

SAF-RC-074

100-D/DR Burial Grounds & Remaining

Sites – Soil In-Process

FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt

H4-21

KW 1/29/13

INITIAL/DATE

COMMENTS:

SDG J01680

SAF RC-074

Rad only

Chem only

Rad & Chem

Complete

Partial

Waste Site: 100-D-100 BCL SPA

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 33 Pages

Report No.: 54366

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.
J01680	RC-074	J1R9C0	J3A250402-1	MX0EH1AC	9MX0EH10	3025038
		J1R9C1	J3A250402-2	MX0EJ1AC	9MX0EJ10	3025038
		J1R9C2	J3A250402-3	MX0EK1AC	9MX0EK10	3025038
		J1R9C3	J3A250402-4	MX0EL1AC	9MX0EL10	3025038
		J1R9C6	J3A250402-5	MX0EM1AC	9MX0EM10	3025038
		J1R9C7	J3A250402-6	MX0EN1AC	9MX0EN10	3025038
		J1R9C8	J3A250402-7	MX0ER1AC	9MX0ER10	3025038
		J1R9C9	J3A250402-8	MX0ET1AC	9MX0ET10	3025038
		J1R9D0	J3A250402-9	MX0EV1AC	9MX0EV10	3025038



THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Washington Closure Hanford
2620 Fermi Avenue
Richland, WA 99354

TestAmerica Laboratories, Inc.

January 28, 2013

Attention: Joan Kessner

SAF Number	:	RC-074
Date SDG Closed	:	January 25, 2013
Number of Samples	:	Nine (9)
Sample Type	:	Soil
SDG Number	:	J01680
Data Deliverable	:	Quick Turn Metals / Summary

CASE NARRATIVE

I. Introduction

On January 25, 2013, nine soil samples were received at TestAmerica for analysis. Upon receipt, the samples were assigned the following laboratory ID numbers 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>
J1R9C0	MX0EH	SOIL	1/25/13
J1R9C1	MX0EJ	SOIL	1/25/13
J1R9C2	MX0EK	SOIL	1/25/13
J1R9C3	MX0EL	SOIL	1/25/13
J1R9C6	MX0EM	SOIL	1/25/13
J1R9C7	MX0EN	SOIL	1/25/13
J1R9C8	MX0ER	SOIL	1/25/13
J1R9C9	MX0ET	SOIL	1/25/13
J1R9D0	MX0EV	SOIL	1/25/13

II. Sample Receipt

The samples were 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:

ICP Metals

ICP Metals by method SW-846 6010A

Chemical Analysis

Hexavalent Chromium by EPA method 7196A

Washington Closure Hanford
January 28, 2013

IV. Quality Control

SDG J01680 includes a minimum of one Laboratory Control Samples (LCS), one method (reagent) blank, a duplicate sample, matrix spike sample and a matrix spike duplicate sample. Any exceptions have been noted in the "Comments" section.

Blanks and LCS are reported in mg/L units, other QC and sample results are reported in the same units.

V. Comments

ICP Metals

ICP Metals by method SW-846 6010A

One batch was analyzed for the samples with the standard metal request list.

Batch 3025037:

The RLV was not within the acceptance limits for Beryllium; the RLV was re-analyzed for acceptable results. Two samples were analyzed before an additional RLV was analyzed. A third RLV was analyzed with acceptable results. Except as noted; the LCS, batch blank, samples, sample duplicate, MS, MSD, ICB, ICV, CCB and CCV results are within contractual limits.

Chemical Analysis

Hexavalent Chromium by EPA method 7196A

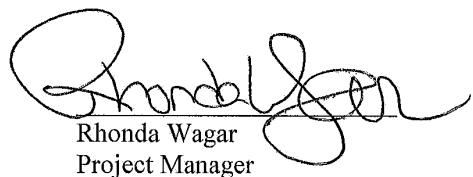
One batch was analyzed.

Batch 3025038:

The LCS, batch blank, samples, sample duplicate (J1R9C0) and sample matrix spike (J1R9C0) 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 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 (Result/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%. $Lc = (1.645 * \text{Sqrt}(2 * (\text{BkgrndCnt/BkgrndCntMin}) / \text{SCntMin})) * (\text{ConvFct} / (\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$. 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%. $MDC = (4.65 * \text{Sqrt}((\text{BkgrndCnt/BkgrndCntMin}) / \text{SCntMin}) + 2.71 / \text{SCntMin}) * (\text{ConvFct} / (\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$. 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 = $(S-D) / [\sqrt{TPUs^2 + TPUs^2}]$ 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 TPUs 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: 28-Jan-13

