

DECEMBER 19, 2012

WSCF Laboratory

PO Box 650 S3-30
Richland, WA 99352



December 19, 2012

Scot Fitzgerald
CH2M-HILL PRC
PO Box 1600
Richland, WA 99352

Dear Scot Fitzgerald,

FINAL RESULT FOR SAMPLE DELIVERY GROUP WSCF121529

Reference: (1) SOW, Mod 2, #36587, Release 3
(2) MSC-SD-CD-QAPP-017, current version, Waste Sampling & Characterization Facility Quality Assurance Program Plan

This letter contains the following information for sample delivery group WSCF121529

- * Cover Sheet (Attachment 1)
- * Narrative (Attachment 2)
- * Analytical Results (Attachment 3)
- * Sample Receipt Information (Attachment 4)

Very truly yours,

A handwritten signature in black ink, appearing to read "Joseph Hale", is positioned above the typed name.

Electronically signed by Joseph Hale

For Lab Manager, Dan T. Smith

WSCF Analytical Lab

(509) 373-4804

Attachments 4

CC: w/Attachments

File/LB

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF Number Cross Reference

Group # WSCF121529
Data Deliverable Date 01/03/13

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
S13-010	B2MDD9	121529001	WATER	12/03/12	12/03/12
S13-010	B2MDF0	121529002	WATER	12/03/12	12/03/12
S13-010	B2MDF1	121529003	WATER	12/03/12	12/03/12
S13-010	B2MDD3	121529004	WATER	12/03/12	12/03/12
S13-010	B2MDD4	121529005	WATER	12/03/12	12/03/12
S13-010	B2MDD5	121529006	WATER	12/03/12	12/03/12

ATTACHMENT 2

NARRATIVE

Consisting of 3 pages
Including cover page

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), Master Contract 39818, Revision 3, "Laboratory Analytical Services to CHPRC Soil and Groundwater Remediation Project."*

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, C, D, J and U) 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.
- **C** – Analyte was detected in the blank and was evaluated. Affected sample results in the batch were C flagged (applies to inorganic and wet chemical analyses).
- **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.
- **B (organic analyses)** – Analyte was detected in the blank and was evaluated. Affected sample results in the batch were B flagged.
- **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

Attachment 2
Narrative
WSCF121529

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

- All applicable QC controls are within the established limits.

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.

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.

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 15 pages
Including cover page

DECEMBER 19, 2012

WSCF ANALYTICAL RESULTS REPORT

For

CH2M Hill Plateau Remediation

PO Box 1600
Richland, WA 99352

Attention: Scot Fitzgerald

Contract # MOA-FH-CHPRC-2008
Group # WSCF121529
Report Date December 19, 2012

Analytical: Electronically signed by Joseph Hale

Client Services: Electronically signed by Marisol Avila

Solid samples results that have a 'Percent Solid' test are reported on a "dry weight basis", except results of TCLP, Percent Solid, and Total Activity. If no 'Percent Solid' test is reported then the results are reported on an "as received" basis.

This information is intended for the use of the addressee only. If the reader of this report is not the intended recipient or is not authorized by the recipient to receive the report, you are hereby notified that any dissemination, distribution or copying of this report is strictly prohibited. If you have received this report in error, please notify WSCF Laboratory immediately by telephone at (509) 373-7005. Information designation of this report is the responsibility of the customer.

