

0077973

SAF-RC-030
Remaining Sites Confirmation Sampling -
Other Solid
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21

KW 6/18/08
INITIAL/DATE

COMMENTS:

SDG J00179

SAF-RC-030

Rad only

Chem only

Rad & Chem

Complete

Partial

Waste Site: 100-H-28:2

RECEIVED
JUN 23 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: TARL

Data Package Contains 20 Pages

Report No.: 39324

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.
J00179	RC-030	J16WC1	J8F040283-1	KPC701AA	9KPC7010	8156434

Certificate of Analysis

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

June 17, 2008

Attention: Joan Kessner

SAF Number	:	RC-030
Date SDG Closed	:	June 4, 2008
Number of Samples	:	One (1)
Sample Type	:	Other Solid
SDG Number	:	J00179
Data Deliverable	:	15 -Day / Summary

CASE NARRATIVE

I. Introduction

On June 4, 2008 one other solid 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>STLR ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
J16WC1	KPC70	OTHER SOLID	6/4/08

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

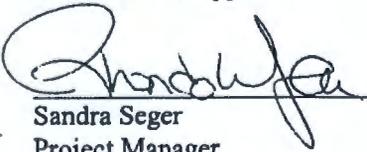
Chemical Analysis

Hexavalent Chromium by EPA method 7196A:

The matrix spike and insoluble matrix spike recovered low. A post-digestion matrix spike was analyzed and it also recovered low. Suspected cause is a reducing matrix in the sample. Data will be accepted. Except as noted, the LCS, batch blank, sample and sample duplicate (J16WC1) 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:


for Sandra Seger
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	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

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.
Bias	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) <i>u_c - Combined Uncertainty.</i>	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, <i>u_c, the combined uncertainty.</i> 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%. $L_c = (1.645 * \sqrt{2 * (\text{BkgmdCnt}/\text{BkgmdCntMin})/\text{SCntMin}}) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$. 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%. $MDC = (4.65 * \sqrt{((\text{BkgmdCnt}/\text{BkgmdCntMin})/\text{SCntMin}) + 2.71/\text{SCntMin}}) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$. 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 = $(S - D) / [\sqrt{(\text{TPUs}^2 + \text{TPUd}^2)}]$ 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: 17-Jun-08

TestAmerica TARL

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

Report No. : 39324

SDG No: J00179

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
8156434	7196_CR6								
	J16WC1								
	KPC701AA	HEXCHROME	3.50E-01 +- 0.00E+00	U	mg/kg	N/A	3.50E-01	3.50E-01	
	KPC701AE	HEXCHROME	3.50E-01 +- 0.00E+00	U	mg/kg	N/A	3.50E-01	3.50E-01	0.0

No. of Results: 2

TestAmerica
rptSTLRchSaSum
mary2 V5.1.6
A2002

RPD - Relative Percent Difference.
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: 17-Jun-08

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Report No. : 39324

SDG No.: J00179

Batch	Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC MDA
7196_CR6	8156434	MATRIX SPIKE, J16WC1							
	KPC701AC	HEXCHROME	3.50E-01 +- 0.00E+00	U	mg/kg	N/A	2%	-1.0	3.50E-01
	8156434	LCS,							
	KPDTK1AC	HEXCHROME	1.72E+01 +- 0.00E+00		mg/kg	N/A	86%	-0.1	3.50E-01
	8156434	BLANK QC,							
	KPDTK1AA	HEXCHROME	3.50E-01 +- 0.00E+00	U	mg/kg	N/A			3.50E-01

No. of Results: 3

TestAmerica Bias - (Result/Expected)-1 as defined by ANSI N13.30.
 rptSTLRchQcSummary V5.1.6 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: 17-Jun-08

SAMPLE RESULTS

Lab Name: TestAmerica

SDG: J00179

Collection Date: 6/4/2008 10:30:00 AM

Lot-Sample No.: J8F040283-1

Report No.: 39324

Received Date: 6/4/2008 12:30:00 PM

Client Sample ID: J16WC1

COC No.: RC-030-085

Matrix: OTHER SOLI OTHERSOLID

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/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 8156434	7196_CR6				Work Order: KPC701AA		Report DB ID: 9KPC7010					
HEXCHROME	3.50E-01	U		0.0E+00	3.50E-01	mg/kg	N/A	(1.)	6/4/08		2.5	
							3.50E-01	N/A			G	

No. of Results: 1

Comments:

FORM II

Date: 17-Jun-08

DUPLICATE RESULTS

Lab Name: TestAmerica

SDG: J00179

Collection Date: 6/4/2008 10:30:00 AM

Lot-Sample No.: J8F040283-1

Report No. : 39324

Received Date: 6/4/2008 12:30:00 PM

Client Sample ID: J16WC1

COC No. : RC-030-085

Matrix: OTHER SOLI OTHERSOLID

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: 8156434	7196_CR6			Work Order: KPC701AE		Report DB ID: KPC701ER		Orig Sa DB ID: 9KPC7010				
HEXCHROME	3.50E-01	U		0.0E+00	3.50E-01	mg/kg	N/A	(1.)	6/4/08		2.5	
	3.50E-01	U	RPD 0.0			3.50E-01		N/A			G	

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.

