Cobalt	7440-48-4	LA-505-412		10.5		mg/kg	1	0.096	0.48	08/23/11
Copper	7440-50-8	LA-505-412		16.9		mg/kg	1	0.096	0.96	08/23/11
Vanadium	7440-62-2	LA-505-412		80.2		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		53.0		mg/kg	1	0.77	4.8	08/23/11
Lead	7439-92-1	LA-505-412		3.87		mg/kg	1	0.096	0.96	08/23/11

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 # WSCF112982

Sample # 112982002
SAF# F11-162
Sample ID B2H039

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	B	0.0500		mg/kg	1	0.048	0.19	08/23/11
Molybdenum	7439-98-7	LA-505-412	B	0.660		mg/kg	1	0.096	0.96	08/23/11
Strontium	7440-24-6	LA-505-412		27.2		mg/kg	1	0.096	0.96	08/23/11
Tin	7440-31-5	LA-505-412		0.620		mg/kg	1	0.096	0.48	08/23/11
Uranium	7440-61-1	LA-505-412	B	0.443		mg/kg	1	0.096	0.48	08/23/11
Arsenic	7440-38-2	LA-505-412	B	1.59		mg/kg	1	0.39	3.9	08/23/11
Selenium	7782-49-2	LA-505-412	B	0.656		mg/kg	1	0.29	2.9	08/23/11

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 # WSCF112982

Sample # 112982003
SAF# F11-162
Sample ID B2H040

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~**Cr(VI) Prep**~~										~~**08/23/11**~~
Cr(VI)										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~UN~~	~~<0.10~~		~~ug/g~~	~~1~~	~~0.10~~	~~0.50~~	~~08/24/11~~
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		375		mg/kg	1	0.093	0.93	08/23/11
Nickel	7440-02-0	LA-505-412		12.3		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	08/23/11
Barium	7440-39-3	LA-505-412		67.1		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.337		mg/kg	1	0.093	0.47	08/23/11
Boron	7440-42-8	LA-505-412	B	1.28		mg/kg	1	0.47	4.7	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	08/23/11
Chromium	7440-47-3	LA-505-412		10.1		mg/kg	1	0.47	4.7	08/23/11
Cobalt	7440-48-4	LA-505-412		11.0		mg/kg	1	0.093	0.47	08/23/11
Copper	7440-50-8	LA-505-412		16.9		mg/kg	1	0.093	0.93	08/23/11
Vanadium	7440-62-2	LA-505-412		78.3		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		55.9		mg/kg	1	0.75	4.7	08/23/11
Lead	7439-92-1	LA-505-412		4.88		mg/kg	1	0.093	0.93	08/23/11

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 # WSCF112982

Sample # 112982003
SAF# F11-162
Sample ID B2H040

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.047		mg/kg	1	0.047	0.19	08/23/11
Molybdenum	7439-98-7	LA-505-412	B	0.585		mg/kg	1	0.093	0.93	08/23/11
Strontium	7440-24-6	LA-505-412		31.7		mg/kg	1	0.093	0.93	08/23/11
Tin	7440-31-5	LA-505-412		0.619		mg/kg	1	0.093	0.47	08/23/11
Uranium	7440-61-1	LA-505-412		0.559		mg/kg	1	0.093	0.47	08/23/11
Arsenic	7440-38-2	LA-505-412	B	2.63		mg/kg	1	0.37	3.7	08/23/11
Selenium	7782-49-2	LA-505-412	B	0.584		mg/kg	1	0.28	2.8	08/23/11

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 # WSCF112982

Sample # 112982004
SAF# F11-162
Sample ID B2H041

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~**Cr(VI) Prep**~~										~~**08/23/11**~~
Cr(VI)										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~UN~~	~~<0.10~~		~~ug/g~~	~~1~~	~~0.10~~	~~0.50~~	~~08/24/11~~
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		375		mg/kg	1	0.096	0.96	08/23/11
Nickel	7440-02-0	LA-505-412		10.5		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	08/23/11
Barium	7440-39-3	LA-505-412		68.1		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.373		mg/kg	1	0.096	0.48	08/23/11
Boron	7440-42-8	LA-505-412	B	1.43		mg/kg	1	0.48	4.8	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	08/23/11
Chromium	7440-47-3	LA-505-412		9.68		mg/kg	1	0.48	4.8	08/23/11
Cobalt	7440-48-4	LA-505-412		10.9		mg/kg	1	0.096	0.48	08/23/11
Copper	7440-50-8	LA-505-412		17.8		mg/kg	1	0.096	0.96	08/23/11
Vanadium	7440-62-2	LA-505-412		76.3		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		58.3		mg/kg	1	0.77	4.8	08/23/11
Lead	7439-92-1	LA-505-412		4.90		mg/kg	1	0.096	0.96	08/23/11

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 # WSCF112982

Sample # 112982004
SAF# F11-162
Sample ID B2H041

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.048		mg/kg	1	0.048	0.19	08/23/11
Molybdenum	7439-98-7	LA-505-412	B	0.721		mg/kg	1	0.096	0.96	08/23/11
Strontium	7440-24-6	LA-505-412		31.9		mg/kg	1	0.096	0.96	08/23/11
Tin	7440-31-5	LA-505-412		0.578		mg/kg	1	0.096	0.48	08/23/11
Uranium	7440-61-1	LA-505-412		0.498		mg/kg	1	0.096	0.48	08/23/11
Arsenic	7440-38-2	LA-505-412	B	2.64		mg/kg	1	0.38	3.8	08/23/11
Selenium	7782-49-2	LA-505-412	B	0.510		mg/kg	1	0.29	2.9	08/23/11

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 # WSCF112982

Sample # 112982005
SAF# F11-162
Sample ID B2H042

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~**Cr(VI) Prep**~~										~~**08/23/11**~~
~~**Cr(VI)**~~										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~UN~~	~~<0.10~~		~~ug/g~~	~~1~~	~~0.10~~	~~0.51~~	~~08/24/11~~
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		284		mg/kg	1	0.096	0.96	08/23/11
Nickel	7440-02-0	LA-505-412		11.3		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412		1.10		mg/kg	1	0.096	0.96	08/23/11
Antimony	7440-36-0	LA-505-412	B	1.19		mg/kg	1	0.29	2.9	08/23/11
Barium	7440-39-3	LA-505-412		52.5		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412		1.09		mg/kg	1	0.096	0.48	08/23/11
Boron	7440-42-8	LA-505-412	B	1.94		mg/kg	1	0.48	4.8	08/23/11
Cadmium	7440-43-9	LA-505-412		1.27		mg/kg	1	0.096	0.96	08/23/11
Chromium	7440-47-3	LA-505-412		10.6		mg/kg	1	0.48	4.8	08/23/11
Cobalt	7440-48-4	LA-505-412		8.72		mg/kg	1	0.096	0.48	08/23/11
Copper	7440-50-8	LA-505-412		15.2		mg/kg	1	0.096	0.96	08/23/11
Vanadium	7440-62-2	LA-505-412		50.8		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		42.5		mg/kg	1	0.77	4.8	08/23/11
Lead	7439-92-1	LA-505-412		4.93		mg/kg	1	0.096	0.96	08/23/11

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 # WSCF112982

Sample # 112982005
SAF# F11-162
Sample ID B2H042

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	B	0.0612		mg/kg	1	0.048	0.19	08/23/11
Molybdenum	7439-98-7	LA-505-412		1.57		mg/kg	1	0.096	0.96	08/23/11
Strontium	7440-24-6	LA-505-412		22.4		mg/kg	1	0.096	0.96	08/23/11
Tin	7440-31-5	LA-505-412		1.50		mg/kg	1	0.096	0.48	08/23/11
Uranium	7440-61-1	LA-505-412		1.52		mg/kg	1	0.096	0.48	08/23/11
Arsenic	7440-38-2	LA-505-412	B	3.18		mg/kg	1	0.39	3.9	08/23/11
Selenium	7782-49-2	LA-505-412	B	1.38		mg/kg	1	0.29	2.9	08/23/11

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 # WSCF112982

Sample # 112982006
SAF# F11-162
Sample ID B2H043

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~**Cr(VI) Prep**~~										~~**08/23/11**~~
Cr(VI)										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~UN~~	~~<0.095~~		~~ug/g~~	~~1~~	~~0.095~~	~~0.48~~	~~08/24/11~~
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		362		mg/kg	1	0.10	1.0	08/23/11
Nickel	7440-02-0	LA-505-412		8.92		mg/kg	1	0.20	2.0	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/23/11
Barium	7440-39-3	LA-505-412		60.9		mg/kg	1	0.20	2.0	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.255		mg/kg	1	0.10	0.50	08/23/11
Boron	7440-42-8	LA-505-412	B	0.825		mg/kg	1	0.50	5.0	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/23/11
Chromium	7440-47-3	LA-505-412		5.89		mg/kg	1	0.50	5.0	08/23/11
Cobalt	7440-48-4	LA-505-412		11.7		mg/kg	1	0.10	0.50	08/23/11
Copper	7440-50-8	LA-505-412		17.9		mg/kg	1	0.10	1.0	08/23/11
Vanadium	7440-62-2	LA-505-412		84.5		mg/kg	1	0.20	2.0	08/23/11
Zinc	7440-66-6	LA-505-412		56.2		mg/kg	1	0.80	5.0	08/23/11
Lead	7439-92-1	LA-505-412		2.81		mg/kg	1	0.10	1.0	08/23/11

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 # WSCF112982

Sample # 112982006
SAF# F11-162
Sample ID B2H043

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.050		mg/kg	1	0.050	0.20	08/23/11
Molybdenum	7439-98-7	LA-505-412	B	0.535		mg/kg	1	0.10	1.0	08/23/11
Strontium	7440-24-6	LA-505-412		25.3		mg/kg	1	0.10	1.0	08/23/11
Tin	7440-31-5	LA-505-412		0.601		mg/kg	1	0.10	0.50	08/23/11
Uranium	7440-61-1	LA-505-412	B	0.425		mg/kg	1	0.10	0.50	08/23/11
Arsenic	7440-38-2	LA-505-412	B	1.45		mg/kg	1	0.40	4.0	08/23/11
Selenium	7782-49-2	LA-505-412	B	0.833		mg/kg	1	0.30	3.0	08/23/11

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 # WSCF112982

Sample # 112982007
SAF# F11-162
Sample ID B2H044

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~**Cr(VI) Prep**~~										~~**08/23/11**~~
~~**Cr(VI)**~~										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~UN~~	~~<0.10~~		~~ug/g~~	~~1~~	~~0.10~~	~~0.51~~	~~08/24/11~~
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		309		mg/kg	1	0.098	0.98	08/23/11
Nickel	7440-02-0	LA-505-412		6.85		mg/kg	1	0.20	2.0	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	08/23/11
Barium	7440-39-3	LA-505-412		50.4		mg/kg	1	0.20	2.0	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.228		mg/kg	1	0.098	0.49	08/23/11
Boron	7440-42-8	LA-505-412	U	<0.49		mg/kg	1	0.49	4.9	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	08/23/11
Chromium	7440-47-3	LA-505-412	B	3.10		mg/kg	1	0.49	4.9	08/23/11
Cobalt	7440-48-4	LA-505-412		10.5		mg/kg	1	0.098	0.49	08/23/11
Copper	7440-50-8	LA-505-412		17.1		mg/kg	1	0.098	0.98	08/23/11
Vanadium	7440-62-2	LA-505-412		76.1		mg/kg	1	0.20	2.0	08/23/11
Zinc	7440-66-6	LA-505-412		48.3		mg/kg	1	0.78	4.9	08/23/11
Lead	7439-92-1	LA-505-412		2.36		mg/kg	1	0.098	0.98	08/23/11

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 # WSCF112982

Sample # 112982007
SAF# F11-162
Sample ID B2H044

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.049		mg/kg	1	0.049	0.20	08/23/11
Molybdenum	7439-98-7	LA-505-412	B	0.507		mg/kg	1	0.098	0.98	08/23/11
Strontium	7440-24-6	LA-505-412		23.7		mg/kg	1	0.098	0.98	08/23/11
Tin	7440-31-5	LA-505-412		0.492		mg/kg	1	0.098	0.49	08/23/11
Uranium	7440-61-1	LA-505-412	B	0.360		mg/kg	1	0.098	0.49	08/23/11
Arsenic	7440-38-2	LA-505-412	B	1.03		mg/kg	1	0.39	3.9	08/23/11
Selenium	7782-49-2	LA-505-412	B	0.748		mg/kg	1	0.29	2.9	08/23/11

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 # WSCF112982

Sample # 112982008
SAF# F11-162
Sample ID B2H045

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~**Cr(VI) Prep**~~										~~**08/23/11**~~
Cr(VI)										
~~Hexavalent chromium~~	~~18540-29-9~~	~~LA-265-403~~	~~UN~~	~~<0.096~~		~~ug/g~~	~~1~~	~~0.096~~	~~0.48~~	~~08/24/11~~
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		373		mg/kg	1	0.093	0.93	08/23/11
Nickel	7440-02-0	LA-505-412		9.25		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	08/23/11
Barium	7440-39-3	LA-505-412		71.2		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.219		mg/kg	1	0.093	0.47	08/23/11
Boron	7440-42-8	LA-505-412	B	1.07		mg/kg	1	0.47	4.7	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	08/23/11
Chromium	7440-47-3	LA-505-412		6.05		mg/kg	1	0.47	4.7	08/23/11
Cobalt	7440-48-4	LA-505-412		10.6		mg/kg	1	0.093	0.47	08/23/11
Copper	7440-50-8	LA-505-412		15.9		mg/kg	1	0.093	0.93	08/23/11
Vanadium	7440-62-2	LA-505-412		69.0		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		48.6		mg/kg	1	0.74	4.7	08/23/11
Lead	7439-92-1	LA-505-412		3.26		mg/kg	1	0.093	0.93	08/23/11

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 # WSCF112982

Sample # 112982008
SAF# F11-162
Sample ID B2H045

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Mercury	7439-97-6	LA-505-412	U	<0.047		mg/kg	1	0.047	0.19	08/23/11
Molybdenum	7439-98-7	LA-505-412	B	0.439		mg/kg	1	0.093	0.93	08/23/11
Strontium	7440-24-6	LA-505-412		29.3		mg/kg	1	0.093	0.93	08/23/11
Tin	7440-31-5	LA-505-412		0.513		mg/kg	1	0.093	0.47	08/23/11
Uranium	7440-61-1	LA-505-412	B	0.409		mg/kg	1	0.093	0.47	08/23/11
Arsenic	7440-38-2	LA-505-412	B	1.79		mg/kg	1	0.37	3.7	08/23/11
Selenium	7782-49-2	LA-505-412	B	0.696		mg/kg	1	0.28	2.8	08/23/11

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

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

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

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Attachment 2
Narrative
WSCF112941

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

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.

Attachment 2
Narrative
WSCF112941

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):

- Batch 188260
  - Vanadium and Copper – 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.

Radiochemistry Comments

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

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- Gamma Energy Analysis:
  - Europium-154 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - All other applicable QC controls are within the established limits.
- Americium-241:
  - Batch QC 188274
    - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Batch QC 188270
    - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Batch QC 188273
    - Americium-243 Tracer – The tracer did not meet the established laboratory limits for sample B2H014 (112941004). No flags issued on sample results. The quality control report was flagged for the failure.
    - All other applicable QC controls are within the established limits.

- Isotopic Plutonium analysis:
  - Batch QC 188273
    - Plutonium-239/240 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Batch QC 188274
    - Plutonium-239/240 – The duplicate is outside of default RPD limits. RPD limit does not apply to results with greater than 20% counting uncertainty.
  - Batch QC 188370
    - Plutonium-239/240 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
    - All other applicable QC controls are within the established limits.
- Isotopic Uranium analysis:
  - Batch QC 188273
    - Uranium-234 and Uranium-238 – The Blank is less than five times the MDC. "B" Flag not required.
    - Uranium-234 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
  - Batch QC 188274
    - Uranium-234, Uranium-235 and Uranium-238 – The Blank is less than five times the MDC. "B" Flag not required.
    - Uranium-235 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - Uranium-238 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.

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

- Strontium-89/90:
  - Batch QC 188376
    - The Blank is less than two times the RDL. "B" Flag not required.
  - Batch QC 188377
    - The duplicate is outside of default RPD limits. RPD limit does not apply to results with greater than 20% counting uncertainty.
    - 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

F11-162-001 | PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #1	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-17	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.[ ]** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis CKI applies to this SAF.

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H011 001	SOIL	8/12/11	0757	✓	✓	✓	✓

112941

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	Rebecca Abby	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-002 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 AG Verification Sample #2

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: GWS-17

FIELD LOGBOOK NO.: HNF-N-507-23.

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	B2H012 002			
MATRIX*	SOIL			
SAMPLE DATE / SAMPLE TIME	8/12/11 0805			

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	Kbearod Sbrown	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-003 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #3	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-807-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H013 002	SOIL	8/12/11	0825	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[illegible]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-162-004	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 AG Verification Sample #4	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162	AIR QUALITY: ☐	
ICE CHEST NO.: GWS - 17	FIELD LOGBOOK NO.: HNF-N-807-33	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10	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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION	HOLDING TIME	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
B2H014	004	SOIL	8/12/11	0903	Cool~4C	6 Months	G/P	1	250mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
					Cool~4C	30 Days	G/P	1	60mL	Chromium Hex - 7196;
					None	6 Months	Square Bottle - Poly	1	500mL	SEE ITEM (2) IN SPECIAL INSTRUCTIONS
					None	6 Months	G/P	1	120mL	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: FM Hall CHPRC	DATE/TIME: 8/12/11 1330	RECEIVED BY/STORED IN:	DATE/TIME: 8/12/11 1330
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

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

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

F11-162-005 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #5	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GW3-017	FIELD LOGBOOK NO.: HNF-N-807-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H015 005	SOIL	8/12/11	0932	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[illegible]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-162-006	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 AG Verification Sample #6	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162	AIR QUALITY: ☐	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10	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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis CVI applies to this COC

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H016	005	SOIL	8/12/11	0944	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: FM Hall CHPRC	DATE/TIME: 8/12/11 1330	RECEIVED BY/STORED IN: [signature]	DATE/TIME: 8/12/11 1330
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

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-007 — 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 AG Verification Sample #7	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	AIR QUALITY: ☐
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23.	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None	
HOLDING TIME	6 Months	30 Days	6 Months	6 Months	
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P	
NO. OF CONTAINER(S)	1	1	1	1	
VOLUME	250mL	60mL	500mL	120mL	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2H017 007	SOIL	8/12/11	0954	✓	✓ ✓ ✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[illegible]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 – Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-008 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	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 AG Verification Sample #8	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	
ICE CHEST NO.: 6WS-017	FIELD LOGBOOK NO.: HNF-N-807-23.	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H018 008	SOIL	8/12/11	1010	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	UBerrod & Boyn	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-009 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #9	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23.	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /19/;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	B2H019 009	B2H019 009	B2H019 009	B2H019 009
MATRIX*	SOIL	SOIL	SOIL	SOIL
SAMPLE DATE	8/12/11	8/12/11	8/12/11	8/12/11
SAMPLE TIME	1034	1034	1034	1034

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[signature]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 – Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-010 — PAGE 1 OF 1

COLLECTOR: FM Hall, CHPRC	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 AG Verification Sample #10	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302577ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Coo~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H020 DID	SOIL	8/12/11	1040	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[illegible]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-011 — PAGE 1 OF 1

COLLECTOR: FM Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: CHPRC	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23.	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H021	01	SOIL	8/12/11	1049	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[signature]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-012 | 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 AG Verification Sample #12

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: GW3-017 HNF-N-507 8/12/11

FIELD LOGBOOK NO.: HNF-N-507-23

ACTUAL SAMPLE DEPTH: 0 - 1'

COA: 302677ES10

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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None	
HOLDING TIME	6 Months	30 Days	6 Months	6 Months	
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P	
NO. OF CONTAINER(S)	1	1	1	1	
VOLUME	250mL	60mL	500mL	120mL	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2H022 8/2	SOIL	8/12/11	1050	✓	✓ ✓ ✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[illegible]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-013

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 AG Verification Sample #13

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: GWS-017

FIELD LOGBOOK NO.: FNF-N-907-23

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B2H023 03	SOIL	8/12/11	1109

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	KBKazad	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-014 PAGE 1 OF 1

COLLECTOR: FM Hall, CHPRC

SAMPLING LOCATION: Area AG Verification Sample #14

ICE CHEST NO.: GWS-017

SHIPPED TO: Waste Sampling & Characterization

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT COORDINATOR: LUKE, SN

PRICE CODE: C01

DATA TURNAROUND: 12 Days / 12 Days

AIR QUALITY: ☐

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

FIELD LOGBOOK NO.: HNF-N-607-23.

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

OFFSITE PROPERTY NO.: N/A

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

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

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

SPECIAL HANDLING AND/OR STORAGE: ** The CACN for WSCF Analytical is <02580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H024 014	SOIL	8/12/11	1127				
PRESERVATION				Cool-4C	Cool-4C	None	None
HOLDING TIME				6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER				G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)				1	1	1	1
VOLUME				250mL	60mL	500mL	120mL
SAMPLE ANALYSIS				SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: FM Hall CHPRC	DATE/TIME: 8/12/11 1330	RECEIVED BY/STORED IN: [signature]	DATE/TIME: 8/12/11 1330
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

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-015 | 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 / 11 Days

SAMPLING LOCATION: Area AG Verification Sample #15

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: GWS-017

FIELD LOGBOOK NO.: HNF-N-507-23.

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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: ** The CACN for WSCF Analytical is 402580ES20.D** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H026 015	SOIL	8/12/11	1136	✓	✓	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[illegible]	8/12/11 1330

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-016

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 AG Verification Sample #16

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: GWS-017

FIELD LOGBOOK NO.: HNF-N-507-23

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H026	016	SOIL	8/12/11	1146	✓	✓	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	M. Nelson	8/12/11 1330

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-017 | PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #17	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Samping - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/F	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H027	017	SOIL	8/12/11	1155	✓	✓	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	M. Nelson	8/12/11 1330

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-040 | 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 AG Verification Sample #40

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: GWS-017

FIELD LOGBOOK NO.: HNF-N-507-23

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION		Cool~4C	Cool~4C	None	None
HOLDING TIME		6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER		G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)		1	1	1	1
VOLUME		250mL	60mL	500mL	120mL
SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2H050 018	SOIL	8/12/11	0805	✓	— ✓ ✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	8/12/11 1330		8/12/11 1330
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

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

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

F11-162-041 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #41	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: C01 — DATA TURNAROUND: 12 Days / 12 Days

AIR QUALITY: ☐ — 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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B2H051 019	SOIL	8/12/11	1058

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall	8/12/11 1330	[illegible]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-044

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 AG Verification Sample #44

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: 6W3-017

FIELD LOGBOOK NO.: HNF-N-507-23

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis CKI applies to this CAF.

PRESERVATION	Cool~4C	Cool~4C	None	None	
HOLDING TIME	6 Months	30 Days	6 Months	6 Months	
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P	
NO. OF CONTAINER(S)	1	1	1	1	
VOLUME	250mL	60mL	500mL	120mL	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2H054 020	SOIL	8/12/11	0740	✓	✓ ✓ ✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[signature]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-045 — 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 AG Verification Sample #45	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	AIR QUALITY: ☐
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23.	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H055 02	SOIL	8/12/11	1022	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[illegible]	8/12/11 1330

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Attachment 2
Narrative
WSCF112976

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

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.

Attachment 2
Narrative
WSCF112976

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 – MS / MSD Relative Percent Difference (RPD) is outside established laboratory limits. The quality control report was flagged for RPD failure.
- All other applicable QC controls are within the established limits.

Radiochemistry Comments

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

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- Gamma Energy Analysis:
  - All applicable QC controls are within the established limits.
- Americium-241:
  - Batch QC 188371
    - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - All other applicable QC controls are within the established limits.
- Isotopic Plutonium analysis:
  - Batch QC 188371
    - Plutonium-239/240 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - All other applicable QC controls are within the established limits.
- Isotopic Uranium analysis:
  - Batch QC 188371

- Uranium-234 and Uranium-238 – The Blank is less than five times the MDC. "B" Flag not required.

- Batch QC 188372
  - Uranium-234 and Uranium-238 – The Blank is less than five times the MDC. "B" Flag not required.
  - Uranium-235 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - All other applicable QC controls are within the established limits.

- Strontium-89/90:
  - Batch QC 188379
    - The Blank is less than two times the RDL. "B" Flag not required.
    - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
    - The Tracer for Sample B2H056 (112976012) did not meet established laboratory acceptance limits.
    - 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

F11-162-018 | PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #18	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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)

112976

SPECIAL HANDLING AND/OR STORAGE
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool<4C	Cool<4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H028	1	SOIL	8/16/11	0836	✓	✓	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M.Nelson M.Nels	8/16/11 1420
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

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-019 — 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 AG Verification Sample #19	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	AIR QUALITY: ☐
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-607-23.	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE DATE	8/16/11			
SAMPLE TIME	0848			

SAMPLE NO.		MATRIX*
B2H029	2	SOIL

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M. Nelson M. Nelson	8/16/11 1420

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-020 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	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 AG Verification Sample #20	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H030	3	SOIL	8/16/11	0858	✓	✓	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M Nelson M.Nelson	8/16/11 1420
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

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-021 — 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 AG Verification Sample #21	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	AIR QUALITY: ☐
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250ml.	60ml.	500ml.	120ml.
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - PEAR;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	[redacted]			
B2H031	4 SOIL	8/16/11	0904	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M. Nelson	8/16/11 1420

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F11-162-022	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 AG Verification Sample #22	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil
SAF NO.: F11-162	AIR QUALITY: ☐	ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23.
ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10	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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/F	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 219;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H032	5	SOIL	8/16/11	0919	/	/	/	/

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M. Nelson	8/16/11 1420
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

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-023

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 AG Verification Sample #23

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: GWS-017

FIELD LOGBOOK NO.: HNF-N-507-23.

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677E510

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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H033	6	SOIL	8/16/11	0938	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M Nelson M.Nelson	8/16/11 1420

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt 60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-024 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	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 AG Verification Sample #24	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-807-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE DATE	8/16/11	8/16/11	8/16/11	8/16/11
SAMPLE TIME	1014	1014	1014	1014

SAMPLE NO.	MATRIX*
B2H034 7	SOIL

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M. Nelson	8/16/11 1420

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-025 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 AG Verification Sample #25

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: GW3-017

FIELD LOGBOOK NO.: HNF-N-807-23.

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /19%	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE DATE / SAMPLE TIME	8/16/11 1022	✓	✓	✓

SAMPLE NO.		MATRIX*
B2H035	8	SOIL

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1400	M. Nelson	8/16/11 1400

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-026

PAGE 1 OF 1

COLLECTOR	FM Hall CHPRC
SAMPLING LOCATION	Area AG Verification Sample #26
ICE CHEST NO.	GWS-017
SHIPPED TO	Waste Sampling & Characterization
COMPANY CONTACT	LUKE, SN
TELEPHONE NO.	372-1667
PROJECT COORDINATOR	LUKE, SN
PRICE CODE	C01
DATA TURNAROUND	12 Days / 12 Days
PROJECT DESIGNATION	Area AG Sampling (Waste Area AG) Verification Sampling - Soil
SAF NO.	F11-162
AIR QUALITY	
FIELD LOGBOOK NO.	HNF-N-507-23.
ACTUAL SAMPLE DEPTH	0-1'
COA	302677ES10
METHOD OF SHIPMENT	GOVERNMENT VEHICLE
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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /1%;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE DATE	8/16/11	8/16/11	8/16/11	8/16/11
SAMPLE TIME	1031	1031	1031	1031

SAMPLE NO.		MATRIX*
B2H036	9	SOIL

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M. Nelson M. Nelson	8/16/11 1420

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

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A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-027 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #27	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE DATE / SAMPLE TIME	8/16/11 1041	✓	✓	✓ ✓

SAMPLE NO.		MATRIX*
B2H037	10	SOIL

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M Nelson M. Nelson	8/16/11 1420

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-042 PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC

SAMPLING LOCATION: Area AG Verification Sample #42

ICE CHEST NO.: GWS-017

SHIPPED TO: Waste Sampling & Characterization

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

FIELD LOGBOOK NO.: HNF-N-507-23

ACTUAL SAMPLE DEPTH: 0-1'

OFFSITE PROPERTY NO.: N/A

PROJECT COORDINATOR: LUKE, SN

SAF NO.: F11-162

COA: 302677ES10

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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO. / MATRIX*				
B2H052 11 SOIL				
SAMPLE DATE / SAMPLE TIME	8/16/11 1011	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M.Nelson K.Nds	8/16/11 1420
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

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-046

PAGE 1 OF 1

COLLECTOR	FM Hall CHPRC
SAMPLING LOCATION	Area AG Verification Sample #46
ICE CHEST NO.	GWS-017
SHIPPED TO	Waste Sampling & Characterization
COMPANY CONTACT	LUKE, SN
TELEPHONE NO.	372-1667
PROJECT DESIGNATION	Area AG Sampling (Waste Area AG) Verification Sampling - Soil
FIELD LOGBOOK NO.	HNF-N-507-23
ACTUAL SAMPLE DEPTH	0-1'
OFFSITE PROPERTY NO.	N/A
PROJECT COORDINATOR	LUKE, SN
SAF NO.	F11-162
COA	302677ES10
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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool<4C	Cool<4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H056 12	SOIL	8/16/11	0817				

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M. Nelson Hanes	8/16/11 1420

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Attachment 2
Narrative
WSCF112982

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

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):

- Post 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.

Attachment 2
Narrative
WSCF112982

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 – 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.

Radiochemistry Comments

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

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- Gamma Energy Analysis:
  - Europium-152 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - All other applicable QC controls are within the established limits.
- Americium-241:
  - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Americium-243 – Tracer recovery did not meet the established laboratory limits for sample B2H040 (112982003). No flags issued on sample results. The quality control report was flagged for the failure.
  - All other applicable QC controls are within the established limits.
- Isotopic Plutonium analysis:
  - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
  - All other applicable QC controls are within the established limits.

Narrative

- Isotopic Uranium analysis:
  - Uranium-234 and Uranium-238 – The Blank is less than five times the MDC. "B" Flag not required.
  - All other applicable QC controls are within the established limits.
- Strontium-89/90:
  - Strontium-85 – Tracer recovery did not meet the established laboratory limits for sample B2H038 (112982001). No flags issued on sample results. The quality control report was flagged for the failure.
  - 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

F11-162-028 | PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #28	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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)

112982

SPECIAL HANDLING AND/OR STORAGE
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H038	SOIL	8/16/11	1052	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall [signature]	8/16/11 1400	M01109 SSL#1 [signature]	8/16/11 1400
M01109 SSL#1	8-17-11 0700	FM Hall [signature]	8-17-11 0700
FM Hall [signature]	8-17-11 1005	[signature]	8-17-11 1005

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-162-029	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 AG Verification Sample #29	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162	AIR QUALITY: ☐	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-807-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10	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
** The CACN for WSCF Analytical is 40258CES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis CKT applies to this CAF.

PRESERVATION	Cool~4C	Cool~4C	None	None	
HOLDING TIME	6 Months	30 Days	6 Months	6 Months	
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P	
NO. OF CONTAINER(S)	1	1	1	1	
VOLUME	250mL	60mL	500mL	120mL	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2H039 2	SOIL	8/17/11	0740		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: FM Hall	DATE/TIME: 8/17/11 1005	RECEIVED BY/STORED IN: [illegible]	DATE/TIME: 8/17/11 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
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
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-030 | 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
AIR QUALITY	☐
SAMPLING LOCATION	Area AG Verification Sample #30
PROJECT DESIGNATION	Area AG Sampling (Waste Area AG) Verification Sampling - Soil
SAF NO.	F11-162
ICE CHEST NO.	GWS-017
FIELD LOGBOOK NO.	HNF-N-507-23
ACTUAL SAMPLE DEPTH	0-1'
COA	302677ES10
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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool<4C	Cool<4C	None	None
HOLDING TIME	6 Months	10 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H040 3	SOIL	8/17/11	0750	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/17/11 1005	Chandal Hbeen	8/17/11 1005

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

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Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-031 — PAGE 1 OF 1

COLLECTOR: FM Hall, CHPRC	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 AG Verification Sample #31	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	
ICE CHEST NO.: 6W3-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME
B2H041	4	SOIL	8/17/11	0804

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/17/11 1005	[illegible]	8/17/11 1005

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 – Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-032 — PAGE 1 OF 1

COLLECTOR: FM Hall, CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #32	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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, OL=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: ** The CACN for WSCF Analytical is 402580ES20.** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /1%;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2H042 5	SOIL	8/12/11	0824	✓ ✓ ✓ ✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1005	[illegible]	8/12/11 1005

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A 6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F11-162-033	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 AG Verification Sample #33	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil
SAF NO.: F11-162	AIR QUALITY: ☐	ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23
ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10	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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis CVI applies to this SAF.

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /1%;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H043	SOIL	8/17/11	0834	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CPRC	8/17/11 1005	[signature]	8/17/11 1005

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-034 — 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 AG Verification Sample #34	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	AIR QUALITY: ☐
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /1%;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H044	7	SOIL	8/17/11	0842	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/17/11 1005	[signature]	8/17/11 1005

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-619 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-035 | PAGE 1 OF 1

COLLECTOR	FM Hall CHPRC
SAMPLING LOCATION	Area AG Verification Sample #35
ICE CHEST NO.	GWS-017
SHIPPED TO	Waste Sampling & Characterization
COMPANY CONTACT	LUKE, SN
TELEPHONE NO.	372-1667
PROJECT COORDINATOR	LUKE, SN
PRICE CODE	C01
DATA TURNAROUND	12 Days / 12 Days
PROJECT DESIGNATION	Area AG Sampling (Waste Area AG) Verification Sampling - Soil
SAF NO.	F11-162
AIR QUALITY	☐
FIELD LOGBOOK NO.	HNF-N-507-23
ACTUAL SAMPLE DEPTH	0-1'
COA	302677ES10
METHOD OF SHIPMENT	GOVERNMENT VEHICLE
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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H045 8	SOIL	8/17/11	0851	✓	✓	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/17/11 1005	[signature]	8/17/11 1005

SIGN/ PRINT NANES

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Appendix 5

Data Validation Supporting Documentation

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: 100-K Project, Area AG, Zone 1			DATA PACKAGE: VSR11-057		
VALIDATOR: Carl Schloesslin		LAB: WSCF		DATE: 9-20-2011	
			SDG: WSCF112941, WSCF112976, WSCF112982		
ANALYSES PERFORMED					
SW-846/ICP	SW-846/GFAA	SW-846/Hg		EPA 200.8 X	

SAMPLES/MATRIX Soil samples

SDG WSCF112941: B2H011, B2H012, B2H013, B2H014, B2H015, B2H016, B2H017, B2H018, B2H019, B2H020, B2H021, B2H022, B2H023, B2H024, B2H025, B2H026, B2H027, B2H050, B2H051, B2H054, B2H055

SDG WSCF112976: B2H028, B2H029, B2H030, B2H031, B2H032, B2H033, B2H034, B2H035, B2H036, B2H037, B2H052, B2H056

SDG WSCF112982: B2H038, B2H039, B2H040, B2H041, B2H042, B2H043, B2H044, B2H045

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:

WSCF112941, batch 188261 MB hits: Cu 0.35 mg/kg, V 0.29 mg/kg
WSCF112941, EB B2H054 hits (mg/kg): Mn 0.47, Ba 0.23, Cu 0.52, V 0.25, Pb 0.10, Sr 0.20
WSCF112941, EB B2H055 hits (mg/kg): Mn 0.34, Ba 0.31, B 0.80, Cu 0.14, V 0.40, Pb 0.13, Sr 0.13
WSCF112976, EB B2H056 hits (mg/kg): Mn 0.27, Ba 0.21, Sr 0.12

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:

WSCF112976: Sb LCS %R = 157%

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:

WSCF112976: Mn MS/MSD RPD = 32%

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

Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF112941

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
188248	188249	4	BLANK	62917	BLANK		ICP-2008 MS All possible metal
188248	188249	5	LCS	62918	LCS		ICP-2008 MS All possible metal
188248	188249	6	SAMPLE	112941021	B2H055		ICP-2008 MS All possible metal
188260	188261	4	BLANK	62960	BLANK		ICP-2008 MS All possible metal
188260	188261	5	LCS	62961	LCS		ICP-2008 MS All possible metal
188260	188261	6	SAMPLE	112941001	B2H011		ICP-2008 MS All possible metal
188260	188261	7	MS	62962	B2H011(112941001MS)	112941001	ICP-2008 MS All possible metal
188260	188261	8	MSD	62963	B2H011(112941001MSD)	112941001	ICP-2008 MS All possible metal
188260	188261	9	SAMPLE	112941002	B2H012		ICP-2008 MS All possible metal
188260	188261	10	SAMPLE	112941003	B2H013		ICP-2008 MS All possible metal
188260	188261	11	SAMPLE	112941004	B2H014		ICP-2008 MS All possible metal
188260	188261	12	SAMPLE	112941005	B2H015		ICP-2008 MS All possible metal
188260	188261	13	SAMPLE	112941006	B2H016		ICP-2008 MS All possible metal
188260	188261	16	SAMPLE	112941007	B2H017		ICP-2008 MS All possible metal
188260	188261	17	SAMPLE	112941008	B2H018		ICP-2008 MS All possible metal
188260	188261	18	SAMPLE	112941009	B2H019		ICP-2008 MS All possible metal
188260	188261	19	SAMPLE	112941010	B2H020		ICP-2008 MS All possible metal
188260	188261	20	SAMPLE	112941011	B2H021		ICP-2008 MS All possible metal
188260	188261	21	SAMPLE	112941012	B2H022		ICP-2008 MS All possible metal
188260	188261	22	SAMPLE	112941013	B2H023		ICP-2008 MS All possible metal
188260	188261	23	SAMPLE	112941014	B2H024		ICP-2008 MS All possible metal
188260	188261	24	SAMPLE	112941015	B2H025		ICP-2008 MS All possible metal
188260	188261	25	SAMPLE	112941016	B2H026		ICP-2008 MS All possible metal

Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF112941

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
188260	188261	28	SAMPLE	112941017	B2H027		ICP-2008 MS All possible metal
188260	188261	29	SAMPLE	112941018	B2H050		ICP-2008 MS All possible metal
188260	188261	30	SAMPLE	112941019	B2H051		ICP-2008 MS All possible metal
188260	188261	31	SAMPLE	112941020	B2H054		ICP-2008 MS All possible metal
188387	188390	3	BLANK	63219	BLANK		Hexavalent chromium
188387	188390	4	LCS	63220	LCS		Hexavalent chromium
188387	188390	5	DUP	63221	B2FP12(112918013DUP)	112918013	Hexavalent chromium
188387	188390	6	MS	63222	B2FP12(112918013MS)	112918013	Hexavalent chromium
188387	188390	7	PSTSPK	63223	PSTSPK		Hexavalent chromium
188387	188390	8	IMS	63224	B2FP12(112918013IMS)	112918013	Hexavalent chromium
188387	188390	14	SAMPLE	112941001	B2H011		Hexavalent chromium
188387	188390	15	SAMPLE	112941002	B2H012		Hexavalent chromium
188387	188390	16	SAMPLE	112941003	B2H013		Hexavalent chromium
188387	188390	17	SAMPLE	112941004	B2H014		Hexavalent chromium
188387	188390	18	SAMPLE	112941005	B2H015		Hexavalent chromium
188387	188390	20	SAMPLE	112941006	B2H016		Hexavalent chromium
188387	188390	21	SAMPLE	112941007	B2H017		Hexavalent chromium
188387	188390	22	SAMPLE	112941008	B2H018		Hexavalent chromium
188387	188390	23	SAMPLE	112941009	B2H019		Hexavalent chromium
188387	188390	24	SAMPLE	112941010	B2H020		Hexavalent chromium
188387	188390	25	SAMPLE	112941011	B2H021		Hexavalent chromium
188387	188390	26	SAMPLE	112941012	B2H022		Hexavalent chromium
188387	188390	27	SAMPLE	112941013	B2H023		Hexavalent chromium

Quality Control Report

Attention Michael Neely
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Group # WSCF112941

QC Batch 188248
Associated Samples 112941021

Test ICP-2008 MS All possible metal

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			**QC Sample #62918**							
Manganese	7439-96-5		271	mg/kg	95	75 - 121				08/16/11
Nickel	7440-02-0		57.5	mg/kg	97.4	74 - 122				08/16/11
Silver	7440-22-4		32.9	mg/kg	95.8	83 - 127				08/16/11
Antimony	7440-36-0		158	mg/kg	129.7	62 - 205				08/16/11
Beryllium	7440-41-7		61.0	mg/kg	97.9	77 - 120				08/16/11
Cadmium	7440-43-9		60.9	mg/kg	98.7	76 - 129				08/16/11
Chromium	7440-47-3		67.8	mg/kg	95.2	68 - 119				08/16/11
Cobalt	7440-48-4		99.9	mg/kg	97.1	77 - 122				08/16/11
Copper	7440-50-8		76.7	mg/kg	94.5	67 - 120				08/16/11
Vanadium	7440-62-2		58.6	mg/kg	99.1	67 - 122				08/16/11
Zinc	7440-66-6		133	mg/kg	94.5	73 - 131				08/16/11
Lead	7439-92-1		89.3	mg/kg	96.7	79 - 124				08/16/11
Mercury	7439-97-6		3.68	mg/kg	97.6	69 - 124				08/16/11
Molybdenum	7439-98-7		45.3	mg/kg	106.4	80 - 125				08/16/11
Strontium	7440-24-6		69.5	mg/kg	96	78 - 119				08/16/11
Tin	7440-31-5		104	mg/kg	97.5	84 - 130				08/16/11
Uranium	7440-61-1		354	mg/kg	88.6	86 - 113				08/16/11
Arsenic	7440-38-2		89.7	mg/kg	96.9	79 - 125				08/16/11
Selenium	7782-49-2		87.6	mg/kg	97.9	82 - 133				08/16/11

Quality Control Report

Attention Michael Neely
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Group # WSCF112941

QC Batch 188260 **Test** ICP-2008 MS All possible metal

Associated Samples 112941001, 112941002, 112941003, 112941004, 112941005, 112941006, 112941007, 112941008, 112941009, 112941010, 112941011, 112941012, 112941013, 112941014, 112941015, 112941016, 112941017, 112941018, 112941019, 112941020

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			**QC Sample #62961**							
Manganese	7439-96-5		269	mg/kg	93.9	75 - 121				08/22/11
Nickel	7440-02-0		58.2	mg/kg	98.4	74 - 122				08/22/11
Silver	7440-22-4		34.2	mg/kg	99.3	83 - 127				08/22/11
Antimony	7440-36-0		110	mg/kg	90	62 - 205				08/22/11
Beryllium	7440-41-7		61.0	mg/kg	97.7	77 - 120				08/22/11
Cadmium	7440-43-9		62.6	mg/kg	101.2	76 - 129				08/22/11
Chromium	7440-47-3		67.0	mg/kg	94	68 - 119				08/22/11
Cobalt	7440-48-4		100	mg/kg	97.2	77 - 122				08/22/11
Copper	7440-50-8		77.6	mg/kg	95.6	67 - 120				08/22/11
Vanadium	7440-62-2		55.5	mg/kg	93.8	67 - 122				08/22/11
Zinc	7440-66-6		136	mg/kg	96.8	73 - 131				08/22/11
Lead	7439-92-1		91.2	mg/kg	98.7	79 - 124				08/22/11
Mercury	7439-97-6		3.79	mg/kg	100.5	69 - 124				08/22/11
Molybdenum	7439-98-7		44.0	mg/kg	103.3	80 - 125				08/22/11
Strontium	7440-24-6		64.6	mg/kg	89.2	78 - 119				08/22/11
Tin	7440-31-5		110	mg/kg	103.1	84 - 130				08/22/11
Uranium	7440-61-1		365	mg/kg	91.3	86 - 113				08/22/11
Arsenic	7440-38-2		94.0	mg/kg	101.5	79 - 125				08/22/11

Quality Control Report

Attention Michael Neely
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Group # WSCF112941

