

WSCF Laboratory

RECEIVED DECEMBER 07, 2010

0098573

PO Box 650 S3-30
Richland, WA 99352



December 6, 2010

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

Dear Michael Neely,

FINAL RESULT FOR SAMPLE DELIVERY GROUP WSCF103067

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

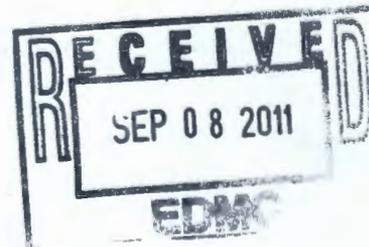
This letter contains the following information for sample delivery group WSCF103067

- * 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
WSCF Analytical Lab
(509) 373-7495



Attachments 4

CC: w/Attachments

File/LB

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF Number Cross Reference

Group # WSCF103067
Data Deliverable Date 12/07/10

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
F11-014	B29B69	103067001	WATER	11/18/10	11/18/10

ATTACHMENT 2

NARRATIVE

Consisting of 3 pages
Including cover page

Introduction

One (1) S&GRP sample was received at the WSCF Laboratory on November 18, 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.

Radiochemistry Comments

Rad Chem – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike (Matrix Spikes apply only to Tritium), Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Tritium:
- Batch QC 170256 analyzed on sample# B29B69 (103067001)

All applicable QC controls are within the established limits.

**Attachment 2
Narrative
WSCF103067**

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 # WSCF103067
Report Date December 6, 2010

Analytical: Electronically signed by Joseph Hale

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 Radiochemistry

Group # WSCF103067

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
170256	170442	1	BLANK	42696	BLANK		Tritium by LSC
170256	170442	2	LCS	42697	LCS		Tritium by LSC
170256	170442	3	SAMPLE	103067001	B29B69		Tritium by LSC
170256	170442	4	DUP	42698	B29B69(103067001DUP)	103067001	Tritium by LSC
170256	170442	5	MS	42699	B29B69(103067001MS)	103067001	Tritium by LSC

Method Reference

Attention Michael Neely
Department Radiochemistry

Group # WSCF103067

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-508-421	Operation of the Tri-Carb Model 2500TR Liquid Scintillation Analyzer		
HEIS	ALPHA_LSC		A/B Liquid Scintillation
HEIS	BETA_LSC		A/B Liquid Scintillation
HEIS	TC99_3MDSK_LSC		TC99 by Liquid Scintillation
HEIS	TRITIUM_EIE_LSC		Tritium, by Eichrome ion exchange, LSC

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 Radiochemistry

Group # WSCF103067

Sample # 103067001
 SAF# F11-014
 Sample ID B29B69

Matrix WATER
 Sampled 11/18/10
 Received 11/18/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
H3 EICHROM										11/23/10
TRI-CARB LSC										
Tritium	10028-17-8	LA-508-421	U	20	180	pCi/L	1	210		12/01/10

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

B - Analyte was detected in both the BLANK and SAMPLE
 U - Analyzed for but not detected above limiting criteria.
 N - Spike Recovery is Outside Control Limits.
 X, Y or Z - See comment detail and/or narrative.

Quality Control Report

Attention Michael Neely
 Department Radiochemistry

Group # WSCF103067

QC Batch 170256 Test Tritium by LSC
 Associated Samples 103067001

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK										
				QC Sample #42696						
Tritium	10028-17-8		-72	pCi/L					U	12/01/10
LCS				QC Sample #42697						
Tritium	10028-17-8		2600	pCi/L	86.9	80 - 120				12/01/10
DUP				QC Sample #42698						
				Original 103067001						
Tritium	10028-17-8	20	46	pCi/L			78.80	-20 - 20	* U	12/01/10
MS				QC Sample #42699						
				Original 103067001						
Tritium	10028-17-8	20	19000	pCi/L	94	75 - 125				12/01/10

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 650 S3-30
Richland, WA 99352

ATTN: Michael Neely

Customer Code: CHPRC
PO #: 401352ES20
Work Order #: 103067
Profile #: F11-014-003
Proj. Mgr.:
Phone:

The following samples were received from you on 11/18/2010 2:15:00 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				
103067001	B29B69	WATER	11/18/2010 07:30	11/18/2010 14:15
		H3-COL-W		

Test Acronym Description

Test Acronym	Description
H3-COL-W	Tritium by EICHROM Column (W)

CH2MHILL Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			FLS-014-003	PAGE 1 OF 1	
COLLECTOR KB Hulse CHPRC		COMPANY CONTACT WIDRIG, DL	TELEPHONE NO. 375-2858	PROJECT COORDINATOR WIDRIG, DL		PRICE CODE 7C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 600 286 F8... TBL RA N/A		PROJECT DESIGNATION ARRA 600-286-PL - QC Sampling		SAF NO. F11-014		AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. N/A		FIELD LOGBOOK NO. HNF-N-507-16.4	ACTUAL SAMPLE DEPTH N/A	COA 202226510		METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO Waste Sampling & Characterization		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A			
MATRIX* A-Air B-Liquor C-Solids D-Drum E-Solids F-Liquid G-Oil H-Solid I-Sediment J-Tissue K-Vegetation L-Water M-Wipe N-Other		POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR 171.15 (A) Dangerous Goods Regulations but are not radioactive per DOE Order 5400.5 (1990/1993)		PRESERVATION None			
		HOLDING TIME 6 Months					
		TYPE OF CONTAINER 206 66 (119) 0					
		NO. OF CONTAINER(S) 1					
		VOLUME 20ml					
		SAMPLE ANALYSIS T/Bar - NO (Thru)					
SPECIAL HANDLING AND/OR STORAGE 153067							
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B29669	001 WATER	NOV 18 2010	0730	X			

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM KB Hulse CHPRC	DATE/TIME NOV 18 2010	RECEIVED BY/STORED IN <i>[Signature]</i>	DATE/TIME NOV 18 2010	** The CACN for all analytical work at WSCF is 401352ES20. ** The 200 Area SBGRP Characterization and Monitoring Sampling and Analysis GRI applies to this SAF.	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	* The laboratory shall report only the requested constituents of concern in all final data reports, and EDDs. QC results for non-requested constituents need not be reported, but samples chosen for matrix spike, and all spike compounds shall be identified in the final data report case narrative. No TICs shall be reported.	
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		

4-6000 6/08 (REV 2)

Friday, November 19, 2010 7:18:43 PM
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