.6 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: 17-Jun-08

Lab Name: TestAmerica
Matrix: OTHER SOLID

SDG: J00179
Report No. : 39324

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	Allquot Size	Primary Detector
Batch: 8156434	7196_CR6				Work Order: KPDTK1AA		Report DB ID: KPDTK1AB					
HEXCHROME	3.50E-01	U		0.0E+00	3.50E-01	mg/kg	N/A	(1.)	6/4/08		2.5	
						3.50E-01		N/A			G	
No. of Results: 1			Comments:									

FORM II
LCS RESULTS

Date: 17-Jun-08

Lab Name: TestAmerica
Matrix: OTHER SOLID

SDG: J00179
Report No. : 39324

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: 8156434	7196_CR6											
HEXCHROME	1.72E+01		0.0E+00	3.50E-01	mg/kg		N/A	2.00E+01	86%	6/4/08	2.5	
							Rec Limits:	80	120	-0.1	G	
No. of Results: 1		Comments:										

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

rptSTLRchLcs
V5.1.6 A2002

FORM II

Date: 17-Jun-08

MATRIX SPIKE RESULTS

Lab Name: TestAmerica

SDG: J00179

Lot-Sample No.: J8F040283-1, J16WC1

Report No.: 39324

Matrix: OTHER SOLI OTHERSOLID

Parameter	SpikeResult, Orig Rst	Count Qual	Error (2 s)	Total Uncert(2 s)	MDC MDA	Rpt Unit, CRDL	Yield	Rec- overy	Exp- ected	Exp Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 8156434	Work Order: KPC701AC			Report DB ID: KPC701CW		Orig Sa DB ID: 9KPC7010							
HEXCHROME	3.50E-01	U		0.0E+00	3.50E-01	mg/kg	N/A	1.79%	1.96E+01		6/4/08	2.5	7196_CR6
	3.50E-01											G	

Number of Results: 1

Comments:

TestAmerica RER - Replicate Error Ratio = $(S-D)/[\sqrt{(sq(TPUs)+sq(TPUD))}]$ as defined by ICPT BOA.
 rptSTLRchMs Bias - (Result/Expected)-1 as defined by ANSI N13.30.
 V5.1.6 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.

Richland Laboratory Data Review Check List Hexavalent Chromium

Batch Number(s): 8156434				
Lab Sample Numbers or SDG: W05414 WJ00179 / J8F040283				
Method/Test/Parameter: Cr+6 in SOLID / RICH-WC-5005, Rev 8				
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 matrix spike and insoluble matrix spike recovered low. Then a post-digestion matrix spike was analyzed and it also recovered low. Suspect that there were reducing agents in the sample and possibly to the unique matrix of the sample. Everything else recovered within limits. -See NCM

Analyst: _____

Date: 6/5/08

Second-Level Review: _____

Date: 6/16/08

Clouseau Nonconformance Memo



NCM #: 10-12482 NCM Initiated By: LIEM DINH Date Opened: 06/05/2008 Date Closed:	Classification: Anomaly Status: GLREVIEW Production Area: Classical Chemistry Tests: 7196A Lot #'s (Sample #'s): J8F040000 (434), J8F040283 (1), QC Batches: 8156434,
Nonconformance: Other (describe in detail) Subcategory: Other (explanation required)	

Problem Description / Root Cause

<u>Name</u>	<u>Date</u>	<u>Description</u>
LIEM DINH	06/05/2008	The matrix spike and insoluble matrix spike recovered low. Then a post-digestion matrix spike was analyzed and it also recovered low. Suspect that there were some reducing agents in the sample and possibly due to the unique matrix of the sample. Everything else recovered within limits.
Liem Dinh	06/05/2008	The matrix spike and insoluble matrix spike recovered low. Then a post-digestion matrix spike was analyzed and it also recovered low. Suspect that there were some reducing agents in the sample and possibly due to the unique matrix of the sample. Everything else recovered within limits.

