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FINAL REPORT FOR THE SAMPLES RECEIVED IN MARCH, 2010, FOR SAF I10-016

Document No.: 20100239
SDG: 222S20100239

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C. S. Menjivar, Project Manager

222-S LABORATORY

FINAL REPORT FOR THE SAMPLES RECEIVED IN MARCH, 2010, FOR SAF I10-016

1.0 INTRODUCTION

This final report presents the results for two ground water samples taken on March 8, 2010. The sample ID numbers are: B23P28 and B23P29. The samples were analyzed in accordance with ATL-MP-1011; *ATL Quality Assurance Project Plan for 222-S Laboratory* (QAPP). The following attachments are included in this report.

Attachment 1	Data Summary Report
Attachment 2	Holding Time Report
Attachment 3	Receipt Paperwork
Attachment 4	Issue Resolution Form

2.0 SAMPLE RECEIPT AND HANDLING

The samples were received on March 9, 2010, with adequate paperwork. The measured temperature of the outside of the sample container was 8 °C. This non-compliance with SW846 recommended sample preservation requirements was reported to the client on the laboratory's sample receipt check list (see Attachment 3).

3.0 ANALYTICAL RESULTS SUMMARY

The Data Summary Report (Attachment 1) presents the final analytical results. The "Det Limit" column in Attachment 1 contains the method detection limit (MDL).

In Attachment 1, the column labeled "A#" indicates the aliquot class or the method used for sample preparation before analysis. For analysis without a preparation step, this column is left blank.

The "Qual Flags" column in Attachment 1 contains data qualifier flags that are defined as follows:

- "U" indicates that the reported result is less than the calculated method detection limit.

Manual calculations using rounded results from the Data Summary Report or result calculation forms may differ slightly from the actual results derived from the raw data.

3.1 ANALYSES

3.1.1 Hexavalent Chromium by Spectrophotometric Determination

The hexavalent chromium analysis was performed on direct aliquots of the samples. All requirements in the QAPP were met, except the holding time requirement. This was due to the holding time being nearly expired at the time of receipt of the samples at the 222S Laboratory (see attachment 4).

4.0 PROCEDURES

Table 1 lists the analytical procedure used for analysis of this sample.

Table 1. Analytical Procedures.

Analysis	Preparation Method	Analysis Procedure
Hexavalent Chromium Analysis by Spectrophotometric Determination	NA	SW846-7196A

5.0 REFERENCES

ATL-MP-1011, 2009, *ATL Quality Assurance Project Plan for 222-S Laboratory*, Rev. 9, Applied Technologies and Laboratories International, Inc., Richland, Washington.

Sampling Authorization Form I10-016; CH2M Hill, Plateau Remediation Company, Richland, Washington

Attachment 1

DATA SUMMARY REPORT

WSCF - Anions & HexCr
Data Summary of All Results

Sample Group: 20100239

Customer Group or SDG Number: 222S20100239

Customer Sample ID: B23P28

Customer Sample ID: B23P28

Sample#	R	A#	CAS #	Analyte	Unit	STD %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Cnt Err %	Qual Flags
S10M000115			18540-29-9	Hexavalent Chromium	ug/mL	98.5	<9.00E-03	<9.68E-03	n/a	n/a	n/a	n/a	9.68E-03	n/a	U

NA = Not Analyzed, ND = Not Detected

U - < Det Limit

WSCF - Anions & HexCr
Data Summary of All Results

Sample Group: 20100239

Customer Group or SDG Number: 222S20100239

Customer Sample ID: B23P29

Customer Sample ID: B23P29

Sample#	R	A#	CAS #	Analyte	Unit	STD %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Cnt Err %	Qual Flags
S10M000116			18540-29-9	Hexavalent Chromium	ug/ml	98.5	<9.00E-03	<9.68E-03	n/a	n/a	n/a	n/a	9.68E-03	n/a	U

NA = Not Analyzed, ND = Not Detected

U - < Det Limit

Attachment 2

HOLDING TIME REPORT

Hold Time Report SDG No 222S20100239

Sample Group	Sample	Matrix	Method	Sample Date	Received Date	Analysis Date	Missed Holding Time
20100239	S10M000115	LIQUID	SW846-7196A	03/08/10 09:55	03/09/10 09:30	03/09/10 16:00	Y
20100239	S10M000116	LIQUID	SW846-7196A	03/08/10 09:55	03/09/10 09:30	03/09/10 16:00	Y

Attachment 3

RECEIPT PAPERWORK

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev D.D.1

Date Samples Received: 3.9.10

Number of Samples: 31

Sample Custodian: [signature]

