

DECEMBER 10, 2012

WSCF Laboratory

PO Box 650 S3-30
Richland, WA 99352



December 10, 2012

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

Dear Scot Fitzgerald,

FINAL RESULT FOR SAMPLE DELIVERY GROUP WSCF121495

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 WSCF121495

- * 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 # WSCF121495

Data Deliverable Date 12/27/12

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
X13-005	B2MLB7	121495001	WATER	11/26/12	11/26/12
X13-005	B2MKF4	121495002	WATER	11/26/12	11/26/12
X13-005	B2MLC1	121495003	WATER	11/26/12	11/26/12
X13-005	B2MKH5	121495004	WATER	11/26/12	11/26/12
X13-005	B2MKF2	121495005	WATER	11/26/12	11/26/12
X13-005	B2MKW3	121495006	WATER	11/26/12	11/26/12
X13-005	B2MLJ7	121495007	WATER	11/26/12	11/26/12
X13-005	B2MKD9	121495008	WATER	11/26/12	11/26/12
X13-005	B2MLK4	121495009	WATER	11/26/12	11/26/12
X13-005	B2MLJ8	121495010	WATER	11/26/12	11/26/12
X13-005	B2MKD7	121495011	WATER	11/26/12	11/26/12
X13-005	B2MLJ1	121495012	WATER	11/26/12	11/26/12
X13-005	B2MKD3	121495013	WATER	11/26/12	11/26/12
X13-005	B2MKD2	121495014	WATER	11/26/12	11/26/12

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
WSCF121495

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

- Matrix Spike recoveries are outside established laboratory limits. Affected sample results in this batch were “N” flagged.
- All other applicable QC controls are within the established limits.

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 20 pages
Including cover page

DECEMBER 10, 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 # WSCF121495
Report Date December 10, 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 # WSCF121495

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
210919	210919	1	BLANK	85648	BLANK		Hexavalent chromium Discrete Analyzer
210919	210919	3	LCS	85650	LCS		Hexavalent chromium Discrete Analyzer
210919	210919	4	DUP	85651	B2MLB7(121495001DUP)	121495001	Hexavalent chromium Discrete Analyzer
210919	210919	5	MS	85652	B2MLB7(121495001MS)	121495001	Hexavalent chromium Discrete Analyzer
210919	210919	6	SAMPLE	121495001	B2MLB7		Hexavalent chromium Discrete Analyzer
210919	210919	7	SAMPLE	121495002	B2MKF4		Hexavalent chromium Discrete Analyzer
210919	210919	8	SAMPLE	121495003	B2MLC1		Hexavalent chromium Discrete Analyzer
210919	210919	9	SAMPLE	121495004	B2MKH5		Hexavalent chromium Discrete Analyzer
210919	210919	10	SAMPLE	121495005	B2MKF2		Hexavalent chromium Discrete Analyzer
210919	210919	11	SAMPLE	121495006	B2MKW3		Hexavalent chromium Discrete Analyzer
210919	210919	12	SAMPLE	121495007	B2MLJ7		Hexavalent chromium Discrete Analyzer
210919	210919	13	SAMPLE	121495008	B2MKD9		Hexavalent chromium Discrete Analyzer
210919	210919	14	SAMPLE	121495009	B2MLK4		Hexavalent chromium Discrete Analyzer
210919	210919	15	SAMPLE	121495010	B2MLJ8		Hexavalent chromium Discrete Analyzer
210919	210919	17	LCS	85654	LCS		Hexavalent chromium Discrete Analyzer
210919	210919	18	BLANK	85655	BLANK		Hexavalent chromium Discrete Analyzer
210919	210919	19	DUP	85656	B2MKD2(121495014DUP)	121495014	Hexavalent chromium Discrete Analyzer
210919	210919	20	MS	85657	B2MKD2(121495014MS)	121495014	Hexavalent chromium Discrete Analyzer
210919	210919	21	SAMPLE	121495011	B2MKD7		Hexavalent chromium Discrete Analyzer
210919	210919	22	SAMPLE	121495012	B2MLJ1		Hexavalent chromium Discrete Analyzer
210919	210919	23	SAMPLE	121495013	B2MKD3		Hexavalent chromium Discrete Analyzer
210919	210919	24	SAMPLE	121495014	B2MKD2		Hexavalent chromium Discrete Analyzer