Corrective Action

<u>Name</u>	<u>Date</u>	<u>Corrective Action</u>
LIEM DINH	06/05/2008	Report Data
Liem Dinh	06/05/2008	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>
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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-030-085		Page 1 of 1	
Collector D Rios		Company Contact Matt Perrot		Telephone No. 372-9088		Project Coordinator KESSNER, JH		Price Code 9C Data Turnaround 15 Days	
Project Designation Remaining Sites Confirmation Sampling - Other Solid		Sampling Location 100-H-28:2			SAF No. RC-030				
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 60mL					
SAMPLE ANALYSIS				Chromium Hex - 7196					
Sample No.	Matrix *	Sample Date	Sample Time						
J16WC1	OTHER SOLID	6/4/08	1030	X					
J16WC2	OTHER SOLID	6/4/08							
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		J8F040283 J00179 DUE 6-28-08 KPC70 RWLH108	
...		6-4-08		BHUDSON Hudson		6/4/08 1100			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
HUDSON Hudson		6/4/08		KYLE LAUNE TAL		6/4/08 1230			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		Matrix * S=Soil SE=Sediment SO=Soil SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue W=Wipe L=Liquid V=Vegetation X=Other	
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
LABORATORY SECTION		Received By		Title		Date/Time			
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time			



Sample Check-in List

Date/Time Received: 6408 1230 GM Screen Result 0.2K

Client: WCH SDG #: 100179 NA [] SAF #: RC-030 NA []

Work Order Number: J8F040283 Chain of Custody # RC-030-085

Shipping Container ID: NIA Air Bill # NIA

- 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: _____ 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
- Custody Seals
- Hazard Labels
- Appropriate Sample Labels

9. Samples are:

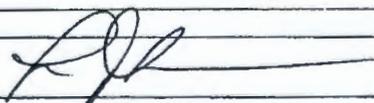
- In Good Condition
 - Broken
 - Leaking
 - Have Air Bubbles
- (Only for samples requiring no head space.)

10. Sample pH taken? ^{OTHER SOLID} NA pH < 2 [] pH > 2 [] pH > 9 [] Amount HNO₃ 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:  Date: 6408

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____

TESTAMERICA

6/5/2008 1:44:53 PM

Sample Preparation/Analysis

Balance Id:

127642, Washington Closure Hanford
Bechtel Hanford, Inc.DW Alkaline Digestion by method 3060A
EA Chromium, Hexavalent (7196A)

Pipet #:

AnalyDueDate: 06/19/2008

5I CLIENT: HANFORD

Sep1 DT/Tm Tech:

Batch: 8156434 OTHER SOLID mg/kg
SEQ Batch, Test: None All Tests: 8156434 DWEA,

PM, Quote: SS , 27038

Sep2 DT/Tm Tech:

Prep Tech:

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 KPC70-1-AA J8F040283-1-SAMP 06/04/2008 10:30										
			AmtRec: 60G							2.6783g Scr: Alpha: Beta:
2 KPC70-1-AC-S J8F040283-1-MS 06/04/2008 10:30										
			AmtRec: 60G							2.5386g Scr: Alpha: Beta:
3 KPC70-1-AD-D J8F040283-1-MSD <i>PbCrO₄</i> 06/04/2008 10:30										
			AmtRec: 60G							10.7mg 2.5732g Scr: Alpha: Beta:
4 KPC70-1-AE-X J8F040283-1-DUP 06/04/2008 10:30										
			AmtRec: 60G							2.5229 Scr: Alpha: Beta:
5 KPDTK-1-AA-B J8F040000-434-BLK 06/04/2008 10:30										
			AmtRec:							Scr: Alpha: Beta:
6 KPDTK-1-AC-C J8F040000-434-LCS 06/04/2008 10:30										
			AmtRec:							Scr: Alpha: Beta:

TAL Richland Key: In - Initial Amt, fi - Final Amt. di - Diluted Amt. s1 - Sep1, s2 - Sep2
Richland Wa. pd - Prep Dt. r - Reference Dt. ec - Enrichment Cell. ct - Cocktail Added

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ISV Insufficient Volume for Analysis

WO Cnt: 6

ICOC v4.8.32

TESTAMERICA

6/5/2008 1:44:54 PM

Sample Preparation/Analysis

Balance Id: _____

DW Alkaline Digestion by method 3060A
 EA Chromium, Hexavalent (7196A)
 5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 06/19/2008

Sep1 DT/Tm Tech: _____

Batch: 8156434 mg/kg

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	Dish Size	Ppt or Geometry	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 Bechtel Hanford, Inc. , SS , 27038

KPC701AA-SAMP Constituent List:

HEXCHROME RDL:0.35 mg/kg LCL:80 UCL:120 RPD:20

KPC701AC-MS Constituent List:

HEXCHROME RDL:0.35 mg/kg LCL:75 UCL:125 RPD:20

KPC701AD-MSD:

HEXCHROME RDL:0.35 mg/kg LCL:75 UCL:125 RPD:20

KPDTK1AA-BLK:

HEXCHROME RDL:0.35 mg/kg LCL: UCL: RPD:

KPDTK1AC-LCS:

HEXCHROME RDL:0.35 mg/kg LCL:80 UCL:120 RPD:20

KPC701AA-SAMP Calc Info:

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

KPC701AC-MS Calc Info:

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

KPC701AD-MSD:

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

KPDTK1AA-BLK:

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

KPDTK1AC-LCS:

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

Approved By _____

Date: _____

Analyst:	L. Dinh	Calibration Curve Information			SOP Information	BATCH #	8156434	
Start Date:	6/4/2008	Blank	Amount	Conc.(mg/L)	ABS.	RICH-WC-5005	SDG #	J00179
Start Time:		Std. 1	0.100	0.050	0.087	Revision 7	Matrix	Soil
End Date:	6/4/2008	Std. 2	0.500	0.250	0.482	Instrument Information		
End Time		Std. 3	0.750	0.375	0.724	MDL (mg/kg)	0.35	
Analyst Signature:	<i>[Signature]</i>	Std. 4	1.500	0.750	1.422	Instrument:	Hach DR2010	
Date:	6/5/08	Std 5	2.000	1.000	1.876	Wavelength:	540	
		Standard Volume (mL):			100.000	R Squared	0.99981	
		Date of Curve:			6/4/2008	Slope:	1.88234	
						Intercept:	0.00439	

	Calibration Information:	ICV Information:	LCS Information:	Matrix Spike Information:	PbCrO4 Information	
Dilution ID #	Cr-08-00117	Cr-08-00118	Cr-08-00117	Cr-08-00117	Weight PbCrO4	10.7
Prep Date:	06/04/08	06/04/08	06/04/08	06/04/08	PDMS Information	
Concentration (mg/L)	50	50	50	50	Dilution ID	Cr-08-00109
Expiration Date:	06/05/08	06/05/08	06/05/08	06/05/08	Concentration	1000
Pipettor(s)	70, 190	190	190	190	Pipettor	90
Volume Used (mL)		1.000	1.00	0.50	Volume	0.05
Expected Value (mg)		0.500	0.50	0.25	Extract Volume	50

Sample ID	Client ID	Type	Sample Weight (g)	Blank ABS.	Sample ABS.	PDMS ABS.	Dilution Factor	Volume (L)	Percent Solids	Wet Sample (mg/g)	Final Dry Sample (mg/kg)	%Recoveries Spike PDMS	MDL
n/a	n/a	ICV	2.5		0.931		1	0.1	100.000%	0.019690655	19.6906547	98.45%	
				Abs-Blank	0.931					Expected	20		
n/a	n/a	ICB	2.5		0		1	0.1	100.000%	-9.3262E-05	<MDL		
				Abs-Blank	0								
KPDTK1AA	n/a	PB	2.5		0		1	0.1	100.000%	-9.3262E-05	<MDL		0.35
				Abs-Blank	0								
KPDTK1AC	n/a	LCS	2.5		0.816		1	0.1	100.000%	0.017246884	17.2468841	86.23%	0.35
				Abs-Blank	0.816					Expected	20		
KPC701AA	J16WC1'	Sample	2.6783		0.089	1.206	1	0.1	50.300%	-0.000642448	<MDL		0.3267
				Abs-Blank	-0.028	1.028						54.38%	
KPC701AC-S	J16WC1'-MS	MS	2.5386		0.151	0.249	1	0.1	50.300%	-0.001200978	<MDL		0.344678
				Abs-Blank	-0.053					Expected	19.57842483		
KPC701AD-D	J16WC1'-MSD	MSD					1	0.1	50.300%				
				Abs-Blank						Expected			
KPC701AE-X	J16WC1'-DUPE	Duplicate	2.5229		0.089	0.164	1	0.1	50.300%	-0.000387218	<MDL		0.346823
				Abs-Blank	-0.014								
KPC701APbCrO4	J16WC1'-PbCrO4	PbCrO4	2.5732		0.702		20	0.1	50.300%	0.28805308	572.6701384	43.72%	6.800871
				Abs-Blank	0.702					Expected	1309.806326		
				Abs-Blank			1	0.1	100.000%				
				Abs-Blank			1	0.1	100.000%				
n/a	n/a	CCV	2.5		0.93		1	0.1	100.000%	0.019669405	19.66940452	98.35%	0.35
				Abs-Blank	0.93					Expected	20		
n/a	n/a	CCB	2.5		-0.001		1	0.1	100.000%	-0.000114512	<MDL		0.35
				Abs-Blank	-0.001								
				Abs-Blank			1	0.1	100.000%				