

**SAF-RC-052**  
**Remaining Sites Confirmation Sampling -**  
**Water**  
**FINAL DATA PACKAGE**

**COMPLETE COPY OF DATA PACKAGE TO:**

Kathy Wendt

H4-21

KW 10/6/08

INITIAL/DATE

**COMMENTS:**

**SDG J00200**

**SAF-RC-052**

Rad only

Chem only

Rad & Chem

Complete

Partial

**Waste Site: 100-H-28:7**

**RECEIVED**  
OCT 20 2008  
**EDMC**

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: TARK

Data Package Contains 19 Pages

Report No.: 39946

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.
J00200	RC-052	J17JY2	J81300297-1	KXW581AA	9KXW5810	8275178

## Certificate of Analysis

Washington Hanford Closure  
2620 Fermi Avenue  
Richland, WA 99354

October 2, 2008

Attention: Joan Kessner

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SAF Number	:	RC-052
Date SDG Closed	:	September 30, 2008
Number of Samples	:	One (1)
Sample Type	:	Water
SDG Number	:	J00200
Data Deliverable	:	15-Day / Summary

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### CASE NARRATIVE

#### I. Introduction

On September 30, 2008 one water 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>TALR ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
J17JY2	KXW58	WATER	9/30/08

#### 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

**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**

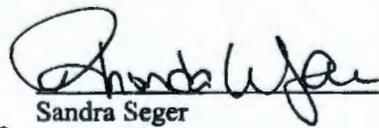
**Chemical Analysis**

Hexavalent Chromium by EPA method 7196A:

The LCS, batch blank, sample, sample duplicate (J17JY2), sample matrix spike (J17JY2) and sample matrix spike duplicate (J17JY2) 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:



Sandra Seger  
Project Manager

for

## 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	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 00-02	Gross Alpha (Coprecipitation)	RICH-RC-5021
EPA 903.0	Total Alpha Radium (Ra-226)	RICH-RC-5027
EPA 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr-89/90	RICH-RC-5006
ASTM D5174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007

**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 example are available on request.

## Report Definitions

<b>Action Lev</b>	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.
<b>Batch</b>	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
<b>Bias</b>	Defined by the equation $(\text{Result}/\text{Expected})-1$ as defined by ANSI N13.30.
<b>COC No</b>	Chain of Custody Number assigned by the Client or TestAmerica.
<b>Count Error (#s)</b>	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.
<b>Total Uncert (#s) <math>u_c</math> - Combined Uncertainty.</b>	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.
<b>(#s), Coverage Factor</b>	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
<b>CRDL (RL)</b>	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)
<b>Lc</b>	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%. $Lc = (1.645 * \text{Sqrt}(2 * (\text{BkgndCnt}/\text{BkgndCntMin})/\text{SCntMin})) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol}) * \text{IngrFct})$ . 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.
<b>Lot-Sample No</b>	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.
<b>MDC MDA</b>	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%. $MDC = (4.65 * \text{Sqrt}((\text{BkgndCnt}/\text{BkgndCntMin})/\text{SCntMin}) + 2.71/\text{SCntMin}) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol}) * \text{IngrFct})$ . For LSC methods the batch blank is used as a measure of the background variability.
<b>Primary Detector</b>	The instrument identifier associated with the analysis of the sample aliquot.
<b>Ratio U-234/U-238</b>	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.
<b>Rst/MDC</b>	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.
<b>Rst/TotUcert</b>	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.
<b>Report DB No</b>	Sample Identifier used by the report system. The number is based upon the first five digits of the Work Order Number.
<b>RER</b>	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.
<b>SDG</b>	Sample Delivery Group Number assigned by the Client or assigned by TestAmerica upon sample receipt.
<b>Sum Rpt Alpha Spec Rst(s)</b>	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.
<b>Work Order</b>	The LIMS software assign test specific identifier.
<b>Yield</b>	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: 02-Oct-08

**TestAmerica TARL**

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

Report No. : 39946

SDG No: J00200

Batch	Client Id Work Order	Parameter	Result +/- Uncertainty ( 2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
8275178	7196_CR6								
	J17JY2								
	KXW581AA	HEXCHROME	2.00E-03 +/- 0.00E+00	U	mg/L	N/A	2.00E-03	3.50E-01	
	KXW581AE	HEXCHROME	2.00E-03 +/- 0.00E+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 V5.1.8  
A2002