Batch QC List

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121529

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
211224	211224	2	BLANK	85927	BLANK		Anions by Ion Chromatography (Water)
211224	211224	3	LCS	85928	LCS		Anions by Ion Chromatography (Water)
211224	211224	4	DUP	85929	B2MDD3(121529004DUP	121529004	Anions by Ion Chromatography (Water)
211224	211224	5	MS	85930	B2MDD3(121529004MS)	121529004	Anions by Ion Chromatography (Water)
211224	211224	6	MSD	85931	B2MDD3(121529004MSD	121529004	Anions by Ion Chromatography (Water)
211224	211224	8	SAMPLE	121529004	B2MDD3		Anions by Ion Chromatography (Water)
211224	211224	9	SAMPLE	121529006	B2MDD5		Anions by Ion Chromatography (Water)
211225	211225	2	BLANK	85934	BLANK		Anions by Ion Chromatography (Water)
211225	211225	3	LCS	85935	LCS		Anions by Ion Chromatography (Water)
211225	211225	4	DUP	85936	B2MDD4(121529005DUP	121529005	Anions by Ion Chromatography (Water)
211225	211225	5	MS	85937	B2MDD4(121529005MS)	121529005	Anions by Ion Chromatography (Water)
211225	211225	6	MSD	85938	B2MDD4(121529005MSD	121529005	Anions by Ion Chromatography (Water)
211225	211225	8	SAMPLE	121529005	B2MDD4		Anions by Ion Chromatography (Water)
211290	211290	1	BLANK	86129	BLANK		Hexavalent chromium Discrete Analyzer
211290	211290	3	LCS	86131	LCS		Hexavalent chromium Discrete Analyzer
211290	211290	4	DUP	86132	B2MT62(121528001DUP)	121528001	Hexavalent chromium Discrete Analyzer
211290	211290	5	MS	86133	B2MT62(121528001MS)	121528001	Hexavalent chromium Discrete Analyzer
211290	211290	7	SAMPLE	121529001	B2MDD9		Hexavalent chromium Discrete Analyzer
211290	211290	8	SAMPLE	121529002	B2MDF0		Hexavalent chromium Discrete Analyzer
211290	211290	9	SAMPLE	121529003	B2MDF1		Hexavalent chromium Discrete Analyzer

Method Reference

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121529

The results provided in this report were generated using the following WSCF Laboratory procedures. For your convenience, this table provides a listing of the regulatory, industry methods or HEIS methods that are referenced by each of these WSCF procedures. Please note that the most recent version of the regulatory or industry method is listed here even though WSCF procedure may reference an older version of the method. Also, a reference to a regulatory or industry method here does not necessarily indicate a verbatim implementation of that method.

LA-265-403	Hexavalent Chromium Analysis		
	EPA SW-846	7196A	Hexavalent Chromium
	HEIS	7196_CR6	Hexavalent Chromium
LA-533-410	Anion Analysis by Ion Chromatography		
	EPA-600/R-94-111	300.0	Determination of Inorganic Anions by Ion Chromatography
	HEIS	300.0_ANIONS_IC	Determination of Inorganic Anions by Ion Chromatography

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121529

Sample # 121529001
 SAF# S13-010
 Sample ID B2MDD9

Matrix WATER
 Sampled 12/03/12
 Received 12/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										12/03/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403		0.0496		mg/L	1	0.0020	0.0050	12/03/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121529

Sample # 121529002
 SAF# S13-010
 Sample ID B2MDF0

Matrix WATER
 Sampled 12/03/12
 Received 12/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										12/03/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403		0.0493		mg/L	1	0.0020	0.0050	12/03/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121529

Sample # 121529003
 SAF# S13-010
 Sample ID B2MDF1

Matrix WATER
 Sampled 12/03/12
 Received 12/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										12/03/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403		0.0499		mg/L	1	0.0020	0.0050	12/03/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121529

Sample # 121529004
 SAF# S13-010
 Sample ID B2MDD3

Matrix WATER
 Sampled 12/03/12
 Received 12/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
12/03/12										
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	1.21		ug/mL	2	0.046	0.14	12/03/12
Chloride	16887-00-6	LA-533-410	D	12.6		ug/mL	2	0.12	0.81	12/03/12
Nitrite-N	NO2-N	LA-533-410	D	1.10		ug/mL	2	0.038	0.20	12/03/12
Nitrate-N	NO3-N	LA-533-410	D	2.59		ug/mL	2	0.038	0.20	12/03/12
Sulfate	14808-79-8	LA-533-410	D	13.3		ug/mL	2	0.22	2.1	12/03/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121529

Sample # 121529005
 SAF# S13-010
 Sample ID B2MDD4

Matrix WATER
 Sampled 12/03/12
 Received 12/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
12/03/12										
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	1.24		ug/mL	2	0.046	0.14	12/03/12
Chloride	16887-00-6	LA-533-410	D	12.6		ug/mL	2	0.12	0.81	12/03/12
Nitrite-N	NO2-N	LA-533-410	D	1.11		ug/mL	2	0.038	0.20	12/03/12
Nitrate-N	NO3-N	LA-533-410	D	2.59		ug/mL	2	0.038	0.20	12/03/12
Sulfate	14808-79-8	LA-533-410	D	13.4		ug/mL	2	0.22	2.1	12/03/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121529