TestAmerica TARL

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

Report No. : 54366

SDG No: J01680

Batch	Client Id Work Order	Parameter	Result +/- Uncertainty (2s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
3025038 7196_CR6									
J1R9C0									
	MX0EH1AC	HEXCHROME	2.11E-01 +/- 0.0E+00		mg/kg	N/A	1.55E-01	1.55E-01	
	MX0EH1CF	HEXCHROME	2.90E-01 +/- 0.0E+00		mg/kg	N/A	1.55E-01	3.50E-01	31.5
J1R9C1									
	MX0EJ1AC	HEXCHROME	2.13E-01 +/- 0.0E+00		mg/kg	N/A	1.55E-01	1.55E-01	
J1R9C2									
	MX0EK1AC	HEXCHROME	2.52E-01 +/- 0.0E+00		mg/kg	N/A	1.55E-01	1.55E-01	
J1R9C3									
	MX0EL1AC	HEXCHROME	2.12E-01 +/- 0.0E+00		mg/kg	N/A	1.55E-01	1.55E-01	
J1R9C6									
	MX0EM1AC	HEXCHROME	2.53E-01 +/- 0.0E+00		mg/kg	N/A	1.55E-01	1.55E-01	
J1R9C7									
	MX0EN1AC	HEXCHROME	2.16E-01 +/- 0.0E+00		mg/kg	N/A	1.55E-01	1.55E-01	
J1R9C8									
	MX0ER1AC	HEXCHROME	2.36E-01 +/- 0.0E+00		mg/kg	N/A	1.55E-01	1.55E-01	
J1R9C9									
	MX0ET1AC	HEXCHROME	2.55E-01 +/- 0.0E+00		mg/kg	N/A	1.55E-01	1.55E-01	
J1R9D0									
	MX0EV1AC	HEXCHROME	2.94E-01 +/- 0.0E+00		mg/kg	N/A	1.55E-01	1.55E-01	
No. of Results: 10									

TestAmerica RPD - Relative Percent Difference.

rptSTLRchSaSum
mary2 V5.2.23
A2002

QC Results Summary
TestAmerica TARL
 Ordered by Method, Batch No, QC Type,.

Date: 28-Jan-13

Report No. : 54366

SDG No.: J01680

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDL
7196_CR6								
3025038 MATRIX SPIKE, J1R9C0								
MX0EH1CE	HEXCHROME	2.61E+01 +- 0.0E+00		mg/kg	N/A	88%	-0.1	1.55E-01
3025038 LCS,								
MX0E71AC	HEXCHROME	1.80E+01 +- 0.0E+00		mg/kg	N/A	95%	-0.1	1.55E-01
3025038 BLANK QC,								
MX0E71AA	HEXCHROME	1.55E-01 +- 0.0E+00	U	mg/kg	N/A			1.55E-01
No. of Results: 3								

TestAmerica Bias - (Result/Expected)-1 as defined by ANSI N13.30.
 rptSTLRchQcSum U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or
 mary V5.2.23 not identified by gamma scan software.
 A2002

FORM I
SAMPLE RESULTS

Date: 28-Jan-13

Lab Name: TestAmerica
Lot-Sample No.: J3A250402-1
Client Sample ID: J1R9C0

SDG: J01680
Report No. : 54366
COC No. : RC-074-440

Collection Date: 1/24/2013 3:00:00 PM
Received Date: 1/25/2013 8:35:00 AM
Matrix: SOIL

Parameter	Result	Count	Total	MDL,	Rpt Unit,	Yield	Rst/MDL,	Analysis,	Total Sa	Aliquot	Primary
		Qual	Uncert(2 s)	Action Lev.	Lc	CRDL(RL)	Rst/TotUcert	Prep Date	Size	Size	Detector
Batch: 3025038	7196 CR6		Work Order: MX0EH1AC			Report DB ID: 9MX0EH10					
HEXCHROME	2.11E-01	0.0E+00	1.55E-01	mg/kg	N/A	(1.4)	1/25/13 09:45 a		2.5118		
					1.55E-01	N/A				g	

No. of Results: 1 Comments:

FORM I
SAMPLE RESULTS

Date: 28-Jan-13

Lab Name: TestAmerica
Lot-Sample No.: J3A250402-2
Client Sample ID: J1R9C1

Parameter	Result	Count	Total	MDL,	Rpt Unit,	Yield	Rst/MDL,	Analysis,	Total Sa	Aliquot	Primary
		Qual	Error (2 s)	Action Lev	L.c	CRDL(RL)	Rst/TotUcert	Prep Date	Size	Size	Detector
Batch: 3025038	7196 CR6		Work Order: MX0EJ1AC			Report DB ID: 9MX0EJ10					
HEXCHROME	2.13E-01	0.0E+00	1.55E-01	mg/kg	N/A	(1.4)	1/25/13 09:45 a		2.5061		
					1.55E-01	N/A					g

No. of Results: 1 Comments:

FORM I
SAMPLE RESULTS

Date: 28-Jan-13

Lab Name: TestAmerica
Lot-Sample No.: J3A250402-3
Client Sample ID: J1R9C2

SDG: J01680
Report No. : 54366
COC No. : RC-074-440

Collection Date: 1/24/2013 2:54:00 PM
Received Date: 1/25/2013 8:35:00 AM
Matrix: SOIL

Parameter	Result	Count	Total	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncrt	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 3025038	7196 CR6	Work Order: MX0EKG1AC	Report DB ID: 9MX0EKG10								
HEXCROME	2.52E-01	0.0E+00	1.55E-01	mg/kg	N/A	(1.6)	1/25/13 09:45 a		2.5044	g	

No. of Results: 1 Comments:

