

**FINAL REPORT FOR THE SAMPLES RECEIVED IN
SEPTEMBER, 2011, FOR SAF W11-009**

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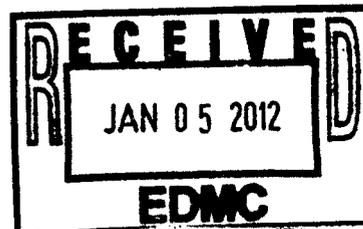


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222-S LABORATORY

FINAL REPORT FOR THE SAMPLES RECEIVED IN SEPTEMBER 2011, FOR SAF W11-009

1.0 INTRODUCTION

This final report presents the result for the three ground water samples taken on September 1, 2011, and September 6, 2011. The samples were analyzed in accordance with Sampling Authorization Form (SAF) W11-009 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 samples were received on September 20, 2011, in good condition and with adequate paperwork.

3.0 ANALYTICAL RESULTS SUMMARY

The Data Summary Report (Attachment 1) presents the final analytical results for those analytes requested in the SAF. 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 separate preparation procedure, this column is left blank.

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

- "C" indicates that the analyte was detected in the method blank and the sample, and the concentration detected in the blank was greater than 20% of the sample result.
- "B" is applied to sample concentrations that are greater than the (MDL) but less than the estimated quantitation limit (EQL).

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.

4.0 CYANIDE

The cyanide analysis by distillation and spectrophotometry was performed on the ground water samples. All analyses met the SW-846 holding time of 14 days except for sample B2FVD3 (S11M000499). This sample had already exceeded its holding time by five days prior to receipt at the 222S Laboratory on September 20, 2011. It is the laboratory's opinion there was little or no effect on the data usability from the holding time excursion. The method blank result was

above the method detection limit. All sample results were less than five times the blank result. Since all results were below the EQL reanalysis was not required. Sample results have been flagged with a "C". All other quality control requirements in the laboratory QAPP were met.

5.0 PROCEDURES

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

Table 1. Analytical Procedures.

Analysis	Preparation Method	Analysis Procedure
Cyanide	LA-695-102 Rev. M-0 SW-846 9010C	LA-695-102 Rev. M-0 SW-846 9014

6.0 REFERENCES

ATL-MP-1011, 2011, *ATL Quality Assurance Project Plan for 222-S Laboratory*, Rev. 10-A, Applied Technologies and Laboratories International, Inc., Richland, Washington.

Sampling Authorization Form W11-009; September 2011– W11-009, 2011, CH2M Hill, Plateau Remediation Company, Richland, Washington.

SW-846, 1986, *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*, Third Edition, as amended, U.S. Environmental Protection Agency, Washington, D.C.

Attachment 1

DATA SUMMARY REPORT

**WSCF Diversion 2011-09
 Data Summary Report**

Sample Group: 20111491
Customer Group or SDG Number: 222S20111491
Customer Sample ID: B2FV75
Customer Sample ID: B2FV75

Sample#	R	A#	CAS #	Analyte	Unit	STD %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Cnt Err %	Qual Flags
S11M000497			57-12-5	Cyanide	ug/mL	110	8.23E-03	0.0354	0.0390	0.0372	9.66	110	0.0200	n/a	CB

B - Estimated

C - Blank Contamination

NA = Not Analyzed, ND = Not Detected

**WSCF Diversion 2011-09
 Data Summary Report**

Sample Group: 20111491
Customer Group or SDG Number: 222S20111491
Customer Sample ID: B2FVD3
Customer Sample ID: B2FVD3

Sample#	R	A#	CAS #	Analyte	Unit	STD %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Cnt Err %	Qual Flags
S11M000499			57-12-5	Cyanide	ug/mL	110	8.23E-03	0.0374	n/a	n/a	n/a	n/a	0.0200	n/a	CB

B - Estimated

C - Blank Contamination

NA = Not Analyzed, ND = Not Detected

**WSCF Diversion 2011-09
 Data Summary Report**

Sample Group: 20111491
Customer Group or SDG Number: 222S20111491
Customer Sample ID: B2FVFO
Customer Sample ID: B2FVFO

