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 WSCF121502

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 WSCF121502

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

Very truly yours,

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 # WSCF121502
Data Deliverable Date 12/28/12

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
X13-005	B2MK50	121502001	WATER	11/27/12	11/27/12
X13-005	B2MK52	121502002	WATER	11/27/12	11/27/12
X13-005	B2MK56	121502003	WATER	11/27/12	11/27/12
X13-005	B2MKF7	121502004	WATER	11/27/12	11/27/12
X13-005	B2MKF9	121502005	WATER	11/27/12	11/27/12
X13-005	B2MKH0	121502006	WATER	11/27/12	11/27/12
X13-005	B2MKH2	121502007	WATER	11/27/12	11/27/12
X13-005	B2MKW6	121502008	WATER	11/27/12	11/27/12
X13-005	B2MKX0	121502009	WATER	11/27/12	11/27/12
X13-005	B2ML68	121502010	WATER	11/27/12	11/27/12
X13-005	B2ML71	121502011	WATER	11/27/12	11/27/12
X13-005	B2ML74	121502012	WATER	11/27/12	11/27/12
X13-005	B2ML77	121502013	WATER	11/27/12	11/27/12

ATTACHMENT 2

NARRATIVE

Consisting of 3 pages
Including cover page

Attachment 2
Narrative
WSCF121502

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
WSCF121502

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 19 pages
Including cover page

WSCF ANALYTICAL RESULTS REPORT

For

CH2M Hill Plateau Remediation

PO Box 1600
Richland, WA 99352

Attention: Scot Fitzgerald

Contract #	MOA-FH-CHPRC-2008
Group #	WSCF121502
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 # WSCF121502

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
210920	210920	1	BLANK	85660	BLANK		Hexavalent chromium Discrete Analyzer
210920	210920	3	LCS	85662	LCS		Hexavalent chromium Discrete Analyzer
210920	210920	4	DUP	85663	B2MK50(121502001DUP)	121502001	Hexavalent chromium Discrete Analyzer
210920	210920	5	MS	85664	B2MK50(121502001MS)	121502001	Hexavalent chromium Discrete Analyzer
210920	210920	6	SAMPLE	121502001	B2MK50		Hexavalent chromium Discrete Analyzer
210920	210920	7	SAMPLE	121502002	B2MK52		Hexavalent chromium Discrete Analyzer
210920	210920	8	SAMPLE	121502003	B2MK56		Hexavalent chromium Discrete Analyzer
210920	210920	9	SAMPLE	121502004	B2MKF7		Hexavalent chromium Discrete Analyzer
210920	210920	10	SAMPLE	121502005	B2MKF9		Hexavalent chromium Discrete Analyzer
210920	210920	11	SAMPLE	121502006	B2MKH0		Hexavalent chromium Discrete Analyzer
210920	210920	12	SAMPLE	121502007	B2MKH2		Hexavalent chromium Discrete Analyzer
210920	210920	13	SAMPLE	121502008	B2MKW6		Hexavalent chromium Discrete Analyzer
210920	210920	14	SAMPLE	121502009	B2MKX0		Hexavalent chromium Discrete Analyzer
210920	210920	15	SAMPLE	121502010	B2ML68		Hexavalent chromium Discrete Analyzer
210920	210920	17	LCS	85666	LCS		Hexavalent chromium Discrete Analyzer
210920	210920	18	BLANK	85667	BLANK		Hexavalent chromium Discrete Analyzer
210920	210920	19	DUP	85668	B2ML74(121502012DUP)	121502012	Hexavalent chromium Discrete Analyzer
210920	210920	20	MS	85669	B2ML74(121502012MS)	121502012	Hexavalent chromium Discrete Analyzer
210920	210920	21	SAMPLE	121502011	B2ML71		Hexavalent chromium Discrete Analyzer
210920	210920	22	SAMPLE	121502012	B2ML74		Hexavalent chromium Discrete Analyzer
210920	210920	23	SAMPLE	121502013	B2ML77		Hexavalent chromium Discrete Analyzer

Method Reference

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121502

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

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121502

Sample # 121502001
SAF# X13-005
Sample ID B2MK50

Matrix WATER
Sampled 11/27/12
Received 11/27/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/27/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403		0.00620		mg/L	1	0.0020	0.0050	11/27/12

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.

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121502

Sample # 121502002
SAF# X13-005
Sample ID B2MK52

Matrix WATER
Sampled 11/27/12
Received 11/27/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/27/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.0020		mg/L	1	0.0020	0.0050	11/27/12

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.

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121502

Sample # 121502003
SAF# X13-005
Sample ID B2MK56

Matrix WATER
Sampled 11/27/12
Received 11/27/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/27/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.0020		mg/L	1	0.0020	0.0050	11/27/12

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.

