

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: July 7, 2010

From: WSCF Laboratory
WSCF Analytical Chemistry

CC:

Subject: FINAL RESULT FOR SAMPLE DELIVERY GROUP WSCF101536

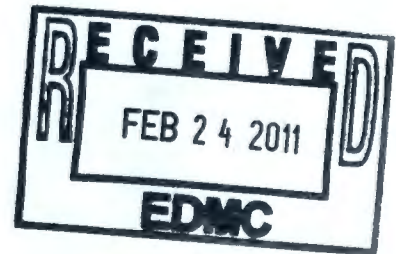
Reference: (1) SOW, Mod 2, #36587, Release 3
(2) HNF-SD-CD-QAPP-017, Rev 9, Waste Sampling & Characterization Facility Quality Assurance Plan

This letter contains the following information for sample delivery group WSCF101536

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

Electronically signed by Markus Stauffer
For Lab Manager

Attachments 4



ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF Number Cross Reference

Group # WSCF101536

Data Deliverable Date 07/15/10

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
F10-209	B25YH9	101536001	WATER	06/30/10	06/30/10

ATTACHMENT 2

NARRATIVE

Consisting of 3 pages
Including cover page

Introduction

One (1) S&GRP sample was received at the WSCF Laboratory on June 30, 2010. 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 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, D, U 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.
- **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

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):

- Batch QC 141575 analyzed on sample# B24K02 (101529001)

All QC controls are within the established limits.

Attachment 2
Narrative
WSCF101536

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 # WSCF101536
Report Date July 7, 2010

Analytical: Electronically signed by Markus Stauffer

Client Services: Electronically signed by Richard Barker

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

Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF101536

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
141575	141575	1	BLANK	32530	BLANK		Hexavalent chromium Discrete Analyzer
141575	141575	3	LCS	32532	LCS		Hexavalent chromium Discrete Analyzer
141575	141575	4	DUP	32533	B24K02(101529001DUP)	101529001	Hexavalent chromium Discrete Analyzer
141575	141575	5	MS	32534	B24K02(101529001MS)	101529001	Hexavalent chromium Discrete Analyzer
141575	141575	13	SAMPLE	101536001	B25YH9		Hexavalent chromium Discrete Analyzer

Method Reference

Attention Michael Neely
Department Inorganic

Group # WSCF101536

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.r1.gov/rapidweb/AS-DOL/index.cfm>

WSCF Analytical Results Report

Attention Michael Neely
 Department Inorganic

Group # WSCF101536

Sample # 101536001
 SAF# F10-209
 Sample ID B25YH9

Matrix WATER
 Sampled 06/30/10
 Received 06/30/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI)										06/30/10
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.0020		mg/L	1	0.0020	0.0050	06/30/10

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 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 # WSCF101536

QC Batch 141575
 Associated Samples 101536001

Test Hexavalent chromium Discrete Analyzer

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK										
			QC Sample #32530							
Hexavalent chromium	18540-29-9		<0.0020	mg/L					U	06/30/10
LCS			QC Sample #32532							
Hexavalent chromium	18540-29-9		0.0492	mg/L	98.4	90 - 110				06/30/10
DUP			QC Sample #32533							
			Original 101529001							
Hexavalent chromium	18540-29-9		<0.0020	mg/L			-5.30	20	U	06/30/10
MS			QC Sample #32534							
			Original 101529001							
Hexavalent chromium	18540-29-9		0.0397	mg/L	99.2	85 - 115				06/30/10

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 #: 401697/ES20
Work Order #: 101536
Profile #: F10-209-065
Proj. Mgr.:
Phone:

The following samples were received from you on 6/30/2010 12:45:00 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		
101536001	B25YH9	WATER	6/30/2010 09:15	6/30/2010 12:45
		CR6DA-W		

Test Acronym Description

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

CH2M-Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F10-209-885	PAGE 1 OF 1
COLLECTOR <i>(Crow, Turner)</i>	COMPANY CONTACT DYERMAN, DL	TELEPHONE NO. 372-2230	PROJECT COORDINATOR DYERMAN, DL		PRICE CODE 1A	DATA TJRNAROUND
SAMPLING LOCATION C7521; L-G20 PITS	PROJECT DESIGNATION 100 Area Remedial Investigation/Feasibility Analysis - 100-AR-4 Q2 Sample	FIELD LOGBOOK NO. <i>HNF-N-585-10</i>	ACTUAL SAMPLE DEPTH <i>N/A</i>		AIR QUALITY	24 Hours / 25 Days
ICE CHEST NO. <i>N/A</i>	OFFSITE PROPERTY NO. <i>N/A</i>	COA 300242510	BILL OF LADING/AIR BILL NO. <i>N/A</i>		METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO Waste Sampling & Characterization	MATRIX* Aqueous Soils Sludges Sediment Turbidate Wastewater 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 SACGS (1990/1993))	PRESERVATION <i>On Ice</i>	HOLDING TIME <i>24 Hours</i>	SPECIAL HANDLING AND/OR STORAGE	
			TYPE OF CONTAINER <i>60</i>	NO. OF CONTAINER(S) <i>1</i>		
			VOLUME <i>100ml</i>	SAMPLE ANALYSIS <i>Uranium Sp-238</i>		
SAMPLE NO. <i>B28YH0</i>	MATRIX* <i>WATER</i>	SAMPLE DATE <i>6-30-10</i>	SAMPLE TIME <i>0915 A</i>			

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>A Turner</i>	DATE/TIME <i>6-30-10 1245</i>	RECEIVED BY/STORED IN <i>Vic Torres</i>	DATE/TIME <i>6/30/10 1245</i>	** The CACN for all analytical work at WSCF laboratory is 401697ES20. The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.	
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		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

ORIGINAL

Wednesday, June 30, 2010 7:04:57 PM
Page 2 of 2