

APRIL 25, 2013

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Tel: (314)298-8566

TestAmerica Job ID: 160-2132-1

TestAmerica Sample Delivery Group: SL1375
Client Project/Site: F13-012

For:

CH2M Hill Plateau Remediation Company
PO BOX 1600, MS H8-41
Richland, Washington 99352

Attn: General Mailbox



Authorized for release by:
4/25/2013 4:15:47 PM

Jayna Awalt
Project Manager I
jayna.awalt@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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8

9

10

11

12



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Chain of Custody	5
Receipt Checklists	18
Definitions/Glossary	19
Method Summary	20
Sample Summary	21
Detection Summary	22
Client Sample Results	23
QC Sample Results	25
QC Association Summary	28

Job ID: 160-2132-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

CH2MHill Plateau Remediation Company
P.O. Box 1600
MS B3-60
Richland, Washington 99352
April 25, 2013
Attention: Scot Fitzgerald

SDG : SL1375
Number of Samples : 12 samples
Sample Matrix : Water
Data Deliverable : Summary
Date SDG Closed : April 18, 2013

II. Introduction

On April 18, 2013, 12 water samples were received by TestAmerica - St. Louis for chemical analysis. The samples were received within temperature criteria. See the COC and CUR forms for documentation of any variations on receipt conditions and temperature. Upon receipt, the samples were given laboratory Ids to correspond with specific client Ids. Please refer to the Sample Summary sheets attached to this case narrative. This report is incomplete without the narrative.

The following SAFs are associated with this SDG: F13-012

III. Analytical Results/ Methodology

The analytical results for this report are presented by analytical test. Each set of data includes sample identification information, analytical results and the appropriate detection limits. All results are based upon samples as they were received, i.e. wet weight, unless otherwise noted on the data sheets. See the attached Methods Summary Form for the methods used in this SDG.

MS/MSD/Dup analysis was done per the client requirements. Analytical batches that did not contain matrix QC were analyzed with a LCS/LCS duplicate.

Deviation from Request: None

IV. Definitions

QCBLK- Quality Control Blank, Method Blank
QCLCS- Quality Control Laboratory Control Sample, Blank Spike
DUP- Laboratory Duplicate
MS- Matrix Spike
MSD- Matrix Spike Duplicate

The term "Detection Limit" used in the analytical data report refers to either the lab's standard reporting limits or contractually required reporting limits, whichever is applicable.

The following data qualifiers may be applicable to the results in this report, as appropriate.

- **B** - For inorganic analyses, the sample result is greater than the MDL but less than the RL.
- **B** - For organic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the



Job ID: 160-2132-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

MDL.

- **J** - For organic analyses, the sample is estimated and less than the RL.
- **C** - For inorganic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL.
- **D** - For all analyses, the sample result was obtained from the analysis of a dilution.
- **N** - For inorganics and GC analyses, the spike/spike duplicate recoveries are outside QC limits.
- **T** - For GCMS analyses, the spike/spike duplicate recoveries are outside QC limits.
- **O** - For all analyses, the LCS (LCSD) recoveries are outside QC limits.
- **P** - For organic analyses (PCB/Pests only), the aroclor target analyte has greater than 25% difference for detected concentrations between the two GC columns.

TKN

Batch: 47376/47594

Nitrogen, Kjeldahl was detected in method blank MB 160-47376/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "B". If the associated sample reported a result above the MDL and/or RL and was not greater than 5x the method blank, the result has been "C" flagged.

The matrix spike (MS) recoveries for TKN batch 47594 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria. (160-2132-3 MS), (160-2136-7 MS) This analyte has been qualified accordingly with an "N" flag in the associated samples.

The matrix duplicate %RPD for TKN associated with batch 47594 was outside the control limits. RPD determinations are not applicable to values near the reporting limit (<5X RL), that are +/- the RL between the results.

There were no observations or nonconformances for the following methods:

TSS

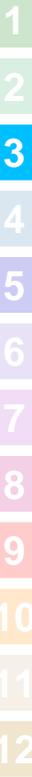
TVS

Sulfide

I certify that this Summary Package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. The Laboratory Manager or a designee, as verified by the signature on the cover page has authorized release of the data contained in this hard copy data package.

Reviewed and approved:

Jayna Awalt
St. Louis Project Manager



CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F13-012-052	PAGE 1 OF 1
COLLECTOR <i>E Kauer</i>	913345	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7B
SAMPLING LOCATION 289-T, FBR-A Influent, valve V14-Y40A1 DAY 1		PROJECT DESIGNATION 200W Pump & Treat - FBR Water Sampling		SAF NO. F13-012	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO. <i>GWS-189-02</i>		FIELD LOGBOOK NO. <i>HNF-N-4919 pg 75</i>	ACTUAL SAMPLE DEPTH N/A	COA 303110ES10	METHOD OF SHIPMENT FEDERAL EXPRESS
SHIPPED TO TestAmerica St. Louis		OFFSITE PROPERTY NO. SEE PTR		BILL OF LADING/AIR BILL NO. SEE PTR	ORIGINAL

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	ZnAc+NaOH to pH > 9
A=Air	**Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/DATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.**	HOLDING TIME	7 Days
DI=Drum		TYPE OF CONTAINER	G/P
L=Liquid		NO. OF CONTAINER(S)	1
O=Oil		VOLUME	1L
S=Soil		SAMPLE ANALYSIS	376.L DISSOLVED SULFIDE; COMMON;
SE=Sediment		SAMPLE DATE	APR 16 2013 1300
T=Tissue		SAMPLE TIME	✓
V=Vegetation			
W=Water			
WI=Wipe			
X=Other			