Method Reference

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121495

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

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 # WSCF121495

Sample # 121495001
 SAF# X13-005
 Sample ID B2MLB7

Matrix WATER
 Sampled 11/26/12
 Received 11/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/26/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.0020		mg/L	1	0.0020	0.0050	11/26/12

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 # WSCF121495

Sample # 121495002
 SAF# X13-005
 Sample ID B2MKF4

Matrix WATER
 Sampled 11/26/12
 Received 11/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/26/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.0020		mg/L	1	0.0020	0.0050	11/26/12

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 # WSCF121495

Sample # 121495003
 SAF# X13-005
 Sample ID B2MLC1

Matrix WATER
 Sampled 11/26/12
 Received 11/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/26/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.0020		mg/L	1	0.0020	0.0050	11/26/12

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121495

Sample # 121495004
 SAF# X13-005
 Sample ID B2MKH5

Matrix WATER
 Sampled 11/26/12
 Received 11/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/26/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.0020		mg/L	1	0.0020	0.0050	11/26/12

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 # WSCF121495

Sample # 121495005
 SAF# X13-005
 Sample ID B2MKF2

Matrix WATER
 Sampled 11/26/12
 Received 11/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/26/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.0020		mg/L	1	0.0020	0.0050	11/26/12

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 # WSCF121495

Sample # 121495006
 SAF# X13-005
 Sample ID B2MKW3

Matrix WATER
 Sampled 11/26/12
 Received 11/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/26/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.0020		mg/L	1	0.0020	0.0050	11/26/12

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 # WSCF121495

Sample # 121495007
 SAF# X13-005
 Sample ID B2MLJ7

Matrix WATER
 Sampled 11/26/12
 Received 11/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/26/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.0020		mg/L	1	0.0020	0.0050	11/26/12

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)
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 o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
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Group # WSCF121495

Sample # 121495008
 SAF# X13-005
 Sample ID B2MKD9

Matrix WATER
 Sampled 11/26/12
 Received 11/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/26/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.0020		mg/L	1	0.0020	0.0050	11/26/12

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 # WSCF121495

Sample # 121495009
 SAF# X13-005
 Sample ID B2MLK4

Matrix WATER
 Sampled 11/26/12
 Received 11/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/26/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	N	0.00990		mg/L	1	0.0020	0.0050	11/26/12

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 # WSCF121495

Sample # 121495010
 SAF# X13-005
 Sample ID B2MLJ8

Matrix WATER
 Sampled 11/26/12
 Received 11/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/26/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.0020		mg/L	1	0.0020	0.0050	11/26/12

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

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 X,Y or Z - See comment detail and/or narrative.
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Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121495

Sample # 121495011
 SAF# X13-005
 Sample ID B2MKD7

Matrix WATER
 Sampled 11/26/12
 Received 11/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/26/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.0020		mg/L	1	0.0020	0.0050	11/26/12

MDL = Minimum Detection Limit
 RQ = Result Qualifier
 TP Err = Total Propagated Error
 DF = Dilution Factor
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 PQL is equivalent to Estimated Quantitation Limit (EQL)
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 o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121495

Sample # 121495012
 SAF# X13-005
 Sample ID B2MLJ1

Matrix WATER
 Sampled 11/26/12
 Received 11/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/26/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.0020		mg/L	1	0.0020	0.0050	11/26/12

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

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 o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121495

Sample # 121495013
 SAF# X13-005
 Sample ID B2MKD3

Matrix WATER
 Sampled 11/26/12
 Received 11/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/26/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.0020		mg/L	1	0.0020	0.0050	11/26/12

MDL = Minimum Detection Limit
 RQ = Result Qualifier
 TP Err = Total Propagated Error
 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)
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Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121495

Sample # 121495014
 SAF# X13-005
 Sample ID B2MKD2

Matrix WATER
 Sampled 11/26/12
 Received 11/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/26/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	UN	<0.0020		mg/L	1	0.0020	0.0050	11/26/12

MDL = Minimum Detection Limit
 RQ = Result Qualifier
 TP Err = Total Propagated Error
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 C - Analyte was found in the Associated Blank. (Inorganic)
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 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 # WSCF121495

Analytical Batch 210919 (QC Batch: 210919) **Test** Hexavalent chromium Discrete Analyzer
Associated Samples 121495001, 121495002, 121495003, 121495004, 121495005, 121495006, 121495007, 121495008, 121495009,
 121495010, 121495011, 121495012, 121495013, 121495014