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Selenium	7782-49-2		92.1	mg/kg	102.9	82 - 133				08/22/11
MS			**QC Sample #62962**							
			Original	**112941001**						
Manganese	7439-96-5	373	98.8	mg/kg	98.8	70 - 130				08/22/11
Nickel	7440-02-0	10.4	95.6	mg/kg	95.6	70 - 130				08/22/11
Silver	7440-22-4	<0.10	97.0	mg/kg	97	70 - 130				08/22/11
Antimony	7440-36-0	<0.30	95.3	mg/kg	95.3	70 - 130				08/22/11
Beryllium	7440-41-7	0.247	98.2	mg/kg	98.2	70 - 130				08/22/11
Cadmium	7440-43-9	0.111	102	mg/kg	102.1	70 - 130				08/22/11
Chromium	7440-47-3	8.96	98.2	mg/kg	98.2	70 - 130				08/22/11
Cobalt	7440-48-4	9.84	95.3	mg/kg	95.3	70 - 130				08/22/11
Copper	7440-50-8	16.6	96.2	mg/kg	96.2	70 - 130				08/22/11
Vanadium	7440-62-2	68.5	104	mg/kg	104.4	70 - 130				08/22/11
Zinc	7440-66-6	55.9	103	mg/kg	103.5	70 - 130				08/22/11
Lead	7439-92-1	9.90	103	mg/kg	103.1	70 - 130				08/22/11
Mercury	7439-97-6	<0.051	2.15	mg/kg	107.5	70 - 130				08/22/11
Molybdenum	7439-98-7	0.494	103	mg/kg	102.9	70 - 130				08/22/11
Strontium	7440-24-6	28.7	107	mg/kg	106.6	70 - 130				08/22/11
Tin	7440-31-5	0.541	103	mg/kg	102.8	70 - 130				08/22/11
Uranium	7440-61-1	0.488	102	mg/kg	102.3	70 - 130				08/22/11
Arsenic	7440-38-2	2.67	102	mg/kg	101.9	70 - 130				08/22/11
Selenium	7782-49-2	0.587	104	mg/kg	103.9	70 - 130				08/22/11
MSD			**QC Sample #62963**							
			Original	**112941001**					**Paired**	**62962**
Manganese	7439-96-5	373	76.3	mg/kg	76.3	70 - 130	25.70	30		08/22/11

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Group # WSCF112941

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Nickel	7440-02-0	10.4	94.5	mg/kg	94.5	70 - 130	1.20	30		08/22/11
Silver	7440-22-4	<0.10	96.5	mg/kg	96.5	70 - 130	0.50	30		08/22/11
Antimony	7440-36-0	<0.30	83.3	mg/kg	83.3	70 - 130	13.40	30		08/22/11
Beryllium	7440-41-7	0.247	97.4	mg/kg	97.4	70 - 130	0.80	30		08/22/11
Cadmium	7440-43-9	0.111	102	mg/kg	101.9	70 - 130	0.20	30		08/22/11
Chromium	7440-47-3	8.96	94.1	mg/kg	94.1	70 - 130	4.30	30		08/22/11
Cobalt	7440-48-4	9.84	95.7	mg/kg	95.7	70 - 130	0.40	30		08/22/11
Copper	7440-50-8	16.6	94.8	mg/kg	94.8	70 - 130	1.50	30		08/22/11
Vanadium	7440-62-2	68.5	97.4	mg/kg	97.4	70 - 130	6.90	30		08/22/11
Zinc	7440-66-6	55.9	97.5	mg/kg	97.5	70 - 130	6.00	30		08/22/11
Lead	7439-92-1	9.90	99.2	mg/kg	99.2	70 - 130	3.90	30		08/22/11
Mercury	7439-97-6	<0.051	2.13	mg/kg	106.5	70 - 130	0.90	30		08/22/11
Molybdenum	7439-98-7	0.494	102	mg/kg	102.3	70 - 130	0.60	30		08/22/11
Strontium	7440-24-6	28.7	107	mg/kg	107.5	70 - 130	0.80	30		08/22/11
Tin	7440-31-5	0.541	101	mg/kg	100.6	70 - 130	2.20	30		08/22/11
Uranium	7440-61-1	0.488	100	mg/kg	100.1	70 - 130	2.20	30		08/22/11
Arsenic	7440-38-2	2.67	100	mg/kg	100.1	70 - 130	1.80	30		08/22/11
Selenium	7782-49-2	0.587	102	mg/kg	101.8	70 - 130	2.00	30		08/22/11

Quality Control Report

Attention Michael Neely
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Group # WSCF112941

QC Batch 188248
Associated Samples 112941021

Test ICP-2008 MS All possible metal

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #62917**						
Manganese	7439-96-5		<0.10	ug/L				U	08/16/11
Nickel	7440-02-0		<0.20	ug/L				U	08/16/11
Silver	7440-22-4		<0.050	ug/L				U	08/16/11
Antimony	7440-36-0		<0.050	ug/L				U	08/16/11
Barium	7440-39-3		<0.20	ug/L				U	08/16/11
Beryllium	7440-41-7		<0.050	ug/L				U	08/16/11
Boron	7440-42-8		<0.50	ug/L				U	08/16/11
Cadmium	7440-43-9		<0.050	ug/L				U	08/16/11
Chromium	7440-47-3		<0.10	ug/L				U	08/16/11
Cobalt	7440-48-4		<0.10	ug/L				U	08/16/11
Copper	7440-50-8		<0.10	ug/L				U	08/16/11
Vanadium	7440-62-2		<0.20	ug/L				U	08/16/11
Zinc	7440-66-6		<0.80	ug/L				U	08/16/11
Lead	7439-92-1		<0.10	ug/L				U	08/16/11
Mercury	7439-97-6		<0.030	ug/L				U	08/16/11
Molybdenum	7439-98-7		<0.10	ug/L				U	08/16/11
Strontium	7440-24-6		<0.10	ug/L				U	08/16/11
Tin	7440-31-5		<0.10	ug/L				U	08/16/11
Uranium	7440-61-1		<0.10	ug/L				U	08/16/11

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Group # WSCF112941

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Arsenic	7440-38-2		<0.40	ug/L					U	08/16/11
Selenium	7782-49-2		<0.30	ug/L					U	08/16/11
LCS			**QC Sample #62918**							
Barium	7440-39-3		158	mg/kg	93.8	78 - 118				08/16/11
Boron	7440-42-8		106	mg/kg	99.9	64 - 136				08/16/11

Quality Control Report

Attention Michael Neely
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Group # WSCF112941

QC Batch 188260 **Test** ICP-2008 MS All possible metal
Associated Samples 112941001, 112941002, 112941003, 112941004, 112941005, 112941006, 112941007, 112941008, 112941009, 112941010, 112941011, 112941012, 112941013, 112941014, 112941015, 112941016, 112941017, 112941018, 112941019, 112941020

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #62960**						
Manganese	7439-96-5		<0.10	ug/L				U	08/22/11
Nickel	7440-02-0		<0.20	ug/L				U	08/22/11
Silver	7440-22-4		<0.050	ug/L				U	08/22/11
Antimony	7440-36-0		<0.050	ug/L				U	08/22/11
Barium	7440-39-3		<0.20	ug/L				U	08/22/11
Boron	7440-42-8		<0.50	ug/L				U	08/22/11
Beryllium	7440-41-7		<0.050	ug/L				U	08/22/11
Cadmium	7440-43-9		<0.050	ug/L				U	08/22/11
Chromium	7440-47-3		<0.10	ug/L				U	08/22/11
Cobalt	7440-48-4		<0.10	ug/L				U	08/22/11
Copper	7440-50-8		0.352	ug/L				B	08/22/11
Vanadium	7440-62-2		0.285	ug/L				B	08/22/11
Zinc	7440-66-6		<0.80	ug/L				U	08/22/11
Lead	7439-92-1		<0.10	ug/L				U	08/22/11
Mercury	7439-97-6		<0.030	ug/L				U	08/22/11
Molybdenum	7439-98-7		<0.10	ug/L				U	08/22/11
Strontium	7440-24-6		<0.10	ug/L				U	08/22/11
Tin	7440-31-5		<0.10	ug/L				U	08/22/11

Quality Control Report

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Group # WSCF112941

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Uranium	7440-61-1		<0.10	ug/L					U	08/22/11
Arsenic	7440-38-2		<0.40	ug/L					U	08/22/11
Selenium	7782-49-2		<0.30	ug/L					U	08/22/11
LCS			**QC Sample #62961**							
Barium	7440-39-3		159	mg/kg	94.1	78 - 118				08/22/11
Boron	7440-42-8		111	mg/kg	104.4	64 - 136				08/22/11
MS			**QC Sample #62962**							
			Original 112941001							
Barium	7440-39-3	65.5	102	mg/kg	102.1	70 - 130				08/22/11
Boron	7440-42-8	1.25	93.3	mg/kg	93.3	70 - 130				08/22/11
MSD			**QC Sample #62963**							
			Original 112941001					**Paired**	**62962**	
Barium	7440-39-3	65.5	112	mg/kg	112.3	70 - 130	9.50	30		08/22/11
Boron	7440-42-8	1.25	92.8	mg/kg	92.8	70 - 130	0.50	30		08/22/11

Quality Control Report

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Group # WSCF112976

QC Batch 188548 **Test** ICP-2008 MS All possible metal
Associated Samples 112976001, 112976002, 112976003, 112976004, 112976005, 112976006, 112976007, 112976008, 112976009, 112976010, 112976011, 112976012

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			**QC Sample #63498**							
Manganese	7439-96-5		292	mg/kg	102.2	75 - 121				08/23/11
Nickel	7440-02-0		61.7	mg/kg	104.5	74 - 122				08/23/11
Silver	7440-22-4		33.4	mg/kg	97.2	83 - 127				08/23/11
Antimony	7440-36-0		191	mg/kg	156.8	62 - 205				08/23/11
Beryllium	7440-41-7		64.2	mg/kg	102.9	77 - 120				08/23/11
Cadmium	7440-43-9		65.7	mg/kg	106.3	76 - 129				08/23/11
Chromium	7440-47-3		73.3	mg/kg	102.7	68 - 119				08/23/11
Cobalt	7440-48-4		106	mg/kg	103.2	77 - 122				08/23/11
Copper	7440-50-8		81.2	mg/kg	100	67 - 120				08/23/11
Vanadium	7440-62-2		62.1	mg/kg	104.8	67 - 122				08/23/11
Zinc	7440-66-6		144	mg/kg	102.2	73 - 131				08/23/11
Lead	7439-92-1		95.1	mg/kg	102.9	79 - 124				08/23/11
Mercury	7439-97-6		4.00	mg/kg	106.2	69 - 124				08/23/11
Molybdenum	7439-98-7		50.0	mg/kg	117.5	80 - 125				08/23/11
Strontium	7440-24-6		69.6	mg/kg	96.1	78 - 119				08/23/11
Tin	7440-31-5		115	mg/kg	107.8	84 - 130				08/23/11
Uranium	7440-61-1		365	mg/kg	91.1	86 - 113				08/23/11
Arsenic	7440-38-2		97.1	mg/kg	104.8	79 - 125				08/23/11

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Group # WSCF112976

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
Selenium	7782-49-2		97.1	mg/kg	108.5	82 - 133					08/23/11
MS			**QC Sample #63499**								
			Original	**112976001**							
Manganese	7439-96-5	360	87.2	mg/kg	89.1	70 - 130					08/23/11
Nickel	7440-02-0	11.1	90.9	mg/kg	92.9	70 - 130					08/23/11
Silver	7440-22-4	<0.094	88.4	mg/kg	90.3	70 - 130					08/23/11
Antimony	7440-36-0	0.453	89.5	mg/kg	91.4	70 - 130					08/23/11
Beryllium	7440-41-7	0.272	93.0	mg/kg	95	70 - 130					08/23/11
Cadmium	7440-43-9	<0.094	93.6	mg/kg	95.7	70 - 130					08/23/11
Chromium	7440-47-3	11.7	88.4	mg/kg	90.3	70 - 130					08/23/11
Cobalt	7440-48-4	9.59	88.5	mg/kg	90.4	70 - 130					08/23/11
Copper	7440-50-8	17.0	86.5	mg/kg	88.4	70 - 130					08/23/11
Vanadium	7440-62-2	67.1	84.9	mg/kg	86.7	70 - 130					08/23/11
Zinc	7440-66-6	54.1	84.5	mg/kg	86.3	70 - 130					08/23/11
Lead	7439-92-1	5.92	93.7	mg/kg	95.7	70 - 130					08/23/11
Mercury	7439-97-6	<0.047	1.76	mg/kg	90	70 - 130					08/23/11
Molybdenum	7439-98-7	0.560	95.6	mg/kg	97.7	70 - 130					08/23/11
Strontium	7440-24-6	30.3	98.2	mg/kg	100.4	70 - 130					08/23/11
Tin	7440-31-5	0.579	96.0	mg/kg	98.1	70 - 130					08/23/11
Uranium	7440-61-1	0.540	95.8	mg/kg	98	70 - 130					08/23/11
Arsenic	7440-38-2	3.16	95.3	mg/kg	97.4	70 - 130					08/23/11
Selenium	7782-49-2	0.540	95.7	mg/kg	97.8	70 - 130					08/23/11
MSD			**QC Sample #63500**								
			Original	**112976001**					**Paired**	**63499**	
Manganese	7439-96-5	360	113	mg/kg	122.7	70 - 130	31.70	30	*	X	08/23/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112976

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Nickel	7440-02-0	11.1	90.0	mg/kg	98.1	70 - 130	5.40	30		08/23/11
Silver	7440-22-4	<0.094	89.0	mg/kg	96.9	70 - 130	7.10	30		08/23/11
Antimony	7440-36-0	0.453	89.7	mg/kg	97.7	70 - 130	6.70	30		08/23/11
Beryllium	7440-41-7	0.272	94.3	mg/kg	102.7	70 - 130	7.80	30		08/23/11
Cadmium	7440-43-9	<0.094	95.5	mg/kg	104	70 - 130	8.30	30		08/23/11
Chromium	7440-47-3	11.7	92.4	mg/kg	100.6	70 - 130	10.80	30		08/23/11
Cobalt	7440-48-4	9.59	91.2	mg/kg	99.4	70 - 130	9.50	30		08/23/11
Copper	7440-50-8	17.0	87.9	mg/kg	95.8	70 - 130	8.00	30		08/23/11
Vanadium	7440-62-2	67.1	97.4	mg/kg	106.1	70 - 130	20.10	30		08/23/11
Zinc	7440-66-6	54.1	91.9	mg/kg	100.1	70 - 130	14.80	30		08/23/11
Lead	7439-92-1	5.92	94.0	mg/kg	102.3	70 - 130	6.70	30		08/23/11
Mercury	7439-97-6	<0.047	1.76	mg/kg	96	70 - 130	6.50	30		08/23/11
Molybdenum	7439-98-7	0.560	96.8	mg/kg	105.4	70 - 130	7.60	30		08/23/11
Strontium	7440-24-6	30.3	106	mg/kg	115.1	70 - 130	13.60	30		08/23/11
Tin	7440-31-5	0.579	96.7	mg/kg	105.3	70 - 130	7.10	30		08/23/11
Uranium	7440-61-1	0.540	95.2	mg/kg	103.7	70 - 130	5.70	30		08/23/11
Arsenic	7440-38-2	3.16	95.8	mg/kg	104.3	70 - 130	6.80	30		08/23/11
Selenium	7782-49-2	0.540	95.3	mg/kg	103.8	70 - 130	6.00	30		08/23/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112976

QC Batch 188548 **Test** ICP-2008 MS All possible metal
Associated Samples 112976001, 112976002, 112976003, 112976004, 112976005, 112976006, 112976007, 112976008, 112976009, 112976010, 112976011, 112976012

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #63497**						
Manganese	7439-96-5		<0.10	ug/L				U	08/23/11
Nickel	7440-02-0		<0.20	ug/L				U	08/23/11
Silver	7440-22-4		<0.050	ug/L				U	08/23/11
Antimony	7440-36-0		<0.050	ug/L				U	08/23/11
Barium	7440-39-3		<0.20	ug/L				U	08/23/11
Boron	7440-42-8		<0.50	ug/L				U	08/23/11
Beryllium	7440-41-7		<0.050	ug/L				U	08/23/11
Cadmium	7440-43-9		<0.050	ug/L				U	08/23/11
Chromium	7440-47-3		<0.10	ug/L				U	08/23/11
Cobalt	7440-48-4		<0.10	ug/L				U	08/23/11
Copper	7440-50-8		<0.10	ug/L				U	08/23/11
Vanadium	7440-62-2		<0.20	ug/L				U	08/23/11
Zinc	7440-66-6		<0.80	ug/L				U	08/23/11
Lead	7439-92-1		<0.10	ug/L				U	08/23/11
Mercury	7439-97-6		<0.030	ug/L				U	08/23/11
Molybdenum	7439-98-7		<0.10	ug/L				U	08/23/11
Strontium	7440-24-6		<0.10	ug/L				U	08/23/11
Tin	7440-31-5		<0.10	ug/L				U	08/23/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112976

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Uranium	7440-61-1		<0.10	ug/L					U	08/23/11
Arsenic	7440-38-2		<0.40	ug/L					U	08/23/11
Selenium	7782-49-2		<0.30	ug/L					U	08/23/11
LCS			**QC Sample #63498**							
Barium	7440-39-3		168	mg/kg	99.6	78 - 118				08/23/11
Boron	7440-42-8		119	mg/kg	112.5	64 - 136				08/23/11
MS			**QC Sample #63499**							
			Original 112976001							
Barium	7440-39-3	67.0	93.3	mg/kg	95.4	70 - 130				08/23/11
Boron	7440-42-8	1.79	98.0	mg/kg	100.2	70 - 130				08/23/11
MSD			**QC Sample #63500**							
			Original 112976001					**Paired**	**63499**	
Barium	7440-39-3	67.0	104	mg/kg	112.8	70 - 130	16.70	30		08/23/11
Boron	7440-42-8	1.79	94.5	mg/kg	103	70 - 130	2.80	30		08/23/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112982

QC Batch 188550 **Test** ICP-2008 MS All possible metal
Associated Samples 112982001, 112982002, 112982003, 112982004, 112982005, 112982006, 112982007, 112982008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			**QC Sample #63511**							
Manganese	7439-96-5		276	mg/kg	96.6	75 - 121				08/23/11
Nickel	7440-02-0		56.4	mg/kg	95.4	74 - 122				08/23/11
Silver	7440-22-4		30.8	mg/kg	89.4	83 - 127				08/23/11
Antimony	7440-36-0		168	mg/kg	138	62 - 205				08/23/11
Beryllium	7440-41-7		58.3	mg/kg	93.5	77 - 120				08/23/11
Cadmium	7440-43-9		61.5	mg/kg	99.6	76 - 129				08/23/11
Chromium	7440-47-3		66.5	mg/kg	93.2	68 - 119				08/23/11
Cobalt	7440-48-4		97.8	mg/kg	94.9	77 - 122				08/23/11
Copper	7440-50-8		73.5	mg/kg	90.6	67 - 120				08/23/11
Vanadium	7440-62-2		56.6	mg/kg	95.5	67 - 122				08/23/11
Zinc	7440-66-6		133	mg/kg	94	73 - 131				08/23/11
Lead	7439-92-1		89.3	mg/kg	96.6	79 - 124				08/23/11
Mercury	7439-97-6		3.64	mg/kg	96.5	69 - 124				08/23/11
Molybdenum	7439-98-7		46.6	mg/kg	109.5	80 - 125				08/23/11
Strontium	7440-24-6		68.3	mg/kg	94.3	78 - 119				08/23/11
Tin	7440-31-5		107	mg/kg	99.9	84 - 130				08/23/11
Uranium	7440-61-1		364	mg/kg	91	86 - 113				08/23/11
Arsenic	7440-38-2		91.8	mg/kg	99.2	79 - 125				08/23/11
Selenium	7782-49-2		92.9	mg/kg	103.8	82 - 133				08/23/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112982

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
MS			**QC Sample #63512**								
			Original	**112982001**							
Manganese	7439-96-5	394	88.2	mg/kg	91.3	70 - 130				X	08/23/11
Nickel	7440-02-0	12.0	92.0	mg/kg	95.3	70 - 130					08/23/11
Silver	7440-22-4	<0.093	93.8	mg/kg	97.1	70 - 130					08/23/11
Antimony	7440-36-0	<0.28	96.9	mg/kg	100.4	70 - 130					08/23/11
Beryllium	7440-41-7	0.347	95.6	mg/kg	99	70 - 130					08/23/11
Cadmium	7440-43-9	<0.093	101	mg/kg	104.7	70 - 130					08/23/11
Chromium	7440-47-3	8.99	95.8	mg/kg	99.3	70 - 130					08/23/11
Cobalt	7440-48-4	11.9	93.0	mg/kg	96.3	70 - 130					08/23/11
Copper	7440-50-8	18.4	92.2	mg/kg	95.5	70 - 130					08/23/11
Vanadium	7440-62-2	77.2	101	mg/kg	104.1	70 - 130					08/23/11
Zinc	7440-66-6	55.7	92.4	mg/kg	95.7	70 - 130					08/23/11
Lead	7439-92-1	4.29	101	mg/kg	104.5	70 - 130					08/23/11
Mercury	7439-97-6	<0.046	1.94	mg/kg	100.5	70 - 130					08/23/11
Molybdenum	7439-98-7	0.548	102	mg/kg	105.3	70 - 130					08/23/11
Strontium	7440-24-6	34.6	102	mg/kg	106	70 - 130					08/23/11
Tin	7440-31-5	0.580	103	mg/kg	106.6	70 - 130					08/23/11
Uranium	7440-61-1	0.475	100	mg/kg	103.8	70 - 130					08/23/11
Arsenic	7440-38-2	2.93	101	mg/kg	104.8	70 - 130					08/23/11
Selenium	7782-49-2	0.610	103	mg/kg	107	70 - 130					08/23/11
MSD			**QC Sample #63513**								
			Original	**112982001**					**Paired**	**63512**	
Manganese	7439-96-5	394	48.0	mg/kg	50.4	70 - 130	57.70	30	*	X	08/23/11
Nickel	7440-02-0	12.0	86.6	mg/kg	90.9	70 - 130	4.70	30			08/23/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112982

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Silver	7440-22-4	<0.093	89.5	mg/kg	93.9	70 - 130	3.40	30		08/23/11
Antimony	7440-36-0	<0.28	92.2	mg/kg	96.8	70 - 130	3.70	30		08/23/11
Beryllium	7440-41-7	0.347	90.6	mg/kg	95.1	70 - 130	4.00	30		08/23/11
Cadmium	7440-43-9	<0.093	96.8	mg/kg	101.6	70 - 130	3.00	30		08/23/11
Chromium	7440-47-3	8.99	88.6	mg/kg	93	70 - 130	6.60	30		08/23/11
Cobalt	7440-48-4	11.9	87.2	mg/kg	91.5	70 - 130	5.10	30		08/23/11
Copper	7440-50-8	18.4	87.4	mg/kg	91.7	70 - 130	4.10	30		08/23/11
Vanadium	7440-62-2	77.2	88.0	mg/kg	92.4	70 - 130	11.90	30		08/23/11
Zinc	7440-66-6	55.7	85.7	mg/kg	90	70 - 130	6.10	30		08/23/11
Lead	7439-92-1	4.29	96.2	mg/kg	100.9	70 - 130	3.50	30		08/23/11
Mercury	7439-97-6	<0.046	1.82	mg/kg	95.5	70 - 130	5.10	30		08/23/11
Molybdenum	7439-98-7	0.548	96.5	mg/kg	101.2	70 - 130	4.00	30		08/23/11
Strontium	7440-24-6	34.6	100	mg/kg	105.2	70 - 130	0.80	30		08/23/11
Tin	7440-31-5	0.580	97.3	mg/kg	102.1	70 - 130	4.30	30		08/23/11
Uranium	7440-61-1	0.475	94.4	mg/kg	99	70 - 130	4.70	30		08/23/11
Arsenic	7440-38-2	2.93	95.9	mg/kg	100.7	70 - 130	4.00	30		08/23/11
Selenium	7782-49-2	0.610	97.7	mg/kg	102.6	70 - 130	4.20	30		08/23/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112982

QC Batch 188550 **Test** ICP-2008 MS All possible metal
Associated Samples 112982001, 112982002, 112982003, 112982004, 112982005, 112982006, 112982007, 112982008

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #63510**						
Manganese	7439-96-5		<0.10	ug/L				U	08/23/11
Nickel	7440-02-0		<0.20	ug/L				U	08/23/11
Silver	7440-22-4		<0.050	ug/L				U	08/23/11
Antimony	7440-36-0		<0.050	ug/L				U	08/23/11
Barium	7440-39-3		<0.20	ug/L				U	08/23/11
Boron	7440-42-8		<0.50	ug/L				U	08/23/11
Beryllium	7440-41-7		<0.050	ug/L				U	08/23/11
Cadmium	7440-43-9		<0.050	ug/L				U	08/23/11
Chromium	7440-47-3		<0.10	ug/L				U	08/23/11
Cobalt	7440-48-4		<0.10	ug/L				U	08/23/11
Copper	7440-50-8		<0.10	ug/L				U	08/23/11
Vanadium	7440-62-2		<0.20	ug/L				U	08/23/11
Zinc	7440-66-6		<0.80	ug/L				U	08/23/11
Lead	7439-92-1		<0.10	ug/L				U	08/23/11
Mercury	7439-97-6		<0.030	ug/L				U	08/23/11
Molybdenum	7439-98-7		<0.10	ug/L				U	08/23/11
Strontium	7440-24-6		<0.10	ug/L				U	08/23/11
Tin	7440-31-5		<0.10	ug/L				U	08/23/11
Uranium	7440-61-1		<0.10	ug/L				U	08/23/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112982

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Arsenic	7440-38-2		<0.40	ug/L					U	08/23/11
Selenium	7782-49-2		<0.30	ug/L					U	08/23/11
LCS			**QC Sample #63511**							
Barium	7440-39-3		158	mg/kg	93.4	78 - 118				08/23/11
Boron	7440-42-8		111	mg/kg	104.3	64 - 136				08/23/11
MS			**QC Sample #63512**							
			Original 112982001							
Barium	7440-39-3	72.1	102	mg/kg	105.2	70 - 130				08/23/11
Boron	7440-42-8	1.18	100	mg/kg	103.6	70 - 130				08/23/11
MSD			**QC Sample #63513**							
			Original 112982001					**Paired**	**63512**	
Barium	7440-39-3	72.1	92.3	mg/kg	96.9	70 - 130	8.20	30		08/23/11
Boron	7440-42-8	1.18	96.0	mg/kg	100.8	70 - 130	2.70	30		08/23/11

Date: 20 September 2011
To: CH2M Hill (technical representative)
From: Analytical Quality Associates, Inc.
Project: 100-K Project, Area AG, Zone 1
Subject: General Chemistry - Sample Data Groups (SDGs) WSCF112941, WSCF112976 and WSCF112982

INTRODUCTION

This memorandum presents the results of data validation for SDGs WSCF112941, WSCF112976 and WSCF112982 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
B2H011	8/12/2011	Soil	C	7196A
B2H012	8/12/2011	Soil	C	7196A
B2H013	8/12/2011	Soil	C	7196A
B2H014	8/12/2011	Soil	C	7196A
B2H015	8/12/2011	Soil	C	7196A
B2H016	8/12/2011	Soil	C	7196A
B2H017	8/12/2011	Soil	C	7196A
B2H018	8/12/2011	Soil	C	7196A
B2H019	8/12/2011	Soil	C	7196A
B2H020	8/12/2011	Soil	C	7196A
B2H021	8/12/2011	Soil	C	7196A
B2H022	8/12/2011	Soil	C	7196A
B2H023	8/12/2011	Soil	C	7196A
B2H024	8/12/2011	Soil	C	7196A
B2H025	8/12/2011	Soil	C	7196A
B2H026	8/12/2011	Soil	C	7196A
B2H027	8/12/2011	Soil	C	7196A
B2H050	8/12/2011	Soil	C	7196A
B2H051	8/12/2011	Soil	C	7196A
B2H054	8/12/2011	Soil	C	7196A
B2H055	8/12/2011	Soil	C	7196A
B2H028	8/16/2011	Soil	C	7196A
B2H029	8/16/2011	Soil	C	7196A
B2H030	8/16/2011	Soil	C	7196A
B2H031	8/16/2011	Soil	C	7196A
B2H032	8/16/2011	Soil	C	7196A
B2H033	8/16/2011	Soil	C	7196A
B2H034	8/16/2011	Soil	C	7196A
B2H035	8/16/2011	Soil	C	7196A
B2H036	8/16/2011	Soil	C	7196A
B2H037	8/16/2011	Soil	C	7196A

Sample ID	Sample Date	Media	Validation Level	Analytical Method
B2H052	8/16/2011	Soil	C	7196A
B2H056	8/16/2011	Soil	C	7196A
B2H038	8/16/2011	Soil	C	7196A
B2H039	8/17/2011	Soil	C	7196A
B2H040	8/17/2011	Soil	C	7196A
B2H041	8/17/2011	Soil	C	7196A
B2H042	8/17/2011	Soil	C	7196A
B2H043	8/17/2011	Soil	C	7196A
B2H044	8/17/2011	Soil	C	7196A
B2H045	8/17/2011	Soil	C	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 requirement for hexavalent chromium is analysis within 30 days of sample collection. Sample preservation requires chilling to 4 degrees Celsius.

The samples were analyzed within the prescribed holding time 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

The 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 (MS) Samples

All MS recoveries were acceptable.

Laboratory Control Samples (LCSs)

All LCS recoveries were acceptable.

- **Precision**

Precision is evaluated by reviewing 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.

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 CRDL.

- **Completeness**

SDGs WSCF112941, WSCF112976 and WSCF112982 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

None found.

REFERENCES

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

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

Appendix 1

Glossary of Data Reporting Qualifiers

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

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

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

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

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

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

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

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

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

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

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

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

Appendix 2

Summary of Data Qualification

General Chemistry Data Qualification Summary			
SDGs: WSCF112941, WSCF112976 & WSCF112982	Reviewer: AQA	Project: 100-K Project, Area AG, Zone 1	Page 1 of 1
Analyte(s)	**DV Flag**	**Samples Affected**	**Reason**
Cr(VI)	None	N/A	N/A

Comments: None

Appendix 3

Annotated Laboratory Reports

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112941

Sample # 112941001
SAF# F11-162
Sample ID B2H011

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.098		ug/g	1	0.098	0.49	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		373		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		10.4		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		65.5		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.247		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	B	1.25		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	B	0.111		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		8.96		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		9.84		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		16.6		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		68.5		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		55.9		mg/kg	1	0.81	5.1	08/22/11
Lead	7439-92-1	LA-505-412		9.90		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941002
SAF# F11-162
Sample ID B2H012

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.098		ug/g	1	0.098	0.49	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		380		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		9.65		mg/kg	1	0.21	2.1	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.31		mg/kg	1	0.31	3.1	08/22/11
Barium	7440-39-3	LA-505-412		60.5		mg/kg	1	0.21	2.1	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.371		mg/kg	1	0.10	0.52	08/22/11
Boron	7440-42-8	LA-505-412	B	0.973		mg/kg	1	0.52	5.2	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		7.02		mg/kg	1	0.52	5.2	08/22/11
Cobalt	7440-48-4	LA-505-412		10.7		mg/kg	1	0.10	0.52	08/22/11
Copper	7440-50-8	LA-505-412		17.8		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		75.2		mg/kg	1	0.21	2.1	08/22/11
Zinc	7440-66-6	LA-505-412		52.9		mg/kg	1	0.83	5.2	08/22/11
Lead	7439-92-1	LA-505-412		5.56		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941003
SAF# F11-162
Sample ID B2H013

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		391		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		12.5		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		69.5		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.373		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	B	1.46		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		10.5		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		10.2		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		19.4		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		64.4		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		55.5		mg/kg	1	0.81	5.1	08/22/11
Lead	7439-92-1	LA-505-412		6.64		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941004
SAF# F11-162
Sample ID B2H014

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.093		ug/g	1	0.093	0.46	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		391		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		11.4		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		78.6		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.410		mg/kg	1	0.10	0.50	08/22/11
Boron	7440-42-8	LA-505-412	B	1.78		mg/kg	1	0.50	5.0	08/22/11
Cadmium	7440-43-9	LA-505-412	B	0.105		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		9.71		mg/kg	1	0.50	5.0	08/22/11
Cobalt	7440-48-4	LA-505-412		10.1		mg/kg	1	0.10	0.50	08/22/11
Copper	7440-50-8	LA-505-412		17.8		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		69.5		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		53.2		mg/kg	1	0.81	5.0	08/22/11
Lead	7439-92-1	LA-505-412		5.83		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941005
SAF# F11-162
Sample ID B2H015

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		386		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		11.4		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		65.4		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.383		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	B	0.992		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		9.05		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		10.8		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		19.8		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		79.3		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		55.0		mg/kg	1	0.81	5.1	08/22/11
Lead	7439-92-1	LA-505-412		5.07		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941006
SAF# F11-162
Sample ID B2H016

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.51	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		411		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		12.0		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		77.7		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.494		mg/kg	1	0.10	0.50	08/22/11
Boron	7440-42-8	LA-505-412	B	1.04		mg/kg	1	0.50	5.0	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		8.70		mg/kg	1	0.50	5.0	08/22/11
Cobalt	7440-48-4	LA-505-412		12.0		mg/kg	1	0.10	0.50	08/22/11
Copper	7440-50-8	LA-505-412		21.2		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		80.3		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		60.7		mg/kg	1	0.81	5.0	08/22/11
Lead	7439-92-1	LA-505-412		5.35		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941007
SAF# F11-162
Sample ID B2H017

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.098		ug/g	1	0.098	0.49	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		412		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		13.1		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		70.4		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412		0.597		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	B	1.90		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		12.2		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		11.1		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		21.2		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		66.6		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		56.0		mg/kg	1	0.81	5.1	08/22/11
Lead	7439-92-1	LA-505-412		6.17		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941008
SAF# F11-162
Sample ID B2H018

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	08/17/11
~~**ICPMS Prep**~~										~~**08/16/11**~~
ICP-MS										
Manganese	7439-96-5	LA-505-412		391		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		11.6		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		71.4		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.340		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	B	1.43		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		7.25		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		11.5		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		20.9		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		75.9		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		56.4		mg/kg	1	0.81	5.1	08/22/11
~~Lead~~	~~7439-92-1~~	~~LA-505-412~~		~~5.16~~		~~mg/kg~~	~~1~~	~~0.10~~	~~1.0~~	~~08/22/11~~

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 # WSCF112941

Sample # 112941009
SAF# F11-162
Sample ID B2H019

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.51	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		414		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		10.4		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		88.9		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.390		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	B	0.812		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		7.85		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		10.2		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		16.4		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		65.6		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		49.3		mg/kg	1	0.81	5.1	08/22/11
Lead	7439-92-1	LA-505-412		4.39		mg/kg	1	0.10	1.0	08/22/11

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C - Analyte was found in the Associated Blank. (Inorganic)
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E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
9-20-2011

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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 # WSCF112941

Sample # 112941010
SAF# F11-162
Sample ID B2H020

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	B	0.0985		ug/g	1	0.097	0.49	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		355		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		10.8		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		71.5		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.335		mg/kg	1	0.10	0.50	08/22/11
Boron	7440-42-8	LA-505-412	B	1.04		mg/kg	1	0.50	5.0	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		8.29		mg/kg	1	0.50	5.0	08/22/11
Cobalt	7440-48-4	LA-505-412		10.7		mg/kg	1	0.10	0.50	08/22/11
Copper	7440-50-8	LA-505-412		18.1		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		76.6		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		57.3		mg/kg	1	0.81	5.0	08/22/11
Lead	7439-92-1	LA-505-412		4.40		mg/kg	1	0.10	1.0	08/22/11

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

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C - Analyte was found in the Associated Blank. (Inorganic)
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E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
9-20-2011

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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 # WSCF112941

Sample # 112941011
SAF# F11-162
Sample ID B2H021

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.099		ug/g	1	0.099	0.49	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		386		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		11.9		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		72.8		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.384		mg/kg	1	0.10	0.50	08/22/11
Boron	7440-42-8	LA-505-412	B	0.805		mg/kg	1	0.50	5.0	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		6.49		mg/kg	1	0.50	5.0	08/22/11
Cobalt	7440-48-4	LA-505-412		12.2		mg/kg	1	0.10	0.50	08/22/11
Copper	7440-50-8	LA-505-412		18.0		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		92.2		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		60.1		mg/kg	1	0.81	5.0	08/22/11
Lead	7439-92-1	LA-505-412		3.92		mg/kg	1	0.10	1.0	08/22/11

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N - MS and/or MSD recovery outside control limits.

LS
9-20-2011

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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 # WSCF112941

Sample # 112941012
SAF# F11-162
Sample ID B2H022

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.51	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		416		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		10.2		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		71.9		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.455		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	B	1.02		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		6.85		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		12.2		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		18.2		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		93.6		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		61.0		mg/kg	1	0.81	5.1	08/22/11
Lead	7439-92-1	LA-505-412		4.00		mg/kg	1	0.10	1.0	08/22/11

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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

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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 # WSCF112941

Sample # 112941013
SAF# F11-162
Sample ID B2H023

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.51	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		362		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		9.56		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		67.5		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.312		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	B	1.52		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		6.34		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		11.0		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		18.1		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		80.3		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		57.3		mg/kg	1	0.81	5.1	08/22/11
Lead	7439-92-1	LA-505-412		4.25		mg/kg	1	0.10	1.0	08/22/11

MDL = Minimum Detection
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TP Err = Total Propagated
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E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
9-20-2011

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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 # WSCF112941

Sample # 112941014
SAF# F11-162
Sample ID B2H024

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.091		ug/g	1	0.091	0.46	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		335		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		8.08		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		67.1		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.180		mg/kg	1	0.10	0.50	08/22/11
Boron	7440-42-8	LA-505-412	B	1.01		mg/kg	1	0.50	5.0	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		5.04		mg/kg	1	0.50	5.0	08/22/11
Cobalt	7440-48-4	LA-505-412		10.6		mg/kg	1	0.10	0.50	08/22/11
Copper	7440-50-8	LA-505-412		16.7		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		77.0		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		54.1		mg/kg	1	0.81	5.0	08/22/11
Lead	7439-92-1	LA-505-412		3.46		mg/kg	1	0.10	1.0	08/22/11

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N - MS and/or MSD recovery outside control limits.

LS
9-20-2011

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PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112941

Sample # 112941015
SAF# F11-162
Sample ID B2H025

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/17/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.097		ug/g	1	0.097	0.49	08/17/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		415		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		9.49		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		82.3		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.428		mg/kg	1	0.10	0.50	08/22/11
Boron	7440-42-8	LA-505-412	B	0.823		mg/kg	1	0.50	5.0	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		12.7		mg/kg	1	0.50	5.0	08/22/11
Cobalt	7440-48-4	LA-505-412		12.3		mg/kg	1	0.10	0.50	08/22/11
Copper	7440-50-8	LA-505-412		20.7		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		85.4		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		60.8		mg/kg	1	0.81	5.0	08/22/11
Lead	7439-92-1	LA-505-412		4.71		mg/kg	1	0.10	1.0	08/22/11

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N - MS and/or MSD recovery outside control limits.