Sample # 121529006
 SAF# S13-010
 Sample ID B2MDD5

Matrix WATER
 Sampled 12/03/12
 Received 12/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
12/03/12										
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	1.20		ug/mL	2	0.046	0.14	12/03/12
Chloride	16887-00-6	LA-533-410	D	12.5		ug/mL	2	0.12	0.81	12/03/12
Nitrite-N	NO2-N	LA-533-410	D	1.09		ug/mL	2	0.038	0.20	12/03/12
Nitrate-N	NO3-N	LA-533-410	D	2.55		ug/mL	2	0.038	0.20	12/03/12
Sulfate	14808-79-8	LA-533-410	D	13.1		ug/mL	2	0.22	2.1	12/03/12

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

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

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

Quality Control Report

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121529

Analytical Batch 211224 (QC Batch: 211224) Test Anions by Ion Chromatography (Water)
 Associated Samples 121529004, 121529006

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK		QC Sample #85927								
Fluoride	16984-48-8	<0.023		ug/mL					U	12/03/12
Chloride	16887-00-6	<0.058		ug/mL					U	12/03/12
Nitrite-N	NO2-N	<0.019		ug/mL					U	12/03/12
Nitrate-N	NO3-N	<0.019		ug/mL					U	12/03/12
Sulfate	14808-79-8	<0.11		ug/mL					U	12/03/12
LCS		QC Sample #85928								
Fluoride	16984-48-8	0.981		ug/mL	99.1	90 - 110				12/03/12
Chloride	16887-00-6	1.89		ug/mL	95.6	90 - 110				12/03/12
Nitrite-N	NO2-N	0.989		ug/mL	101.1	90 - 110				12/03/12
Nitrate-N	NO3-N	0.887		ug/mL	100.2	90 - 110				12/03/12
Sulfate	14808-79-8	4.05		ug/mL	103.4	90 - 110				12/03/12
DUP		QC Sample #85929								
		Original 121529004								
Fluoride	16984-48-8	1.21	1.24	ug/mL			2.60	20	D	12/03/12
Chloride	16887-00-6	12.6	12.8	ug/mL			1.80	20	D	12/03/12
Nitrite-N	NO2-N	1.10	1.12	ug/mL			1.90	20	D	12/03/12
Nitrate-N	NO3-N	2.59	2.65	ug/mL			2.30	20	D	12/03/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121529

Analytical Batch 211225 (QC Batch: 211225) Test Anions by Ion Chromatography (Water)
 Associated Samples 121529005

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK		QC Sample #85934								
Fluoride	16984-48-8		<0.023	ug/mL					U	12/03/12
Chloride	16887-00-6		<0.058	ug/mL					U	12/03/12
Nitrite-N	NO2-N		<0.019	ug/mL					U	12/03/12
Nitrate-N	NO3-N		<0.019	ug/mL					U	12/03/12
Sulfate	14808-79-8		<0.11	ug/mL					U	12/03/12
LCS		QC Sample #85935								
Fluoride	16984-48-8		0.952	ug/mL	96.1	90 - 110				12/03/12
Chloride	16887-00-6		1.89	ug/mL	95.5	90 - 110				12/03/12
Nitrite-N	NO2-N		1.04	ug/mL	106	90 - 110				12/03/12
Nitrate-N	NO3-N		0.922	ug/mL	104.2	90 - 110				12/03/12
Sulfate	14808-79-8		3.95	ug/mL	100.7	90 - 110				12/03/12
DUP		QC Sample #85936								
		Original 121529005								
Fluoride	16984-48-8	1.24	1.24	ug/mL			0.10	20	D	12/03/12
Chloride	16887-00-6	12.6	12.7	ug/mL			0.10	20	D	12/03/12
Nitrite-N	NO2-N	1.11	1.11	ug/mL			0.00	20	D	12/03/12
Nitrate-N	NO3-N	2.59	2.61	ug/mL			0.70	20	D	12/03/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121529

Analytical Batch 211290 (QC Batch: 211290) Test Hexavalent chromium Discrete Analyzer
 Associated Samples 121529001, 121529002, 121529003