Group #: 20100 238, 239, 240, 241, 242, 243, 244, 245, 246, 247

Sample Custodian to Complete:

Action	OK? (Y/N)	N/A	Comments
RSA/COC provided?	✓		
RSR provided?		✓	
Verify GKI is complete			
Check that outer custody seal is intact, if present			
Record cooler temperature in centigrade, as appropriate	8°C	✓	☐ Check if no cooler and/or no ice
Samples are intact and in good condition	✓		If No, provide comments on back
Verify that COC or RSA is accurate and complete, containing the following information:			
• Client name and client sample number	✓		
• Date and time of sampling			
• Sampling location or origin			
• Container type, size, and number			
• Analysis request is clear			
• Signature of persons relinquishing and receiving samples			
• Date and/or time of sample custody exchange			
Verify that sample numbers on containers match the COC and/or RSA			
Samples stored properly (e.g., refrigeration)	✓		2B Ref #4

Notify the PM immediately if any problems are noted. (A "No" answer requires Project Manager resolution.)

PM to Complete:

Samples acceptable for release? yes PM Initials RS Date 3.9.10

If No, comment on communication and resolution: For J.R. Ritenour

Other Comments:

A-6005-342 (REV 0)

CHPRC

20100239

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I10-016-12

Page 1 of 1

Collector: AR McIntyre	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: 110-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071ES20
Project Title: 100KR4, FEBRUARY 2010 222 S	Logbook No: HNF-N-506 31 / 20	Ice Chest No.: N/A
Shipped To (Lab): [redacted]	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 24 Hours **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

S10M 000 115
S10M 000 116
GRP# 20100239

SPECIAL INSTRUCTIONS Hold Time — Total Activity Exemption: Yes ☑ No ☐

100 Area Generator Knowledge Information Form applies. All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W10 SAFs into one. The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B23P28	Y	W	3-8-10	0955	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C
B23P29	N	W	↓	↓	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C

SS 3-0 0-10

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
AR McIntyre			MAR 08 2010 1530		Victor Simms		MAR 08 2010 1530
			3/9/10 0815	L.D. Wall CHPRC		L.D. Wall	3/9/10 0815
L.D. Wall CHPRC		L.D. Wall	MAR 09 2010 0930			R H Steele	MAR 09 2010 0930

Matrix *

S = Soil	DS = Drum Solid		
SD = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) — Disposed By — Date/Time

GENERATOR KNOWLEDGE INFORMATION

1. Chain of Custody Number NA CACN/COA NA Customer Identification Number NA

2. List generator knowledge or description of process that produced sample. Or list description of sample source:
100 Area S&GRP Characterization and Monitoring Sampling and Analysis

MSDS Available? (●) No ( ) Yes Hanford MSDS No: _____

3. List all waste codes and constituents associated with the waste or media that was sampled, regardless of CERCLA status.

a) Does the sample contain any of the following listed waste codes?
By checking "unknown" the customer understands that no knowledge is available following a careful search.

	List Federal Waste Code(s):	List Constituent(s):			
P Codes:			( ) Yes	(●) No	( ) Unknown
U Codes:			( ) Yes	(●) No	( ) Unknown
K Codes:			( ) Yes	(●) No	( ) Unknown
F Codes:			( ) Yes	(●) No	( ) Unknown

b) List applicable characteristic waste codes, flash point, pH, constituents, and concentrations as appropriate.

D001:	☐ FP <100°F	☐ FP ≥100 <140°F	☐ DOT Oxidizer	( ) Yes	(●) No	( ) Unknown
D002:	☐ pH ≤2	☐ pH ≥12.5	☐ Solid Corrosive (WSC2)	( ) Yes	(●) No	( ) Unknown
D003:	☐ Cyanide	☐ Sulfide	☐ Water Reactive ☐ Other _____ (i.e., peroxide former, explosive, air reactive)	( ) Yes	(●) No	( ) Unknown
D004-D043 (Identify applicable waste codes and concentrations):				( ) Yes	(●) No	( ) Unknown

N/A

c) If characteristic, list any known underlying hazardous constituents (UHCs) reasonably expected to be present, and their concentrations that may be present above the LDR treatment standard (40 CFR 268.48):
N/A

d) List any known Land Disposal Restrictions (LDR) subcategories, if applicable (40 CFR 268.40):
N/A

e) List any applicable Washington State dangerous waste codes: (not required if federally regulated)

WT01:	( ) Yes	(●) No	( ) Unknown
WT02:	( ) Yes	(●) No	( ) Unknown
W001:	( ) Yes	(●) No	( ) Unknown

(*State mixture rule for ignitability)