LS
9-20-2011

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PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF112941

Sample # 112941016
SAF# F11-162
Sample ID B2H026

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	B	0.103		ug/g	1	0.098	0.49	08/18/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		343		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		8.28		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		63.1		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.300		mg/kg	1	0.10	0.50	08/22/11
Boron	7440-42-8	LA-505-412	B	0.633		mg/kg	1	0.50	5.0	08/22/11
Cadmium	7440-43-9	LA-505-412	B	0.149		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		7.62		mg/kg	1	0.50	5.0	08/22/11
Cobalt	7440-48-4	LA-505-412		10.6		mg/kg	1	0.10	0.50	08/22/11
Copper	7440-50-8	LA-505-412		17.8		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		74.2		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		61.9		mg/kg	1	0.81	5.0	08/22/11
Lead	7439-92-1	LA-505-412		4.36		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941017
SAF# F11-162
Sample ID B2H027

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.097		ug/g	1	0.097	0.48	08/18/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		375		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		8.98		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		68.9		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.299		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	B	1.09		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412	B	5.07		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		12.0		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		19.3		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		81.2		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		57.5		mg/kg	1	0.81	5.1	08/22/11
Lead	7439-92-1	LA-505-412		3.27		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941018
SAF# F11-162
Sample ID B2H050

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.099		ug/g	1	0.099	0.49	08/18/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		372		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		12.6		mg/kg	1	0.21	2.1	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.31		mg/kg	1	0.31	3.1	08/22/11
Barium	7440-39-3	LA-505-412		66.6		mg/kg	1	0.21	2.1	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.456		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	B	0.711		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412		11.8		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		11.5		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		20.3		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		80.0		mg/kg	1	0.21	2.1	08/22/11
Zinc	7440-66-6	LA-505-412		55.3		mg/kg	1	0.82	5.1	08/22/11
Lead	7439-92-1	LA-505-412		4.49		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941019
SAF# F11-162
Sample ID B2H051

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.091		ug/g	1	0.091	0.46	08/18/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		377		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412		8.48		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412		67.0		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	B	0.297		mg/kg	1	0.10	0.51	08/22/11
Boron	7440-42-8	LA-505-412	U	<0.51		mg/kg	1	0.51	5.1	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412	B	4.74		mg/kg	1	0.51	5.1	08/22/11
Cobalt	7440-48-4	LA-505-412		11.7		mg/kg	1	0.10	0.51	08/22/11
Copper	7440-50-8	LA-505-412		19.2		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412		82.9		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412		56.4		mg/kg	1	0.81	5.1	08/22/11
Lead	7439-92-1	LA-505-412		3.52		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941020
SAF# F11-162
Sample ID B2H054

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.093		ug/g	1	0.093	0.46	08/18/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	B	0.469		mg/kg	1	0.10	1.0	08/22/11
Nickel	7440-02-0	LA-505-412	U	<0.20		mg/kg	1	0.20	2.0	08/22/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/22/11
Barium	7440-39-3	LA-505-412	B	0.226		mg/kg	1	0.20	2.0	08/22/11
Beryllium	7440-41-7	LA-505-412	U	<0.10		mg/kg	1	0.10	0.50	08/22/11
Boron	7440-42-8	LA-505-412	U	<0.50		mg/kg	1	0.50	5.0	08/22/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/22/11
Chromium	7440-47-3	LA-505-412	U	<0.50		mg/kg	1	0.50	5.0	08/22/11
Cobalt	7440-48-4	LA-505-412	U	<0.10		mg/kg	1	0.10	0.50	08/22/11
Copper	7440-50-8	LA-505-412	BC	0.522		mg/kg	1	0.10	1.0	08/22/11
Vanadium	7440-62-2	LA-505-412	BC	0.246		mg/kg	1	0.20	2.0	08/22/11
Zinc	7440-66-6	LA-505-412	U	<0.80		mg/kg	1	0.80	5.0	08/22/11
Lead	7439-92-1	LA-505-412	B	0.104		mg/kg	1	0.10	1.0	08/22/11

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 # WSCF112941

Sample # 112941021
SAF# F11-162
Sample ID B2H055

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.094		ug/g	1	0.094	0.47	08/18/11
ICPMS Prep										**08/16/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	B	0.336		mg/kg	1	0.099	0.99	08/16/11
Nickel	7440-02-0	LA-505-412	U	<0.20		mg/kg	1	0.20	2.0	08/16/11
Silver	7440-22-4	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	08/16/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/16/11
Barium	7440-39-3	LA-505-412	B	0.311		mg/kg	1	0.20	2.0	08/16/11
Beryllium	7440-41-7	LA-505-412	U	<0.099		mg/kg	1	0.099	0.50	08/16/11
Boron	7440-42-8	LA-505-412	B	0.795		mg/kg	1	0.50	5.0	08/16/11
Cadmium	7440-43-9	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	08/16/11
Chromium	7440-47-3	LA-505-412	U	<0.50		mg/kg	1	0.50	5.0	08/16/11
Cobalt	7440-48-4	LA-505-412	U	<0.099		mg/kg	1	0.099	0.50	08/16/11
Copper	7440-50-8	LA-505-412	B	0.135		mg/kg	1	0.099	0.99	08/16/11
Vanadium	7440-62-2	LA-505-412	B	0.404		mg/kg	1	0.20	2.0	08/16/11
Zinc	7440-66-6	LA-505-412	U	<0.79		mg/kg	1	0.79	5.0	08/16/11
Lead	7439-92-1	LA-505-412	B	0.128		mg/kg	1	0.099	0.99	08/16/11

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 # WSCF112976

Sample # 112976001
SAF# F11-162
Sample ID B2H028

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.51	08/18/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		360		mg/kg	1	0.094	0.94	08/23/11
Nickel	7440-02-0	LA-505-412		11.1		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	08/23/11
Antimony	7440-36-0	LA-505-412	B	0.453		mg/kg	1	0.28	2.8	08/23/11
Barium	7440-39-3	LA-505-412		67.0		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.272		mg/kg	1	0.094	0.47	08/23/11
Boron	7440-42-8	LA-505-412	B	1.79		mg/kg	1	0.47	4.7	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	08/23/11
Chromium	7440-47-3	LA-505-412		11.7		mg/kg	1	0.47	4.7	08/23/11
Cobalt	7440-48-4	LA-505-412		9.59		mg/kg	1	0.094	0.47	08/23/11
Copper	7440-50-8	LA-505-412		17.0		mg/kg	1	0.094	0.94	08/23/11
Vanadium	7440-62-2	LA-505-412		67.1		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		54.1		mg/kg	1	0.75	4.7	08/23/11
Lead	7439-92-1	LA-505-412		5.92		mg/kg	1	0.094	0.94	08/23/11

MDL = Minimum Detection
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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

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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 # WSCF112976

Sample # 112976002
SAF# F11-162
Sample ID B2H029

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	B	0.161		ug/g	1	0.10	0.51	08/18/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		438		mg/kg	1	0.096	0.96	08/23/11
Nickel	7440-02-0	LA-505-412		12.1		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	08/23/11
Barium	7440-39-3	LA-505-412		79.8		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.176		mg/kg	1	0.096	0.48	08/23/11
Boron	7440-42-8	LA-505-412	B	1.51		mg/kg	1	0.48	4.8	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	08/23/11
Chromium	7440-47-3	LA-505-412		13.9		mg/kg	1	0.48	4.8	08/23/11
Cobalt	7440-48-4	LA-505-412		12.7		mg/kg	1	0.096	0.48	08/23/11
Copper	7440-50-8	LA-505-412		20.6		mg/kg	1	0.096	0.96	08/23/11
Vanadium	7440-62-2	LA-505-412		83.3		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		65.0		mg/kg	1	0.77	4.8	08/23/11
Lead	7439-92-1	LA-505-412		5.59		mg/kg	1	0.096	0.96	08/23/11

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

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 # WSCF112976

Sample # 112976003
SAF# F11-162
Sample ID B2H030

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	B	0.173		ug/g	1	0.10	0.50	08/18/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		347		mg/kg	1	0.094	0.94	08/23/11
Nickel	7440-02-0	LA-505-412		11.1		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	08/23/11
Antimony	7440-36-0	LA-505-412	B	0.976		mg/kg	1	0.28	2.8	08/23/11
Barium	7440-39-3	LA-505-412		66.2		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.333		mg/kg	1	0.094	0.47	08/23/11
Boron	7440-42-8	LA-505-412	B	1.98		mg/kg	1	0.47	4.7	08/23/11
Cadmium	7440-43-9	LA-505-412	B	0.105		mg/kg	1	0.094	0.94	08/23/11
Chromium	7440-47-3	LA-505-412		13.8		mg/kg	1	0.47	4.7	08/23/11
Cobalt	7440-48-4	LA-505-412		10.2		mg/kg	1	0.094	0.47	08/23/11
Copper	7440-50-8	LA-505-412		19.5		mg/kg	1	0.094	0.94	08/23/11
Vanadium	7440-62-2	LA-505-412		71.0		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		55.9		mg/kg	1	0.76	4.7	08/23/11
Lead	7439-92-1	LA-505-412		7.27		mg/kg	1	0.094	0.94	08/23/11

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 # WSCF112976

Sample # 112976004
SAF# F11-162
Sample ID B2H031

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	08/18/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		331		mg/kg	1	0.097	0.97	08/23/11
Nickel	7440-02-0	LA-505-412		8.91		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	08/23/11
Barium	7440-39-3	LA-505-412		55.0		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.279		mg/kg	1	0.097	0.48	08/23/11
Boron	7440-42-8	LA-505-412	B	1.17		mg/kg	1	0.48	4.8	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	08/23/11
Chromium	7440-47-3	LA-505-412		6.36		mg/kg	1	0.48	4.8	08/23/11
Cobalt	7440-48-4	LA-505-412		9.98		mg/kg	1	0.097	0.48	08/23/11
Copper	7440-50-8	LA-505-412		15.2		mg/kg	1	0.097	0.97	08/23/11
Vanadium	7440-62-2	LA-505-412		68.9		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		50.0		mg/kg	1	0.78	4.8	08/23/11
Lead	7439-92-1	LA-505-412		4.08		mg/kg	1	0.097	0.97	08/23/11

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 # WSCF112976

Sample # 112976005
SAF# F11-162
Sample ID B2H032

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	08/18/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		394		mg/kg	1	0.098	0.98	08/23/11
Nickel	7440-02-0	LA-505-412		12.7		mg/kg	1	0.20	2.0	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	08/23/11
Barium	7440-39-3	LA-505-412		70.6		mg/kg	1	0.20	2.0	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.393		mg/kg	1	0.098	0.49	08/23/11
Boron	7440-42-8	LA-505-412	B	1.52		mg/kg	1	0.49	4.9	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	08/23/11
Chromium	7440-47-3	LA-505-412		11.1		mg/kg	1	0.49	4.9	08/23/11
Cobalt	7440-48-4	LA-505-412		10.7		mg/kg	1	0.098	0.49	08/23/11
Copper	7440-50-8	LA-505-412		18.6		mg/kg	1	0.098	0.98	08/23/11
Vanadium	7440-62-2	LA-505-412		67.3		mg/kg	1	0.20	2.0	08/23/11
Zinc	7440-66-6	LA-505-412		54.9		mg/kg	1	0.78	4.9	08/23/11
Lead	7439-92-1	LA-505-412		8.10		mg/kg	1	0.098	0.98	08/23/11

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 # WSCF112976

Sample # 112976006
SAF# F11-162
Sample ID B2H033

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	B	0.174		ug/g	1	0.10	0.51	08/18/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		390		mg/kg	1	0.099	0.99	08/23/11
Nickel	7440-02-0	LA-505-412		12.9		mg/kg	1	0.20	2.0	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/23/11
Barium	7440-39-3	LA-505-412		69.6		mg/kg	1	0.20	2.0	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.292		mg/kg	1	0.099	0.49	08/23/11
Boron	7440-42-8	LA-505-412	B	1.20		mg/kg	1	0.49	4.9	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	08/23/11
Chromium	7440-47-3	LA-505-412		30.9		mg/kg	1	0.49	4.9	08/23/11
Cobalt	7440-48-4	LA-505-412		11.0		mg/kg	1	0.099	0.49	08/23/11
Copper	7440-50-8	LA-505-412		17.8		mg/kg	1	0.099	0.99	08/23/11
Vanadium	7440-62-2	LA-505-412		70.7		mg/kg	1	0.20	2.0	08/23/11
Zinc	7440-66-6	LA-505-412		69.7		mg/kg	1	0.79	4.9	08/23/11
Lead	7439-92-1	LA-505-412		6.43		mg/kg	1	0.099	0.99	08/23/11

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 # WSCF112976

Sample # 112976007
SAF# F11-162
Sample ID B2H034

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	08/18/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		265		mg/kg	1	0.094	0.94	08/23/11
Nickel	7440-02-0	LA-505-412		11.2		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	08/23/11
Barium	7440-39-3	LA-505-412		51.2		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.116		mg/kg	1	0.094	0.47	08/23/11
Boron	7440-42-8	LA-505-412	B	0.883		mg/kg	1	0.47	4.7	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.094		mg/kg	1	0.094	0.94	08/23/11
Chromium	7440-47-3	LA-505-412		9.76		mg/kg	1	0.47	4.7	08/23/11
Cobalt	7440-48-4	LA-505-412		7.20		mg/kg	1	0.094	0.47	08/23/11
Copper	7440-50-8	LA-505-412		12.9		mg/kg	1	0.094	0.94	08/23/11
Vanadium	7440-62-2	LA-505-412		46.7		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		38.0		mg/kg	1	0.75	4.7	08/23/11
Lead	7439-92-1	LA-505-412		3.52		mg/kg	1	0.094	0.94	08/23/11

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 # WSCF112976

Sample # 112976008
SAF# F11-162
Sample ID B2H035

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	08/18/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		361		mg/kg	1	0.097	0.97	08/23/11
Nickel	7440-02-0	LA-505-412		8.21		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	08/23/11
Barium	7440-39-3	LA-505-412		57.2		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.213		mg/kg	1	0.097	0.49	08/23/11
Boron	7440-42-8	LA-505-412	B	0.584		mg/kg	1	0.49	4.9	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.097		mg/kg	1	0.097	0.97	08/23/11
Chromium	7440-47-3	LA-505-412	B	4.44		mg/kg	1	0.49	4.9	08/23/11
Cobalt	7440-48-4	LA-505-412		10.4		mg/kg	1	0.097	0.49	08/23/11
Copper	7440-50-8	LA-505-412		16.6		mg/kg	1	0.097	0.97	08/23/11
Vanadium	7440-62-2	LA-505-412		73.0		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		50.3		mg/kg	1	0.78	4.9	08/23/11
Lead	7439-92-1	LA-505-412		2.56		mg/kg	1	0.097	0.97	08/23/11

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 # WSCF112976

Sample # 112976009
SAF# F11-162
Sample ID B2H036

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	08/18/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		362		mg/kg	1	0.098	0.98	08/23/11
Nickel	7440-02-0	LA-505-412		9.51		mg/kg	1	0.20	2.0	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	08/23/11
Barium	7440-39-3	LA-505-412		60.4		mg/kg	1	0.20	2.0	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.188		mg/kg	1	0.098	0.49	08/23/11
Boron	7440-42-8	LA-505-412	B	0.753		mg/kg	1	0.49	4.9	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	08/23/11
Chromium	7440-47-3	LA-505-412		7.65		mg/kg	1	0.49	4.9	08/23/11
Cobalt	7440-48-4	LA-505-412		11.3		mg/kg	1	0.098	0.49	08/23/11
Copper	7440-50-8	LA-505-412		16.7		mg/kg	1	0.098	0.98	08/23/11
Vanadium	7440-62-2	LA-505-412		85.5		mg/kg	1	0.20	2.0	08/23/11
Zinc	7440-66-6	LA-505-412		56.0		mg/kg	1	0.79	4.9	08/23/11
Lead	7439-92-1	LA-505-412		3.23		mg/kg	1	0.098	0.98	08/23/11

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

LS
9-20-2011

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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 # WSCF112976

Sample # 112976010
SAF# F11-162
Sample ID B2H037

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.52	08/18/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		444		mg/kg	1	0.10	1.0	08/23/11
Nickel	7440-02-0	LA-505-412		12.8		mg/kg	1	0.20	2.0	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/23/11
Barium	7440-39-3	LA-505-412		79.3		mg/kg	1	0.20	2.0	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.287		mg/kg	1	0.10	0.51	08/23/11
Boron	7440-42-8	LA-505-412	B	1.39		mg/kg	1	0.51	5.1	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/23/11
Chromium	7440-47-3	LA-505-412		11.1		mg/kg	1	0.51	5.1	08/23/11
Cobalt	7440-48-4	LA-505-412		10.1		mg/kg	1	0.10	0.51	08/23/11
Copper	7440-50-8	LA-505-412		17.4		mg/kg	1	0.10	1.0	08/23/11
Vanadium	7440-62-2	LA-505-412		66.6		mg/kg	1	0.20	2.0	08/23/11
Zinc	7440-66-6	LA-505-412		53.9		mg/kg	1	0.81	5.1	08/23/11
Lead	7439-92-1	LA-505-412		6.95		mg/kg	1	0.10	1.0	08/23/11

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

LS
9-20-2011

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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 # WSCF112976

Sample # 112976011
SAF# F11-162
Sample ID B2H052

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	08/18/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		297		mg/kg	1	0.095	0.95	08/23/11
Nickel	7440-02-0	LA-505-412		10.4		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.095		mg/kg	1	0.095	0.95	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	08/23/11
Barium	7440-39-3	LA-505-412		52.2		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.131		mg/kg	1	0.095	0.47	08/23/11
Boron	7440-42-8	LA-505-412	B	0.822		mg/kg	1	0.47	4.7	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.095		mg/kg	1	0.095	0.95	08/23/11
Chromium	7440-47-3	LA-505-412		8.84		mg/kg	1	0.47	4.7	08/23/11
Cobalt	7440-48-4	LA-505-412		7.32		mg/kg	1	0.095	0.47	08/23/11
Copper	7440-50-8	LA-505-412		12.3		mg/kg	1	0.095	0.95	08/23/11
Vanadium	7440-62-2	LA-505-412		48.4		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		38.3		mg/kg	1	0.76	4.7	08/23/11
Lead	7439-92-1	LA-505-412		3.88		mg/kg	1	0.095	0.95	08/23/11

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 # WSCF112976

Sample # 112976012
SAF# F11-162
Sample ID B2H056

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.50	08/18/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412	B	0.269		mg/kg	1	0.095	0.95	08/23/11
Nickel	7440-02-0	LA-505-412	U	<0.19		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.095		mg/kg	1	0.095	0.95	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	08/23/11
Barium	7440-39-3	LA-505-412	B	0.205		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	U	<0.095		mg/kg	1	0.095	0.48	08/23/11
Boron	7440-42-8	LA-505-412	U	<0.48		mg/kg	1	0.48	4.8	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.095		mg/kg	1	0.095	0.95	08/23/11
Chromium	7440-47-3	LA-505-412	U	<0.48		mg/kg	1	0.48	4.8	08/23/11
Cobalt	7440-48-4	LA-505-412	U	<0.095		mg/kg	1	0.095	0.48	08/23/11
Copper	7440-50-8	LA-505-412	U	<0.095		mg/kg	1	0.095	0.95	08/23/11
Vanadium	7440-62-2	LA-505-412	U	<0.19		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412	U	<0.76		mg/kg	1	0.76	4.8	08/23/11
Lead	7439-92-1	LA-505-412	U	<0.095		mg/kg	1	0.095	0.95	08/23/11

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 # WSCF112982

Sample # 112982001
SAF# F11-162
Sample ID B2H038

Matrix SOIL
Sampled 08/16/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/23/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.098		ug/g	1	0.098	0.49	08/24/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		394		mg/kg	1	0.093	0.93	08/23/11
Nickel	7440-02-0	LA-505-412		12.0		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	08/23/11
Barium	7440-39-3	LA-505-412		72.1		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.347		mg/kg	1	0.093	0.46	08/23/11
Boron	7440-42-8	LA-505-412	B	1.18		mg/kg	1	0.46	4.6	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	08/23/11
Chromium	7440-47-3	LA-505-412		8.99		mg/kg	1	0.46	4.6	08/23/11
Cobalt	7440-48-4	LA-505-412		11.9		mg/kg	1	0.093	0.46	08/23/11
Copper	7440-50-8	LA-505-412		18.4		mg/kg	1	0.093	0.93	08/23/11
Vanadium	7440-62-2	LA-505-412		77.2		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		55.7		mg/kg	1	0.74	4.6	08/23/11
Lead	7439-92-1	LA-505-412		4.29		mg/kg	1	0.093	0.93	08/23/11

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

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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 # WSCF112982

Sample # 112982002
SAF# F11-162
Sample ID B2H039

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/23/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	BN	0.186		ug/g	1	0.089	0.45	08/24/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		338		mg/kg	1	0.096	0.96	08/23/11
Nickel	7440-02-0	LA-505-412		8.41		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	08/23/11
Barium	7440-39-3	LA-505-412		66.0		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.221		mg/kg	1	0.096	0.48	08/23/11
Boron	7440-42-8	LA-505-412	B	1.16		mg/kg	1	0.48	4.8	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	08/23/11
Chromium	7440-47-3	LA-505-412		16.6		mg/kg	1	0.48	4.8	08/23/11
Cobalt	7440-48-4	LA-505-412		10.5		mg/kg	1	0.096	0.48	08/23/11
Copper	7440-50-8	LA-505-412		16.9		mg/kg	1	0.096	0.96	08/23/11
Vanadium	7440-62-2	LA-505-412		80.2		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		53.0		mg/kg	1	0.77	4.8	08/23/11
Lead	7439-92-1	LA-505-412		3.87		mg/kg	1	0.096	0.96	08/23/11

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 # WSCF112982

Sample # 112982003
SAF# F11-162
Sample ID B2H040

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/23/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10		ug/g	1	0.10	0.50	08/24/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		375		mg/kg	1	0.093	0.93	08/23/11
Nickel	7440-02-0	LA-505-412		12.3		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	08/23/11
Barium	7440-39-3	LA-505-412		67.1		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.337		mg/kg	1	0.093	0.47	08/23/11
Boron	7440-42-8	LA-505-412	B	1.28		mg/kg	1	0.47	4.7	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	08/23/11
Chromium	7440-47-3	LA-505-412		10.1		mg/kg	1	0.47	4.7	08/23/11
Cobalt	7440-48-4	LA-505-412		11.0		mg/kg	1	0.093	0.47	08/23/11
Copper	7440-50-8	LA-505-412		16.9		mg/kg	1	0.093	0.93	08/23/11
Vanadium	7440-62-2	LA-505-412		78.3		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		55.9		mg/kg	1	0.75	4.7	08/23/11
Lead	7439-92-1	LA-505-412		4.88		mg/kg	1	0.093	0.93	08/23/11

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 # WSCF112982

Sample # 112982004
SAF# F11-162
Sample ID B2H041

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/23/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10		ug/g	1	0.10	0.50	08/24/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		375		mg/kg	1	0.096	0.96	08/23/11
Nickel	7440-02-0	LA-505-412		10.5		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	08/23/11
Barium	7440-39-3	LA-505-412		68.1		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.373		mg/kg	1	0.096	0.48	08/23/11
Boron	7440-42-8	LA-505-412	B	1.43		mg/kg	1	0.48	4.8	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	08/23/11
Chromium	7440-47-3	LA-505-412		9.68		mg/kg	1	0.48	4.8	08/23/11
Cobalt	7440-48-4	LA-505-412		10.9		mg/kg	1	0.096	0.48	08/23/11
Copper	7440-50-8	LA-505-412		17.8		mg/kg	1	0.096	0.96	08/23/11
Vanadium	7440-62-2	LA-505-412		76.3		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		58.3		mg/kg	1	0.77	4.8	08/23/11
Lead	7439-92-1	LA-505-412		4.90		mg/kg	1	0.096	0.96	08/23/11

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 # WSCF112982

Sample # 112982005
SAF# F11-162
Sample ID B2H042

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/23/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10		ug/g	1	0.10	0.51	08/24/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		284		mg/kg	1	0.096	0.96	08/23/11
Nickel	7440-02-0	LA-505-412		11.3		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412		1.10		mg/kg	1	0.096	0.96	08/23/11
Antimony	7440-36-0	LA-505-412	B	1.19		mg/kg	1	0.29	2.9	08/23/11
Barium	7440-39-3	LA-505-412		52.5		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412		1.09		mg/kg	1	0.096	0.48	08/23/11
Boron	7440-42-8	LA-505-412	B	1.94		mg/kg	1	0.48	4.8	08/23/11
Cadmium	7440-43-9	LA-505-412		1.27		mg/kg	1	0.096	0.96	08/23/11
Chromium	7440-47-3	LA-505-412		10.6		mg/kg	1	0.48	4.8	08/23/11
Cobalt	7440-48-4	LA-505-412		8.72		mg/kg	1	0.096	0.48	08/23/11
Copper	7440-50-8	LA-505-412		15.2		mg/kg	1	0.096	0.96	08/23/11
Vanadium	7440-62-2	LA-505-412		50.8		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		42.5		mg/kg	1	0.77	4.8	08/23/11
Lead	7439-92-1	LA-505-412		4.93		mg/kg	1	0.096	0.96	08/23/11

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

LS
9-20-2011

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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 # WSCF112982

Sample # 112982006
SAF# F11-162
Sample ID B2H043

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/23/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.095		ug/g	1	0.095	0.48	08/24/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		362		mg/kg	1	0.10	1.0	08/23/11
Nickel	7440-02-0	LA-505-412		8.92		mg/kg	1	0.20	2.0	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/23/11
Barium	7440-39-3	LA-505-412		60.9		mg/kg	1	0.20	2.0	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.255		mg/kg	1	0.10	0.50	08/23/11
Boron	7440-42-8	LA-505-412	B	0.825		mg/kg	1	0.50	5.0	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/23/11
Chromium	7440-47-3	LA-505-412		5.89		mg/kg	1	0.50	5.0	08/23/11
Cobalt	7440-48-4	LA-505-412		11.7		mg/kg	1	0.10	0.50	08/23/11
Copper	7440-50-8	LA-505-412		17.9		mg/kg	1	0.10	1.0	08/23/11
Vanadium	7440-62-2	LA-505-412		84.5		mg/kg	1	0.20	2.0	08/23/11
Zinc	7440-66-6	LA-505-412		56.2		mg/kg	1	0.80	5.0	08/23/11
Lead	7439-92-1	LA-505-412		2.81		mg/kg	1	0.10	1.0	08/23/11

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

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 # WSCF112982

Sample # 112982007
SAF# F11-162
Sample ID B2H044

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/23/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.10		ug/g	1	0.10	0.51	08/24/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		309		mg/kg	1	0.098	0.98	08/23/11
Nickel	7440-02-0	LA-505-412		6.85		mg/kg	1	0.20	2.0	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	08/23/11
Barium	7440-39-3	LA-505-412		50.4		mg/kg	1	0.20	2.0	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.228		mg/kg	1	0.098	0.49	08/23/11
Boron	7440-42-8	LA-505-412	U	<0.49		mg/kg	1	0.49	4.9	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.098		mg/kg	1	0.098	0.98	08/23/11
Chromium	7440-47-3	LA-505-412	B	3.10		mg/kg	1	0.49	4.9	08/23/11
Cobalt	7440-48-4	LA-505-412		10.5		mg/kg	1	0.098	0.49	08/23/11
Copper	7440-50-8	LA-505-412		17.1		mg/kg	1	0.098	0.98	08/23/11
Vanadium	7440-62-2	LA-505-412		76.1		mg/kg	1	0.20	2.0	08/23/11
Zinc	7440-66-6	LA-505-412		48.3		mg/kg	1	0.78	4.9	08/23/11
Lead	7439-92-1	LA-505-412		2.36		mg/kg	1	0.098	0.98	08/23/11

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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 # WSCF112982

Sample # 112982008
SAF# F11-162
Sample ID B2H045

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/23/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.096		ug/g	1	0.096	0.48	08/24/11
ICPMS Prep										**08/22/11**
ICP-MS										
Manganese	7439-96-5	LA-505-412		373		mg/kg	1	0.093	0.93	08/23/11
Nickel	7440-02-0	LA-505-412		9.25		mg/kg	1	0.19	1.9	08/23/11
Silver	7440-22-4	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	08/23/11
Antimony	7440-36-0	LA-505-412	U	<0.28		mg/kg	1	0.28	2.8	08/23/11
Barium	7440-39-3	LA-505-412		71.2		mg/kg	1	0.19	1.9	08/23/11
Beryllium	7440-41-7	LA-505-412	B	0.219		mg/kg	1	0.093	0.47	08/23/11
Boron	7440-42-8	LA-505-412	B	1.07		mg/kg	1	0.47	4.7	08/23/11
Cadmium	7440-43-9	LA-505-412	U	<0.093		mg/kg	1	0.093	0.93	08/23/11
Chromium	7440-47-3	LA-505-412		6.05		mg/kg	1	0.47	4.7	08/23/11
Cobalt	7440-48-4	LA-505-412		10.6		mg/kg	1	0.093	0.47	08/23/11
Copper	7440-50-8	LA-505-412		15.9		mg/kg	1	0.093	0.93	08/23/11
Vanadium	7440-62-2	LA-505-412		69.0		mg/kg	1	0.19	1.9	08/23/11
Zinc	7440-66-6	LA-505-412		48.6		mg/kg	1	0.74	4.7	08/23/11
Lead	7439-92-1	LA-505-412		3.26		mg/kg	1	0.093	0.93	08/23/11

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)

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Attachment 2
Narrative
WSCF112941

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

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.

Attachment 2
Narrative
WSCF112941

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):

- Batch 188260
  - Vanadium and Copper – 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.

Radiochemistry Comments

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

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- Gamma Energy Analysis:
  - Europium-154 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - All other applicable QC controls are within the established limits.
- Americium-241:
  - Batch QC 188274
    - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Batch QC 188270
    - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Batch QC 188273
    - Americium-243 Tracer – The tracer did not meet the established laboratory limits for sample B2H014 (112941004). No flags issued on sample results. The quality control report was flagged for the failure.
    - All other applicable QC controls are within the established limits.

Attachment 2
Narrative
WSCF112941

- Isotopic Plutonium analysis:
  - Batch QC 188273
    - Plutonium-239/240 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Batch QC 188274
    - Plutonium-239/240 – The duplicate is outside of default RPD limits. RPD limit does not apply to results with greater than 20% counting uncertainty.
  - Batch QC 188370
    - Plutonium-239/240 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
    - All other applicable QC controls are within the established limits.
- Isotopic Uranium analysis:
  - Batch QC 188273
    - Uranium-234 and Uranium-238 – The Blank is less than five times the MDC. "B" Flag not required.
    - Uranium-234 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
  - Batch QC 188274
    - Uranium-234, Uranium-235 and Uranium-238 – The Blank is less than five times the MDC. "B" Flag not required.
    - Uranium-235 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - Uranium-238 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.

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

- Strontium-89/90:
  - Batch QC 188376
    - The Blank is less than two times the RDL. "B" Flag not required.
  - Batch QC 188377
    - The duplicate is outside of default RPD limits. RPD limit does not apply to results with greater than 20% counting uncertainty.
    - 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** — F11-162-001 — PAGE 1 OF 1

COLLECTOR	FM Hall CHPRC
SAMPLING LOCATION	Area AG Verification Sample #1
ICE CHEST NO.	GWS-17
SHIPPED TO	Waste Sampling & Characterization
COMPANY CONTACT	LUKE, SN
TELEPHONE NO.	372-1667
PROJECT COORDINATOR	LUKE, SN
PRICE CODE	C01
DATA TURNAROUND	12 Days / 12 Days
PROJECT DESIGNATION	Area AG Sampling (Waste Area AG) Verification Sampling - Soil
SAF NO.	F11-162
AIR QUALITY	☐
FIELD LOGBOOK NO.	HNF-N-507-23
ACTUAL SAMPLE DEPTH	0-1
COA	302677ES10
METHOD OF SHIPMENT	GOVERNMENT VEHICLE
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis CKI applies to this SAF

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H011 001	SOIL	8/12/11	0757	✓	✓	✓	✓

112941

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	Rebecca Abey	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-002 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 AG Verification Sample #2

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: GWS-17

FIELD LOGBOOK NO.: HNF-N-507-23.

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H012	002	SOIL	8/12/11	0805	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	Kbearod	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-003 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #3	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-807-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis CAN applies to this CAF.

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE DATE / SAMPLE TIME	8/12/11 0825	✓	✓	✓ ✓

SAMPLE NO.	MATRIX*
B2H013 002	SOIL

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	Mercedes Herrera	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-162-004	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 AG Verification Sample #4	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162	AIR QUALITY: ☐	
ICE CHEST NO.: GWS - 17	FIELD LOGBOOK NO.: HNF-N-807-33	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10	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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION	HOLDING TIME	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
B2H014	004	SOIL	8/12/11	0903	Cool~4C	6 Months	G/P	1	250mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
					Cool~4C	30 Days	G/P	1	60mL	Chromium Hex - 7196;
					None	6 Months	Square Bottle - Poly	1	500mL	SEE ITEM (2) IN SPECIAL INSTRUCTIONS
					None	6 Months	G/P	1	120mL	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: FM Hall CHPRC	DATE/TIME: 8/12/11 1330	RECEIVED BY/STORED IN:	DATE/TIME: 8/12/11 1330
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

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

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

F11-162-005 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #5	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GW3-017	FIELD LOGBOOK NO.: HNF-N-807-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis [illegible] applies to this [illegible]

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H015 005	SOIL	8/12/11	0932	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[illegible]	8/12/11 1330

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-162-006	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 AG Verification Sample #6	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162	AIR QUALITY: ☐	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10	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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis CVI sampling to this COC

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H016	005	SOIL	8/12/11	0944	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: FM Hall CHPRC	DATE/TIME: 8/12/11 1330	RECEIVED BY/STORED IN: [signature]	DATE/TIME: 8/12/11 1330
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

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-007 — 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 AG Verification Sample #7	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	AIR QUALITY: ☐
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23.	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION		Cool~4C	Cool~4C	None	None
HOLDING TIME		6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER		G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)		1	1	1	1
VOLUME		250mL	60mL	500mL	120mL
SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2H017 007	SOIL	8/12/11	0954	✓	✓ ✓ ✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[illegible]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 – Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-008 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	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 AG Verification Sample #8	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-807-23.	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H018 008	SOIL	8/12/11	1010	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	UBerrod & Boyn	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-009 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #9	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23.	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /19/;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE DATE	8/12/11	8/12/11	8/12/11	8/12/11
SAMPLE TIME	1034	1034	1034	1034

SAMPLE NO.	MATRIX*
B2H019 009	SOIL

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[illegible]	8/12/11 1330

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 – Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-010 — PAGE 1 OF 1

COLLECTOR: FM Hall, CHPRC	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 AG Verification Sample #10	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302577ES10
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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Coo~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H020 DID	SOIL	8/12/11	1040	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	Vbarnard / Bleay	8/12/11 1330

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-011 — PAGE 1 OF 1

COLLECTOR: FM Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: CHPRC	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23.	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H021	011	SOIL	8/12/11	1049	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[signature]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-012 | 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 AG Verification Sample #12

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: GW3-017 HNF-N-507 8/12/11

FIELD LOGBOOK NO.: HNF-N-507-23

ACTUAL SAMPLE DEPTH: 0 - 1'

COA: 302677ES10

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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H022	SOIL	8/12/11	1050	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[illegible]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-013

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 AG Verification Sample #13

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: GWS-017

FIELD LOGBOOK NO.: FNF-N-907-23

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B2H023 03	SOIL	8/12/11	1109

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	KBKazad	8/12/11 1330

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-014 PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC

SAMPLING LOCATION: Area AG Verification Sample #14

ICE CHEST NO.: GWS-017

SHIPPED TO: Waste Sampling & Characterization

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT COORDINATOR: LUKE, SN

PRICE CODE: C01

DATA TURNAROUND: 12 Days / 12 Days

AIR QUALITY: ☐

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

FIELD LOGBOOK NO.: HNF-N-607-23.

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

OFFSITE PROPERTY NO.: N/A

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

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

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

SPECIAL HANDLING AND/OR STORAGE: ** The CACN for WSCF Analytical is <02580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool-4C	Cool-4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE DATE / SAMPLE TIME				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H024 014	SOIL	8/12/11	1127	✓	✓	✓	—

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[signature]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

LABORATORY SECTION — RECEIVED BY — TITLE — DATE/TIME

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-015 | 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 / 11 Days

SAMPLING LOCATION: Area AG Verification Sample #15

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: GWS-017

FIELD LOGBOOK NO.: HNF-N-507-23.

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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: ** The CACN for WSCF Analytical is 402580ES20.D** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H026 015	SOIL	8/12/11	1136	✓	✓	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[illegible]	8/12/11 1330

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-016

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 AG Verification Sample #16

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-152

AIR QUALITY: ☐

ICE CHEST NO.: GWS-017

FIELD LOGBOOK NO.: HNF-N-507-23

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE DATE	8/12/11	8/12/11	8/12/11	8/12/11
SAMPLE TIME	1146	1146	1146	1146

SAMPLE NO.		**MATRIX***
B2H026	016	SOIL

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	M. Nelson	8/12/11 1330

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-017 | 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 AG Verification Sample #17

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Samping - Soil

SAF NO.: F11-162

AIR QUALITY:

ICE CHEST NO.: GWS-017

FIELD LOGBOOK NO.: HNF-N-507-23

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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: ** The CACN for WSCF Analytical is 402580ES20.□** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool-4C	Cool-4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/F	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H027 017	SOIL	8/12/11	1155	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	M. Nelson	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-040 | PAGE 1 OF 1

COLLECTOR	FM Hall CHPRC
SAMPLING LOCATION	Area AG Verification Sample #40
ICE CHEST NO.	GWS-017
SHIPPED TO	Waste Sampling & Characterization
COMPANY CONTACT	LUKE, SN
TELEPHONE NO.	372-1667
PROJECT COORDINATOR	LUKE, SN
PRICE CODE	C01
DATA TURNAROUND	12 Days / 12 Days
AIR QUALITY	1
PROJECT DESIGNATION	Area AG Sampling (Waste Area AG) Verification Sampling - Soil
SAF NO.	F11-162
FIELD LOGBOOK NO.	HNF-N-507-23
ACTUAL SAMPLE DEPTH	0-1'
COA	302677ES10
METHOD OF SHIPMENT	GOVERNMENT VEHICLE
ORIGINAL	
OFFSITE PROPERTY NO.	N/A
BILL OF LADING/AIR BILL NO.	N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H050 018	SOIL	8/12/11	0805	✓	—	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	8/12/11 1330	[illegible]	8/12/11 1330
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

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-041 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	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 AG Verification Sample #41	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H051 019	SOIL	8/12/11	1058	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[illegible]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-044

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 AG Verification Sample #44

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: 6W3-017

FIELD LOGBOOK NO.: HNF-N-507-23

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis CKI applies to this CAF.

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	B2H054 020			
MATRIX*	SOIL			
SAMPLE DATE	8/12/11			
SAMPLE TIME	0740			
	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[signature]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-045 — 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 AG Verification Sample #45	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	AIR QUALITY: ☐
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23.	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool<4C	Cool<4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H055 02	SOIL	8/12/11	1022	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[illegible]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Attachment 2
Narrative
WSCF112976

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

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.

Attachment 2
Narrative
WSCF112976

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 – MS / MSD Relative Percent Difference (RPD) is outside established laboratory limits. The quality control report was flagged for RPD failure.
- All other applicable QC controls are within the established limits.

Radiochemistry Comments

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

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- Gamma Energy Analysis:
  - All applicable QC controls are within the established limits.
- Americium-241:
  - Batch QC 188371
    - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - All other applicable QC controls are within the established limits.
- Isotopic Plutonium analysis:
  - Batch QC 188371
    - Plutonium-239/240 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - All other applicable QC controls are within the established limits.
- Isotopic Uranium analysis:
  - Batch QC 188371

- Uranium-234 and Uranium-238 – The Blank is less than five times the MDC. "B" Flag not required.

- Batch QC 188372
  - Uranium-234 and Uranium-238 – The Blank is less than five times the MDC. "B" Flag not required.
  - Uranium-235 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - All other applicable QC controls are within the established limits.

- Strontium-89/90:
  - Batch QC 188379
    - The Blank is less than two times the RDL. "B" Flag not required.
    - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
    - The Tracer for Sample B2H056 (112976012) did not meet established laboratory acceptance limits.
    - 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

F11-162-018 | PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #18	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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)

112976

SPECIAL HANDLING AND/OR STORAGE
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool<4C	Cool<4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H028	1	SOIL	8/16/11	0836	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M. Nelson	8/16/11 1420

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-019 — PAGE 1 OF 1

COLLECTOR: FM Hall, CHPRC	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 AG Verification Sample #19	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-607-23.	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE DATE	8/16/11			
SAMPLE TIME	0848			

SAMPLE NO.		MATRIX*
B2H029	2	SOIL

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall ~~[illegible]~~ CHPRC	8/16/11 1430	M. Nelson M. Nelson	8/16/11 1430

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-020 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	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 AG Verification Sample #20	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis QAP applies to this CAC

PRESERVATION	Cool~4C	Cool~4C	None	None			
HOLDING TIME	6 Months	30 Days	6 Months	6 Months			
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P			
NO. OF CONTAINER(S)	1	1	1	1			
VOLUME	250mL	60mL	500mL	120mL			
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H030 3	SOIL	8/16/11	0858	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M Nelson M.Nelson	8/16/11 1420
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

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-021 — 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 AG Verification Sample #21	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	AIR QUALITY: ☐
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250ml.	60ml.	500ml.	120ml.
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - PEAR;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H031	4 SOIL	8/16/11	0904	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M. Nelson	8/16/11 1420

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-022 — PAGE 1 OF 1

COLLECTOR: FM Hall, CHPRC	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 AG Verification Sample #22	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/F	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 218;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H032	5	SOIL	8/16/11	0919	/	/	/	/

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M. Nelson	8/16/11 1420

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-023

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 AG Verification Sample #23

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: GWS-017

FIELD LOGBOOK NO.: HNF-N-507-23.

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677E510

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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis CKT applies to this CAC

PRESERVATION	Cool~4C	Cool~4C	None	None	
HOLDING TIME	6 Months	30 Days	6 Months	6 Months	
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P	
NO. OF CONTAINER(S)	1	1	1	1	
VOLUME	250mL	60mL	500mL	120mL	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /196:	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	[redacted]
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2H033	SOIL	8/16/11	0938	✓	✓ ✓ ✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M Nelson M.Nelson	8/16/11 1420

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt 60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-024

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 AG Verification Sample #24

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: GWS-017

FIELD LOGBOOK NO.: HNF-N-807-23

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis CX1 applies to this CN.

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE DATE	8/16/11			
SAMPLE TIME	1014			

SAMPLE NO.		MATRIX*
B2H034	7	SOIL

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M. Nelson M. Nelson	8/16/11 1420

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-025 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #25	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GW3-017	FIELD LOGBOOK NO.: HNF-N-807-23.	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /19%	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H035 8	SOIL	8/16/11	1022	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC [signature]	8/16/11 1400	M. Nelson [signature]	8/16/11 1400

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-026 — PAGE 1 OF 1

COLLECTOR	FM Hall CHPRC
SAMPLING LOCATION	Area AG Verification Sample #26
ICE CHEST NO.	GWS-017
SHIPPED TO	Waste Sampling & Characterization
COMPANY CONTACT	LUKE, SN
TELEPHONE NO.	372-1667
PROJECT COORDINATOR	LUKE, SN
PRICE CODE	C01
DATA TURNAROUND	12 Days / 12 Days
PROJECT DESIGNATION	Area AG Sampling (Waste Area AG) Verification Sampling - Soil
SAF NO.	F11-162
AIR QUALITY	
FIELD LOGBOOK NO.	HNF-N-507-23.
ACTUAL SAMPLE DEPTH	0-1'
COA	302677ES10
METHOD OF SHIPMENT	GOVERNMENT VEHICLE
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /1%;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H036 9	SOIL	8/16/11	1031	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M. Nelson M. Nelson	8/16/11 1420

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-027 PAGE 1 OF 1

COLLECTOR	FM Hall CHPRC
SAMPLING LOCATION	Area AG Verification Sample #27
ICE CHEST NO.	GWS-017
SHIPPED TO	Waste Sampling & Characterization
COMPANY CONTACT	LUKE, SN
TELEPHONE NO.	372-1667
PROJECT COORDINATOR	LUKE, SN
PRICE CODE	C01
DATA TURNAROUND	12 Days / 12 Days
AIR QUALITY	☐
PROJECT DESIGNATION	Area AG Sampling (Waste Area AG) Verification Sampling - Soil
SAF NO.	F11-162
FIELD LOGBOOK NO.	HNF-N-507-23
ACTUAL SAMPLE DEPTH	0-1'
COA	302677ES10
METHOD OF SHIPMENT	GOVERNMENT VEHICLE
ORIGINAL	
OFFSITE PROPERTY NO.	N/A
BILL OF LADING/AIR BILL NO.	N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE DATE / SAMPLE TIME	8/16/11 1041	✓	✓	✓

SAMPLE NO.		MATRIX*
B2H037	10	SOIL

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M Nelson M.Nelson	8/16/11 1420

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-042 PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC

SAMPLING LOCATION: Area AG Verification Sample #42

ICE CHEST NO.: GWS-017

SHIPPED TO: Waste Sampling & Characterization

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

FIELD LOGBOOK NO.: HNF-N-507-23

ACTUAL SAMPLE DEPTH: 0-1'

OFFSITE PROPERTY NO.: N/A

PROJECT COORDINATOR: LUKE, SN

SAF NO.: F11-162

COA: 302677ES10

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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H052	11	SOIL	8/16/11	1011	✓	✓	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M.Nelson K.Nds	8/16/11 1420

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-046

PAGE 1 OF 1

COLLECTOR	FM Hall CHPRC
SAMPLING LOCATION	Area AG Verification Sample #46
ICE CHEST NO.	GWS-017
SHIPPED TO	Waste Sampling & Characterization
COMPANY CONTACT	LUKE, SN
TELEPHONE NO.	372-1667
PROJECT COORDINATOR	LUKE, SN
PROJECT DESIGNATION	Area AG Sampling (Waste Area AG) Verification Sampling - Soil
SAF NO.	F11-162
FIELD LOGBOOK NO.	HNF-N-507-23
ACTUAL SAMPLE DEPTH	0-1'
COA	302677ES10
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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION		Cool<4C	Cool<4C	None	None
HOLDING TIME		6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER		G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)		1	1	1	1
VOLUME		250mL	60mL	500mL	120mL
SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*				
B2H056 12	SOIL				
SAMPLE DATE	SAMPLE TIME				
8/16/11	0817				

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M. Nelson Hanes	8/16/11 1420

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Attachment 2
Narrative
WSCF112982

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

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):

- Post 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.

Attachment 2
Narrative
WSCF112982

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 – 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.

Radiochemistry Comments

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

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- Gamma Energy Analysis:
  - Europium-152 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - All other applicable QC controls are within the established limits.
- Americium-241:
  - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Americium-243 – Tracer recovery did not meet the established laboratory limits for sample B2H040 (112982003). No flags issued on sample results. The quality control report was flagged for the failure.
  - All other applicable QC controls are within the established limits.
- Isotopic Plutonium analysis:
  - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
  - All other applicable QC controls are within the established limits.

- Isotopic Uranium analysis:
  - Uranium-234 and Uranium-238 – The Blank is less than five times the MDC. "B" Flag not required.
  - All other applicable QC controls are within the established limits.
- Strontium-89/90:
  - Strontium-85 – Tracer recovery did not meet the established laboratory limits for sample B2H038 (112982001). No flags issued on sample results. The quality control report was flagged for the failure.
  - 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

F11-162-028 | PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #28	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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)

112982

SPECIAL HANDLING AND/OR STORAGE
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H038	SOIL	8/16/11	1052	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1400	MO1109 SSLC#1	8/16/11 1400
MO1109 SSLC#1	8-17-11 0900	FM Hall	8-17-11 0900
FM Hall	8-17-11 1005	[illegible]	8-17-11 1005

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F11-162-029	PAGE 1 OF 1
COLLECTOR: FM Hall, CHPRC	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 AG Verification Sample #29	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-807-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10	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
** The CACN for WSCF Analytical is 40258CES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis CAF applies to this CAF.