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

# QC Results Summary

Date: 02-Oct-08

## TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Report No. : 39946

SDG No.: J00200

Batch	Work Order	Parameter	Result +/- Uncertainty ( 2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC MDA
7196_CR6									
8275178	MATRIX SPIKE, J17JY2								
	KXW581AC	HEXCHROME	2.34E-01 +/- 0.00E+00		mg/L	N/A	89%	-0.1	2.00E-03
	KXW581AD	HEXCHROME	2.28E-01 +/- 0.00E+00		mg/L	N/A	87%	-0.1	2.00E-03
8275178	LCS,								
	KXXQV1AC	HEXCHROME	5.03E-01 +/- 0.00E+00		mg/L	N/A	101%	0.0	2.00E-03
8275178	BLANK QC,								
	KXXQV1AA	HEXCHROME	2.00E-03 +/- 0.00E+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 V5.1.8 A2002 U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

Date: 02-Oct-08

SAMPLE RESULTS

Lab Name: TestAmerica

SDG: J00200

Collection Date: 9/30/2008 12:45:00 PM

Lot-Sample No.: J81300297-1

Report No. : 39946

Received Date: 9/30/2008 4:15:00 PM

Client Sample ID: J17JY2

COC No. : RC-052-011

Matrix: WATER

Ordered by Client Sample ID, Batch No.

Parameter	Result	Count Qual	Total 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: 8275178	7196_CR6			Work Order: KXW581AA		Report DB ID: 9KXW5810						
HEXCHROME	2.00E-03	U		0.0E+00	2.00E-03	mg/L	N/A	1.	9/30/08		100.0	
							3.50E-01	N/A			ML	

No. of Results: 1      Comments:

FORM II

Date: 02-Oct-08

DUPLICATE RESULTS

Lab Name: TestAmerica  
 Lot-Sample No.: J8I300297-1  
 Client Sample ID: J17JY2

SDG: J00200  
 Report No.: 39946  
 COC No.: RC-052-011

Collection Date: 9/30/2008 12:45:00 PM  
 Received Date: 9/30/2008 4:15:00 PM  
 Matrix: WATER

Parameter	Result, Orig Rst	Qual	Count Error ( 2 s)	Total Uncert( 2 s)	MDC MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 8275178	7196_CR6			Work Order: KXW581AE		Report DB ID: KXW581ER		Orig Sa DB ID: 9KXW5810				
HEXCHROME	2.00E-03	U		0.0E+00	2.00E-03	mg/L	N/A	1.	9/30/08		100.0	
	2.00E-03	U	RPD 0.0			3.50E-01		N/A			ML	

No. of Results: 1      Comments:

TestAmerica      RPD - Relative Percent Difference.  
 rptSTLRchDupV5.1      MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.  
 .8 A2002      U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II  
BLANK RESULTS

Date: 02-Oct-08

Lab Name: TestAmerica  
Matrix: WATER

SDG: J00200  
Report No. : 39946

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: 8275178	7196_CR6				Work Order: KXXQV1AA			Report DB ID: KXXQV1AB				
HEXCHROME	2.00E-03	U		0.0E+00	2.00E-03	mg/L	N/A	1.	9/30/08		100.0	
						3.50E-01		N/A			ML	

No. of Results: 1      Comments:

FORM II  
LCS RESULTS

Date: 02-Oct-08

Lab Name: TestAmerica

SDG: J00200

Matrix: WATER

Report No. : 39946

Parameter	Result	Count Qual	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: 8275178	7196_CR6					Work Order: KXXQV1AC		Report DB ID: KXXQV1AS					
HEXCHROME	5.03E-01			0.0E+00	2.00E-03	mg/L	N/A	5.00E-01		101%	9/30/08	100.0	
							Rec Limits:	70	130	0.0		ML	
No. of Results: 1		Comments:											