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>Kathy E...</i>	DATE/TIME APR 16 2013 0740	RECEIVED BY/STORED IN SSU-1	DATE/TIME APR 16 2013 1400	FILTER SAMPLE; The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-13-049	
RELINQUISHED BY/REMOVED FROM SSU-1	DATE/TIME APR 17 2013 0740	RECEIVED BY/STORED IN <i>Juan Aguilar</i>	DATE/TIME APR 17 2013 0740		
RELINQUISHED BY/REMOVED FROM <i>Juan Aguilar</i>	DATE/TIME APR 17 2013 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM <i>FedEx</i>	DATE/TIME	RECEIVED BY/STORED IN <i>Brian Harris</i>	DATE/TIME 4/16/13 0830		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TRVL-13-049	
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		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD		DATE/TIME		



CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F13-012-054	PAGE 1 OF 1
COLLECTOR <i>E. Kauer</i> 81375	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7B	DATA TURNAROUND 7 Days / 15 Days
SAMPLING LOCATION 289-T, FBR-A Influent, valve V14-Y40A1 DAY 1	PROJECT DESIGNATION 200W Pump & Treat - FBR Water Sampling	FIELD LOGBOOK NO. HNF-N-491 9pg 75	SAF NO. F13-012	AIR QUALITY	<input type="checkbox"/>
ICE CHEST NO. GWS-189-02	ACTUAL SAMPLE DEPTH N/A	COA 303110ES10	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL	
SHIPPED TO TestAmerica St. Louis	OFFSITE PROPERTY NO. SEE PTR	BILL OF LADING/AIR BILL NO. SEE PTR 79954576 3350			

MATRIX* 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/DATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.**	PRESERVATION H2SO4 to pH <2/Cool~4C	HOLDING TIME 28 Days	TYPE OF CONTAINER G/P	NO. OF CONTAINER(S) 1	VOLUME 250ml	SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS
SAMPLE NO. NB2P7F7 FILTER WATER	MATRIX*	SAMPLE DATE APR 16 2013	SAMPLE TIME 1300				

Page 1 of 29

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>E. Kauer</i>	DATE/TIME APR 16 2013 1400	RECEIVED BY/STORED IN SSU-1	DATE/TIME APR 16 2013 1400	FILTER SAMPLE; The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GK1 applies to this SAF. TRVL-13-049	
RELINQUISHED BY/REMOVED FROM SSU-1	DATE/TIME APR 17 2013 0700	RECEIVED BY/STORED IN <i>Juan Aguilera</i>	DATE/TIME APR 17 2013 0740	(1) 351.2_TOTAL DISSOLVED NITROGEN_KIELDAHL: COMMON;	
RELINQUISHED BY/REMOVED FROM <i>Juan Aguilera</i>	DATE/TIME APR 17 2013 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME	TRVL-13-049	
RELINQUISHED BY/REMOVED FROM <i>FeD Ex</i>	DATE/TIME	RECEIVED BY/STORED IN <i>Joan Kauer</i>	DATE/TIME 4/16/13 0830		
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		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD		DISPOSED BY		



CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F13-012-055	PAGE 1 OF 1
COLLECTOR <i>E. Kauer</i> 81375	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7B	DATA TURNAROUND 7 Days / 15 Days
SAMPLING LOCATION 289-T, FBR-A Influent, valve V14-Y40A1 DAY 1	PROJECT DESIGNATION 200W Pump & Treat - FBR Water Sampling	SAF NO. F13-012	COA 303110ES10	AIR QUALITY	METHOD OF SHIPMENT FEDERAL EXPRESS
ICE CHEST NO. <i>CWS-189-02</i>	FIELD LOGBOOK NO. <i>HNF-N-4919975</i>	ACTUAL SAMPLE DEPTH <i>N/A</i>	SEE PTR <i>7995 4576 3350</i>	BILL OF LADING/AIR BILL NO.	
SHIPPED TO TestAmerica St. Louis	OFFSITE PROPERTY NO. SEE PTR				

MATRIX*	PRESERVATION	H2SO4 to pH <2/ Cool-4C	Cool-4C	Cool-4C
POSSIBLE SAMPLE HAZARDS/ REMARKS **Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/DATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.**	HOLDING TIME	28 Days	7 Days	7 Days
	TYPE OF CONTAINER	G/P	P	G/P
	NO. OF CONTAINER(S)	1	1	1
	VOLUME	250mL	500mL	500mL
SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	351.2_TOTAL_NITROGEN_LQE IDAHL; COMMON;	160.4_TOTAL_V OLATILE SOLID S; COMMON;	160.2_TSS; COMMON;
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2P7F8	WATER	APR 16 2013	1300	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>E. Kauer</i>	DATE/TIME APR 16 2013 1400	RECEIVED BY/STORED IN SSU-1	DATE/TIME APR 16 2013 1400	** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-13-049 TRVL-13-049	
RELINQUISHED BY/REMOVED FROM SSU-1	DATE/TIME APR 17 2013 0740	RECEIVED BY/STORED IN <i>Juan Aguilar</i>	DATE/TIME APR 17 2013 0740		
RELINQUISHED BY/REMOVED FROM <i>Juan Aguilar</i>	DATE/TIME APR 17 2013 1400	RECEIVED BY/STORED IN <i>Donna Sparks</i>	DATE/TIME APR 17 2013 1400		
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



CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F13-012-057	PAGE 1 OF 1
COLLECTOR E. Kowey 91375	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7B	DATA TURNAROUND 7 Days / 15 Days
SAMPLING LOCATION 289-T, FBR-A Influent, valve V02-Y40A DAY 1	PROJECT DESIGNATION 200W Pump & Treat - FBR Water Sampling	FIELD LOGBOOK NO. HNF-N-4919 pg 75	SAF NO. F13-012	AIR QUALITY	
ICE CHEST NO. CWS-189-02	ACTUAL SAMPLE DEPTH N/A	COA 303110ES10	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL	
SHIPPED TO TestAmerica St. Louis	OFFSITE PROPERTY NO. SEE PTR	BILL OF LADING/AIR BILL NO. SEE PTR 7995 4576 3350			

