

DECEMBER 14, 2012

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: 160-913-1

TestAmerica Sample Delivery Group: SL1332

Client Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

For:

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

Attn: General Mailbox

A handwritten signature in black ink, appearing to read "Jayna Awalt".

Authorized for release by:

12/14/2012 11:22:56 AM

Jayna Awalt

Project Manager I

jayna.awalt@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?

Ask
The
Expert

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www.testamericainc.com

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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DECEMBER 14, 2012

Case Narrative

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
SDG: SL1332

Job ID: 160-913-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

CH2MHill Plateau Remediation Company

P.O. Box 1600

MS B3-60

Richland, Washington 99352

December 14, 2012

Attention: Scot Fitzgerald

SDG : SL1332

Number of Samples : 11 samples

Sample Matrix : Water

Data Deliverable : Summary

Date SDG Closed : November 15, 2012

II. Introduction

Between November 14, 2012 and November 15, 2012, 11 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: I13-007, W13-011, I13-005

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.

Job ID: 160-913-1 (Continued)**Laboratory: TestAmerica St. Louis (Continued)**

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 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.

Pesticides**Batch: 17433/19880**

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 17433. MS/MSD was performed using half volume.

The laboratory control sample (LCS) associated with batch 17433 was outside acceptance criteria for 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, alpha-BHC, Dieldrin, Endosulfan sulfate, Endrin, gamma-BHC, and Heptachlor epoxide. The samples are now outside 2x hold time and there is insufficient sample volume remaining for re-extraction. The data has been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance. These analytes have been qualified accordingly with an "O" flag in the associated samples.

PAHs**Batch: 17446/20483**

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 17446. MS/MSD was performed using half volume.

Acenaphthene detected in the associated sample B2MXN6 appeared questionable during spectral confirmation. The software used to perform the confirmation of hits reviews an overlay of the sample and the reference library spectra. The software evaluates the differences in the spectra and assigns a "match" value. The match values above 700 are considered a confirmation. The match value for this sample is 77.

Sulfide**Batch: 17468**

Sulfide was detected in method blank MB 160-17468/1 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, the result has been "C" flagged.

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

DECEMBER 14, 2012
Case Narrative

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
SDG: SL1332

Job ID: 160-913-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

contained in this hard copy data package.

Reviewed and approved:

Jayna Awalt
St. Louis Project Manager

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DECEMBER 14, 2012

CH2MHill Plateau Remediation Company		SL4332	
C.R. 475 CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			
C.O.C. # II3-007-007		Page 1 of 1	

Collector	F.M. Hall	Contact/Requester	Karen Waters-Husted
SAF No.	II3-007	Sampling Origin	Hanford Site
Project Title	100NR2, DECEMBER 2012	Logbook No.	HNF-N-506 <u>36/38</u>
Shipped To (Lab)	Test/America St. Louis	Method of Shipment	Commercial Carrier
Protocol	CERCLA	Priority:	30 Days
PRIORITY			

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					
100 Area Generator Knowledge Information Form applies.					Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
The CACN for all analytical work at WSCF is 401647.					
FY12 and FY13 samples cannot be in the same SD					
Sample Analysis					
Sample No.	Filter	*	Date	Time	No/Type Container
B2MXM5	N	W	11/12/12	1200	2x1-L aG
B2MXM5	N	W			2x1-L aG
B2MXM5	N	W			1x20-mL P
					Activity Scan

Relinquished By F.M. Hall	Print <i>F.M. Hall</i>	Sign <i>F.M. Hall</i>	Date/Time 1336	Received By <i>SSU #1</i>	Print <i>SSU #1</i>	Sign <i>SSU #1</i>	Date/Time NOV 12 2012	Matrix *
Relinquished By <i>SSU #1</i>	Date/Time 11-13-12 0930	Received By <i>Ed Karen Edwards</i>	Date/Time 11-13-12 0930	SSU #1	Date/Time 11-13-12 0930	Received By <i>Ed Karen Edwards</i>	Date/Time 11-13-12 0930	S = Soil DS = Drum Solids
Relinquished By <i>Ed Karen Edwards</i>	Date/Time 11-13-12 1400	Received By <i>FED-X</i>	Date/Time 11-13-12 1400	ED Karen Edwards	Date/Time 11-13-12 0930	Received By <i>FED-X</i>	Date/Time 11-13-12 0930	SE = Sediment DL = Drum Liquids
Relinquished By <i>FED-X</i>	Date/Time 11-14-12 0930	Received By <i>Steven Clayton</i>	Date/Time 11-14-12 0930	ED Karen Edwards	Date/Time 11-14-12 0930	Received By <i>Steven Clayton</i>	Date/Time 11-14-12 0930	SO = Solid T = Tissue
Relinquished By <i>Steven Clayton</i>	Date/Time 11-14-12 0930	Disposed By <i>Disposal Method (e.g., Return to customer, per lab procedure, used in process)</i>	Date/Time 11-14-12 0930	ED Karen Edwards	Date/Time 11-14-12 0930	Disposed By <i>Disposal Method (e.g., Return to customer, per lab procedure, used in process)</i>	Date/Time 11-14-12 0930	SL = Sludge WI = Wipe
Relinquished By <i>Disposal Method (e.g., Return to customer, per lab procedure, used in process)</i>	Date/Time 11-14-12 0930	Disposed By <i>Disposal Method (e.g., Return to customer, per lab procedure, used in process)</i>	Date/Time 11-14-12 0930	ED Karen Edwards	Date/Time 11-14-12 0930	Disposed By <i>Disposal Method (e.g., Return to customer, per lab procedure, used in process)</i>	Date/Time 11-14-12 0930	W = Water L = Liquid
Relinquished By <i>Disposal Method (e.g., Return to customer, per lab procedure, used in process)</i>	Date/Time 11-14-12 0930	Disposed By <i>Disposal Method (e.g., Return to customer, per lab procedure, used in process)</i>	Date/Time 11-14-12 0930	ED Karen Edwards	Date/Time 11-14-12 0930	Disposed By <i>Disposal Method (e.g., Return to customer, per lab procedure, used in process)</i>	Date/Time 11-14-12 0930	O = Oil V = Vegetation
Relinquished By <i>Disposal Method (e.g., Return to customer, per lab procedure, used in process)</i>	Date/Time 11-14-12 0930	Disposed By <i>Disposal Method (e.g., Return to customer, per lab procedure, used in process)</i>	Date/Time 11-14-12 0930	ED Karen Edwards	Date/Time 11-14-12 0930	Disposed By <i>Disposal Method (e.g., Return to customer, per lab procedure, used in process)</i>	Date/Time 11-14-12 0930	A = Air X = Other

DECEMBER 14, 2012

CH2MHill Plateau Remediation Company	SL1332
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CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

c.o.c. # **113-007-008**

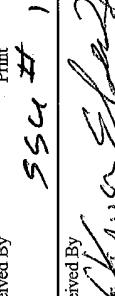
Page 1 of 1

Collector	F.M. Hall	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	113-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	30007IES20
Project Title	100NR2, DECEMBER 2012	Logbook No.	HNF-N-506 <u>36 / 38</u>	Ice Chest No.	<u>6-11-13-72</u> <u>6-12-5</u> <u>6-12-6</u> / 58
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No. <u>794D63440940</u>	
Protocol	CERCLA	Priority:	30 Days	PRIORITY	Offsite Property No.

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 <input checked="" type="checkbox"/> No <input type="checkbox"/>
100 Area Generator Knowledge Information Form applies.								
The CACN for all analytical work at WSCF is 401647.								
FY12 and FY13 samples cannot be in the same SD								
Sample No.	Filter *	Date	Time	No/Type Container	Sample Analysis		Holding Time	Preservative
B2MXM6	N	W	11/12/12	1200	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B2MXM6	N	W			2x1-L aG	8310_SVOA_HPLC	7/40 Days	Cool~4C
B2MXM6	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
F.M. Hall		NOV 12 2012	11-17-12 0910	Karen Waters-Husted		NOV 12 2012	11-13-12 0830	S = Soil DS = Drum Solids
Relinquished By			Date/Time				Date/Time	SE = Sediment DL = Drum Liquids
								SO = Solid T = Tissue
Relinquished By			Date/Time					SL = Sludge WI = Wipe
								L = Liquid
Relinquished By			Date/Time					W = Water O = Oil V = Vegetation
								A = Air X = Other
Relinquished By			Date/Time					

Disposed By **Tek EX** Date/Time **11-14-12 0930**

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

DECEMBER 14, 2012

CH2MHill Plateau Remediation Company		SL332		475 WIP CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				
Collector F. M. Hall		Contact/Requester Karen Waters-Husted		Telephone No. 376-4650	Page 1 of 1			
SAF No.	I13-007	Sampling Origin Hanford Site		Purchase Order/Charge Code 300071ES20				
Project Title	100NR2, DECEMBER 2012	Logbook No. HNF-N-506 20/38		Ice Chest No. GWS 166				
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment Commercial Carrier		Bill of Lading/Air Bill No. 7940 6333/1829				
Protocol	CERCLA	Priority: 30 Days	PRIORITY	Offsite Property No.				
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 100 Area Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647. FY12 and FY13 samples cannot be in the same SD		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Sample No.	Filter *	Date	Time	No/Type Container	Sample Analysis	Hold Time	Holding Time	Preservative
B2MXN6	N W	11/12/12	0800	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C	
B2MXN6	N W			2x1-L aG	8310_SVOA_HPLC	7/40 Days	Cool~4C	
B2MXN6	N W			1x20-mL P	Activity Scan	6 Months	None	

A-6004-842 (REV 2)

**CH2MHill Plateau Remediation
Company**

SL1332

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

		C.O.C. #	
		113-007-010	
		Page 1 of 1	

Collector	F. M. Hall	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	113-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	100NR2, DECEMBER 2012	Logbook No.	HNF-N-506 <u>36/38</u>	Ice Chest No.	<u>6125 160</u> 158 70163
Shipped To (Lab)	<u>TestAmerica St. Louis</u>	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	<u>794063440940</u>
Protocol	CERCLA	Priority:	30 Days	PRIORITY	Offsite Property No.

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)

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MXN7	N	W	11/12/12	1045	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B2MXN7	N	W			2x1-L aG	8310_SVOA_HPLC	7/40 Days	Cool~4C
B2MXN7	N	W			1x20-mL P	Activity Scan	6 Months	None

** ** 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).
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.
FY12 and FY13 samples cannot be in the same SD

DECEMBER 14, 2012

Relinquished By	F. M. Hall	Print	NOV 12 2012	Date/Time	1334	Received By	SSU 41	Print	NOV 12 2012	Date/Time	1334	Matrix *
Relinquished By	SSU #1	Date/Time	11-13-12 0910	Received By	Edith Clark	Date/Time	11-13-12 0930	Received By	FED-X	Date/Time	11-13-12 0930	S = Soil
Relinquished By	Edith Clark	Date/Time	11-13-12 1400	Received By	FED-X	Date/Time	11-14-12 0930	Received By	Steven Clark	Date/Time	11-14-12 0930	SE = Sediment
Relinquished By	12/14/2012	Disposed By	FedEx	Disposed By	Steven Clark	Disposed By	12/14/2012	Disposed By	12/14/2012	Disposed By	12/14/2012	DS = Drum Solids
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)											DL = Drum Liquids
PRINTED O 10/24/2012												T = Tissue
												WI = Wipe
												L = Liquid
												O = Oil V = Vegetation
												A = Air X = Other

IMPORTANT!FedEx returns to normal operations in the Northeast. [Learn More](#)

794063331829

Ship (P/U) date :
Tues 11/13/2012 4:01 pm

RICHLAND, WA US

Delivered
Signed for by: B.DANIELSActual delivery :
Wed 11/14/2012 9:26 am

EARTH CITY, MO US

Travel History**Date/Time** **Activity****Location**

~ 11/14/2012 - Wednesday

9:26 am	Delivered	EARTH CITY, MO
7:48 am	On FedEx vehicle for delivery	EARTH CITY, MO
7:41 am	At local FedEx facility	EARTH CITY, MO
5:09 am	At destination sort facility	BERKELEY, MO
4:25 am	Departed FedEx location	MEMPHIS, TN
12:12 am	Arrived at FedEx location	MEMPHIS, TN

~ 11/13/2012 - Tuesday

5:07 pm	Left FedEx origin facility	PASCO, WA
4:01 pm	Picked up	PASCO, WA
1:12 pm	Shipment information sent to FedEx	

Local Scan Time

Shipment Facts

Tracking number	794063331829	Service	FedEx Priority Overnight
Weight	78 lbs	Delivered To	Shipping/Receiving
Total pieces	1	Total shipment weight	78 lbs / 35.4 kgs
Shipper reference	GWS-166	Packaging	Your Packaging
Special handling section	Deliver Weekday		

IMPORTANT!FedEx returns to normal operations in the Northeast. [Learn More](#)

794063440940

Ship (P/U) date :
Tues 11/13/2012 4:01 pmActual delivery :
Wed 11/14/2012 9:26 am

RICHLAND, WA US

EARTH CITY, MO US

Delivered
Signed for by: B.DANIELS**Travel History****Date/Time** **Activity****Location**

~ 11/14/2012 - Wednesday

9:26 am	Delivered	EARTH CITY, MO
7:42 am	On FedEx vehicle for delivery	EARTH CITY, MO
7:36 am	At local FedEx facility	EARTH CITY, MO
5:09 am	At destination sort facility	BERKELEY, MO
4:25 am	Departed FedEx location	MEMPHIS, TN

~ 11/13/2012 - Tuesday

5:07 pm	Left FedEx origin facility	PASCO, WA
4:01 pm	Picked up	PASCO, WA
1:18 pm	Shipment information sent to FedEx	

Local Scan Time

Shipment Facts

Tracking number	794063440940	Service	FedEx Priority Overnight
Weight	70 lbs	Delivered To	Shipping/Receiving
Total pieces	1	Total shipment weight	70 lbs / 31.8 kgs
Shipper reference	GWS-158	Packaging	Your Packaging
Special handling section	Deliver Weekday		

DECEMBER 14, 2012

Lot #(s): 160-912

160-913

160-914

CUR Form #: 4 7 5

CONDITION UPON RECEIPT FORM

Client: CHPRC

Quote No:

COC/RFA No: S13-010-738, I13-007-007, 009 See notes

Initiated By: SC



11-14-12 SC

160-914

160-914

Date: 11-14-12

Time: 09:30

Shipping Information

Shipper: FedEx

UPS

DHL

Courier

Client

Other:

Multiple Packages:

Y

N

Shipping # (s):*

1. 7940 6582 510
2. 7940 6333 1629
3. 7940 6341 0940
4. 7940 6345 9206
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Sample Temperature (s):**

Y

N

1. ambient

6.