FORM I
SAMPLE RESULTS

Date: 28-Jan-13

Lab Name: TestAmerica
Lot-Sample No.: J3A250402-4
Client Sample ID: J1R9C3

SDG: J01680
Report No.: 54366
COC No.: RC-074-440

Collection Date: 1/24/2013 2:50:00 PM
Received Date: 1/25/2013 8:35:00 AM
Matrix: SOIL

Parameter	Result	Count	Total	MDL,	Rpt Unit,	Yield	Rst/MDL,	Analysis,	Total Sa	Aliquot	Primary
		Qual	Uncert(2 s)	Action Lev	Lc	CRDL(RL)	Rst/TotUcert	Prep Date	Size	Size	Detector
Batch: 3025038	7196 CR6		Work Order: MXOEL1AC			Report DB ID: 9MXOEL10					
HEXCHROME	2.12E-01	0.0E+00	0.0E+00	1.55E-01	mg/kg	N/A	(1.4)	1/25/13 09:45 a	2.5072		g

No. of Results: 1 Comments:

FORM I
SAMPLE RESULTS

Date: 28-Jan-13

Lab Name: TestAmerica
Lot-Sample No.: J3A250402-5
Client Sample ID: J1R9C6

SDG: J01680
Report No.: 54366
COC No.: RC-074-441

Collection Date: 1/24/2013 2:20:00 PM
Received Date: 1/25/2013 8:35:00 AM
Matrix: Soil

Parameter	Result	Qual	Count	Total	MDL,	Rpt Unit,	Yield	Rst/MDL,	Analysis,	Total Sa	Aliquot	Primary
			Error (2 s)	Uncert(2 s)	Action Lev	Lc	CRDL(RL)	Rst/TotUncrt	Prep Date	Size	Size	Detector
Batch: 3025038 HEXCHROME	7196_CRF6	2.53E-01		Work Order: MX0EM1AC	0.0E+00	1.55E-01 mg/kg	N/A	Report DB ID: 9MX0EM10	1/25/13 09:45 a			
							1.55E-01			2.4974		g

No. of Results: 1 Comments:

FORM I
SAMPLE RESULTS

Date: 28-Jan-13

Lab Name: TestAmerica
Lot-Sample No.: J3A250402-6
Client Sample ID: J1R9C7

SDG: J01680
Report No. : 54366
COC No. : RC-074-441

Collection Date: 1/24/2013 2:24:00 PM
Received Date: 1/25/2013 8:35:00 AM
Matrix: SOIL

Parameter	Result	Qual	Count	Total	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 3025038	7196_CRG			Work Order: MX0EN1AC				Report DB ID: 9MX0EN10				
HEXCHROME	2.16E-01			0.0E+00	1.55E-01	mg/kg	N/A	(1.4)	1/25/13 09:45 a	2.5052	g	

No. of Results: 1 Comments:

FORM I
SAMPLE RESULTS

Date: 28-Jan-13

Lab Name: TestAmerica
Lot-Sample No.: J3A250402-7
Client Sample ID: J1R9C8

Parameter	Result	Count	Total	MDL, Action Lev	Rpt Unit, Lc	Rst/MDL, CRDL(RL)	Yield	Rst/TotUncrt	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 3025038	7196_Cr6		Work Order: MX00ER1AC				Report DB ID: 9MX00ER10					
HEXCHROME	2.36E-01	0.0E+00	1.55E-01	mg/kg	N/A	(1.5)	1/25/13 09:45 a	1.55E-01	N/A	2.5091	g	

No. of Results: 1 Comments:

FORM I
SAMPLE RESULTS

Date: 28-Jan-13

Lab Name: TestAmerica
Lot-Sample No.: J3A250402-8
Client Sample ID: J1R9C9

Parameter	Result	Count	Total	MDL,	Rpt Unit,	Yield	Rst/MDL,	Analysis,	Total Sa	Aliquot	Primary
		Error (2 s)	Uncert(2 s)	Action Lev	Lc	CRDL(RL)	Rst/TotUncrt	Prep Date	Size	Size	Detector
Batch: 3025038	7196_CR6		Work Order: MX0ET1AC			Report DB ID: 9MX0ET10					
HEXCHROME	2.55E-01	0.0E+00	1.55E-01	mg/kg		N/A	(1.6)	1/25/13 09:45 a	2.5055	g	

No. of Results: 1 Comments:

FORM I
SAMPLE RESULTS

Date: 28-Jan-13

Lab Name: TestAmerica
Lot-Sample No.: J3A250402-9
Client Sample ID: J1R9D0

SDG: J01680
Report No. : 54366
COC No. : RC-074-442

Collection Date: 1/24/2013 2:31:00 PM
Received Date: 1/25/2013 8:35:00 AM
Matrix: SOIL

Parameter	Result	Count	Total	MDL,	Rpt Unit,	Yield	Rst/MDL,	Analysis,	Total Sa	Aliquot	Primary
		Qual	Error (2 s)	Action Lev	Lc	CRDL(RL)	Rst/TotUcert	Prep Date	Size	Size	Detector
Batch: 3025038	7196 CR6		Work Order: MX0EV1AC			Report DB ID: 9MX0EV10					
HEXCROME	2.94E-01	0.0E+00	1.55E-01	mg/kg	N/A	(1.9)	1/25/13 09:45 a	2.5018			