WP01:	( ) Yes	(●) No	( ) Unknown
WP02:	( ) Yes	(●) No	( ) Unknown
WP03:	( ) Yes	(●) No	( ) Unknown
F003:*	( ) Yes	(●) No	( ) Unknown

List constituents and concentrations:
N/A

4. Is this material TSCA regulated for PCBs? ( ) Yes (●) No ( ) Unknown ( ) Analysis Requested

List concentration if applicable: _____

If yes, what is the source of the PCBs? (see TSCA PCB Hanford Site User Guide, DOE/RL-2001-50)

☐ PCB Liquid Waste ☐ PCB Bulk Product Waste ☐ PCB Transformer ≥500 ppm ☐ Unknown
☐ PCB Remediation Waste ☐ PCB R&D Waste ☐ PCB contaminated electrical equipment (capacitor/ballast) <500 ppm
☐ PCB Spill Material ☐ PCB Item ☐ Other PCB Waste (list) _____

5. Is this material TRU? ( ) Yes (●) No ( ) Unknown

6. ACCURACY OF INFORMATION
Based on my inquiry of those individuals immediately responsible for obtaining this information, that to the best of my knowledge, the information entered in this document is true, accurate, and complete.

Print & Sign SJ TRENT / [signature] Date 12/3/07

A-6002-990 (08/03)

222-S
WRPS, P. O. Box 850
Richland, WA
Phone: (509) 376-5029 / FAX: (509) 372-1878

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Sample Group: 20100239 - CACN/COA 401647/ES20

Specification Entity: WSCF - Anions & HexCr

The following samples were received from you on03/09/2010. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using222-S.

Sample Tests Scheduled	Customer Sample ID	Matrix	Sample Date
S10[illegible]000115 CHROMIUM VI	B23P28	LIQUID	03/08/2010
S1[illegible]00116 CHROMIUM VI	B23P29	LIQUID	03/08/2010

Test Acronym Description

Test Acronym	Description
CHROMIUM VI	Chromium (VI) by Spec.

Attachment 4

ISSUE RESOLUTION FORMS

20100239

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 10-064

Date : **3/15/10** SAF No.: **See table**

SDG: **See table**
LOGIN No.: **See attached table**
TEST: **Hexavalent Chromium**
Sample No.(s) **See table**

Submitted By: G. P. Ritenour
Phone No: 372-2742
Fax No.: 373-4884

Submitted To: Hedi Hampt
Phone No. 376-4319
Fax No. 373-1788

ISSUE	PROPOSED RESOLUTION
The table below displays the samples for which the holding time for HexCr were missed. This was due to most or all of the holding time being expired upon receipt at 222S Lab.	Analyze and note in narrative.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution.

Heidi Hampt 3/18/10
Signature and Date

SAF #	HEIS No.	SDG	Lab ID	Sample Date	Received Date	Analysis Date	Missed HT
S10-002	B23X20	20100238	S10M000113	03/08/10 13:00	03/09/10 09:30	03/09/10 14:20	Y
S10-002	B23X31	20100238	S10M000114	03/08/10 13:00	03/09/10 09:30	03/09/10 14:20	Y
I10-016	B23P28	20100239	S10M000115	03/08/10 09:55	03/09/10 09:30	03/09/10 14:20	Y
I10-016	B23P29	20100239	S10M000116	03/08/10 09:55	03/09/10 09:30	03/09/10 14:20	Y
X10-034	B24B05	20100240	S10M000117	03/08/10 09:28	03/09/10 09:30	03/09/10 14:20	Y
X10-034	B24B06	20100240	S10M000118	03/08/10 09:28	03/09/10 09:30	03/09/10 14:20	Y
X10-034	B24B12	20100240	S10M000119	03/08/10 13:56	03/09/10 09:30	03/09/10 14:20	Y
X10-034	B24B13	20100240	S10M000120	03/08/10 13:56	03/09/10 09:30	03/09/10 14:20	Y
X10-034	B24B10	20100240	S10M000121	03/08/10 13:56	03/09/10 09:30	03/09/10 14:20	Y
X10-034	B24B11	20100240	S10M000122	03/08/10 13:56	03/09/10 09:30	03/09/10 14:20	Y
X10-034	B24B48	20100240	S10M000123	03/08/10 12:23	03/09/10 09:30	03/09/10 14:20	Y
X10-034	B24B49	20100240	S10M000124	03/08/10 12:23	03/09/10 09:30	03/09/10 14:20	Y
X10-034	B249J0	20100240	S10M000125	03/08/10 10:37	03/09/10 09:30	03/09/10 14:20	Y
X10-034	B249J1	20100240	S10M000126	03/08/10 10:37	03/09/10 09:30	03/09/10 14:20	Y