2. 3

7.

3. Z

8.

4. Z

9.

5.

10.

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C. If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <input checked="" type="radio"/> Y N	Are there custody seals present on the cooler?	8. <input checked="" type="radio"/> Y N	Are there custody seals present on bottles?
2. Y <input type="radio"/> N N/A	Do custody seals on cooler appear to be tampered with?	9. Y <input checked="" type="radio"/> N N/A	Do custody seals on bottles appear to be tampered with?
3. <input checked="" type="radio"/> Y N	Were contents of cooler frisked after opening, but before unpacking?	10. <input checked="" type="radio"/> Y N N/A	Was sample received with proper pH? (If not, make note below)
4. <input checked="" type="radio"/> Y N	Sample received with Chain of Custody?	11. Y N <input checked="" type="radio"/> N/A	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. <input checked="" type="radio"/> Y N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <input checked="" type="radio"/> Y N	Sample received in proper containers?
6. Y <input checked="" type="radio"/> N	Was sample received broken?	13. Y N <input checked="" type="radio"/> N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <input checked="" type="radio"/> Y N	Is sample volume sufficient for analysis?	14. Y N <input checked="" type="radio"/> N/A	Was Internal COC/Workshare received?

For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

COCs S13-010-738, I13-007-007, W13-011-051
 -009, -052
 -008, -058
 -010

Corrective Action:

- Client Contact Name:
- Sample(s) processed "as is"
- Sample(s) on hold until:

Informed by: _____

If released, notify:

Date: 11-14-12

Project Management Review: *Jayna Awalt*

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

ADMIN-0004 rev13, REVISED 05/27/11 \\SISvr01\QA\FORMS\ST-Louis\ADMIN\Admin-0004 CUR.doc

DECEMBER 14, 2012

CH2MHill Plateau Remediation Company	SLU332
CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	
C.O.C.# W13-011-051	
Page 1 of 1	

Collector B.E. Briggs CHPRC	Contact Requester Karen Waters-Husted	Telephone No. 376-4650
SAF No. W13-011	Sampling Origin Hanford Site	Purchase Order/Charge Code 300071ES20
Project Title RCRA, NOVEMBER 2012	Logbook No. HNF-N-506 51 / 42	Ice Chest No. GWS-004
Shipped To (Lab) TestAmerica St. Louis	Method of Shipment Commercial Carrier	Bill of Lading/Air Bill No. 794063459206
Protocol RCRA	Priority: 30 Days	PRIORITY Offsite Property No.

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)

FY12 and FY13 samples cannot be in the same SDG.

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
B2MN41	N	W	11-12-12	1157	2x1-L aG	8081_PEST_GC: List-1 (19)	Cool~4C
B2MN41	N	W	✓	Y	3x500-mL G/P	9030_SULFIDE: Sulfide (1)	7 Days
B2MN41	N	W	11-12-12	1157	1x20-mL P	Activity Scan	6 Months

Relinquished By B.E. Briggs CHPRC	Date/Time 11-13-12	Print NOV 12 2012 1330	Received By ElKhar El-Ghoul	Date/Time 11-13-12 0930	Sign NOV 12 2012 1330	Date/Time NOV 12 2012 1330	Matrix *
Relinquished By SS UTH	Date/Time 11-13-12	Print NOV 12 2012 1330	Received By ElKhar El-Ghoul	Date/Time 11-13-12 0930	Sign NOV 12 2012 1330	Date/Time NOV 12 2012 1330	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By ElKhar El-Ghoul	Date/Time 11-13-12	Print NOV 12 2012 1330	Received By FedEx-X	Date/Time 11-13-12 1400	Sign NOV 12 2012 1330	Date/Time NOV 12 2012 1330	DS = Dran Solids DL = Dran Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By FedEx	Date/Time 11-14-12	Print NOV 12 2012 1330	Received By Steven Claffey	Date/Time 11-14-12 0930	Sign NOV 12 2012 1330	Date/Time NOV 12 2012 1330	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)						Date/Time 11-16-2012

**CH2MHill Plateau Remediation
Company**

SU332

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

c.o.c. # **W13-011-052**

Page 1 of 1

Collector	B.E. Biggs CHPRC W13-011	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.		Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	RCRA, NOVEMBER 2012	Logbook No.	HNF-N-506 <u>51</u> / <u>44</u>	Ice Chest No.	GWS-004
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	<u>794063459206</u>
Protocol	RCRA	Priority:	30 Days	PRIORITY	Offsite Property No.

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)

FY12 and FY13 samples cannot be in the same SDG.
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
B2MN46	N	W	11-12-12	1107	2x1-L AG	8081_PEST_GC_List-1 (19)	7/40 Days
B2MN46	N	W	11-12-12	1107	3x500-mL G/P	9030_SULFIDE: Sulfide (1)	7 Days
B2MN46	N	W	11-12-12	1107	1x20-mL P	Activity Scan	6 Months

DECEMBER 14, 2012

Relinquished By B.E. Biggs CHPRC	Print <i>B.E. Biggs</i>	Sign <i>B.E. Biggs</i>	Date/Time NOV 12 2012 1330	Received By SL#1	Print <i>SL#1</i>	Sign <i>SL#1</i>	Date/Time NOV 12 2012 1330	Matrix *
Relinquished By SL#1	Date/Time 11-13-12	Received By 0930	Date/Time 11-13-12 0930	Received By <i>Karen Shultz</i>	Date/Time 11-13-12 0930	Received By <i>Karen Shultz</i>	Date/Time 11-13-12 0930	Soil = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By Karen Shultz	Date/Time 11-13-12	Received By 1400	Date/Time 11-13-12 1400	Received By <i>FED-X</i>	Date/Time 11-13-12 1400	Received By <i>FED-X</i>	Date/Time 11-13-12 1400	Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By FED-X	Date/Time 11-14-12	Received By <i>Stevan Clayton</i>	Date/Time 11-14-12 0930	Disposed By <i>Stevan Clayton</i>	Date/Time 11-14-12 0930	Disposed By <i>Stevan Clayton</i>	Date/Time 11-14-12 0930	

PRINTED ON 11/6/2012 Disposal Method (e.g., Return to customer, per lab procedure, used in process)

PRINTED ON 11/6/2012

A-6004-842 (REV 2)

Date/Time

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DECEMBER 14, 2012

CH2MHill Plateau Remediation Company	SL1332	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	
B.E. Briggs CHPRC		c.o.c.# W13-011-058	
Page 1 of 1			

Collector		Contact/Requester	Karen Waters-Husted					
SAF No.	W13-011	Sampling Origin	Hanford Site					
Project Title	RCRA, NOVEMBER 2012	Logbook No.	HNF-N-506 <u>51 / 44</u>					
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier					
Protocol	RCRA	Priority:	30 Days PRIORITY					
POSSIBLE SAMPLE HAZARDS/REMARKS		SPECIAL INSTRUCTIONS FY12 and FY13 samples cannot be in the same SDG. Site Wide Generator Knowledge Information Form applies. The CA CN for all analytical work at WSCF is 401647.						
** 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)								
Sample No.	Filter *	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative	
B2MN74	N	W	11-12-12	0955	2x1-L aG	8081_PEST_GC; List-1 (19)	7/40 Days	Cool~4C
B2MN74	N	W	11-12-12	0955	3x500-mL G/P	9030_SULFIDE; Sulfide (1)	7 Days	ZnAc+NaOH to pH > 9/Cool~4C
B2MN74	N	W	11-12-12	0955	1x20-mL P	Activity Scan	6 Months	None

Sample No.	Filter *	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MN74	N	W	11-12-12	0955	2x1-L aG	8081_PEST_GC; List-1 (19)	7/40 Days
B2MN74	N	W	11-12-12	0955	3x500-mL G/P	9030_SULFIDE; Sulfide (1)	7 Days
B2MN74	N	W	11-12-12	0955	1x20-mL P	Activity Scan	6 Months

Relinquished By B.E. Briggs CHPRC	Date/Time NOV 12 2012 13:30	Received By <u>SDiff</u>	Print <u>SDiff</u>	Date/Time NOV 12 2012 13:30	Sign <u>SDiff</u>	Date/Time NOV 12 2012 13:30	Matrix *
Relinquished By SS U#1	Date/Time 11-13-12 0930	Received By <u>Eck Karen Shaffer</u>	Date/Time 11-13-12 0930	Date/Time 11-13-12 0930	Sign <u>Eck Karen Shaffer</u>	Date/Time 11-13-12 0930	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By Eck Karen Shaffer	Date/Time 11-13-12 1400	Received By <u>FedEx</u>	Date/Time 11-13-12 1400	Date/Time 11-13-12 1400	Sign <u>FedEx</u>	Date/Time 11-13-12 1400	DS = Drun Solids DL = Drun Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By 2012 FINAL SAMPLE DISPOSITION	Disposed By <u>Stewen Clapp</u>						Date/Time 11-14-12 0930

1	2	3	4	5	6	7	8	9	10	11	12	13
PRINTED ON 11/6/2012	A-6004-842 (REV 2)											

IMPORTANT!FedEx returns to normal operations in the Northeast. [Learn More](#)

794063459206

Ship (P/U) date :
Tues 11/13/2012 4:01 pmActual delivery :
Wed 11/14/2012 9:26 am

RICHLAND, WA US

EARTH CITY, MO US

Delivered

Signed for by: B.DANIELS

Travel History**Date/Time** **Activity****Location**

- 11/14/2012 - Wednesday

9:26 am Delivered

EARTH CITY, MO

6:51 am On FedEx vehicle for delivery

EARTH CITY, MO

6:45 am At local FedEx facility

EARTH CITY, MO

5:09 am At destination sort facility

BERKELEY, MO

4:25 am Departed FedEx location

MEMPHIS, TN

12:12 am Arrived at FedEx location

MEMPHIS, TN

- 11/13/2012 - Tuesday

5:07 pm Left FedEx origin facility

PASCO, WA

4:01 pm Picked up

PASCO, WA

1:19 pm Shipment information sent to FedEx

Local Scan Time

Shipment Facts

Tracking number	794063459206	Service	FedEx Priority Overnight
Weight	76 lbs	Delivered To	Shipping/Receiving
Total pieces	1	Total shipment weight	76 lbs / 34.5 kgs
Shipper reference	GWS-004	Packaging	Your Packaging
Special handling section	Deliver Weekday		

DECEMBER 14, 2012

Lot #(s): 160-912

CUR Form #: 4 7 5

160-913

160-914

CONDITION UPON RECEIPT FORM

Client: CHPRC

Quote No:

COC/RFA No: S13-010-738, I13-007-007, 009 See Notes

Initiated By:

SC

11-14-12 SC

Date: 11-14-12

Time: 0930

Shipping Information

Shipper: FedEx

UPS

DHL

Courier

Client

Other:

Multiple Packages:

Y

N

Shipping # (s):*

1. 7940 6582 5110
2. 7940 6333 1629
3. 7940 6341 0946
4. 7940 6345 9206
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Sample Temperature (s):**

1. Ambient
2. 3
3. Z
4. Z
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C. If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <input checked="" type="radio"/> Y N	Are there custody seals present on the cooler?	8. <input checked="" type="radio"/> Y N	Are there custody seals present on bottles?
2. <input checked="" type="radio"/> Y N/A	Do custody seals on cooler appear to be tampered with?	9. <input checked="" type="radio"/> Y N/A	Do custody seals on bottles appear to be tampered with?
3. <input checked="" type="radio"/> Y N	Were contents of cooler frisked after opening, but before unpacking?	10. <input checked="" type="radio"/> Y N N/A	Was sample received with proper pH? (If not, make note below)
4. <input checked="" type="radio"/> Y N	Sample received with Chain of Custody?	11. <input checked="" type="radio"/> Y N N/A	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. <input checked="" type="radio"/> Y N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <input checked="" type="radio"/> Y N	Sample received in proper containers?
6. <input checked="" type="radio"/> Y N	Was sample received broken?	13. <input checked="" type="radio"/> Y N N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <input checked="" type="radio"/> Y N	Is sample volume sufficient for analysis?	14. <input checked="" type="radio"/> Y N N/A	Was Internal COC/Workshare received?

