

WSCF Laboratory

RECEIVED MARCH 16, 2009

PO Box 1000 S3-30
Richland, WA 99352
(509) 373-7005
(509) 372-0456

Memorandum

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

Date: March 13, 2009

From: WSCF Laboratory
WSCF Analytical Chemistry

CC:

Subject: FINAL RESULT FOR SAMPLE DELIVERY GROUP WSCF90126

✓
F08-146

Reference: (1) MOA-FH-CHPRC-2008
(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 WSCF90126

- * 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 # WSCF90126
Data Deliverable Date 03/13/09

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
F08-146	B1YP27	90126001	WATER	02/26/09	02/26/09

ATTACHMENT 2

NARRATIVE

Consisting of 2 pages
Including cover page

Introduction

One S&GRP sample was received at the WSCF Laboratory on February 26, 2009. Sample was analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Memorandum of Agreement (MOA-FH-CHPRC-2008, Rev.0)*, referenced in the cover letter.

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.

Analytical Methodology for Requested Analyses

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

Inorganic Comments

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

- Sample results with a concentration greater than the MDL but less the RDL were B flagged.

All QC controls are within the established limits.

I certify that this data package is in compliance with the MOA, 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 Laboratory Analytical Manager and Client Services.

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 7 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 # WSCF90126
Report Date March 13, 2009

Analytical: Electronically signed by Scot Fitzgerald

Client Services: Electronically signed by Pauline Mix

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 # WSCF90126
Project Number F08-146

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
19501		1	BLANK	4739	BLANK		Hexavalent chromium Discrete Analyzer
19501		2	LCS	4740	LCS		Hexavalent chromium Discrete Analyzer
19501		13	DUP	4744	B1XP35(90133001DUP)	90133001	Hexavalent chromium Discrete Analyzer
19501		14	MS	4745	B1XP35(90133001MS)	90133001	Hexavalent chromium Discrete Analyzer
19501		19	SAMPLE	90126001	B1YP27		Hexavalent chromium Discrete Analyzer
19501		20	DUP	4746	B1YP27(90126001DUP)	90126001	Hexavalent chromium Discrete Analyzer
19501		21	MS	4747	B1YP27(90126001MS)	90126001	Hexavalent chromium Discrete Analyzer

Method Reference

Attention Michael Neely
Department Inorganic

Group # WSCF90126
Project Number F08-146

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.rti.gov/rapidweb/AS-DOL/index.cfm>

WSCF Analytical Results Report

Attention Michael Neely
 Department Inorganic

Group # WSCF90126
 Project Number F08-146

Sample # 90126001
 SAF# F08-146
 Sample ID B1YP27

Matrix WATER
 Sampled 02/26/09
 Received 02/26/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	B	0.00220		mg/L	1	0.0020	0.0050	02/26/09

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 # WSCF90126
 Project Number F08-146

QC Batch 19501
 Associated Samples 90126001

Test Hexavalent chromium Discrete Analyzer

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK										
			QC Sample #4739							
Hexavalent chromium LCS	18540-29-9	<0.0020		mg/L					U	02/26/09
			QC Sample #4740							
Hexavalent chromium DUP	18540-29-9	0.0506		mg/L	100.8	90 - 110				02/26/09
			QC Sample #4744							
			Original 90133001							
Hexavalent chromium MS	18540-29-9	0.0139		mg/L			0.00	20		02/26/09
			QC Sample #4745							
			Original 90133001							
Hexavalent chromium DUP	18540-29-9	0.0715		mg/L	107.8	85 - 115				02/26/09
			QC Sample #4746							
			Original 90126001							
Hexavalent chromium MS	18540-29-9	.0022	0.00220	mg/L			0.00	20	B	02/26/09
			QC Sample #4747							
			Original 90126001							
Hexavalent chromium	18540-29-9	.0022	0.0571	mg/L	102.8	85 - 115				02/26/09

Analytical Comment Report

Attention Michael Neely

Group # WSCF90126
Project Number F08-146

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 #: 131280
Work Order #: 90126
Profile #: F08-146-152
Proj. Mgr.:
Phone:

The following samples were received from you on 2/26/2009 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		
90126001	B1YP27	WATER	2/26/2009 12:35	2/26/2009 13:00
		CR6DA-W		

Test Acronym Description

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

CH2MHILL Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F08-146-152	PAGE 1 OF 1
COLLECTOR <i>Rosanne McIndoe</i>	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR WIDRIG, DL	PRICE CODE 1A	DATA TURNAROUND 24 Hours / 15 Days
SAMPLING LOCATION C7061; 1-004	PROJECT DESIGNATION K-West Characterization - Groundwater	SAF NO. F08-146	AIR QUALITY <input type="checkbox"/>	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
ICE CHEST NO.	FIELD LOGBOOK NO. <i>HVE-W-576-3 p949</i>	ACTUAL SAMPLE DEPTH <i>101.7'</i>	COA 300088ES10	BILL OF LADING/AIR BILL NO.	
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO.				

MATRIX ^a	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	COOL-IC
A-Air DL-Drum Liquids DS-Drum Solids L-Liquid O-Oil S-Soil SE-Sediment T-Tissue V-Vegetation W-Water WI-Wipe X-Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	TYPE OF CONTAINER	9G
	<i>90126</i>	NO. OF CONTAINER(S)	1
		VOLUME	500ml
SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	Checkman Per 71%	
	<i>LOT #</i>	<i>02118</i>	

SAMPLE NO.	MATRIX ^a	SAMPLE DATE	SAMPLE TIME
B1YP27	001 WATER	2-26-09	1235 ✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>L.J. Rosano</i>	DATE/TIME <i>2-26-09 / 1320</i>	RECEIVED BY/STORED IN <i>TA #1021021</i>	DATE/TIME <i>2-26-09 / 1320</i>	** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GIC applies to this SAF.	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** All Cr VI analyses will be on a 24 hour turnaround time. This requires a separate chain of custody for Cr VI only.	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