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK										
			QC Sample #85648							
Hexavalent chromium LCS	18540-29-9		<0.0020	mg/L					U	11/26/12
			QC Sample #85650							
Hexavalent chromium DUP	18540-29-9		0.0510	mg/L	102	90 - 110				11/26/12
			QC Sample #85651							
			Original 121495001							
Hexavalent chromium MS	18540-29-9	<0.0020	<0.0020	mg/L			-6.90	20	U	11/26/12
			QC Sample #85652							
			Original 121495001							
Hexavalent chromium LCS	18540-29-9	<0.0020	0.0333	mg/L	83.2	85 - 115			N	11/26/12
			QC Sample #85654							
Hexavalent chromium BLANK	18540-29-9		0.0510	mg/L	102	90 - 110				11/26/12
			QC Sample #85655							
Hexavalent chromium DUP	18540-29-9		<0.0020	mg/L					U	11/26/12
			QC Sample #85656							
			Original 121495014							

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121495

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Hexavalent chromium MS	18540-29-9	<0.0020	<0.0020	mg/L			-17.70	20	U	11/26/12
			QC Sample #85657							
			Original 121495014							
Hexavalent chromium	18540-29-9	<0.0020	0.0205	mg/L	51.2	85 - 115			N	11/26/12

* - QC result out of range

n/a - Not Applicable

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 17 pages
Including cover page

Waste Sampling and Characterization Facility
P.O. Box 1970 S3-30, Richland WA 99352
Phone: (509) 373-7004/FAX: (509) 373-7134

ACKNOWLEDGEMENT OF SAMPLES RECEIVED**WSCF Laboratory**

PO Box 650 S3-30
 Richland, WA 99352

ATTN: Scot Fitzgerald

Customer Code: CHPRC

PO #: 403899

Work Order #: 121495

Profile #: X13-005-342

Proj. Mgr.:

Phone:

The following samples were received from you on 11/26/2012 1:10:00 PM. They have been scheduled for the tests listed beside 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
		Tests scheduled		
121495001	B2MLB7	WATER	11/26/2012 09:48	11/26/2012 13:10
		CR6DA-W		
121495002	B2MKF4	WATER	11/26/2012 12:15	11/26/2012 13:10
		CR6DA-W		
121495003	B2MLC1	WATER	11/26/2012 09:55	11/26/2012 13:10
		CR6DA-W		
121495004	B2MKH5	WATER	11/26/2012 12:03	11/26/2012 13:10
		CR6DA-W		
121495005	B2MKF2	WATER	11/26/2012 12:22	11/26/2012 13:10
		CR6DA-W		
121495006	B2MKW3	WATER	11/26/2012 11:39	11/26/2012 13:10
		CR6DA-W		
121495007	B2MLJ7	WATER	11/26/2012 10:39	11/26/2012 13:10
		CR6DA-W		
121495008	B2MKD9	WATER	11/26/2012 11:26	11/26/2012 13:10
		CR6DA-W		
121495009	B2MLK4	WATER	11/26/2012 10:16	11/26/2012 13:10
		CR6DA-W		
121495010	B2MLJ8	WATER	11/26/2012 10:39	11/26/2012 13:10
		CR6DA-W		
121495011	B2MKD7	WATER	11/26/2012 11:05	11/26/2012 13:10

Waste Sampling and Characterization Facility
P.O. Box 1970 S3-30, Richland WA 99352
Phone: (509) 373-7004/FAX: (509) 373-7134

CR6DA-W

121495012	B2MLJ1	WATER	11/26/2012 10:30	11/26/2012 13:10
<hr/>				
CR6DA-W				
<hr/>				
121495013	B2MKD3	WATER	11/26/2012 11:14	11/26/2012 13:10
<hr/>				
CR6DA-W				
<hr/>				
121495014	B2MKD2	WATER	11/26/2012 11:14	11/26/2012 13:10
<hr/>				
CR6DA-W				

Test Acronym Description

Test Acronym	Description
CR6DA-W	Cr6 (W Discrete analyzer)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.#
X13-005-342
Page 1 of 1