For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

COCs S13-010-738, I13-007-007

W13-011-051

-009
-008
-010-052
-058

Corrective Action:

- Client Contact Name: _____
- Sample(s) processed "as is" _____
- Sample(s) on hold until: _____

Informed by: _____

If released, notify:

Date: 11-14-12

Project Management Review: *Jayna Anhalt*

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

ADMIN-0004 rev13, REVISED 05/27/11 \SISvr01\QA\FORMS\ST-Louis\ADMIN\Admin-0004 CUR.doc

DECEMBER 14, 2012

CH2MHill Plateau Remediation Company	SL 1332	CWR 478 CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		
			c.o.c. #	W13-011-055
			Page 1 of 1	

Collector	Robert Crow	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	W13-011	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	RCRA, NOVEMBER 2012	Logbook No.	HNF-N-506 <u>36 / 39</u>	Ice Chest No.	<u>36W S - 291</u>
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7940 7154 4557
Protocol	RCRA	Priority:	30 Days	PRIORITY	Offsite Property No.
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS		
*** 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)			FY12 and FY13 samples cannot be in the same SDG. 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
B2MN61	N	W <u>11-13-12</u>	<u>0745</u>	2x1-L aG	8081_PEST_GC: List-1 (19)
B2MN61	N	W <u>/</u>	<u>/</u>	3x500-mL G/P	9030_SULFIDE: Sulfide (1)
B2MN61	N	W <u>11-13-12</u>	<u>0745</u>	1x20-mL P	Activity Scan

Sample No.	Filter *	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MN61	N	W <u>11-13-12</u>	<u>0745</u>	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B2MN61	N	W <u>/</u>	<u>/</u>	3x500-mL G/P	9030_SULFIDE: Sulfide (1)	7 Days	ZnAc+NaOH to pH > 9/Cool~4C
B2MN61	N	W <u>11-13-12</u>	<u>0745</u>	1x20-mL P	Activity Scan	6 Months	None

Relinquished By	Print: <u>Robert Crow</u>	Sign: <u>Robert Crow</u>	Date/Time <u>NOV 13 2012</u>	Received By <u>SSU-1</u>	Print: <u>SSU-1</u>	Sign: <u>SSU-1</u>	Date/Time <u>NOV 13 2012</u>	Matrix *
Relinquished By			Date/Time <u>NOV 14 2012</u>	Received By <u>NOV 14 2012 o 740 M4uk + M4uk</u>			Date/Time <u>NOV 14 2012 (D)40</u>	S = Soil
SSU-1				Received By <u>NOV 14 2012 740 M4uk + M4uk</u>				SE = Sediment
Relinquished By			Date/Time <u>NOV 14 2012 740 M4uk + M4uk</u>	Received By <u>NOV 14 2012 FEDIEK</u>			Date/Time <u>NOV 14 2012 (D)40</u>	SO = Solid
FEDIEK				Received By <u>NOV 14 2012 FEDIEK</u>				SL = Sludge
Relinquished By			Date/Time <u>NOV 14 2012 FEDIEK</u>	Received By <u>NOV 14 2012 FEDIEK</u>			Date/Time <u>NOV 14 2012 (D)40</u>	W = Water
FEDIEK				Received By <u>NOV 14 2012 FEDIEK</u>				O = Oil
Relinquished By			Date/Time <u>NOV 14 2012 FEDIEK</u>	Received By <u>NOV 14 2012 FEDIEK</u>			Date/Time <u>NOV 14 2012 (D)40</u>	A = Air
FEDIEK				Received By <u>NOV 14 2012 FEDIEK</u>				X = Other
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)							Date/Time
PRINTED ON 11/6/2012								A-6004-842 (REV 2)

1	2	3	4	5	6	7	8	9	10	11	12	13
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IMPORTANT!FedEx returns to normal operations in the Northeast. [Learn More](#)**794071544557**Ship (P/U) date :
Wed 11/14/2012 3:35 pm
RICHLAND, WA US**Delivered**
Signed for by: B.DANIELSActual delivery :
Thur 11/15/2012 9:19 am
EARTH CITY, MO US**Travel History****Date/Time** **Activity****Location**

- 11/15/2012 - Thursday

9:19 am	Delivered	EARTH CITY, MO
6:59 am	On FedEx vehicle for delivery	EARTH CITY, MO
6:54 am	At local FedEx facility	EARTH CITY, MO
5:16 am	At destination sort facility	BERKELEY, MO
4:30 am	Departed FedEx location	MEMPHIS, TN
12:53 am	Arrived at FedEx location	MEMPHIS, TN
- 11/14/2012 - Wednesday		
5:12 pm	Left FedEx origin facility	PASCO, WA
3:35 pm	Picked up	PASCO, WA
10:23 am	Shipment information sent to FedEx	

Local Scan Time

Shipment Facts

Tracking number	794071544557	Service	FedEx Priority Overnight
Weight	78 lbs	Delivered To	Shipping/Receiving
Total pieces	1	Total shipment weight	78 lbs / 35.4 kgs
Shipper reference	GWS-291	Packaging	Your Packaging
Special handling section	Deliver Weekday		

DECEMBER 14, 2012

Lot #(s):

160-920

160-921

CUR Form #: 4 7 8

CONDITION UPON RECEIPT FORM

Client: C4PRC



Quote No:

COC/RFA No: See Notes

Initiated By: SC

Date: 11-15-12

Time: 0920

Shipping Information

Shipper: FedEx UPS DHL Courier Client Other: _____ Multiple Packages: Y N

Shipping # (s):* 7940 7154 4557 Sample Temperature (s):**

1.	7940 7154 4557	6.	1.	3	6.
2.		7.	2.		7.
3.		8.	3.		8.
4.		9.	4.		9.
5.		10.	5.		10.

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C. If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <input checked="" type="checkbox"/> Y N	Are there custody seals present on the cooler?	8. <input checked="" type="checkbox"/> Y N	Are there custody seals present on bottles?
2. Y <input checked="" type="checkbox"/> N/A	Do custody seals on cooler appear to be tampered with?	9. Y <input checked="" type="checkbox"/> N/A	Do custody seals on bottles appear to be tampered with?
3. <input checked="" type="checkbox"/> Y N	Were contents of cooler frisked after opening, but before unpacking?	10. <input checked="" type="checkbox"/> Y' N N/A	Was sample received with proper pH ¹ ? (If not, make note below)
4. <input checked="" type="checkbox"/> Y N	Sample received with Chain of Custody?	11. Y N <input checked="" type="checkbox"/> N/A	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. <input checked="" type="checkbox"/> Y N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <input checked="" type="checkbox"/> Y N	Sample received in proper containers?
6. Y <input checked="" type="checkbox"/> B	Was sample received broken?	13. Y N <input checked="" type="checkbox"/> N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <input checked="" type="checkbox"/> Y N	Is sample volume sufficient for analysis?	14. Y N <input checked="" type="checkbox"/> N/A	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

COCS 713-005-025, W13-011-055
-026, -056

Corrective Action:

- Client Contact Name: _____
- Sample(s) processed "as is"
- Sample(s) on hold until: _____

Informed by: _____

If released, notify: _____

Date: 11-15-12

Project Management Review: *Janna Awalt*

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

DECEMBER 14, 2012

CH2MHill Plateau Remediation Company	CHP 478	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	c.c.# I13-005-025
Page 1 of 1			

Collector Robert Cross	Contact/Requester Sampling Origin Hanford Site	Karen Waters-Husted	Telephone No. 376-4650					
SAF No. I13-005	Logbook No. HNF-N-506 36 / 39	Purchase Order/Charge Code 300071ES20						
Project Title 2ZP1, NOVEMBER 2012	Method of Shipment TestAmerica St. Louis	Commercial Carrier	Ice Chest No. GWS-3Q1					
Shipped To (Lab)	Priority: 30 Days	PRIORITY	Bill of Lading/Air Bill No. 7940 7154 4557					
Protocol CERCLA	SPECIAL INSTRUCTIONS 200 Area Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.		Offsite Property No.					
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)								
Sample No.	Filter *	Date	Time	No/Type Container	Sample Analysis	Hold Time	Holding Time	Preservative
B2MP04	N	W 11-13-12	0900	3x500-mL G/P	9030_SULFIDE: Sulfide (1)	7 Days	ZnAc+NaOH to pH > 9/Cool~4C	
B2MP04	N	W 11-13-12	0900	1x20-mL P	Activity Scan	6 Months	None	

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Relinquished By Robert Cross	Print R Cross	Sign NOV 13 2012	Date/Time 1408	Received By SSU-1	Print SSU-1	Sign NOV 13 2012	Date/Time 1408	Matrix *
Relinquished By SSU-1	Print SSU-1	Sign NOV 14 2012	Date/Time 0740	Received By MAUL & MAUL Site	Print MAUL & MAUL Site	Sign NOV 14 2012	Date/Time 1440	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By MAUL & MAUL Site	Print MAUL & MAUL Site	Sign NOV 14 2012	Date/Time 1400	Received By FEDEX	Print FEDEX	Sign NOV 14 2012	Date/Time 0920	DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By 2014/10/10	Print 2014/10/10	Sign 2014/10/10	Date/Time	Received By Stevan Clark	Print Stevan Clark	Sign NOV 15 2012	Date/Time 0920	Disposed By Stevan Clark
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)							Date/Time
PRINTED ON 10/10/2012								A-6004-842 (REV 2)

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DECEMBER 14, 2012

CH2MHill Plateau Remediation Company	5413372	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	
		c.o.c. #	I13-005-026
		Page 1 of 1	

Collector Robert Crow	Contact/Requester Sampling Origin	Karen Waters-Husted	Telephone No.				
SAF No. I13-005	Hanford Site	Purchase Order/Charge Code	300071ES20				
Project Title 2ZP1, NOVEMBER 2012	Logbook No. HNF-N-506 <u>34</u> / <u>39</u>	Ice Chest No.	<u>34</u> - <u>39</u>				
Shipped To (Lab) TestAmerica St. Louis	Method of Shipment Commercial Carrier	Bill of Lading/Air Bill No.	<u>7940</u> <u>7154</u> <u>455577</u>				
Protocol CERCLA	Priority: 30 Days	PRIORITY	Offsite Property No.				
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 200 Area 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
B2MP05 N	W	11-13-12	1254	3x500-mL G/P	9030_SULFIDE: Sulfide (1)	7 Days	ZnAc+NaOH to pH > 9/Cool~4C
B2MP05 N	W	11-13-12	1254	1x20-mL P	Activity Scan	6 Months	None

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Relinquished By Print Sign Date/Time Received By Sign Date/Time Matrix *	NOV 13 2012 NOV 13 2012 NOV 13 2012 S = Soil DS = Drum Solids
Robert Crow R Crow NOV 13 2012 NOV 13 2012 NOV 13 2012 SE = Sediment DL = Drum Liquids	Received By NOV 13 2012 NOV 13 2012 NOV 13 2012 SO = Solid T = Tissue
SSU-1 NOV 14 2012 0740 NOV 14 2012 0740 NOV 14 2012 SL = Sludge WI = Wipe	Received By NOV 14 2012 0740 NOV 14 2012 0740 NOV 14 2012 W = Water L = Liquid
Malik Khalid NOV 14 2012 0401 NOV 14 2012 0401 NOV 14 2012 O = Oil V = Vegetation	Received By NOV 14 2012 0401 NOV 14 2012 0401 NOV 14 2012 A = Air X = Other
FedEx FedEx FedEx	Date/Time Disposed By Date/Time
14/11/2012	Youni Chayen Shahen Clarkon 11-15-12 0920
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)
PRINTED ON 10/10/2012	A-6004-842 (REV 2) Date/Time