No. of Results: 1 Comments:

FORM II

Date: 28-Jan-13

DUPLICATE RESULTS

Lab Name: TestAmerica
Lot-Sample No.: J3A250402-1
Client Sample ID: J1R9C0

SDG: J01680
Report No. : 54366
COC No. : RC-074-440

Parameter	Result, Orig Rst	Count	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, CRDL	Rst/MDL, Rst/TotUncrt	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 3025038	7196_CRF6	Work Order: MX0EH1CF		Report DB ID: MX0EH1ER		Orig Sa DB ID: 9MX0EH10				
HEXCHROME	2.90E-01	0.0E+00	1.55E-01	mg/kg	N/A	(1.9)	1/25/13 09:45 a		2.4997	g
	2.11E-01	RPD 31.5	3.50E-01		N/A					

No. of Results: 1 Comments:

FORM II
BLANK RESULTS

Date: 28-Jan-13

Lab Name: TestAmerica
 Matrix: SOIL

SDG: J01680
 Report No.: 54366

Parameter	Result	Qual	Count	Total	MDL,	Rpt Unit,	Rst/MDL,	Analysis,	Total Sa	Aliquot	Primary
			Error (2 s)	Uncert(2 s)	Lc	CRDL	Yield	Prep Date	Size	Size	Detector
Batch: 3025038	7196_CR6			Work Order: MX0E71AA			Report DB ID: MX0E71AB				
HEXCROME	1.55E-01	U		0.0E+00	1.55E-01	mg/kg	N/A	1.	1/25/13 09:45 a	2.5	g

No. of Results: 1 Comments:

FORM II
LCS RESULTS

Date: 28-Jan-13

Lab Name: TestAmerica
 Matrix: SOIL

SDG: J01680
 Report No.: 54366

Parameter	Result	Count	Total	Report	Expected	Recovery,	Aliquot	Primary
	Qual	Error (2 s)	Uncert(2 s)	MDL	Unit	Bias	Size	Detector
Batch: 3025038	7196_CRF6			Work Order: MX0E71AC	Report DB ID: MX0E71AS			
HEXCHROME	1.80E+01	0.0E+00	1.55E-01	mg/kg	N/A	1.90E+01	95%	1/25/13 09:45 a
No. of Results:	1	Comments:		Rec Limits:	80	120	-0.1	25 g

TestAmerica Bias - (Result/Expected)-1 as defined by ANSI N13.30.
 rptSTLRhLcs
 V5.2.23 A2002

FORM II
MATRIX SPIKE RESULTS

Date: 28-Jan-13

Lab Name: TestAmerica
 Lot-Sample No.: J3A250402-1, J1R9C0

SDG: J01680
 Report No. : 54366

Parameter	SpikeResult, Orig Rst	Count	Total	Rpt Unit, CRDL	Expected, Uncert	Aliquot Size	Analy Method, Primary Detector
	Qual	Error (2 s)	Uncert(2 s)	MDC MDA	Yield		
Batch: 3025038	Work Order: MX0EH1CE	Report DB ID: MX0EH1CW	Orig Sa DB ID: 9MX0EH10				
HEXCHROME	2.61E+01	0.0E+00	1.55E-01	mg/kg	N/A	2.97E+01	1/25/13 09:45 a
	2.11E-01						2.5101
							7196_CR6
							g

Number of Results: 1

Comments:

TestAmerica RER - Replicate Error Ratio = $(S-D)/[\sqrt{sq(TPUs)+sq(TPUs)}]$ as defined by ICPT BOA.
 rptSTLRchMs Bias - (Result/Expected)-1 as defined by ANSI N13.30.
 V5.2.23 A2002