**FORM II**  
**MATRIX SPIKE RESULTS**

Date: 02-Oct-08

Lab Name: TestAmerica

SDG: J00200

Lot-Sample No.: J81300297-1, J17JY2

Report No.: 39946

Matrix: WATER

Parameter	SpikeResult, Orig Rst	Count Qual Error (2 s)	Total Uncert( 2 s)	MDC MDA	Rpt Unit, CRDL	Yield	Rec- overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 8275178	Work Order: KXW581AC		Report DB ID: KXW581CW		Orig Sa DB ID:						
HEXCHROME	2.34E-01		0.0E+00	2.00E-03	mg/L	N/A	88.97%	2.63E-01	9/30/08	100.0	7196_CR6
	0.00E+00									ML	
Batch: 8275178	Work Order: KXW581AD		Report DB ID: KXW581DW		Orig Sa DB ID:						
HEXCHROME	2.28E-01		0.0E+00	2.00E-03	mg/L	N/A	86.69%	2.63E-01	9/30/08	100.0	7196_CR6
	0.00E+00									ML	

Number of Results: 2

Comments:

FORM II

Date: 02-Oct-08

MATRIX SPIKE DUPLICATE RESULTS

Lab Name: TestAmerica

SDG: J00200

Lot-Sample No.: J8I300297-1, J17JY2

Report No. : 39946

Matrix: WATER

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert( 2 s)	MDC MDA	Rpt Unit, CRDL	Yield	Rec- overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 8275178	7196_CR6			Work Order: KXW581AC		Report DB ID: KXW581CW		Orig Sa DB ID: KXW581DW				
HEXCHROME	2.34E-01			0.0E+00	2.00E-03	mg/L	N/A	88.97%	2.63E-01	9/30/08	100.0	
	2.28E-01	<b>RPD</b>	2.6								ML	
Batch: 8275178	7196_CR6			Work Order: KXW581AD		Report DB ID: KXW581DW		Orig Sa DB ID: KXW581CW				
HEXCHROME	2.28E-01			0.0E+00	2.00E-03	mg/L	N/A	86.69%	2.63E-01	9/30/08	100.0	
	2.34E-01	<b>RPD</b>	2.6								ML	

No. of Results: 2      Comments:

Batch Number(s): 8275178				
Lab Sample Numbers or <u>J8I300297 / J00200</u>				
Method/Test/Parameter: Cr+6 in Water / RL-WC-003				
Review Item	Yes (✓)	No (✓)	N/A (✓)	2 <sup>nd</sup> Level Review (✓)
<b>A. Initial Calibration</b>				
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>B. Continuing Calibration</b>				
1. CCV analyzed at required frequency and all parameters within QC limits?	✓			✓
2. CCB analyzed at required frequency and all results ≤ reporting limit?	✓			✓
<b>C. Sample Analysis</b>				
1. Were any samples with concentrations above the linear range for any parameter diluted and reanalyzed?	✓			✓
2. Were all sample holding times met?	✓			✓
<b>D. QC Samples</b>				
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?			✓	N/A
6. ICP only: CRDL standard (CRI or CRA) analyzed at required frequency?			✓	N/A
7. ICP only: Interference check samples (ICSA, ICSAB) and HICAL analyzed at the required frequencies and within QC limits?			✓	N/A

Review Item	Yes (✓)	No (✓)	N/A (✓)	2 <sup>nd</sup> Level Review (✓)
<b>E. Other</b>	✓			✓ No N/Cm
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:

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Analyst: *[Signature]*  
 Second-Level Review: *[Signature]*

Date: 10/1/08  
 Date: 10/2/08

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-052-011	Page 1 of 1
Collector Welch-Koelling		Company Contact Bill Hudson		Telephone No. 372-9695	Project Coordinator KESSNER, JH	Price Code 7G	Data Turnaround 15 Days
Project Designation Remaining Sites Confirmation Sampling - Water		Sampling Location 100-H-28:7			SAF No. RC-052		
Ice Chest No.		Field Logbook No. EL-1601-2	COA C00H28A000		Method of Shipment		
Shipped To TestAmerica Incorporated, Richland		Offsite Property No.			Bill of Lading/Air Bill No.		
POSSIBLE SAMPLE HAZARDS/REMARKS		Preservation	Cool 4C				
Special Handling and/or Storage		Type of Container	G/P				
		No. of Container(s)	1				
		Volume	500mL				
SAMPLE ANALYSIS			Chromium Hex - 7196				
Sample No.	Matrix *	Sample Date	Sample Time				
J17JY2	WATER	9/30/08	1245	X		KXW 58	
<del>J17JY3</del>	WATER						
<del>J17JY4</del>	WATER						
<del>J17JY5</del>	WATER						
<del>J17JY6</del> Bt 9/30/08	WATER						
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time	JBI300297 J00200 Due 10/15/08			S=Sediment SO=Solid SL=Sludge W=Water (O=Oil) A=Air DS=Dryum Solids DL=Dryum Liquid L=Lime W=Wipe L=Liquid V=Vegetative X=Other
<i>T. Koelling</i>	9/30/08 1515	<i>Bill Hudson</i>	9/30/08 1515				
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time				
<i>Bill Hudson</i>	9/30/08 1615	<i>A. Smith</i>	0930081615				
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time				
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time				
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time				
LABORATORY SECTION	Received By	Title					Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By					Date/Time