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK										
			QC Sample #86129							
Hexavalent chromium	18540-29-9		<0.0020	mg/L					U	12/03/12
LCS			QC Sample #86131							
Hexavalent chromium	18540-29-9		0.0502	mg/L	100.4	90 - 110				12/03/12
DUP			QC Sample #86132							
			Original 121528001							
Hexavalent chromium	18540-29-9		0.00210	mg/L			0.00	20	B	12/03/12
MS			QC Sample #86133							
			Original 121528001							
Hexavalent chromium	18540-29-9		0.0412	mg/L	103	85 - 115				12/03/12

* - QC result out of range

n/a - Not Applicable

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 8 pages
Including cover page

Waste Sampling and Characterization Facility
P.O. Box 650 S3-30, Richland WA 99352
Phone: (509) 373-7005/FAX: (509) 372-0456

ACKNOWLEDGEMENT OF SAMPLES RECEIVED

WSCF Laboratory

PO Box 650 S3-30
 Richland, WA 99352

ATTN: Scot Fitzgerald

Customer Code: CHPRC
CACN: 401647
Work Order #: 121529
Customer Work ID: S13-010-712
Due Date: 01/03/2013

The following samples were received from you on 12/3/2012 12:50:00 PM. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

Sample #	Sample ID	Matrix	Collected	Received
121529001	B2MDD9	WATER	12/3/2012 10:00	12/3/2012 12:50
Procedure		Compound List		
Hexavalent chromium Discrete Analyzer		Cr6		
Sample #	Sample ID	Matrix	Collected	Received
121529002	B2MDF0	WATER	12/3/2012 10:00	12/3/2012 12:50
Procedure		Compound List		
Hexavalent chromium Discrete Analyzer		Cr6		
Sample #	Sample ID	Matrix	Collected	Received
121529003	B2MDF1	WATER	12/3/2012 10:00	12/3/2012 12:50
Procedure		Compound List		
Hexavalent chromium Discrete Analyzer		Cr6		
Sample #	Sample ID	Matrix	Collected	Received
121529004	B2MDD3	WATER	12/3/2012 10:00	12/3/2012 12:50
Procedure		Compound List		
Anions by Ion Chromatography (Water)		F,Cl,NO2,NO3,SO4		
Sample #	Sample ID	Matrix	Collected	Received
121529005	B2MDD4	WATER	12/3/2012 10:00	12/3/2012 12:50
Procedure		Compound List		
Anions by Ion Chromatography (Water)		F,Cl,NO2,NO3,SO4		
Sample #	Sample ID	Matrix	Collected	Received
121529006	B2MDD5	WATER	12/3/2012 10:00	12/3/2012 12:50
Procedure		Compound List		
Anions by Ion Chromatography (Water)		F,Cl,NO2,NO3,SO4		

Sample Receipt

Chain of Custody

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C. # S13-010-712	
Collector: BE Briggs CHPRC		Contact/Requester: Karen Waters-Husted		Telephone No. 376-4650		Page 1 of 1	
SAF No. S13-010		Sampling Origin: Hanford Site		Purchase Order/Charge Code 300071ES20			
Project Title: SURV, OCTOBER 2012		Logbook No. HNF-N-506 49/88		Ice Chest No. N/A			
Shipped To (Lab): Waste Sampling & Characterization		Method of Shipment: GOVERNMENT VEHICLE		Bill of Lading/Air Bill No. N/A			
Protocol: SURV		Priority: 31 Days		Offsite Property No. N/A			
POSSIBLE SAMPLE HAZARDS/REMARKS *** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5480.5 (1990, 1993)							
Sample No. B2MDD9 1		Filter: N		Date: DEC 03 2012		Time: 121529	
No/Type Container: 1x500-mL aG		Sample Analysis: 7196_Cr6: Hexavalent Chromium (1)		Holding Time: 24 Hours		Preservative: Cool-AC	
SPECIAL INSTRUCTIONS FY12 and FY13 samples cannot be in the same SDG. Site-Wide Generator Knowledge Information Form applies. The CACH for all analytical work at WSCF is 401047.							