1	2	3	4	5	6	7	8	9	10	11	12	13
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IMPORTANT!FedEx returns to normal operations in the Northeast. [Learn More](#)

794071544557

Ship (P/U) date :
Wed 11/14/2012 3:35 pm

RICHLAND, WA US

Actual delivery :
Thur 11/15/2012 9:19 am

EARTH CITY, MO US

Delivered

Signed for by: B.DANIELS

Travel History**Date/Time** **Activity****Location**

~ 11/15/2012 - Thursday

9:19 am Delivered

EARTH CITY, MO

6:59 am On FedEx vehicle for delivery

EARTH CITY, MO

6:54 am At local FedEx facility

EARTH CITY, MO

5:16 am At destination sort facility

BERKELEY, MO

4:30 am Departed FedEx location

MEMPHIS, TN

12:53 am Arrived at FedEx location

MEMPHIS, TN

~ 11/14/2012 - Wednesday

5:12 pm Left FedEx origin facility

PASCO, WA

3:35 pm Picked up

PASCO, WA

10:23 am Shipment information sent to FedEx

Local Scan Time

Shipment Facts

Tracking number	794071544557	Service	FedEx Priority Overnight
Weight	78 lbs	Delivered To	Shipping/Receiving
Total pieces	1	Total shipment weight	78 lbs / 35.4 kgs
Shipper reference	GWS-291	Packaging	Your Packaging
Special handling section	Deliver Weekday		

DECEMBER 14, 2012

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot #(s):

CUR Form #: 4 7 8

160-920
160-921**CONDITION UPON RECEIPT FORM**

Client: C4PRC



Quote No:

COC/RFA No: See Notes

Initiated By: SC

Date: 11-15-12

Time: 0920

Shipping Information

Shipper: FedEx UPS DHL Courier Client Other: Multiple Packages: Y N

Shipping # (s):*

Sample Temperature (s):**

1. 7940 7154 4557 6. _____
 2. _____ 7. _____
 3. _____ 8. _____
 4. _____ 9. _____
 5. _____ 10. _____

1. 3 6. _____
 2. _____ 7. _____
 3. _____ 8. _____
 4. _____ 9. _____
 5. _____ 10. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C. If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid; Rad tests- Liquid or Solids; Perchlorate

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <input checked="" type="radio"/> Y N	Are there custody seals present on the cooler?	8. <input checked="" type="radio"/> Y N	Are there custody seals present on bottles?
2. Y <input checked="" type="radio"/> N/A	Do custody seals on cooler appear to be tampered with?	9. <input checked="" type="radio"/> Y N/A	Do custody seals on bottles appear to be tampered with?
3. <input checked="" type="radio"/> Y N	Were contents of cooler frisked after opening, but before unpacking?	10. <input checked="" type="radio"/> Y N N/A	Was sample received with proper pH ¹ ? (If not, make note below)
4. <input checked="" type="radio"/> Y N	Sample received with Chain of Custody?	11. <input checked="" type="radio"/> Y N <input checked="" type="radio"/> N/A	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5. <input checked="" type="radio"/> Y N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <input checked="" type="radio"/> Y N	Sample received in proper containers?
6. Y <input checked="" type="radio"/>	Was sample received broken?	13. <input checked="" type="radio"/> Y N <input checked="" type="radio"/> N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <input checked="" type="radio"/> Y N	Is sample volume sufficient for analysis?	14. <input checked="" type="radio"/> Y N <input checked="" type="radio"/> N/A	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX, Oil & Grease and soils.

Notes:

COCs 713-005-025, W13-011-055
-026, -056**Corrective Action:**

- Client Contact Name: _____
 Sample(s) processed "as is"
 Sample(s) on hold until: _____

Informed by: _____

If released, notify:

Date: 11-15-12

Project Management Review:

Janna Awalt

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

DECEMBER 14, 2012

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-913-1

SDG Number: SL1332

Login Number: 913

List Source: TestAmerica St. Louis

List Number: 1

Creator: Claxton, Steven

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	

DECEMBER 14, 2012

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-913-1

SDG Number: SL1332

Login Number: 914

List Source: TestAmerica St. Louis

List Number: 1

Creator: Claxton, Steven

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	

DECEMBER 14, 2012

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Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-913-1

SDG Number: SL1332

Login Number: 920

List Source: TestAmerica St. Louis

List Number: 1

Creator: Claxton, Steven

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	

DECEMBER 14, 2012

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-913-1

SDG Number: SL1332

1
Login Number: 921

2
List Number: 1

3
Creator: Claxton, Steven

4
List Source: TestAmerica St. Louis

5
Question

6
Answer

7
Comment

8
Radioactivity wasn't checked or is </= background as measured by a survey meter.

9
True

10
The cooler's custody seal, if present, is intact.

11
True

12
Sample custody seals, if present, are intact.

13
True

1
The cooler or samples do not appear to have been compromised or tampered with.

2
True

3
Samples were received on ice.

4
True

5
Cooler Temperature is acceptable.

6
True

7
Cooler Temperature is recorded.

8
True

9
COC is present.

10
True

11
COC is filled out in ink and legible.

12
True

13
COC is filled out with all pertinent information.

1
True

2
Is the Field Sampler's name present on COC?

3
True

4
There are no discrepancies between the containers received and the COC.

5
True

6
Samples are received within Holding Time.

7
True

8
Sample containers have legible labels.

9
True

10
Containers are not broken or leaking.

11
True

12
Sample collection date/times are provided.

13
True

1
Appropriate sample containers are used.

2
True

3
Sample bottles are completely filled.

4
True

5
Sample Preservation Verified.

6
True

7
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs

8
True

9
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

10
N/A

11
Multiphasic samples are not present.

12
True

13
Samples do not require splitting or compositing.

1
True

2
Residual Chlorine Checked.

3
N/A

Qualifiers**GC Semi VOA**

Qualifier	Qualifier Description
O	LCS, LCSD: Recovery exceeds upper or lower control limits.
U	Analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

HPLC/IC

Qualifier	Qualifier Description
U	Analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
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 </= 5X the blank concentration.
U	Analyzed for but not detected.

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, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDA	Minimum detectable activity
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)

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DECEMBER 14, 2012

Method Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
SDG: SL1332

Method	Method Description	Protocol	Laboratory
8081B	Organochlorine Pesticides (GC)	SW846	TAL SL
8310	PAHs (HPLC)	SW846	TAL SL
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL SL

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

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

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DECEMBER 14, 2012
Sample Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
SDG: SL1332

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-913-1	B2MXM5	Water	11/12/12 12:00	11/14/12 09:30
160-913-2	B2MXM6	Water	11/12/12 12:00	11/14/12 09:30
160-913-3	B2MXN6	Water	11/12/12 08:00	11/14/12 09:30
160-913-4	B2MXN7	Water	11/12/12 10:45	11/14/12 09:30
160-914-1	B2MN41	Water	11/12/12 11:57	11/14/12 09:30
160-914-2	B2MN46	Water	11/12/12 11:07	11/14/12 09:30
160-914-3	B2MN74	Water	11/12/12 09:55	11/14/12 09:30
160-920-1	B2MN61	Water	11/13/12 07:45	11/15/12 09:20
160-920-2	B2MN62	Water	11/13/12 11:23	11/15/12 09:20
160-921-1	B2MP04	Water	11/13/12 09:00	11/15/12 09:20
160-921-2	B2MP05	Water	11/13/12 12:54	11/15/12 09:20

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TestAmerica St. Louis

DECEMBER 14, 2012
Detection Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
SDG: SL1332

Client Sample ID: B2MXM5

Lab Sample ID: 160-913-1

No Detections

Client Sample ID: B2MXM6

Lab Sample ID: 160-913-2

No Detections

Client Sample ID: B2MXN6

Lab Sample ID: 160-913-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	10		4.8	0.95	ug/L	1		8310	Total/NA

Client Sample ID: B2MXN7

Lab Sample ID: 160-913-4

No Detections

Client Sample ID: B2MN41

Lab Sample ID: 160-914-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfide	0.20	B C	1.0	0.083	mg/L	1		9034	Total/NA

Client Sample ID: B2MN46

Lab Sample ID: 160-914-2

No Detections

Client Sample ID: B2MN74

Lab Sample ID: 160-914-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfide	0.20	B C	1.0	0.083	mg/L	1		9034	Total/NA

Client Sample ID: B2MN61

Lab Sample ID: 160-920-1

No Detections

Client Sample ID: B2MN62

Lab Sample ID: 160-920-2

No Detections

Client Sample ID: B2MP04

Lab Sample ID: 160-921-1

No Detections

Client Sample ID: B2MP05

Lab Sample ID: 160-921-2

No Detections

TestAmerica St. Louis

DECEMBER 14, 2012
Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
SDG: SL1332

Method: 8081B - Organochlorine Pesticides (GC)

Client Sample ID: B2MXM5

Date Collected: 11/12/12 12:00

Date Received: 11/14/12 09:30

Lab Sample ID: 160-913-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	0.0095	U O	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 16:34	1
alpha-BHC	0.0095	U O	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 16:34	1
beta-BHC	0.012	U	0.048	0.012	ug/L		11/19/12 12:44	12/05/12 16:34	1
delta-BHC	0.0095	U	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 16:34	1
gamma-BHC (Lindane)	0.0095	U O	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 16:34	1
4,4'-DDD	0.0095	U O	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 16:34	1
4,4'-DDE	0.013	U O	0.048	0.013	ug/L		11/19/12 12:44	12/05/12 16:34	1
4,4'-DDT	0.022	U O	0.048	0.022	ug/L		11/19/12 12:44	12/05/12 16:34	1
Dieldrin	0.0095	U O	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 16:34	1
Endosulfan I	0.018	U	0.048	0.018	ug/L		11/19/12 12:44	12/05/12 16:34	1
Endosulfan II	0.0095	U	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 16:34	1
Endosulfan sulfate	0.0095	U O	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 16:34	1
Endrin	0.017	U O	0.048	0.017	ug/L		11/19/12 12:44	12/05/12 16:34	1
Endrin aldehyde	0.0095	U	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 16:34	1
Heptachlor	0.0095	U	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 16:34	1
Heptachlor epoxide	0.016	U O	0.048	0.016	ug/L		11/19/12 12:44	12/05/12 16:34	1
Methoxychlor	0.012	U	0.48	0.012	ug/L		11/19/12 12:44	12/05/12 16:34	1
Toxaphene	0.26	U	1.9	0.26	ug/L		11/19/12 12:44	12/05/12 16:34	1
Technical Chlordane	0.095	U	0.48	0.095	ug/L		11/19/12 12:44	12/05/12 16:34	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Sur)	81			50 - 125			11/19/12 12:44	12/05/12 16:34	1
Tetrachloro-m-xylene	72			68 - 123			11/19/12 12:44	12/05/12 16:34	1

Client Sample ID: B2MXM6

Date Collected: 11/12/12 12:00

Date Received: 11/14/12 09:30

Lab Sample ID: 160-913-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	0.0095	U O	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 17:36	1
alpha-BHC	0.0095	U O	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 17:36	1
beta-BHC	0.012	U	0.048	0.012	ug/L		11/19/12 12:44	12/05/12 17:36	1
delta-BHC	0.0095	U	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 17:36	1
gamma-BHC (Lindane)	0.0095	U O	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 17:36	1
4,4'-DDD	0.0095	U O	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 17:36	1
4,4'-DDE	0.013	U O	0.048	0.013	ug/L		11/19/12 12:44	12/05/12 17:36	1
4,4'-DDT	0.022	U O	0.048	0.022	ug/L		11/19/12 12:44	12/05/12 17:36	1
Dieldrin	0.0095	U O	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 17:36	1
Endosulfan I	0.018	U	0.048	0.018	ug/L		11/19/12 12:44	12/05/12 17:36	1
Endosulfan II	0.0095	U	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 17:36	1
Endosulfan sulfate	0.0095	U O	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 17:36	1
Endrin	0.017	U O	0.048	0.017	ug/L		11/19/12 12:44	12/05/12 17:36	1
Endrin aldehyde	0.0095	U	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 17:36	1
Heptachlor	0.0095	U	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 17:36	1
Heptachlor epoxide	0.016	U O	0.048	0.016	ug/L		11/19/12 12:44	12/05/12 17:36	1
Methoxychlor	0.012	U	0.48	0.012	ug/L		11/19/12 12:44	12/05/12 17:36	1
Toxaphene	0.26	U	1.9	0.26	ug/L		11/19/12 12:44	12/05/12 17:36	1
Technical Chlordane	0.095	U	0.48	0.095	ug/L		11/19/12 12:44	12/05/12 17:36	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Sur)	71			50 - 125			11/19/12 12:44	12/05/12 17:36	1