MATRIX*	PRESERVATION	ZnAc+NaOH to pH > 9
A=Air	HOLDING TIME	7 Days
DL=Drum	TYPE OF CONTAINER	G/P
Liquids	NO. OF CONTAINER(S)	1
DS=Drum	VOLUME	1L
Solids	SAMPLE ANALYSIS	376.1 TOTAL SULFIDE: COMMON;
L=Liquid	SAMPLE DATE	APR 16 2013
O=Oil	SAMPLE TIME	1315
S=Soil		
SE=Sediment		
T=Tissue		
V=Vegetation		
W=Water		
WI=Wipe		
X=Other		

Page 6 of 29

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM E. Kowey	DATE/TIME APR 16 2013 1400	RECEIVED BY/STORED IN SSU-1	DATE/TIME APR 16 2013 1400	** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-13-049	
RELINQUISHED BY/REMOVED FROM SSU-1	DATE/TIME APR 17 2013 0740	RECEIVED BY/STORED IN FEDEX	DATE/TIME APR 17 2013 0740	TRVL-13-049	
RELINQUISHED BY/REMOVED FROM FEDEX	DATE/TIME APR 17 2013 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME APR 17 2013 1400		
RELINQUISHED BY/REMOVED FROM FEDEX	DATE/TIME APR 17 2013 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME APR 17 2013 1400		
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	TITLE	
LABORATORY SECTION	RECEIVED BY	DISPOSED BY		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	



CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FL3-012-058	PAGE 1 OF 1
COLLECTOR E. Kowen S4375	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7B	DATA TURNAROUND 7 Days / 15 Days
SAMPLING LOCATION 289-T, FBR-A Influent, valve V02-Y40A DAY 1	PROJECT DESIGNATION 200W Pump & Treat - FBR Water Sampling	FIELD LOGBOOK NO. HNF-N-491 9 pg 75	SAF NO. F13-012	AIR QUALITY	<input type="checkbox"/>
ICE CHEST NO. 6205-189-02	ACTUAL SAMPLE DEPTH N/A	COA 303110ES10	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL	
SHIPPED TO TestAmerica St. Louis	OFFSITE PROPERTY NO. SEE PTR	BILL OF LADING/AIR BILL NO. SEE PTR 799545763350			

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	POSSIBLE SAMPLE HAZARDS/ REMARKS **Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/JATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.**	PRESERVATION ZnAc+NaOH to pH > 9	HOLDING TIME 7 Days	TYPE OF CONTAINER G/P	NO. OF CONTAINER(S) 1	VOLUME 1L	SAMPLE ANALYSIS 376.1 DISSOLV ED SULFIDE: COMMON;	SAMPLE DATE APR 16 2013	SAMPLE TIME 1315	<input checked="" type="checkbox"/>
SPECIAL HANDLING AND/OR STORAGE										
SAMPLE NO. B2P7H1	MATRIX* WATER									

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM E. Kowen S4375	DATE/TIME APR 16 2013 1400	RECEIVED BY/STORED IN SSU-1	DATE/TIME APR 16 2013 1400	FILTER SAMPLE; The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-13-049	
RELINQUISHED BY/REMOVED FROM SSU-1	DATE/TIME APR 17 2013 0740	RECEIVED BY/STORED IN JENNIFER	DATE/TIME APR 17 2013 0740		
RELINQUISHED BY/REMOVED FROM JENNIFER	DATE/TIME APR 17 2013 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME APR 17 2013 0830		
RELINQUISHED BY/REMOVED FROM FEDEX	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		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD		DATE/TIME		
			TRVL-13-049		
			DATE/TIME		



CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F13-012-060	PAGE 1 OF 1
COLLECTOR <i>E. Kauer</i> 81375	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7B	DATA TURNAROUND 7 Days / 15 Days
SAMPLING LOCATION 289-T, FBR-A Influent, valve V02-Y40A DAY 1	PROJECT DESIGNATION 200W Pump & Treat - FBR Water Sampling	FIELD LOGBOOK NO. HNF-N-4919 pg 75	SAF NO. F13-012	AIR QUALITY	<input type="checkbox"/>
ICE CHEST NO. CWS-189-02	ACTUAL SAMPLE DEPTH N/A	COA 303110ES10	METHOD OF SHIPMENT FEDERAL EXPRESS		
SHIPPED TO TestAmerica St. Louis	OFFSITE PROPERTY NO. SEE PTR	BILL OF LADING/AIR BILL NO. SEE PTR 7995 4576 3350			

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WR=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 458.1.**	PRESERVATION H2SO4 to pH <2/ Cool-4C	HOLDING TIME 28 Days	TYPE OF CONTAINER G/P	NO. OF CONTAINER(S) 1	VOLUME 250ml	SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SAMPLE DATE APR 16 2013	SAMPLE TIME 1315	DATE/TIME APR 16 2013 1400
SPECIAL HANDLING AND/OR STORAGE		B2P7H3 FILTER WATER								

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>E. Kauer</i>	DATE/TIME APR 16 2013 1400	RECEIVED BY/STORED IN SSU-1	DATE/TIME APR 16 2013 1400	FILTER SAMPLE; The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-13-049	
RELINQUISHED BY/REMOVED FROM SSU-1	DATE/TIME APR 17 2013 0740	RECEIVED BY/STORED IN <i>Juan Aguilera</i>	DATE/TIME APR 17 2013 0740	(1) 351.2_TOTAL DISSOLVED NITROGEN_KJELDAHL: COMMON;	
RELINQUISHED BY/REMOVED FROM <i>Juan Aguilera</i>	DATE/TIME APR 17 2013 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME	TRVL-13-049	
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		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD		DATE/TIME		



CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F13-012-061	PAGE 1 OF 1
COLLECTOR E. Kauer	SLU375	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7B
SAMPLING LOCATION 289-T, FBR-A Influent, valve V02-Y40A DAY 1		PROJECT DESIGNATION 200W Pump & Treat - FBR Water Sampling		SAF NO. F13-012	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO. GWS-189.02		FIELD LOGBOOK NO. HNF-N-4919 pg 75	ACTUAL SAMPLE DEPTH N/A	COA 303110ES10	METHOD OF SHIPMENT FEDERAL EXPRESS
SHIPPED TO TestAmerica St. Louis		OFFSITE PROPERTY NO. SEE PTR		BILL OF LADING/AIR BILL NO. SEE PTR 7995 41576 3350	

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HOLDING TIME	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS	SAMPLE DATE	SAMPLE TIME	DATE/TIME	DATE/TIME
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	**Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.**	H2504 to pH <2/Cool-4C	28 Days	G/P	1	250mL	351.2_TOTAL NITROGEN LIKE LDAHL: COMMON;	APR 16 2013	1315	APR 16 2013 1400	APR 17 2013 0740
		Cool-4C	7 Days	P	1	500mL	160.4_TOTAL V OLATILE SOLID S: COMMON;				APR 17 2013 0740
		Cool-4C	7 Days	G/P	1	500mL	160.2_TSS: OLATILE SOLID COMMON;				APR 17 2013 0740

SPECIAL HANDLING AND/OR STORAGE		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM E. Kauer	DATE/TIME APR 16 2013 1400	RECEIVED BY/STORED IN SSU-1	DATE/TIME APR 16 2013 1400	** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-13-049	
RELINQUISHED BY/REMOVED FROM SSU-1	DATE/TIME APR 17 2013 0740	RECEIVED BY/STORED IN <i>Jason Aguilera</i>	DATE/TIME APR 17 2013 0740		
RELINQUISHED BY/REMOVED FROM <i>Jason Aguilera</i>	DATE/TIME APR 17 2013 1400	RECEIVED BY/STORED IN FED EX	DATE/TIME APR 17 2013 1400		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN <i>Bob Jantz</i>	DATE/TIME 4/16/13 0830		
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		

TRVL-13-049



CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FL13-012-063	PAGE 1 OF 1
COLLECTOR <i>E. Kauer</i> 81375	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7B	DATA TURNAROUND 7 Days / 15 Days
SAMPLING LOCATION 289-T, Post EBR-A, valve V17-Y40A1 DAY 1	PROJECT DESIGNATION 200W Pump & Treat - FBR Water Sampling	FIELD LOGBOOK NO. HNF-N-4919 pg 75	SAF NO. FL13-012	AIR QUALITY	<input type="checkbox"/>
ICE CHEST NO. Guss-189-02	ACTUAL SAMPLE DEPTH N/A	COA 303110ES10	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL	
SHIPPED TO TestAmerica St. Louis	OFFSITE PROPERTY NO. SEE PTR	BILL OF LADING/AIR BILL NO. SEE PTR 7995 4576 3350			

MATRIX* 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/JATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.**	ZnAc+NaOH to pH > 9 7 Days G/P 1 1L 376.1 TOTAL SULFIDE: COMMON;
SPECIAL HANDLING AND/OR STORAGE		
SAMPLE NO.	MATRIX*	
B2P7H6	WATER	
SAMPLE DATE	SAMPLE TIME	
APR 16 2013	1308	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>E. Kauer</i>	DATE/TIME APR 16 2013 1400	RECEIVED BY/STORED IN SSU-1	DATE/TIME APR 16 2013 1400	** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-13-049	
RELINQUISHED BY/REMOVED FROM SSU-1	DATE/TIME APR 17 2013 0740	RECEIVED BY/STORED IN <i>Juan Aguilera</i>	DATE/TIME APR 17 2013 0740	TRVL-13-049	
RELINQUISHED BY/REMOVED FROM <i>Juan Aguilera</i>	DATE/TIME APR 17 2013 1402	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM FedEx	DATE/TIME	RECEIVED BY/STORED IN <i>Brian Hernandez</i>	DATE/TIME 4/16/13 0830		
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	



CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST		F13-012-064	PAGE 1 OF 1
COLLECTOR <i>E Kauer</i> 81375	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7B	DATA TURNAROUND 7 Days / 15 Days
SAMPLING LOCATION 289-T, Post FBR-A, valve V17-Y40A1 DAY 1	PROJECT DESIGNATION 200W Pump & Treat - FBR Water Sampling	FIELD LOGBOOK NO. HNF-N-49190975	SAF NO. F13-012	AIR QUALITY	<input type="checkbox"/>
ICE CHEST NO. GWS-189-02	ACTUAL SAMPLE DEPTH N/A	COA 303110ES10	METHOD OF SHIPMENT FEDERAL EXPRESS		
SHIPPED TO TestAmerica St. Louis	OFFSITE PROPERTY NO. SEE PTR	BILL OF LADING/AIR BILL NO. SEE PTR 7995 4576 3350			

MATRIX*	PRESERVATION	ZnAc+NaOH to pH > 9
A=Air	HOLDING TIME	7 Days
DJ=Drum	TYPE OF CONTAINER	G/P
Liquids	NO. OF CONTAINER(S)	1
DS=Drum	VOLUME	1L
Solids	SAMPLE ANALYSIS	376.1 DISSOLVED SULFIDE; COMMON;
L=Liquid	SAMPLE DATE	APR 16 2013
O=Oil	SAMPLE TIME	1308
S=Soil	SPECIAL HANDLING AND/OR STORAGE	WATER
SE=Sediment		✓
T=Tissue		
V=Vegetation		
W=Water		
WI=Wipe		
X=Other		