Collector	<i>J. Aquilera</i>	Contract/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	<i>X13-005</i>	Sampling Origin	Hamford Site	Purchase Order/Charge Code	303064ES20
Project Title	AQUIFER TUBES, NOVEMBER 2012	Logbook No.	HNF-N-506 <i>52 / 5,4</i>	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 5100.5 (1990/1993)

121495

Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MLB7	N	11-26-12	0948	1x500-mL AG	7195_CR6 Hexavalent Chromium (1)	24 Hours	Cool-4C

SPECIAL INSTRUCTIONS Hold Time
 Site-Wide Generator Knowledge Information Form applies
 The CACN for all analytical work at WSCF is 403899
 FY12 and FY13 samples cannot be in the same SIG

Total Activity Exemption: Yes No

Relinquished By	Sign	Date/Time	Received By	Sign	Date/Time	Matrix *
<i>J. Aquilera</i>	<i>[Signature]</i>	11-26-12 1310	<i>CH Henderson</i>	<i>[Signature]</i>	11-26-12 1730	S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air
Relinquished By		Date/Time	Received By		Date/Time	DS - Damm Solids DL - Damm Liquids T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other
Relinquished By		Date/Time	Received By		Date/Time	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) _____ Disposed By _____ Date/Time _____

PRINTED ON 10/9/2012

A-5004-842 (REV 2)

Chain of Custody

CH2M Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X13-005-191
Page 1 of 1

Collector	S. Aguilar	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	X13-005	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303064ESS20
Project Title	AQUIFER TUBES, NOVEMBER 2012	Logbook No.	INF-N-506 52 / 54	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		SPECIAL INSTRUCTIONS		Hold Time	
*** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 480.5 (1990/1993)		Site Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 023899. FY12 and FY13 samples cannot be in the same SDO.		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Sample No.	Filter	Date	Time	No./Type Container	Sample Analysis
B2MKF4	N	11-26-12	1215	1x500-mL AG	7199_CRG: Hexavalent Chromium (1)
					Holding Time
					24 Hours
					Preservative
					Cool: 4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
J. Aguilar			11/26/12 1310	CH Husted			11/26/12 1310	S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air
								DS - Drum Solids DL - Drum Linings T - Tissue W1 - Wipe L - Liquid V - Vegetation X - Other
Relinquished By			Date/Time	Received By			Date/Time	
Relinquished By			Date/Time	Received By			Date/Time	
Relinquished By			Date/Time	Received By			Date/Time	
FINAL SAMPLE DISPOSITION				Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed By
								Date/Time

PRINTED: 0 10/9/2012

A-6004-942 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X13-005-345
Page 1 of 1

Collector	S. Aquilera	Contract/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	X13-005	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303064ES20
Project Title	AQUIFER TUBES, NOVEMBER 2012	Logbook No.	INF-N-506 52 / 54	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			SPECIAL INSTRUCTIONS		
*** 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)			Site Wide Generator Knowledge Information Form applies. The CACS for all analytical work at WSCF is 103899. FY12 and FY13 samples cannot be in the same SDC.		
Sample No.	B2MLC1 3	Filter	N	Date	11-26-12
		Time	0955	No./Type Container	1x500-mL aIG
				Sample Analysis	7195_CRG: Hexavalent Chromium (1)
				Holding Time	24 Hours
				Preservative	Cool-4C

Relinquished By	S. Aquilera	Print	Sign	Date/Time	11-26-12	1310	Received By	Cynthia R Johnson	Print	Sign	Date/Time	11-26-12	1310
Relinquished By				Date/Time			Received By				Date/Time		
Relinquished By				Date/Time			Received By				Date/Time		
Relinquished By				Date/Time			Received By				Date/Time		
FINAL SAMPLE DISPOSITION		Disposal Method (e.g. Return to customer, per lab procedure, used in process)		Disposed By		Date/Time							

Matrix *	
S	Soil
SE	Sediment
SO	Solid
SL	Sludge
W	Water
O	Oil
A	Air
DS	Drum Solids
DIL	Drum Liquids
T	Tissue
WI	Wine
L	Landfill
V	Vegetation
X	Other

PRINTED ON 10/9/2012

A-6004-842 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company
CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST
 C.O.C. # **X13-005-198**
 Page 1 of 1