Client_id	Cas_nbr	Parameter	Result	Qualifier	Units	Reporting_Limits	SReporting_Limits	Uncertainty_1s	Analyzed_Analyze	Decision_Level	IC	LCSReco	Addit	Analysis_date	time	Batch_nbr	Test_MetLab	sample_id
JR9C0	7440-22-4	As	2.10E+01	U	Ug/G	9.75E+00	9.75E+00	2.10E-01	0.2564 G	1.71E-01				1/25/2013	14:50	3025037 46DQ	MXOEH1A0	
SOIL	CS	7440-38-2	As	2.10E+01	U	Ug/G	9.75E+00	9.75E+00	6.30E-01	0.2564 G	5.21E-01			1/25/2013	14:50	3025037 46DQ	MXOEH1A0	
SOIL	CS	7440-39-3	Ba	5.64E-01	U	Ug/G	9.95E+00	9.95E+00	1.98E-01	0.2564 G	3.15E-01			1/25/2013	14:50	3025037 46DQ	MXOEH1A0	
SOIL	CS	7440-41-7	Beryllium	2.44E-01	U	Ug/G	9.75E+02	9.75E+02	6.80E-03	0.2564 G	5.61E-03			1/25/2013	14:50	3025037 46DQ	MXOEH1A0	
SOIL	CS	7440-43-9	Cadmium	1.42E+01	U	Ug/G	1.95E+00	1.95E+00	6.50E-02	0.2564 G	5.38E-02			1/25/2013	14:50	3025037 46DQ	MXOEH1A0	
SOIL	CS	7440-47-3	Chromium	6.78E+00	U	Ug/G	9.75E+00	9.75E+00	2.30E-01	0.2564 G	1.91E-01			1/25/2013	14:50	3025037 46DQ	MXOEH1A0	
SOIL	CS	7439-92-1	Lead	3.12E+00	U	Ug/G	9.75E+00	9.75E+00	3.50E-01	0.2564 G	2.92E-01			1/25/2013	14:50	3025037 46DQ	MXOEH1A0	
SOIL	CS	7782-49-2	Se	1.95E+01	U	Ug/G	9.75E+00	9.75E+00	1.00E+00	0.2564 G	8.20E-01			1/25/2013	14:50	3025037 46DQ	MXOEH1A0	
SOIL	CS	7440-22-4	Ag	1.33E-01	U	Ug/G	9.93E+00	9.93E+00	1.30E-01	0.2518 G	1.04E-01			1/25/2013	15:11	3025037 46DQ	MXOEJ1AA	
SOIL	CS	7440-38-2	As	2.07E+00	U	Ug/G	9.93E+00	9.93E+00	3.40E-01	0.2518 G	2.81E-01			1/25/2013	15:11	3025037 46DQ	MXOEJ1AA	
SOIL	CS	7440-39-3	Ba	7.72E+01	U	Ug/G	1.99E+00	1.99E+00	3.80E+00	0.2518 G	3.13E+00			1/25/2013	15:11	3025037 46DQ	MXOEJ1AA	
SOIL	CS	7440-41-7	Beryllium	2.56E-01	U	Ug/G	9.93E+02	9.93E+02	1.20E-02	0.2518 G	9.67E-03			1/25/2013	15:11	3025037 46DQ	MXOEJ1AA	
SOIL	CS	7440-43-9	Cadmium	1.41E+01	U	Ug/G	1.98E+00	1.98E+00	6.80E+00	0.2518 G	5.58E-02			1/25/2013	15:11	3025037 46DQ	MXOEJ1AA	
SOIL	CS	7440-47-3	Chromium	8.15E+00	U	Ug/G	9.93E+00	9.93E+00	6.30E-01	0.2518 G	5.16E-01			1/25/2013	15:11	3025037 46DQ	MXOEJ1AA	
SOIL	CS	7439-92-1	Lead	3.18E+00	U	Ug/G	9.93E+00	9.93E+00	2.10E-01	0.2518 G	1.70E-01			1/25/2013	15:11	3025037 46DQ	MXOEJ1AA	
SOIL	CS	7782-49-2	Se	5.88E+01	U	Ug/G	9.93E+00	9.93E+00	7.90E-01	0.2518 G	6.50E-01			1/25/2013	15:11	3025037 46DQ	MXOEJ1AA	
SOIL	CS	7440-22-4	Ag	-1.80E+01	U	Ug/G	9.89E+00	9.89E+00	1.20E-01	0.2528 G	9.86E-02			1/25/2013	15:11	3025037 46DQ	MXOEK1AA	
SOIL	CS	7440-38-2	As	5.63E+00	U	Ug/G	9.89E+00	9.89E+00	1.10E+00	0.2528 G	9.20E-01			1/25/2013	15:11	3025037 46DQ	MXOEK1AA	
SOIL	CS	7440-39-3	Ba	7.20E+01	U	Ug/G	1.98E+00	1.98E+00	1.00E+01	0.2528 G	8.43E-01			1/25/2013	15:11	3025037 46DQ	MXOEK1AA	
SOIL	CS	7440-41-7	Beryllium	2.85E-01	U	Ug/G	9.89E+02	9.89E+02	1.20E-02	0.2528 G	1.01E-02			1/25/2013	15:11	3025037 46DQ	MXOEK1AA	
SOIL	CS	7440-43-9	Cadmium	1.66E+01	U	Ug/G	1.98E+00	1.98E+00	8.80E-02	0.2528 G	7.23E-02			1/25/2013	15:11	3025037 46DQ	MXOEK1AA	
SOIL	CS	7440-47-3	Chromium	8.59E-01	U	Ug/G	9.89E+00	9.89E+00	1.20E-01	0.2528 G	9.97E-02			1/25/2013	15:11	3025037 46DQ	MXOEK1AA	
SOIL	CS	7439-92-1	Lead	3.40E+00	U	Ug/G	9.89E+00	9.89E+00	5.20E-01	0.2528 G	4.29E-01			1/25/2013	15:27	3025037 46DQ	MXOEK1AA	
SOIL	CS	7782-49-2	Se	1.10E+00	U	Ug/G	9.89E+00	9.89E+00	6.40E-01	0.2528 G	5.24E-01			1/25/2013	15:27	3025037 46DQ	MXOEK1AA	
SOIL	CS	7440-22-4	Ag	-1.70E+01	U	Ug/G	1.00E+01	1.00E+01	7.10E-02	0.2489 G	5.34E-02			1/25/2013	15:32	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-38-2	As	1.35E+00	U	Ug/G	1.00E+01	1.00E+01	4.50E-01	0.2489 G	3.72E-01			1/25/2013	15:32	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-39-3	Ba	7.56E+01	U	Ug/G	2.01E+00	2.01E+00	1.00E+01	0.2489 G	2.15E+00			1/25/2013	15:32	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-41-7	Beryllium	3.14E-01	U	Ug/G	1.00E+01	1.00E+01	1.50E-02	0.2489 G	1.25E-02			1/25/2013	15:32	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-43-9	Cadmium	8.19E+00	U	Ug/G	1.49E+01	1.49E+01	2.01E-01	0.2489 G	1.87E-01			1/25/2013	15:32	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-47-3	Chromium	8.19E+00	U	Ug/G	1.00E+01	1.00E+01	2.50E-01	0.2489 G	2.07E-01			1/25/2013	15:32	3025037 46DQ	MXOLE1AA	