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H039	2	SOIL	8/17/11	0740				

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall	8/17/11 1005	[illegible]	8/17/11 1005

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-162-030	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 AG Verification Sample #30	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162	AIR QUALITY: ☐	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10	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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool<4C	Cool<4C	None	None
HOLDING TIME	6 Months	10 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Rev - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H040 3	SOIL	8/17/11	0750	✓	✓	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/17/11 1005	Chandal Hbeen	8/17/11 1005

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-031 — PAGE 1 OF 1

COLLECTOR: FM Hall, CHPRC	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 AG Verification Sample #31	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	
ICE CHEST NO.: 6W3-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None	
HOLDING TIME	6 Months	30 Days	6 Months	6 Months	
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P	
NO. OF CONTAINER(S)	1	1	1	1	
VOLUME	250mL	60mL	500mL	120mL	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME
B2H041	4	SOIL	8/17/11	0804

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/17/11 1005	[illegible]	8/17/11 1005

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 – Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-032

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 AG Verification Sample #32

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY:

ICE CHEST NO.: GWS-017

FIELD LOGBOOK NO.: HNF-N-507-23

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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, OL=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: ** The CACN for WSCF Analytical is 402580ES20.□** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /1%;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H042	5	SOIL	8/12/11	0824	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1005	[illegible]	8/12/11 1005

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A 6003 618 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-033

PAGE 1 OF 1

COLLECTOR: FM Hall, CHPRC	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 AG Verification Sample #33	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /1%;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H043	SOIL	8/17/11	0834	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CPRC	8/17/11 1005	[signature]	8/17/11 1005

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Wednesday, August 17, 2011 11:41:58 AM
Page 8 of 10

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-034 — 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 AG Verification Sample #34	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	AIR QUALITY: ☐
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /1%;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H044	7	SOIL	8/17/11	0842	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/17/11 1005	[illegible]	8/17/11 1005

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-619 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-035 | PAGE 1 OF 1

COLLECTOR	FM Hall CHPRC
SAMPLING LOCATION	Area AG Verification Sample #35
ICE CHEST NO.	GWS-017
SHIPPED TO	Waste Sampling & Characterization
COMPANY CONTACT	LUKE, SN
TELEPHONE NO.	372-1667
PROJECT COORDINATOR	LUKE, SN
PRICE CODE	C01
DATA TURNAROUND	12 Days / 12 Days
PROJECT DESIGNATION	Area AG Sampling (Waste Area AG) Verification Sampling - Soil
SAF NO.	F11-162
AIR QUALITY	☐
FIELD LOGBOOK NO.	HNF-N-507-23.
ACTUAL SAMPLE DEPTH	0-1'
COA	302677ES10
METHOD OF SHIPMENT	GOVERNMENT VEHICLE
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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H045 8	SOIL	8/17/11	0851	✓	✓	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/17/11 1005	[illegible]	8/17/11 1005

SIGN/ PRINT NANES

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Appendix 5

Data Validation Supporting Documentation

VALIDATION LEVEL:	A	B	(C)	D	E
PROJECT: 100-K Project, Area AG, Zone 1			DATA PACKAGE: VSR11-057		
VALIDATOR: Carl Schloesslin		LAB: WSCF		DATE: 9-20-2011	
			SDG: WSCF112941, WSCF112976, WSCF112982		
ANALYSES PERFORMED					
Anions/IC	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 WSCF112941: B2H011, B2H012, B2H013, B2H014, B2H015, B2H016, B2H017, B2H018, B2H019, B2H020, B2H021, B2H022, B2H023, B2H024, B2H025, B2H026, B2H027, B2H050, B2H051, B2H054, B2H055

SDG WSCF112976: B2H028, B2H029, B2H030, B2H031, B2H032, B2H033, B2H034, B2H035, B2H036, B2H037, B2H052, B2H056

SDG WSCF112982: B2H038, B2H039, B2H040, B2H041, B2H042, B2H043, B2H044, B2H045

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: None

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

Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF112941

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
188260	188261	28	SAMPLE	112941017	B2H027		ICP-2008 MS All possible metal
188260	188261	29	SAMPLE	112941018	B2H050		ICP-2008 MS All possible metal
188260	188261	30	SAMPLE	112941019	B2H051		ICP-2008 MS All possible metal
188260	188261	31	SAMPLE	112941020	B2H054		ICP-2008 MS All possible metal
188387	188390	3	BLANK	63219	BLANK		Hexavalent chromium
188387	188390	4	LCS	63220	LCS		Hexavalent chromium
188387	188390	5	DUP	63221	B2FP12(112918013DUP)	112918013	Hexavalent chromium
188387	188390	6	MS	63222	B2FP12(112918013MS)	112918013	Hexavalent chromium
188387	188390	7	PSTSPK	63223	PSTSPK		Hexavalent chromium
188387	188390	8	IMS	63224	B2FP12(112918013IMS)	112918013	Hexavalent chromium
188387	188390	14	SAMPLE	112941001	B2H011		Hexavalent chromium
188387	188390	15	SAMPLE	112941002	B2H012		Hexavalent chromium
188387	188390	16	SAMPLE	112941003	B2H013		Hexavalent chromium
188387	188390	17	SAMPLE	112941004	B2H014		Hexavalent chromium
188387	188390	18	SAMPLE	112941005	B2H015		Hexavalent chromium
188387	188390	20	SAMPLE	112941006	B2H016		Hexavalent chromium
188387	188390	21	SAMPLE	112941007	B2H017		Hexavalent chromium
188387	188390	22	SAMPLE	112941008	B2H018		Hexavalent chromium
188387	188390	23	SAMPLE	112941009	B2H019		Hexavalent chromium
188387	188390	24	SAMPLE	112941010	B2H020		Hexavalent chromium
188387	188390	25	SAMPLE	112941011	B2H021		Hexavalent chromium
188387	188390	26	SAMPLE	112941012	B2H022		Hexavalent chromium
188387	188390	27	SAMPLE	112941013	B2H023		Hexavalent chromium

Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF112941

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
188387	188390	28	SAMPLE	112941014	B2H024		Hexavalent chromium
188387	188390	29	SAMPLE	112941015	B2H025		Hexavalent chromium
188464	188465	3	BLANK	63439	BLANK		Hexavalent chromium
188464	188465	4	LCS	63440	LCS		Hexavalent chromium
188464	188465	5	DUP	63441	B2H026(112941016DUP)	112941016	Hexavalent chromium
188464	188465	6	MS	63442	B2H026(112941016MS)	112941016	Hexavalent chromium
188464	188465	7	PSTSPK	63443	PSTSPK		Hexavalent chromium
188464	188465	8	IMS	63444	B2H026(112941016IMS)	112941016	Hexavalent chromium
188464	188465	9	SAMPLE	112941016	B2H026		Hexavalent chromium
188464	188465	10	SAMPLE	112941017	B2H027		Hexavalent chromium
188464	188465	11	SAMPLE	112941018	B2H050		Hexavalent chromium
188464	188465	12	SAMPLE	112941019	B2H051		Hexavalent chromium
188464	188465	13	SAMPLE	112941020	B2H054		Hexavalent chromium
188464	188465	14	SAMPLE	112941021	B2H055		Hexavalent chromium

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112941

QC Batch 188387 **Test** Hexavalent chromium
Associated Samples 112941001, 112941002, 112941003, 112941004, 112941005, 112941006, 112941007, 112941008, 112941009, 112941010, 112941011, 112941012, 112941013, 112941014, 112941015

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #63219**							
Hexavalent chromium	18540-29-9		<0.094	ug/g					U	08/17/11
LCS			**QC Sample #63220**							
Hexavalent chromium	18540-29-9		4.02	ug/g	101.8	80 - 120				08/17/11
DUP			**QC Sample #63221**							
			Original 112918013							
Hexavalent chromium	18540-29-9		<0.097	ug/g			-12200.0	30	U	08/17/11
MS			**QC Sample #63222**							
			Original 112918013							
Hexavalent chromium	18540-29-9		3.91	ug/g	98.1	75 - 125				08/17/11
PSTSPK			**QC Sample #63223**							
Hexavalent chromium	18540-29-9		0.0447	ug/g	89.4	85 - 115				08/17/11
IMS			**QC Sample #63224**							
			Original 112918013							
Hexavalent chromium	18540-29-9		322	ug/g	96.7	75 - 125			D	08/17/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112941

QC Batch 188464 **Test** Hexavalent chromium
Associated Samples 112941016, 112941017, 112941018, 112941019, 112941020, 112941021

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #63439**							
Hexavalent chromium	18540-29-9		<0.098	ug/g					U	08/18/11
LCS			**QC Sample #63440**							
Hexavalent chromium	18540-29-9		4.02	ug/g	101	80 - 120				08/18/11
DUP			**QC Sample #63441**							
			Original 112941016							
Hexavalent chromium	18540-29-9	0.103	0.101	ug/g			1.00	30	B	08/18/11
MS			**QC Sample #63442**							
			Original 112941016							
Hexavalent chromium	18540-29-9	0.103	3.26	ug/g	81.8	75 - 125				08/18/11
PSTSPK			**QC Sample #63443**							
Hexavalent chromium	18540-29-9		0.0533	ug/g	106.6	85 - 115				08/18/11
IMS			**QC Sample #63444**							
			Original 112941016							
Hexavalent chromium	18540-29-9	0.103	320	ug/g	94	75 - 125			D	08/18/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112976

QC Batch 188464 **Test** Hexavalent chromium
Associated Samples 112976001, 112976002, 112976003, 112976004, 112976005, 112976006, 112976007, 112976008, 112976009, 112976010, 112976011, 112976012

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #63439**							
Hexavalent chromium	18540-29-9		<0.098	ug/g					U	08/18/11
LCS			**QC Sample #63440**							
Hexavalent chromium	18540-29-9		4.02	ug/g	101	80 - 120				08/18/11
DUP			**QC Sample #63441**							
			Original 112941016							
Hexavalent chromium	18540-29-9		0.101	ug/g			1.00	30	B	08/18/11
MS			**QC Sample #63442**							
			Original 112941016							
Hexavalent chromium	18540-29-9		3.26	ug/g	81.8	75 - 125				08/18/11
PSTSPK			**QC Sample #63443**							
Hexavalent chromium	18540-29-9		0.0533	ug/g	106.6	85 - 115				08/18/11
IMS			**QC Sample #63444**							
			Original 112941016							
Hexavalent chromium	18540-29-9		320	ug/g	94	75 - 125			D	08/18/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF112982

QC Batch 188844 **Test** Hexavalent chromium
Associated Samples 112982001, 112982002, 112982003, 112982004, 112982005, 112982006, 112982007, 112982008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #63676**							
Hexavalent chromium	18540-29-9		<0.098	ug/g					U	08/24/11
LCS			**QC Sample #63677**							
Hexavalent chromium	18540-29-9		4.01	ug/g	101.2	80 - 120				08/24/11
DUP			**QC Sample #63678**							
			Original 112982001							
Hexavalent chromium	18540-29-9	<0.098	<0.088	ug/g			25.50	30	U	08/24/11
MS			**QC Sample #63679**							
			Original 112982001							
Hexavalent chromium	18540-29-9	<0.098	3.34	ug/g	85.3	75 - 125				08/24/11
PSTSPK			**QC Sample #63680**							
Hexavalent chromium	18540-29-9		0.0342	ug/g	68.4	85 - 115			N	08/24/11
IMS			**QC Sample #63681**							
			Original 112982001							
Hexavalent chromium	18540-29-9	<0.098	318	ug/g	94.2	75 - 125			D	08/24/11

Date: 20 September 2011
To: CH2M Hill (technical representative)
From: Analytical Quality Associates, Inc.
Project: 100-K Project, Area AG, Zone 1
Subject: Radiochemical - Sample Data Groups (SDGs) WSCF112941, WSCF112976 and WSCF112982

INTRODUCTION

This memorandum presents the results of data validation for SDGs WSCF112941, WSCF112976 and WSCF112982 prepared by WSCF Analytical Laboratories. A list of samples validated along with the analytical methods is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B2H011	8/12/2011	Soil	C	See note 1
B2H012	8/12/2011	Soil	C	See note 1
B2H013	8/12/2011	Soil	C	See note 1
B2H014	8/12/2011	Soil	C	See note 1
B2H015	8/12/2011	Soil	C	See note 1
B2H016	8/12/2011	Soil	C	See note 1
B2H017	8/12/2011	Soil	C	See note 1
B2H018	8/12/2011	Soil	C	See note 1
B2H019	8/12/2011	Soil	C	See note 1
B2H020	8/12/2011	Soil	C	See note 1
B2H021	8/12/2011	Soil	C	See note 1
B2H022	8/12/2011	Soil	C	See note 1
B2H023	8/12/2011	Soil	C	See note 1
B2H024	8/12/2011	Soil	C	See note 1
B2H025	8/12/2011	Soil	C	See note 1
B2H026	8/12/2011	Soil	C	See note 1
B2H027	8/12/2011	Soil	C	See note 1
B2H050	8/12/2011	Soil	C	See note 1
B2H051	8/12/2011	Soil	C	See note 1
B2H054	8/12/2011	Soil	C	See note 1
B2H055	8/12/2011	Soil	C	See note 1
B2H028	8/16/2011	Soil	C	See note 1
B2H029	8/16/2011	Soil	C	See note 1
B2H030	8/16/2011	Soil	C	See note 1
B2H031	8/16/2011	Soil	C	See note 1
B2H032	8/16/2011	Soil	C	See note 1
B2H033	8/16/2011	Soil	C	See note 1
B2H034	8/16/2011	Soil	C	See note 1
B2H035	8/16/2011	Soil	C	See note 1
B2H036	8/16/2011	Soil	C	See note 1
B2H037	8/16/2011	Soil	C	See note 1

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B2H052	8/16/2011	Soil	C	See note 1
B2H056	8/16/2011	Soil	C	See note 1
B2H038	8/16/2011	Soil	C	See note 1
B2H039	8/17/2011	Soil	C	See note 1
B2H040	8/17/2011	Soil	C	See note 1
B2H041	8/17/2011	Soil	C	See note 1
B2H042	8/17/2011	Soil	C	See note 1
B2H043	8/17/2011	Soil	C	See note 1
B2H044	8/17/2011	Soil	C	See note 1
B2H045	8/17/2011	Soil	C	See note 1

1 - Gamma, Sr-89/90, Am-241, Isotopic-Pu, Isotopic-U

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

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

DATA QUALITY OBJECTIVES

- **Holding Times and Sample Preservation**

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

The samples were analyzed within the prescribed holding times.

- **Blanks**

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

Laboratory Blanks

All laboratory blank results were acceptable with the following exceptions.

For SDG WSCF112941, batch 188456, the U-234 and U-238 laboratory blank results were > the minimum detectable concentrations (MDCs). The U-234 results for all associated samples *except* B2H011 were detects >5X the blank result and should not be qualified. The U-234 result

for sample B2H011 was a detect <5X the blank result and should be qualified as an estimate and flagged "J." The U-238 results for all associated samples *except* B2H012 and B2H017 were detects >5X the blank result and should not be qualified. The U-238 results for samples B2H012 and B2H017 were detects <5X the blank result and should be qualified as estimates and flagged "J."

For SDG WSCF112941, batch 188563, the U-234, U-235 and U-238 laboratory blank results were > the MDCs. The U-234 and U-238 results for all associated samples were detects >5X the blank result and should not be qualified. The U-235 results for samples B2H018, B2H020, B2H022, B2H023 and B2H024 were detects <5X the blank result and should be qualified as estimates and flagged "J." The U-235 results for samples B2H019 and B2H021 were non-detects and should not be qualified.

For SDG WSCF112941, batch 188469, the Sr-89/90 laboratory blank result was > the MDC. The Sr-89/90 results for samples B2H011, B2H012, B2H013, B2H014 and B2H016 were detects <5X the blank result and should be qualified as estimates and flagged "J." The Sr-89/90 results for samples B2H015 and B2H017 were non-detects and should not be qualified.

For SDG WSCF112976, batch 188855, the U-234 and U-238 laboratory blank results were > the MDCs. The U-234 results for all associated samples *except* B2H031 were detects >5X the blank result and should not be qualified. The U-234 result for sample B2H031 was a detect <5X the blank result and should be qualified as an estimate and flagged "J." The U-238 results for samples B2H030, B2H032 and B2H033 were detects >5X the blank result and should not be qualified. The U-238 results for samples B2H028, B2H029, B2H031 and B2H034 were detects <5X the blank result and should be qualified as estimates and flagged "J."

For SDG WSCF112976, batch 188852, the U-234 and U-238 laboratory blank results were > the MDCs. The U-234 and U-238 results for all associated samples *except* B2H056 were detects >5X the blank results and should not be qualified. The U-234 and U-238 results for sample B2H056 were detects <5X the blank results and should be qualified as estimates and flagged "J."

For SDG WSCF112976, batch 188685, the Sr-89/90 laboratory blank result was > the MDC. The Sr-89/90 results for samples B2H035 and B2H036 were detects <5X the blank result and should be qualified as estimates and flagged "J." The Sr-89/90 result for sample B2H056 was a detect <5X the blank result and would be qualified as an estimate and flagged "J," but was further flagged "J+" due to a tracer recovery infraction. The Sr-89/90 result for sample B2H037 was a non-detect and should not be qualified. The Sr-89/90 result for sample B2H052 was a detect >5X the blank result and should not be qualified.

For SDG WSCF112982, the U-234 and U-238 laboratory blank results were > the MDCs. The U-234 results for all associated samples were detects >5X the blank result and should not be qualified. The U-238 results for all associated samples *except* B2H043 were detects >5X the blank result and should not be qualified. The U-238 result for sample B2H043 was a detect <5X the blank result and should be qualified as an estimate and flagged "J."

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 WSCF112941, Pu-239/240, U-234 and U-238 were detected in equipment blanks B2H054 and B2H055.

For SDG WSCF112976, Pu-239/240, U-234, U-238 and Sr-89/90 were detected in equipment blank B2H056.

- **Accuracy**

Accuracy is evaluated by reviewing matrix spike sample results, laboratory control sample results, and chemical recovery factors. Chemical recovery factors are determined through use of a carrier or tracer and provide assessment of the chemical separation process that is affected by the laboratory procedure, sample matrix, and/or interference. Chemical recovery factors are used to correct sample concentration, uncertainty, and MDC results. According to the SAP, the laboratory control sample accuracy limits are 70% to 130%. The matrix spike 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 (MS) Samples

MS analyses are not required for the analytical methods performed.

Laboratory Control Samples (LCSs)

All LCS recoveries were acceptable.

Carrier/Tracer Recovery Factors

All carrier/tracer recovery factors were acceptable with the following exceptions.

For SDG WSCF112941, the Am-243 tracer recovery for sample B2H014 was >105%. The Am-241 result for sample B2H014 was a non-detect and should not be qualified.

For SDG WSCF112976, the Sr-85 tracer recovery for sample B2H056 was >105%. The Sr-89/90 result for sample B2H056 was a detect and should be qualified as an estimate and flagged "J+."

For SDG WSCF112982, the Sr-85 tracer recovery for sample B2H038 was >105%. The Sr-89/90 result for sample B2H038 was a detect and should be qualified as an estimate and flagged "J+."

- **Precision**

Precision is evaluated by reviewing laboratory duplicate, field duplicate, and field split sample results. These QC results provide information on the laboratory reproducibility and whether sampling activities are adequate to acquire consistent sample results. According to the SAP, the relative percent difference (RPD) 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 MDCs the precision limits are ones specified by the DV procedure.

Laboratory Duplicate Samples

All laboratory duplicate results were acceptable with the following exceptions.

For SDG WSCF112941, batch 188561, the Am-241 difference was >2X the MDC. The Am-241 results for all associated samples *except* B2H024 were non-detects and should be qualified as estimates and flagged "UJ." The Am-241 result for sample B2H024 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.

For SDG WSCF112941, batch 188665, the Am-241 RPD was > the acceptance limit. The Am-241 results for samples B2H050, B2H051, B2H054 and B2H055 were non-detects and should be qualified as estimates and flagged "UJ." The Am-241 results for samples B2H025, B2H026 and B2H027 were detects and should be qualified as estimates and flagged "J."

For SDG WSCF112941, batch 188455, the Pu-239/240 difference was >2X the MDC. The Pu-239/240 results for all associated samples *except* B2H012 were detects and should be qualified as estimates and flagged "J." The Pu-239/240 result for sample B2H012 was a non-detect and should be qualified as an estimate and flagged "UJ." See the table in Appendix 2 for a listing of all affected sample results.

For SDG WSCF112941, batch 188562, the Pu-239/240 difference was >2X the MDC. The Pu-239/240 results for samples B2H019, B2H020, B2H021 and B2H022 were non-detects and should be qualified as estimates and flagged "UJ." The Pu-239/240 results for samples B2H018, B2H023 and B2H024 were detects and should be qualified as estimates and flagged "J."

For SDG WSCF112941, batch 188666, the Pu-238 difference was >2X the MDC. The Pu-238 results for samples B2H050, B2H051, B2H054 and B2H055 were non-detects and should be

qualified as estimates and flagged "UJ." The Pu-238 results for samples B2H025, B2H026 and B2H027 were detects and should be qualified as estimates and flagged "J."

For SDG WSCF112941, batch 188666, the Pu-239/240 RPD was > the acceptance limit. The Pu-239/240 results for samples B2H025, B2H026, B2H027, B2H050, B2H051, B2H054 and B2H055 were detects and should be qualified as estimates and flagged "J."

For SDG WSCF112941, batch 188660, the Sr-89/90 difference was >2X the MDC. The Sr-89/90 results for samples B2H050, B2H051, B2H054 and B2H055 were non-detects and should be qualified as estimates and flagged "UJ." The Sr-89/90 results for samples B2H025, B2H026 and B2H027 were detects and should be qualified as estimates and flagged "J."

For SDG WSCF112976, batch 188853, the Am-241 difference was >2X the MDC. The Am-241 results for all associated samples *except* B2H032 were detects and should be qualified as estimates and flagged "J." The Am-241 result for sample B2H032 was a non-detect and should be qualified as an estimate and flagged "UJ." See the table in Appendix 2 for a listing of all affected sample results.

For SDG WSCF112976, batch 188854, the Pu-239/240 difference was >2X the MDC. The Pu-239/240 results for all associated samples *except* B2H031 and B2H032 were detects and should be qualified as estimates and flagged "J." The Pu-239/240 results for samples B2H031 and B2H032 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 SDG WSCF112982, the Pu-239/240 difference was >2X the MDC. The Pu-239/240 results for all associated samples 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. Samples B2H034 and B2H052 had a Cs-137 RPD = 62%.

Field Split Samples

No field splits were submitted for validation.

- **Detection Limits**

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

All reported sample MDCs with associated non-detected sample results were below the CRDLs with the following exceptions. Many Eu-152, Eu-54 and Eu-155 MDCs were slightly > the CRDLs. See the data validation checklist in Appendix 5 for a listing of results.

- **Completeness**

SDGs WSCF112941, WSCF112976 and WSCF112982 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-002, Rev. 0, Change 0, *Data Validation for Radiochemical Analyses*, August 2010.

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

Appendix 1

Glossary of Data Reporting Qualifiers

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

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

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

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

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

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

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

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

Appendix 2

Summary of Data Qualification

Radiochemical Data Qualification Summary			
SDGs: WSCF112941, WSCF112976 & WSCF112982	Reviewer: AQA	Project: 100-K Project, Area AG, Zone 1	
Analyte(s)	**DV Flag**	**Samples Affected**	**Reason**
U-234	J	B2H011	Lab blank contamination
U-238	J	B2H012, B2H017	Lab blank contamination
U-235	J	B2H018, B2H020, B2H022, B2H023, B2H024	Lab blank contamination
Sr-89/90	J	B2H011, B2H012, B2H013, B2H014, B2H016	Lab blank contamination
U-234	J	B2H031	Lab blank contamination
U-238	J	B2H028, B2H029, B2H031, B2H034	Lab blank contamination
U-234, U-238	J	B2H056	Lab blank contamination
Sr-89/90	J	B2H035, B2H036	Lab blank contamination
U-238	J	B2H043	Lab blank contamination
Sr-89/90	J+	B2H056	Lab blank contamination and high tracer recovery
Sr-89/90	J+	B2H038	High tracer recovery
Am-241	UJ	B2H018, B2H019, B2H020, B2H021, B2H022, B2H023	Poor laboratory duplicate precision
Am-241	J	B2H024	Poor laboratory duplicate precision
Am-241	UJ	B2H050, B2H051, B2H054, B2H055	Poor laboratory duplicate precision
Am-241	J	B2H025, B2H026, B2H027	Poor laboratory duplicate precision
Pu-239/240	UJ	B2H012	Poor laboratory duplicate precision
Pu-239/240	J	B2H011, B2H013, B2H014, B2H015, B2H016, B2H017	Poor laboratory duplicate precision
Pu-239/240	UJ	B2H019, B2H020, B2H021, B2H022	Poor laboratory duplicate precision
Pu-239/240	J	B2H018, B2H023, B2H024	Poor laboratory duplicate precision
Pu-238	UJ	B2H050, B2H051, B2H054, B2H055	Poor laboratory duplicate precision

Pu-238	J	B2H025, B2H026, B2H027	Poor laboratory duplicate precision
Pu-239/240	J	B2H025, B2H026, B2H027, B2H050, B2H051, B2H054, B2H055	Poor laboratory duplicate precision
Sr-89/90	UJ	B2H050, B2H051, B2H054, B2H055	Poor laboratory duplicate precision
Sr-89/90	J	B2H025, B2H026, B2H027	Poor laboratory duplicate precision
Am-241	UJ	B2H032	Poor laboratory duplicate precision
Am-241	J	B2H028, B2H029, B2H030, B2H031, B2H033, B2H034	Poor laboratory duplicate precision
Pu-239/240	UJ	B2H031, B2H032	Poor laboratory duplicate precision
Pu-239/240	J	B2H028, B2H029, B2H030, B2H033, B2H034	Poor laboratory duplicate precision
Pu-239/240	J	B2H038, B2H039, B2H040, B2H041, B2H042, B2H043, B2H044, B2H045	Poor laboratory duplicate precision

Comments: None

Appendix 3

Annotated Laboratory Reports

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941001
SAF# F11-162
Sample ID B2H011

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/15/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		0.057		.028	pCi/g	1	0.032		08/15/11
Cobalt-60	10198-40-0	LA-508-481	U	-9.1E-3		.017	pCi/g	1	0.028		08/15/11
Europium-152	14683-23-9	LA-508-481	U	-0.039		.068	pCi/g	1	0.094		08/15/11
Europium-154	15585-10-1	LA-508-481	U	0.014		.057	pCi/g	1	0.092		08/15/11
Europium-155	14391-16-3	LA-508-481	U	-0.029		.086	pCi/g	1	0.14		08/15/11
Np/Th/Pu/Am/U Prep											**08/19/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471	U	-0.018		.035	pCi/g	1	0.065		08/21/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	9.4E-3		.012	pCi/g	1	0.019		08/21/11
Plutonium-239/240	PU-239/240	LA-508-471		0.020	J	.012	pCi/g	1	4.3E-3		08/21/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.10	J	.038	pCi/g	1	5.3E-3		08/21/11
Uranium-235	15117-96-1	LA-508-471		0.021		.014	pCi/g	1	5.8E-3		08/21/11
Uranium-238	U-238	LA-508-471		0.17		.056	pCi/g	1	0.018		08/21/11
SR-89/90											**08/19/11**
SR-89/90											

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

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

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941001
SAF# F11-162
Sample ID B2H011

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		0.94	J	.81	pCi/g	1	0.51		08/23/11

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9-20-2011

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941002
SAF# F11-162
Sample ID B2H012

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481	U	-8.1E-4	.021	pCi/g	1	0.037		08/15/11
Cobalt-60	10198-40-0	LA-508-481	U	-0.0060	.018	pCi/g	1	0.032		08/15/11
Europium-152	14683-23-9	LA-508-481	U	0.034	.071	pCi/g	1	0.096		08/15/11
Europium-154	15585-10-1	LA-508-481	U	0.029	.063	pCi/g	1	0.12		08/15/11
Europium-155	14391-16-3	LA-508-481	U	0.098	.11	pCi/g	1	0.13		08/15/11
Np/Th/Pu/Am/U Prep										**08/19/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	-1.8E-3	.035	pCi/g	1	0.064		08/21/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	-3.3E-3	.013	pCi/g	1	0.027		08/21/11
Plutonium-239/240	PU-239/240	LA-508-471	U	1.6E-3 UJ	.0071	pCi/g	1	0.015		08/21/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.16	.053	pCi/g	1	0.016		08/21/11
Uranium-235	15117-96-1	LA-508-471		0.012	.01	pCi/g	1	6.3E-3		08/21/11
Uranium-238	U-238	LA-508-471		0.13 J	.046	pCi/g	1	5.8E-3		08/21/11
SR-89/90										**08/19/11**
SR-89/90										

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

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

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941002
SAF# F11-162
Sample ID B2H012

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		0.70	J	.8	pCi/g	1	0.51		08/23/11

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9-20-2011

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941003
SAF# F11-162
Sample ID B2H013

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.16	.048	pCi/g	1	0.036		08/15/11
Cobalt-60	10198-40-0	LA-508-481		0.048	.021	pCi/g	1	0.034		08/15/11
Europium-152	14683-23-9	LA-508-481	U	-0.036	.077	pCi/g	1	0.099		08/15/11
Europium-154	15585-10-1	LA-508-481	U	-4.4E-3	.057	pCi/g	1	0.10		08/15/11
Europium-155	14391-16-3	LA-508-481	U	-0.023	.1	pCi/g	1	0.17		08/15/11
Np/Th/Pu/Am/U Prep										**08/19/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.033	.033	pCi/g	1	0.051		08/21/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	7.5E-3	.01	pCi/g	1	0.016		08/21/11
Plutonium-239/240	PU-239/240	LA-508-471		0.018 J	.011	pCi/g	1	4.1E-3		08/21/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.17	.056	pCi/g	1	0.015		08/21/11
Uranium-235	15117-96-1	LA-508-471	U	0.011	.012	pCi/g	1	0.016		08/21/11
Uranium-238	U-238	LA-508-471		0.18	.061	pCi/g	1	0.019		08/21/11
SR-89/90										**08/19/11**
SR-89/90										

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

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

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941003
SAF# F11-162
Sample ID B2H013

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		0.78 J	.73	pCi/g	1	0.46		08/23/11

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9-20-2011

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941004
SAF# F11-162
Sample ID B2H014

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.59	.095	pCi/g	1	0.042		08/15/11
Cobalt-60	10198-40-0	LA-508-481		0.050	.023	pCi/g	1	0.028		08/15/11
Europium-152	14683-23-9	LA-508-481		0.16	.091	pCi/g	1	0.12		08/15/11
Europium-154	15585-10-1	LA-508-481	U	-0.018	.067	pCi/g	1	0.12		08/15/11
Europium-155	14391-16-3	LA-508-481	U	0.10	.096	pCi/g	1	0.17		08/15/11
Np/Th/Pu/Am/U Prep										**08/19/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.026	.03	pCi/g	1	0.048		08/21/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	6.9E-3	.011	pCi/g	1	0.019		08/21/11
Plutonium-239/240	PU-239/240	LA-508-471		0.014 J	.01	pCi/g	1	4.7E-3		08/21/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.24	.076	pCi/g	1	0.020		08/21/11
Uranium-235	15117-96-1	LA-508-471		0.012	.011	pCi/g	1	6.4E-3		08/21/11
Uranium-238	U-238	LA-508-471		0.20	.065	pCi/g	1	0.016		08/21/11
SR-89/90										**08/19/11**
SR-89/90										

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

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

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941004
SAF# F11-162
Sample ID B2H014

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		1.1 J	.74	pCi/g	1	0.45		08/23/11

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9-20-2011

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941005
SAF# F11-162
Sample ID B2H015

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.14	.035	pCi/g	1	0.064		08/15/11
Cobalt-60	10198-40-0	LA-508-481	U	-2.3E-3	.021	pCi/g	1	0.037		08/15/11
Europium-152	14683-23-9	LA-508-481		0.14	.091	pCi/g	1	0.12		08/15/11
Europium-154	15585-10-1	LA-508-481	U	-2.4E-3	.068	pCi/g	1	0.12		08/15/11
Europium-155	14391-16-3	LA-508-481	U	-0.067	.084	pCi/g	1	0.14		08/15/11
Np/Th/Pu/Am/U Prep										**08/19/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.019	.026	pCi/g	1	0.044		08/21/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	1.6E-3	.0016	pCi/g	1	0.020		08/21/11
Plutonium-239/240	PU-239/240	LA-508-471		0.033 J	.016	pCi/g	1	4.5E-3		08/21/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.17	.057	pCi/g	1	0.019		08/21/11
Uranium-235	15117-96-1	LA-508-471	U	0.016	.015	pCi/g	1	0.021		08/21/11
Uranium-238	U-238	LA-508-471		0.17	.056	pCi/g	1	5.5E-3		08/21/11
SR-89/90										**08/19/11**
SR-89/90										

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

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

LS
9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941005
SAF# F11-162
Sample ID B2H015

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406	U	-0.84	.7	pCi/g	1	0.43		08/23/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941006
SAF# F11-162
Sample ID B2H016

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/15/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		0.13		.043	pCi/g	1	0.032		08/15/11
Cobalt-60	10198-40-0	LA-508-481	U	-1.3E-3		.019	pCi/g	1	0.034		08/15/11
Europium-152	14683-23-9	LA-508-481	U	-0.050		.092	pCi/g	1	0.10		08/15/11
Europium-154	15585-10-1	LA-508-481	U	-0.015		.055	pCi/g	1	0.097		08/15/11
Europium-155	14391-16-3	LA-508-481	U	0.013		.098	pCi/g	1	0.17		08/15/11
Np/Th/Pu/Am/U Prep											**08/19/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471	U	3.5E-3		.024	pCi/g	1	0.043		08/21/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	9.6E-3		.014	pCi/g	1	0.024		08/21/11
Plutonium-239/240	PU-239/240	LA-508-471		6.4E-3	J	.0065	pCi/g	1	4.3E-3		08/21/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.15		.053	pCi/g	1	0.025		08/21/11
Uranium-235	15117-96-1	LA-508-471	U	0.013		.013	pCi/g	1	0.017		08/21/11
Uranium-238	U-238	LA-508-471		0.19		.063	pCi/g	1	0.015		08/21/11
SR-89/90											**08/19/11**
SR-89/90											

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

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

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941006
SAF# F11-162
Sample ID B2H016

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		1.0 J	.72	pCi/g	1	0.45		08/23/11

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9-20-2011

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941007
SAF# F11-162
Sample ID B2H017

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.25	.049	pCi/g	1	0.035		08/15/11
Cobalt-60	10198-40-0	LA-508-481	U	2.8E-3	.019	pCi/g	1	0.035		08/15/11
Europium-152	14683-23-9	LA-508-481	U	6.7E-3	.067	pCi/g	1	0.10		08/15/11
Europium-154	15585-10-1	LA-508-481	U	0.015	.06	pCi/g	1	0.11		08/15/11
Europium-155	14391-16-3	LA-508-481	U	0.034	.079	pCi/g	1	0.14		08/15/11
Np/Th/Pu/Am/U Prep										**08/19/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.047	.035	pCi/g	1	0.051		08/21/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	7.4E-3	.013	pCi/g	1	0.022		08/21/11
Plutonium-239/240	PU-239/240	LA-508-471		0.028 J	.016	pCi/g	1	0.014		08/21/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.18	.06	pCi/g	1	0.025		08/21/11
Uranium-235	15117-96-1	LA-508-471		0.016	.014	pCi/g	1	0.016		08/21/11
Uranium-238	U-238	LA-508-471		0.13 J	.047	pCi/g	1	0.015		08/21/11
SR-89/90										**08/19/11**
SR-89/90										

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

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

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941007
SAF# F11-162
Sample ID B2H017

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406	U	0.19	.7	pCi/g	1	0.47		08/23/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941008
SAF# F11-162
Sample ID B2H018

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/15/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		1.1		.15	pCi/g	1	0.041		08/15/11
Cobalt-60	10198-40-0	LA-508-481	U	0.020		.02	pCi/g	1	0.039		08/15/11
Europium-152	14683-23-9	LA-508-481	U	7.7E-3		.079	pCi/g	1	0.12		08/15/11
Europium-154	15585-10-1	LA-508-481	U	0.016		.065	pCi/g	1	0.12		08/15/11
Europium-155	14391-16-3	LA-508-481	U	0.083		.094	pCi/g	1	0.17		08/15/11
Np/Th/Pu/Am/U Prep											**08/22/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471	U	0.048	UJ	.04	pCi/g	1	0.061		08/23/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	3.6E-3		.037	pCi/g	1	0.066		08/23/11
Plutonium-239/240	PU-239/240	LA-508-471		0.094	J	.036	pCi/g	1	0.021		08/23/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.15		.046	pCi/g	1	4.8E-3		08/23/11
Uranium-235	15117-96-1	LA-508-471		0.020	J	.014	pCi/g	1	5.9E-3		08/23/11
Uranium-238	U-238	LA-508-471		0.22		.062	pCi/g	1	4.8E-3		08/23/11
SR-89/90											**08/19/11**
SR-89/90											

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

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

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WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941008
SAF# F11-162
Sample ID B2H018

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		1.6	.78	pCi/g	1	0.40		08/23/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
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U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941009
SAF# F11-162
Sample ID B2H019

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/15/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		0.095		.035	pCi/g	1	0.029		08/15/11
Cobalt-60	10198-40-0	LA-508-481	U	3.7E-3		.015	pCi/g	1	0.029		08/15/11
Europium-152	14683-23-9	LA-508-481	U	-0.053		.071	pCi/g	1	0.096		08/15/11
Europium-154	15585-10-1	LA-508-481	U	0.015		.054	pCi/g	1	0.099		08/15/11
Europium-155	14391-16-3	LA-508-481	U	-0.069		.093	pCi/g	1	0.15		08/15/11
Np/Th/Pu/Am/U Prep											**08/22/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471	U	9.8E-3	UJ	.033	pCi/g	1	0.058		08/23/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	6.9E-3		.036	pCi/g	1	0.063		08/23/11
Plutonium-239/240	PU-239/240	LA-508-471	U	0.010	UJ	.012	pCi/g	1	0.019		08/23/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.18		.05	pCi/g	1	0.011		08/23/11
Uranium-235	15117-96-1	LA-508-471	U	1.8E-3		.0062	pCi/g	1	0.013		08/23/11
Uranium-238	U-238	LA-508-471		0.16		.046	pCi/g	1	0.011		08/23/11
SR-89/90											**08/19/11**
SR-89/90											

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
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X,Y or Z - See comment detail and/or narrative.

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WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941009
SAF# F11-162
Sample ID B2H019

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		0.98	.73	pCi/g	1	0.36		08/23/11

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

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U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941010
SAF# F11-162
Sample ID B2H020

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/15/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		0.044		.036	pCi/g	1	0.035		08/16/11
Cobalt-60	10198-40-0	LA-508-481	U	0.030		.02	pCi/g	1	0.038		08/16/11
Europium-152	14683-23-9	LA-508-481	U	-0.056		.084	pCi/g	1	0.11		08/16/11
Europium-154	15585-10-1	LA-508-481	U	-0.037		.056	pCi/g	1	0.096		08/16/11
Europium-155	14391-16-3	LA-508-481	U	0.036		.087	pCi/g	1	0.15		08/16/11
Np/Th/Pu/Am/U Prep											**08/22/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471	U	0.014	UJ	.037	pCi/g	1	0.064		08/23/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	0.036		.035	pCi/g	1	0.053		08/23/11
Plutonium-239/240	PU-239/240	LA-508-471	U	-3.6E-3	UJ	.012	pCi/g	1	0.027		08/23/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.25		.068	pCi/g	1	4.4E-3		08/23/11
Uranium-235	15117-96-1	LA-508-471		0.012	J	.01	pCi/g	1	5.4E-3		08/23/11
Uranium-238	U-238	LA-508-471		0.21		.059	pCi/g	1	0.015		08/23/11
SR-89/90											**08/19/11**
SR-89/90											

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

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N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941010
SAF# F11-162
Sample ID B2H020

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		0.74	.76	pCi/g	1	0.38		08/23/11

MDL = Minimum Detection
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TP Err = Total Propagated
DF = Dilution Factor
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N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941011
SAF# F11-162
Sample ID B2H021

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/15/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		0.15		.051	pCi/g	1	0.031		08/16/11
Cobalt-60	10198-40-0	LA-508-481	U	8.7E-3		.018	pCi/g	1	0.034		08/16/11
Europium-152	14683-23-9	LA-508-481	U	-0.015		.055	pCi/g	1	0.088		08/16/11
Europium-154	15585-10-1	LA-508-481	U	-0.0060		.06	pCi/g	1	0.11		08/16/11
Europium-155	14391-16-3	LA-508-481	U	0.067		.07	pCi/g	1	0.13		08/16/11
Np/Th/Pu/Am/U Prep											**08/22/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471	U	0.0020	UJ	.038	pCi/g	1	0.068		08/23/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	0.021		.035	pCi/g	1	0.059		08/23/11
Plutonium-239/240	PU-239/240	LA-508-471	U	0.021	UJ	.017	pCi/g	1	0.022		08/23/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.15		.044	pCi/g	1	4.6E-3		08/23/11
Uranium-235	15117-96-1	LA-508-471	U	4.2E-3		.006	pCi/g	1	5.7E-3		08/23/11
Uranium-238	U-238	LA-508-471		0.15		.045	pCi/g	1	4.6E-3		08/23/11
SR-89/90											**08/19/11**
SR-89/90											

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

B - Analyte was detected in both the BLANK and SAMPLE
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N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941011
SAF# F11-162
Sample ID B2H021

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		0.60	.78	pCi/g	1	0.44		08/23/11

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

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U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941012
SAF# F11-162
Sample ID B2H022

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/15/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		0.11		.033	pCi/g	1	0.022		08/16/11
Cobalt-60	10198-40-0	LA-508-481	U	-0.010		.011	pCi/g	1	0.018		08/16/11
Europium-152	14683-23-9	LA-508-481	U	8.3E-3		.045	pCi/g	1	0.069		08/16/11
Europium-154	15585-10-1	LA-508-481	U	-0.018		.036	pCi/g	1	0.062		08/16/11
Europium-155	14391-16-3	LA-508-481	U	-9.7E-3		.054	pCi/g	1	0.092		08/16/11
Np/Th/Pu/Am/U Prep											**08/22/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471	U	0.044	UJ	.035	pCi/g	1	0.051		08/23/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	-6.4E-3		.031	pCi/g	1	0.059		08/23/11
Plutonium-239/240	PU-239/240	LA-508-471	U	4.3E-3	UJ	.012	pCi/g	1	0.023		08/23/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.14		.042	pCi/g	1	4.3E-3		08/23/11
Uranium-235	15117-96-1	LA-508-471		5.9E-3	J	.0068	pCi/g	1	5.3E-3		08/23/11
Uranium-238	U-238	LA-508-471		0.15		.044	pCi/g	1	4.3E-3		08/23/11
SR-89/90											**08/19/11**
SR-89/90											

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

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

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941012
SAF# F11-162
Sample ID B2H022

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		0.69	.77	pCi/g	1	0.43		08/23/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941013
SAF# F11-162
Sample ID B2H023

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/15/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		0.098		.036	pCi/g	1	0.029		08/16/11
Cobalt-60	10198-40-0	LA-508-481	U	3.5E-3		.017	pCi/g	1	0.031		08/16/11
Europium-152	14683-23-9	LA-508-481	U	0.095		.068	pCi/g	1	0.096		08/16/11
Europium-154	15585-10-1	LA-508-481	U	0.011		.045	pCi/g	1	0.084		08/16/11
Europium-155	14391-16-3	LA-508-481	U	0.079		.083	pCi/g	1	0.15		08/16/11
Np/Th/Pu/Am/U Prep											**08/22/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471	U	0.057	UJ	.043	pCi/g	1	0.063		08/23/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	1.6E-3		.022	pCi/g	1	0.041		08/23/11
Plutonium-239/240	PU-239/240	LA-508-471		0.021	J	.016	pCi/g	1	0.020		08/23/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.14		.043	pCi/g	1	0.013		08/23/11
Uranium-235	15117-96-1	LA-508-471		0.013	J	.011	pCi/g	1	5.9E-3		08/23/11
Uranium-238	U-238	LA-508-471		0.16		.047	pCi/g	1	4.8E-3		08/23/11
SR-89/90											**08/19/11**
SR-89/90											

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

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

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941013
SAF# F11-162
Sample ID B2H023

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		1.1	.83	pCi/g	1	0.44		08/23/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941014
SAF# F11-162
Sample ID B2H024

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/15/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		0.18		.033	pCi/g	1	0.016		08/16/11
Cobalt-60	10198-40-0	LA-508-481	U	-5.3E-3		.0076	pCi/g	1	0.013		08/16/11
Europium-152	14683-23-9	LA-508-481		0.074		.027	pCi/g	1	0.044		08/16/11
Europium-154	15585-10-1	LA-508-481	U	2.1E-3		.026	pCi/g	1	0.046		08/16/11
Europium-155	14391-16-3	LA-508-481	U	0.036		.041	pCi/g	1	0.063		08/16/11
Np/Th/Pu/Am/U Prep											**08/22/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471		0.061	J	.041	pCi/g	1	0.057		08/23/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	-0.016		.036	pCi/g	1	0.068		08/23/11
Plutonium-239/240	PU-239/240	LA-508-471		0.038	J	.022	pCi/g	1	0.017		08/23/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.14		.042	pCi/g	1	0.011		08/23/11
Uranium-235	15117-96-1	LA-508-471		7.5E-3	J	.0076	pCi/g	1	5.1E-3		08/23/11
Uranium-238	U-238	LA-508-471		0.17		.048	pCi/g	1	4.1E-3		08/23/11
SR-89/90											**08/19/11**
SR-89/90											

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

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

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941014
SAF# F11-162
Sample ID B2H024

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		1.4	.72	pCi/g	1	0.41		08/23/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941015
SAF# F11-162
Sample ID B2H025

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/15/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		3.1		.42	pCi/g	1	0.031		08/16/11
Cobalt-60	10198-40-0	LA-508-481		0.030		.019	pCi/g	1	0.014		08/16/11
Europium-152	14683-23-9	LA-508-481		0.96		.085	pCi/g	1	0.098		08/16/11
Europium-154	15585-10-1	LA-508-481		0.10		.064	pCi/g	1	0.093		08/16/11
Europium-155	14391-16-3	LA-508-481	U	-0.038		.08	pCi/g	1	0.13		08/16/11
Np/Th/Pu/Am/U Prep											**08/23/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471		3.2	J	.81	pCi/g	1	0.063		08/24/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471		0.54	J	.13	pCi/g	1	0.018		08/24/11
Plutonium-239/240	PU-239/240	LA-508-471		3.8	J	.81	pCi/g	1	4.1E-3		08/24/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.18		.06	pCi/g	1	0.0050		08/24/11
Uranium-235	15117-96-1	LA-508-471		0.016		.012	pCi/g	1	5.5E-3		08/24/11
Uranium-238	U-238	LA-508-471		0.16		.053	pCi/g	1	0.017		08/24/11
SR-89/90											**08/22/11**
SR-89/90											