Requisitioned By: BE Briggs	Sign: <i>[Signature]</i>	Date/Time: DEC 03 2012 121529	Received By: Cynthia R Johnson	Sign: <i>[Signature]</i>	Date/Time: DEC 03 2012 121529	MATRIX *
Requisitioned By:	Sign:	Date/Time:	Received By:	Sign:	Date/Time:	S - Soil
Requisitioned By:	Sign:	Date/Time:	Received By:	Sign:	Date/Time:	SE - Sediment
Requisitioned By:	Sign:	Date/Time:	Received By:	Sign:	Date/Time:	SO - Solid
Requisitioned By:	Sign:	Date/Time:	Received By:	Sign:	Date/Time:	SL - Sludge
Requisitioned By:	Sign:	Date/Time:	Received By:	Sign:	Date/Time:	W - Water
Requisitioned By:	Sign:	Date/Time:	Received By:	Sign:	Date/Time:	O - Oil
Requisitioned By:	Sign:	Date/Time:	Received By:	Sign:	Date/Time:	A - Air
Requisitioned By:	Sign:	Date/Time:	Received By:	Sign:	Date/Time:	DS - Drain Solids
Requisitioned By:	Sign:	Date/Time:	Received By:	Sign:	Date/Time:	DL - Drain Liquids
Requisitioned By:	Sign:	Date/Time:	Received By:	Sign:	Date/Time:	I - Insect
Requisitioned By:	Sign:	Date/Time:	Received By:	Sign:	Date/Time:	WI - Waste
Requisitioned By:	Sign:	Date/Time:	Received By:	Sign:	Date/Time:	L - Liquid
Requisitioned By:	Sign:	Date/Time:	Received By:	Sign:	Date/Time:	V - Vegetation
Requisitioned By:	Sign:	Date/Time:	Received By:	Sign:	Date/Time:	X - Other
FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process)						Date/Time:

PRINTED ON 10/16/2012

A-6004-842 (REV.2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C. # SI3-010-714
Collector: B.E. Briggs GPP#0- S13-010		Contract/Requester: Karen Waters-Husted Sampling Origin: Hanford Site	Telephone No.: 376-4650	Purchase Order/Charge Code: 300071ES20		
Project Title: SURV, OCTOBER 2012	Logbook No.: HNF-N-506 49/88	Method of Shipment: GOVERNMENT VEHICLE	Ice Chest No.: N/A	Bill of Lading/Air Bill No.: N/A	Offsite Property No.: N/A	
Shipped To (Lab): Waste Sampling & Characterization	Priority: 31 Days	PRIORITY	SPECIAL INSTRUCTIONS: FY12 and FY13 samples cannot be in the same SDG. Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401047.			
Protocol: SURV	POSSIBLE SAMPLE HAZARDS/REMARKS: *** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990, 1993)		Hold Time: Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preservative: Cool-4C		
Sample No.: B2MDF1 3	Filter: N	Date: DEC 03 2012	Time: 1000	No/Type Container: 1x500-mL aG	Sample Analysis: 7196 CR6: Hexavalent Chromium (1)	Holding Time: 24 Hours

Requisitioned By: B.E. Briggs	Signature: <i>B.E. Briggs</i>	Date/Time: DEC 03 2012 10:00	Received By: Cynthia R Johnson	Signature: <i>Cynthia R Johnson</i>	Date/Time: DEC 03 2012 12:00	Matrix *
Requisitioned By:	Signature:	Date/Time:	Received By:	Signature:	Date/Time:	S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air
Requisitioned By:	Signature:	Date/Time:	Received By:	Signature:	Date/Time:	DS - Drums/Sludges DL - Drums/Liquids T - Tissue WI - Waste L - Liquid V - Vegetation X - Other
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By:	Date/Time:	PRINTED ON 10/16/2012		