SOIL	CS	7439-92-1	Lead	3.18E+00	U	Ug/G	1.00E+01	1.00E+01	6.80E-01	0.2489 G	5.57E-01			1/25/2013	15:32	3025037 46DQ	MXOLE1AA	
SOIL	CS	7782-49-2	Se	9.91E+01	U	Ug/G	1.00E+01	1.00E+01	1.20E+00	0.2489 G	9.81E-01			1/25/2013	15:32	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-22-4	Ag	-2.58E+01	U	Ug/G	9.83E+00	9.83E+00	6.90E-02	0.2544 G	5.70E-02			1/25/2013	15:36	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-38-2	As	2.13E+00	U	Ug/G	9.83E+00	9.83E+00	8.50E-01	0.2544 G	7.01E-01			1/25/2013	15:36	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-39-3	Ba	7.40E+01	U	Ug/G	1.49E+00	1.49E+00	1.97E+00	0.2489 G	1.19E+00			1/25/2013	15:36	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-41-7	Beryllium	2.71E+01	U	Ug/G	9.83E+00	9.83E+00	1.00E+01	0.2489 G	1.16E+00			1/25/2013	15:36	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-43-9	Cadmium	1.46E+01	U	Ug/G	1.97E+00	1.97E+00	1.40E-02	0.2544 G	1.46E-02			1/25/2013	15:36	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-47-3	Chromium	6.40E+00	U	Ug/G	9.83E+00	9.83E+00	3.30E-01	0.2544 G	2.71E-01			1/25/2013	15:36	3025037 46DQ	MXOLE1AA	
SOIL	CS	7439-92-1	Lead	2.43E+00	U	Ug/G	2.02E+00	2.02E+00	2.00E-02	0.2475 G	2.69E-01			1/25/2013	15:36	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-47-3	Se	1.25E+01	U	Ug/G	9.83E+00	9.83E+00	1.01E-01	0.2475 G	5.44E-01			1/25/2013	15:36	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-22-4	Ag	-1.98E+01	U	Ug/G	1.01E+01	1.01E+01	1.50E-02	0.2475 G	1.31E-01			1/25/2013	15:41	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-38-2	As	1.38E+00	U	Ug/G	1.01E+01	1.01E+01	2.02E+00	0.2475 G	9.68E-02			1/25/2013	15:41	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-39-3	Ba	6.29E+01	U	Ug/G	1.01E+01	1.01E+01	7.90E-03	0.2475 G	6.52E-03			1/25/2013	15:41	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-41-7	Beryllium	2.65E+01	U	Ug/G	1.01E+01	1.01E+01	3.30E-01	0.2475 G	1.61E-02			1/25/2013	15:41	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-43-9	Cadmium	1.71E+01	U	Ug/G	2.02E+00	2.02E+00	2.00E-02	0.2475 G	2.45E-01			1/25/2013	15:41	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-47-3	Chromium	6.34E+00	U	Ug/G	1.01E+01	1.01E+01	1.00E-01	0.2475 G	7.85E-03			1/25/2013	15:41	3025037 46DQ	MXOLE1AA	
SOIL	CS	7439-92-1	Lead	2.38E+00	U	Ug/G	1.01E+01	1.01E+01	3.30E-02	0.2475 G	2.75E-01			1/25/2013	15:45	3025037 46DQ	MXOLE1AA	
SOIL	CS	7782-49-2	Se	6.28E+01	U	Ug/G	1.01E+01	1.01E+01	1.80E-01	0.2475 G	1.47E-01			1/25/2013	15:45	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-22-4	Ag	-2.77E+01	U	Ug/G	1.01E+01	1.01E+01	2.02E+00	0.2475 G	1.07E-01			1/25/2013	15:45	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-38-2	As	1.68E+01	U	Ug/G	1.01E+01	1.01E+01	9.80E-01	0.2499 G	9.54E-01			1/25/2013	15:45	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-39-3	Ba	6.91E+01	U	Ug/G	1.01E+01	1.01E+01	2.00E+00	0.2499 G	8.04E-01			1/25/2013	15:45	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-41-7	Beryllium	2.70E+01	U	Ug/G	1.01E+01	1.01E+01	9.50E-02	0.2499 G	4.66E-01			1/25/2013	15:45	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-43-9	Cadmium	1.37E+01	U	Ug/G	1.01E+01	1.01E+01	1.30E-01	0.2499 G	1.09E-01			1/25/2013	15:45	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-47-3	Chromium	7.70E+00	U	Ug/G	1.01E+01	1.01E+01	9.98E-02	0.2499 G	4.51E-01			1/25/2013	15:45	3025037 46DQ	MXOLE1AA	
SOIL	CS	7439-92-1	Lead	3.42E+01	U	Ug/G	1.01E+01	1.01E+01	1.30E-01	0.2499 G	9.49E-02			1/25/2013	15:48	3025037 46DQ	MXOLE1AA	
SOIL	CS	7782-49-2	Se	1.30E+01	U	Ug/G	1.01E+01	1.01E+01	9.98E-02	0.2499 G	9.30E-01			1/25/2013	15:48	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-38-2	As	1.17E+01	U	Ug/G	1.01E+01	1.01E+01	9.50E-03	0.2499 G	8.30E-01			1/25/2013	15:48	3025037 46DQ	MXOLE1AA	
SOIL	CS	7440-39-3	Ba	6.39E+01	U	Ug/G	2.00E+00	2.00E+00	5.70E-01	0.2499 G	4.66E-01	</						

