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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: December 5, 2008

From: WSCF Laboratory
WSCF Analytical Chemistry

CC:

Subject: FINAL RESULT FOR SAMPLE DELIVERY GROUP WSCF80044

F08-039

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 WSCF80044:

- * 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 # WSCF80044
Data Deliverable Date 10/24/08

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
F08-039	B1XMR2	80044001	WATER	10/23/08	10/23/08

ATTACHMENT 2

NARRATIVE

Consisting of 2 pages
Including cover page

Introduction

One S&GRP sample was received at the WSCF Laboratory on October 23, 2008. 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 sample 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.

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 hard copy data package has been authorized by the Laboratory Analytical Manager and Client Services as verified by the following signatures.

Scot L. Fitzgerald
WSCF Analytical Laboratory Manager

Andrew J. Kopriva
WSCF 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 # WSCF80044
Report Date December 5, 2008

Analytical: Electronically signed by Scot Fitzgerald

Client Services: Electronically signed by Andrew Kopriva

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 # WSCF80044
Project Number F08-039

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
	5679	1	BLANK	1605	BLANK		Hexavalent chromium Discrete Analyzer
	5679	2	LCS	1606	LCS		Hexavalent chromium Discrete Analyzer
	5679	4	SAMPLE	80044001	B1XMR2		Hexavalent chromium Discrete Analyzer
	5679	5	DUP	1608	B1X1J4(80043001DUP)	80043001	Hexavalent chromium Discrete Analyzer
	5679	6	MS	1609	B1X1J4(80043001MS)	80043001	Hexavalent chromium Discrete Analyzer

Method Reference

Attention Michael Neely
Department Inorganic

Group # WSCF80044
Project Number F08-039

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 # WSCF80044
Project Number F08-039

Sample # 80044001
SAF# F08-039
Sample ID B1XMR2

Matrix WATER
Sampled 10/23/08
Received 10/23/08

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<2.E-3		mg/L	1	2.E-3	2.E-3	10/23/08

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.

M - Duplicate precision criteria not met.
 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 # WSCF80044
 Project Number F08-039

QC Batch 5679 Test Hexavalent chromium Discrete Analyzer
 Associated Samples 80044001

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK		QC Sample #1605								
Hexavalent chromium LCS	18540-29-9	<2.E-3		mg/L					U	10/23/08
		QC Sample #1606								
Hexavalent chromium DUP	18540-29-9	0.0502		mg/L	100	90 - 110				10/23/08
		QC Sample #1608								
		Original 80043001								
Hexavalent chromium MS	18540-29-9	0.0560		mg/L			0.18	20		10/23/08
		QC Sample #1609								
		Original 80043001								
Hexavalent chromium	18540-29-9	0.0916		mg/L	88.4	85 - 115				10/23/08

Analytical Comment Report

Attention Michael Neely

Group # WSCF80044

Project Number F08-039

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 #: 300113/ES10
Work Order #: 80044
Profile #: F08-039-140
Proj. Mgr.:
Phone:

The following samples were received from you on 10/23/2008 12:35:00 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				
80044001	B1XMR2	WATER	10/23/2008 10:46	10/23/2008 12
		CR6DA-W		

Test Acronym Description

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

CH2MHILL Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F08-039-140	PAGE 1 OF 1
COLLECTOR NCO Samplers <i>Pope, Pfister</i>		COMPANY CONTACT WIDRIG, DL	TELEPHONE NO. 376-2858	PROJECT COORDINATOR WIDRIG, DL		PRICE CODE 1A	DATA TURNAROUND 24 Hours / 15 Days
SAMPLING LOCATION DR-5 Unfiltered		PROJECT DESIGNATION DR-5 GW Treatment Facility Regen Waste Characterization - Special Sample		SAF NO. F08-039	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO. <i>GRP-05-010</i>		FIELD LOGBOOK NO. <i>HNF-N-4283</i>	ACTUAL SAMPLE DEPTH <i>N/A</i>	COA 300113ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization <i>80044</i>		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A			
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water NI=NIPE X=Other	POSSIBLE SAMPLE HAZARDS/REMARKS 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)		PRESERVATION	Cool+IC			
			TYPE OF CONTAINER	GP			
			NO. OF CONTAINER(S)	1			
			VOLUME	125ml			
	SPECIAL HANDLING AND/OR STORAGE 11SEP708		SAMPLE ANALYSIS	Chromium Hex-7194			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B1XMR2 <i>001</i>	WATER	<i>10-23-08</i>	<i>1040</i>	<input checked="" type="checkbox"/>			
CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** Special Instructions: The laboratory is to filter the samples and preserve them with acid before analysis. ** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GIC applies to this SAF. ** The Laboratory is to pay special attention to Special Instructions for proper processing of individual samples.			
<i>R. P. Pfister</i>	<i>10/23/08 1235</i>	<i>TAFRAZIM</i>	<i>10/23/08 1235</i>				
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				

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