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

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

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WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941015
SAF# F11-162
Sample ID B2H025

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		2.1	J	1.1	pCi/g	1	0.45		08/24/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941016
SAF# F11-162
Sample ID B2H026

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/15/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		3.9		.52	pCi/g	1	0.10		08/16/11
Cobalt-60	10198-40-0	LA-508-481		0.65		.083	pCi/g	1	0.054		08/16/11
Europium-152	14683-23-9	LA-508-481		27		1.4	pCi/g	1	0.28		08/16/11
Europium-154	15585-10-1	LA-508-481		2.0		.28	pCi/g	1	0.16		08/16/11
Europium-155	14391-16-3	LA-508-481	U	0.013		.28	pCi/g	1	0.47		08/16/11
Np/Th/Pu/Am/U Prep											**08/23/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471		0.61	J	.17	pCi/g	1	0.066		08/24/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471		0.079	J	.029	pCi/g	1	0.024		08/24/11
Plutonium-239/240	PU-239/240	LA-508-471		0.79	J	.18	pCi/g	1	0.013		08/24/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.15		.051	pCi/g	1	0.014		08/24/11
Uranium-235	15117-96-1	LA-508-471		0.012		.01	pCi/g	1	5.5E-3		08/24/11
Uranium-238	U-238	LA-508-471		0.17		.056	pCi/g	1	5.1E-3		08/24/11
SR-89/90											**08/22/11**
SR-89/90											

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

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

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WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941016
SAF# F11-162
Sample ID B2H026

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		3.3	J	1.1	pCi/g	1	0.47		08/24/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941017
SAF# F11-162
Sample ID B2H027

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/15/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		3.4		.42	pCi/g	1	0.033		08/16/11
Cobalt-60	10198-40-0	LA-508-481	U	-2.1E-3		.016	pCi/g	1	0.028		08/16/11
Europium-152	14683-23-9	LA-508-481	U	-0.073		.081	pCi/g	1	0.12		08/16/11
Europium-154	15585-10-1	LA-508-481	U	-0.059		.046	pCi/g	1	0.071		08/16/11
Europium-155	14391-16-3	LA-508-481	U	-0.049		.1	pCi/g	1	0.17		08/16/11
Np/Th/Pu/Am/U Prep											**08/23/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471		0.69	J	.19	pCi/g	1	0.058		08/24/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471		0.094	J	.032	pCi/g	1	0.017		08/24/11
Plutonium-239/240	PU-239/240	LA-508-471		0.71	J	.16	pCi/g	1	4.2E-3		08/24/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.12		.044	pCi/g	1	0.015		08/24/11
Uranium-235	15117-96-1	LA-508-471		0.019		.015	pCi/g	1	0.016		08/24/11
Uranium-238	U-238	LA-508-471		0.16		.055	pCi/g	1	0.018		08/24/11
SR-89/90											**08/22/11**
SR-89/90											

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

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

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WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941017
SAF# F11-162
Sample ID B2H027

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		5.3	J	1.3	pCi/g	1	0.47		08/24/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941018
SAF# F11-162
Sample ID B2H050

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/15/11**
GEA											
Cesium-137	10045-97-3	LA-508-481	U	9.3E-3		.022	pCi/g	1	0.041		08/16/11
Cobalt-60	10198-40-0	LA-508-481	U	0.016		.019	pCi/g	1	0.037		08/16/11
Europium-152	14683-23-9	LA-508-481	U	-9.4E-3		.069	pCi/g	1	0.10		08/16/11
Europium-154	15585-10-1	LA-508-481	U	-2.2E-3		.063	pCi/g	1	0.12		08/16/11
Europium-155	14391-16-3	LA-508-481	U	0.019		.084	pCi/g	1	0.15		08/16/11
Np/Th/Pu/Am/U Prep											**08/23/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471	U	0.036	UJ	.034	pCi/g	1	0.053		08/24/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	1.5E-3	UJ	.0075	pCi/g	1	0.016		08/24/11
Plutonium-239/240	PU-239/240	LA-508-471		0.010	J	.0078	pCi/g	1	3.9E-3		08/24/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.16		.052	pCi/g	1	0.015		08/24/11
Uranium-235	15117-96-1	LA-508-471		0.013		.0099	pCi/g	1	4.9E-3		08/24/11
Uranium-238	U-238	LA-508-471		0.14		.047	pCi/g	1	0.012		08/24/11
SR-89/90											**08/22/11**
SR-89/90											

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

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

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WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941018
SAF# F11-162
Sample ID B2H050

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406	U	0.28	UJ	.99	pCi/g	1	0.47		08/24/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941019
SAF# F11-162
Sample ID B2H051

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/15/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		0.13		.036	pCi/g	1	0.029		08/16/11
Cobalt-60	10198-40-0	LA-508-481	U	-6.3E-3		.016	pCi/g	1	0.028		08/16/11
Europium-152	14683-23-9	LA-508-481	U	6.5E-3		.053	pCi/g	1	0.087		08/16/11
Europium-154	15585-10-1	LA-508-481	U	-6.4E-3		.051	pCi/g	1	0.091		08/16/11
Europium-155	14391-16-3	LA-508-481	U	0.082		.073	pCi/g	1	0.11		08/16/11
Np/Th/Pu/Am/U Prep											**08/23/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471	U	0.020	UJ	.027	pCi/g	1	0.044		08/24/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	4.8E-3	UJ	.011	pCi/g	1	0.019		08/24/11
Plutonium-239/240	PU-239/240	LA-508-471		9.7E-3	J	.0081	pCi/g	1	4.4E-3		08/24/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.13		.045	pCi/g	1	0.016		08/24/11
Uranium-235	15117-96-1	LA-508-471	U	0.011		.012	pCi/g	1	0.018		08/24/11
Uranium-238	U-238	LA-508-471		0.16		.051	pCi/g	1	4.7E-3		08/24/11
SR-89/90											**08/22/11**
SR-89/90											

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

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

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WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941019
SAF# F11-162
Sample ID B2H051

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406	U	0.48 UJ	.96	pCi/g	1	0.49		08/24/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941020
SAF# F11-162
Sample ID B2H054

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/15/11**
GEA											
Cesium-137	10045-97-3	LA-508-481	U	-3.2E-4		.0083	pCi/g	1	0.015		08/16/11
Cobalt-60	10198-40-0	LA-508-481	U	-2.6E-3		.0061	pCi/g	1	0.011		08/16/11
Europium-152	14683-23-9	LA-508-481	U	-0.016		.029	pCi/g	1	0.044		08/16/11
Europium-154	15585-10-1	LA-508-481	U	-8.4E-3		.022	pCi/g	1	0.038		08/16/11
Europium-155	14391-16-3	LA-508-481	U	-0.030		.035	pCi/g	1	0.057		08/16/11
Np/Th/Pu/Am/U Prep											**08/23/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471	U	4.7E-3	UJ	.031	pCi/g	1	0.057		08/24/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	1.5E-3	UJ	.0015	pCi/g	1	0.023		08/24/11
Plutonium-239/240	PU-239/240	LA-508-471		4.6E-3	J	.0054	pCi/g	1	4.2E-3		08/24/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.027		.019	pCi/g	1	0.023		08/24/11
Uranium-235	15117-96-1	LA-508-471	U	2.1E-3		.0072	pCi/g	1	0.015		08/24/11
Uranium-238	U-238	LA-508-471		0.017		.013	pCi/g	1	0.014		08/24/11
SR-89/90											**08/22/11**
SR-89/90											

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

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

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941020
SAF# F11-162
Sample ID B2H054

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406	U	0.35 UJ	1.1	pCi/g	1	0.54		08/24/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941021
SAF# F11-162
Sample ID B2H055

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/15/11**
GEA											
Cesium-137	10045-97-3	LA-508-481	U	-2.2E-3		.012	pCi/g	1	0.018		08/16/11
Cobalt-60	10198-40-0	LA-508-481	U	2.5E-3		.006	pCi/g	1	0.013		08/16/11
Europium-152	14683-23-9	LA-508-481	U	-0.021		.031	pCi/g	1	0.048		08/16/11
Europium-154	15585-10-1	LA-508-481	U	-0.018		.028	pCi/g	1	0.042		08/16/11
Europium-155	14391-16-3	LA-508-481	U	-1.8E-3		.04	pCi/g	1	0.068		08/16/11
Np/Th/Pu/Am/U Prep											**08/23/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471	U	0.024	UJ	.035	pCi/g	1	0.058		08/24/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	-1.4E-3	UJ	.0072	pCi/g	1	0.016		08/24/11
Plutonium-239/240	PU-239/240	LA-508-471		0.011	J	.0081	pCi/g	1	3.7E-3		08/24/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.021		.017	pCi/g	1	0.021		08/24/11
Uranium-235	15117-96-1	LA-508-471	U	9.6E-3		.01	pCi/g	1	0.014		08/24/11
Uranium-238	U-238	LA-508-471		0.028		.017	pCi/g	1	0.013		08/24/11
SR-89/90											**08/22/11**
SR-89/90											

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

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

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941021
SAF# F11-162
Sample ID B2H055

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406	U	0.48 UJ	.94	pCi/g	1	0.50		08/24/11

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

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U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976001
SAF# F11-162
Sample ID B2H028

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/17/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		0.53		.078	pCi/g	1	0.023		08/17/11
Cobalt-60	10198-40-0	LA-508-481	U	-6.2E-3		.011	pCi/g	1	0.019		08/17/11
Europium-152	14683-23-9	LA-508-481		0.12		.054	pCi/g	1	0.084		08/17/11
Europium-154	15585-10-1	LA-508-481	U	0.023		.038	pCi/g	1	0.072		08/17/11
Europium-155	14391-16-3	LA-508-481	U	-9.4E-3		.061	pCi/g	1	0.10		08/17/11
Np/Th/Pu/Am/U Prep											**08/24/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471		0.063	J	.027	pCi/g	1	0.022		08/25/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	-6.5E-3		.044	pCi/g	1	0.079		08/25/11
Plutonium-239/240	PU-239/240	LA-508-471		0.041	J	.024	pCi/g	1	0.026		08/25/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.15		.05	pCi/g	1	5.1E-3		08/25/11
Uranium-235	15117-96-1	LA-508-471		0.010		.0094	pCi/g	1	5.6E-3		08/25/11
Uranium-238	U-238	LA-508-471		0.14	J	.048	pCi/g	1	0.017		08/25/11
SR-89/90											**08/22/11**
SR-89/90											

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

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

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WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976001
SAF# F11-162
Sample ID B2H028

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		0.65	.9	pCi/g	1	0.45		08/25/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976002
SAF# F11-162
Sample ID B2H029

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/17/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		3.3		.43	pCi/g	1	0.059		08/17/11
Cobalt-60	10198-40-0	LA-508-481		0.11		.041	pCi/g	1	0.035		08/17/11
Europium-152	14683-23-9	LA-508-481		5.0		.34	pCi/g	1	0.18		08/17/11
Europium-154	15585-10-1	LA-508-481		0.48		.11	pCi/g	1	0.13		08/17/11
Europium-155	14391-16-3	LA-508-481	U	0.062		.15	pCi/g	1	0.26		08/17/11
Np/Th/Pu/Am/U Prep											**08/24/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471		0.28	J	.07	pCi/g	1	0.020		08/25/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	0.056		.043	pCi/g	1	0.064		08/25/11
Plutonium-239/240	PU-239/240	LA-508-471		0.27	J	.08	pCi/g	1	0.016		08/25/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.19		.061	pCi/g	1	0.013		08/25/11
Uranium-235	15117-96-1	LA-508-471		0.019		.013	pCi/g	1	5.3E-3		08/25/11
Uranium-238	U-238	LA-508-471		0.13	J	.044	pCi/g	1	4.8E-3		08/25/11
SR-89/90											**08/22/11**
SR-89/90											

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

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

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WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976002
SAF# F11-162
Sample ID B2H029

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		1.5	.82	pCi/g	1	0.44		08/25/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976003
SAF# F11-162
Sample ID B2H030

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/17/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		0.34		.068	pCi/g	1	0.034		08/17/11
Cobalt-60	10198-40-0	LA-508-481	U	9.4E-3		.018	pCi/g	1	0.034		08/17/11
Europium-152	14683-23-9	LA-508-481		0.27		.071	pCi/g	1	0.10		08/17/11
Europium-154	15585-10-1	LA-508-481	U	-0.020		.06	pCi/g	1	0.10		08/17/11
Europium-155	14391-16-3	LA-508-481	U	7.5E-4		.076	pCi/g	1	0.13		08/17/11
Np/Th/Pu/Am/U Prep											**08/24/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471		0.064	J	.023	pCi/g	1	0.012		08/25/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	0.047		.036	pCi/g	1	0.053		08/25/11
Plutonium-239/240	PU-239/240	LA-508-471		0.084	J	.034	pCi/g	1	0.025		08/25/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.15		.051	pCi/g	1	0.013		08/25/11
Uranium-235	15117-96-1	LA-508-471		0.014		.011	pCi/g	1	5.2E-3		08/25/11
Uranium-238	U-238	LA-508-471		0.16		.052	pCi/g	1	0.016		08/25/11
SR-89/90											**08/22/11**
SR-89/90											

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

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

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WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976003
SAF# F11-162
Sample ID B2H030

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		0.50	.81	pCi/g	1	0.44		08/25/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976004
SAF# F11-162
Sample ID B2H031

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/17/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		0.31		.057	pCi/g	1	0.031		08/17/11
Cobalt-60	10198-40-0	LA-508-481	U	7.8E-3		.015	pCi/g	1	0.029		08/17/11
Europium-152	14683-23-9	LA-508-481		0.19		.072	pCi/g	1	0.095		08/17/11
Europium-154	15585-10-1	LA-508-481	U	-0.032		.049	pCi/g	1	0.083		08/17/11
Europium-155	14391-16-3	LA-508-481	U	-7.1E-3		.09	pCi/g	1	0.15		08/17/11
Np/Th/Pu/Am/U Prep											**08/24/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471		0.027	J	.015	pCi/g	1	0.016		08/25/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	-0.019		.031	pCi/g	1	0.059		08/25/11
Plutonium-239/240	PU-239/240	LA-508-471	U	9.3E-3	UJ	.014	pCi/g	1	0.022		08/25/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.095	J	.036	pCi/g	1	0.017		08/25/11
Uranium-235	15117-96-1	LA-508-471		0.012		.01	pCi/g	1	5.4E-3		08/25/11
Uranium-238	U-238	LA-508-471		0.12	J	.042	pCi/g	1	0.013		08/25/11
SR-89/90											**08/22/11**
SR-89/90											

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

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

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WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976004
SAF# F11-162
Sample ID B2H031

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406	U	0.23	.72	pCi/g	1	0.41		08/25/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976005
SAF# F11-162
Sample ID B2H032

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/17/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		0.035		.02	pCi/g	1	0.025		08/17/11
Cobalt-60	10198-40-0	LA-508-481	U	4.6E-3		.012	pCi/g	1	0.023		08/17/11
Europium-152	14683-23-9	LA-508-481		0.095		.052	pCi/g	1	0.070		08/17/11
Europium-154	15585-10-1	LA-508-481	U	0.011		.038	pCi/g	1	0.070		08/17/11
Europium-155	14391-16-3	LA-508-481	U	0.037		.058	pCi/g	1	0.10		08/17/11
Np/Th/Pu/Am/U Prep											**08/24/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471	U	0.014	UJ	.012	pCi/g	1	0.017		08/25/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	5.1E-3		.026	pCi/g	1	0.047		08/25/11
Plutonium-239/240	PU-239/240	LA-508-471	U	6.8E-3	UJ	.0097	pCi/g	1	0.016		08/25/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.21		.066	pCi/g	1	0.017		08/25/11
Uranium-235	15117-96-1	LA-508-471	U	7.9E-3		.011	pCi/g	1	0.018		08/25/11
Uranium-238	U-238	LA-508-471		0.19		.061	pCi/g	1	4.9E-3		08/25/11
SR-89/90											**08/22/11**
SR-89/90											

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

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

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WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976005
SAF# F11-162
Sample ID B2H032

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		0.46	.79	pCi/g	1	0.42		08/25/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976006
SAF# F11-162
Sample ID B2H033

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/17/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		61		8	pCi/g	1	0.080		08/17/11
Cobalt-60	10198-40-0	LA-508-481		1.6		.14	pCi/g	1	0.033		08/17/11
Europium-152	14683-23-9	LA-508-481		12		.62	pCi/g	1	0.31		08/17/11
Europium-154	15585-10-1	LA-508-481		1.6		.26	pCi/g	1	0.12		08/17/11
Europium-155	14391-16-3	LA-508-481	U	0.29		.23	pCi/g	1	0.38		08/17/11
Np/Th/Pu/Am/U Prep											**08/24/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471		3.6	J	.76	pCi/g	1	0.017		08/25/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471		0.32		.079	pCi/g	1	0.012		08/25/11
Plutonium-239/240	PU-239/240	LA-508-471		2.9	J	.62	pCi/g	1	3.6E-3		08/25/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.22		.069	pCi/g	1	0.021		08/25/11
Uranium-235	15117-96-1	LA-508-471		0.017		.013	pCi/g	1	0.014		08/25/11
Uranium-238	U-238	LA-508-471		0.23		.071	pCi/g	1	0.013		08/25/11
SR-89/90											**08/22/11**
SR-89/90											

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

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

LS
9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976006
SAF# F11-162
Sample ID B2H033

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		0.94	.77	pCi/g	1	0.42		08/25/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976007
SAF# F11-162
Sample ID B2H034

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/17/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		4.3		.57	pCi/g	1	0.026		08/17/11
Cobalt-60	10198-40-0	LA-508-481	U	0.026		.017	pCi/g	1	0.030		08/17/11
Europium-152	14683-23-9	LA-508-481		0.18		.053	pCi/g	1	0.099		08/17/11
Europium-154	15585-10-1	LA-508-481	U	0.037		.041	pCi/g	1	0.079		08/17/11
Europium-155	14391-16-3	LA-508-481	U	0.035		.079	pCi/g	1	0.13		08/17/11
Np/Th/Pu/Am/U Prep											**08/24/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471		0.25	J	.067	pCi/g	1	0.016		08/25/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	0.030		.033	pCi/g	1	0.053		08/25/11
Plutonium-239/240	PU-239/240	LA-508-471		0.24	J	.074	pCi/g	1	0.013		08/25/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.12		.045	pCi/g	1	0.024		08/25/11
Uranium-235	15117-96-1	LA-508-471		0.017		.014	pCi/g	1	0.016		08/25/11
Uranium-238	U-238	LA-508-471		0.13	J	.046	pCi/g	1	0.015		08/25/11
SR-89/90											**08/22/11**
SR-89/90											

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

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

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976007
SAF# F11-162
Sample ID B2H034

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		6.6	1.1	pCi/g	1	0.44		08/25/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976008
SAF# F11-162
Sample ID B2H035

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		1.3	.18	pCi/g	1	0.036		08/17/11
Cobalt-60	10198-40-0	LA-508-481		0.062	.029	pCi/g	1	0.032		08/17/11
Europium-152	14683-23-9	LA-508-481		0.25	.073	pCi/g	1	0.12		08/17/11
Europium-154	15585-10-1	LA-508-481	U	0.039	.063	pCi/g	1	0.12		08/17/11
Europium-155	14391-16-3	LA-508-481	U	6.7E-3	.092	pCi/g	1	0.16		08/17/11
Np/Th/Pu/Am/U Prep										**08/24/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.17	.048	pCi/g	1	0.016		08/26/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471		0.066	.041	pCi/g	1	0.054		08/26/11
Plutonium-239/240	PU-239/240	LA-508-471		0.18	.059	pCi/g	1	0.025		08/26/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.16	.045	pCi/g	1	4.2E-3		08/25/11
Uranium-235	15117-96-1	LA-508-471		5.7E-3	.0066	pCi/g	1	5.1E-3		08/25/11
Uranium-238	U-238	LA-508-471		0.15	.043	pCi/g	1	4.1E-3		08/25/11
SR-89/90										**08/23/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976008
SAF# F11-162
Sample ID B2H035

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		1.7	J	.92	pCi/g	1	0.48		08/25/11

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9-20-2011

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976009
SAF# F11-162
Sample ID B2H036

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.11	.037	pCi/g	1	0.029		08/17/11
Cobalt-60	10198-40-0	LA-508-481	U	8.2E-3	.017	pCi/g	1	0.033		08/17/11
Europium-152	14683-23-9	LA-508-481	U	0.037	.061	pCi/g	1	0.094		08/17/11
Europium-154	15585-10-1	LA-508-481	U	5.7E-3	.05	pCi/g	1	0.093		08/17/11
Europium-155	14391-16-3	LA-508-481	U	-0.026	.087	pCi/g	1	0.15		08/17/11
Np/Th/Pu/Am/U Prep										**08/24/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.036	.017	pCi/g	1	0.013		08/26/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	-0.0020	.035	pCi/g	1	0.064		08/26/11
Plutonium-239/240	PU-239/240	LA-508-471		0.032	.021	pCi/g	1	0.024		08/26/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.22	.059	pCi/g	1	0.012		08/25/11
Uranium-235	15117-96-1	LA-508-471		0.014	.011	pCi/g	1	5.3E-3		08/25/11
Uranium-238	U-238	LA-508-471		0.26	.069	pCi/g	1	4.2E-3		08/25/11
SR-89/90										**08/23/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976009
SAF# F11-162
Sample ID B2H036

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		0.51 J	.89	pCi/g	1	0.49		08/25/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976010
SAF# F11-162
Sample ID B2H037

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.66	.1	pCi/g	1	0.037		08/17/11
Cobalt-60	10198-40-0	LA-508-481	U	-7.1E-3	.02	pCi/g	1	0.036		08/17/11
Europium-152	14683-23-9	LA-508-481	U	0.044	.085	pCi/g	1	0.12		08/17/11
Europium-154	15585-10-1	LA-508-481	U	0.019	.068	pCi/g	1	0.13		08/17/11
Europium-155	14391-16-3	LA-508-481	U	0.037	.09	pCi/g	1	0.16		08/17/11
Np/Th/Pu/Am/U Prep										**08/24/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.035	.017	pCi/g	1	0.015		08/26/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	0.020	.035	pCi/g	1	0.061		08/26/11
Plutonium-239/240	PU-239/240	LA-508-471	U	0.013	.014	pCi/g	1	0.020		08/26/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.21	.057	pCi/g	1	0.013		08/25/11
Uranium-235	15117-96-1	LA-508-471		0.019	.013	pCi/g	1	5.8E-3		08/25/11
Uranium-238	U-238	LA-508-471		0.22	.06	pCi/g	1	4.7E-3		08/25/11
SR-89/90										**08/23/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976010
SAF# F11-162
Sample ID B2H037

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406	U	-0.18	.85	pCi/g	1	0.47		08/25/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976011
SAF# F11-162
Sample ID B2H052

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		8.2	1	pCi/g	1	0.046		08/17/11
Cobalt-60	10198-40-0	LA-508-481	U	9.3E-3	.021	pCi/g	1	0.038		08/17/11
Europium-152	14683-23-9	LA-508-481	U	0.068	.11	pCi/g	1	0.17		08/17/11
Europium-154	15585-10-1	LA-508-481	U	0.032	.062	pCi/g	1	0.11		08/17/11
Europium-155	14391-16-3	LA-508-481	U	0.033	.11	pCi/g	1	0.19		08/17/11
Np/Th/Pu/Am/U Prep										**08/24/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.28	.072	pCi/g	1	0.018		08/26/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	0.024	.032	pCi/g	1	0.052		08/26/11
Plutonium-239/240	PU-239/240	LA-508-471		0.28	.082	pCi/g	1	0.012		08/26/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.15	.045	pCi/g	1	4.5E-3		08/25/11
Uranium-235	15117-96-1	LA-508-471		0.010	.0093	pCi/g	1	5.5E-3		08/25/11
Uranium-238	U-238	LA-508-471		0.17	.049	pCi/g	1	4.5E-3		08/25/11
SR-89/90										**08/23/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976011
SAF# F11-162
Sample ID B2H052

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		5.8	1.1	pCi/g	1	0.46		08/25/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976012
SAF# F11-162
Sample ID B2H056

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/17/11**
GEA											
Cesium-137	10045-97-3	LA-508-481	U	3.4E-3		.014	pCi/g	1	0.023		08/17/11
Cobalt-60	10198-40-0	LA-508-481	U	-2.1E-3		.0096	pCi/g	1	0.015		08/17/11
Europium-152	14683-23-9	LA-508-481	U	-0.017		.042	pCi/g	1	0.059		08/17/11
Europium-154	15585-10-1	LA-508-481	U	1.2E-3		.034	pCi/g	1	0.064		08/17/11
Europium-155	14391-16-3	LA-508-481	U	0.046		.057	pCi/g	1	0.10		08/17/11
Np/Th/Pu/Am/U Prep											**08/24/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471	U	0.013		.014	pCi/g	1	0.021		08/26/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	0.049		.039	pCi/g	1	0.057		08/26/11
Plutonium-239/240	PU-239/240	LA-508-471		0.076		.032	pCi/g	1	0.018		08/26/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.015	J	.01	pCi/g	1	4.1E-3		08/25/11
Uranium-235	15117-96-1	LA-508-471	U	3.7E-3		.0054	pCi/g	1	5.1E-3		08/25/11
Uranium-238	U-238	LA-508-471		0.024	J	.014	pCi/g	1	0.011		08/25/11
SR-89/90											**08/23/11**
SR-89/90											

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

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

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976012
SAF# F11-162
Sample ID B2H056

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		0.40 J+	.64	pCi/g	1	0.30		08/25/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982001
SAF# F11-162
Sample ID B2H038

Matrix SOIL
Sampled 08/16/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		3.1	.39	pCi/g	1	0.036		08/18/11
Cobalt-60	10198-40-0	LA-508-481	U	3.8E-3	.017	pCi/g	1	0.028		08/18/11
Europium-152	14683-23-9	LA-508-481		0.15	.098	pCi/g	1	0.13		08/18/11
Europium-154	15585-10-1	LA-508-481	U	-0.048	.071	pCi/g	1	0.099		08/18/11
Europium-155	14391-16-3	LA-508-481	U	0.035	.082	pCi/g	1	0.14		08/18/11
Np/Th/Pu/Am/U Prep										**08/26/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.048	.045	pCi/g	1	0.070		08/29/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	-5.7E-3	.038	pCi/g	1	0.069		08/29/11
Plutonium-239/240	PU-239/240	LA-508-471		0.075 J	.031	pCi/g	1	0.018		08/29/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.13	.04	pCi/g	1	0.012		08/29/11
Uranium-235	15117-96-1	LA-508-471	U	0.014	.012	pCi/g	1	0.015		08/29/11
Uranium-238	U-238	LA-508-471		0.15	.044	pCi/g	1	4.3E-3		08/29/11
SR-89/90										**08/24/11**
SR-89/90										

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

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

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982001
SAF# F11-162
Sample ID B2H038

Matrix SOIL
Sampled 08/16/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		0.69 J+	.74	pCi/g	1	0.25		08/26/11

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9-20-2011

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982002
SAF# F11-162
Sample ID B2H039

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/17/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		2.1		.26	pCi/g	1	0.034		08/18/11
Cobalt-60	10198-40-0	LA-508-481		0.054		.021	pCi/g	1	0.031		08/18/11
Europium-152	14683-23-9	LA-508-481		0.65		.088	pCi/g	1	0.11		08/18/11
Europium-154	15585-10-1	LA-508-481	U	0.020		.057	pCi/g	1	0.11		08/18/11
Europium-155	14391-16-3	LA-508-481	U	-6.2E-3		.1	pCi/g	1	0.18		08/18/11
Np/Th/Pu/Am/U Prep											**08/26/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471		0.13		.055	pCi/g	1	0.059		08/29/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	0.048		.035	pCi/g	1	0.051		08/29/11
Plutonium-239/240	PU-239/240	LA-508-471		0.096	J	.037	pCi/g	1	0.026		08/29/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.18		.049	pCi/g	1	0.0040		08/29/11
Uranium-235	15117-96-1	LA-508-471		0.011		.009	pCi/g	1	4.9E-3		08/29/11
Uranium-238	U-238	LA-508-471		0.17		.047	pCi/g	1	0.0040		08/29/11
SR-89/90											**08/24/11**
SR-89/90											

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

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

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982002
SAF# F11-162
Sample ID B2H039

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		0.95	.87	pCi/g	1	0.38		08/26/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982003
SAF# F11-162
Sample ID B2H040

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/17/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		3.7		.5	pCi/g	1	0.030		08/18/11
Cobalt-60	10198-40-0	LA-508-481		0.071		.017	pCi/g	1	0.023		08/18/11
Europium-152	14683-23-9	LA-508-481		0.53		.067	pCi/g	1	0.10		08/18/11
Europium-154	15585-10-1	LA-508-481	U	0.043		.044	pCi/g	1	0.084		08/18/11
Europium-155	14391-16-3	LA-508-481	U	0.024		.078	pCi/g	1	0.13		08/18/11
Np/Th/Pu/Am/U Prep											**08/26/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471		0.082		.044	pCi/g	1	0.056		08/29/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	0.019		.035	pCi/g	1	0.059		08/29/11
Plutonium-239/240	PU-239/240	LA-508-471		0.10	J	.04	pCi/g	1	0.023		08/29/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.17		.05	pCi/g	1	0.012		08/29/11
Uranium-235	15117-96-1	LA-508-471		0.017		.012	pCi/g	1	5.6E-3		08/29/11
Uranium-238	U-238	LA-508-471		0.16		.047	pCi/g	1	4.5E-3		08/29/11
SR-89/90											**08/24/11**
SR-89/90											

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

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

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982003
SAF# F11-162
Sample ID B2H040

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		1.5	.92	pCi/g	1	0.38		08/26/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982004
SAF# F11-162
Sample ID B2H041

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/17/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		0.49		.079	pCi/g	1	0.033		08/18/11
Cobalt-60	10198-40-0	LA-508-481		0.051		.018	pCi/g	1	0.026		08/18/11
Europium-152	14683-23-9	LA-508-481		2.2		.14	pCi/g	1	0.090		08/18/11
Europium-154	15585-10-1	LA-508-481		0.22		.084	pCi/g	1	0.086		08/18/11
Europium-155	14391-16-3	LA-508-481	U	-0.012		.092	pCi/g	1	0.15		08/18/11
Np/Th/Pu/Am/U Prep											**08/26/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471	U	0.054		.041	pCi/g	1	0.061		08/29/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	-3.8E-3		.028	pCi/g	1	0.052		08/29/11
Plutonium-239/240	PU-239/240	LA-508-471		0.060	J	.027	pCi/g	1	0.020		08/29/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.18		.051	pCi/g	1	4.5E-3		08/29/11
Uranium-235	15117-96-1	LA-508-471		0.018		.013	pCi/g	1	5.5E-3		08/29/11
Uranium-238	U-238	LA-508-471		0.18		.051	pCi/g	1	4.4E-3		08/29/11
SR-89/90											**08/24/11**
SR-89/90											

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

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

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982004
SAF# F11-162
Sample ID B2H041

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		0.39	.82	pCi/g	1	0.38		08/26/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982005
SAF# F11-162
Sample ID B2H042

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		55	7.3	pCi/g	1	0.059		08/18/11
Cobalt-60	10198-40-0	LA-508-481		0.20	.031	pCi/g	1	0.026		08/18/11
Europium-152	14683-23-9	LA-508-481		2.1	.16	pCi/g	1	0.27		08/18/11
Europium-154	15585-10-1	LA-508-481		0.68	.16	pCi/g	1	0.085		08/18/11
Europium-155	14391-16-3	LA-508-481	U	0.044	.18	pCi/g	1	0.30		08/18/11
Np/Th/Pu/Am/U Prep										**08/26/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		11	2.8	pCi/g	1	0.053		08/29/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471		1.6	.36	pCi/g	1	4.2E-3		08/29/11
Plutonium-239/240	PU-239/240	LA-508-471		12 J	2.6	pCi/g	1	0.014		08/29/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.14	.043	pCi/g	1	0.017		08/29/11
Uranium-235	15117-96-1	LA-508-471		0.011	.01	pCi/g	1	0.0060		08/29/11
Uranium-238	U-238	LA-508-471		0.15	.047	pCi/g	1	4.8E-3		08/29/11
SR-89/90										**08/24/11**
SR-89/90										

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

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

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982005
SAF# F11-162
Sample ID B2H042

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		26	3.3	pCi/g	1	0.42		08/26/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982006
SAF# F11-162
Sample ID B2H043

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/17/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		10		1.2	pCi/g	1	0.042		08/18/11
Cobalt-60	10198-40-0	LA-508-481	U	2.4E-3		.016	pCi/g	1	0.030		08/18/11
Europium-152	14683-23-9	LA-508-481	U	8.8E-3		.1	pCi/g	1	0.18		08/18/11
Europium-154	15585-10-1	LA-508-481	U	0.059		.056	pCi/g	1	0.11		08/18/11
Europium-155	14391-16-3	LA-508-481	U	-0.014		.14	pCi/g	1	0.23		08/18/11
Np/Th/Pu/Am/U Prep											**08/26/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471		0.87		.24	pCi/g	1	0.056		08/29/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471		0.14		.054	pCi/g	1	0.054		08/29/11
Plutonium-239/240	PU-239/240	LA-508-471		0.94	J	.25	pCi/g	1	0.013		08/29/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.12		.038	pCi/g	1	0.011		08/29/11
Uranium-235	15117-96-1	LA-508-471	U	7.3E-3		.0089	pCi/g	1	0.013		08/29/11
Uranium-238	U-238	LA-508-471		0.13	J	.039	pCi/g	1	0.011		08/29/11
SR-89/90											**08/24/11**
SR-89/90											

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

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

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982006
SAF# F11-162
Sample ID B2H043

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		6.2	1.2	pCi/g	1	0.36		08/26/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982007
SAF# F11-162
Sample ID B2H044

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/17/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		3.8		.5	pCi/g	1	0.025		08/18/11
Cobalt-60	10198-40-0	LA-508-481		0.031		.017	pCi/g	1	0.020		08/18/11
Europium-152	14683-23-9	LA-508-481		0.17		.043	pCi/g	1	0.089		08/18/11
Europium-154	15585-10-1	LA-508-481	U	4.1E-3		.036	pCi/g	1	0.063		08/18/11
Europium-155	14391-16-3	LA-508-481	U	2.5E-4		.067	pCi/g	1	0.11		08/18/11
Np/Th/Pu/Am/U Prep											**08/26/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471		0.37		.11	pCi/g	1	0.060		08/29/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	0.038		.036	pCi/g	1	0.056		08/29/11
Plutonium-239/240	PU-239/240	LA-508-471		0.30	J	.089	pCi/g	1	0.014		08/29/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.12		.036	pCi/g	1	0.0040		08/29/11
Uranium-235	15117-96-1	LA-508-471		0.014		.01	pCi/g	1	4.9E-3		08/29/11
Uranium-238	U-238	LA-508-471		0.15		.043	pCi/g	1	0.014		08/29/11
SR-89/90											**08/24/11**
SR-89/90											

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

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

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9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982007
SAF# F11-162
Sample ID B2H044

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		2.6	.86	pCi/g	1	0.36		08/26/11

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982008
SAF# F11-162
Sample ID B2H045

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep											**08/17/11**
GEA											
Cesium-137	10045-97-3	LA-508-481		3.3		.44	pCi/g	1	0.029		08/18/11
Cobalt-60	10198-40-0	LA-508-481		0.15		.026	pCi/g	1	0.021		08/18/11
Europium-152	14683-23-9	LA-508-481		0.47		.059	pCi/g	1	0.088		08/18/11
Europium-154	15585-10-1	LA-508-481	U	0.073		.045	pCi/g	1	0.077		08/18/11
Europium-155	14391-16-3	LA-508-481	U	0.075		.075	pCi/g	1	0.13		08/18/11
Np/Th/Pu/Am/U Prep											**08/26/11**
AEA Am-U-Pu											
Americium-241	14596-10-2	LA-508-471		0.26		.086	pCi/g	1	0.064		08/29/11
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471		0.056		.029	pCi/g	1	0.031		08/29/11
Plutonium-239/240	PU-239/240	LA-508-471		0.42	J	.12	pCi/g	1	0.018		08/29/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471		0.12		.036	pCi/g	1	3.9E-3		08/29/11
Uranium-235	15117-96-1	LA-508-471		0.011		.0088	pCi/g	1	4.8E-3		08/29/11
Uranium-238	U-238	LA-508-471		0.16		.046	pCi/g	1	3.9E-3		08/29/11
SR-89/90											**08/24/11**
SR-89/90											

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

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

LS
9-20-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982008
SAF# F11-162
Sample ID B2H045

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium-89/90	SR-RAD	LA-220-406		8.7	1.4	pCi/g	1	0.37		08/26/11

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

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

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Attachment 2
Narrative
WSCF112941

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

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.

Attachment 2
Narrative
WSCF112941

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):

- Batch 188260
  - Vanadium and Copper – 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.

Radiochemistry Comments

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

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- Gamma Energy Analysis:
  - Europium-154 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - All other applicable QC controls are within the established limits.
- Americium-241:
  - Batch QC 188274
    - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Batch QC 188270
    - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Batch QC 188273
    - Americium-243 Tracer – The tracer did not meet the established laboratory limits for sample B2H014 (112941004). No flags issued on sample results. The quality control report was flagged for the failure.
    - All other applicable QC controls are within the established limits.

Attachment 2
Narrative
WSCF112941

- Isotopic Plutonium analysis:
  - Batch QC 188273
    - Plutonium-239/240 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Batch QC 188274
    - Plutonium-239/240 – The duplicate is outside of default RPD limits. RPD limit does not apply to results with greater than 20% counting uncertainty.
  - Batch QC 188370
    - Plutonium-239/240 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
    - All other applicable QC controls are within the established limits.
- Isotopic Uranium analysis:
  - Batch QC 188273
    - Uranium-234 and Uranium-238 – The Blank is less than five times the MDC. "B" Flag not required.
    - Uranium-234 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
  - Batch QC 188274
    - Uranium-234, Uranium-235 and Uranium-238 – The Blank is less than five times the MDC. "B" Flag not required.
    - Uranium-235 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - Uranium-238 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.

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

- Strontium-89/90:
  - Batch QC 188376
    - The Blank is less than two times the RDL. "B" Flag not required.
  - Batch QC 188377
    - The duplicate is outside of default RPD limits. RPD limit does not apply to results with greater than 20% counting uncertainty.
    - 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** — F11-162-001 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #1	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-17	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis CKI applies to this CAF

PRESERVATION	Cool~4C	Cool~4C	None	None	
HOLDING TIME	6 Months	30 Days	6 Months	6 Months	
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P	
NO. OF CONTAINER(S)	1	1	1	1	
VOLUME	250mL	60mL	500mL	120mL	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2H011 001	SOIL	8/12/11	0757	✓	✓ ✓ ✓

112941

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: FM Hall CHPRC	DATE/TIME: 8/12/11 1330	RECEIVED BY/STORED IN: Rebecca Abby	DATE/TIME: 8/12/11 1330
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

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-002 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 AG Verification Sample #2

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: 6WS-17

FIELD LOGBOOK NO.: HNF-N-507-23.

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	B2H012 002			
MATRIX*	SOIL			
SAMPLE DATE / SAMPLE TIME	8/12/11 0805			

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	Kbearood	8/12/11 1330

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-003 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	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 AG Verification Sample #3	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-807-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2H013 003	SOIL	8/12/11	0825	✓ ✓ ✓ ✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: FM Hall CHPRC	DATE/TIME: 8/12/11 1330	RECEIVED BY/STORED IN: Mercedes Herrera	DATE/TIME: 8/12/11 1330
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

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-162-004	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 AG Verification Sample #4	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162	AIR QUALITY: ☐	
ICE CHEST NO.: GWS - 17	FIELD LOGBOOK NO.: HNF-N-807-33	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10	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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION		Cool~4C	Cool~4C	None	None
HOLDING TIME		6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER		G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)		1	1	1	1
VOLUME		250mL	60mL	500mL	120mL
SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2H014 004	SOIL	8/12/11	0903	✓	✓ ✓ ✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: FM Hall CHPRC	DATE/TIME: 8/12/11 1330	RECEIVED BY/STORED IN: [signature]	DATE/TIME: 8/12/11 1330
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

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

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

F11-162-005 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #5	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GW3-017	FIELD LOGBOOK NO.: HNF-N-807-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H015 005	SOIL	8/12/11	0932	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[illegible]	8/12/11 1330

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-162-006	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 AG Verification Sample #6	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162	AIR QUALITY: ☐	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10	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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis CVI applies to this COC

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H016	005	SOIL	8/12/11	0944	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: FM Hall CHPRC	DATE/TIME: 8/12/11 1330	RECEIVED BY/STORED IN: [signature]	DATE/TIME: 8/12/11 1330
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

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-007 — 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 AG Verification Sample #7	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil
SAF NO.: F11-162	AIR QUALITY: ☐	ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23.
ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10	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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis / QA applies to this EAI

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H017 007	SOIL	8/12/11	0954	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[illegible]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 – Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-008 — PAGE 1 OF 1

COLLECTOR	FM Hall CHPRC
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 AG Verification Sample #8
PROJECT DESIGNATION	Area AG Sampling (Waste Area AG) Verification Sampling - Soil
SAF NO.	F11-162
ICE CHEST NO.	GWS-017
FIELD LOGBOOK NO.	HNF-~~N-807~~-23.
ACTUAL SAMPLE DEPTH	0-1'
COA	302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION			Cool~4C	Cool~4C	None	None	
HOLDING TIME			6 Months	30 Days	6 Months	6 Months	
TYPE OF CONTAINER			G/P	G/P	Square Bottle - Poly	G/P	
NO. OF CONTAINER(S)			1	1	1	1	
VOLUME			250mL	60mL	500mL	120mL	
SAMPLE ANALYSIS			SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H018 008	SOIL	8/12/11	1010	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	UBerrod & Boyn	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-009 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #9	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23.	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /19/;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	B2H019 009	B2H019 009	B2H019 009	B2H019 009
MATRIX*	SOIL	SOIL	SOIL	SOIL
SAMPLE DATE	8/12/11	8/12/11	8/12/11	8/12/11
SAMPLE TIME	1034	1034	1034	1034

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[illegible]	8/12/11 1330

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 – Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-010 — PAGE 1 OF 1

COLLECTOR: FM Hall, CHPRC	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 AG Verification Sample #10	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302577ES10
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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Coo~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H020 DID	SOIL	8/12/11	1040	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	Vbarnard / Bleyl	8/12/11 1330

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

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

F11-162-011 — PAGE 1 OF 1

COLLECTOR: FM Hall	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: CHPRC	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23.	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H021	011	SOIL	8/12/11	1049	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[signature]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-012 | 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 AG Verification Sample #12

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: GW3-017 HNF-N-507 8/12/11

FIELD LOGBOOK NO.: HNF-N-507-23

ACTUAL SAMPLE DEPTH: 0 - 1'

COA: 302677ES10

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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None	
HOLDING TIME	6 Months	30 Days	6 Months	6 Months	
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P	
NO. OF CONTAINER(S)	1	1	1	1	
VOLUME	250mL	60mL	500mL	120mL	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	
SAMPLE NO. / MATRIX*		SAMPLE DATE / SAMPLE TIME			
B2H022 8/2 / SOIL		8/12/11 1058	✓	✓	✓ ✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: FM Hall CHPRC	DATE/TIME: 8/12/11 1330	RECEIVED BY/STORED IN: V Brazeau	DATE/TIME: 8/12/11 1330
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

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-013

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 AG Verification Sample #13

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: GWS-017

FIELD LOGBOOK NO.: RNF-N-507-23

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B2H023 03	SOIL	8/12/11	1109

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	KBKazad	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-014 PAGE 1 OF 1

COLLECTOR	FM Hall CHPRC
SAMPLING LOCATION	Area AG Verification Sample #14
ICE CHEST NO.	GWS-017
SHIPPED TO	Waste Sampling & Characterization
COMPANY CONTACT	LUKE, SN
TELEPHONE NO.	372-1667
PROJECT COORDINATOR	LUKE, SN
PRICE CODE	C01
DATA TURNAROUND	12 Days / 12 Days
AIR QUALITY	☐
PROJECT DESIGNATION	Area AG Sampling (Waste Area AG) Verification Sampling - Soil
SAF NO.	F11-162
FIELD LOGBOOK NO.	HNF-N-607-23.
ACTUAL SAMPLE DEPTH	0-1'
COA	302677ES10
METHOD OF SHIPMENT	GOVERNMENT VEHICLE
ORIGINAL	
OFFSITE PROPERTY NO.	N/A
BILL OF LADING/AIR BILL NO.	N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
** The CACN for WSCF Analytical is <02580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis CKT applies to this CAF

PRESERVATION	Cool-4C	Cool-4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H024 014	SOIL	8/12/11	1127	✓	✓	✓	—

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[signature]	8/12/11 1330

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-015 | 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 / 11 Days

SAMPLING LOCATION: Area AG Verification Sample #15

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: GWS-017

FIELD LOGBOOK NO.: HNF-N-507-23.