## Sample Check-in List

Date/Time Received: 093008 1615 GM Screen Result - 01

Client: WCH SDG #: J00200 NA [ ] SAF #: RC-052 NA [ ]

Work Order Number: J8I300297 Chain of Custody # RC-052-011

Shipping Container ID: N/A Air Bill # N/A

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

6. Number of samples in shipping container: 1

7. Sample holding times exceeded? NA [ ] Yes [ ] No

8. Samples have:

         Tape          Hazard Labels  
         Custody Seals          /          Appropriate Sample Labels

9. Samples are:

         /          In Good Condition          Leaking  
         Broken          Have Air Bubbles  
 (Only for samples requiring no head space.)

10. Sample pH taken? NA [ ] pH < 2 [ ] pH > 2  pH > 9 [ ] Amount HNO<sub>3</sub> Added         

11. Sample Location, Sample Collector Listed? \*  
 \*For documentation only. No corrective action needed.

12. Were any anomalies identified in sample receipt? Yes [ ] No

13. Description of anomalies (include sample numbers):         

Sample Custodian: S. Sm. Vn Date: 093008

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on          by          Person Contacted         

[ ] No action necessary; process as is.

Project Manager          Date

TestAmerica Laboratories, Inc.

10/1/2008 9:08:17 AM

**Sample Preparation/Analysis**

Balance Id:

127642, Washington Closure Hanford LLC  
Bechtel Hanford, Inc.

**88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION**  
EA Chromium, Hexavalent (7196A)

Pipet #:

**AnalytDueDate: 10/15/2008**

*J00200*

5I CLIENT: HANFORD

Sep1 DT/Tm Tech:

**Batch: 8275178 WATER mg/L**

**PM, Quote: SS , 27023**

Sep2 DT/Tm Tech:

SEQ 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:
<b>1 KXW58-1-AA</b>								
J8I300297-1-SAMP								
09/30/2008 12:45		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
<b>2 KXW58-1-AC-S</b>								
J8I300297-1-MS								
09/30/2008 12:45		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
<b>3 KXW58-1-AD-D</b>								
J8I300297-1-MSD								
09/30/2008 12:45		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
<b>4 KXW58-1-AE-X</b>								
J8I300297-1-DUP								
09/30/2008 12:45		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
<b>5 KXXQV-1-AA-B</b>								
J8J010000-178-BLK								
09/30/2008 12:45		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
<b>6 KXXQV-1-AC-C</b>								
J8J010000-178-LCS								
09/30/2008 12:45		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:

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TestAmerica Laboratories, Inc.

10/1/2008 9:08:18 AM

**Sample Preparation/Analysis**

Balance Id:

**88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION**  
**EA Chromium, Hexavalent (7196A)**  
**5I CLIENT: HANFORD**

Pipet #:

AnalyDueDate: 10/15/2008

Sep1 DT/Tm Tech:

Batch: 8275178  
 SEQ Batch, Test: None

mg/L

Sep2 DT/Tm Tech:

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:
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Comments:

All Clients for Batch:

127642, Washington Closure Hanford LLC

Bechtel Hanford, Inc.

, SS , 27023

KKW581AA-SAMP Constituent List:

HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20

KKW581AC-MS Constituent List:

KKW581AD-MSD:

KXXQV1AA-BLK:

KXXQV1AC-LCS:

KKW581AA-SAMP Calc Info:

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

KKW581AC-MS Calc Info:

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

KKW581AD-MSD:

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

KXXQV1AA-BLK:

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

KXXQV1AC-LCS:

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

Approved By

Date:

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