

SAF-RC-205
Water Sampling – Integrated Remedial
Investigation/Feasibility Study,
100-N Decision Unit
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

No Distribution Required

COMMENTS:

SDG J01079

SAF-RC-205

Rad only

Chem only

Rad & Chem

Complete

Partial



Sample Location: C8185 (199-N-183); I-013

Analytical Data Package Prepared For
Washington Closure Hanford



Radiochemical Analysis By
TestAmerica

2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.

Assigned Laboratory Code: TARL

Data Package Contains 21 Pages

Report No.: 46262

Results in this report relate only to the sample(s) analyzed.

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
J01079	RC-205	B2C292	J1D180517-1	MG6HE1AA	9MG6HE10	11009111

Certificate of Analysis

TestAmerica Laboratories, Inc.

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

April 19, 2011

Attention: Joan Kessner

SAF Number	:	RC-205
Date SDG Closed	:	April 18, 2011
Number of Samples	:	One (1)
Sample Type	:	Water
SDG Number	:	J01079
Data Deliverable	:	7 Day Summary

CASE NARRATIVE

I. Introduction

On April 18, 2011, one soil sample was received at TestAmerica for chemistry analysis. Upon receipt, the sample was assigned the following laboratory ID number to correspond with the Washington Closure Hanford (WCH) specific ID:

<u>WCH ID#</u>	<u>TARL ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
B2C292	MG6HE	WATER	4/18/11

II. Sample Receipt

The sample was received in good condition and no anomalies were noted during check-in.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analyses were:

Chemical Analysis
Hexavalent Chromium by EPA method 7196A

Washington Closure Hanford
April 19, 2011

IV. Quality Control

The analytical results for each analysis performed includes a minimum of one laboratory control sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

V. Comments

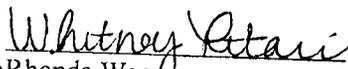
Chemical Analysis

Hexavalent Chromium by EPA method 7196A:

The sample matrix spike (B2C292) recovered low at 15.9%, while the matrix spike duplicate (B2C292) was recovered at 12.6%. This implies strong reducing capacity in the sample, but not enough to exhaust the insoluble matrix spike. Except as noted the LCS, batch blank, sample, sample duplicate (B2C292) and the sample matrix spike (B2C292) results are within contractual requirements.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:


 Rhonda Wagar
Project Manager

Drinking Water Method Cross References

DRINKING WATER ASTM METHOD CROSS REFERENCES		
Referenced Method	Isotope(s)	TestAmerica Richland's SOP No.
EPA 901.1	Cs-134, I-131	RL-GAM-001
EPA 900.0	Alpha & Beta	RL-GPC-001
EPA 00-02	Gross Alpha (Coprecipitation)	RL-GPC-002
EPA 903.0	Total Alpha Radium (Ra-226)	RL-RA-002
EPA 903.1	Ra-226	RL-RA-001
EPA 904.0	Ra-228	RL-RA-001
EPA 905.0	Sr-89/90	RL-GPC-003
ASTM D5174	Uranium	RL-KPA-003
EPA 906.0	Tritium	RL-LSC-005

Results in this report relate only to the sample(s) analyzed.

Uncertainty Estimation

TestAmerica Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, $R = \text{constants} * f(x, y, z, \dots)$. The components (x, y, z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1, 2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/\sqrt{n}), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific examples are available on request.

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Blas	Defined by the equation $(\text{Result}/\text{Expected})-1$ as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or TestAmerica.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) u_c - Combined Uncertainty.	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, u_c the combined uncertainty. The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or TestAmerica "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. $Lc = (1.645 * \text{Sqrt}(2 * (\text{BkgrndCnt}/\text{BkgrndCntMin})/\text{SCntMin})) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$. For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. $MDC = (4.65 * \text{Sqrt}((\text{BkgrndCnt}/\text{BkgrndCntMin})/\text{SCntMin}) + 2.71/\text{SCntMin}) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$. For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the Work Order Number.
RER	The equation Replicate Error Ratio $= (S-D)/[\text{sqrt}(\text{TPUs}^2 + \text{TPUd}^2)]$ as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by TestAmerica upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