Sample#	R	A#	CAS #	Analyte	Unit	STD %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det. Limit	Cnt Err %	Qual Flags
S11M000498			57-12-5	Cyanide	ug/mL	110	8.23E-03	0.0338	n/a	n/a	n/a	n/a	0.0200	n/a	CB

B - Estimated

C - Blank Contamination

NA = Not Analyzed, ND = Not Detected

Attachment 2

HOLDING TIME REPORT

HOLD TIME REPORT, Sample Group: 20111491

Holding Time	Sample Group Sample	Matrix	Method	Prep Method	Sample Date	Received Date	Prep Date	Analysis Date	Holding Time Missed
09/15/11 13:19	20111491 S11M000499	LIQUID	CN - WATER DISTILLATION		09/01/11 13:19	09/20/11 15:00	N/A	09/20/11 20:45	Y
09/20/11 11:41	20111491 S11M000497	LIQUID	CN - WATER DISTILLATION		09/06/11 11:41	09/20/11 15:00	N/A	09/20/11 20:45	N
09/20/11 12:41	20111491 S11M000498	LIQUID	CN - WATER DISTILLATION		09/06/11 12:41	09/20/11 15:00	N/A	09/20/11 20:45	N

09/28/2011 07:32

holdtimereport 2.7.29

MissedHoldTime v 2.7.29

Attachment 3

RECEIPT PAPERWORK

ATL	SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST	LO-090-101 Rev <u>EE, O</u>
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Date Samples Received: _____ Group #: 20111491 3 CN
 Number of Samples: 15 20111492 4 Ph
 Sample Custodian: elliot 20111493 8 CN

Sample Custodian to Complete:

Action	Yes	No	N/A	Comments
RSA/ COC provided?	✓			
RSR provided?			✓	
Verify GKI is complete			✓	<input type="checkbox"/> In Project File
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	✓			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	✓			
• Preservatives (if used) are noted on the COC/RSA and sample bottle	✓			
• 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)	✓			

Notify the PM immediately if any problems are noted. (Any "No" checked requires Project Manager resolution.) _____

PM to Complete:

Samples acceptable for release? yes PM Initials pk Date 9.20.11
 If No, comment on communication and resolution: Per G.P.R

Other Comments:

CH2M Hill Plateau Remediation Company **SEPTEMBER 29, 2011** C.O.C.# **W11-009-140-A**
 Collector **JP HERRICK** Telephone No. **376-4650**
 SAF No. **W11-009** Purchase Order/Charge Code **300071ES20**
 Project Title **RCRA, September 2011** Ice Chest No. **N/A**
 Shipped To (Lab) **Waste Sampling & Characterization** Bill of Lading/Air Bill No. **N/A**
 Protocol **RCRA 9-21-11 mms** 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) ***
SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes No
 Site Wide Generator Knowledge Information Form applies.
 The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	* Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2FV72	N	9/26/11	114	1x600-mL G/P	299-6_METALS_TGMS_Uranium-(4)	6 Months	HNO3 to pH <2
B2FV75	N	9/26/11	114	1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B2FV73	N	9/26/11	114	1x500-mL G/P	Gross Beta	6 Months	HNO3 to pH <2
B2FV73	N	9/26/11	114	1x1-L G/P	IC99_3MDSK_LSC_Tc-99 (1)	6 Months	HCl to pH <2
B2FV73	N	9/26/11	114	1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool ~4C

FRP# 20111491
 SAN# 5114000497

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
JP HERRICK			SEP 06 2011	Donnaal Hubbard			SEP 06 2011	S = Soil, DS = Drum Solids
CHPRC				Don Brotherton / CHPRC			SEP 20 2011 1500	DL = Drum Liquids, T = Tissue, WI = Wipe, L = Liquid, V = Vegetation, X = Other
Don Brotherton / CHPRC			SEP 20 2011 1500	Philip Steele			SEP 20 2011 1500	
Don Brotherton / CHPRC			SEP 20 2011 1500					