Collector	S. Aguilar	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	X13-005	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303064ES20
Project Title	AQUIFER TUBES, NOVEMBER 2012	Logbook No.	HNF-N-506 52 / 5, 4	Ice Check 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 **Hold Time** **Total Activity Exemption:** Yes No
 Site Wide Generator Knowledge Information Form applies.
 The CACN for all analytical work at WSCF is 403897
 FY12 and FY13 samples cannot be in the same SDG

Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Sample Analysis	Holding Time	Preservative
B2MKH5 4	N	11-26-12	1203	1x500-mL AG	7196_CRF6 Hexavalent Chromium (1)		24 Hours	Cool-4C

Relinquished By	<i>S. Aguilar</i>	Print	Sign	Date/Time	11-26-12	1310	Received By	<i>[Signature]</i>	Print	Sign	Date/Time	11-26-12	1210	Matrix *
Relinquished By				Date/Time			Received By				Date/Time			S = Soil DS = Drum Solids SE = Sediment DL = Drum Liquids SO = Solid T = Tissue SL = Sludge WT = Wire W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By				Date/Time			Received By				Date/Time			
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By		Date/Time								

Chain of Custody

CH2M Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.#
X13-005-190
Page 1 of 1

Collector	J. Aguilar	Contract/Requester	Karen Waters-Flusted	Telephone No.	376-4650
SAF No.	X13-005	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303064ES20
Project Title	AQUIFER TUBES, NOVEMBER 2012	Logbook No.	INF-N-506 52 / 54	Fee 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	Outside 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 (1998/1995)

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes No

Site Wide Generator Knowledge Information Form applies
The GAGN for all analytical work at WSCF is 403899.
PVI2 and PVI3 samples cannot be in the same SMC.

Sample No.	Filter	Date	Time	No./Type Container	Sample Analysis	Holding Time	Preservative
B2MKF2 5	N	11-26-12	1222	1x500-mL AG	7196_Cr6: Hexavalent Chromium (1)	24 Hours	Cool-AG

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
J. Aguilar	[Signature]	[Signature]	11-26-12 1310	[Signature]	[Signature]	[Signature]	11-26-12 1310	S - Soil SE - Sediment SD - Solid SL - Sludge W - Water O - Oil A - Air
Relinquished By			Date/Time	Received By			Date/Time	DS - Drum Solids DL - Drum Liquids T - Tissue WT - Wire L - Liquid V - Vegetation X - Other
Relinquished By			Date/Time	Received By			Date/Time	
Relinquished By			Date/Time	Received By			Date/Time	

FINAL SAMPLE DISPOSITION Disposal Method (i.e. Return to customer, per lab procedure, used in process) Deposited By Date/Time

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A-5004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company
CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST
 C.O.C. # **X13-005-257**
 Page 1 of 1

Collector: **J. Aguilar** Contact/Requester: **Karen Waters-Husted** Telephone No.: **376-4650**
 SAMP No.: **X13-005** Sampling Origin: **Hanford Site** Purchase Order/Charge Code: **303064ES20**
 Project Title: **AQUIFER TUBES, NOVEMBER 2012** Logbook No.: **INF-N-506 52 / 5, 6** 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 PRIORITY** 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 (1999/1993)
 SPECIAL INSTRUCTIONS: **HOLD TIME** Tidal Activity Exemption: Yes No
 Site Wide Generator Knowledge Information Form applies. The CACN for all analytical works at WSCF is 603899. FY12 and FY13 samples cannot be in the same SDG.

Sample No.	Filter *	Date	Time	No./Type Container	Sample Analysis	Holding Time	Preservative
B2MKV3	N	11-26-12	1139	1x500-mL AG	7196_CIR6: Hexavalent Chromium (1)	24 Hours	Cool-AC

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
J. Aguilar			11-26-12 1310	M. Henderson			11-26-12 1320	S - Soil SE - Sediment SO - Solid SL - Sludge W - Water Q - Oil A - Air
Relinquished By			Date/Time	Received By			Date/Time	DS - Drum Solids DL - Drum Liquids T - Tissue WT - Waste L - Land V - Vegetation X - Other
Relinquished By			Date/Time	Received By			Date/Time	
FINAL SAMPLE DISPOSITION				Disposal Method (e.g. Return to customer, per lab procedure, used in process)				Date/Time

Chain of Custody

CH2M Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
X13-005-371
Page 1 of 1

Collector	J. Aguilar	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	X13-005	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303064ES20
Project Title	AQUIFER TUBES, NOVEMBER 2012	Logbook No.	HNF-N-506 52 / 5, 6	Fee 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 (1990/1995)

SPECIAL INSTRUCTIONS Hold Time: Total Activity Exemption: Yes No

Site Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 403899. PVI2 and PVI3 samples cannot be in the same SMC.