SPECIAL INSTRUCTIONS		SPECIAL INSTRUCTIONS	
FILTER SAMPLE; The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-13-049		TRVL-13-049	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
<i>E Kauer</i>	APR 16 2013 1400	SSU-1	APR 16 2013 1400
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SSU-1	APR 17 2013 0740	<i>Jessie Aguilar</i>	APR 17 2013 0740
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
<i>Kean Aguilar</i>	APR 17 2013 1400	PEDEX	APR 17 2013 1400
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
<i>Jessie Aguilar</i>	APR 17 2013 1400	<i>Brian Aguilar</i>	APR 17 2013 1400
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SSU-1	APR 17 2013 1400	PEDEX	APR 17 2013 1400
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SSU-1	APR 17 2013 1400	PEDEX	APR 17 2013 1400
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SSU-1	APR 17 2013 1400	PEDEX	APR 17 2013 1400
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SSU-1	APR 17 2013 1400	PEDEX	APR 17 2013 1400
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SSU-1	APR 17 2013 1400	PEDEX	APR 17 2013 1400
LABORATORY SECTION	TITLE		DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSED BY		DATE/TIME



CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FL3-012-066	PAGE 1 OF 1
COLLECTOR E Kauer	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7B	DATA TURNAROUND 7 Days / 15 Days
SAMPLING LOCATION 289-T, Post FBR-A, valve V17-Y40A1 DAY 1	PROJECT DESIGNATION 200W Pump & Treat - FBR Water Sampling	FIELD LOGBOOK NO. HNF-N-4919 pg 75	SAF NO. F13-012	AIR QUALITY <input type="checkbox"/>	METHOD OF SHIPMENT FEDERAL EXPRESS
ICE CHEST NO. GWS-189-02	ACTUAL SAMPLE DEPTH N/A	OFFSITE PROPERTY NO. SEE PTR	COA 303110ES10	ORIGINAL	
SHIPPED TO TestAmerica St. Louis	BILL OF LADING/AIR BILL NO. SEE PTR 7995 4576 3350				

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WF=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/REMARKS **Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.**	PRESERVATION H2504 to pH <2/Cool~4C	HOLDING TIME 28 Days	TYPE OF CONTAINER G/P	NO. OF CONTAINER(S) 1	VOLUME 250mL	SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SAMPLE DATE APR 16 2013	SAMPLE TIME 1308	✓
SPECIAL HANDLING AND/OR STORAGE										
SAMPLE NO. B2P7H9	MATRIX* WATER									

CHAIN OF POSSESSION		SIGN/PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM E Kauer	DATE/TIME APR 16 2013 1400	RECEIVED BY/STORED IN SSU-1	DATE/TIME APR 16 2013 1400	FILTER SAMPLE; The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-13-049 (1) 351.2_TOTAL DISSOLVED NITROGEN_KJELDAHL: COMMON;	
RELINQUISHED BY/REMOVED FROM SSU-1	DATE/TIME APR 17 2013 0500	RECEIVED BY/STORED IN <i>Juan Aguilera</i>	DATE/TIME APR 17 2013 0740	TRVL-13-049	
RELINQUISHED BY/REMOVED FROM <i>Juan Aguilera</i>	DATE/TIME APR 17 2013 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME APR 17 2013 1400		
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		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD		DISPOSED BY		



CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F13-012-067	PAGE 1 OF 1
COLLECTOR <i>E. Kauer</i>	51375	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7B
SAMPLING LOCATION 289-T, Post FBR-A, valve V17-Y40A1 DAY 1		PROJECT DESIGNATION 200W Pump & Treat - FBR Water Sampling		SAF NO. F13-012	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO. GWS-185-02		FIELD LOGBOOK NO. HNF-N-4919 pg 75	ACTUAL SAMPLE DEPTH N/A	COA 303110ES10	METHOD OF SHIPMENT FEDERAL EXPRESS
SHIPPED TO TestAmerica St. Louis		OFFSITE PROPERTY NO. SEE PTR		BILL OF LADING/AIR BILL NO. SEE PTR 7995 4576 3350	

MATRIX*	PRESERVATION	H2SO4 to pH <2/(Cool-4C)	Cool-4C	Cool-4C
POSSIBLE SAMPLE HAZARDS/ REMARKS **Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/1ATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. **	PRESERVATION 28 Days 7 Days 7 Days	28 Days 7 Days 7 Days	Cool-4C 7 Days 7 Days	Cool-4C 7 Days 7 Days
	HOLDING TIME G/P	G/P	P	G/P
	TYPE OF CONTAINER 1	1	1	1
	NO. OF CONTAINER(S) 250mL	250mL	500mL	500mL
	VOLUME 351.2_TOTAL NITROGEN_LKE DAHL: COMMON;	351.2_TOTAL NITROGEN_LKE DAHL: COMMON;	160.4_TOTAL_V OLATILE SOLID S: COMMON;	160.2_TSS: COMMON;
SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SAMPLE DATE APR 16 2013	SAMPLE TIME 1306	<input checked="" type="checkbox"/>
SAMPLE NO. B2P7J0	MATRIX* WATER	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM <i>E. Kauer</i>	DATE/TIME APR 16 2013 1400	RECEIVED BY/STORED IN SSU-1	DATE/TIME APR 16 2013 1400
RELINQUISHED BY/REMOVED FROM SSU-1	DATE/TIME APR 17 2013 0740	RECEIVED BY/STORED IN <i>Juan Aguilar</i>	DATE/TIME APR 17 2013 0740
RELINQUISHED BY/REMOVED FROM <i>Juan Aguilar</i>	DATE/TIME APR 17 2013 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN <i>Brian James B-J</i>	DATE/TIME 4/18/13 0800
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