Sample Results Summary

Date: 19-Apr-11

TestAmerica TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 46262

SDG No: J01079

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
11009111	7196_CR8								
	B2C292								
	MG6HE1AA	HEXCHROME	2.00E-03 +- 0.0E+00	U	mg/L	N/A	2.00E-03	3.50E-01	
	MG6HE1AE	HEXCHROME	2.00E-03 +- 0.0E+00	U	mg/L	N/A	2.00E-03	3.50E-01	0.0
No. of Results:		2							

TestAmerica

RPD - Relative Percent Difference.

rptSTLRchSaSum
mary2 V5.2.12
A2002

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

QC Results Summary

Date: 19-Apr-11

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Report No. : 46262

SDG No.: J01079

Batch	Work Order	Parameter	Result +/- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC MDA
7196_CR6	11009111	MATRIX SPIKE, B2C292							
	MG6HE1AC	HEXCHROME	4.20E-02 +- 0.0E+00		mg/L	N/A	16%	-0.8	2.00E-03
	MG6HE1AD	HEXCHROME	3.30E-02 +- 0.0E+00		mg/L	N/A	13%	-0.9	2.00E-03
	11009111	LCS,							
	MG61X1AC	HEXCHROME	5.06E-01 +- 0.0E+00		mg/L	N/A	101%	0.0	2.00E-03
	11009111	BLANK QC,							
	MG61X1AA	HEXCHROME	2.00E-03 +- 0.0E+00	U	mg/L	N/A			2.00E-03
	No. of Results: 4								

TestAmerica Bias - (Result/Expected)-1 as defined by ANSI N13.30.

rptSTLRchQcSummary V5.2.12 U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or A2002 not identified by gamma scan software.

**FORM I
SAMPLE RESULTS**

Date: 19-Apr-11

Lab Name: TestAmerica
 Lot-Sample No.: J1D180517-1
 Client Sample ID: B2C292

SDG: J01079
 Report No.: 46262
 COC No.: RC-205-002

Collection Date: 4/18/2011 12:40:00 PM
 Received Date: 4/18/2011 2:45:00 PM
 Matrix: WATER

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 11009111	7196_CR6											
HEXCHROME	2.00E-03	U										
Work Order: MG6HE1AA Report DB ID: 9MG6HE10 0.0E+00 2.00E-03 mg/L N/A 1. 4/19/11 09:00 a 3.50E-01 N/A												
No. of Results: 1	Comments:											

TestAmerica MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rpt\$TLRchSample U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.
 V5.2.12 A2002

FORM I

Date: 19-Apr-11

SAMPLE RESULTS

Lab Name: TestAmerica
Lot-Sample No.: J1D180517-1
Client Sample ID: B2C292

SDG: J01079
Report No.: 46262
COC No.: RC-205-002

Collection Date: 4/18/2011 12:40:00 PM
Received Date: 4/18/2011 2:45:00 PM
Matrix: WATER

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
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FORM II

Date: 19-Apr-11

DUPLICATE RESULTS

Lab Name: TestAmerica
 Lot-Sample No.: J1D180517-1
 Client Sample ID: B2C292

SDG: J01079
 Report No.: 46262
 COC No.: RC-205-002
 Matrix: WATER

Collection Date: 4/18/2011 12:40:00 PM
 Received Date: 4/18/2011 2:45:00 PM

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/TotUcert	Rst/MDc, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 11009111	7196_CR6												
HEXCHROME	2.00E-03	U		0.0E+00	2.00E-03	mg/L	N/A	1.		4/19/11 09:00 a		100.0	ML
	2.00E-03	U	RPD 0.0			3.50E-01		N/A					

Work Order: MG6HE1AE
 Report DB ID: MG6HE1ER
 Orig Sa DB ID: 9MG6HE10

No. of Results: 1 Comments:

TestAmerica RPD - Relative Percent Difference.
 rptSLRchDupV5.2 MDC|MDA,Le - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 .12 A2002 U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mdz/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

**FORM II
BLANK RESULTS**

Date: 19-Apr-11

Lab Name: TestAmerica SDG: J01079
 Matrix: WATER Report No.: 46262

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 11009111	7196_CR6											
HEXCHROME	2.00E-03	U		0.0E+00	2.00E-03	mg/L	N/A	1.	4/19/11 09:00 a		100.0	ML
Work Order: MG61X1AA Report DB ID: MG61X1AB												
3.50E-01 N/A												

No. of Results: 1 Comments:

**FORM II
LCS RESULTS**

Date: 19-Apr-11

Lab Name: TestAmerica SDG: J01079
 Matrix: WATER Report No.: 46262

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 11009111	7196_CR6												
HEXCHROME	5.06E-01			0.0E+00	2.00E-03	mg/L	N/A	5.00E-01	130	101%	4/19/11 09:00 a	100.0	ML
Work Order: MG61X1AC Report DB ID: MG61X1AS Rec Limits: 70 130 0.0													

No. of Results: 1 Comments:

FORM II

MATRIX SPIKE RESULTS

Date: 19-Apr-11

Lab Name: TestAmerica SDG: J01079 Matrix: WATER
 Lot-Sample No.: J1D180517-1, B2C292 Report No.: 46262

Parameter	Spike Result, Orig Rst	Count Error (2 s)	Total Uncert (2 s)	MDC MDA	Rpt Unit, CRDL	Yield	Recovery	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 11009111 HEXCHROME	Work Order: 4.20E-02 2.00E-03	MG6HE1AC	Report DB ID: 0.0E+00	MG6HE1CW	2.00E-03 mg/L	N/A	15.97%	2.63E-01	4/19/11 09:00 a	100.0	7196_CR6
Batch: 11009111 HEXCHROME	Work Order: 3.30E-02 4.20E-02	MG6HE1AD	Report DB ID: 0.0E+00	MG6HE1DW	2.00E-03 mg/L	N/A	12.55%	2.63E-01	4/19/11 09:00 a	100.0	7196_CR6

Number of Results: 2

Comments:

TestAmerica RER - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUS)+sq(TPUD))] as defined by ICPT BOA
 rptSTLRchMIs Bias - (Result/Expected)-1 as defined by ANSI N13.30
 V5.2.12 A2002

Date: 19-Apr-11

FORM II MATRIX SPIKE DUPLICATE RESULTS

Lab Name: TestAmerica SDG: J01079 Matrix: WATER
Lot-Sample No.: J1D180517-1, B2C292 Report No.: 46262

Parameter	SpikeResult, Orig Rst	Count Error (2 s)	Qual	Total Uncert(2 s)	MDC MDA	Rpt Unit, CRDL	Yield	Rec- overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 11009111	7196_CR6											
HEXCHROME	4.20E-02			0.0E+00	2.00E-03	mg/L	N/A	15.97%	2.63E-01	MG6HE1DW 4/19/11 09:00 a	100.0	
	3.30E-02	RPD										
Batch: 11009111	7196_CR6											
HEXCHROME	3.30E-02			0.0E+00	2.00E-03	mg/L	N/A	12.55%	2.63E-01	MG6HE1CW 4/19/11 09:00 a	100.0	
	4.20E-02	RPD										

No. of Results: 2 Comments:

TestAmerica RER • Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA
rptSTLRchMsDup2 Bias - (Result/Expected)-1 as defined by ANSI N13.30.
V5.2.12 A2002

**Richland Laboratory
Data Review Check List
Hexavalent Chromium**

Batch Number(s): <u>1109111</u> <i>W2 4/19/11</i>				
Lab Sample Numbers or SDG: <u>J01079</u>				
Method/Test/Parameter: <u>Cr+6 in Water / RL-WC-003</u>				
Review Item	Yes (✓)	No (✓)	N/A (✓)	2 nd Level Review (✓)
A. Initial Calibration				
1. Performed at required frequency with required number of levels?	✓			✓
2. Correlation coefficient within QC limits?	✓			✓
3. Initial calibration verification (ICV) analyzed immediately after calibration and results within QC limits?	✓			✓
4. Initial calibration blank (ICB) analyzed immediately after ICV and concentrations of all parameters ≤ reporting limit?	✓			✓
B. Continuing Calibration				
1. CCV analyzed at required frequency and all parameters within QC limits?	✓			✓
2. CCB analyzed at required frequency and all results ≤ reporting limit?	✓			✓
C. Sample Analysis				
1. Were any samples with concentrations above the linear range for any parameter diluted and reanalyzed?			✓	✓
2. Were all sample holding times met?	✓			✓
D. QC Samples				
1. All results for the preparation blank below limits?	✓			✓
2. MS or MS/MSD recoveries within QC limits and %RPD (for MSD) acceptable?		✓		✓
3. LCS percent recovery within QC limits and %RPD (for LCSD) acceptable?	✓			✓
4. Analytical spikes within QC limits where applicable?	✓			✓
5. ICP only: One serial dilution performed per SDG?			✓	✓
6. ICP only: CRDL standard (CRI or CRA) analyzed at required frequency?			✓	✓
7. ICP only: Interference check samples (ICSA, ICSAB) and HICAL analyzed at the required frequencies and within QC limits?			✓	✓