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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
** The CACN for WSCF Analytical is 402580ES20.D** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis CKT applies to this SAF.

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H026 015	SOIL	8/12/11	1136	✓	✓	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[illegible]	8/12/11 1330

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

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

F11-162-016 — 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 AG Verification Sample #16

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-152

AIR QUALITY: ☐

ICE CHEST NO.: GWS-017

FIELD LOGBOOK NO.: HNF-N-507-23

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H026	016	SOIL	8/12/11	1146	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	M. Nelson	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-017 | PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #17	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Samping - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool-4C	Cool-4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/F	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H027 017	SOIL	8/12/11	1155	✓	✓	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	M. Nelson	8/12/11 1330

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-040 | 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 AG Verification Sample #40

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: 1

ICE CHEST NO.: GWS-017

FIELD LOGBOOK NO.: HNF-N-507-23

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None	
HOLDING TIME	6 Months	30 Days	6 Months	6 Months	
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P	
NO. OF CONTAINER(S)	1	1	1	1	
VOLUME	250mL	60mL	500mL	120mL	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2H050 018	SOIL	8/12/11	0805	✓	— ✓ ✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. Hall	8/12/11 1330	[illegible]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

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

F11-162-041 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #41	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: C01 — DATA TURNAROUND: 12 Days / 12 Days

AIR QUALITY: ☐ — 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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B2H051 019	SOIL	8/12/11	1058

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: FM Hall	DATE/TIME: 8/12/11 1330	RECEIVED BY/STORED IN: [signature]	DATE/TIME: 8/12/11 1330
RELINQUISHED BY/REMOVED FROM: UNFRL	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

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-044

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 AG Verification Sample #44

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: 6W3-017

FIELD LOGBOOK NO.: HNF-N-507-23

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis CKI applies to this CAF.

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H054 020	SOIL	8/12/11	0740	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[signature]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-045 — 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 AG Verification Sample #45	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	AIR QUALITY: ☐
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23.	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H055 02	SOIL	8/12/11	1022	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1330	[illegible]	8/12/11 1330

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Attachment 2
Narrative
WSCF112976

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

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.

Attachment 2
Narrative
WSCF112976

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 – MS / MSD Relative Percent Difference (RPD) is outside established laboratory limits. The quality control report was flagged for RPD failure.
- All other applicable QC controls are within the established limits.

Radiochemistry Comments

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

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- Gamma Energy Analysis:
  - All applicable QC controls are within the established limits.
- Americium-241:
  - Batch QC 188371
    - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - All other applicable QC controls are within the established limits.
- Isotopic Plutonium analysis:
  - Batch QC 188371
    - Plutonium-239/240 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - All other applicable QC controls are within the established limits.
- Isotopic Uranium analysis:
  - Batch QC 188371

- Uranium-234 and Uranium-238 – The Blank is less than five times the MDC. "B" Flag not required.

- Batch QC 188372
  - Uranium-234 and Uranium-238 – The Blank is less than five times the MDC. "B" Flag not required.
  - Uranium-235 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - All other applicable QC controls are within the established limits.

- Strontium-89/90:
  - Batch QC 188379
    - The Blank is less than two times the RDL. "B" Flag not required.
    - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
    - The Tracer for Sample B2H056 (112976012) did not meet established laboratory acceptance limits.
    - 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

F11-162-018 | PAGE 1 OF 1

COLLECTOR	FM Hall CHPRC
SAMPLING LOCATION	Area AG Verification Sample #18
ICE CHEST NO.	GWS-017
SHIPPED TO	Waste Sampling & Characterization
COMPANY CONTACT	LUKE, SN
TELEPHONE NO.	372-1667
PROJECT COORDINATOR	LUKE, SN
PROJECT DESIGNATION	Area AG Sampling (Waste Area AG) Verification Sampling - Soil
SAF NO.	F11-162
FIELD LOGBOOK NO.	HNF-N-507-23
ACTUAL SAMPLE DEPTH	0-1'
COA	302677ES10
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)

112976

SPECIAL HANDLING AND/OR STORAGE
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION		Cool<4C	Cool<4C	None	None
HOLDING TIME		6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER		G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)		1	1	1	1
VOLUME		250mL	60mL	500mL	120mL
SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2H028	1 SOIL	8/16/11	0836	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M. Nelson	8/16/11 1420

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Tuesday, August 16, 2011 3:40:08 PM
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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-019 — 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	AIR QUALITY: ☐	SAF NO.: F11-162
SAMPLING LOCATION: Area AG Verification Sample #19	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-607-23.	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE DATE / SAMPLE TIME	8/16/11 0848	✓	✓	✓

SAMPLE NO.		MATRIX*
B2H029	2	SOIL

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1430	M. Nelson M. Nelson	8/16/11 1430

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-020 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	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 AG Verification Sample #20	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H030	3	SOIL	8/16/11	0858	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M Nelson M.Nelson	8/16/11 1420

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-021 — 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 AG Verification Sample #21	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	AIR QUALITY: ☐
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250ml.	60ml.	500ml.	120ml.
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H031	4 SOIL	8/16/11	0904	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M. Nelson	8/16/11 1420

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-022 — PAGE 1 OF 1

COLLECTOR: FM Hall, CHPRC	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 AG Verification Sample #22	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23.	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/F	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 219;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H032	5	SOIL	8/16/11	0919	/	/	/	/

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M. Nelson	8/16/11 1420

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-023

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 AG Verification Sample #23

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: GWS-017

FIELD LOGBOOK NO.: HNF-N-507-23.

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677E510

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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME	[redacted]			
B2H033	6	SOIL	8/16/11	0938	✓	✓	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M Nelson M.Nelson	8/16/11 1420

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt 60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-162-024 — PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	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 AG Verification Sample #24	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-807-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis CX1 applies to this CN.

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H034	7	SOIL	8/16/11	1014	✓	✓	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M. Nelson M. Nelson	8/16/11 1420

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011 — A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-025 PAGE 1 OF 1

COLLECTOR	FM Hall CHPRC
SAMPLING LOCATION	Area AG Verification Sample #25
ICE CHEST NO.	GW3-017
SHIPPED TO	Waste Sampling & Characterization
COMPANY CONTACT	LUKE, SN
TELEPHONE NO.	372-1667
PROJECT COORDINATOR	LUKE, SN
PROJECT DESIGNATION	Area AG Sampling (Waste Area AG) Verification Sampling - Soil
SAF NO.	F11-162
FIELD LOGBOOK NO.	HNF-N-807-23.
ACTUAL SAMPLE DEPTH	0-1'
COA	302677ES10
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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /19%	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H035 8	SOIL	8/16/11	1022	✓	✓	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1400	M. Nelson	8/16/11 1400

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-026

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 AG Verification Sample #26	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	AIR QUALITY
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23.	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /1%;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE DATE	8/16/11	8/16/11	8/16/11	8/16/11
SAMPLE TIME	1031	1031	1031	1031

SAMPLE NO.		MATRIX*
B2H036	9	SOIL

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M. Nelson M. Nelson	8/16/11 1420

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-027 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 AG Verification Sample #27

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: GWS-017

FIELD LOGBOOK NO.: HNF-N-507-23

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE DATE / SAMPLE TIME	8/16/11 1041	✓	✓	✓

SAMPLE NO.		MATRIX*
B2H037	10	SOIL

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M Nelson M.Nelson	8/16/11 1420

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-042 PAGE 1 OF 1

ORIGINAL

COLLECTOR	FM Hall CHPRC
SAMPLING LOCATION	Area AG Verification Sample #42
ICE CHEST NO.	GWS-017
SHIPPED TO	Waste Sampling & Characterization
COMPANY CONTACT	LUKE, SN
TELEPHONE NO.	372-1667
PROJECT DESIGNATION	Area AG Sampling (Waste Area AG) Verification Sampling - Soil
FIELD LOGBOOK NO.	HNF-N-507-23
ACTUAL SAMPLE DEPTH	0-1'
OFFSITE PROPERTY NO.	N/A
PROJECT COORDINATOR	LUKE, SN
SAF NO.	F11-162
COA	302677ES10
BILL OF LADING/AIR BILL NO.	N/A
PRICE CODE	C01
AIR QUALITY	☐
DATA TURNAROUND	12 Days / 12 Days
METHOD OF SHIPMENT	GOVERNMENT VEHICLE

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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H052	11	SOIL	8/16/11	1011	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M.Nelson K.Nds	8/16/11 1420

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-046

PAGE 1 OF 1

COLLECTOR	FM Hall CHPRC
SAMPLING LOCATION	Area AG Verification Sample #46
ICE CHEST NO.	GWS-017
SHIPPED TO	Waste Sampling & Characterization
COMPANY CONTACT	LUKE, SN
TELEPHONE NO.	372-1667
PROJECT DESIGNATION	Area AG Sampling (Waste Area AG) Verification Sampling - Soil
FIELD LOGBOOK NO.	HNF-N-507-23
ACTUAL SAMPLE DEPTH	0-1'
OFFSITE PROPERTY NO.	N/A
PROJECT COORDINATOR	LUKE, SN
SAF NO.	F11-162
COA	302677ES10
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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool<4C	Cool<4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H056 12	SOIL	8/16/11	0817				

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1420	M. Nelson Hanes	8/16/11 1420

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Attachment 2
Narrative
WSCF112982

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

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):

- Post 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.

Attachment 2
Narrative
WSCF112982

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 – 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.

Radiochemistry Comments

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

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- Gamma Energy Analysis:
  - Europium-152 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - All other applicable QC controls are within the established limits.
- Americium-241:
  - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Americium-243 – Tracer recovery did not meet the established laboratory limits for sample B2H040 (112982003). No flags issued on sample results. The quality control report was flagged for the failure.
  - All other applicable QC controls are within the established limits.
- Isotopic Plutonium analysis:
  - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
  - All other applicable QC controls are within the established limits.

Narrative

- Isotopic Uranium analysis:
  - Uranium-234 and Uranium-238 – The Blank is less than five times the MDC. "B" Flag not required.
  - All other applicable QC controls are within the established limits.
- Strontium-89/90:
  - Strontium-85 – Tracer recovery did not meet the established laboratory limits for sample B2H038 (112982001). No flags issued on sample results. The quality control report was flagged for the failure.
  - 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

F11-162-028 | PAGE 1 OF 1

COLLECTOR: FM Hall CHPRC	COMPANY CONTACT: LUKE, SN	TELEPHONE NO.: 372-1667	PROJECT COORDINATOR: LUKE, SN
SAMPLING LOCATION: Area AG Verification Sample #28	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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)

112982

SPECIAL HANDLING AND/OR STORAGE
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H038	SOIL	8/16/11	1052	✓	✓	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/16/11 1400	M01109 SSL#1	8/16/11 1400
M01109 SSL#1	8-17-11 0900	FM Hall	8-17-11 0900
FM Hall	8-17-11 1005	[illegible]	8-17-11 1005

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F11-162-029	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 AG Verification Sample #29	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162	AIR QUALITY: ☐
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-807-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10	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
** The CACN for WSCF Analytical is 40258CES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis CKT applies to this CAF.

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H039	2	SOIL	8/17/11	0740				

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall	8/17/11 1005	[illegible]	8/17/11 1005

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-030 | 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
AIR QUALITY	☐
SAMPLING LOCATION	Area AG Verification Sample #30
PROJECT DESIGNATION	Area AG Sampling (Waste Area AG) Verification Sampling - Soil
SAF NO.	F11-162
ICE CHEST NO.	GWS-017
FIELD LOGBOOK NO.	HNF-N-507-23
ACTUAL SAMPLE DEPTH	0-1'
COA	302677ES10
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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool<4C	Cool<4C	None	None
HOLDING TIME	6 Months	10 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Rev - 7346;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H040 3	SOIL	8/17/11	0750	✓	✓	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall	8/17/11 1005		8/17/11 1005
CHPRC			

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-031 | 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 AG Verification Sample #31	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162
AIR QUALITY: ☐			
ICE CHEST NO.: 6W3-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H041	4	SOIL	8/17/11	0804	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/17/11 1005	[illegible]	8/17/11 1005

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 – Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-032

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 AG Verification Sample #32

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY:

ICE CHEST NO.: GWS-017

FIELD LOGBOOK NO.: HNF-N-507-23

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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, OL=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: ** The CACN for WSCF Analytical is 402580ES20.□** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /1%;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H042	5	SOIL	8/12/11	0824	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/12/11 1005	[illegible]	8/12/11 1005

SPECIAL INSTRUCTIONS

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

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A 6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-033

PAGE 1 OF 1

COLLECTOR: FM Hall, CHPRC	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 AG Verification Sample #33	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil	SAF NO.: F11-162	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10
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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /1%;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H043	SOIL	8/17/11	0834	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CPRC	8/17/11 1005		8/17/11 1005

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-162-034	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 AG Verification Sample #34	PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil		SAF NO.: F11-162	AIR QUALITY: ☐	
ICE CHEST NO.: GWS-017	FIELD LOGBOOK NO.: HNF-N-507-23	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302677ES10	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: ** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - /SW;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H044 7	SOIL	8/17/11	0842	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: FM Hall CHPRC	DATE/TIME: 8/17/11 1005	RECEIVED BY/STORED IN: [signature]	DATE/TIME: 8/17/11 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
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

(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-619 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-162-035 | 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 AG Verification Sample #35

PROJECT DESIGNATION: Area AG Sampling (Waste Area AG) Verification Sampling - Soil

SAF NO.: F11-162

AIR QUALITY: ☐

ICE CHEST NO.: GWS-017

FIELD LOGBOOK NO.: HNF-N-507-23.

ACTUAL SAMPLE DEPTH: 0-1'

COA: 302677ES10

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
** The CACN for WSCF Analytical is 402580ES20.☐** The 100 Area S&GRP Characterization and Monitoring Sampling and

PRESERVATION	Cool~4C	Cool~4C	None	None
HOLDING TIME	6 Months	30 Days	6 Months	6 Months
TYPE OF CONTAINER	G/P	G/P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	60mL	500mL	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2H045	8	SOIL	8/17/11	0851	✓	✓	✓	✓

CHAIN OF POSSESSION / **SIGN/ PRINT NANES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FM Hall CHPRC	8/17/11 1005	[illegible]	8/17/11 1005

SPECIAL INSTRUCTIONS
(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};
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155};
(3) Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Americium-241 {Americium-241}; Strontium-89,90 -- Total Sr;

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

PRINTED ON 8/3/2011

A-6003-618 (REV 2)

Appendix 5

Data Validation Supporting Documentation

Appendix B - Radiochemical Data Validation Checklist

RADIOCHEMICAL DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	(C)	D	E
PROJECT: 100-K Project, Area AG, Zone 1			DATA PACKAGE: VSR11-057		
VALIDATOR: Carl Schloesslin		LAB: WSCF		DATE: 9-20-2011	
			SDG: WSCF112941, WSCF112976, WSCF112982		
ANALYSES PERFORMED					
Gross Alpha/Beta	Strontium-90 X	Technetium-99	Alpha Spectroscopy X	Gamma Spectroscopy X	
Total Uranium	Radium-22	Tritium	C-14	I-129	

SAMPLES/MATRIX Soil samples

SDG WSCF112941: B2H011, B2H012, B2H013, B2H014, B2H015, B2H016, B2H017, B2H018, B2H019, B2H020, B2H021, B2H022, B2H023, B2H024, B2H025, B2H026, B2H027, B2H050, B2H051, B2H054, B2H055

SDG WSCF112976: B2H028, B2H029, B2H030, B2H031, B2H032, B2H033, B2H034, B2H035, B2H036, B2H037, B2H052, B2H056

SDG WSCF112982: B2H038, B2H039, B2H040, B2H041, B2H042, B2H043, B2H044, B2H045

1. Completeness ..... ☐ N/A

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

Comments: None

2. Initial Calibration (Levels D, E) ..... ☒ N/A

Instruments/detectors calibrated? ..... Yes No N/A

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

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

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

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

Comments:

3. Continuing Calibration (Levels D, E)..... ☒ N/A

Calibration checked within required frequency? ..... Yes No N/A

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

Calibration check standards traceable? ..... Yes No N/A

Calibration check standards expired? ..... Yes No N/A

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

Comments:

4. Background Counts (Levels D, E) ..... ☒ N/A

Background Counts checked within required frequency? ..... Yes No N/A

Background Counts acceptable? ..... Yes No N/A

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

Comments:

5. Blanks (Levels B, C, D, E) ☐ N/A

Method blank analyzed within required frequency? (Yes) No N/A

Method blank results acceptable? (Yes) No N/A

Analytes detected in method blank? (Yes) No N/A

Field blank(s) analyzed? (Yes) No N/A

Field blank results acceptable? (Yes) No N/A

Analytes detected in field blank(s)? (Yes) No N/A

Transcription/Calculation Errors? (Levels D, E) Yes No (N/A)

Comments:

WSCF112941, batch 188456, MB hits (pCi/g): U-234 0.025, U-238 0.032
WSCF112941, batch 188563, MB hits (pCi/g): U-234 0.024, U-235 0.010, U-238 0.025
WSCF112941, batch 188469, MB hit (pCi/g): Sr-89/90 0.68
WSCF112941, EB B2H054 hits (pCi/g): Pu-239/240 0.0046, U-234 0.027, U-238 0.017
WSCF112941, EB B2H055 hits (pCi/g): Pu-239/240 0.011, U-234 0.021, U-238 0.028

See additional comments for more blank infractions.

6. Laboratory Control Samples or Blank Spike Samples (Levels C, D, E) ☐ N/A

LCS /BSS analyzed within required frequency? (Yes) No N/A

LCS/BSS recoveries acceptable? (Yes) No N/A

LCS/BSS traceable? (Levels D,E) Yes No (N/A)

LCS/BSS expired? (Levels D,E) Yes No (N/A)

LCS/BSS levels correct? (Levels D,E) Yes No (N/A)

Transcription/Calculation Errors? (Levels D, E) Yes No (N/A)

Comments: None

7. Chemical Carrier Recovery (Levels C, D, E) ..... ☐ N/A

Chemical carrier added? ..... Yes No (N/A)

Chemical recovery acceptable? ..... Yes No (N/A)

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

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

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

Comments: None

8. Tracer Recovery (Levels C, D, E) ..... ☐ N/A

Tracer added? ..... (Yes) No N/A

Tracer recovery acceptable? ..... Yes (No) N/A

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

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

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

Comments:

WSCF112941, sample B2H014 Am-234 %R = 106%
WSCF112976, sample B2H056 Sr-85 %R = 110%
WSCF112982, sample B2H038 Sr-85 %R = 114%

9. Matrix Spikes (Levels C, D, E)..... ☐ N/A

Matrix spike analyzed?..... Yes No (N/A)

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

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

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

Transcription/Calculation Errors? (Levels D, E)..... Yes No (N/A)

Comments: None

10. Duplicates (Levels C, D, E) ..... ☐ N/A

Duplicates Analyzed at required frequency? ..... (Yes) No N/A

RPD Values Acceptable?..... Yes (No) N/A

Transcription/Calculation Errors? (Levels D, E)..... Yes No (N/A)

Comments:

WSCF112941, batch 188561 Am-241 difference = 0.17 pCi/g, MDC = 0.061 pCi/g
WSCF112941, batch 188665 Am-241 RPD = 148%
WSCF112941, batch 188455 Pu-239/240 difference = 0.010 pCi/g, MDC = 0.0043 pCi/g
WSCF112941, batch 188562 Pu-239/240 difference = 0.086 pCi/g, MDC = 0.021 pCi/g
WSCF112941, batch 188666 Pu-238 difference = 0.47 pCi/g, MDC = 0.018 pCi/g
WSCF112941, batch 188666 Pu-239/240 RPD = 151%
WSCF112941, batch 188660 Sr-89/90 difference = 1.2 pCi/g, MDC = 0.45 pCi/g

WSCF112976, batch 188853 Am-241 difference = 0.53 pCi/g, MDC = 0.022 pCi/g
WSCF112976, batch 188854 Pu-239/240 difference = 0.15 pCi/g, MDC = 0.026 pCi/g

WSCF112982 Pu-239/240 difference = 0.045 pCi/g, MDC = 0.018 pCi/g

11. Field QC Samples (Levels C, D E) ..... ☐ N/A

Field duplicate sample(s) analyzed? ..... (Yes) No N/A

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

Field split sample(s) analyzed? ..... Yes No (N/A)

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

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

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

Comments:

WSCF112976, field dups B2H034 & B2H052 Cs-137 RPD = 62%

12. Holding Times (All levels)

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

Comments: None

13. Results and Detection Limits (All Levels) ..... ☐ N/A

Results reported for all required sample analyses? ..... (Yes) No N/A

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

Results Acceptable? (Levels D, E) ..... Yes No (N/A)

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

MDA's meet required detection limits? ..... Yes (No) N/A

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

Comments:

MDCs > CRDLs for associated non-detect sample results

See the attachments after additional comments for Eu-152, Eu-154 and Eu-155 non-detect results with associated MDCs > the CRDL of 0.1 pCi/g

Blank infractions continued
WSCF112976, batch 188855, MB hits (pCi/g): U-234 0.022, U-238 0.032
WSCF112976, batch 188852, MB hits (pCi/g): U-234 0.015, U-238 0.023
WSCF112976, batch 188685, MB hit (pCi/g): Sr-89/90 0.62
WSCF112976, EB B2H056 hits (pCi/g): Pu-239/240 0.076, U-234 0.015, U-238 0.024, Sr-89/90 0.40
WSCF112982 MB hits (pCi/g): U-234 0.018, U-238 0.027

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941001
SAF# F11-162
Sample ID B2H011

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.057	.028	pCi/g	1	0.032		08/15/11
Cobalt-60	10198-40-0	LA-508-481	U	-9.1E-3	.017	pCi/g	1	0.028		08/15/11
Europium-152	14683-23-9	LA-508-481	U	-0.039	.068	pCi/g	1	0.094		08/15/11
Europium-154	15585-10-1	LA-508-481	U	0.014	.057	pCi/g	1	0.092		08/15/11
Europium-155	14391-16-3	LA-508-481	U	-0.029	.086	pCi/g	1	0.14		08/15/11
Np/Th/Pu/Am/U Prep										**08/19/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	-0.018	.035	pCi/g	1	0.065		08/21/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	9.4E-3	.012	pCi/g	1	0.019		08/21/11
Plutonium-239/240	PU-239/240	LA-508-471		0.020	.012	pCi/g	1	4.3E-3		08/21/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.10	.038	pCi/g	1	5.3E-3		08/21/11
Uranium-235	15117-96-1	LA-508-471		0.021	.014	pCi/g	1	5.8E-3		08/21/11
Uranium-238	U-238	LA-508-471		0.17	.056	pCi/g	1	0.018		08/21/11
SR-89/90										**08/19/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941002
SAF# F11-162
Sample ID B2H012

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481	U	-8.1E-4	.021	pCi/g	1	0.037		08/15/11
Cobalt-60	10198-40-0	LA-508-481	U	-0.0060	.018	pCi/g	1	0.032		08/15/11
Europium-152	14683-23-9	LA-508-481	U	0.034	.071	pCi/g	1	0.096		08/15/11
Europium-154	15585-10-1	LA-508-481	U	0.029	.063	pCi/g	1	0.12		08/15/11
Europium-155	14391-16-3	LA-508-481	U	0.098	.11	pCi/g	1	0.13		08/15/11
Np/Th/Pu/Am/U Prep										**08/19/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	-1.8E-3	.035	pCi/g	1	0.064		08/21/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	-3.3E-3	.013	pCi/g	1	0.027		08/21/11
Plutonium-239/240	PU-239/240	LA-508-471	U	1.6E-3	.0071	pCi/g	1	0.015		08/21/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.16	.053	pCi/g	1	0.016		08/21/11
Uranium-235	15117-96-1	LA-508-471		0.012	.01	pCi/g	1	6.3E-3		08/21/11
Uranium-238	U-238	LA-508-471		0.13	.046	pCi/g	1	5.8E-3		08/21/11
SR-89/90										**08/19/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941003
SAF# F11-162
Sample ID B2H013

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.16	.048	pCi/g	1	0.036		08/15/11
Cobalt-60	10198-40-0	LA-508-481		0.048	.021	pCi/g	1	0.034		08/15/11
Europium-152	14683-23-9	LA-508-481	U	-0.036	.077	pCi/g	1	0.099		08/15/11
Europium-154	15585-10-1	LA-508-481	U	-4.4E-3	.057	pCi/g	1	0.10		08/15/11
Europium-155	14391-16-3	LA-508-481	U	-0.023	.1	pCi/g	1	0.17		08/15/11
Np/Th/Pu/Am/U Prep										**08/19/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.033	.033	pCi/g	1	0.051		08/21/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	7.5E-3	.01	pCi/g	1	0.016		08/21/11
Plutonium-239/240	PU-239/240	LA-508-471		0.018	.011	pCi/g	1	4.1E-3		08/21/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.17	.056	pCi/g	1	0.015		08/21/11
Uranium-235	15117-96-1	LA-508-471	U	0.011	.012	pCi/g	1	0.016		08/21/11
Uranium-238	U-238	LA-508-471		0.18	.061	pCi/g	1	0.019		08/21/11
SR-89/90										**08/19/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941004
SAF# F11-162
Sample ID B2H014

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.59	.095	pCi/g	1	0.042		08/15/11
Cobalt-60	10198-40-0	LA-508-481		0.050	.023	pCi/g	1	0.028		08/15/11
Europium-152	14683-23-9	LA-508-481		0.16	.091	pCi/g	1	0.12		08/15/11
Europium-154	15585-10-1	LA-508-481	U	-0.018	.067	pCi/g	1	0.12		08/15/11
Europium-155	14391-16-3	LA-508-481	U	0.10	.096	pCi/g	1	0.17		08/15/11
Np/Th/Pu/Am/U Prep										**08/19/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.026	.03	pCi/g	1	0.048		08/21/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	6.9E-3	.011	pCi/g	1	0.019		08/21/11
Plutonium-239/240	PU-239/240	LA-508-471		0.014	.01	pCi/g	1	4.7E-3		08/21/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.24	.076	pCi/g	1	0.020		08/21/11
Uranium-235	15117-96-1	LA-508-471		0.012	.011	pCi/g	1	6.4E-3		08/21/11
Uranium-238	U-238	LA-508-471		0.20	.065	pCi/g	1	0.016		08/21/11
SR-89/90										**08/19/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941005
SAF# F11-162
Sample ID B2H015

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.14	.035	pCi/g	1	0.064		08/15/11
Cobalt-60	10198-40-0	LA-508-481	U	-2.3E-3	.021	pCi/g	1	0.037		08/15/11
Europium-152	14683-23-9	LA-508-481		0.14	.091	pCi/g	1	0.12		08/15/11
Europium-154	15585-10-1	LA-508-481	U	-2.4E-3	.068	pCi/g	1	0.12		08/15/11
Europium-155	14391-16-3	LA-508-481	U	-0.067	.084	pCi/g	1	0.14		08/15/11
Np/Th/Pu/Am/U Prep										**08/19/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.019	.026	pCi/g	1	0.044		08/21/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	1.6E-3	.0016	pCi/g	1	0.020		08/21/11
Plutonium-239/240	PU-239/240	LA-508-471		0.033	.016	pCi/g	1	4.5E-3		08/21/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.17	.057	pCi/g	1	0.019		08/21/11
Uranium-235	15117-96-1	LA-508-471	U	0.016	.015	pCi/g	1	0.021		08/21/11
Uranium-238	U-238	LA-508-471		0.17	.056	pCi/g	1	5.5E-3		08/21/11
SR-89/90										**08/19/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941006
SAF# F11-162
Sample ID B2H016

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.13	.043	pCi/g	1	0.032		08/15/11
Cobalt-60	10198-40-0	LA-508-481	U	-1.3E-3	.019	pCi/g	1	0.034		08/15/11
Europium-152	14683-23-9	LA-508-481	U	-0.050	.092	pCi/g	1	0.10		08/15/11
Europium-154	15585-10-1	LA-508-481	U	-0.015	.055	pCi/g	1	0.097		08/15/11
Europium-155	14391-16-3	LA-508-481	U	0.013	.098	pCi/g	1	0.17		08/15/11
Np/Th/Pu/Am/U Prep										**08/19/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	3.5E-3	.024	pCi/g	1	0.043		08/21/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	9.6E-3	.014	pCi/g	1	0.024		08/21/11
Plutonium-239/240	PU-239/240	LA-508-471		6.4E-3	.0065	pCi/g	1	4.3E-3		08/21/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.15	.053	pCi/g	1	0.025		08/21/11
Uranium-235	15117-96-1	LA-508-471	U	0.013	.013	pCi/g	1	0.017		08/21/11
Uranium-238	U-238	LA-508-471		0.19	.063	pCi/g	1	0.015		08/21/11
SR-89/90										**08/19/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941007
SAF# F11-162
Sample ID B2H017

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.25	.049	pCi/g	1	0.035		08/15/11
Cobalt-60	10198-40-0	LA-508-481	U	2.8E-3	.019	pCi/g	1	0.035		08/15/11
Europium-152	14683-23-9	LA-508-481	U	6.7E-3	.067	pCi/g	1	0.10		08/15/11
Europium-154	15585-10-1	LA-508-481	U	0.015	.06	pCi/g	1	0.11		08/15/11
Europium-155	14391-16-3	LA-508-481	U	0.034	.079	pCi/g	1	0.14		08/15/11
Np/Th/Pu/Am/U Prep										**08/19/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.047	.035	pCi/g	1	0.051		08/21/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	7.4E-3	.013	pCi/g	1	0.022		08/21/11
Plutonium-239/240	PU-239/240	LA-508-471		0.028	.016	pCi/g	1	0.014		08/21/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.18	.06	pCi/g	1	0.025		08/21/11
Uranium-235	15117-96-1	LA-508-471		0.016	.014	pCi/g	1	0.016		08/21/11
Uranium-238	U-238	LA-508-471		0.13	.047	pCi/g	1	0.015		08/21/11
SR-89/90										**08/19/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941008
SAF# F11-162
Sample ID B2H018

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		1.1	.15	pCi/g	1	0.041		08/15/11
Cobalt-60	10198-40-0	LA-508-481	U	0.020	.02	pCi/g	1	0.039		08/15/11
Europium-152	14683-23-9	LA-508-481	U	7.7E-3	.079	pCi/g	1	0.12		08/15/11
Europium-154	15585-10-1	LA-508-481	U	0.016	.065	pCi/g	1	0.12		08/15/11
Europium-155	14391-16-3	LA-508-481	U	0.083	.094	pCi/g	1	0.17		08/15/11
Np/Th/Pu/Am/U Prep										**08/22/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.048	.04	pCi/g	1	0.061		08/23/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	3.6E-3	.037	pCi/g	1	0.066		08/23/11
Plutonium-239/240	PU-239/240	LA-508-471		0.094	.036	pCi/g	1	0.021		08/23/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.15	.046	pCi/g	1	4.8E-3		08/23/11
Uranium-235	15117-96-1	LA-508-471		0.020	.014	pCi/g	1	5.9E-3		08/23/11
Uranium-238	U-238	LA-508-471		0.22	.062	pCi/g	1	4.8E-3		08/23/11
SR-89/90										**08/19/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941009
SAF# F11-162
Sample ID B2H019

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.095	.035	pCi/g	1	0.029		08/15/11
Cobalt-60	10198-40-0	LA-508-481	U	3.7E-3	.015	pCi/g	1	0.029		08/15/11
Europium-152	14683-23-9	LA-508-481	U	-0.053	.071	pCi/g	1	0.096		08/15/11
Europium-154	15585-10-1	LA-508-481	U	0.015	.054	pCi/g	1	0.099		08/15/11
Europium-155	14391-16-3	LA-508-481	U	-0.069	.093	pCi/g	1	0.15		08/15/11
Np/Th/Pu/Am/U Prep										**08/22/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	9.8E-3	.033	pCi/g	1	0.058		08/23/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	6.9E-3	.036	pCi/g	1	0.063		08/23/11
Plutonium-239/240	PU-239/240	LA-508-471	U	0.010	.012	pCi/g	1	0.019		08/23/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.18	.05	pCi/g	1	0.011		08/23/11
Uranium-235	15117-96-1	LA-508-471	U	1.8E-3	.0062	pCi/g	1	0.013		08/23/11
Uranium-238	U-238	LA-508-471		0.16	.046	pCi/g	1	0.011		08/23/11
SR-89/90										**08/19/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941010
SAF# F11-162
Sample ID B2H020

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.044	.036	pCi/g	1	0.035		08/16/11
Cobalt-60	10198-40-0	LA-508-481	U	0.030	.02	pCi/g	1	0.038		08/16/11
Europium-152	14683-23-9	LA-508-481	U	-0.056	.084	pCi/g	1	0.11		08/16/11
Europium-154	15585-10-1	LA-508-481	U	-0.037	.056	pCi/g	1	0.096		08/16/11
Europium-155	14391-16-3	LA-508-481	U	0.036	.087	pCi/g	1	0.15		08/16/11
Np/Th/Pu/Am/U Prep										**08/22/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.014	.037	pCi/g	1	0.064		08/23/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	0.036	.035	pCi/g	1	0.053		08/23/11
Plutonium-239/240	PU-239/240	LA-508-471	U	-3.6E-3	.012	pCi/g	1	0.027		08/23/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.25	.068	pCi/g	1	4.4E-3		08/23/11
Uranium-235	15117-96-1	LA-508-471		0.012	.01	pCi/g	1	5.4E-3		08/23/11
Uranium-238	U-238	LA-508-471		0.21	.059	pCi/g	1	0.015		08/23/11
SR-89/90										**08/19/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941011
SAF# F11-162
Sample ID B2H021

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.15	.051	pCi/g	1	0.031		08/16/11
Cobalt-60	10198-40-0	LA-508-481	U	8.7E-3	.018	pCi/g	1	0.034		08/16/11
Europium-152	14683-23-9	LA-508-481	U	-0.015	.055	pCi/g	1	0.088		08/16/11
Europium-154	15585-10-1	LA-508-481	U	-0.0060	.06	pCi/g	1	0.11		08/16/11
Europium-155	14391-16-3	LA-508-481	U	0.067	.07	pCi/g	1	0.13		08/16/11
Np/Th/Pu/Am/U Prep										**08/22/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.0020	.038	pCi/g	1	0.068		08/23/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	0.021	.035	pCi/g	1	0.059		08/23/11
Plutonium-239/240	PU-239/240	LA-508-471	U	0.021	.017	pCi/g	1	0.022		08/23/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.15	.044	pCi/g	1	4.6E-3		08/23/11
Uranium-235	15117-96-1	LA-508-471	U	4.2E-3	.006	pCi/g	1	5.7E-3		08/23/11
Uranium-238	U-238	LA-508-471		0.15	.045	pCi/g	1	4.6E-3		08/23/11
SR-89/90										**08/19/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941013
SAF# F11-162
Sample ID B2H023

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.098	.036	pCi/g	1	0.029		08/16/11
Cobalt-60	10198-40-0	LA-508-481	U	3.5E-3	.017	pCi/g	1	0.031		08/16/11
Europium-152	14683-23-9	LA-508-481	U	0.095	.068	pCi/g	1	0.096		08/16/11
Europium-154	15585-10-1	LA-508-481	U	0.011	.045	pCi/g	1	0.084		08/16/11
Europium-155	14391-16-3	LA-508-481	U	0.079	.083	pCi/g	1	0.15		08/16/11
Np/Th/Pu/Am/U Prep										**08/22/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.057	.043	pCi/g	1	0.063		08/23/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	1.6E-3	.022	pCi/g	1	0.041		08/23/11
Plutonium-239/240	PU-239/240	LA-508-471		0.021	.016	pCi/g	1	0.020		08/23/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.14	.043	pCi/g	1	0.013		08/23/11
Uranium-235	15117-96-1	LA-508-471		0.013	.011	pCi/g	1	5.9E-3		08/23/11
Uranium-238	U-238	LA-508-471		0.16	.047	pCi/g	1	4.8E-3		08/23/11
SR-89/90										**08/19/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941015
SAF# F11-162
Sample ID B2H025

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		3.1	.42	pCi/g	1	0.031		08/16/11
Cobalt-60	10198-40-0	LA-508-481		0.030	.019	pCi/g	1	0.014		08/16/11
Europium-152	14683-23-9	LA-508-481		0.96	.085	pCi/g	1	0.098		08/16/11
Europium-154	15585-10-1	LA-508-481		0.10	.064	pCi/g	1	0.093		08/16/11
Europium-155	14391-16-3	LA-508-481	U	-0.038	.08	pCi/g	1	0.13		08/16/11
Np/Th/Pu/Am/U Prep										**08/23/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		3.2	.81	pCi/g	1	0.063		08/24/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471		0.54	.13	pCi/g	1	0.018		08/24/11
Plutonium-239/240	PU-239/240	LA-508-471		3.8	.81	pCi/g	1	4.1E-3		08/24/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.18	.06	pCi/g	1	0.0050		08/24/11
Uranium-235	15117-96-1	LA-508-471		0.016	.012	pCi/g	1	5.5E-3		08/24/11
Uranium-238	U-238	LA-508-471		0.16	.053	pCi/g	1	0.017		08/24/11
SR-89/90										**08/22/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941016
SAF# F11-162
Sample ID B2H026

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		3.9	.52	pCi/g	1	0.10		08/16/11
Cobalt-60	10198-40-0	LA-508-481		0.65	.083	pCi/g	1	0.054		08/16/11
Europium-152	14683-23-9	LA-508-481		27	1.4	pCi/g	1	0.28		08/16/11
Europium-154	15585-10-1	LA-508-481		2.0	.28	pCi/g	1	0.16		08/16/11
Europium-155	14391-16-3	LA-508-481	U	0.013	.28	pCi/g	1	0.47		08/16/11
Np/Th/Pu/Am/U Prep										**08/23/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.61	.17	pCi/g	1	0.066		08/24/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471		0.079	.029	pCi/g	1	0.024		08/24/11
Plutonium-239/240	PU-239/240	LA-508-471		0.79	.18	pCi/g	1	0.013		08/24/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.15	.051	pCi/g	1	0.014		08/24/11
Uranium-235	15117-96-1	LA-508-471		0.012	.01	pCi/g	1	5.5E-3		08/24/11
Uranium-238	U-238	LA-508-471		0.17	.056	pCi/g	1	5.1E-3		08/24/11
SR-89/90										**08/22/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941017
SAF# F11-162
Sample ID B2H027

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		3.4	.42	pCi/g	1	0.033		08/16/11
Cobalt-60	10198-40-0	LA-508-481	U	-2.1E-3	.016	pCi/g	1	0.028		08/16/11
Europium-152	14683-23-9	LA-508-481	U	-0.073	.081	pCi/g	1	0.12		08/16/11
Europium-154	15585-10-1	LA-508-481	U	-0.059	.046	pCi/g	1	0.071		08/16/11
Europium-155	14391-16-3	LA-508-481	U	-0.049	.1	pCi/g	1	0.17		08/16/11
Np/Th/Pu/Am/U Prep										**08/23/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.69	.19	pCi/g	1	0.058		08/24/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471		0.094	.032	pCi/g	1	0.017		08/24/11
Plutonium-239/240	PU-239/240	LA-508-471		0.71	.16	pCi/g	1	4.2E-3		08/24/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.12	.044	pCi/g	1	0.015		08/24/11
Uranium-235	15117-96-1	LA-508-471		0.019	.015	pCi/g	1	0.016		08/24/11
Uranium-238	U-238	LA-508-471		0.16	.055	pCi/g	1	0.018		08/24/11
SR-89/90										**08/22/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941018
SAF# F11-162
Sample ID B2H050

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481	U	9.3E-3	.022	pCi/g	1	0.041		08/16/11
Cobalt-60	10198-40-0	LA-508-481	U	0.016	.019	pCi/g	1	0.037		08/16/11
Europium-152	14683-23-9	LA-508-481	U	-9.4E-3	.069	pCi/g	1	0.10		08/16/11
Europium-154	15585-10-1	LA-508-481	U	-2.2E-3	.063	pCi/g	1	0.12		08/16/11
Europium-155	14391-16-3	LA-508-481	U	0.019	.084	pCi/g	1	0.15		08/16/11
Np/Th/Pu/Am/U Prep										**08/23/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.036	.034	pCi/g	1	0.053		08/24/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	1.5E-3	.0075	pCi/g	1	0.016		08/24/11
Plutonium-239/240	PU-239/240	LA-508-471		0.010	.0078	pCi/g	1	3.9E-3		08/24/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.16	.052	pCi/g	1	0.015		08/24/11
Uranium-235	15117-96-1	LA-508-471		0.013	.0099	pCi/g	1	4.9E-3		08/24/11
Uranium-238	U-238	LA-508-471		0.14	.047	pCi/g	1	0.012		08/24/11
SR-89/90										**08/22/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Sample # 112941019
SAF# F11-162
Sample ID B2H051

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/12/11
Received 08/12/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/15/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.13	.036	pCi/g	1	0.029		08/16/11
Cobalt-60	10198-40-0	LA-508-481	U	-6.3E-3	.016	pCi/g	1	0.028		08/16/11
Europium-152	14683-23-9	LA-508-481	U	6.5E-3	.053	pCi/g	1	0.087		08/16/11
Europium-154	15585-10-1	LA-508-481	U	-6.4E-3	.051	pCi/g	1	0.091		08/16/11
Europium-155	14391-16-3	LA-508-481	U	0.082	.073	pCi/g	1	0.11		08/16/11
Np/Th/Pu/Am/U Prep										**08/23/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.020	.027	pCi/g	1	0.044		08/24/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	4.8E-3	.011	pCi/g	1	0.019		08/24/11
Plutonium-239/240	PU-239/240	LA-508-471		9.7E-3	.0081	pCi/g	1	4.4E-3		08/24/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.13	.045	pCi/g	1	0.016		08/24/11
Uranium-235	15117-96-1	LA-508-471	U	0.011	.012	pCi/g	1	0.018		08/24/11
Uranium-238	U-238	LA-508-471		0.16	.051	pCi/g	1	4.7E-3		08/24/11
SR-89/90										**08/22/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976002
SAF# F11-162
Sample ID B2H029

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		3.3	.43	pCi/g	1	0.059		08/17/11
Cobalt-60	10198-40-0	LA-508-481		0.11	.041	pCi/g	1	0.035		08/17/11
Europium-152	14683-23-9	LA-508-481		5.0	.34	pCi/g	1	0.18		08/17/11
Europium-154	15585-10-1	LA-508-481		0.48	.11	pCi/g	1	0.13		08/17/11
Europium-155	14391-16-3	LA-508-481	U	0.062	.15	pCi/g	1	0.26		08/17/11
Np/Th/Pu/Am/U Prep										**08/24/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.28	.07	pCi/g	1	0.020		08/25/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	0.056	.043	pCi/g	1	0.064		08/25/11
Plutonium-239/240	PU-239/240	LA-508-471		0.27	.08	pCi/g	1	0.016		08/25/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.19	.061	pCi/g	1	0.013		08/25/11
Uranium-235	15117-96-1	LA-508-471		0.019	.013	pCi/g	1	5.3E-3		08/25/11
Uranium-238	U-238	LA-508-471		0.13	.044	pCi/g	1	4.8E-3		08/25/11
SR-89/90										**08/22/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976003
SAF# F11-162
Sample ID B2H030

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.34	.068	pCi/g	1	0.034		08/17/11
Cobalt-60	10198-40-0	LA-508-481	U	9.4E-3	.018	pCi/g	1	0.034		08/17/11
Europium-152	14683-23-9	LA-508-481		0.27	.071	pCi/g	1	0.10		08/17/11
Europium-154	15585-10-1	LA-508-481	U	-0.020	.06	pCi/g	1	0.10		08/17/11
Europium-155	14391-16-3	LA-508-481	U	7.5E-4	.076	pCi/g	1	0.13		08/17/11
Np/Th/Pu/Am/U Prep										**08/24/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.064	.023	pCi/g	1	0.012		08/25/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	0.047	.036	pCi/g	1	0.053		08/25/11
Plutonium-239/240	PU-239/240	LA-508-471		0.084	.034	pCi/g	1	0.025		08/25/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.15	.051	pCi/g	1	0.013		08/25/11
Uranium-235	15117-96-1	LA-508-471		0.014	.011	pCi/g	1	5.2E-3		08/25/11
Uranium-238	U-238	LA-508-471		0.16	.052	pCi/g	1	0.016		08/25/11
SR-89/90										**08/22/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976004
SAF# F11-162
Sample ID B2H031