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time
 A-6004-842 (REV 2)

Collector: JP HERRICK
 SAF No.: W11-009
 Project Title: RCRA, September 2011
 Shipped To (Lab): Waste Sampling & Characterization

Contact/Requester: Karen Waters-Husted
 Sampling Origin: Hanford Site
 Logbook No.: HNF-N-506 43/19
 Method of Shipment: GOVERNMENT VEHICLE
 Priority: 45 Days

Telephone No.: 376-4650
 Purchase Order/Charge Code: 300071ES20
 Ice Chest No.: N/A
 Bill of Lading/Air Bill No.: N/A
 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)

SPECIAL INSTRUCTIONS
 Site Wide Generator Knowledge Information Form applies.
 The CACN for all analytical work at WSCF is 401647.

Total Activity Exemption: Yes No

Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2FV08	N	09/06/11	1241	1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B2FVD8	N			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B2FVD8	N			1x250-mL G/P	2320_ALKALINITY: List-1(*)	14 Days	Cool-4C
B2FVF0	N			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B2FVD7	N			1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1)	6 Months	HNO3 to pH <2
B2FVD7	N			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B2FVF1	Y	09/06/11	1241	1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1)	6 Months	HNO3 to pH <2

GAP 4 20111491
 SAM 4 211M0010 498

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
JP HERRICK			SEP 06 2011	Don Brotherton			SEP 06 2011	S = Soil
CHPRC				Don Brotherton				SE = Sediment
Don Brotherton			9/20/11 1445	Don Brotherton			9/20/11 1445	SO = Solid
CHPRC				Don Brotherton				SL = Sludge
Don Brotherton			SEP 20 2011 1500	Don Brotherton			SEP 20 2011 1500	W = Water
CHPRC				Don Brotherton				L = Liquid
Don Brotherton				Don Brotherton				O = Oil
CHPRC				Don Brotherton				A = Air
Don Brotherton				Don Brotherton				DS = Dnum Solids
CHPRC				Don Brotherton				DL = Dnum Liquids
Don Brotherton				Don Brotherton				T = Tissue
CHPRC				Don Brotherton				WI = Wipe
Don Brotherton				Don Brotherton				L = Liquid
CHPRC				Don Brotherton				V = Vegetation
Don Brotherton				Don Brotherton				X = Other

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process)

Date/Time

A-6004-842 (REV 2)

113075
TONY VALERO
CHPRC

Page 1 of 1

Collector: CHPRC
 SAF No.: W11-009
 Project Title: RCRA, September 2011 9-21-11 mms
 Shipped To (Lab): Waste Sampling & Characterization
 Protocol: RCRA 2225
 Contact/Requester: Karen Waters-Husted
 Sampling Origin: Hanford Site
 Logbook No.: HNF-N-506 42/18
 Method of Shipment: GOVERNMENT VEHICLE
 Priority: 45 Days
 Telephone No.: 376-4650
 Purchase Order/Charge Code: 300071ES20
 Ice Chest No.: N/A
 Bill of Lading/Air Bill No.: N/A
 Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

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

SPECIAL INSTRUCTIONS

Hold Time: _____
 Total Activity Exemption: Yes No
 Site Wide Generator Knowledge Information Form applies.
 The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2FVD3	N	9-1-11	1317	1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B2FVD4	N	9-1-11	1317	1x500-mL G/P	Gross Beta	6 Months	HNO3 to pH <2
B2FVD1	N			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B2FVD1	N			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool-4C
B2FVD0	N			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2

GRP 4 20111491
 SAM 4 SHAW00497A
 S11m000499

Relinquished By	Print	Signature	Date/Time	Received By	Print	Signature	Date/Time	Matrix *
TONY VALERO CHPRC			SEP 01 2011 1400	M. Nelson	M. Nelson		SEP 01 2011 1400	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By			9/20/11 1415	Don Brotherton	Don Brotherton		9/20/11 1415	DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By			SEP 20 2011 1500	Phillip R Steele	Phillip R Steele		SEP 20 2011 1500	

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process)