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121502

Sample # 121502004
SAF# X13-005
Sample ID B2MKF7

Matrix WATER
Sampled 11/27/12
Received 11/27/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/27/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.0020		mg/L	1	0.0020	0.0050	11/27/12

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.

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121502

Sample # 121502005
SAF# X13-005
Sample ID B2MKF9

Matrix WATER
Sampled 11/27/12
Received 11/27/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/27/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.0020		mg/L	1	0.0020	0.0050	11/27/12

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.

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121502

Sample # 121502006
SAF# X13-005
Sample ID B2MKH0

Matrix WATER
Sampled 11/27/12
Received 11/27/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/27/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.0020		mg/L	1	0.0020	0.0050	11/27/12

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.

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121502

Sample # 121502007
SAF# X13-005
Sample ID B2MKH2

Matrix WATER
Sampled 11/27/12
Received 11/27/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/27/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.0020		mg/L	1	0.0020	0.0050	11/27/12

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.

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121502

Sample # 121502008
SAF# X13-005
Sample ID B2MKW6

Matrix WATER
Sampled 11/27/12
Received 11/27/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/27/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.0020		mg/L	1	0.0020	0.0050	11/27/12

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.

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121502

Sample # 121502009
SAF# X13-005
Sample ID B2MKX0

Matrix WATER
Sampled 11/27/12
Received 11/27/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/27/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.0020		mg/L	1	0.0020	0.0050	11/27/12

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.

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121502

Sample # 121502010
SAF# X13-005
Sample ID B2ML68

Matrix WATER
Sampled 11/27/12
Received 11/27/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/27/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403		0.00510		mg/L	1	0.0020	0.0050	11/27/12

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.

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121502

Sample # 121502011
SAF# X13-005
Sample ID B2ML71

Matrix WATER
Sampled 11/27/12
Received 11/27/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/27/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403		0.0155		mg/L	1	0.0020	0.0050	11/27/12

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.

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121502

Sample # 121502012
SAF# X13-005
Sample ID B2ML74

Matrix WATER
Sampled 11/27/12
Received 11/27/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/27/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403		0.0118		mg/L	1	0.0020	0.0050	11/27/12

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.

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121502

Sample # 121502013
SAF# X13-005
Sample ID B2ML77

Matrix WATER
Sampled 11/27/12
Received 11/27/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/27/12
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403		0.00790		mg/L	1	0.0020	0.0050	11/27/12

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 # WSCF121502

Analytical Batch 210920 (QC Batch: 210920) **Test** Hexavalent chromium Discrete Analyzer
Associated Samples 121502001, 121502002, 121502003, 121502004, 121502005, 121502006, 121502007, 121502008, 121502009, 121502010, 121502011, 121502012, 121502013

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #85660**							
Hexavalent chromium	18540-29-9		<0.0020	mg/L					U	11/27/12
LCS			**QC Sample #85662**							
Hexavalent chromium	18540-29-9		0.0501	mg/L	100.2	90 - 110				11/27/12
DUP			**QC Sample #85663**							
			Original 121502001							
Hexavalent chromium	18540-29-9	0.00620	0.00590	mg/L			5.00	20		11/27/12
MS			**QC Sample #85664**							
			Original 121502001							
Hexavalent chromium	18540-29-9	0.00620	0.0402	mg/L	100.5	85 - 115				11/27/12
LCS			**QC Sample #85666**							
Hexavalent chromium	18540-29-9		0.0497	mg/L	99.4	90 - 110				11/27/12
BLANK			**QC Sample #85667**							
Hexavalent chromium	18540-29-9		<0.0020	mg/L					U	11/27/12
DUP			**QC Sample #85668**							
			Original 121502012							

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121502

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Hexavalent chromium	18540-29-9	0.0118	0.0118	mg/L			0.00	20		11/27/12
MS			**QC Sample #85669**							
			Original 121502012							
Hexavalent chromium	18540-29-9	0.0118	0.0390	mg/L	97.5	85 - 115				11/27/12

* - QC result out of range n/a - Not Applicable

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 16 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 #: 121502
Profile #: X13-005-140
Proj. Mgr.:
Phone:

The following samples were received from you on 11/27/2012 1:20:00 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		
121502001	B2MK50	WATER	11/27/2012 09:47	11/27/2012 13:20
		CR6DA-W		
121502002	B2MK52	WATER	11/27/2012 09:40	11/27/2012 13:20
		CR6DA-W		
121502003	B2MK56	WATER	11/27/2012 11:15	11/27/2012 13:20
		CR6DA-W		
121502004	B2MKF7	WATER	11/27/2012 10:47	11/27/2012 13:20
		CR6DA-W		
121502005	B2MKF9	WATER	11/27/2012 07:00	11/27/2012 13:20
		CR6DA-W		
121502006	B2MKH0	WATER	11/27/2012 10:40	11/27/2012 13:20
		CR6DA-W		
121502007	B2MKH2	WATER	11/27/2012 10:33	11/27/2012 13:20
		CR6DA-W		
121502008	B2MKW6	WATER	11/27/2012 11:01	11/27/2012 13:20
		CR6DA-W		
121502009	B2MKX0	WATER	11/27/2012 11:34	11/27/2012 13:20
		CR6DA-W		
121502010	B2ML68	WATER	11/27/2012 12:16	11/27/2012 13:20
		CR6DA-W		
121502011	B2ML71	WATER	11/27/2012 12:25	11/27/2012 13:20