Sample No.	Filter	Date	Time	No./Type Container	Sample Analysis	Holding Time	Preservative
B2MLJ71	N	11-26-12	1039	1x500-mL AG	7196_Cr6: Hexavalent Chromium (1)	24 Hours	Cool-4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
J. Aguilar			11-26-12 1310	M. Husted			11-26-12 1310	S - Soil SE - Sediment SD - Solid SL - Sludge W - Water O - Oil A - Air
Relinquished By			Date/Time	Received By			Date/Time	DS - Drum Solids DL - Drum Linings T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other
Relinquished By			Date/Time	Received By			Date/Time	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process)

Disposed By: _____ Date/Time: _____

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A-5004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company
CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST
 C.O.C. # **X13-005-188**
 Page 1 of 1

Collector	<i>J. Aguilar</i>	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	X13-005	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303064ES20
Project Title	AQUIFER TUBES, NOVEMBER 2012	Logbook No.	HNF-N-506 <i>52/54</i>	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 (1990/1995)

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption Yes No
 Site Wide Generator Knowledge Information Form applies.
 The CACS for all analytical work at WSCF is 405899.
 PY12 and PY13 samples cannot be in the same SDG.

Sample No.	Filter	Date	Time	No./Type Container	Sample Analysis	Holding Time	Preservative
B2MKC9	N	11-26-12	1126	1x500-mL aG	7196_CR6 - Hexavalent Chromium (1)	24 Hours	Cool-4C

Reinquished By	<i>J. Aguilar</i>	Print	Sign	Date/Time	Received By	<i>CH Haddock</i>	Print	Sign	Date/Time	Matrix *
Reinquished By				11-26-12 1310	Received By				11-26-12 1310	S - Soil DS - Drum Solids SF - Sediment DL - Drum Linings SO - Solid T - Tissue SL - Sludge WI - Wipe W - Water L - Liquid O - Oil V - Vegetation A - Air X - Other
Reinquished By					Received By					
Reinquished By					Received By					
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, meet in process)		Disposed By						

Chain of Custody

CH2M Hill Plateau Remediation Company
CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST
 C.O.C. # **X13-005-377**
 Page 1 of 1

Collector	J. Aguilar	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	X13-005	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303064EES20
Project Title	AQUIFER TUBES, NOVEMBER 2012	Logbook No.	INF-N-506 52 / 54	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 DCE: Order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes No
 Site Wide Generator Knowledge Information Form applies
 The CACN for all analytical work at WSCF is 403899.
 FY12 and FY13 samples cannot be in the same SDX.

Sample No.	Fiber	Date	Time	No./Type Container	Sample Analysis	Holding Time	Preservative
B2MLK4	9	11-26-12	1016	1x500-mL AG	7196_CRG- Hexavalent Chromium (1)	24 Hours	COOL-4C

Relinquished By	<i>J. Aguilar</i>	Date/Time	11-26-12 1310	Received By	<i>CH Hill</i>	Date/Time	11-26-12 1310	Matrix *
Relinquished By	<i>[Signature]</i>	Date/Time		Received By		Date/Time		S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air
Relinquished By		Date/Time		Received By		Date/Time		DS - Drum Solids DL - Drum Liquids T - Tissue WT - Waste L - Lint V - Vegetation X - Other

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer per lab procedure, used in process)

Disposed By: _____ Date/Time: _____

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
X13-005-374
Page 1 of 1

Collector	J. Aguilar	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	X13-005	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303064ES20
Project Title	AQUIFER TUBES, NOVEMBER 2012	Logbook No.	HNF-N-506 52 / 54	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 (1998/1995)

SPECIAL INSTRUCTIONS Hold Time: Total Activity Exemption: Yes No

Site Wide Generator Knowledge Information Form applies
The C/C/N for all analytical work at WSCF is 003899.
FY12 and FY13 samples cannot be in the same SDG

Sample No.	Filter	Date	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MLJ8 (D)	N	11-26-12	1x500-mL AG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool-4C