TRVL-13-049



IMPORTANT!
Service in Boston has been resumed. Learn More



799545763350			
Ship (P/U) date : Wed 4/17/2013 3:59 pm RICHLAND, WA US	<p>Delivered <i>Signed for by: R.CASTILLO</i></p>	Actual delivery : Thur 4/18/2013 8:33 am EARTH CITY, MO US	
Travel History			
Date/Time	Activity	Location	
- 4/18/2013 - Thursday			
8:33 am	Delivered	EARTH CITY, MO	
7:21 am	On FedEx vehicle for delivery	EARTH CITY, MO	
7:15 am	At local FedEx facility	EARTH CITY, MO	
5:03 am	At destination sort facility	BERKELEY, MO	
4:17 am	Departed FedEx location	MEMPHIS, TN	
1:00 am	Arrived at FedEx location	MEMPHIS, TN	
- 4/17/2013 - Wednesday			
5:11 pm	Left FedEx origin facility	PASCO, WA	
3:59 pm	Picked up	PASCO, WA	
11:37 am	Shipment information sent to FedEx		
		Local Scan Time	
Shipment Facts			
Tracking number	799545763350	Service	FedEx Priority Overnight
Weight	59 lbs	Dimensions	16x16x17 in.
Delivered To	Shipping/Receiving	Total pieces	1
Total shipment weight	59 lbs / 26.8 kgs	Shipper reference	GWS-189-02
Packaging	Your Packaging	Special handling section	Deliver Weekday



Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-2132-1

SDG Number: SL1375

Login Number: 2132

List Number: 1

Creator: Daniels, Brian

List Source: TestAmerica St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Qualifiers

General Chemistry

Qualifier	Qualifier Description
U	Analyzed for but not detected.
N	MS, MSD: Spike recovery exceeds upper or lower control limits.
B	Estimated result. Result is less than the RL, but greater than MDL
C	The analyte was detected in both the sample and the associated QC blank, and the sample concentration was \leq 5X the blank concentration.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: CH2M Hill Plateau Remediation Company
Project/Site: F13-012

TestAmerica Job ID: 160-2132-1
SDG: SL1375

Method	Method Description	Protocol	Laboratory
160.2	Solids, Total Suspended (TSS)	MCAWW	TAL SL
160.4	Solids, Total Volatile (TVS)	MCAWW	TAL SL
351.2	Nitrogen, Total Kjeldahl	MCAWW	TAL SL
376.1	Sulfide	MCAWW	TAL SL

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



APRIL 25, 2013
Sample Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F13-012

TestAmerica Job ID: 160-2132-1
SDG: SL1375

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-2132-1	B2P7F4	Water	04/16/13 13:00	04/18/13 08:30
160-2132-2	B2P7F5	Water	04/16/13 13:00	04/18/13 08:30
160-2132-3	B2P7F7	Water	04/16/13 13:00	04/18/13 08:30
160-2132-4	B2P7F8	Water	04/16/13 13:00	04/18/13 08:30
160-2132-5	B2P7H0	Water	04/16/13 13:15	04/18/13 08:30
160-2132-6	B2P7H1	Water	04/16/13 13:15	04/18/13 08:30
160-2132-7	B2P7H3	Water	04/16/13 13:15	04/18/13 08:30
160-2132-8	B2P7H4	Water	04/16/13 13:15	04/18/13 08:30
160-2132-9	B2P7H6	Water	04/16/13 13:08	04/18/13 08:30
160-2132-10	B2P7H7	Water	04/16/13 13:08	04/18/13 08:30
160-2132-11	B2P7H9	Water	04/16/13 13:08	04/18/13 08:30
160-2132-12	B2P7J0	Water	04/16/13 13:08	04/18/13 08:30

APRIL 25, 2013
Detection Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F13-012

TestAmerica Job ID: 160-2132-1
SDG: SL1375

Client Sample ID: B2P7F4

Lab Sample ID: 160-2132-1

No Detections.

Client Sample ID: B2P7F5

Lab Sample ID: 160-2132-2

No Detections.

Client Sample ID: B2P7F7

Lab Sample ID: 160-2132-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrogen, Kjeldahl	0.38	B N C	0.50	0.059	mg/L	1		351.2	Dissolved

Client Sample ID: B2P7F8

Lab Sample ID: 160-2132-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	11.0		4.0	4.0	mg/L	1		160.2	Total/NA
Total Volatile Solids	153		5.0	5.0	mg/L	1		160.4	Total/NA
Nitrogen, Kjeldahl	0.51	N	0.50	0.059	mg/L	1		351.2	Total/NA

Client Sample ID: B2P7H0

Lab Sample ID: 160-2132-5

No Detections.

Client Sample ID: B2P7H1

Lab Sample ID: 160-2132-6

No Detections.

Client Sample ID: B2P7H3

Lab Sample ID: 160-2132-7

No Detections.

Client Sample ID: B2P7H4

Lab Sample ID: 160-2132-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Volatile Solids	173		5.0	5.0	mg/L	1		160.4	Total/NA

Client Sample ID: B2P7H6

Lab Sample ID: 160-2132-9

No Detections.

Client Sample ID: B2P7H7

Lab Sample ID: 160-2132-10

No Detections.

Client Sample ID: B2P7H9

Lab Sample ID: 160-2132-11

No Detections.

Client Sample ID: B2P7J0

Lab Sample ID: 160-2132-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	9.0		4.0	4.0	mg/L	1		160.2	Total/NA
Total Volatile Solids	249		5.0	5.0	mg/L	1		160.4	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica St. Louis

APRIL 25, 2013
Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F13-012

TestAmerica Job ID: 160-2132-1
SDG: SL1375

General Chemistry

Client Sample ID: B2P7F4
Date Collected: 04/16/13 13:00
Date Received: 04/18/13 08:30

Lab Sample ID: 160-2132-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	0.45	U	1.0	0.45	mg/L			04/19/13 12:55	1

Client Sample ID: B2P7F8
Date Collected: 04/16/13 13:00
Date Received: 04/18/13 08:30