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

		CR6DA-W		
121502012	B2ML74	WATER	11/27/2012 11:49	11/27/2012 13:20
		CR6DA-W		
121502013	B2ML77	WATER	11/27/2012 11:58	11/27/2012 13:20
		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. # X13-005-140

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 / 7,8	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 concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

121502

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 SDG.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MK50	N	W	11-27-12	0947	1x500 mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J. Aguilar			11-27-12 1320	Cynthia R Johnson			11-27-12 1320
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

PRINTED O 10/9/2012

A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X13-005-141**

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 / 7,8	**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 concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

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 SDG.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MK52	N	W	11-27-12	0940	1x500 mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
J. Aguilar		11-27-12 1320	Cynthia R Johnson		11-27-12 1320
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

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

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

PRINTED O 10/9/2012

A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X13-005-143**

Page 1 of 1

Collector	J. Aguilar	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	XT3-005	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303064ES20
Project Title	AQUIFER TUBES, NOVEMBER 2012	Logbook No.	HNF-N-506 52/7,8	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 concentations that are not regulated for transportation per 49 CRF 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 403899
FY12 and FY13 samples cannot be in the same SDG.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MK56 3	N	W	11-27-12	1115	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J. Aguilar	11-27-12 1320	Cynthia R Johnson	11-27-12 1320
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

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

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

PRINTED O 10/9/2012

A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X13-005-193**

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 / 7,8	**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 concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

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 SDG.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MKF7 4	N	W	11-27-12	1047	1x500-mL aG	7196_CR6. Hexavalent Chromium (1)	24 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J. Aguilar			11-27-12 1320	Cynthia R Johnson			11-27-12 1320
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

PRINTED O 10/9/2012

A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X13-005-194**

Page 1 of 1

Collector	S. King	**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 / 7,8	**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 concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

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 SDG.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MKF9 S	N	W	11-27-12	0700	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
S. King	Scott King		11-27-12 1320	Cynthia R Johnson			11-27-12 1320
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

PRINTED O 10/9/2012

A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X13-005-195**

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 / 7,8	**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 concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

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 SDG.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MKH0	N	W	11-27-12	1040	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J. Aguilar			11-27-12 1320	Cynthia R Johnson			11-27-12 1320
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

PRINTED O 10/9/2012

A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X13-005-196**

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 / 7,8	**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 concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

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 SDG

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MKH2	N	W	11-27-12	1033	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J. Aguilar			11-27-12 1320		Cynthia R Johnson		11-27-12 1320
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

PRINTED O 10/9/2012

A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X13-005-259**

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 / 7,8	**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 Radionetive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

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 SDG.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MKW6 8	N	W	11-27-12	1101	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J. Aguilar	11-27-12 1320	Cynthia R Johnson	11-27-12 1320
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

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

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

PRINTED O 10/9/2012

A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X13-005-262**

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 / 7,8	**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 concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400.5 (1990/1993)

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 SDG.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MKX0	N	W	11-27-12	1134	1x500 mL aG	7196_CR6 Hexavalent Chromium (1)	24 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J. Aguilar			11-27-12 1320	Cynthia R Johnson			11-27-12 1320
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

PRINTED O 10/9/2012

A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X13-005-319**

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 / 7, 8	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 concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

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 SDG.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2ML68	C	N	W	11-27-12	1216	1x500 mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J. Aguilar			11-27-12 1320	Cynthia R Johnson			11-27-12 1320
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

PRINTED O 10/9/2012

A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X13-005-321**

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 17,8	**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 concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400.5 (1990/1993)

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 SDG.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2ML71	N	W	11-27-12	1225	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
J. Aguilar		11-27-12 1320	Cynthia R Johnson		11-27-12 1320
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

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

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

PRINTED O 10/9/2012

A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X13-005-323**

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 / 7,8	**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 concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

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 SDG.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2ML74 12	N	W	11-27-12	1149	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J. Aguilar			11-27-12 1320	Cynthia R Johnson			11-27-12 1320
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

PRINTED O 10/9/2012

A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X13-005-325**

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 / 7,8	**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 concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400.5 (1990/1993)

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 SDG.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2ML77 13	N	W	11-27-12	1158	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J. Aguilar			11-27-12 1320	Cynthia R Johnson			11-27-12 1320
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

PRINTED O 10/9/2012

A-6004-842 (REV 2)