Review Item	Yes (✓)	No (✓)	N/A (✓)	2 nd Level Review (✓)
E. Other	✓			
1. Are all nonconformances included and noted?				✓
2. Is the correct date and time of analysis shown?	✓			
3. Did the analyst sign and date the front page of the analytical run?	✓			✓
4. Correct methodology used?	✓			✓
5. Transcriptions checked?	✓			✓
6. Calculations checked at minimum frequency?	✓			✓
7. Units checked?	✓			✓

Comments on any "No" response: The MS recovered low at 15.90%. The MSD recovered at 12.60%.

Suspect reducing capacity in the sample.

Analyst: H.Rahavi
 Second-Level Review: 

Date: 04/19/11
 Date: 4/19/11

Clouseau Nonconformance Memo

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

NCM #: 10-18149 NCM Initiated By: Hooshang Rahavi Date Opened: 04/19/2011 Date Closed:	Classification: Anomaly Status: PMREVIEW Production Area: Classical Chemistry Tests: 7196A Lot #'s (Sample #'s): J1D180517 (1), J1D190000 (111), QC Batches: 1109111,
Nonconformance: QC data exceeded criteria Subcategory: MS/MSD accuracy and/or precision out of control	

Problem Description / Root Cause

<u>Name</u>	<u>Date</u>	<u>Description</u>
Hooshang Rahavi	04/19/2011	The MS recovered low at 15.90. The MSD recovered at 12.60. Suspect reducing capacity in the sample.

Corrective Action

<u>Name</u>	<u>Date</u>	<u>Corrective Action</u>
Hooshang Rahavi	04/19/2011	Report data

Client Notification Summary

<u>Client</u>	<u>Project Manager</u>	<u>Notified</u>	<u>Response</u>	<u>How Notified</u>	<u>Note</u>
			<u>Response</u>		<u>Response Note</u>

Quality Assurance Verification

<u>Verified By</u>	<u>Due Date</u>	<u>Status</u>	<u>Notes</u>
			This section not yet completed by QA.

Approval History

<u>Date Approved</u>	<u>Approved By</u>	<u>Position</u>

CH2M Hill Plateau Remediation Company

COLLECTOR: *DAVEN*

SAMPLING LOCATION: C8185 (199-N-183); I-013

ICE CHEST NO.: N/A

SHIPPED TO: TestAmerica Incorporated, Richland

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

COMPANY CONTACT: KESSNER, JH

TELEPHONE NO.: 375-4688

PROJECT COORDINATOR: KESSNER, JH

PROJECT DESIGNATION: Water Sampling - Integrated Remedial Investigation/Feasibility Study, 100-Field Logbook No. *742*

ACTUAL SAMPLE DEPTH: *742*

OFFSITE PROPERTY NO.: N/A

RC-205-002

PRICE CODE: 7D

AIR QUALITY:

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

PAGE 1 OF 1

DATA TURNAROUND: 21 Days / 21 Days

DATE: *4/13/11*

ORIGINAL

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

PRESERVATION: Cool-4C

HOLDING TIME: 24 Hours

TYPE OF CONTAINER: aG

NO. OF CONTAINER(S): 1

VOLUME: 500ml

SAMPLE ANALYSIS: Chromium Hex - 7156 (100 Area RIFS);

SPECIAL HANDLING AND/OR STORAGE: WATER

MATRIX*: WATER

SAMPLE NO.: B2C292

SAMPLE DATE: 4-18-11

SAMPLE TIME: 1240

4/25/11

Due: 5:00 PM 4/18/11

24 hr - holding time

SDG# J01079

Lot# J1D180517

MGGHE

7 days TAT per client

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		DATE/TIME	
RELINQUISHED BY/REMOVED FROM	<i>DAVEN</i>	RECEIVED BY/STORED IN	<i>AAA White MGGHE</i>	DATE/TIME	<i>4-18-11 1345</i>
RELINQUISHED BY/REMOVED FROM	<i>Mattie MGGHE</i>	RECEIVED BY/STORED IN	<i>AAA White MGGHE</i>	DATE/TIME	<i>4-18-11 1445</i>
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN		DATE/TIME	
LABORATORY SECTION	RECEIVED BY	TITLE			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY			
DATE/TIME		DATE/TIME		DATE/TIME	

Sample Check-in List

Date/Time Received: 4.18.11 1445 GM Screen Result (out) -.1 (in) .2 Initials CK
Client: BTI SDG #: JO1079 NA [] SAF #: RC-205 NA []
Work Order Number: J1D180517 Chain of Custody # RC-205-002
Shipping Container ID: hand delivery NA [] Air Bill # _____ NA []

Item 1 through 5 for shipping container only. Initial appropriate response.