Lab Sample ID: 160-2132-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	11.0		4.0	4.0	mg/L			04/19/13 12:21	1
Total Volatile Solids	153		5.0	5.0	mg/L			04/23/13 14:36	1
Nitrogen, Kjeldahl	0.51	N	0.50	0.059	mg/L		04/23/13 13:30	04/24/13 14:02	1

Client Sample ID: B2P7H0
Date Collected: 04/16/13 13:15
Date Received: 04/18/13 08:30

Lab Sample ID: 160-2132-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	0.45	U	1.0	0.45	mg/L			04/19/13 12:55	1

Client Sample ID: B2P7H4
Date Collected: 04/16/13 13:15
Date Received: 04/18/13 08:30

Lab Sample ID: 160-2132-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	4.0	mg/L			04/19/13 12:21	1
Total Volatile Solids	173		5.0	5.0	mg/L			04/23/13 14:36	1
Nitrogen, Kjeldahl	0.059	U N	0.50	0.059	mg/L		04/23/13 13:30	04/24/13 14:09	1

Client Sample ID: B2P7H6
Date Collected: 04/16/13 13:08
Date Received: 04/18/13 08:30

Lab Sample ID: 160-2132-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	0.45	U	1.0	0.45	mg/L			04/19/13 12:55	1

Client Sample ID: B2P7J0
Date Collected: 04/16/13 13:08
Date Received: 04/18/13 08:30

Lab Sample ID: 160-2132-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	9.0		4.0	4.0	mg/L			04/19/13 12:21	1
Total Volatile Solids	249		5.0	5.0	mg/L			04/23/13 14:36	1
Nitrogen, Kjeldahl	0.059	U N	0.50	0.059	mg/L		04/23/13 13:30	04/24/13 14:16	1

General Chemistry - Dissolved

Client Sample ID: B2P7F5
Date Collected: 04/16/13 13:00
Date Received: 04/18/13 08:30

Lab Sample ID: 160-2132-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	0.45	U	1.0	0.45	mg/L			04/19/13 12:55	1

Client Sample ID: B2P7F7
Date Collected: 04/16/13 13:00
Date Received: 04/18/13 08:30

Lab Sample ID: 160-2132-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	0.38	B N C	0.50	0.059	mg/L		04/23/13 13:30	04/24/13 13:52	1

TestAmerica St. Louis

~~APRIL 25, 2013~~
Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F13-012

TestAmerica Job ID: 160-2132-1
SDG: SL1375

General Chemistry - Dissolved

Client Sample ID: B2P7H1
Date Collected: 04/16/13 13:15
Date Received: 04/18/13 08:30

Lab Sample ID: 160-2132-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	0.45	U	1.0	0.45	mg/L			04/19/13 12:55	1

Client Sample ID: B2P7H3
Date Collected: 04/16/13 13:15
Date Received: 04/18/13 08:30

Lab Sample ID: 160-2132-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	0.059	U N	0.50	0.059	mg/L		04/23/13 13:30	04/24/13 14:05	1

Client Sample ID: B2P7H7
Date Collected: 04/16/13 13:08
Date Received: 04/18/13 08:30

Lab Sample ID: 160-2132-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	0.45	U	1.0	0.45	mg/L			04/19/13 12:55	1

Client Sample ID: B2P7H9
Date Collected: 04/16/13 13:08
Date Received: 04/18/13 08:30

Lab Sample ID: 160-2132-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	0.059	U N	0.50	0.059	mg/L		04/23/13 13:30	04/24/13 14:12	1

Client: CH2M Hill Plateau Remediation Company
Project/Site: F13-012

TestAmerica Job ID: 160-2132-1
SDG: SL1375

Method: 160.2 - Solids, Total Suspended (TSS)

Lab Sample ID: MB 160-46914/1
Matrix: Water
Analysis Batch: 46914

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	4.0	mg/L	-		04/19/13 12:21	1

Lab Sample ID: LCS 160-46914/2
Matrix: Water
Analysis Batch: 46914

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	500	457.0		mg/L	-	91	66 - 127

Lab Sample ID: 160-2132-4 DU
Matrix: Water
Analysis Batch: 46914

Client Sample ID: B2P7F8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	11.0		11.00		mg/L	-	0	20

Method: 160.4 - Solids, Total Volatile (TVS)

Lab Sample ID: MB 160-47355/1
Matrix: Water
Analysis Batch: 47355

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Volatile Solids	5.0	U	5.0	5.0	mg/L	-		04/23/13 14:36	1

Lab Sample ID: 160-2132-4 DU
Matrix: Water
Analysis Batch: 47355

Client Sample ID: B2P7F8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Volatile Solids	153		157.0		mg/L	-	3	20

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 160-47376/1-A
Matrix: Water
Analysis Batch: 47594

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 47376

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	0.101	B	0.50	0.059	mg/L	-	04/23/13 13:30	04/24/13 13:45	1

Lab Sample ID: LCS 160-47376/2-A
Matrix: Water
Analysis Batch: 47594

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 47376

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrogen, Kjeldahl	2.50	2.35		mg/L	-	94	90 - 110

Client: CH2M Hill Plateau Remediation Company
Project/Site: F13-012

TestAmerica Job ID: 160-2132-1
SDG: SL1375

Method: 351.2 - Nitrogen, Total Kjeldahl (Continued)

Lab Sample ID: 160-2132-3 MS
Matrix: Water
Analysis Batch: 47594

Client Sample ID: B2P7F7
Prep Type: Dissolved
Prep Batch: 47376

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier		Result	Qualifier				
Nitrogen, Kjeldahl	0.38	B N C	2.50	2.51	N	mg/L		85	90 - 110

Lab Sample ID: 160-2136-A-7-B MS
Matrix: Water
Analysis Batch: 47594

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 47376

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier		Result	Qualifier				
Nitrogen, Kjeldahl	0.68	N	2.50	2.64	N	mg/L		78	90 - 110