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Client_Id	Matrix	Result_y	Cas_nbr	Parameter	Result	Qualifier	Units	Reporting_Limits_S	Reporting_Limits_U	Uncertainty_is	Analyzed_Analyze	Decision_Level	Analysis_date	Time	Batch_nbr	Test	MettLab_sample_id
JIR9D0	Soil	CS	7440-41-7	Beryllium	2.6E-01	UG/G	1.00E-01	6.40E-03	5.30E-03	0.2494 G	0.2494 G	1/25/2013 15:52	302503746DQ	MX0EVAIA			
JIR9D0	Soil	CS	7440-43-3	Cadmium	1.57E-01	U/G	2.00E+00	3.90E-02	3.24E-02	0.2494 G	0.2494 G	1/25/2013 15:52	302503746DQ	MX0EVAIA			
JIR9D0	Soil	CS	7440-47-3	Chromium	6.50E-00	U/G	1.00E+01	1.00E+01	2.30E-01	0.2494 G	0.2494 G	1/25/2013 15:52	302503746DQ	MX0EVAIA			
JIR9D0	Soil	CS	7439-92-1	Lead	8.23E-01	U/G	1.00E+01	1.00E+01	4.10E-01	0.2494 G	0.2494 G	1/25/2013 15:52	302503746DQ	MX0EVAIA			
JIR9D0	Soil	CS	7782-49-2	Se	8.02E-01	U/G	1.00E+01	9.90E-01	0.2494 G	0.2494 G	0.2494 G	1/25/2013 15:52	302503746DQ	MX0EVAIA			
INTRA-LAB BLANK	Soil	BLK	7440-22-4	Ag	-6.01E-04	U/G	5.00E-02	5.00E-02	5.00E-04	0.2572 L	0.2572 L	1/25/2013 14:12	302503746DQ	MX0EVAIA			
INTRA-LAB BLANK	Soil	BLK	7440-38-2	As	-7.62E-04	U/G	5.00E-02	8.10E-04	0.2572 L	0.2572 L	0.2572 L	1/25/2013 14:12	302503746DQ	MX0EVAIA			
INTRA-LAB BLANK	Soil	BLK	7440-39-3	Ba	6.09E-04	U/G	1.00E-02	2.80E-05	0.2572 L	0.2572 L	0.2572 L	1/25/2013 14:12	302503746DQ	MX0EVAIA			
INTRA-LAB BLANK	Soil	BLK	7440-41-7	Beryllium	9.26E-05	U/G	5.00E-04	5.00E-04	4.10E-05	0.2572 L	0.2572 L	1/25/2013 14:12	302503746DQ	MX0EVAIA			
INTRA-LAB BLANK	Soil	BLK	7440-43-9	Cadmium	5.24E-05	U/G	1.00E-02	2.30E-04	0.2572 L	0.2572 L	0.2572 L	1/25/2013 14:12	302503746DQ	MX0EVAIA			
INTRA-LAB BLANK	Soil	BLK	7440-47-3	Chromium	1.33E-04	U/G	5.00E-02	2.00E-04	0.2572 L	0.2572 L	0.2572 L	1/25/2013 14:12	302503746DQ	MX0EVAIA			
INTRA-LAB BLANK	Soil	BLK	7439-92-1	Lead	-3.57E-04	U/G	5.00E-02	1.60E-03	0.2572 L	0.2572 L	0.2572 L	1/25/2013 14:12	302503746DQ	MX0EVAIA			
INTRA-LAB BLANK	Soil	BLK	7782-49-2	Se	9.44E-04	U/G	5.00E-02	5.00E-02	0.2572 L	0.2572 L	0.2572 L	1/25/2013 14:12	302503746DQ	MX0EVAIA			
INTRA-LAB CHECK	Soil	LCS	7440-22-4	Ag	9.38E-01	U/G	5.00E-02	6.20E-03	0.2572 L	0.2572 L	0.2572 L	1/25/2013 14:15	302503746DQ	MX0EVAIA			
INTRA-LAB CHECK	Soil	LCS	7440-38-2	As	8.36E-01	U/G	5.00E-02	8.50E-03	0.2572 L	0.2572 L	0.2572 L	1/25/2013 14:15	302503746DQ	MX0EVAIA			
INTRA-LAB CHECK	Soil	LCS	7440-39-3	Ba	1.01E-00	U/G	1.00E-02	1.10E-02	0.2572 L	0.2572 L	0.2572 L	1/25/2013 14:15	302503746DQ	MX0EVAIA			
INTRA-LAB CHECK	Soil	LCS	7440-41-7	Beryllium	9.61E-01	U/G	5.00E-04	5.00E-04	0.2572 L	0.2572 L	0.2572 L	1/25/2013 14:15	302503746DQ	MX0EVAIA			
INTRA-LAB CHECK	Soil	LCS	7440-43-9	Cadmium	9.14E-01	U/G	1.00E-02	1.10E-02	0.2572 L	0.2572 L	0.2572 L	1/25/2013 14:15	302503746DQ	MX0EVAIA			
INTRA-LAB CHECK	Soil	LCS	7440-47-3	Chromium	9.68E-01	U/G	5.00E-02	7.30E-03	0.2572 L	0.2572 L	0.2572 L	1/25/2013 14:15	302503746DQ	MX0EVAIA			
INTRA-LAB CHECK	Soil	LCS	7439-92-1	Lead	9.26E-01	U/G	5.00E-02	5.00E-02	0.2572 L	0.2572 L	0.2572 L	1/25/2013 14:15	302503746DQ	MX0EVAIA			
INTRA-LAB CHECK	Soil	LCS	7782-49-2	Se	8.56E-01	U/G	5.00E-02	5.00E-02	0.2572 L	0.2572 L	0.2572 L	1/25/2013 14:15	302503746DQ	MX0EVAIA			
INTRA-LAB CHECK	Soil	DUP	7440-22-4	Ag	-2.56E-01	U/G	1.00E+01	6.80E-02	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
INTRA-LAB CHECK	Soil	DUP	7440-38-2	As	2.40E+00	U/G	1.00E+01	4.00E-01	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