TestAmerica St. Louis

DECEMBER 14, 2012
Client Sample Results

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
 SDG: SL1332

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Client Sample ID: B2MXM6

Date Collected: 11/12/12 12:00

Date Received: 11/14/12 09:30

Lab Sample ID: 160-913-2

Matrix: Water

Surrogate

%Recovery

Qualifier

Limits

Prepared

Analyzed

Dil Fac

Tetrachloro-m-xylene

70

68 - 123

11/19/12 12:44

12/05/12 17:36

1

Client Sample ID: B2MXN6

Date Collected: 11/12/12 08:00

Date Received: 11/14/12 09:30

Lab Sample ID: 160-913-3

Matrix: Water

Analyte

Result

Qualifier

RL

MDL

Unit

D

Prepared

Analyzed

Dil Fac

Aldrin

0.0095

U O

0.048

0.0095

ug/L

11/19/12 12:44

12/05/12 17:56

1

alpha-BHC

0.0095

U O

0.048

0.0095

ug/L

11/19/12 12:44

12/05/12 17:56

1

beta-BHC

0.012

U

0.048

0.012

ug/L

11/19/12 12:44

12/05/12 17:56

1

delta-BHC

0.0095

U

0.048

0.0095

ug/L

11/19/12 12:44

12/05/12 17:56

1

gamma-BHC (Lindane)

0.0095

U O

0.048

0.0095

ug/L

11/19/12 12:44

12/05/12 17:56

1

4,4'-DDD

0.0095

U O

0.048

0.0095

ug/L

11/19/12 12:44

12/05/12 17:56

1

4,4'-DDE

0.013

U O

0.048

0.013

ug/L

11/19/12 12:44

12/05/12 17:56

1

4,4'-DDT

0.022

U O

0.048

0.022

ug/L

11/19/12 12:44

12/05/12 17:56

1

Dieldrin

0.0095

U O

0.048

0.0095

ug/L

11/19/12 12:44

12/05/12 17:56

1

Endosulfan I

0.018

U

0.048

0.018

ug/L

11/19/12 12:44

12/05/12 17:56

1

Endosulfan II

0.0095

U

0.048

0.0095

ug/L

11/19/12 12:44

12/05/12 17:56

1

Endosulfan sulfate

0.0095

U O

0.048

0.0095

ug/L

11/19/12 12:44

12/05/12 17:56

1

Endrin

0.017

U O

0.048

0.017

ug/L

11/19/12 12:44

12/05/12 17:56

1

Endrin aldehyde

0.0095

U

0.048

0.0095

ug/L

11/19/12 12:44

12/05/12 17:56

1

Heptachlor

0.0095

U

0.048

0.0095

ug/L

11/19/12 12:44

12/05/12 17:56

1

Heptachlor epoxide

0.016

U O

0.048

0.016

ug/L

11/19/12 12:44

12/05/12 17:56

1

Methoxychlor

0.012

U

0.48

0.012

ug/L

11/19/12 12:44

12/05/12 17:56

1

Toxaphene

0.26

U

1.9

0.26

ug/L

11/19/12 12:44

12/05/12 17:56

1

Technical Chlordane

0.095

U

0.48

0.095

ug/L

11/19/12 12:44

12/05/12 17:56

1

Surrogate

%Recovery

Qualifier

Limits

Prepared

Analyzed

Dil Fac

DCB Decachlorobiphenyl (Surr)

85

50 - 125

11/19/12 12:44

12/05/12 17:56

1

Tetrachloro-m-xylene

77

68 - 123

11/19/12 12:44

12/05/12 17:56

1

Client Sample ID: B2MXN7

Date Collected: 11/12/12 10:45

Date Received: 11/14/12 09:30

Lab Sample ID: 160-913-4

Matrix: Water

Analyte

Result

Qualifier

RL

MDL

Unit

D

Prepared

Analyzed

Dil Fac

Aldrin

0.0095

U O

0.047

0.0095

ug/L

11/19/12 12:44

12/05/12 18:17

1

alpha-BHC

0.0095

U O

0.047

0.0095

ug/L

11/19/12 12:44

12/05/12 18:17

1

beta-BHC

0.012

U

0.047

0.012

ug/L

11/19/12 12:44

12/05/12 18:17

1

delta-BHC

0.0095

U

0.047

0.0095

ug/L

11/19/12 12:44

12/05/12 18:17

1

gamma-BHC (Lindane)

0.0095

<p

DECEMBER 14, 2012
Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
SDG: SL1332

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Client Sample ID: B2MXN7

Date Collected: 11/12/12 10:45

Date Received: 11/14/12 09:30

Lab Sample ID: 160-913-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methoxychlor	0.012	U	0.47	0.012	ug/L		11/19/12 12:44	12/05/12 18:17	1
Toxaphene	0.26	U	1.9	0.26	ug/L		11/19/12 12:44	12/05/12 18:17	1
Technical Chlordane	0.095	U	0.47	0.095	ug/L		11/19/12 12:44	12/05/12 18:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	90		50 - 125				11/19/12 12:44	12/05/12 18:17	1
Tetrachloro-m-xylene	74		68 - 123				11/19/12 12:44	12/05/12 18:17	1

Client Sample ID: B2MN41

Date Collected: 11/12/12 11:57

Date Received: 11/14/12 09:30

Lab Sample ID: 160-914-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	0.0098	U O	0.049	0.0098	ug/L		11/19/12 12:44	12/05/12 18:37	1
alpha-BHC	0.0098	U O	0.049	0.0098	ug/L		11/19/12 12:44	12/05/12 18:37	1
beta-BHC	0.013	U	0.049	0.013	ug/L		11/19/12 12:44	12/05/12 18:37	1
delta-BHC	0.0098	U	0.049	0.0098	ug/L		11/19/12 12:44	12/05/12 18:37	1
gamma-BHC (Lindane)	0.0098	U O	0.049	0.0098	ug/L		11/19/12 12:44	12/05/12 18:37	1
4,4'-DDD	0.0098	U O	0.049	0.0098	ug/L		11/19/12 12:44	12/05/12 18:37	1
4,4'-DDE	0.014	U O	0.049	0.014	ug/L		11/19/12 12:44	12/05/12 18:37	1
4,4'-DDT	0.022	U O	0.049	0.022	ug/L		11/19/12 12:44	12/05/12 18:37	1
Dieldrin	0.0098	U O	0.049	0.0098	ug/L		11/19/12 12:44	12/05/12 18:37	1
Endosulfan I	0.019	U	0.049	0.019	ug/L		11/19/12 12:44	12/05/12 18:37	1
Endosulfan II	0.0098	U	0.049	0.0098	ug/L		11/19/12 12:44	12/05/12 18:37	1
Endosulfan sulfate	0.0098	U O	0.049	0.0098	ug/L		11/19/12 12:44	12/05/12 18:37	1
Endrin	0.018	U O	0.049	0.018	ug/L		11/19/12 12:44	12/05/12 18:37	1
Endrin aldehyde	0.0098	U	0.049	0.0098	ug/L		11/19/12 12:44	12/05/12 18:37	1
Heptachlor	0.0098	U	0.049	0.0098	ug/L		11/19/12 12:44	12/05/12 18:37	1
Heptachlor epoxide	0.017	U O	0.049	0.017	ug/L		11/19/12 12:44	12/05/12 18:37	1
Methoxychlor	0.013	U	0.49	0.013	ug/L		11/19/12 12:44	12/05/12 18:37	1
Toxaphene	0.26	U	2.0	0.26	ug/L		11/19/12 12:44	12/05/12 18:37	1
Technical Chlordane	0.098	U	0.49	0.098	ug/L		11/19/12 12:44	12/05/12 18:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	91		50 - 125				11/19/12 12:44	12/05/12 18:37	1
Tetrachloro-m-xylene	79		68 - 123				11/19/12 12:44	12/05/12 18:37	1

Client Sample ID: B2MN46

Date Collected: 11/12/12 11:07

Date Received: 11/14/12 09:30

Lab Sample ID: 160-914-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	0.0099	U O	0.049	0.0099	ug/L		11/19/12 12:44	12/05/12 18:58	1
alpha-BHC	0.0099	U O	0.049	0.0099	ug/L		11/19/12 12:44	12/05/12 18:58	1
beta-BHC	0.013	U	0.049	0.013	ug/L		11/19/12 12:44	12/05/12 18:58	1
delta-BHC	0.0099	U	0.049	0.0099	ug/L		11/19/12 12:44	12/05/12 18:58	1
gamma-BHC (Lindane)	0.0099	U O	0.049	0.0099	ug/L		11/19/12 12:44	12/05/12 18:58	1
4,4'-DDD	0.0099	U O	0.049	0.0099	ug/L		11/19/12 12:44	12/05/12 18:58	1
4,4'-DDE	0.014	U O	0.049	0.014	ug/L		11/19/12 12:44	12/05/12 18:58	1
4,4'-DDT	0.023	U O	0.049	0.023	ug/L		11/19/12 12:44	12/05/12 18:58	1
Dieldrin	0.0099	U O	0.049	0.0099	ug/L		11/19/12 12:44	12/05/12 18:58	1
Endosulfan I	0.019	U	0.049	0.019	ug/L		11/19/12 12:44	12/05/12 18:58	1

TestAmerica St. Louis

DECEMBER 14, 2012
Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
SDG: SL1332

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Client Sample ID: B2MN46

Date Collected: 11/12/12 11:07

Date Received: 11/14/12 09:30

Lab Sample ID: 160-914-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan II	0.0099	U	0.049	0.0099	ug/L		11/19/12 12:44	12/05/12 18:58	1
Endosulfan sulfate	0.0099	U O	0.049	0.0099	ug/L		11/19/12 12:44	12/05/12 18:58	1
Endrin	0.018	U O	0.049	0.018	ug/L		11/19/12 12:44	12/05/12 18:58	1
Endrin aldehyde	0.0099	U	0.049	0.0099	ug/L		11/19/12 12:44	12/05/12 18:58	1
Heptachlor	0.0099	U	0.049	0.0099	ug/L		11/19/12 12:44	12/05/12 18:58	1
Heptachlor epoxide	0.017	U O	0.049	0.017	ug/L		11/19/12 12:44	12/05/12 18:58	1
Methoxychlor	0.013	U	0.49	0.013	ug/L		11/19/12 12:44	12/05/12 18:58	1
Toxaphene	0.27	U	2.0	0.27	ug/L		11/19/12 12:44	12/05/12 18:58	1
Technical Chlordane	0.099	U	0.49	0.099	ug/L		11/19/12 12:44	12/05/12 18:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	84		50 - 125				11/19/12 12:44	12/05/12 18:58	1
Tetrachloro-m-xylene	74		68 - 123				11/19/12 12:44	12/05/12 18:58	1

Client Sample ID: B2MN74

Date Collected: 11/12/12 09:55

Date Received: 11/14/12 09:30

Lab Sample ID: 160-914-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	0.0098	U O	0.049	0.0098	ug/L		11/19/12 12:44	12/05/12 20:20	1
alpha-BHC	0.0098	U O	0.049	0.0098	ug/L		11/19/12 12:44	12/05/12 20:20	1
beta-BHC	0.013	U	0.049	0.013	ug/L		11/19/12 12:44	12/05/12 20:20	1
delta-BHC	0.0098	U	0.049	0.0098	ug/L		11/19/12 12:44	12/05/12 20:20	1
gamma-BHC (Lindane)	0.0098	U O	0.049	0.0098	ug/L		11/19/12 12:44	12/05/12 20:20	1
4,4'-DDD	0.0098	U O	0.049	0.0098	ug/L		11/19/12 12:44	12/05/12 20:20	1
4,4'-DDE	0.014	U O	0.049	0.014	ug/L		11/19/12 12:44	12/05/12 20:20	1
4,4'-DDT	0.023	U O	0.049	0.023	ug/L		11/19/12 12:44	12/05/12 20:20	1
Dieldrin	0.0098	U O	0.049	0.0098	ug/L		11/19/12 12:44	12/05/12 20:20	1
Endosulfan I	0.019	U	0.049	0.019	ug/L		11/19/12 12:44	12/05/12 20:20	1
Endosulfan II	0.0098	U	0.049	0.0098	ug/L		11/19/12 12:44	12/05/12 20:20	1
Endosulfan sulfate	0.0098	U O	0.049	0.0098	ug/L		11/19/12 12:44	12/05/12 20:20	1
Endrin	0.018	U O	0.049	0.018	ug/L		11/19/12 12:44	12/05/12 20:20	1
Endrin aldehyde	0.0098	U	0.049	0.0098	ug/L		11/19/12 12:44	12/05/12 20:20	1
Heptachlor	0.0098	U	0.049	0.0098	ug/L		11/19/12 12:44	12/05/12 20:20	1
Heptachlor epoxide	0.017	U O	0.049	0.017	ug/L		11/19/12 12:44	12/05/12 20:20	1
Methoxychlor	0.013	U	0.49	0.013	ug/L		11/19/12 12:44	12/05/12 20:20	1
Toxaphene	0.26	U	2.0	0.26	ug/L		11/19/12 12:44	12/05/12 20:20	1
Technical Chlordane	0.098	U	0.49	0.098	ug/L		11/19/12 12:44	12/05/12 20:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	82		50 - 125				11/19/12 12:44	12/05/12 20:20	1
Tetrachloro-m-xylene	70		68 - 123				11/19/12 12:44	12/05/12 20:20	1

