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**FINAL REPORT FOR THE SAMPLES RECEIVED IN
MARCH, 2010 FOR SAF I10-023**

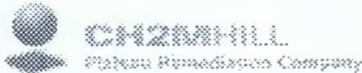
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SDG: 222S20100262**

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222-S LABORATORY**FINAL REPORT FOR THE SAMPLES RECEIVED IN MARCH, 2010
FOR SAF I10-023****1.0 INTRODUCTION**

This final report presents the results for two ground water samples taken on March 9, 2010. The samples were analyzed in accordance with Sampling Authorization Form I10-023; and 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

2.0 SAMPLE RECEIPT AND HANDLING

Samples were received on March 9, 2010 with adequate paperwork. The measured temperature of the outside of the sample container was 15 °C. This 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 result. The "Det Limit" column in Attachment 1 contains the method detection limit (MDL). In order to demonstrate batch precision and accuracy, Attachment 1 also contains the matrix spikes and duplicates associated with the analysis of the samples in this SDG, even if they were from a different SDG

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.
- "B" indicates that the reported result is greater than the method detection limit (MDL), but less than the quantitation 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 Anions by Ion Chromatography

The ion chromatography analysis for anions was performed by preparing several dilutions of the samples. All requirements in the SAF and QAPP were met.

4.0 PROCEDURES

Table 1 lists the analytical procedures used for analysis of these samples.

Table 1. Analytical Procedures.

Analysis	Preparation Method	Analysis Procedure
Anions by Ion Chromatography	NA	SW846-9056A

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 I10-023; CH2M Hill, Plateau Remediation Company, Richland, Washington.

Attachment 1

DATA SUMMARY REPORT

**WSCF - Anions & HexCr
 Data Summary of All Results**

Sample Group: 20100262

Customer Group or SDG Number: 222S20100262

Customer Sample ID: B246X5

Customer Sample ID: B246X5

Sample#	R	A#	CAS #	Analyte	Unit	STD %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Cnt Err %	Qual Flags
S10M000156			24959-67-9	Bromide	ug/mL	98.6	<0.0237	0.152	n/a	n/a	n/a	n/a	0.0237	n/a	B
S10M000156			16984-48-8	Fluoride	ug/mL	104	<1.61E-03	0.0522	n/a	n/a	n/a	n/a	0.0177	n/a	B
S10M000156			16887-00-6	Chloride	ug/mL	103	<9.98E-03	22.3	n/a	n/a	n/a	n/a	1.01	n/a	
S10M000156			14797-65-0	Nitrite	ug/mL	95.6	<0.0192	<0.211	n/a	n/a	n/a	n/a	0.211	n/a	U
S10M000156			14808-79-8	Sulfate	ug/mL	104	<0.0187	85.5	n/a	n/a	n/a	n/a	0.206	n/a	
S10M000156			14797-55-8	Nitrate	ug/mL	101	<0.0208	66.0	n/a	n/a	n/a	n/a	0.229	n/a	
S10M000156			14265-44-2	Phosphate	ug/mL	102	<0.0167	<0.184	n/a	n/a	n/a	n/a	0.184	n/a	U

NA = Not Analyzed, ND = Not Detected

U - < Det Limit

B - Estimated

WSCF - Anions & HexCr
Data Summary of All Results

Sample Group: 20100262

Customer Group or SDG Number: 222S20100262

Customer Sample ID: B246X6

Customer Sample ID: B246X6

Sample#	R	A#	CAS #	Analyte	Unit	STD %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Cnt Err %	Qual Flags
S10M000157			24959-67-9	Bromide	ug/mL	98.6	<0.0237	0.173	n/a	n/a	n/a	n/a	0.0237	n/a	B
S10M000157			16984-48-8	Fluoride	ug/mL	104	<1.61E-03	0.0272	n/a	n/a	n/a	n/a	0.0177	n/a	B
S10M000157			16887-00-6	Chloride	ug/mL	103	<9.98E-03	22.7	n/a	n/a	n/a	n/a	0.110	n/a	
S10M000157			14797-65-0	Nitrite	ug/mL	95.6	<0.0192	<0.211	n/a	n/a	n/a	n/a	0.211	n/a	U
S10M000157			14808-79-8	Sulfate	ug/mL	104	<0.0187	85.4	n/a	n/a	n/a	n/a	0.206	n/a	
S10M000157			14797-55-8	Nitrate	ug/mL	101	<0.0208	65.7	n/a	n/a	n/a	n/a	0.229	n/a	
S10M000157			14265-44-2	Phosphate	ug/mL	102	<0.0167	<0.184	n/a	n/a	n/a	n/a	0.184	n/a	U

