

WSCF Laboratory

RECEIVED JANUARY 12, 2010

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Richland, WA 99352
(509) 373-7005
(509) 372-0456

Memorandum

To: Michael Neely
CH2M-HILL PRC
PO Box 1600
Richland, WA 99352

Date: January 11, 2010

From: WSCF Laboratory
WSCF Analytical Chemistry

CC:

Subject: FINAL RESULT FOR SAMPLE DELIVERY GROUP WSCF91845

Reference: (1) SOW, Mod 2, #36587, Release 3
(2) HNF-SD-CD-QAPP-017, Rev 9, Waste Sampling & Characterization Facility Quality Assurance Plan

This letter contains the following information for sample delivery group WSCF91845

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

Electronically signed by Scot Fitzgerald
For Lab Manager

Attachments 4

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ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF Number Cross Reference

Group # WSCF91845

Data Deliverable Date 01/14/10

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
F09-061	B23K81	91845001	WATER	12/30/09	12/30/09

ATTACHMENT 2

NARRATIVE

Consisting of 2 pages
Including cover page

Introduction

One (1) S&GRP sample was received at the WSCF Laboratory on December 30, 2009. The sample was analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

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

It should be noted that the attached chain of custody was stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving, indicating the presence of ice in the transport container.

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

- **B** -- Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **D** -- Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** -- Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.

Analytical Methodology for Requested Analyses

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

Inorganic Comments

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

All 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 6 pages
Including cover page

WSCF ANALYTICAL RESULTS REPORT

For

CH2M Hill Plateau Remediation

PO Box 1600
Richland, WA 99352

Attention: Michael Neely

Contract # MOA-FH-CHPRC-2008
Group # WSCF91845
Report Date January 11, 2010

Analytical: Electronically signed by Scot Fitzgerald

Client Services: Electronically signed by Richard Barker

All radiochemistry 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) 373-7020 or (509) 531-8004. Information designation of this report is the responsibility of the customer.

Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF91845

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
82394	82394	1	BLANK	21650	BLANK		Hexavalent chromium Discrete Analyzer
82394	82394	3	LCS	21652	LCS		Hexavalent chromium Discrete Analyzer
82394	82394	4	DUP	21653	B234W0(91842001DUP)	91842001	Hexavalent chromium Discrete Analyzer
82394	82394	5	MS	21654	B234W0(91842001MS)	91842001	Hexavalent chromium Discrete Analyzer
82394	82394	8	SAMPLE	91845001	B23K81		Hexavalent chromium Discrete Analyzer

Method Reference

Attention Michael Neely
Department Inorganic

Group # WSCF91845

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

Attention Michael Neely
 Department Inorganic

Group # WSCF91845

Sample # 91845001
 SAF# F09-061
 Sample ID B23K81

Matrix WATER
 Sampled 12/30/09
 Received 12/30/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI)										12/30/09
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.0020		mg/L	1	0.0020	0.0050	12/30/09

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

B - Analyte < the RDL 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 sample recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
 X, Y or Z - See comment detail and/or narrative.

Quality Control Report

Attention Michael Neely
 Department Inorganic

Group # WSCF91845

QC Batch 82394 Test Hexavalent chromium Discrete Analyzer
 Associated Samples 91845001

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			QC Sample #21650							
Hexavalent chromium LCS	18540-29-9	<0.0020		mg/L					U	12/30/09
			QC Sample #21652							
Hexavalent chromium DUP	18540-29-9	0.0534		mg/L	106.8	90 - 110				12/30/09
			QC Sample #21653							
			Original 91842001							
Hexavalent chromium MS	18540-29-9	<0.0020		mg/L			0.00	20	U	12/30/09
			QC Sample #21654							
			Original 91842001							
Hexavalent chromium	18540-29-9	0.0425		mg/L	106.2	85 - 115				12/30/09

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 3 pages
Including cover page

Sample Receipt

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 1000 S3-30
Richland, WA 99352

ATTN: Michael Neely

Customer Code: CHPRC
PO #: 401586
Work Order #: 91845
Profile #: F09-061-013
Proj. Mgr.:
Phone:

The following samples were received from you on 12/30/2009 2:35:00 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				
91845001	B23K81	WATER	12/30/2009 07:30	12/30/2009 14:35
		CR6DA-W		

Test Acronym Description

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