Client Sample ID: B2MN61

Date Collected: 11/13/12 07:45

Date Received: 11/15/12 09:20

Lab Sample ID: 160-920-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	0.0095	U O	0.047	0.0095	ug/L		11/19/12 12:44	12/05/12 20:40	1
alpha-BHC	0.0095	U O	0.047	0.0095	ug/L		11/19/12 12:44	12/05/12 20:40	1
beta-BHC	0.012	U	0.047	0.012	ug/L		11/19/12 12:44	12/05/12 20:40	1
delta-BHC	0.0095	U	0.047	0.0095	ug/L		11/19/12 12:44	12/05/12 20:40	1

TestAmerica St. Louis

DECEMBER 14, 2012
Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
SDG: SL1332

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Client Sample ID: B2MN61							Lab Sample ID: 160-920-1						
Date Collected: 11/13/12 07:45							Matrix: Water						
Date Received: 11/15/12 09:20													
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac				
gamma-BHC (Lindane)	0.0095	U O	0.047	0.0095	ug/L		11/19/12 12:44	12/05/12 20:40	1				
4,4'-DDD	0.0095	U O	0.047	0.0095	ug/L		11/19/12 12:44	12/05/12 20:40	1				
4,4'-DDE	0.013	U O	0.047	0.013	ug/L		11/19/12 12:44	12/05/12 20:40	1				
4,4'-DDT	0.022	U O	0.047	0.022	ug/L		11/19/12 12:44	12/05/12 20:40	1				
Dieldrin	0.0095	U O	0.047	0.0095	ug/L		11/19/12 12:44	12/05/12 20:40	1				
Endosulfan I	0.018	U	0.047	0.018	ug/L		11/19/12 12:44	12/05/12 20:40	1				
Endosulfan II	0.0095	U	0.047	0.0095	ug/L		11/19/12 12:44	12/05/12 20:40	1				
Endosulfan sulfate	0.0095	U O	0.047	0.0095	ug/L		11/19/12 12:44	12/05/12 20:40	1				
Endrin	0.017	U O	0.047	0.017	ug/L		11/19/12 12:44	12/05/12 20:40	1				
Endrin aldehyde	0.0095	U	0.047	0.0095	ug/L		11/19/12 12:44	12/05/12 20:40	1				
Heptachlor	0.0095	U	0.047	0.0095	ug/L		11/19/12 12:44	12/05/12 20:40	1				
Heptachlor epoxide	0.016	U O	0.047	0.016	ug/L		11/19/12 12:44	12/05/12 20:40	1				
Methoxychlor	0.012	U	0.47	0.012	ug/L		11/19/12 12:44	12/05/12 20:40	1				
Toxaphene	0.26	U	1.9	0.26	ug/L		11/19/12 12:44	12/05/12 20:40	1				
Technical Chlordane	0.095	U	0.47	0.095	ug/L		11/19/12 12:44	12/05/12 20:40	1				
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac				
DCB Decachlorobiphenyl (Sur)	88		50 - 125				11/19/12 12:44	12/05/12 20:40	1				
Tetrachloro-m-xylene	68		68 - 123				11/19/12 12:44	12/05/12 20:40	1				
Client Sample ID: B2MN62							Lab Sample ID: 160-920-2						
Date Collected: 11/13/12 11:23							Matrix: Water						
Date Received: 11/15/12 09:20													
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac				
Aldrin	0.0095	U O	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 21:00	1				
alpha-BHC	0.0095	U O	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 21:00	1				
beta-BHC	0.012	U	0.048	0.012	ug/L		11/19/12 12:44	12/05/12 21:00	1				
delta-BHC	0.0095	U	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 21:00	1				
gamma-BHC (Lindane)	0.0095	U O	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 21:00	1				
4,4'-DDD	0.0095	U O	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 21:00	1				
4,4'-DDE	0.013	U O	0.048	0.013	ug/L		11/19/12 12:44	12/05/12 21:00	1				
4,4'-DDT	0.022	U O	0.048	0.022	ug/L		11/19/12 12:44	12/05/12 21:00	1				
Dieldrin	0.0095	U O	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 21:00	1				
Endosulfan I	0.018	U	0.048	0.018	ug/L		11/19/12 12:44	12/05/12 21:00	1				
Endosulfan II	0.0095	U	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 21:00	1				
Endosulfan sulfate	0.0095	U O	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 21:00	1				
Endrin	0.017	U O	0.048	0.017	ug/L		11/19/12 12:44	12/05/12 21:00	1				
Endrin aldehyde	0.0095	U	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 21:00	1				
Heptachlor	0.0095	U	0.048	0.0095	ug/L		11/19/12 12:44	12/05/12 21:00	1				
Heptachlor epoxide	0.016	U O	0.048	0.016	ug/L		11/19/12 12:44	12/05/12 21:00	1				
Methoxychlor	0.012	U	0.48	0.012	ug/L		11/19/12 12:44	12/05/12 21:00	1				
Toxaphene	0.26	U	1.9	0.26	ug/L		11/19/12 12:44	12/05/12 21:00	1				
Technical Chlordane	0.095	U	0.48	0.095	ug/L		11/19/12 12:44	12/05/12 21:00	1				
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac				
DCB Decachlorobiphenyl (Sur)	83		50 - 125				11/19/12 12:44	12/05/12 21:00	1				
Tetrachloro-m-xylene	71		68 - 123				11/19/12 12:44	12/05/12 21:00	1				

TestAmerica St. Louis

DECEMBER 14, 2012
Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
SDG: SL1332

Method: 8310 - PAHs (HPLC)

Client Sample ID: B2MXM5

Date Collected: 11/12/12 12:00

Date Received: 11/14/12 09:30

Lab Sample ID: 160-913-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.95	U	4.8	0.95	ug/L		11/19/12 13:47	12/10/12 16:48	1
Acenaphthylene	0.95	U	4.8	0.95	ug/L		11/19/12 13:47	12/10/12 16:48	1
Anthracene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 16:48	1
Benzo[a]anthracene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 16:48	1
Benzo[a]pyrene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 16:48	1
Benzo[b]fluoranthene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 16:48	1
Benzo[g,h,i]perylene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 16:48	1
Benzo[k]fluoranthene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 16:48	1
Chrysene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 16:48	1
Dibenz(a,h)anthracene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 16:48	1
Fluoranthene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 16:48	1
Fluorene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 16:48	1
Indeno[1,2,3-cd]pyrene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 16:48	1
Naphthalene	0.95	U	4.8	0.95	ug/L		11/19/12 13:47	12/10/12 16:48	1
Phenanthrene	0.29	U	0.95	0.29	ug/L		11/19/12 13:47	12/10/12 16:48	1
Pyrene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 16:48	1
Surrogate							Prepared	Analyzed	Dil Fac
p-Terphenyl-d14	88			60 - 98			11/19/12 13:47	12/10/12 16:48	1

Client Sample ID: B2MXM6

Date Collected: 11/12/12 12:00

Date Received: 11/14/12 09:30

Lab Sample ID: 160-913-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.95	U	4.8	0.95	ug/L		11/19/12 13:47	12/10/12 17:18	1
Acenaphthylene	0.95	U	4.8	0.95	ug/L		11/19/12 13:47	12/10/12 17:18	1
Anthracene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 17:18	1
Benzo[a]anthracene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 17:18	1
Benzo[a]pyrene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 17:18	1
Benzo[b]fluoranthene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 17:18	1
Benzo[g,h,i]perylene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 17:18	1
Benzo[k]fluoranthene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 17:18	1
Chrysene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 17:18	1
Dibenz(a,h)anthracene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 17:18	1
Fluoranthene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 17:18	1
Fluorene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 17:18	1
Indeno[1,2,3-cd]pyrene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 17:18	1
Naphthalene	0.95	U	4.8	0.95	ug/L		11/19/12 13:47	12/10/12 17:18	1
Phenanthrene	0.29	U	0.95	0.29	ug/L		11/19/12 13:47	12/10/12 17:18	1
Pyrene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 17:18	1
Surrogate							Prepared	Analyzed	Dil Fac
p-Terphenyl-d14	85			60 - 98			11/19/12 13:47	12/10/12 17:18	1

Client Sample ID: B2MXN6

Date Collected: 11/12/12 08:00

Date Received: 11/14/12 09:30

Lab Sample ID: 160-913-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	10		4.8	0.95	ug/L		11/19/12 13:47	12/10/12 19:19	1
Acenaphthylene	0.95	U	4.8	0.95	ug/L		11/19/12 13:47	12/10/12 19:19	1

TestAmerica St. Louis

DECEMBER 14, 2012
Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
SDG: SL1332

Method: 8310 - PAHs (HPLC) (Continued)

Client Sample ID: B2MXN6							Lab Sample ID: 160-913-3			
Date Collected: 11/12/12 08:00							Matrix: Water			
Date Received: 11/14/12 09:30										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Anthracene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:19	1	
Benzo[a]anthracene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:19	1	
Benzo[a]pyrene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:19	1	
Benzo[b]fluoranthene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:19	1	
Benzo[g,h,i]perylene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:19	1	
Benzo[k]fluoranthene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:19	1	
Chrysene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:19	1	
Dibenz(a,h)anthracene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:19	1	
Fluoranthene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:19	1	
Fluorene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:19	1	
Indeno[1,2,3-cd]pyrene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:19	1	
Naphthalene	0.95	U	4.8	0.95	ug/L		11/19/12 13:47	12/10/12 19:19	1	
Phenanthrene	0.29	U	0.95	0.29	ug/L		11/19/12 13:47	12/10/12 19:19	1	
Pyrene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:19	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
p-Terphenyl-d14	82		60 - 98				11/19/12 13:47	12/10/12 19:19	1	

Client Sample ID: B2MXN7							Lab Sample ID: 160-913-4			
Date Collected: 11/12/12 10:45							Matrix: Water			
Date Received: 11/14/12 09:30										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Acenaphthene	0.95	U	4.8	0.95	ug/L		11/19/12 13:47	12/10/12 19:49	1	
Acenaphthylene	0.95	U	4.8	0.95	ug/L		11/19/12 13:47	12/10/12 19:49	1	
Anthracene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:49	1	
Benzo[a]anthracene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:49	1	
Benzo[a]pyrene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:49	1	
Benzo[b]fluoranthene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:49	1	
Benzo[g,h,i]perylene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:49	1	
Benzo[k]fluoranthene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:49	1	
Chrysene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:49	1	
Dibenz(a,h)anthracene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:49	1	
Fluoranthene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:49	1	
Fluorene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:49	1	
Indeno[1,2,3-cd]pyrene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:49	1	
Naphthalene	0.95	U	4.8	0.95	ug/L		11/19/12 13:47	12/10/12 19:49	1	
Phenanthrene	0.29	U	0.95	0.29	ug/L		11/19/12 13:47	12/10/12 19:49	1	
Pyrene	0.19	U	0.95	0.19	ug/L		11/19/12 13:47	12/10/12 19:49	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
p-Terphenyl-d14	90		60 - 98				11/19/12 13:47	12/10/12 19:49	1	

General Chemistry										
Client Sample ID: B2MN41							Lab Sample ID: 160-914-1			
Date Collected: 11/12/12 11:57							Matrix: Water			
Date Received: 11/14/12 09:30										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Sulfide	0.20	B C	1.0	0.083	mg/L		11/19/12 18:31		1	

TestAmerica St. Louis

DECEMBER 14, 2012
Client Sample Results

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
 SDG: SL1332

General Chemistry

Client Sample ID: B2MN46

Date Collected: 11/12/12 11:07

Date Received: 11/14/12 09:30

Lab Sample ID: 160-914-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	0.083	U	1.0	0.083	mg/L			11/19/12 18:31	1

Client Sample ID: B2MN74

Date Collected: 11/12/12 09:55

Date Received: 11/14/12 09:30

Lab Sample ID: 160-914-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	0.20	B C	1.0	0.083	mg/L			11/19/12 18:31	1

Client Sample ID: B2MN61

Date Collected: 11/13/12 07:45

Date Received: 11/15/12 09:20

Lab Sample ID: 160-920-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	0.083	U	1.0	0.083	mg/L			11/20/12 14:45	1

Client Sample ID: B2MN62

Date Collected: 11/13/12 11:23

Date Received: 11/15/12 09:20

Lab Sample ID: 160-920-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	0.083	U	1.0	0.083	mg/L			11/20/12 14:45	1

Client Sample ID: B2MP04

Date Collected: 11/13/12 09:00

Date Received: 11/15/12 09:20

Lab Sample ID: 160-921-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	0.083	U	1.0	0.083	mg/L			11/20/12 14:45	1