Chain of Custody

CH2M Hill Plateau Remediation Company				CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C. # S13-010-706	
Collector: BE Briggs CHPRC				Contact/Requester: Karen Waters-Husted		Telephone No. 376-4650		Page 1 of 1	
SAMP No. S13-010				Sampling Origin: Hanford Site		Purchase Order/Charge Code: 300071ES20			
Project Title: SURV, OCTOBER 2012				Logbook No. HNF-N-506 <u>49/88</u>		Ice Chest No. N/A			
Shipped To (Lab): Waste Sampling & Characterization				Method of Shipment: GOVERNMENT VEHICLE		Bill of Lading/Air Bill No. N/A			
Protocol: SURV				Priority: 31 Days		Offsite Property No. N/A			
POSSIBLE SAMPLE HAZARDS/REMARKS: *** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990, 1993)				SPECIAL INSTRUCTIONS: FY12 and FY13 samples cannot be in the same SDG. Site Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.		Hold Time		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Sample No. B2MDD3	Filter: N	Date: DEC 03 2012	Time: 1000	No/Type Container: 1x500-ML P	Sample Analysis: 300.0_ANIONS_IC>List-1 (5)	Holding Time: 48 Hours	Preservative: Cool-4C		

Requisitioned By: BE Briggs	Signature: <i>[Signature]</i>	Date/Time: DEC 03 2012	Received By: Gyrithia R Johnson	Signature: <i>[Signature]</i>	Date/Time: DEC 03 2012	Matrix: S = Soil, SE = Sediment, SO = Solid, SL = Sludge, W = Water, O = Oil, A = Air, DS = Drum Solids, DL = Drum Liquids, T = Tissue, WI = Wipe, L = Liquid, V = Vegetation, X = Other
Requisitioned By:	Signature:	Date/Time:	Received By:	Signature:	Date/Time:	
Requisitioned By:	Signature:	Date/Time:	Received By:	Signature:	Date/Time:	
Requisitioned By:	Signature:	Date/Time:	Received By:	Signature:	Date/Time:	
FINAL SAMPLE DISPOSITION: Disposal Method (e.g. Return to customer, per lab procedure, used in process)						Date/Time:

PRINTED ON: 10/16/2012

A-6004-842 (REV.2)

Sample Receipt

Chain of Custody

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C. # S13-010-708									
Collector: BE Biggs CHPRC		Contact/Requester: Karen Waters-Flusted	Telephone No.:	376-4650		Page 1 of 1									
SAF No.:	S13-010	Sampling Origin:	Hanford Site		Purchase Order/Charge Code:	300071ES20									
Project Title:	SURV, OCTOBER 2012	Logbook No.:	HNF-N-506 <u>49/88</u>		Ice Chest No.:	N/A									
Shipped To (Lab):	Waste Sampling & Characterization	Method of Shipment:	GOVERNMENT VEHICLE		Bill of Lading/Air Bill No.:	N/A									
Protocol:	SURV	Priority:	31 Days		Offsite Property No.:	N/A									
POSSIBLE SAMPLE HAZARDS/REMARKS															
*** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)															
Sample No.:	6	Filter:	*	Date:	DEC 03 2012	Time:	1000	No./Type Container:	1x500-mL P	Sample Analysis:	300.0 ANIONS, C, List-1 (5)	Holding Time:	48 Hours	Preservative:	Coal-4C
<p>SPECIAL INSTRUCTIONS Hold Time: Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> FY12 and FY13 samples cannot be in the same SDG. Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 40-647.</p>															

Relinquished By:	B.E. Biggs	Sign:	<i>[Signature]</i>	Date/Time:	DEC 03 2012	Received By:	Cynthia R. Johnson	Sign:	<i>[Signature]</i>	Date/Time:	DEC 03 2012	MATRIX *
Relinquished By:		Date/Time:		Received By:		Date/Time:		S	Soil	DS	Debris Solids	
Relinquished By:		Date/Time:		Received By:		Date/Time:		SE	Sediment	DL	Dropt Liquids	
Relinquished By:		Date/Time:		Received By:		Date/Time:		SO	Solid	T	Tissue	
Relinquished By:		Date/Time:		Received By:		Date/Time:		SL	Silage	WF	Wipe	
Relinquished By:		Date/Time:		Received By:		Date/Time:		W	Water	L	Liquid	
Relinquished By:		Date/Time:		Received By:		Date/Time:		O	Oil	V	Vegetation	
Relinquished By:		Date/Time:		Received By:		Date/Time:		A	Air	X	Other	
FINAL SAMPLE DISPOSITION												
Disposal Method (e.g., Return to customer, per lab procedure, used in process)						Disposed By:						

PRINTED ON 10/16/2012

A-6004-842 (REV2)