

**FINAL REPORT FOR THE SAMPLE RECEIVED IN
DECEMBER, 2010, FROM 100-KR-4 GROUND WATER**

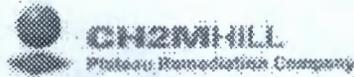
**Document No.: 20101226
SDG: 222S20101226**

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Advanced Technologies and Laboratories International, Inc.

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Prepared for:

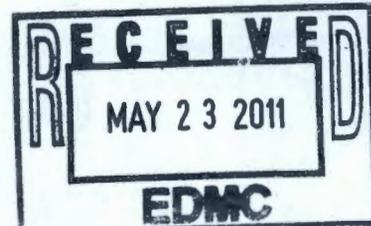
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222-S LABORATORY**FINAL REPORT FOR THE SAMPLE RECEIVED IN DECEMBER, 2010,
FROM 100-KR-4 GROUND WATER****1.0 INTRODUCTION**

This final report presents the result for the one ground water sample taken on December 10, 2010. The sample was analyzed in accordance with Sampling Authorization Form F10-208; *100-KR-4 Ground Water* (SAF) 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

The sample was received on December 10, 2010, approximately one and one quarter hour after sampling, with adequate paperwork. The sample was not delivered to Door 13 in a cooler. The sample temperature was not measured. The sample was placed in to a refrigerator.

3.0 ANALYTICAL RESULTS SUMMARY

The Data Summary Report (Attachment 1) present the final analytical results for those analytes requested in the SAF. The "Det Limit" column in Attachment 1 contains the method detection limit (MDL) for non-radionuclide analyses.

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 sample. All requirements in the SAF and QAPP were met.

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, 2010, *ATL Quality Assurance Project Plan for 222-S Laboratory*, Rev. 9-A, Applied Technologies and Laboratories International, Inc., Richland, Washington.

Sampling Authorization Form F10-208; 100 Area Remedial Investigation/Feasibility Analysis - 100-KR-4 Groundwater, 2010, CH2M Hill, Plateau Remediation Company, Richland, Washington

Attachment 1

DATA SUMMARY REPORT

**WSCF GW Diversion FY11
 Data Summary of All Results**

Sample Group: 20101226

Customer Group or SDG Number: 222S20101226

Customer Sample ID: B27HH4

Sample Portion: Total

Sample#	R	A#	CAS #	Analyte	Unit	STD %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Cnt Err %	Qual Flags
S10M000620			18540-29-9	Hexavalent Chromium	ug/mL	106	<9.00E-03	<0.0108	<0.0108	n/a	n/a	106	0.0108	n/a	U

NA = Not Analyzed, ND = Not Detectec

U - < Det Limit

Attachment 2

HOLDING TIME REPORT

Ordered by Holding Time

All Hold Times

Holding Time	Sample Group	Sample	Matrix	Method	Prep Method	Sample Date	Received Date	Prep Date	Analysis Date	Missed Holding Time	Hold Time Days/Hr Remaining
12/11/10 08:18	20101226	S10M000620	LIQUID	CHROMIUM VI		12/10/10 08:18	12/10/10 09:30	N/A	12/10/10 19:00	N	13h

Attachment 3

RECEIPT PAPERWORK

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev <u>GE.0</u>
Date Samples Received: <u>12.10.10</u>		Group #: <u>20101225</u> <u>1225</u>
Number of Samples: <u>2</u>		
Sample Custodian: <u>rt steels</u>		
Sample Custodian to Complete:		
Action	OK? (Y/N)	N/A
RSA/COC provided?	y	
RSR provided?		✓
Verify GKI is complete		✓ <u>on F.I.</u>
Check that outer custody seal is intact, if present		✓
Record cooler temperature in centigrade, as appropriate		✓ <input type="checkbox"/> Check if no cooler and/or no ice
Samples are intact and in good condition	y	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	y	
• Date and time of sampling	y	
• Sampling location or origin	y	
• Container type, size, and number	y	
• Analysis request is clear	y	
• Signature of persons relinquishing and receiving samples	y	
• Date and/or time of sample custody exchange	y	
Verify that sample numbers on containers match the COC and/or RSA	y	
Samples stored properly (e.g., refrigeration)	y	
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>rt</u> Date <u>12.10.10</u>		
If No, comment on communication and resolution:		
Other Comments:		

CH2MHill Plateau Remediation Company		20101226 CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F10-208-687	PAGE 1 OF 1
COLLECTOR <i>Southern, Bates</i>	COMPANY CONTACT DYEKMAN, DL	TELEPHONE NO. 373-2530	PROJECT COORDINATOR RADLOFF, AW		PRICE CODE 1A	DATA TURNAROUND
SAMPLING LOCATION C7695 (199-K-195); I-039	PROJECT DESIGNATION 100 Area Remedial Investigation/Feasibility Analysis - 100-KR-4 Groundwat		SAF NO. F10-208	AIR QUALITY <input type="checkbox"/>		24 Hours / 15 Days
ICE CHEST NO.	FIELD LOGBOOK NO. <i>HNF-01-593-1 page 67</i>	ACTUAL SAMPLE DEPTH <i>155"</i>	COA 300082ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization <i>222-S</i>	OFFSITE PROPERTY NO. <i>KS 12/10/10</i>	BILL OF LADING/AIR BILL NO. N/A				

MATRX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe 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-4C	
		HOLDING TIME	24 Hours	
		TYPE OF CONTAINER	aG	
		NO. OF CONTAINER(S)	1	
		SPECIAL HANDLING AND/OR STORAGE	VOLUME	500mL
		SAMPLE ANALYSIS	Chromium Hex - 7196;	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B27HH4	WATER	<i>12-10-10</i>	<i>0818</i>	<input checked="" type="checkbox"/>

Lab-GRP# 20101226
Sam# S10M000620

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. <div style="text-align: center; font-size: 2em; font-weight: bold;">ORIGINAL</div>
<i>Dale Bates, Dal Bates</i>	<i>12-10-10 930</i>	<i>RT Steele</i>	<i>RT STEELE 140-10 0930</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	
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	

222-S

WRPS, P. O. Box 850

Richland, WA

Phone: (509) 376-5029 / FAX: (509) 372-1878

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Sample Group: 20101226

Specification Entity: WSCF GW Diversion FY11 - CACN/COA 1E.01/1E.01

The following samples were received from you on 12/10/2010. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using 222-S.

Sample	Customer Sample ID	Matrix	Sample Date
Tests Scheduled			
S10M000620	B27HH4	LIQUID	12/10/2010
CHROMIUM VI			

Test Acronym Description

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