Client Sample ID: B2MP05

Date Collected: 11/13/12 12:54

Date Received: 11/15/12 09:20

Lab Sample ID: 160-921-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	0.083	U	1.0	0.083	mg/L			11/20/12 14:45	1

TestAmerica St. Louis

DECEMBER 14, 2012
QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
SDG: SL1332

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 160-17433/1-A

Matrix: Water

Analysis Batch: 19880

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 17433

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aldrin	0.010	U	0.050	0.010	ug/L		11/19/12 12:44	12/05/12 15:53	1
alpha-BHC	0.010	U	0.050	0.010	ug/L		11/19/12 12:44	12/05/12 15:53	1
beta-BHC	0.013	U	0.050	0.013	ug/L		11/19/12 12:44	12/05/12 15:53	1
delta-BHC	0.010	U	0.050	0.010	ug/L		11/19/12 12:44	12/05/12 15:53	1
gamma-BHC (Lindane)	0.010	U	0.050	0.010	ug/L		11/19/12 12:44	12/05/12 15:53	1
4,4'-DDD	0.010	U	0.050	0.010	ug/L		11/19/12 12:44	12/05/12 15:53	1
4,4'-DDE	0.014	U	0.050	0.014	ug/L		11/19/12 12:44	12/05/12 15:53	1
4,4'-DDT	0.023	U	0.050	0.023	ug/L		11/19/12 12:44	12/05/12 15:53	1
Dieldrin	0.010	U	0.050	0.010	ug/L		11/19/12 12:44	12/05/12 15:53	1
Endosulfan I	0.019	U	0.050	0.019	ug/L		11/19/12 12:44	12/05/12 15:53	1
Endosulfan II	0.010	U	0.050	0.010	ug/L		11/19/12 12:44	12/05/12 15:53	1
Endosulfan sulfate	0.010	U	0.050	0.010	ug/L		11/19/12 12:44	12/05/12 15:53	1
Endrin	0.018	U	0.050	0.018	ug/L		11/19/12 12:44	12/05/12 15:53	1
Endrin aldehyde	0.010	U	0.050	0.010	ug/L		11/19/12 12:44	12/05/12 15:53	1
Heptachlor	0.010	U	0.050	0.010	ug/L		11/19/12 12:44	12/05/12 15:53	1
Heptachlor epoxide	0.017	U	0.050	0.017	ug/L		11/19/12 12:44	12/05/12 15:53	1
Methoxychlor	0.013	U	0.50	0.013	ug/L		11/19/12 12:44	12/05/12 15:53	1
Toxaphene	0.27	U	2.0	0.27	ug/L		11/19/12 12:44	12/05/12 15:53	1
Technical Chlordane	0.10	U	0.50	0.10	ug/L		11/19/12 12:44	12/05/12 15:53	1

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
DCB Decachlorobiphenyl (Surrogate)	80		50 - 125			11/19/12 12:44	12/05/12 15:53	1
Tetrachloro-m-xylene	65		68 - 123			11/19/12 12:44	12/05/12 15:53	1

Lab Sample ID: LCS 160-17433/2-A

Matrix: Water

Analysis Batch: 19880

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 17433

Analyte	Spike	LCS	LCS	%Rec.		
	Added	Result	Qualifier	Unit	D	%Rec
Aldrin	0.500	0.278	O	ug/L	56	76 - 118
alpha-BHC	0.500	0.387	O	ug/L	77	82 - 124
beta-BHC	0.500	0.378		ug/L	76	43 - 140
delta-BHC	0.500	0.398		ug/L	80	80 - 140
gamma-BHC (Lindane)	0.501	0.386	O	ug/L	77	80 - 120
4,4'-DDD	0.500	0.401	O	ug/L	80	83 - 128
4,4'-DDE	0.501	0.334	O	ug/L	67	78 - 121
4,4'-DDT	0.500	0.388	O	ug/L	78	79 - 136
Dieldrin	0.501	0.381	O	ug/L	76	81 - 121
Endosulfan I	0.500	0.358		ug/L	72	47 - 131
Endosulfan II	0.500	0.361		ug/L	72	57 - 127
Endosulfan sulfate	0.500	0.383	O	ug/L	77	82 - 120
Endrin	0.501	0.389	O	ug/L	78	85 - 128
Endrin aldehyde	0.500	0.395		ug/L	79	78 - 124
Heptachlor	0.500	0.430		ug/L	86	76 - 132
Heptachlor epoxide	0.500	0.379	O	ug/L	76	79 - 121
Methoxychlor	0.500	0.410	J	ug/L	82	80 - 136

TestAmerica St. Louis

DECEMBER 14, 2012
QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
SDG: SL1332

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 160-17433/2-A

Matrix: Water

Analysis Batch: 19880

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 17433

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl (Surr)			71		50 - 125
Tetrachloro-m-xylene			64		68 - 123

Lab Sample ID: 160-913-1 MS

Matrix: Water

Analysis Batch: 19880

Client Sample ID: B2MXM5

Prep Type: Total/NA

Prep Batch: 17433

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Aldrin	0.0095	U O	0.956	0.606		ug/L		63	57 - 150
alpha-BHC	0.0095	U O	0.956	0.808		ug/L		84	61 - 150
beta-BHC	0.012	U	0.956	0.779		ug/L		81	38 - 150
delta-BHC	0.0095	U	0.956	0.825		ug/L		86	54 - 150
gamma-BHC (Lindane)	0.0095	U O	0.957	0.799		ug/L		83	67 - 150
4,4'-DDD	0.0095	U O	0.956	0.845		ug/L		88	64 - 150
4,4'-DDE	0.013	U O	0.957	0.738		ug/L		77	67 - 139
4,4'-DDT	0.022	U O	0.956	0.805		ug/L		84	66 - 150
Dieldrin	0.0095	U O	0.957	0.800		ug/L		84	66 - 149
Endosulfan I	0.018	U	0.956	0.750		ug/L		78	64 - 143
Endosulfan II	0.0095	U	0.956	0.752		ug/L		79	64 - 146
Endosulfan sulfate	0.0095	U O	0.956	0.795		ug/L		83	64 - 147
Endrin	0.017	U O	0.957	0.812		ug/L		85	70 - 150
Endrin aldehyde	0.0095	U	0.957	0.723		ug/L		76	47 - 150
Heptachlor	0.0095	U	0.956	0.796		ug/L		83	52 - 150
Heptachlor epoxide	0.016	U O	0.956	0.788		ug/L		82	54 - 150
Methoxychlor	0.012	U	0.956	0.859	J	ug/L		90	58 - 150

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl (Surr)			78		50 - 125
Tetrachloro-m-xylene			65		68 - 123

Lab Sample ID: 160-913-1 MSD

Matrix: Water

Analysis Batch: 19880

Client Sample ID: B2MXM5

Prep Type: Total/NA

Prep Batch: 17433

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Aldrin	0.0095	U O	0.944	0.665		ug/L		71	57 - 150	9	20
alpha-BHC	0.0095	U O	0.944	0.883		ug/L		94	61 - 150	9	20
beta-BHC	0.012	U	0.944	0.849		ug/L		90	38 - 150	9	20
delta-BHC	0.0095	U	0.944	0.898		ug/L		95	54 - 150	9	20
gamma-BHC (Lindane)	0.0095	U O	0.945	0.878		ug/L		93	67 - 150	10	20
4,4'-DDD	0.0095	U O	0.944	0.907		ug/L		96	64 - 150	7	20
4,4'-DDE	0.013	U O	0.945	0.793		ug/L		84	67 - 139	7	20
4,4'-DDT	0.022	U O	0.944	0.882		ug/L		93	66 - 150	9	20
Dieldrin	0.0095	U O	0.945	0.858		ug/L		91	66 - 149	7	20
Endosulfan I	0.018	U	0.944	0.809		ug/L		86	64 - 143	7	20
Endosulfan II	0.0095	U	0.944	0.815		ug/L		86	64 - 146	8	20
Endosulfan sulfate	0.0095	U O	0.944	0.856		ug/L		91	64 - 147	7	20
Endrin	0.017	U O	0.945	0.879		ug/L		93	70 - 150	8	20

TestAmerica St. Louis

DECEMBER 14, 2012
QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
SDG: SL1332

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 160-913-1 MSD

Matrix: Water

Analysis Batch: 19880

Client Sample ID: B2MXM5

Prep Type: Total/NA

Prep Batch: 17433

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Endrin aldehyde	0.0095	U	0.944	0.798		ug/L		85	47 - 150	10	20
Heptachlor	0.0095	U	0.944	0.861		ug/L		91	52 - 150	8	20
Heptachlor epoxide	0.016	U O	0.944	0.848		ug/L		90	54 - 150	7	20
Methoxychlor	0.012	U	0.944	0.920	J	ug/L		97	58 - 150	7	20
<hr/>											
Surrogate	MSD		MSD								
	%Recovery	Qualifier			Limits						
DCB Decachlorobiphenyl (Surr)	84			50 - 125							
Tetrachloro-m-xylene	72			68 - 123							

Method: 8310 - PAHs (HPLC)

Lab Sample ID: MB 160-17446/1-A

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 20483

Prep Batch: 17446

Analyte	MB	MB	RL	MDL	Unit	D	Prepared		Analyzed		Dil Fac
	Result	Qualifier									
Acenaphthene	1.0	U	5.0	1.0	ug/L		11/19/12 13:47		12/10/12 15:48		1
Acenaphthylene	1.0	U	5.0	1.0	ug/L		11/19/12 13:47		12/10/12 15:48		1
Anthracene	0.20	U	1.0	0.20	ug/L		11/19/12 13:47		12/10/12 15:48		1
Benzo[a]anthracene	0.20	U	1.0	0.20	ug/L		11/19/12 13:47		12/10/12 15:48		1
Benzo[a]pyrene	0.20	U	1.0	0.20	ug/L		11/19/12 13:47		12/10/12 15:48		1
Benzo[b]fluoranthene	0.20	U	1.0	0.20	ug/L		11/19/12 13:47		12/10/12 15:48		1
Benzo[g,h,i]perylene	0.20	U	1.0	0.20	ug/L		11/19/12 13:47		12/10/12 15:48		1
Benzo[k]fluoranthene	0.20	U	1.0	0.20	ug/L		11/19/12 13:47		12/10/12 15:48		1
Chrysene	0.20	U	1.0	0.20	ug/L		11/19/12 13:47		12/10/12 15:48		1
Dibenz(a,h)anthracene	0.20	U	1.0	0.20	ug/L		11/19/12 13:47		12/10/12 15:48		1
Fluoranthene	0.20	U	1.0	0.20	ug/L		11/19/12 13:47		12/10/12 15:48		1
Fluorene	0.20	U	1.0	0.20	ug/L		11/19/12 13:47		12/10/12 15:48		1
Indeno[1,2,3-cd]pyrene	0.20	U	1.0	0.20	ug/L		11/19/12 13:47		12/10/12 15:48		1
Naphthalene	1.0	U	5.0	1.0	ug/L		11/19/12 13:47		12/10/12 15:48		1
Phenanthrene	0.30	U	1.0	0.30	ug/L		11/19/12 13:47		12/10/12 15:48		1
Pyrene	0.20	U	1.0	0.20	ug/L		11/19/12 13:47		12/10/12 15:48		1
<hr/>											
Surrogate	MB		MB						Prepared		Dil Fac
	%Recovery	Qualifier			Limits						
p-Terphenyl-d14	82			60 - 98					11/19/12 13:47	12/10/12 15:48	1

Lab Sample ID: LCS 160-17446/2-A

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 20483

Prep Batch: 17446

Analyte	Spike		LCS		Unit	D	%Rec.		Limits
	Added	Result	Qualifier	Unit			%Rec		
Acenaphthene	20.0	16.1		ug/L			80		52 - 100
Acenaphthylene	40.0	32.3		ug/L			81		54 - 106
Anthracene	2.00	1.66		ug/L			83		56 - 116
Benzo[a]anthracene	2.00	1.87		ug/L			93		58 - 116
Benzo[a]pyrene	2.00	2.02		ug/L			101		46 - 118
Benzo[b]fluoranthene	4.00	3.75		ug/L			94		56 - 114

TestAmerica St. Louis

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QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
SDG: SL1332

Method: 8310 - PAHs (HPLC) (Continued)