Lab Sample ID: 160-2132-3 DU
Matrix: Water
Analysis Batch: 47594

Client Sample ID: B2P7F7
Prep Type: Dissolved
Prep Batch: 47376

Analyte	Sample	Sample	Spike	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier		Result	Qualifier				
Nitrogen, Kjeldahl	0.38	B N C		0.629	C N	mg/L		50	20

Method: 376.1 - Sulfide

Lab Sample ID: MB 160-46922/1
Matrix: Water
Analysis Batch: 46922

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil
	Result	Qualifier							
Sulfide	0.45	U	1.0	0.45	mg/L			04/19/13 12:55	1

Lab Sample ID: LCS 160-46922/2
Matrix: Water
Analysis Batch: 46922

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
Sulfide	10.1	9.99		mg/L		99	90 - 110

Lab Sample ID: 160-2132-1 MS
Matrix: Water
Analysis Batch: 46922

Client Sample ID: B2P7F4
Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier		Result	Qualifier				
Sulfide	0.45	U	10.1	9.79		mg/L		97	90 - 110

Lab Sample ID: 160-2132-1 DU
Matrix: Water
Analysis Batch: 46922

Client Sample ID: B2P7F4
Prep Type: Total/NA

Analyte	Sample	Sample	Spike	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier		Result	Qualifier				
Sulfide	0.45	U		0.45	U	mg/L		NC	20

Client: CH2M Hill Plateau Remediation Company
Project/Site: F13-012

TestAmerica Job ID: 160-2132-1
SDG: SL1375

Method: 376.1 - Sulfide (Continued)

Lab Sample ID: 160-2132-2 MS
Matrix: Water
Analysis Batch: 46922

Client Sample ID: B2P7F5
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.45	U	10.1	9.89		mg/L		98	90 - 110

Lab Sample ID: 160-2132-2 DU
Matrix: Water
Analysis Batch: 46922

Client Sample ID: B2P7F5
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfide	0.45	U	0.45	U	mg/L		NC	20

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- 2
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Client: CH2M Hill Plateau Remediation Company
Project/Site: F13-012

TestAmerica Job ID: 160-2132-1
SDG: SL1375

General Chemistry

Analysis Batch: 46914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-2132-4	B2P7F8	Total/NA	Water	160.2	
160-2132-4 DU	B2P7F8	Total/NA	Water	160.2	
160-2132-8	B2P7H4	Total/NA	Water	160.2	
160-2132-12	B2P7J0	Total/NA	Water	160.2	
LCS 160-46914/2	Lab Control Sample	Total/NA	Water	160.2	
MB 160-46914/1	Method Blank	Total/NA	Water	160.2	

Analysis Batch: 46922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-2132-1	B2P7F4	Total/NA	Water	376.1	
160-2132-1 DU	B2P7F4	Total/NA	Water	376.1	
160-2132-1 MS	B2P7F4	Total/NA	Water	376.1	
160-2132-2	B2P7F5	Dissolved	Water	376.1	
160-2132-2 DU	B2P7F5	Dissolved	Water	376.1	
160-2132-2 MS	B2P7F5	Dissolved	Water	376.1	
160-2132-5	B2P7H0	Total/NA	Water	376.1	
160-2132-6	B2P7H1	Dissolved	Water	376.1	
160-2132-9	B2P7H6	Total/NA	Water	376.1	
160-2132-10	B2P7H7	Dissolved	Water	376.1	
LCS 160-46922/2	Lab Control Sample	Total/NA	Water	376.1	
MB 160-46922/1	Method Blank	Total/NA	Water	376.1	

Analysis Batch: 47355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-2132-4	B2P7F8	Total/NA	Water	160.4	
160-2132-4 DU	B2P7F8	Total/NA	Water	160.4	
160-2132-8	B2P7H4	Total/NA	Water	160.4	
160-2132-12	B2P7J0	Total/NA	Water	160.4	
MB 160-47355/1	Method Blank	Total/NA	Water	160.4	

Prep Batch: 47376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-2132-3	B2P7F7	Dissolved	Water	351.2	
160-2132-3 DU	B2P7F7	Dissolved	Water	351.2	
160-2132-3 MS	B2P7F7	Dissolved	Water	351.2	
160-2132-4	B2P7F8	Total/NA	Water	351.2	
160-2132-7	B2P7H3	Dissolved	Water	351.2	
160-2132-8	B2P7H4	Total/NA	Water	351.2	
160-2132-11	B2P7H9	Dissolved	Water	351.2	
160-2132-12	B2P7J0	Total/NA	Water	351.2	
160-2136-A-7-B MS	Matrix Spike	Dissolved	Water	351.2	
LCS 160-47376/2-A	Lab Control Sample	Total/NA	Water	351.2	
MB 160-47376/1-A	Method Blank	Total/NA	Water	351.2	

Analysis Batch: 47594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-2132-3	B2P7F7	Dissolved	Water	351.2	47376
160-2132-3 DU	B2P7F7	Dissolved	Water	351.2	47376
160-2132-3 MS	B2P7F7	Dissolved	Water	351.2	47376
160-2132-4	B2P7F8	Total/NA	Water	351.2	47376
160-2132-7	B2P7H3	Dissolved	Water	351.2	47376

TestAmerica St. Louis



APRIL 25, 2013
QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F13-012

TestAmerica Job ID: 160-2132-1
SDG: SL1375

General Chemistry (Continued)

Analysis Batch: 47594 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-2132-8	B2P7H4	Total/NA	Water	351.2	47376
160-2132-11	B2P7H9	Dissolved	Water	351.2	47376
160-2132-12	B2P7J0	Total/NA	Water	351.2	47376
160-2136-A-7-B MS	Matrix Spike	Dissolved	Water	351.2	47376
LCS 160-47376/2-A	Lab Control Sample	Total/NA	Water	351.2	47376
MB 160-47376/1-A	Method Blank	Total/NA	Water	351.2	47376

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