1. Custody Seals on shipping container intact? Yes No [] No Custody Seal []
2. Custody Seals dated and signed? Yes No [] No Custody Seal []
3. Chain of Custody record present? Yes No []
4. Cooler temperature: 4°C NA 5. Vermiculite/packing materials is NA [] Wet [] Dry

Item 6 through 10 for samples. Initial appropriate response.

6. Number of samples in shipping container (Each sample may contain multiple bottles): 1 sample @ 1X500 mL per only
7. Sample holding times exceeded? NA [] Yes [] No
8. Samples have:
CK tape custody seals (water) CK hazard labels appropriate sample labels
9. Samples:
CK are in good condition _____ are broken _____ are leaking _____ have air bubbles (Only for samples requiring no head space)
10. Sample pH appropriate for analysis requested Yes No [] N/A [] (Note discrepancies in #13)
(If acidification necessary, then document sample ID, initial pH, amount of HNO₃ added and pH after addition)

RPL ID # of preservative used: N/A

11. Sample Location, Sample Collector Listed? * CK
*For documentation only. No corrective action needed. Yes [] No []
12. Were any anomalies identified in sample receipt? CK
Yes [] No []
13. Description of anomalies (include sample numbers): CK
NA []

See other side for additional comments
Sample Custodian: [Signature] Date: 4.18.11 1445

Client Informed on _____ by _____ Person contacted _____

No action necessary; process as is

Project Manager: [Signature] Date: 4/18/11

04/19/2011 9:06:14 AM
 27642, Washington Closure Hanford LLC
 Bechtel Hanford, Inc.
Analyte Due Date: 04/25/2011
 Batch: 1109111 WATER mg/L
 EQ Batch, Test: None All Tests: 1109111 88EA,
 PM, Quote: RW2, 27023

Sample Preparation/Analysis
 Balance Id:
 Pipet #:
 Sep1 DT/Tm Tech:
 Sep2 DT/Tm Tech:
 Prep Tech:
 CR Analyst, Init/Date

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	Comments:
1 MG6HE-1-AA J1D180517-1-SAM/P 04/18/2011 12:40							Scr: Alpha: Beta:
2 MG6HE-1-AC-S J1D180517-1-MS 04/18/2011 12:40							Scr: Alpha: Beta:
3 MG6HE-1-AD-D J1D180517-1-MSD 04/18/2011 12:40							Scr: Alpha: Beta:
4 MG6HE-1-AE-X J1D180517-1-DUP 04/18/2011 12:40							Scr: Alpha: Beta:
5 MG6TX-1-AA-B J1D190000-111-BLK 04/19/2011 09:06 pd							Scr: Alpha: Beta:
6 MG6TX-1-AC-C J1D190000-111-LCS 04/19/2011 09:06 pd							Scr: Alpha: Beta:

04/19/2011 9:06:14 AM

Sample Preparation/Analysis

Balance Id:

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

Pipet #:

Analysis Due Date: 04/25/2011

Sep1 DT/Tm Tech:

Batch: 1109111

mg/L

Sep2 DT/Tm Tech:

66 EQ Batch, Test: None

Prep Tech:

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On/Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Comments:

All Clients for Batch:

127642, Washington Closure Hanford LLC Bechtel Hanford, Inc. RW2, 27023

MG6HE1AA-SAMP Constituent List:

HEXCHROME RDL:0.0037 mg/L LCL:85 UCL:115 RPD:20

MG6HE1AC-MS Constituent List:

MG6HE1AD-MSD:

MG61X1AA-BLK:

MG61X1AC-LCS:

MG6HE1AA-SAMP Calc Info:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

MG6HE1AC-MS Calc Info:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

MG6HE1AD-MSD:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

MG61X1AA-BLK:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

MG61X1AC-LCS:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B