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.31	.057	pCi/g	1	0.031		08/17/11
Cobalt-60	10198-40-0	LA-508-481	U	7.8E-3	.015	pCi/g	1	0.029		08/17/11
Europium-152	14683-23-9	LA-508-481		0.19	.072	pCi/g	1	0.095		08/17/11
Europium-154	15585-10-1	LA-508-481	U	-0.032	.049	pCi/g	1	0.083		08/17/11
Europium-155	14391-16-3	LA-508-481	U	-7.1E-3	.09	pCi/g	1	0.15		08/17/11
Np/Th/Pu/Am/U Prep										**08/24/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.027	.015	pCi/g	1	0.016		08/25/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	-0.019	.031	pCi/g	1	0.059		08/25/11
Plutonium-239/240	PU-239/240	LA-508-471	U	9.3E-3	.014	pCi/g	1	0.022		08/25/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.095	.036	pCi/g	1	0.017		08/25/11
Uranium-235	15117-96-1	LA-508-471		0.012	.01	pCi/g	1	5.4E-3		08/25/11
Uranium-238	U-238	LA-508-471		0.12	.042	pCi/g	1	0.013		08/25/11
SR-89/90										**08/22/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976006
SAF# F11-162
Sample ID B2H033

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		61	8	pCi/g	1	0.080		08/17/11
Cobalt-60	10198-40-0	LA-508-481		1.6	.14	pCi/g	1	0.033		08/17/11
Europium-152	14683-23-9	LA-508-481		12	.62	pCi/g	1	0.31		08/17/11
Europium-154	15585-10-1	LA-508-481		1.6	.26	pCi/g	1	0.12		08/17/11
Europium-155	14391-16-3	LA-508-481	U	0.29	.23	pCi/g	1	0.38		08/17/11
Np/Th/Pu/Am/U Prep										**08/24/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		3.6	.76	pCi/g	1	0.017		08/25/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471		0.32	.079	pCi/g	1	0.012		08/25/11
Plutonium-239/240	PU-239/240	LA-508-471		2.9	.62	pCi/g	1	3.6E-3		08/25/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.22	.069	pCi/g	1	0.021		08/25/11
Uranium-235	15117-96-1	LA-508-471		0.017	.013	pCi/g	1	0.014		08/25/11
Uranium-238	U-238	LA-508-471		0.23	.071	pCi/g	1	0.013		08/25/11
SR-89/90										**08/22/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976007
SAF# F11-162
Sample ID B2H034

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		4.3	.57	pCi/g	1	0.026		08/17/11
Cobalt-60	10198-40-0	LA-508-481	U	0.026	.017	pCi/g	1	0.030		08/17/11
Europium-152	14683-23-9	LA-508-481		0.18	.053	pCi/g	1	0.099		08/17/11
Europium-154	15585-10-1	LA-508-481	U	0.037	.041	pCi/g	1	0.079		08/17/11
Europium-155	14391-16-3	LA-508-481	U	0.035	.079	pCi/g	1	0.13		08/17/11
Np/Th/Pu/Am/U Prep										**08/24/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.25	.067	pCi/g	1	0.016		08/25/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	0.030	.033	pCi/g	1	0.053		08/25/11
Plutonium-239/240	PU-239/240	LA-508-471		0.24	.074	pCi/g	1	0.013		08/25/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.12	.045	pCi/g	1	0.024		08/25/11
Uranium-235	15117-96-1	LA-508-471		0.017	.014	pCi/g	1	0.016		08/25/11
Uranium-238	U-238	LA-508-471		0.13	.046	pCi/g	1	0.015		08/25/11
SR-89/90										**08/22/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976008
SAF# F11-162
Sample ID B2H035

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		1.3	.18	pCi/g	1	0.036		08/17/11
Cobalt-60	10198-40-0	LA-508-481		0.062	.029	pCi/g	1	0.032		08/17/11
Europium-152	14683-23-9	LA-508-481		0.25	.073	pCi/g	1	0.12		08/17/11
Europium-154	15585-10-1	LA-508-481	U	0.039	.063	pCi/g	1	0.12		08/17/11
Europium-155	14391-16-3	LA-508-481	U	6.7E-3	.092	pCi/g	1	0.16		08/17/11
Np/Th/Pu/Am/U Prep										**08/24/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.17	.048	pCi/g	1	0.016		08/26/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471		0.066	.041	pCi/g	1	0.054		08/26/11
Plutonium-239/240	PU-239/240	LA-508-471		0.18	.059	pCi/g	1	0.025		08/26/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.16	.045	pCi/g	1	4.2E-3		08/25/11
Uranium-235	15117-96-1	LA-508-471		5.7E-3	.0066	pCi/g	1	5.1E-3		08/25/11
Uranium-238	U-238	LA-508-471		0.15	.043	pCi/g	1	4.1E-3		08/25/11
SR-89/90										**08/23/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976009
SAF# F11-162
Sample ID B2H036

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.11	.037	pCi/g	1	0.029		08/17/11
Cobalt-60	10198-40-0	LA-508-481	U	8.2E-3	.017	pCi/g	1	0.033		08/17/11
Europium-152	14683-23-9	LA-508-481	U	0.037	.061	pCi/g	1	0.094		08/17/11
Europium-154	15585-10-1	LA-508-481	U	5.7E-3	.05	pCi/g	1	0.093		08/17/11
Europium-155	14391-16-3	LA-508-481	U	-0.026	.087	pCi/g	1	0.15		08/17/11
Np/Th/Pu/Am/U Prep										**08/24/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.036	.017	pCi/g	1	0.013		08/26/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	-0.0020	.035	pCi/g	1	0.064		08/26/11
Plutonium-239/240	PU-239/240	LA-508-471		0.032	.021	pCi/g	1	0.024		08/26/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.22	.059	pCi/g	1	0.012		08/25/11
Uranium-235	15117-96-1	LA-508-471		0.014	.011	pCi/g	1	5.3E-3		08/25/11
Uranium-238	U-238	LA-508-471		0.26	.069	pCi/g	1	4.2E-3		08/25/11
SR-89/90										**08/23/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976010
SAF# F11-162
Sample ID B2H037

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.66	.1	pCi/g	1	0.037		08/17/11
Cobalt-60	10198-40-0	LA-508-481	U	-7.1E-3	.02	pCi/g	1	0.036		08/17/11
Europium-152	14683-23-9	LA-508-481	U	0.044	.085	pCi/g	1	0.12		08/17/11
Europium-154	15585-10-1	LA-508-481	U	0.019	.068	pCi/g	1	0.13		08/17/11
Europium-155	14391-16-3	LA-508-481	U	0.037	.09	pCi/g	1	0.16		08/17/11
Np/Th/Pu/Am/U Prep										**08/24/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.035	.017	pCi/g	1	0.015		08/26/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	0.020	.035	pCi/g	1	0.061		08/26/11
Plutonium-239/240	PU-239/240	LA-508-471	U	0.013	.014	pCi/g	1	0.020		08/26/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.21	.057	pCi/g	1	0.013		08/25/11
Uranium-235	15117-96-1	LA-508-471		0.019	.013	pCi/g	1	5.8E-3		08/25/11
Uranium-238	U-238	LA-508-471		0.22	.06	pCi/g	1	4.7E-3		08/25/11
SR-89/90										**08/23/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Sample # 112976011
SAF# F11-162
Sample ID B2H052

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/16/11
Received 08/16/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		8.2	1	pCi/g	1	0.046		08/17/11
Cobalt-60	10198-40-0	LA-508-481	U	9.3E-3	.021	pCi/g	1	0.038		08/17/11
Europium-152	14683-23-9	LA-508-481	U	0.068	.11	pCi/g	1	0.17		08/17/11
Europium-154	15585-10-1	LA-508-481	U	0.032	.062	pCi/g	1	0.11		08/17/11
Europium-155	14391-16-3	LA-508-481	U	0.033	.11	pCi/g	1	0.19		08/17/11
Np/Th/Pu/Am/U Prep										**08/24/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.28	.072	pCi/g	1	0.018		08/26/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	0.024	.032	pCi/g	1	0.052		08/26/11
Plutonium-239/240	PU-239/240	LA-508-471		0.28	.082	pCi/g	1	0.012		08/26/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.15	.045	pCi/g	1	4.5E-3		08/25/11
Uranium-235	15117-96-1	LA-508-471		0.010	.0093	pCi/g	1	5.5E-3		08/25/11
Uranium-238	U-238	LA-508-471		0.17	.049	pCi/g	1	4.5E-3		08/25/11
SR-89/90										**08/23/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982001
SAF# F11-162
Sample ID B2H038

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/16/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		3.1	.39	pCi/g	1	0.036		08/18/11
Cobalt-60	10198-40-0	LA-508-481	U	3.8E-3	.017	pCi/g	1	0.028		08/18/11
Europium-152	14683-23-9	LA-508-481		0.15	.098	pCi/g	1	0.13		08/18/11
Europium-154	15585-10-1	LA-508-481	U	-0.048	.071	pCi/g	1	0.099		08/18/11
Europium-155	14391-16-3	LA-508-481	U	0.035	.082	pCi/g	1	0.14		08/18/11
Np/Th/Pu/Am/U Prep										**08/26/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.048	.045	pCi/g	1	0.070		08/29/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	-5.7E-3	.038	pCi/g	1	0.069		08/29/11
Plutonium-239/240	PU-239/240	LA-508-471		0.075	.031	pCi/g	1	0.018		08/29/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.13	.04	pCi/g	1	0.012		08/29/11
Uranium-235	15117-96-1	LA-508-471	U	0.014	.012	pCi/g	1	0.015		08/29/11
Uranium-238	U-238	LA-508-471		0.15	.044	pCi/g	1	4.3E-3		08/29/11
SR-89/90										**08/24/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982002
SAF# F11-162
Sample ID B2H039

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		2.1	.26	pCi/g	1	0.034		08/18/11
Cobalt-60	10198-40-0	LA-508-481		0.054	.021	pCi/g	1	0.031		08/18/11
Europium-152	14683-23-9	LA-508-481		0.65	.088	pCi/g	1	0.11		08/18/11
Europium-154	15585-10-1	LA-508-481	U	0.020	.057	pCi/g	1	0.11		08/18/11
Europium-155	14391-16-3	LA-508-481	U	-6.2E-3	.1	pCi/g	1	0.18		08/18/11
Np/Th/Pu/Am/U Prep										**08/26/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.13	.055	pCi/g	1	0.059		08/29/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	0.048	.035	pCi/g	1	0.051		08/29/11
Plutonium-239/240	PU-239/240	LA-508-471		0.096	.037	pCi/g	1	0.026		08/29/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.18	.049	pCi/g	1	0.0040		08/29/11
Uranium-235	15117-96-1	LA-508-471		0.011	.009	pCi/g	1	4.9E-3		08/29/11
Uranium-238	U-238	LA-508-471		0.17	.047	pCi/g	1	0.0040		08/29/11
SR-89/90										**08/24/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982003
SAF# F11-162
Sample ID B2H040

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		3.7	.5	pCi/g	1	0.030		08/18/11
Cobalt-60	10198-40-0	LA-508-481		0.071	.017	pCi/g	1	0.023		08/18/11
Europium-152	14683-23-9	LA-508-481		0.53	.067	pCi/g	1	0.10		08/18/11
Europium-154	15585-10-1	LA-508-481	U	0.043	.044	pCi/g	1	0.084		08/18/11
Europium-155	14391-16-3	LA-508-481	U	0.024	.078	pCi/g	1	0.13		08/18/11
Np/Th/Pu/Am/U Prep										**08/26/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.082	.044	pCi/g	1	0.056		08/29/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	0.019	.035	pCi/g	1	0.059		08/29/11
Plutonium-239/240	PU-239/240	LA-508-471		0.10	.04	pCi/g	1	0.023		08/29/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.17	.05	pCi/g	1	0.012		08/29/11
Uranium-235	15117-96-1	LA-508-471		0.017	.012	pCi/g	1	5.6E-3		08/29/11
Uranium-238	U-238	LA-508-471		0.16	.047	pCi/g	1	4.5E-3		08/29/11
SR-89/90										**08/24/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982004
SAF# F11-162
Sample ID B2H041

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.49	.079	pCi/g	1	0.033		08/18/11
Cobalt-60	10198-40-0	LA-508-481		0.051	.018	pCi/g	1	0.026		08/18/11
Europium-152	14683-23-9	LA-508-481		2.2	.14	pCi/g	1	0.090		08/18/11
Europium-154	15585-10-1	LA-508-481		0.22	.084	pCi/g	1	0.086		08/18/11
Europium-155	14391-16-3	LA-508-481	U	-0.012	.092	pCi/g	1	0.15		08/18/11
Np/Th/Pu/Am/U Prep										**08/26/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.054	.041	pCi/g	1	0.061		08/29/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	-3.8E-3	.028	pCi/g	1	0.052		08/29/11
Plutonium-239/240	PU-239/240	LA-508-471		0.060	.027	pCi/g	1	0.020		08/29/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.18	.051	pCi/g	1	4.5E-3		08/29/11
Uranium-235	15117-96-1	LA-508-471		0.018	.013	pCi/g	1	5.5E-3		08/29/11
Uranium-238	U-238	LA-508-471		0.18	.051	pCi/g	1	4.4E-3		08/29/11
SR-89/90										**08/24/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982005
SAF# F11-162
Sample ID B2H042

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		55	7.3	pCi/g	1	0.059		08/18/11
Cobalt-60	10198-40-0	LA-508-481		0.20	.031	pCi/g	1	0.026		08/18/11
Europium-152	14683-23-9	LA-508-481		2.1	.16	pCi/g	1	0.27		08/18/11
Europium-154	15585-10-1	LA-508-481		0.68	.16	pCi/g	1	0.085		08/18/11
Europium-155	14391-16-3	LA-508-481	U	0.044	.18	pCi/g	1	0.30		08/18/11
Np/Th/Pu/Am/U Prep										**08/26/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		11	2.8	pCi/g	1	0.053		08/29/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471		1.6	.36	pCi/g	1	4.2E-3		08/29/11
Plutonium-239/240	PU-239/240	LA-508-471		12	2.6	pCi/g	1	0.014		08/29/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.14	.043	pCi/g	1	0.017		08/29/11
Uranium-235	15117-96-1	LA-508-471		0.011	.01	pCi/g	1	0.0060		08/29/11
Uranium-238	U-238	LA-508-471		0.15	.047	pCi/g	1	4.8E-3		08/29/11
SR-89/90										**08/24/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982006
SAF# F11-162
Sample ID B2H043

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		10	1.2	pCi/g	1	0.042		08/18/11
Cobalt-60	10198-40-0	LA-508-481	U	2.4E-3	.016	pCi/g	1	0.030		08/18/11
Europium-152	14683-23-9	LA-508-481	U	8.8E-3	.1	pCi/g	1	0.18		08/18/11
Europium-154	15585-10-1	LA-508-481	U	0.059	.056	pCi/g	1	0.11		08/18/11
Europium-155	14391-16-3	LA-508-481	U	-0.014	.14	pCi/g	1	0.23		08/18/11
Np/Th/Pu/Am/U Prep										**08/26/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.87	.24	pCi/g	1	0.056		08/29/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471		0.14	.054	pCi/g	1	0.054		08/29/11
Plutonium-239/240	PU-239/240	LA-508-471		0.94	.25	pCi/g	1	0.013		08/29/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.12	.038	pCi/g	1	0.011		08/29/11
Uranium-235	15117-96-1	LA-508-471	U	7.3E-3	.0089	pCi/g	1	0.013		08/29/11
Uranium-238	U-238	LA-508-471		0.13	.039	pCi/g	1	0.011		08/29/11
SR-89/90										**08/24/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982007
SAF# F11-162
Sample ID B2H044

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		3.8	.5	pCi/g	1	0.025		08/18/11
Cobalt-60	10198-40-0	LA-508-481		0.031	.017	pCi/g	1	0.020		08/18/11
Europium-152	14683-23-9	LA-508-481		0.17	.043	pCi/g	1	0.089		08/18/11
Europium-154	15585-10-1	LA-508-481	U	4.1E-3	.036	pCi/g	1	0.063		08/18/11
Europium-155	14391-16-3	LA-508-481	U	2.5E-4	.067	pCi/g	1	0.11		08/18/11
Np/Th/Pu/Am/U Prep										**08/26/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.37	.11	pCi/g	1	0.060		08/29/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	0.038	.036	pCi/g	1	0.056		08/29/11
Plutonium-239/240	PU-239/240	LA-508-471		0.30	.089	pCi/g	1	0.014		08/29/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.12	.036	pCi/g	1	0.0040		08/29/11
Uranium-235	15117-96-1	LA-508-471		0.014	.01	pCi/g	1	4.9E-3		08/29/11
Uranium-238	U-238	LA-508-471		0.15	.043	pCi/g	1	0.014		08/29/11
SR-89/90										**08/24/11**
SR-89/90										

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112982

Sample # 112982008
SAF# F11-162
Sample ID B2H045

Eu-152, Eu-154 and Eu-155 non-detect results with MDCs > the CRDL of 0.1 pCi/g highlighted

Matrix SOIL
Sampled 08/17/11
Received 08/17/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/17/11**
GEA										
Cesium-137	10045-97-3	LA-508-481		3.3	.44	pCi/g	1	0.029		08/18/11
Cobalt-60	10198-40-0	LA-508-481		0.15	.026	pCi/g	1	0.021		08/18/11
Europium-152	14683-23-9	LA-508-481		0.47	.059	pCi/g	1	0.088		08/18/11
Europium-154	15585-10-1	LA-508-481	U	0.073	.045	pCi/g	1	0.077		08/18/11
Europium-155	14391-16-3	LA-508-481	U	0.075	.075	pCi/g	1	0.13		08/18/11
Np/Th/Pu/Am/U Prep										**08/26/11**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.26	.086	pCi/g	1	0.064		08/29/11
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471		0.056	.029	pCi/g	1	0.031		08/29/11
Plutonium-239/240	PU-239/240	LA-508-471		0.42	.12	pCi/g	1	0.018		08/29/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.12	.036	pCi/g	1	3.9E-3		08/29/11
Uranium-235	15117-96-1	LA-508-471		0.011	.0088	pCi/g	1	4.8E-3		08/29/11
Uranium-238	U-238	LA-508-471		0.16	.046	pCi/g	1	3.9E-3		08/29/11
SR-89/90										**08/24/11**
SR-89/90										

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

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

Appendix 6

Additional Documentation Requested By Client

Batch QC List

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
188151	188160	1	IBLANK	62859	IBLANK		Gamma Energy Analysis-general
188151	188160	2	LCS	62860	LCS		Gamma Energy Analysis-general
188151	188160	3	DUP	62861	B2H011(112941001DUP)	112941001	Gamma Energy Analysis-general
188151	188160	4	SAMPLE	112941001	B2H011		Gamma Energy Analysis-general
188151	188160	5	SAMPLE	112941002	B2H012		Gamma Energy Analysis-general
188151	188160	6	SAMPLE	112941003	B2H013		Gamma Energy Analysis-general
188151	188160	7	SAMPLE	112941004	B2H014		Gamma Energy Analysis-general
188151	188160	8	SAMPLE	112941005	B2H015		Gamma Energy Analysis-general
188151	188160	9	SAMPLE	112941006	B2H016		Gamma Energy Analysis-general
188151	188160	10	SAMPLE	112941007	B2H017		Gamma Energy Analysis-general
188152	188161	1	IBLANK	62862	IBLANK		Gamma Energy Analysis-general
188152	188161	2	LCS	62863	LCS		Gamma Energy Analysis-general
188152	188161	3	DUP	62864	B2H018(112941008DUP)	112941008	Gamma Energy Analysis-general
188152	188161	4	SAMPLE	112941008	B2H018		Gamma Energy Analysis-general
188152	188161	5	SAMPLE	112941009	B2H019		Gamma Energy Analysis-general
188152	188161	6	SAMPLE	112941010	B2H020		Gamma Energy Analysis-general
188152	188161	7	SAMPLE	112941011	B2H021		Gamma Energy Analysis-general
188152	188161	8	SAMPLE	112941012	B2H022		Gamma Energy Analysis-general
188152	188161	9	SAMPLE	112941013	B2H023		Gamma Energy Analysis-general
188152	188161	10	SAMPLE	112941014	B2H024		Gamma Energy Analysis-general
188153	188162	1	IBLANK	62865	IBLANK		Gamma Energy Analysis-general
188153	188162	2	LCS	62866	LCS		Gamma Energy Analysis-general
188153	188162	3	DUP	62867	B2H025(112941015DUP)	112941015	Gamma Energy Analysis-general

Batch QC List

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
188153	188162	4	SAMPLE	112941015	B2H025		Gamma Energy Analysis-general
188153	188162	5	SAMPLE	112941016	B2H026		Gamma Energy Analysis-general
188153	188162	6	SAMPLE	112941017	B2H027		Gamma Energy Analysis-general
188153	188162	7	SAMPLE	112941018	B2H050		Gamma Energy Analysis-general
188153	188162	8	SAMPLE	112941019	B2H051		Gamma Energy Analysis-general
188153	188162	9	SAMPLE	112941020	B2H054		Gamma Energy Analysis-general
188153	188162	10	SAMPLE	112941021	B2H055		Gamma Energy Analysis-general
188273	188454	1	BLANK	62991	BLANK		Americium/Curium (AEA)
188273	188454	2	LCS	62992	LCS		Americium/Curium (AEA)
188273	188454	3	SAMPLE	112941001	B2H011		Americium/Curium (AEA)
188273	188454	4	DUP	62993	B2H011(112941001DUP)	112941001	Americium/Curium (AEA)
188273	188454	5	SAMPLE	112941002	B2H012		Americium/Curium (AEA)
188273	188454	6	SAMPLE	112941003	B2H013		Americium/Curium (AEA)
188273	188454	7	SAMPLE	112941004	B2H014		Americium/Curium (AEA)
188273	188454	8	SAMPLE	112941005	B2H015		Americium/Curium (AEA)
188273	188454	9	SAMPLE	112941006	B2H016		Americium/Curium (AEA)
188273	188454	10	SAMPLE	112941007	B2H017		Americium/Curium (AEA)
188273	188455	1	DUP	62993	B2H011(112941001DUP)	112941001	Plutonium (AEA)
188273	188455	2	SAMPLE	112941001	B2H011		Plutonium (AEA)
188273	188455	3	SAMPLE	112941002	B2H012		Plutonium (AEA)
188273	188455	4	SAMPLE	112941003	B2H013		Plutonium (AEA)
188273	188455	5	SAMPLE	112941004	B2H014		Plutonium (AEA)
188273	188455	6	SAMPLE	112941005	B2H015		Plutonium (AEA)

Batch QC List

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
188273	188455	7	SAMPLE	112941006	B2H016		Plutonium (AEA)
188273	188455	8	SAMPLE	112941007	B2H017		Plutonium (AEA)
188273	188455	9	BLANK	62991	BLANK		Plutonium (AEA)
188273	188455	10	LCS	62992	LCS		Plutonium (AEA)
188273	188456	1	DUP	62993	B2H011(112941001DUP)	112941001	Uranium (AEA)
188273	188456	2	SAMPLE	112941001	B2H011		Uranium (AEA)
188273	188456	3	SAMPLE	112941002	B2H012		Uranium (AEA)
188273	188456	4	SAMPLE	112941003	B2H013		Uranium (AEA)
188273	188456	5	SAMPLE	112941004	B2H014		Uranium (AEA)
188273	188456	6	SAMPLE	112941005	B2H015		Uranium (AEA)
188273	188456	7	SAMPLE	112941006	B2H016		Uranium (AEA)
188273	188456	8	SAMPLE	112941007	B2H017		Uranium (AEA)
188273	188456	9	BLANK	62991	BLANK		Uranium (AEA)
188273	188456	10	LCS	62992	LCS		Uranium (AEA)
188274	188561	1	BLANK	62994	BLANK		Americium/Curium (AEA)
188274	188561	2	LCS	62995	LCS		Americium/Curium (AEA)
188274	188561	3	SAMPLE	112941008	B2H018		Americium/Curium (AEA)
188274	188561	4	DUP	62996	B2H018(112941008DUP)	112941008	Americium/Curium (AEA)
188274	188561	5	SAMPLE	112941009	B2H019		Americium/Curium (AEA)
188274	188561	6	SAMPLE	112941010	B2H020		Americium/Curium (AEA)
188274	188561	7	SAMPLE	112941011	B2H021		Americium/Curium (AEA)
188274	188561	8	SAMPLE	112941012	B2H022		Americium/Curium (AEA)
188274	188561	9	SAMPLE	112941013	B2H023		Americium/Curium (AEA)

Batch QC List

Attention Michael Neely
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Group # WSCF112941

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
188274	188561	10	SAMPLE	112941014	B2H024		Americium/Curium (AEA)
188274	188562	1	DUP	62996	B2H018(112941008DUP)	112941008	Plutonium (AEA)
188274	188562	2	SAMPLE	112941008	B2H018		Plutonium (AEA)
188274	188562	3	SAMPLE	112941009	B2H019		Plutonium (AEA)
188274	188562	4	SAMPLE	112941010	B2H020		Plutonium (AEA)
188274	188562	5	SAMPLE	112941011	B2H021		Plutonium (AEA)
188274	188562	6	SAMPLE	112941012	B2H022		Plutonium (AEA)
188274	188562	7	SAMPLE	112941013	B2H023		Plutonium (AEA)
188274	188562	8	SAMPLE	112941014	B2H024		Plutonium (AEA)
188274	188562	9	BLANK	62994	BLANK		Plutonium (AEA)
188274	188562	10	LCS	62995	LCS		Plutonium (AEA)
188274	188563	1	DUP	62996	B2H018(112941008DUP)	112941008	Uranium (AEA)
188274	188563	2	SAMPLE	112941008	B2H018		Uranium (AEA)
188274	188563	3	SAMPLE	112941009	B2H019		Uranium (AEA)
188274	188563	4	SAMPLE	112941010	B2H020		Uranium (AEA)
188274	188563	5	SAMPLE	112941011	B2H021		Uranium (AEA)
188274	188563	6	SAMPLE	112941012	B2H022		Uranium (AEA)
188274	188563	7	SAMPLE	112941013	B2H023		Uranium (AEA)
188274	188563	8	SAMPLE	112941014	B2H024		Uranium (AEA)
188274	188563	9	BLANK	62994	BLANK		Uranium (AEA)
188274	188563	10	LCS	62995	LCS		Uranium (AEA)
188370	188665	1	BLANK	63166	BLANK		Americium/Curium (AEA)
188370	188665	2	LCS	63167	LCS		Americium/Curium (AEA)

Batch QC List

Attention Michael Neely
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Group # WSCF112941

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
188370	188665	3	SAMPLE	112941015	B2H025		Americium/Curium (AEA)
188370	188665	4	DUP	63168	B2H025(112941015DUP)	112941015	Americium/Curium (AEA)
188370	188665	5	SAMPLE	112941016	B2H026		Americium/Curium (AEA)
188370	188665	6	SAMPLE	112941017	B2H027		Americium/Curium (AEA)
188370	188665	7	SAMPLE	112941018	B2H050		Americium/Curium (AEA)
188370	188665	8	SAMPLE	112941019	B2H051		Americium/Curium (AEA)
188370	188665	9	SAMPLE	112941020	B2H054		Americium/Curium (AEA)
188370	188665	10	SAMPLE	112941021	B2H055		Americium/Curium (AEA)
188370	188666	1	BLANK	63166	BLANK		Plutonium (AEA)
188370	188666	2	LCS	63167	LCS		Plutonium (AEA)
188370	188666	3	SAMPLE	112941015	B2H025		Plutonium (AEA)
188370	188666	4	DUP	63168	B2H025(112941015DUP)	112941015	Plutonium (AEA)
188370	188666	5	SAMPLE	112941016	B2H026		Plutonium (AEA)
188370	188666	6	SAMPLE	112941017	B2H027		Plutonium (AEA)
188370	188666	7	SAMPLE	112941018	B2H050		Plutonium (AEA)
188370	188666	8	SAMPLE	112941019	B2H051		Plutonium (AEA)
188370	188666	9	SAMPLE	112941020	B2H054		Plutonium (AEA)
188370	188666	10	SAMPLE	112941021	B2H055		Plutonium (AEA)
188370	188667	1	BLANK	63166	BLANK		Uranium (AEA)
188370	188667	2	LCS	63167	LCS		Uranium (AEA)
188370	188667	3	SAMPLE	112941015	B2H025		Uranium (AEA)
188370	188667	4	DUP	63168	B2H025(112941015DUP)	112941015	Uranium (AEA)
188370	188667	5	SAMPLE	112941016	B2H026		Uranium (AEA)

Batch QC List

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
188370	188667	6	SAMPLE	112941017	B2H027		Uranium (AEA)
188370	188667	7	SAMPLE	112941018	B2H050		Uranium (AEA)
188370	188667	8	SAMPLE	112941019	B2H051		Uranium (AEA)
188370	188667	9	SAMPLE	112941020	B2H054		Uranium (AEA)
188370	188667	10	SAMPLE	112941021	B2H055		Uranium (AEA)
188375	188466	1	BLANK	63180	BLANK		Strontium 89/90 (GPC/GEA)
188375	188466	2	LCS	63181	LCS		Strontium 89/90 (GPC/GEA)
188375	188466	3	DUP	63182	B2H018(112941008DUP)	112941008	Strontium 89/90 (GPC/GEA)
188375	188466	4	SAMPLE	112941008	B2H018		Strontium 89/90 (GPC/GEA)
188375	188466	5	SAMPLE	112941009	B2H019		Strontium 89/90 (GPC/GEA)
188375	188466	6	SAMPLE	112941010	B2H020		Strontium 89/90 (GPC/GEA)
188375	188466	7	SAMPLE	112941011	B2H021		Strontium 89/90 (GPC/GEA)
188375	188466	8	SAMPLE	112941012	B2H022		Strontium 89/90 (GPC/GEA)
188375	188466	9	SAMPLE	112941013	B2H023		Strontium 89/90 (GPC/GEA)
188375	188466	10	SAMPLE	112941014	B2H024		Strontium 89/90 (GPC/GEA)
188376	188469	1	BLANK	63183	BLANK		Strontium 89/90 (GPC/GEA)
188376	188469	2	LCS	63184	LCS		Strontium 89/90 (GPC/GEA)
188376	188469	3	DUP	63185	B2H011(112941001DUP)	112941001	Strontium 89/90 (GPC/GEA)
188376	188469	4	SAMPLE	112941001	B2H011		Strontium 89/90 (GPC/GEA)
188376	188469	5	SAMPLE	112941002	B2H012		Strontium 89/90 (GPC/GEA)
188376	188469	6	SAMPLE	112941003	B2H013		Strontium 89/90 (GPC/GEA)
188376	188469	7	SAMPLE	112941004	B2H014		Strontium 89/90 (GPC/GEA)
188376	188469	8	SAMPLE	112941005	B2H015		Strontium 89/90 (GPC/GEA)

Batch QC List

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
188376	188469	9	SAMPLE	112941006	B2H016		Strontium 89/90 (GPC/GEA)
188376	188469	10	SAMPLE	112941007	B2H017		Strontium 89/90 (GPC/GEA)
188377	188660	1	BLANK	63186	BLANK		Strontium 89/90 (GPC/GEA)
188377	188660	2	LCS	63187	LCS		Strontium 89/90 (GPC/GEA)
188377	188660	3	DUP	63188	B2H025(112941015DUP)	112941015	Strontium 89/90 (GPC/GEA)
188377	188660	4	SAMPLE	112941015	B2H025		Strontium 89/90 (GPC/GEA)
188377	188660	5	SAMPLE	112941016	B2H026		Strontium 89/90 (GPC/GEA)
188377	188660	6	SAMPLE	112941017	B2H027		Strontium 89/90 (GPC/GEA)
188377	188660	7	SAMPLE	112941018	B2H050		Strontium 89/90 (GPC/GEA)
188377	188660	8	SAMPLE	112941019	B2H051		Strontium 89/90 (GPC/GEA)
188377	188660	9	SAMPLE	112941020	B2H054		Strontium 89/90 (GPC/GEA)
188377	188660	10	SAMPLE	112941021	B2H055		Strontium 89/90 (GPC/GEA)

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

QC Batch 188151 **Test** Gamma Energy Analysis-general
Associated Samples 112941001, 112941002, 112941003, 112941004, 112941005, 112941006, 112941007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
IBLANK			**QC Sample #62859**								
Cesium-137	10045-97-3		-5.1E-3	pCi/g						U	08/15/11
Cobalt-60	10198-40-0		5.2E-3	pCi/g						U	08/15/11
Europium-152	14683-23-9		3.2E-3	pCi/g						U	08/15/11
Europium-154	15585-10-1		-4.2E-3	pCi/g						U	08/15/11
Europium-155	14391-16-3		0.013	pCi/g						U	08/15/11
LCS			**QC Sample #62860**								
Cesium-137	10045-97-3		6400	pCi/sample	106.1	80 - 120					08/15/11
Cobalt-60	10198-40-0		10000	pCi/sample	101.6	80 - 120					08/15/11
DUP			**QC Sample #62861**								
			Original 112941001								
Cesium-137	10045-97-3	0.057	0.064	pCi/g			11.60	30			08/15/11
Cobalt-60	10198-40-0	-9.1E-3	-0.010	pCi/g			-10.50	30		U	08/15/11
Europium-152	14683-23-9	-0.039	0.013	pCi/g			-408.00	30	*	U	08/15/11
Europium-154	15585-10-1	0.014	1.4E-4	pCi/g			196.00	30	*	U	08/15/11
Europium-155	14391-16-3	-0.029	-0.075	pCi/g			-90.20	30	*	U	08/15/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

QC Batch 188152 **Test** Gamma Energy Analysis-general
Associated Samples 112941008, 112941009, 112941010, 112941011, 112941012, 112941013, 112941014

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
IBLANK			**QC Sample #62862**								
Cesium-137	10045-97-3		-4.5E-3	pCi/g						U	08/16/11
Cobalt-60	10198-40-0		4.8E-3	pCi/g						U	08/16/11
Europium-152	14683-23-9		0.015	pCi/g						U	08/16/11
Europium-154	15585-10-1		0.012	pCi/g						U	08/16/11
Europium-155	14391-16-3		5.2E-3	pCi/g						U	08/16/11
LCS			**QC Sample #62863**								
Cesium-137	10045-97-3		6400	pCi/sample	105.6	80 - 120					08/16/11
Cobalt-60	10198-40-0		10000	pCi/sample	103.7	80 - 120					08/16/11
DUP			**QC Sample #62864**								
			Original 112941008								
Cesium-137	10045-97-3	1.1	1.0	pCi/g			9.50	30			08/16/11
Cobalt-60	10198-40-0	0.020	8.5E-3	pCi/g			81.70	30	*	U	08/16/11
Europium-152	14683-23-9	7.7E-3	0.073	pCi/g			162.30	30	*	U	08/16/11
Europium-154	15585-10-1	0.016	-0.021	pCi/g			-1480.00	30	*	U	08/16/11
Europium-155	14391-16-3	0.083	0.018	pCi/g			128.00	30	*	U	08/16/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

QC Batch 188153 **Test** Gamma Energy Analysis-general
Associated Samples 112941015, 112941016, 112941017, 112941018, 112941019, 112941020, 112941021

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
IBLANK			**QC Sample #62865**								
Cesium-137	10045-97-3		-0.011	pCi/g						U	08/16/11
Cobalt-60	10198-40-0		-3.4E-3	pCi/g						U	08/16/11
Europium-152	14683-23-9		-0.017	pCi/g						U	08/16/11
Europium-154	15585-10-1		-1.6E-3	pCi/g						U	08/16/11
Europium-155	14391-16-3		0.011	pCi/g						U	08/16/11
LCS			**QC Sample #62866**								
Cesium-137	10045-97-3		6300	pCi/sample	103.9	80 - 120					08/16/11
Cobalt-60	10198-40-0		10000	pCi/sample	103.8	80 - 120					08/16/11
DUP			**QC Sample #62867**								
			Original 112941015								
Cesium-137	10045-97-3	3.1	3.2	pCi/g			3.20	30			08/16/11
Cobalt-60	10198-40-0	0.030	0.019	pCi/g			50.00	30	*	U	08/16/11
Europium-152	14683-23-9	0.96	1.0	pCi/g			5.10	30			08/16/11
Europium-154	15585-10-1	0.10	0.17	pCi/g			46.20	30	*	X	08/16/11
Europium-155	14391-16-3	-0.038	1.6E-4	pCi/g			-201.70	30	*	U	08/16/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

QC Batch 188273 **Test** Plutonium (AEA)
Associated Samples 112941001, 112941002, 112941003, 112941004, 112941005, 112941006, 112941007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #62991**								
Plutonium-238	13981-16-3		-0.016	pCi/g						U	08/21/11
Americium-241	14596-10-2		-5.8E-3	pCi/g						U	08/21/11
Plutonium-239/240	PU-239/240		3.9E-3	pCi/g						U	08/21/11
Uranium-234	U-233/234		0.025	pCi/g						X	08/21/11
Uranium-235	15117-96-1		7.7E-3	pCi/g						U	08/21/11
Uranium-238	U-238		0.032	pCi/g						X	08/21/11
LCS			**QC Sample #62992**								
Americium-241	14596-10-2		25	pCi/sample	113.8	80 - 120					08/21/11
Plutonium-239/240	PU-239/240		22	pCi/sample	96.4	80 - 120					08/21/11
Uranium-234	U-233/234		37	pCi/sample	112.6	80 - 120					08/21/11
DUP			**QC Sample #62993**								
			Original 112941001								
Plutonium-238	13981-16-3	9.4E-3	1.6E-3	pCi/g			141.30	30	*	U	08/21/11
Americium-241	14596-10-2	-0.018	-6.6E-6	pCi/g			-199.90	30	*	U	08/21/11
Plutonium-239/240	PU-239/240	0.020	9.6E-3	pCi/g			70.30	30	*	X	08/21/11
Uranium-234	U-233/234	0.10	0.14	pCi/g			33.30	30	*	X	08/21/11
Uranium-235	15117-96-1	0.021	0.014	pCi/g			40.00	30	*	U	08/21/11
Uranium-238	U-238	0.17	0.14	pCi/g			13.30	30			08/21/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

QC Batch 188274 **Test** Americium/Curium (AEA)
Associated Samples 112941008, 112941009, 112941010, 112941011, 112941012, 112941013, 112941014

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #62994**								
Americium-241	14596-10-2		-0.033	pCi/g						U	08/23/11
Plutonium-238	13981-16-3		-7.9E-3	pCi/g						U	08/23/11
Uranium-234	U-233/234		0.024	pCi/g						X	08/23/11
Plutonium-239/240	PU-239/240		-0.0020	pCi/g						U	08/23/11
Uranium-235	15117-96-1		0.010	pCi/g						X	08/23/11
Uranium-238	U-238		0.025	pCi/g						X	08/23/11
LCS			**QC Sample #62995**								
Americium-241	14596-10-2		25	pCi/sample	112.8	80 - 120					08/23/11
Plutonium-239/240	PU-239/240		23	pCi/sample	101.8	80 - 120					08/23/11
Uranium-234	U-233/234		38	pCi/sample	114.8	80 - 120					08/23/11
DUP			**QC Sample #62996**								
			Original 112941008								
Plutonium-238	13981-16-3	3.6E-3	0.043	pCi/g			169.90	30	*	U	08/23/11
Americium-241	14596-10-2	0.048	0.22	pCi/g			128.40	30	*	X	08/23/11
Uranium-234	U-233/234	0.15	0.14	pCi/g			6.90	30			08/23/11
Plutonium-239/240	PU-239/240	0.094	0.18	pCi/g			63.70	30	*	X	08/23/11
Uranium-235	15117-96-1	0.020	0.010	pCi/g			66.70	30	*	X	08/23/11
Uranium-238	U-238	0.22	0.16	pCi/g			31.60	30	*	X	08/23/11

Quality Control Report

Attention Michael Neely
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Group # WSCF112941

QC Batch 188370 **Test** Americium/Curium (AEA)
Associated Samples 112941015, 112941016, 112941017, 112941018, 112941019, 112941020, 112941021

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #63166**								
Americium-241	14596-10-2		-8.8E-3	pCi/g						U	08/24/11
Plutonium-238	13981-16-3		-8.7E-3	pCi/g						U	08/24/11
Uranium-234	U-233/234		0.020	pCi/g						U	08/24/11
Plutonium-239/240	PU-239/240		8.7E-3	pCi/g						U	08/24/11
Uranium-235	15117-96-1		7.9E-3	pCi/g						U	08/24/11
Uranium-238	U-238		0.014	pCi/g						U	08/24/11
LCS			**QC Sample #63167**								
Americium-241	14596-10-2		24	pCi/sample	108.2	80 - 120					08/24/11
Uranium-234	U-233/234		35	pCi/sample	106	80 - 120					08/24/11
Plutonium-239/240	PU-239/240		23	pCi/sample	99.6	80 - 120					08/24/11
DUP			**QC Sample #63168**								
			Original 112941015								
Americium-241	14596-10-2	3.2	0.46	pCi/g			148.30	30	*	X	08/24/11
Plutonium-238	13981-16-3	0.54	0.070	pCi/g			154.10	30	*	X	08/24/11
Uranium-234	U-233/234	0.18	0.15	pCi/g			18.20	30			08/24/11
Plutonium-239/240	PU-239/240	3.8	0.53	pCi/g			151.00	30	*	X	08/24/11
Uranium-235	15117-96-1	0.016	7.8E-3	pCi/g			68.90	30	*	U	08/24/11
Uranium-238	U-238	0.16	0.16	pCi/g			0.00	30			08/24/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

QC Batch 188375 **Test** Strontium 89/90 (GPC/GEA)
Associated Samples 112941008, 112941009, 112941010, 112941011, 112941012, 112941013, 112941014

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #63180**							
Strontium-89/90	SR-RAD		0.024	pCi/g					U	08/23/11
LCS			**QC Sample #63181**							
Strontium-89/90	SR-RAD		19	pCi/g	103	80 - 120				08/23/11
DUP			**QC Sample #63182**							
			Original 112941008							
Strontium-89/90	SR-RAD	1.6	1.7	pCi/g			6.10	30		08/23/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

QC Batch 188376 **Test** Strontium 89/90 (GPC/GEA)
Associated Samples 112941001, 112941002, 112941003, 112941004, 112941005, 112941006, 112941007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #63183**							
Strontium-89/90	SR-RAD		0.68	pCi/g					X	08/23/11
LCS			**QC Sample #63184**							
Strontium-89/90	SR-RAD		22	pCi/g	119.4	80 - 120				08/23/11
DUP			**QC Sample #63185**							
			Original 112941001							
Strontium-89/90	SR-RAD	0.94	0.87	pCi/g			8.90	30		08/23/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

QC Batch 188377 **Test** Strontium 89/90 (GPC/GEA)
Associated Samples 112941015, 112941016, 112941017, 112941018, 112941019, 112941020, 112941021

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #63186**								
Strontium-89/90	SR-RAD		0.48	pCi/g						U	08/24/11
LCS			**QC Sample #63187**								
Strontium-89/90	SR-RAD		22	pCi/g	110.7	80 - 120					08/24/11
DUP			**QC Sample #63188**								
			Original 112941015								
Strontium-89/90	SR-RAD	2.1	3.3	pCi/g			41.50	30	*	X	08/24/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

QC Batch 188273 **Test** Uranium (AEA)
Associated Samples 112941001, 112941002, 112941003, 112941004, 112941005, 112941006, 112941007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #112941001**							
Uranium-232 Tracer	14158-29-3				84.8	25 - 105				08/21/11
Americium-243 Tracer	14993-75-0				93.6	25 - 105				08/21/11
Plutonium-242 Tracer	13982-10-0				85.2	25 - 105				08/21/11
SAMPLE			**Sample #112941002**							
Uranium-232 Tracer	14158-29-3				79.8	25 - 105				08/21/11
Americium-243 Tracer	14993-75-0				93.7	25 - 105				08/21/11
Plutonium-242 Tracer	13982-10-0				81.3	25 - 105				08/21/11
SAMPLE			**Sample #112941003**							
Uranium-232 Tracer	14158-29-3				82.6	25 - 105				08/21/11
Americium-243 Tracer	14993-75-0				89.8	25 - 105				08/21/11
Plutonium-242 Tracer	13982-10-0				86.6	25 - 105				08/21/11
SAMPLE			**Sample #112941004**							
Uranium-232 Tracer	14158-29-3				76.1	25 - 105				08/21/11
Americium-243 Tracer	14993-75-0				106.3	25 - 105			X	08/21/11
Plutonium-242 Tracer	13982-10-0				78.8	25 - 105				08/21/11
SAMPLE			**Sample #112941005**							