Lab Sample ID: LCS 160-17446/2-A

Matrix: Water

Analysis Batch: 20483

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 17446

Analyte		Spike	LCS		Unit	D	%Rec	Limits
		Added	Result	Qualifier				
Benzo[g,h,i]perylene		4.00	3.94		ug/L		99	50 - 106
Benzo[k]fluoranthene		2.00	1.78		ug/L		89	55 - 110
Chrysene		2.00	1.86		ug/L		93	56 - 115
Dibenz(a,h)anthracene		4.00	3.71		ug/L		93	51 - 98
Fluoranthene		4.00	3.50		ug/L		88	40 - 140
Fluorene		4.00	3.29		ug/L		82	54 - 108
Indeno[1,2,3-cd]pyrene		2.00	1.85		ug/L		93	56 - 111
Naphthalene		20.0	16.6		ug/L		83	46 - 96
Phenanthrene		2.00	1.75		ug/L		87	54 - 115
Pyrene		2.00	1.79		ug/L		89	57 - 115
Surrogate			LCS	LCS				
<i>p-Terphenyl-d14</i>		88	%Recovery	Qualifier	Limits			
					60 - 98			

Lab Sample ID: 160-913-2 MS

Matrix: Water

Analysis Batch: 20483

Client Sample ID: B2MXM6

Prep Type: Total/NA

Prep Batch: 17446

Analyte	Sample	Sample	Spike	MS		Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Acenaphthene	0.95	U	38.2	32.6		ug/L		85	60 - 94
Acenaphthylene	0.95	U	76.4	66.7		ug/L		87	64 - 95
Anthracene	0.19	U	3.82	3.58		ug/L		94	62 - 105
Benzo[a]anthracene	0.19	U	3.82	3.71		ug/L		97	64 - 106
Benzo[a]pyrene	0.19	U	3.82	4.31		ug/L		113	38 - 123
Benzo[b]fluoranthene	0.19	U	7.64	7.49		ug/L		98	59 - 103
Benzo[g,h,i]perylene	0.19	U	7.64	7.86		ug/L		103	38 - 116
Benzo[k]fluoranthene	0.19	U	3.82	3.55		ug/L		93	51 - 112
Chrysene	0.19	U	3.82	3.70		ug/L		97	63 - 103
Dibenz(a,h)anthracene	0.19	U	7.64	7.67		ug/L		100	35 - 117
Fluoranthene	0.19	U	7.64	7.41		ug/L		97	48 - 121
Fluorene	0.19	U	7.64	6.79		ug/L		89	61 - 98
Indeno[1,2,3-cd]pyrene	0.19	U	3.82	3.67		ug/L		96	58 - 108
Naphthalene	0.95	U	38.2	31.5		ug/L		82	55 - 88
Phenanthrene	0.29	U	3.82	3.60		ug/L		94	63 - 106
Pyrene	0.19	U	3.82	3.64		ug/L		95	49 - 133
Surrogate			MS	MS					
<i>p-Terphenyl-d14</i>		92	%Recovery	Qualifier	Limits				
					60 - 98				

Lab Sample ID: 160-913-2 MSD

Matrix: Water

Analysis Batch: 20483

Client Sample ID: B2MXM6

Prep Type: Total/NA

Prep Batch: 17446

Analyte	Sample	Sample	Spike	MSD		Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Acenaphthene	0.95	U	37.8	30.8		ug/L		81	60 - 94	6	20
Acenaphthylene	0.95	U	75.7	63.2		ug/L		84	64 - 95	5	20
Anthracene	0.19	U	3.78	3.41		ug/L		90	62 - 105	5	20
Benzo[a]anthracene	0.19	U	3.78	3.91		ug/L		103	64 - 106	5	20

TestAmerica St. Louis

DECEMBER 14, 2012
QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
SDG: SL1332

Method: 8310 - PAHs (HPLC) (Continued)

Lab Sample ID: 160-913-2 MSD

Matrix: Water

Analysis Batch: 20483

Client Sample ID: B2MXM6

Prep Type: Total/NA

Prep Batch: 17446

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec.		RPD	Limit
	Result	Qualifier	Added	Result	Qualifier			%Rec.	Limits		
Benzo[a]pyrene	0.19	U	3.78	4.31		ug/L		114	38 - 123	0	20
Benzo[b]fluoranthene	0.19	U	7.57	7.28		ug/L		96	59 - 103	3	20
Benzo[g,h,i]perylene	0.19	U	7.57	7.97		ug/L		105	38 - 116	1	20
Benzo[k]fluoranthene	0.19	U	3.78	3.53		ug/L		93	51 - 112	1	20
Chrysene	0.19	U	3.78	3.69		ug/L		97	63 - 103	0	20
Dibenz(a,h)anthracene	0.19	U	7.57	7.63		ug/L		101	35 - 117	0	20
Fluoranthene	0.19	U	7.57	6.86		ug/L		91	48 - 121	8	20
Fluorene	0.19	U	7.57	6.47		ug/L		85	61 - 98	5	20
Indeno[1,2,3-cd]pyrene	0.19	U	3.78	3.68		ug/L		97	58 - 108	0	20
Naphthalene	0.95	U	37.8	31.6		ug/L		84	55 - 88	0	20
Phenanthrene	0.29	U	3.78	3.43		ug/L		91	63 - 106	5	20
Pyrene	0.19	U	3.78	3.49		ug/L		92	49 - 133	4	20
<i>Surrogate</i>		<i>MSD</i>	<i>MSD</i>								
<i>Surrogate</i>		<i>%Recovery</i>	<i>Qualifier</i>		<i>Limits</i>						
<i>p-Terphenyl-d14</i>		89			60 - 98						

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 160-17468/1

Client Sample ID: Method Blank

Prep Type: Total/NA

Matrix: Water

Analysis Batch: 17468

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Sulfide	0.200	B	1.0	0.083	mg/L			11/19/12 18:31	1

Lab Sample ID: LCS 160-17468/2

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Matrix: Water

Analysis Batch: 17468

Analyte	Spike	LCS	LCS	Unit	D	%Rec.	Limits
	Added	Result	Qualifier				
Sulfide	9.95	9.40		mg/L		94	70 - 130

Lab Sample ID: 160-914-1 MS

Client Sample ID: B2MN41

Prep Type: Total/NA

Matrix: Water

Analysis Batch: 17468

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier				
Sulfide	0.20	B C	9.95	9.60		mg/L		94	75 - 125

Lab Sample ID: 160-914-1 DU

Client Sample ID: B2MN41

Prep Type: Total/NA

Matrix: Water

Analysis Batch: 17468

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Sulfide	0.20	B C	0.200	B	mg/L		0	20

TestAmerica St. Louis

DECEMBER 14, 2012
QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
SDG: SL1332

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric) (Continued)

Lab Sample ID: MB 160-17642/1

Matrix: Water

Analysis Batch: 17642

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Sulfide	0.083	U	1.0	0.083	mg/L			11/20/12 14:45	1

Lab Sample ID: LCS 160-17642/2

Matrix: Water

Analysis Batch: 17642

Analyte	Spike	LCS	LCS	Unit	D	%Rec.	Limits	RPD	Limit
	Added	Result	Qualifier						
Sulfide	9.95	9.40		mg/L		94	70 - 130		

Lab Sample ID: LCSD 160-17642/3

Matrix: Water

Analysis Batch: 17642

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec.	Limits	RPD	Limit
	Added	Result	Qualifier						
Sulfide	9.95	9.60		mg/L		96	70 - 130	2	20

Lab Sample ID: 160-920-1 MS

Matrix: Water

Analysis Batch: 17642

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Sulfide	0.083	U	9.95	9.60		mg/L		96	75 - 125		

Lab Sample ID: 160-920-1 DU

Matrix: Water

Analysis Batch: 17642

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Sulfide	0.083	U	0.083	U	mg/L		NC	20

TestAmerica St. Louis

DECEMBER 14, 2012
QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
SDG: SL1332

GC Semi VOA

Prep Batch: 17433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-913-1	B2MXM5	Total/NA	Water	3510C	5
160-913-1 MS	B2MXM5	Total/NA	Water	3510C	6
160-913-1 MSD	B2MXM5	Total/NA	Water	3510C	7
160-913-2	B2MXM6	Total/NA	Water	3510C	8
160-913-3	B2MXN6	Total/NA	Water	3510C	9
160-913-4	B2MXN7	Total/NA	Water	3510C	10
160-914-1	B2MN41	Total/NA	Water	3510C	11
160-914-2	B2MN46	Total/NA	Water	3510C	12
160-914-3	B2MN74	Total/NA	Water	3510C	13
160-920-1	B2MN61	Total/NA	Water	3510C	
160-920-2	B2MN62	Total/NA	Water	3510C	
LCS 160-17433/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 160-17433/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 19880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-913-1	B2MXM5	Total/NA	Water	8081B	17433
160-913-1 MS	B2MXM5	Total/NA	Water	8081B	17433
160-913-1 MSD	B2MXM5	Total/NA	Water	8081B	17433
160-913-2	B2MXM6	Total/NA	Water	8081B	17433
160-913-3	B2MXN6	Total/NA	Water	8081B	17433
160-913-4	B2MXN7	Total/NA	Water	8081B	17433
160-914-1	B2MN41	Total/NA	Water	8081B	17433
160-914-2	B2MN46	Total/NA	Water	8081B	17433
160-914-3	B2MN74	Total/NA	Water	8081B	17433
160-920-1	B2MN61	Total/NA	Water	8081B	17433
160-920-2	B2MN62	Total/NA	Water	8081B	17433
LCS 160-17433/2-A	Lab Control Sample	Total/NA	Water	8081B	17433
MB 160-17433/1-A	Method Blank	Total/NA	Water	8081B	17433

HPLC/IC

Prep Batch: 17446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-913-1	B2MXM5	Total/NA	Water	3510C	
160-913-2	B2MXM6	Total/NA	Water	3510C	
160-913-2 MS	B2MXM6	Total/NA	Water	3510C	
160-913-2 MSD	B2MXM6	Total/NA	Water	3510C	
160-913-3	B2MXN6	Total/NA	Water	3510C	
160-913-4	B2MXN7	Total/NA	Water	3510C	
LCS 160-17446/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 160-17446/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 20483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-913-1	B2MXM5	Total/NA	Water	8310	17446
160-913-2	B2MXM6	Total/NA	Water	8310	17446
160-913-2 MS	B2MXM6	Total/NA	Water	8310	17446
160-913-2 MSD	B2MXM6	Total/NA	Water	8310	17446
160-913-3	B2MXN6	Total/NA	Water	8310	17446

TestAmerica St. Louis

DECEMBER 14, 2012
QC Association Summary

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
 SDG: SL1332

HPLC/IC (Continued)

Analysis Batch: 20483 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-913-4	B2MXN7	Total/NA	Water	8310	17446
LCS 160-17446/2-A	Lab Control Sample	Total/NA	Water	8310	17446
MB 160-17446/1-A	Method Blank	Total/NA	Water	8310	17446

General Chemistry

Analysis Batch: 17468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-914-1	B2MN41	Total/NA	Water	9034	9
160-914-1 DU	B2MN41	Total/NA	Water	9034	10
160-914-1 MS	B2MN41	Total/NA	Water	9034	11
160-914-2	B2MN46	Total/NA	Water	9034	12
160-914-3	B2MN74	Total/NA	Water	9034	13
LCS 160-17468/2	Lab Control Sample	Total/NA	Water	9034	
MB 160-17468/1	Method Blank	Total/NA	Water	9034	

Analysis Batch: 17642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-920-1	B2MN61	Total/NA	Water	9034	
160-920-1 DU	B2MN61	Total/NA	Water	9034	
160-920-1 MS	B2MN61	Total/NA	Water	9034	
160-920-2	B2MN62	Total/NA	Water	9034	
160-921-1	B2MP04	Total/NA	Water	9034	
160-921-2	B2MP05	Total/NA	Water	9034	
LCS 160-17642/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 160-17642/3	Lab Control Sample Dup	Total/NA	Water	9034	
MB 160-17642/1	Method Blank	Total/NA	Water	9034	

DECEMBER 14, 2012
Surrogate Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-913-1
SDG: SL1332

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCB1 (50-125)	TCX1 (68-123)									
160-913-1	B2MXM5	81	72									
160-913-1 MS	B2MXM5	78	65									
160-913-1 MSD	B2MXM5	84	72									
160-913-2	B2MXM6	71	70									
160-913-3	B2MXN6	85	77									
160-913-4	B2MXN7	90	74									
160-914-1	B2MN41	91	79									
160-914-2	B2MN46	84	74									
160-914-3	B2MN74	82	70									
160-920-1	B2MN61	88	68									
160-920-2	B2MN62	83	71									
LCS 160-17433/2-A	Lab Control Sample	71	64									
MB 160-17433/1-A	Method Blank	80	65									

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene

Method: 8310 - PAHs (HPLC)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TPH1 (60-98)										
160-913-1	B2MXM5	88										
160-913-2	B2MXM6	85										
160-913-2 MS	B2MXM6	92										
160-913-2 MSD	B2MXM6	89										
160-913-3	B2MXN6	82										
160-913-4	B2MXN7	90										
LCS 160-17446/2-A	Lab Control Sample	88										
MB 160-17446/1-A	Method Blank	82										

Surrogate Legend

TPH = p-Terphenyl-d14