Relinquished By	J. Aguilar	Print	Sign	Date/Time	11-26-12 1310	Received By	C. Hudson	Print	Sign	Date/Time	11-26-12 1310
Relinquished By				Date/Time		Received By				Date/Time	
Relinquished By				Date/Time		Received By				Date/Time	
Relinquished By				Date/Time		Received By				Date/Time	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer per lab procedure, used in process)	Disposed By	Date/Time

PRINTED: 10/9/2012

Matrix *

S	Soil	DS	Dryn Solids
SE	Sediment	DL	Dryn Liquids
SO	Solid	T	Tissue
SL	Sludge	WI	Wipe
W	Water	L	Liquid
O	Oil	V	Vegetation
A	Air	X	Other

Chain of Custody

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C. # X13-005-187
Collector J. Aguilar		Contact/Requester	Karen Waters-Husted		Telephone No.	376-4650
SAF No.	X13-005	Sampling Origin	Hanford Site		Purchase Order/Charge Code	303064ES20
Project Title	AQUIFER TUBES, NOVEMBER 2012	Logbook No.	INF-N-506 52 / 5,6		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 (1990/1995)						
SPECIAL INSTRUCTIONS						
Site Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 803899. FY12 and FY13 samples cannot be in the same SDG.						
Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Hold Time
B2MK07 11	N	11-26-12	1105	1x500-mL aG	7199_CRG: Hexavalent Chromium (1)	24 Hours
					Preservative	Cool-4C

Relinquished By		Print	Sign	Date/Time	Received By		Print	Sign	Date/Time	Matrix *
Relinquished By	J. Aguilar			11-26-12 1310	Received By	K Waters-Husted			11-26-12 1310	S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air
Relinquished By					Received By					DS - Drum Solids DL - Drum Liquids T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other
Relinquished By					Received By					
FINAL SAMPLE DISPOSITION										
Disposal Method (e.g., Return to customer; per lab procedure; used in process)					Disposed By					
Date/Time										

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A-6004-942 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.#
X13-005-368
Page 1 of 1

Collector	J. Aguilar	Contact/Requester	Karen Waters-Illstedt	Telephone No.	376-4650
SAF No.	X13-005	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303064IES20
Project Title	AQUIFER TUBES, NOVEMBER 2012	Logbook No.	HNF-N-506 52 / 5 JL	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		SPECIAL INSTRUCTIONS		Hold Time	
*** 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).		Site Wide Generator Knowledge Information Form applies. The CACH for all analytical work at WSCF is 403899. FY12 and FY13 samples cannot be in the same SDX.		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Sample No.	Filter	Date	Time	No./Type Container	Sample Analysis
BMLJ1	N	11-26-12	1030	1x600 mL aG	7196_CR6: Hexavalent Chromium (1)
					Sample Analysis
					24 Hours
					Preservative
					Cool-4C

Retransmitted By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	MATRIX *
J. Aguilar			11-26-12 1310	A. Hudson			11-26-12 1310	S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air
Retransmitted By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	DS - Drum Solids DL - Drum Liquids T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other
Retransmitted By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g. Return to customer, per lab procedure, used in process)		Dispersed By		Date/Time		

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A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation
Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
X13-005-186
Page 1 of 1

Collector	J. Aguilar	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	X13-005	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303064ES20
Project Title	AQUIFER TUBES, NOVEMBER 2012	Logbook No.	HNF-N-506 52 / 5, J _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		SPECIAL INSTRUCTIONS		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
*** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 3409.5 (1990/1995)		Site Wide Generator Knowledge Information Form applies. The C/O.C. for all analytical work at WSCF is 403899. P112 and P113 samples cannot be in the same SDCL.			
Sample No.	Filter	Date	Time	No./Type Container	Sample Analysis
B2MKC3	N	11-26-12	1114	1x500-mL a/c	7195_CRG-Hexavalent Chromium (1)
					7195_CRG-Hexavalent Chromium (1)
					24 Hours
					Preservative
					Cool-4C

Redequired By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
J. Aguilar			11-26-12 1310	M. Williams			11-26-12 1310	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
Redequired By			Date/Time	Received By			Date/Time	
Redequired By			Date/Time	Received By			Date/Time	
Redequired By			Date/Time	Received By			Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g. Return to customer, per lab procedure, used in process)		Disposed By		Date/Time		

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A-6004-842 (REV 2)

