

JUNE 27, 2013

**FINAL REPORT FOR SAMPLES RECEIVED IN  
JUNE, 2013, FOR SAF No. F13-017**

**Document No.: 20130670 Rev. 0  
SDG: 222S20130670**

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Prepared for:



Prepared by:



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A handwritten signature in black ink, appearing to read "C. Menjivar".

06/27/2013

C.S. Menjivar, ATL Project Coordinator

## 222-S LABORATORY

### FINAL REPORT FOR THE SAMPLE RECEIVED IN JUNE, 2013 FROM 200W PUMP & TREAT- SAF No. F13-017

#### 1.0 INTRODUCTION

This final report presents the result for one liquid sample taken on June 20, 2013. The sample was analyzed in accordance with Sampling Authorization Form F13-017; *200W Pump & Treat-Stack Emission Sampling- Chem* (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 June 20, 2013, with adequate paperwork. The measured temperature at receipt was 1 °C.

#### 3.0 ANALYTICAL RESULTS SUMMARY

The Data Summary Report (Attachment 1) present 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 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.**

<b>Analysis</b>	<b>Preparation Method</b>	<b>Analysis Procedure</b>
Hexavalent Chromium Analysis by Spectrophotometric Determination	NA	LA-265-101 Rev. H-0 (SW846-7196A)

#### 5.0 REFERENCES

ATL-MP-1011, 2013, *ATL Quality Assurance Project Plan for 222-S Laboratory*, Rev. 12, Applied Technologies and Laboratories International, Inc., Richland, Washington.

Sampling Authorization Form F13-017; *200W Pump & Treat- Stack Emission Sampling- Chem*, CH2M Hill, Plateau Remediation Company, Richland, Washington

Attachment 1

DATA SUMMARY REPORT

**DATA SUMMARY REPORT FOR SAMPLE DELIVERY GROUP 222S20130670**

Customer Sample ID	Laboratory Sample ID	A	CAS #	Analyte	Result Unit	Standard % Recovery	Blank	Result	Duplicate	RPD	Matrix Spike % Recovery	Det Limit	Qual Flags
B2PLJ8	S13M000033		18540-29-9	Hexavalent Chromium	ug/mL	105	<9.00E-03	<9.68E-03	1.38E-02	n/a	106	9.68E-03	U

Attachment 2

HOLDING TIME REPORT

Ordered by Holding Time

All Hold Times - Status: Not Mailed

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
06/21/13 13:16	20130670	S13M000033	LIQUID	CHROMIUM VI		06/20/13 13:16	06/20/13 14:40	N/A	06/20/13 17:00	N	20h

Attachment 3

RECEIPT PAPERWORK

<b>ATL</b>	<b>SAMPLE RECEIPT AND CHAIN OF CUSTODY VERIFICATION CHECKLIST</b>	LO-090-101 Rev <u>GEO</u>
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Date Samples Received: 6-20-13 Group #: 20130670  
 Number of Samples: 1  
 Sample Custodian: Jasm Frauer

**Sample Custodian to Complete:**

Action	Yes	No	N/A	Comments
RSA/ <del>COC</del> provided?	✓			
RSR provided?			✓	
Verify GKI is complete				<input checked="" type="checkbox"/> In Project File
Received from an alpha facility?		✓		<input type="checkbox"/> Contact PM for approval to release
Check that outer custody seal is intact, if present	✓			
Record cooler temperature in centigrade, as appropriate	1.0			<input type="checkbox"/> Check if no cooler and/or no ice
Samples are intact and in good condition	✓			If No, provide comments below
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 <del>COC</del> and/or RSA	✓			
Samples stored properly (e.g. <del>refrigeration</del> )	✓			<u>Corridor 8E, Refrigerator 7A Shelf-1</u>

Notify the PM immediately if any problems are noted.

Samples acceptable for release? yes Initials CSM Date 06-20-13

If No, comment on communication and resolution:

Other Comments:

JUNE 27 2013

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST		F13-017-016	PAGE 1 OF 1
COLLECTOR <i>C. Fulton</i>	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 9C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 289-T_Main Stack_1MS-CR6-R1-I	PROJECT DESIGNATION 200W Pump & Treat - Stack Emission Sampling - Chem		SAF NO. F13-017	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. <i>GWS-155</i>	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH N/A	COA 303110ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO <i>222-S (W3) 6/20/13</i> Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WT=Wipe X=Other	<b>POSSIBLE SAMPLE HAZARDS/ REMARKS</b> **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 458.1.**	PRESERVATION	Cool~4C	
		HOLDING TIME	24 Hours	
		TYPE OF CONTAINER	G/P	
		NO. OF CONTAINER(S)	1	
	VOLUME	500mL		
<b>SPECIAL HANDLING AND/OR STORAGE</b>		SAMPLE ANALYSIS	7196 CR6: COMMON;	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2PLJ8	OTHER LIQUID	6/20/13	1316	✓

*Temp = 1.0°C*

*Group # 20130670*

*S13M000033*

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM <i>C. Fulton</i>	DATE/TIME <i>6/20/13 1424</i>	RECEIVED BY/STORED IN <i>MA White</i>	DATE/TIME <i>6-20-13 1424</i>	** The CACN for WSCF Analytical is 403311. <input type="checkbox"/> ** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-13-064  <i>TRVL-13-064</i>
RELINQUISHED BY/REMOVED FROM <i>MA White</i>	DATE/TIME <i>6-20-13 1440</i>	RECEIVED BY/STORED IN <i>JE Frazier</i>	DATE/TIME <i>6-20-13 1440</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	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	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:  
200 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: <u>F001 - F005</u>	<u>See Attached List</u>	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Unknown

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

D001: <input type="checkbox"/> FP <100°F	<input type="checkbox"/> FP ≥100 <140°F	<input type="checkbox"/> DOT Oxidizer	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> Unknown	
D002: <input type="checkbox"/> pH ≤2	<input type="checkbox"/> pH ≥12.5	<input type="checkbox"/> Solid Corrosive (WSC2)	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> Unknown	
D003: <input type="checkbox"/> Cyanide	<input type="checkbox"/> Sulfide	<input type="checkbox"/> Water Reactive	<input type="checkbox"/> Other _____	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> Unknown
D004-D043 (Identify applicable waste codes and concentrations):				<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> 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

Bob Cathel Bob Cathel

Date

1/12/12

200 Area S&GRP Characterization and Monitoring Sampling and Analysis

Generator Knowledge Information Attachment

Constituent List

Methyl Isobutyl Ketone

Cresols (o, m, p)

Carbon Tetrachloride

Acetone

1,1,1 Trichloroethane

Methylene Chloride

Methyl Ethyl Ketone

Print & Sign Bob Cathel Bob Cathel Date 1/12/12