NA = Not Analyzed, ND = Not Detected

U - < Det Limit

B - Estimated

WSCF - Anions & HexCr
 Data Summary of All Results

Sample Group: 20100243

Customer Group or SDG Number: 222S20100243

Customer Sample ID: B23X10

Customer Sample ID: B23X10

Sample#	R	A#	CAS #	Analyte	Unit	STD %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Cnt Err %	Qual Flags
S10M000129			16984-48-8	Fluoride	ug/mL	94.6	<6.16E-03	0.636	n/a	n/a	n/a	n/a	0.0678	n/a	B
S10M000129			16887-00-6	Chloride	ug/mL	99.6	<3.10E-03	36.5	n/a	n/a	n/a	n/a	0.0341	n/a	
S10M000129			14797-65-0	Nitrite	ug/mL	95.4	<0.0400	<0.0400	<0.0400	n/a	n/a	116	0.0400	n/a	U
S10M000129			24959-67-9	Bromide	ug/mL	99.2	<0.0237	0.210	0.211	0.211	0.394	95.6	0.0237	n/a	B
S10M000129			14797-55-8	Nitrate	ug/mL	91.9	<0.0162	37.2	n/a	n/a	n/a	n/a	0.178	n/a	
S10M000129			14265-44-2	Phosphate	ug/mL	95.1	<0.0381	<0.419	n/a	n/a	n/a	n/a	0.419	n/a	U
S10M000129			14808-79-8	Sulfate	ug/mL	91.7	<0.0219	108	n/a	n/a	n/a	n/a	2.21	n/a	

NA = Not Analyzed, ND = Not Detected

U - < Det Limit

B - Estimated

WSCF - Anions & HexCr
Data Summary of All Results

Sample Group: 20100242

Customer Group or SDG Number: 222S20100242

Customer Sample ID: B243V4

Customer Sample ID: B243V4

Sample#	R	A#	CAS #	Analyte	Unit	STD %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Cnt Err %	Qual Flags
S10M000153			24959-67-9	Bromide	ug/mL	98.6	<0.0237	<0.0237	n/a	n/a	n/a	n/a	0.0237	n/a	U
S10M000153			16984-48-8	Fluoride	ug/mL	104	<1.61E-03	<0.0177	<0.0177	n/a	n/a	105	0.0177	n/a	U
S10M000153			16887-00-6	Chloride	ug/mL	103	<9.98E-03	<0.110	<0.110	n/a	n/a	103	0.110	n/a	U
S10M000153			14797-65-0	Nitrite	ug/mL	95.6	<0.0192	<0.211	<0.211	n/a	n/a	98.0	0.211	n/a	U
S10M000153			14808-79-8	Sulfate	ug/mL	104	<0.0187	<0.206	<0.206	n/a	n/a	105	0.206	n/a	U
S10M000153			14797-55-8	Nitrate	ug/mL	101	<0.0208	<0.229	<0.229	n/a	n/a	102	0.229	n/a	U
S10M000153			14265-44-2	Phosphate	ug/mL	102	<0.0167	<0.184	<0.184	n/a	n/a	103	0.184	n/a	U

NA = Not Analyzed, ND = Not Detected

U - < Det Limit

Attachment 2

HOLDING TIME REPORT

Hold Time Report

SDG222S20100262

Customer Sample ID	Sample Group	Laboratory Sample ID	Method	Sample Date	Received Date	Analysis Date	Analysis Time Lapse	Missed Holding Time
B246X5	20100262	S10M000156	SW846-9056A	03/09/10 12:03	03/09/10 15:15	04/06/10 22:17	28 days	N
B246X5	20100262	S10M000156	SW846-9056A	03/09/10 12:03	03/09/10 15:15	03/10/10 23:47	36 hours	N
B246X5	20100262	S10M000156	SW846-9056A	03/09/10 12:03	03/09/10 15:15	03/11/10 05:38	42 hours	N
B246X6	20100262	S10M000157	SW846-9056A	03/09/10 12:03	03/09/10 15:15	04/06/10 22:31	28 days	N
B246X6	20100262	S10M000157	SW846-9056A	03/09/10 12:03	03/09/10 15:15	03/11/10 00:19	36 hours	N
B246X6	20100262	S10M000157	SW846-9056A	03/09/10 12:03	03/09/10 15:15	03/11/10 06:10	42 hours	N

Attachment 3

RECEIPT PAPERWORK

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev <u>D.D.1</u>
Date Samples Received: <u>3.9.10</u>		Group #: <u>20100(262)263</u>
Number of Samples: <u>4</u>		
Sample Custodian: <u>Alkhal</u>		
Sample Custodian to Complete:		
Action	OK? (Y/N)	N/A
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	15 ^o c	<input type="checkbox"/> 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?	<u>yes</u>	PM Initials <u>eh</u> Date <u>3-9-10</u>
If No, comment on communication and resolution: <u>for TA retention</u>		
Other Comments:		

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: _____	_____	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
U Codes: _____	_____	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
K Codes: _____	_____	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
F Codes: _____	_____	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> 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 _____ Yes No Unknown
 D004-D043 (Identify applicable waste codes and concentrations): _____ (i.e., peroxide former, explosive, air reactive) 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) (*State mixture rule for ignitability)

WT01: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown	WP01: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
WT02: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown	WP02: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
W001: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown	WP03: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
List constituents and concentrations:	F003: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown

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)

<input type="checkbox"/> PCB Liquid Waste	<input type="checkbox"/> PCB Bulk Product Waste	<input type="checkbox"/> PCB Transformer ≥500 ppm	<input type="checkbox"/> Unknown
<input type="checkbox"/> PCB Remediation Waste	<input type="checkbox"/> PCB R&D Waste	<input type="checkbox"/> PCB contaminated electrical equipment (capacitor/ballast) <500 ppm	
<input type="checkbox"/> PCB Spill Material	<input type="checkbox"/> PCB Item	<input type="checkbox"/> 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