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Uranium-232 Tracer	14158-29-3				79.5	25 - 105				08/21/11
Americium-243 Tracer	14993-75-0				100.9	25 - 105				08/21/11
Plutonium-242 Tracer	13982-10-0				88.3	25 - 105				08/21/11
SAMPLE			**Sample #112941006**							
Uranium-232 Tracer	14158-29-3				78.9	25 - 105				08/21/11
Americium-243 Tracer	14993-75-0				97.4	25 - 105				08/21/11
Plutonium-242 Tracer	13982-10-0				82.5	25 - 105				08/21/11
SAMPLE			**Sample #112941007**							
Uranium-232 Tracer	14158-29-3				85.6	25 - 105				08/21/11
Americium-243 Tracer	14993-75-0				95.5	25 - 105				08/21/11
Plutonium-242 Tracer	13982-10-0				74.9	25 - 105				08/21/11
BLANK			**QC Sample #62991**							
Uranium-232 Tracer	14158-29-3				87.6	25 - 105				08/21/11
Americium-243 Tracer	14993-75-0				79.2	25 - 105				08/21/11
Plutonium-242 Tracer	13982-10-0				83.8	25 - 105				08/21/11
LCS			**QC Sample #62992**							
Uranium-232 Tracer	14158-29-3				57.8	25 - 105				08/21/11
Americium-243 Tracer	14993-75-0				87.6	25 - 105				08/21/11
Plutonium-242 Tracer	13982-10-0				88.3	25 - 105				08/21/11
DUP			**QC Sample #62993**							
			Original 112941001							
Uranium-232 Tracer	14158-29-3				91.6	25 - 105	2.50			08/21/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Americium-243 Tracer	14993-75-0				89.8	25 - 105	0.00			08/21/11
Plutonium-242 Tracer	13982-10-0				89.9	25 - 105	1.60			08/21/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

QC Batch 188274 **Test** Uranium (AEA)
Associated Samples 112941008, 112941009, 112941010, 112941011, 112941012, 112941013, 112941014

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #112941008**							
Uranium-232 Tracer	14158-29-3				68.1	25 - 105				08/23/11
Americium-243 Tracer	14993-75-0				98.7	25 - 105				08/23/11
Plutonium-242 Tracer	13982-10-0				85.5	25 - 105				08/23/11
SAMPLE			**Sample #112941009**							
Uranium-232 Tracer	14158-29-3				81.9	25 - 105				08/23/11
Americium-243 Tracer	14993-75-0				93.2	25 - 105				08/23/11
Plutonium-242 Tracer	13982-10-0				89	25 - 105				08/23/11
SAMPLE			**Sample #112941010**							
Uranium-232 Tracer	14158-29-3				80.5	25 - 105				08/23/11
Americium-243 Tracer	14993-75-0				89.4	25 - 105				08/23/11
Plutonium-242 Tracer	13982-10-0				84.5	25 - 105				08/23/11
SAMPLE			**Sample #112941011**							
Uranium-232 Tracer	14158-29-3				80.8	25 - 105				08/23/11
Americium-243 Tracer	14993-75-0				84.1	25 - 105				08/23/11
Plutonium-242 Tracer	13982-10-0				88.7	25 - 105				08/23/11
SAMPLE			**Sample #112941012**							

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Uranium-232 Tracer	14158-29-3				80.6	25 - 105				08/23/11
Americium-243 Tracer	14993-75-0				97.6	25 - 105				08/23/11
Plutonium-242 Tracer	13982-10-0				77.2	25 - 105				08/23/11
SAMPLE			**Sample #112941013**							
Uranium-232 Tracer	14158-29-3				72.3	25 - 105				08/23/11
Americium-243 Tracer	14993-75-0				81.9	25 - 105				08/23/11
Plutonium-242 Tracer	13982-10-0				95.3	25 - 105				08/23/11
SAMPLE			**Sample #112941014**							
Uranium-232 Tracer	14158-29-3				81.2	25 - 105				08/23/11
Americium-243 Tracer	14993-75-0				88	25 - 105				08/23/11
Plutonium-242 Tracer	13982-10-0				65.8	25 - 105				08/23/11
BLANK			**QC Sample #62994**							
Uranium-232 Tracer	14158-29-3				75.8	25 - 105				08/23/11
Americium-243 Tracer	14993-75-0				82.8	25 - 105				08/23/11
Plutonium-242 Tracer	13982-10-0				77.3	25 - 105				08/23/11
LCS			**QC Sample #62995**							
Uranium-232 Tracer	14158-29-3				55.8	25 - 105				08/23/11
Americium-243 Tracer	14993-75-0				79.7	25 - 105				08/23/11
Plutonium-242 Tracer	13982-10-0				78.8	25 - 105				08/23/11
DUP			**QC Sample #62996**							
			Original 112941008							
Uranium-232 Tracer	14158-29-3				77.5	25 - 105	5.60			08/23/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Americium-243 Tracer	14993-75-0				91.6	25 - 105	5.10			08/23/11
Plutonium-242 Tracer	13982-10-0				79.3	25 - 105	5.20			08/23/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

QC Batch 188370 **Test** Uranium (AEA)
Associated Samples 112941015, 112941016, 112941017, 112941018, 112941019, 112941020, 112941021

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #112941015**							
Uranium-232 Tracer	14158-29-3				86.3	25 - 105				08/24/11
Americium-243 Tracer	14993-75-0				93.1	25 - 105				08/24/11
Plutonium-242 Tracer	13982-10-0				84.2	25 - 105				08/24/11
SAMPLE			**Sample #112941016**							
Uranium-232 Tracer	14158-29-3				88.3	25 - 105				08/24/11
Americium-243 Tracer	14993-75-0				88.2	25 - 105				08/24/11
Plutonium-242 Tracer	13982-10-0				91.5	25 - 105				08/24/11
SAMPLE			**Sample #112941017**							
Uranium-232 Tracer	14158-29-3				83.6	25 - 105				08/24/11
Americium-243 Tracer	14993-75-0				80.8	25 - 105				08/24/11
Plutonium-242 Tracer	13982-10-0				82.5	25 - 105				08/24/11
SAMPLE			**Sample #112941018**							
Uranium-232 Tracer	14158-29-3				90.1	25 - 105				08/24/11
Americium-243 Tracer	14993-75-0				87.3	25 - 105				08/24/11
Plutonium-242 Tracer	13982-10-0				84.5	25 - 105				08/24/11
SAMPLE			**Sample #112941019**							

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Uranium-232 Tracer	14158-29-3				88.9	25 - 105				08/24/11
Americium-243 Tracer	14993-75-0				95.7	25 - 105				08/24/11
Plutonium-242 Tracer	13982-10-0				86.6	25 - 105				08/24/11
SAMPLE			**Sample #112941020**							
Uranium-232 Tracer	14158-29-3				87.6	25 - 105				08/24/11
Americium-243 Tracer	14993-75-0				73.8	25 - 105				08/24/11
Plutonium-242 Tracer	13982-10-0				87.3	25 - 105				08/24/11
SAMPLE			**Sample #112941021**							
Uranium-232 Tracer	14158-29-3				92.5	25 - 105				08/24/11
Americium-243 Tracer	14993-75-0				77.4	25 - 105				08/24/11
Plutonium-242 Tracer	13982-10-0				94.8	25 - 105				08/24/11
BLANK			**QC Sample #63166**							
Uranium-232 Tracer	14158-29-3				86.5	25 - 105				08/24/11
Americium-243 Tracer	14993-75-0				70.8	25 - 105				08/24/11
Plutonium-242 Tracer	13982-10-0				95.5	25 - 105				08/24/11
LCS			**QC Sample #63167**							
Uranium-232 Tracer	14158-29-3				64.8	25 - 105				08/24/11
Americium-243 Tracer	14993-75-0				76.3	25 - 105				08/24/11
Plutonium-242 Tracer	13982-10-0				88.6	25 - 105				08/24/11
DUP			**QC Sample #63168**							
			Original 112941015							
Uranium-232 Tracer	14158-29-3				94.5	25 - 105	0.00			08/24/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Americium-243 Tracer	14993-75-0				79.7	25 - 105	2.50			08/24/11
Plutonium-242 Tracer	13982-10-0				82.3	25 - 105	0.00			08/24/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

QC Batch 188375 **Test** Strontium 89/90 (GPC/GEA)
Associated Samples 112941008, 112941009, 112941010, 112941011, 112941012, 112941013, 112941014

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #112941008**							
Strontium-85	13967-73-2				73.8	25 - 105				08/23/11
SAMPLE			**Sample #112941009**							
Strontium-85	13967-73-2				82.7	25 - 105				08/23/11
SAMPLE			**Sample #112941010**							
Strontium-85	13967-73-2				80.4	25 - 105				08/23/11
SAMPLE			**Sample #112941011**							
Strontium-85	13967-73-2				75.1	25 - 105				08/23/11
SAMPLE			**Sample #112941012**							
Strontium-85	13967-73-2				74.6	25 - 105				08/23/11
SAMPLE			**Sample #112941013**							
Strontium-85	13967-73-2				73.2	25 - 105				08/23/11
SAMPLE			**Sample #112941014**							
Strontium-85	13967-73-2				72.3	25 - 105				08/23/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #63180**							
Strontium-85	13967-73-2				74.2	25 - 105				08/23/11
LCS			**QC Sample #63181**							
Strontium-85	13967-73-2				77.3	25 - 105				08/23/11
DUP			**QC Sample #63182**							
			Original 112941008							
Strontium-85	13967-73-2				74.4	25 - 105	0.00			08/23/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

QC Batch 188376 **Test** Strontium 89/90 (GPC/GEA)
Associated Samples 112941001, 112941002, 112941003, 112941004, 112941005, 112941006, 112941007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #112941001**							
Strontium-85	13967-73-2				71	25 - 105				08/23/11
SAMPLE			**Sample #112941002**							
Strontium-85	13967-73-2				72	25 - 105				08/23/11
SAMPLE			**Sample #112941003**							
Strontium-85	13967-73-2				78.4	25 - 105				08/23/11
SAMPLE			**Sample #112941004**							
Strontium-85	13967-73-2				80.1	25 - 105				08/23/11
SAMPLE			**Sample #112941005**							
Strontium-85	13967-73-2				82.7	25 - 105				08/23/11
SAMPLE			**Sample #112941006**							
Strontium-85	13967-73-2				77.7	25 - 105				08/23/11
SAMPLE			**Sample #112941007**							
Strontium-85	13967-73-2				76.2	25 - 105				08/23/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #63183**							
Strontium-85	13967-73-2				72.8	25 - 105				08/23/11
LCS			**QC Sample #63184**							
Strontium-85	13967-73-2				77.1	25 - 105				08/23/11
DUP			**QC Sample #63185**							
			Original 112941001							
Strontium-85	13967-73-2				77.6	25 - 105	9.10			08/23/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

QC Batch 188377 **Test** Strontium 89/90 (GPC/GEA)
Associated Samples 112941015, 112941016, 112941017, 112941018, 112941019, 112941020, 112941021

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #112941015**							
Strontium-85	13967-73-2				76.2	25 - 105				08/24/11
SAMPLE			**Sample #112941016**							
Strontium-85	13967-73-2				74.9	25 - 105				08/24/11
SAMPLE			**Sample #112941017**							
Strontium-85	13967-73-2				74.7	25 - 105				08/24/11
SAMPLE			**Sample #112941018**							
Strontium-85	13967-73-2				69.4	25 - 105				08/24/11
SAMPLE			**Sample #112941019**							
Strontium-85	13967-73-2				69.4	25 - 105				08/24/11
SAMPLE			**Sample #112941020**							
Strontium-85	13967-73-2				66.4	25 - 105				08/24/11
SAMPLE			**Sample #112941021**							
Strontium-85	13967-73-2				65.8	25 - 105				08/24/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112941

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #63186**							
Strontium-85	13967-73-2				66.4	25 - 105				08/24/11
LCS			**QC Sample #63187**							
Strontium-85	13967-73-2				72	25 - 105				08/24/11
DUP			**QC Sample #63188**							
			Original 112941015							
Strontium-85	13967-73-2				71.8	25 - 105	4.70			08/24/11

Batch QC List

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
188352	188362	1	IBLANK	63121	IBLANK		Gamma Energy Analysis-general
188352	188362	2	LCS	63122	LCS		Gamma Energy Analysis-general
188352	188362	3	DUP	63123	B2H028(112976001DUP)	112976001	Gamma Energy Analysis-general
188352	188362	4	SAMPLE	112976001	B2H028		Gamma Energy Analysis-general
188352	188362	5	SAMPLE	112976002	B2H029		Gamma Energy Analysis-general
188352	188362	6	SAMPLE	112976003	B2H030		Gamma Energy Analysis-general
188352	188362	7	SAMPLE	112976004	B2H031		Gamma Energy Analysis-general
188352	188362	8	SAMPLE	112976005	B2H032		Gamma Energy Analysis-general
188352	188362	9	SAMPLE	112976006	B2H033		Gamma Energy Analysis-general
188353	188363	1	IBLANK	63124	IBLANK		Gamma Energy Analysis-general
188353	188363	2	LCS	63125	LCS		Gamma Energy Analysis-general
188353	188363	3	DUP	63126	B2H034(112976007DUP)	112976007	Gamma Energy Analysis-general
188353	188363	4	SAMPLE	112976007	B2H034		Gamma Energy Analysis-general
188353	188363	5	SAMPLE	112976008	B2H035		Gamma Energy Analysis-general
188353	188363	6	SAMPLE	112976009	B2H036		Gamma Energy Analysis-general
188353	188363	7	SAMPLE	112976010	B2H037		Gamma Energy Analysis-general
188353	188363	8	SAMPLE	112976011	B2H052		Gamma Energy Analysis-general
188353	188363	9	SAMPLE	112976012	B2H056		Gamma Energy Analysis-general
188371	188853	1	BLANK	63169	BLANK		Americium/Curium (AEA)
188371	188853	2	LCS	63170	LCS		Americium/Curium (AEA)
188371	188853	3	SAMPLE	112976001	B2H028		Americium/Curium (AEA)
188371	188853	4	DUP	63171	B2H028(112976001DUP)	112976001	Americium/Curium (AEA)
188371	188853	5	SAMPLE	112976002	B2H029		Americium/Curium (AEA)

Batch QC List

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
188371	188853	6	SAMPLE	112976003	B2H030		Americium/Curium (AEA)
188371	188853	7	SAMPLE	112976004	B2H031		Americium/Curium (AEA)
188371	188853	8	SAMPLE	112976005	B2H032		Americium/Curium (AEA)
188371	188853	9	SAMPLE	112976006	B2H033		Americium/Curium (AEA)
188371	188853	10	SAMPLE	112976007	B2H034		Americium/Curium (AEA)
188371	188854	1	DUP	63171	B2H028(112976001DUP)	112976001	Plutonium (AEA)
188371	188854	2	SAMPLE	112976001	B2H028		Plutonium (AEA)
188371	188854	3	SAMPLE	112976002	B2H029		Plutonium (AEA)
188371	188854	4	SAMPLE	112976003	B2H030		Plutonium (AEA)
188371	188854	5	SAMPLE	112976004	B2H031		Plutonium (AEA)
188371	188854	6	SAMPLE	112976005	B2H032		Plutonium (AEA)
188371	188854	7	SAMPLE	112976006	B2H033		Plutonium (AEA)
188371	188854	8	SAMPLE	112976007	B2H034		Plutonium (AEA)
188371	188854	9	BLANK	63169	BLANK		Plutonium (AEA)
188371	188854	10	LCS	63170	LCS		Plutonium (AEA)
188371	188855	1	DUP	63171	B2H028(112976001DUP)	112976001	Uranium (AEA)
188371	188855	2	SAMPLE	112976001	B2H028		Uranium (AEA)
188371	188855	3	SAMPLE	112976002	B2H029		Uranium (AEA)
188371	188855	4	SAMPLE	112976003	B2H030		Uranium (AEA)
188371	188855	5	SAMPLE	112976004	B2H031		Uranium (AEA)
188371	188855	6	SAMPLE	112976005	B2H032		Uranium (AEA)
188371	188855	7	SAMPLE	112976006	B2H033		Uranium (AEA)
188371	188855	8	SAMPLE	112976007	B2H034		Uranium (AEA)

Batch QC List

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
188371	188855	9	BLANK	63169	BLANK		Uranium (AEA)
188371	188855	10	LCS	63170	LCS		Uranium (AEA)
188372	188850	1	BLANK	63172	BLANK		Americium/Curium (AEA)
188372	188850	2	LCS	63173	LCS		Americium/Curium (AEA)
188372	188850	3	SAMPLE	112976008	B2H035		Americium/Curium (AEA)
188372	188850	4	DUP	63174	B2H035(112976008DUP)	112976008	Americium/Curium (AEA)
188372	188850	5	SAMPLE	112976009	B2H036		Americium/Curium (AEA)
188372	188850	6	SAMPLE	112976010	B2H037		Americium/Curium (AEA)
188372	188850	7	SAMPLE	112976011	B2H052		Americium/Curium (AEA)
188372	188850	8	SAMPLE	112976012	B2H056		Americium/Curium (AEA)
188372	188851	1	DUP	63174	B2H035(112976008DUP)	112976008	Plutonium (AEA)
188372	188851	2	SAMPLE	112976008	B2H035		Plutonium (AEA)
188372	188851	3	SAMPLE	112976009	B2H036		Plutonium (AEA)
188372	188851	4	SAMPLE	112976010	B2H037		Plutonium (AEA)
188372	188851	5	SAMPLE	112976011	B2H052		Plutonium (AEA)
188372	188851	6	SAMPLE	112976012	B2H056		Plutonium (AEA)
188372	188851	7	BLANK	63172	BLANK		Plutonium (AEA)
188372	188851	8	LCS	63173	LCS		Plutonium (AEA)
188372	188852	1	DUP	63174	B2H035(112976008DUP)	112976008	Uranium (AEA)
188372	188852	2	SAMPLE	112976008	B2H035		Uranium (AEA)
188372	188852	3	SAMPLE	112976009	B2H036		Uranium (AEA)
188372	188852	4	SAMPLE	112976010	B2H037		Uranium (AEA)
188372	188852	5	SAMPLE	112976011	B2H052		Uranium (AEA)

Batch QC List

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
188372	188852	6	SAMPLE	112976012	B2H056		Uranium (AEA)
188372	188852	7	BLANK	63172	BLANK		Uranium (AEA)
188372	188852	8	LCS	63173	LCS		Uranium (AEA)
188378	188664	1	BLANK	63189	BLANK		Strontium 89/90 (GPC/GEA)
188378	188664	2	LCS	63190	LCS		Strontium 89/90 (GPC/GEA)
188378	188664	3	DUP	63191	B2H028(112976001DUP)	112976001	Strontium 89/90 (GPC/GEA)
188378	188664	4	SAMPLE	112976001	B2H028		Strontium 89/90 (GPC/GEA)
188378	188664	5	SAMPLE	112976002	B2H029		Strontium 89/90 (GPC/GEA)
188378	188664	6	SAMPLE	112976003	B2H030		Strontium 89/90 (GPC/GEA)
188378	188664	7	SAMPLE	112976004	B2H031		Strontium 89/90 (GPC/GEA)
188378	188664	8	SAMPLE	112976005	B2H032		Strontium 89/90 (GPC/GEA)
188378	188664	9	SAMPLE	112976006	B2H033		Strontium 89/90 (GPC/GEA)
188378	188664	10	SAMPLE	112976007	B2H034		Strontium 89/90 (GPC/GEA)
188379	188685	1	BLANK	63192	BLANK		Strontium 89/90 (GPC/GEA)
188379	188685	2	LCS	63193	LCS		Strontium 89/90 (GPC/GEA)
188379	188685	3	DUP	63194	B2H035(112976008DUP)	112976008	Strontium 89/90 (GPC/GEA)
188379	188685	4	SAMPLE	112976008	B2H035		Strontium 89/90 (GPC/GEA)
188379	188685	5	SAMPLE	112976009	B2H036		Strontium 89/90 (GPC/GEA)
188379	188685	6	SAMPLE	112976010	B2H037		Strontium 89/90 (GPC/GEA)
188379	188685	7	SAMPLE	112976011	B2H052		Strontium 89/90 (GPC/GEA)
188379	188685	8	SAMPLE	112976012	B2H056		Strontium 89/90 (GPC/GEA)

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

QC Batch 188352 **Test** Gamma Energy Analysis-general
Associated Samples 112976001, 112976002, 112976003, 112976004, 112976005, 112976006

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
IBLANK			**QC Sample #63121**								
Cesium-137	10045-97-3		-1.6E-3	pCi/g						U	08/17/11
Cobalt-60	10198-40-0		9.4E-4	pCi/g						U	08/17/11
Europium-152	14683-23-9		-0.018	pCi/g						U	08/17/11
Europium-154	15585-10-1		-1.5E-3	pCi/g						U	08/17/11
Europium-155	14391-16-3		0.029	pCi/g						U	08/17/11
LCS			**QC Sample #63122**								
Cesium-137	10045-97-3		6500	pCi/sample	107.8	80 - 120					08/17/11
Cobalt-60	10198-40-0		10000	pCi/sample	104.2	80 - 120					08/17/11
DUP			**QC Sample #63123**								
			Original 112976001								
Cesium-137	10045-97-3	0.53	0.53	pCi/g			0.00	30			08/17/11
Cobalt-60	10198-40-0	-6.2E-3	-0.0010	pCi/g			-143.70	30	*	U	08/17/11
Europium-152	14683-23-9	0.12	0.10	pCi/g			18.20	30			08/17/11
Europium-154	15585-10-1	0.023	0.024	pCi/g			4.30	30		U	08/17/11
Europium-155	14391-16-3	-9.4E-3	0.076	pCi/g			256.60	30	*	U	08/17/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

QC Batch 188353 **Test** Gamma Energy Analysis-general
Associated Samples 112976007, 112976008, 112976009, 112976010, 112976011, 112976012

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
IBLANK			**QC Sample #63124**								
Cesium-137	10045-97-3		-5.5E-3	pCi/g						U	08/17/11
Cobalt-60	10198-40-0		3.7E-3	pCi/g						U	08/17/11
Europium-152	14683-23-9		0.027	pCi/g						U	08/17/11
Europium-154	15585-10-1		-0.015	pCi/g						U	08/17/11
Europium-155	14391-16-3		-0.031	pCi/g						U	08/17/11
LCS			**QC Sample #63125**								
Cesium-137	10045-97-3		6400	pCi/sample	106.2	80 - 120					08/17/11
Cobalt-60	10198-40-0		10000	pCi/sample	105.3	80 - 120					08/17/11
DUP			**QC Sample #63126**								
			Original 112976007								
Cesium-137	10045-97-3	4.3	4.4	pCi/g			2.40	30			08/17/11
Cobalt-60	10198-40-0	0.026	0.010	pCi/g			88.90	30	*	U	08/17/11
Europium-152	14683-23-9	0.18	0.18	pCi/g			0.00	30			08/17/11
Europium-154	15585-10-1	0.037	0.037	pCi/g			2.70	30		U	08/17/11
Europium-155	14391-16-3	0.035	-0.025	pCi/g			1311.10	30	*	U	08/17/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

QC Batch 188371 **Test** Americium/Curium (AEA)
Associated Samples 112976001, 112976002, 112976003, 112976004, 112976005, 112976006, 112976007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #63169**								
Americium-241	14596-10-2		-2.2E-3	pCi/g						U	08/25/11
Plutonium-238	13981-16-3		0.025	pCi/g						U	08/25/11
Uranium-234	U-233/234		0.022	pCi/g						X	08/25/11
Plutonium-239/240	PU-239/240		3.9E-3	pCi/g						U	08/25/11
Uranium-235	15117-96-1		0.014	pCi/g						U	08/25/11
Uranium-238	U-238		0.032	pCi/g						X	08/25/11
LCS			**QC Sample #63170**								
Americium-241	14596-10-2		24	pCi/sample	109.9	80 - 120					08/25/11
Uranium-234	U-233/234		32	pCi/sample	98.3	80 - 120					08/25/11
Plutonium-239/240	PU-239/240		23	pCi/sample	100.1	80 - 120					08/25/11
DUP			**QC Sample #63171**								
			Original 112976001								
Plutonium-238	13981-16-3	-6.5E-3	0.024	pCi/g			345.50	30	*	U	08/25/11
Americium-241	14596-10-2	0.063	0.59	pCi/g			162.00	30	*	X	08/25/11
Plutonium-239/240	PU-239/240	0.041	0.19	pCi/g			130.40	30	*	X	08/25/11
Uranium-234	U-233/234	0.15	0.11	pCi/g			24.00	30			08/25/11
Uranium-235	15117-96-1	0.010	4.6E-3	pCi/g			74.00	30	*	U	08/25/11
Uranium-238	U-238	0.14	0.14	pCi/g			0.00	30			08/25/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

QC Batch 188372 **Test** Americium/Curium (AEA)
Associated Samples 112976008, 112976009, 112976010, 112976011, 112976012

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #63172**								
Americium-241	14596-10-2		0.040	pCi/g						U	08/26/11
Plutonium-238	13981-16-3		4.3E-3	pCi/g						U	08/26/11
Uranium-234	U-233/234		0.015	pCi/g						X	08/25/11
Plutonium-239/240	PU-239/240		6.4E-3	pCi/g						U	08/26/11
Uranium-235	15117-96-1		5.7E-3	pCi/g						U	08/25/11
Uranium-238	U-238		0.023	pCi/g						X	08/25/11
LCS			**QC Sample #63173**								
Americium-241	14596-10-2		24	pCi/sample	109.7	80 - 120					08/26/11
Plutonium-239/240	PU-239/240		22	pCi/sample	94.6	80 - 120					08/26/11
Uranium-234	U-233/234		37	pCi/sample	112.7	80 - 120					08/25/11
DUP			**QC Sample #63174**								
			Original 112976008								
Americium-241	14596-10-2	0.17	0.21	pCi/g			21.10	30			08/26/11
Plutonium-238	13981-16-3	0.066	0.058	pCi/g			11.40	30		U	08/26/11
Plutonium-239/240	PU-239/240	0.18	0.21	pCi/g			15.40	30			08/26/11
Uranium-234	U-233/234	0.16	0.15	pCi/g			0.00	30			08/25/11
Uranium-235	15117-96-1	5.7E-3	0.017	pCi/g			100.90	30	*	X	08/25/11
Uranium-238	U-238	0.15	0.16	pCi/g			6.50	30			08/25/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

QC Batch 188378 **Test** Strontium 89/90 (GPC/GEA)
Associated Samples 112976001, 112976002, 112976003, 112976004, 112976005, 112976006, 112976007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #63189**								
Strontium-89/90	SR-RAD		0.37	pCi/g						U	08/25/11
LCS			**QC Sample #63190**								
Strontium-89/90	SR-RAD		26	pCi/g	118.2	80 - 120					08/25/11
DUP			**QC Sample #63191**								
			Original 112976001								
Strontium-89/90	SR-RAD	0.65	-0.33	pCi/g			625.80	30	*	U	08/25/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

QC Batch 188379 **Test** Strontium 89/90 (GPC/GEA)
Associated Samples 112976008, 112976009, 112976010, 112976011, 112976012

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #63192**								
Strontium-89/90	SR-RAD		0.62	pCi/g						X	08/25/11
LCS			**QC Sample #63193**								
Strontium-89/90	SR-RAD		22	pCi/g	100.4	80 - 120					08/25/11
DUP			**QC Sample #63194**								
			Original 112976008								
Strontium-89/90	SR-RAD	1.7	0.91	pCi/g			61.50	30	*	X	08/25/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

QC Batch 188371 **Test** Americium/Curium (AEA)
Associated Samples 112976001, 112976002, 112976003, 112976004, 112976005, 112976006, 112976007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #112976001**							
Americium-243 Tracer	14993-75-0				70.3	25 - 105				08/25/11
Uranium-232 Tracer	14158-29-3				85.6	25 - 105				08/25/11
Plutonium-242 Tracer	13982-10-0				76.7	25 - 105				08/25/11
SAMPLE			**Sample #112976002**							
Americium-243 Tracer	14993-75-0				84.8	25 - 105				08/25/11
Uranium-232 Tracer	14158-29-3				82.4	25 - 105				08/25/11
Plutonium-242 Tracer	13982-10-0				85.1	25 - 105				08/25/11
SAMPLE			**Sample #112976003**							
Americium-243 Tracer	14993-75-0				84.4	25 - 105				08/25/11
Uranium-232 Tracer	14158-29-3				82.4	25 - 105				08/25/11
Plutonium-242 Tracer	13982-10-0				80.6	25 - 105				08/25/11
SAMPLE			**Sample #112976004**							
Americium-243 Tracer	14993-75-0				80.6	25 - 105				08/25/11
Uranium-232 Tracer	14158-29-3				79.9	25 - 105				08/25/11
Plutonium-242 Tracer	13982-10-0				81.3	25 - 105				08/25/11
SAMPLE			**Sample #112976005**							

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Americium-243 Tracer	14993-75-0				93.5	25 - 105				08/25/11
Uranium-232 Tracer	14158-29-3				80.8	25 - 105				08/25/11
Plutonium-242 Tracer	13982-10-0				89.3	25 - 105				08/25/11
SAMPLE			**Sample #112976006**							
Americium-243 Tracer	14993-75-0				94.3	25 - 105				08/25/11
Uranium-232 Tracer	14158-29-3				87.3	25 - 105				08/25/11
Plutonium-242 Tracer	13982-10-0				90.7	25 - 105				08/25/11
SAMPLE			**Sample #112976007**							
Americium-243 Tracer	14993-75-0				84.6	25 - 105				08/25/11
Uranium-232 Tracer	14158-29-3				81.1	25 - 105				08/25/11
Plutonium-242 Tracer	13982-10-0				86.8	25 - 105				08/25/11
BLANK			**QC Sample #63169**							
Uranium-232 Tracer	14158-29-3				84.2	25 - 105				08/25/11
Americium-243 Tracer	14993-75-0				72.2	25 - 105				08/25/11
Plutonium-242 Tracer	13982-10-0				77.5	25 - 105				08/25/11
LCS			**QC Sample #63170**							
Uranium-232 Tracer	14158-29-3				65.7	25 - 105				08/25/11
Americium-243 Tracer	14993-75-0				65.9	25 - 105				08/25/11
Plutonium-242 Tracer	13982-10-0				71.3	25 - 105				08/25/11
DUP			**QC Sample #63171**							
			Original 112976001							
Americium-243 Tracer	14993-75-0				93.1	25 - 105	4.80			08/25/11

Quality Control Report

Attention Michael Neely
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Group # WSCF112976

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Uranium-232 Tracer	14158-29-3				84.1	25 - 105	5.10			08/25/11
Plutonium-242 Tracer	13982-10-0				73.1	25 - 105	3.20			08/25/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

QC Batch 188372 **Test** Uranium (AEA)
Associated Samples 112976008, 112976009, 112976010, 112976011, 112976012

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #112976008**							
Uranium-232 Tracer	14158-29-3				86.5	25 - 105				08/25/11
Americium-243 Tracer	14993-75-0				104.9	25 - 105				08/26/11
Plutonium-242 Tracer	13982-10-0				87.5	25 - 105				08/26/11
SAMPLE			**Sample #112976009**							
Uranium-232 Tracer	14158-29-3				83.7	25 - 105				08/25/11
Americium-243 Tracer	14993-75-0				91.2	25 - 105				08/26/11
Plutonium-242 Tracer	13982-10-0				86.5	25 - 105				08/26/11
SAMPLE			**Sample #112976010**							
Uranium-232 Tracer	14158-29-3				78.2	25 - 105				08/25/11
Americium-243 Tracer	14993-75-0				97.4	25 - 105				08/26/11
Plutonium-242 Tracer	13982-10-0				76.3	25 - 105				08/26/11
SAMPLE			**Sample #112976011**							
Uranium-232 Tracer	14158-29-3				79.9	25 - 105				08/25/11
Americium-243 Tracer	14993-75-0				91.8	25 - 105				08/26/11
Plutonium-242 Tracer	13982-10-0				91.3	25 - 105				08/26/11
SAMPLE			**Sample #112976012**							

Quality Control Report

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Group # WSCF112976

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Uranium-232 Tracer	14158-29-3				86.7	25 - 105				08/25/11
Americium-243 Tracer	14993-75-0				75	25 - 105				08/26/11
Plutonium-242 Tracer	13982-10-0				80.8	25 - 105				08/26/11
BLANK			**QC Sample #63172**							
Uranium-232 Tracer	14158-29-3				79.6	25 - 105				08/25/11
Americium-243 Tracer	14993-75-0				61.3	25 - 105				08/26/11
Plutonium-242 Tracer	13982-10-0				68.1	25 - 105				08/26/11
LCS			**QC Sample #63173**							
Uranium-232 Tracer	14158-29-3				57.6	25 - 105				08/25/11
Americium-243 Tracer	14993-75-0				78	25 - 105				08/26/11
Plutonium-242 Tracer	13982-10-0				79.3	25 - 105				08/26/11
DUP			**QC Sample #63174**							
			Original	**112976008**						
Uranium-232 Tracer	14158-29-3				79.9	25 - 105	11.10			08/25/11
Americium-243 Tracer	14993-75-0				84.5	25 - 105	10.50			08/26/11
Plutonium-242 Tracer	13982-10-0				88.6	25 - 105	10.70			08/26/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF112976

QC Batch 188378 **Test** Strontium 89/90 (GPC/GEA)
Associated Samples 112976001, 112976002, 112976003, 112976004, 112976005, 112976006, 112976007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #112976001**							
Strontium-85	13967-73-2				77.3	25 - 105				08/25/11
SAMPLE			**Sample #112976002**							
Strontium-85	13967-73-2				71.1	25 - 105				08/25/11
SAMPLE			**Sample #112976003**							
Strontium-85	13967-73-2				69.7	25 - 105				08/25/11
SAMPLE			**Sample #112976004**							
Strontium-85	13967-73-2				76.9	25 - 105				08/25/11
SAMPLE			**Sample #112976005**							
Strontium-85	13967-73-2				75.8	25 - 105				08/25/11
SAMPLE			**Sample #112976006**							
Strontium-85	13967-73-2				78.7	25 - 105				08/25/11
SAMPLE			**Sample #112976007**							
Strontium-85	13967-73-2				73.4	25 - 105				08/25/11

Quality Control Report

Attention Michael Neely
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Group # WSCF112976

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #63189**							
Strontium-85	13967-73-2				63.7	25 - 105				08/25/11
LCS			**QC Sample #63190**							
Strontium-85	13967-73-2				69.2	25 - 105				08/25/11
DUP			**QC Sample #63191**							
			Original 112976001							
Strontium-85	13967-73-2				81.4	25 - 105	4.40			08/25/11

Quality Control Report

Attention Michael Neely
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Group # WSCF112976

QC Batch 188379 **Test** Strontium 89/90 (GPC/GEA)
Associated Samples 112976008, 112976009, 112976010, 112976011, 112976012

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #112976008**							
Strontium-85	13967-73-2				70.9	25 - 105				08/25/11
SAMPLE			**Sample #112976009**							
Strontium-85	13967-73-2				73.9	25 - 105				08/25/11
SAMPLE			**Sample #112976010**							
Strontium-85	13967-73-2				75.4	25 - 105				08/25/11
SAMPLE			**Sample #112976011**							
Strontium-85	13967-73-2				72.6	25 - 105				08/25/11
SAMPLE			**Sample #112976012**							
Strontium-85	13967-73-2				110	25 - 105			X	08/25/11
BLANK			**QC Sample #63192**							
Strontium-85	13967-73-2				69.1	25 - 105				08/25/11
LCS			**QC Sample #63193**							
Strontium-85	13967-73-2				76.6	25 - 105				08/25/11

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Group # WSCF112976

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
DUP			**QC Sample #63194**							
			Original 112976008							
Strontium-85	13967-73-2				80.2	25 - 105	14.00			08/25/11

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Attention Michael Neely
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Group # WSCF112982

QC Batch 188381 **Test** Gamma Energy Analysis-general
Associated Samples 112982001, 112982002, 112982003, 112982004, 112982005, 112982006, 112982007, 112982008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
IBLANK			**QC Sample #63195**								
Cesium-137	10045-97-3		-7.7E-3	pCi/g						U	08/18/11
Cobalt-60	10198-40-0		2.4E-3	pCi/g						U	08/18/11
Europium-152	14683-23-9		0.013	pCi/g						U	08/18/11
Europium-154	15585-10-1		6.4E-3	pCi/g						U	08/18/11
Europium-155	14391-16-3		4.5E-3	pCi/g						U	08/18/11
LCS			**QC Sample #63196**								
Cesium-137	10045-97-3		6400	pCi/sample	105.3	80 - 120					08/18/11
Cobalt-60	10198-40-0		10000	pCi/sample	105.4	80 - 120					08/18/11
DUP			**QC Sample #63197**								
			Original 112982001								
Cesium-137	10045-97-3	3.1	3.1	pCi/g			3.30	30			08/18/11
Cobalt-60	10198-40-0	3.8E-3	0.023	pCi/g			141.10	30	*	U	08/18/11
Europium-152	14683-23-9	0.15	0.25	pCi/g			50.00	30	*	X	08/18/11
Europium-154	15585-10-1	-0.048	0.029	pCi/g			-810.50	30	*	U	08/18/11
Europium-155	14391-16-3	0.035	0.0020	pCi/g			178.80	30	*	U	08/18/11

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Group # WSCF112982

QC Batch 188462 **Test** Strontium 89/90 (GPC/GEA)
Associated Samples 112982001, 112982002, 112982003, 112982004, 112982005, 112982006, 112982007, 112982008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #63431**							
Strontium-89/90	SR-RAD		0.30	pCi/g					U	08/26/11
LCS			**QC Sample #63432**							
Strontium-89/90	SR-RAD		22	pCi/g	116.3	80 - 120				08/26/11
DUP			**QC Sample #63433**							
			Original 112982001							
Strontium-89/90	SR-RAD	0.69	0.85	pCi/g			21.10	30		08/26/11

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Group # WSCF112982

QC Batch 188654 **Test** Americium/Curium (AEA)
Associated Samples 112982001, 112982002, 112982003, 112982004, 112982005, 112982006, 112982007, 112982008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #63577**								
Americium-241	14596-10-2		-0.023	pCi/g						U	08/31/11
Plutonium-238	13981-16-3		0.023	pCi/g						U	08/29/11
Plutonium-239/240	PU-239/240		0.0090	pCi/g						U	08/29/11
Uranium-234	U-233/234		0.018	pCi/g						X	08/29/11
Uranium-235	15117-96-1		1.5E-3	pCi/g						U	08/29/11
Uranium-238	U-238		0.027	pCi/g						X	08/29/11
LCS			**QC Sample #63578**								
Americium-241	14596-10-2		25	pCi/sample	110.9	80 - 120					08/31/11
Plutonium-239/240	PU-239/240		23	pCi/sample	98	80 - 120					08/29/11
Uranium-234	U-233/234		37	pCi/sample	113.8	80 - 120					08/29/11
DUP			**QC Sample #63579**								
			Original 112982001								
Americium-241	14596-10-2	0.048	0.078	pCi/g			47.60	30	*	X	08/29/11
Plutonium-238	13981-16-3	-5.7E-3	0.012	pCi/g			561.90	30	*	U	08/29/11
Uranium-234	U-233/234	0.13	0.12	pCi/g			8.00	30			08/29/11
Plutonium-239/240	PU-239/240	0.075	0.12	pCi/g			47.40	30	*	X	08/29/11
Uranium-235	15117-96-1	0.014	0.016	pCi/g			13.30	30			08/29/11
Uranium-238	U-238	0.15	0.17	pCi/g			12.50	30			08/29/11

Quality Control Report

Attention Michael Neely
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Group # WSCF112982

QC Batch 188462 **Test** Strontium 89/90 (GPC/GEA)
Associated Samples 112982001, 112982002, 112982003, 112982004, 112982005, 112982006, 112982007, 112982008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #112982001**							
Strontium-85	13967-73-2				114.4	25 - 105			X	08/26/11
SAMPLE			**Sample #112982002**							
Strontium-85	13967-73-2				70.9	25 - 105				08/26/11
SAMPLE			**Sample #112982003**							
Strontium-85	13967-73-2				74.8	25 - 105				08/26/11
SAMPLE			**Sample #112982004**							
Strontium-85	13967-73-2				72.7	25 - 105				08/26/11
SAMPLE			**Sample #112982005**							
Strontium-85	13967-73-2				70.1	25 - 105				08/26/11
SAMPLE			**Sample #112982006**							
Strontium-85	13967-73-2				77	25 - 105				08/26/11
SAMPLE			**Sample #112982007**							
Strontium-85	13967-73-2				76.5	25 - 105				08/26/11

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Group # WSCF112982

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #112982008**							
Strontium-85	13967-73-2				71.9	25 - 105				08/26/11
BLANK			**QC Sample #63431**							
Strontium-85	13967-73-2				68.4	25 - 105				08/26/11
LCS			**QC Sample #63432**							
Strontium-85	13967-73-2				69.4	25 - 105				08/26/11
DUP			**QC Sample #63433**							
			Original	**112982001**						
Strontium-85	13967-73-2				71.9	25 - 105	n/a			08/26/11

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Attention Michael Neely
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Group # WSCF112982

QC Batch 188654 **Test** Uranium (AEA)
Associated Samples 112982001, 112982002, 112982003, 112982004, 112982005, 112982006, 112982007, 112982008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #112982001**							
Uranium-232 Tracer	14158-29-3				79.4	25 - 105				08/29/11
Americium-243 Tracer	14993-75-0				96.9	25 - 105				08/29/11
Plutonium-242 Tracer	13982-10-0				79.3	25 - 105				08/29/11
SAMPLE			**Sample #112982002**							
Uranium-232 Tracer	14158-29-3				83.9	25 - 105				08/29/11
Americium-243 Tracer	14993-75-0				92.2	25 - 105				08/29/11
Plutonium-242 Tracer	13982-10-0				87.2	25 - 105				08/29/11
SAMPLE			**Sample #112982003**							
Uranium-232 Tracer	14158-29-3				84	25 - 105				08/29/11
Americium-243 Tracer	14993-75-0				105.3	25 - 105			X	08/29/11
Plutonium-242 Tracer	13982-10-0				86.9	25 - 105				08/29/11
SAMPLE			**Sample #112982004**							
Uranium-232 Tracer	14158-29-3				77.9	25 - 105				08/29/11
Americium-243 Tracer	14993-75-0				89	25 - 105				08/29/11
Plutonium-242 Tracer	13982-10-0				85.9	25 - 105				08/29/11
SAMPLE			**Sample #112982005**							

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Group # WSCF112982

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Uranium-232 Tracer	14158-29-3				78.8	25 - 105				08/29/11
Americium-243 Tracer	14993-75-0				97.2	25 - 105				08/29/11
Plutonium-242 Tracer	13982-10-0				90.9	25 - 105				08/29/11
SAMPLE			**Sample #112982006**							
Uranium-232 Tracer	14158-29-3				84.6	25 - 105				08/29/11
Americium-243 Tracer	14993-75-0				89.4	25 - 105				08/29/11
Plutonium-242 Tracer	13982-10-0				88.5	25 - 105				08/29/11
SAMPLE			**Sample #112982007**							
Uranium-232 Tracer	14158-29-3				90.6	25 - 105				08/29/11
Americium-243 Tracer	14993-75-0				91.2	25 - 105				08/29/11
Plutonium-242 Tracer	13982-10-0				85.1	25 - 105				08/29/11
SAMPLE			**Sample #112982008**							
Uranium-232 Tracer	14158-29-3				85.6	25 - 105				08/29/11
Americium-243 Tracer	14993-75-0				86.3	25 - 105				08/29/11
Plutonium-242 Tracer	13982-10-0				85.7	25 - 105				08/29/11
BLANK			**QC Sample #63577**							
Uranium-232 Tracer	14158-29-3				79.7	25 - 105				08/29/11
Americium-243 Tracer	14993-75-0				89.5	25 - 105				08/31/11
Plutonium-242 Tracer	13982-10-0				77.3	25 - 105				08/29/11
LCS			**QC Sample #63578**							
Uranium-232 Tracer	14158-29-3				59.8	25 - 105				08/29/11

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Group # WSCF112982

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Americium-243 Tracer	14993-75-0				89.2	25 - 105				08/31/11
Plutonium-242 Tracer	13982-10-0				86.5	25 - 105				08/29/11
DUP			**QC Sample #63579**							
			Original	**112982001**						
Uranium-232 Tracer	14158-29-3				29.5	25 - 105	n/a			08/29/11
Americium-243 Tracer	14993-75-0				96.2	25 - 105	n/a			08/29/11
Plutonium-242 Tracer	13982-10-0				90.4	25 - 105	n/a			08/29/11