INTRA-LAB CHECK	Soil	DUP	7440-39-3	Ba	7.22E+00	U/G	2.01E+00	2.20E+01	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
INTRA-LAB CHECK	Soil	DUP	7440-41-7	Beryllium	2.87E+01	U/G	1.00E-01	9.70E-03	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
INTRA-LAB CHECK	Soil	DUP	7440-43-9	Cadmium	1.58E+01	U/G	2.01E+00	7.40E-02	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
INTRA-LAB CHECK	Soil	DUP	7440-47-3	Chromium	8.96E+00	U/G	1.00E+01	1.50E-01	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
INTRA-LAB CHECK	Soil	DUP	7439-92-1	Lead	3.22E+00	U/G	1.00E+01	1.00E+01	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MS	7782-49-2	Se	3.53E-01	U/G	1.00E+01	2.00E+00	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MS	7440-38-2	As	1.77E+02	REC	9.63E+00	3.60E+01	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MS	7440-39-3	Ba	7.22E+01	REC	9.63E+00	2.00E+00	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MS	7440-41-7	Beryllium	2.87E+01	REC	9.63E+00	1.00E+01	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MS	7440-43-9	Cadmium	1.58E+01	REC	9.63E+00	4.70E-01	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MS	7440-47-3	Chromium	8.96E+00	REC	9.63E+00	1.00E+01	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MS	7439-92-1	Lead	3.22E+00	REC	9.63E+00	1.00E+01	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MS	7782-49-2	Se	3.53E-01	REC	9.63E+00	2.00E+00	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MS	7440-38-2	As	1.81E+02	REC	9.63E+00	9.63E+00	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MS	7440-39-3	Ba	1.45E+02	REC	9.63E+00	1.93E+00	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MS	7440-41-7	Beryllium	1.84E+02	REC	9.63E+00	1.00E+00	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MS	7440-43-9	Cadmium	1.75E+02	REC	9.63E+00	1.93E+00	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MS	7440-47-3	Chromium	1.82E+02	REC	9.63E+00	1.60E+00	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MS	7439-92-1	Lead	1.71E+02	REC	9.63E+00	1.20E+00	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MS	7782-49-2	Se	1.68E+02	REC	9.63E+00	2.50E+00	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:07	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MSD	7440-22-4	Ag	1.75E+02	REC	9.74E+00	3.00E+00	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:02	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MSD	7440-38-2	As	1.80E+02	REC	9.74E+00	2.10E+00	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:02	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MSD	7440-39-3	Ba	1.91E+02	REC	9.74E+00	1.90E+00	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:02	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MSD	7440-41-7	Beryllium	1.81E+02	REC	9.74E+00	1.40E+00	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:02	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MSD	7440-43-9	Cadmium	1.74E+02	REC	9.74E+00	1.60E+00	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:02	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MSD	7440-47-3	Chromium	1.78E+02	REC	9.74E+00	9.90E+00	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:02	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MSD	7439-92-1	Lead	1.71E+02	REC	9.74E+00	8.20E+00	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:02	302503746DQ	MX0EVAIA			
JIR9CO DUP	Soil	MSD	7782-49-2	Se	1.65E+02	REC	9.74E+00	1.20E+00	0.2489 G	0.2489 G	0.2489 G	1/25/2013 15:02	302503746DQ	MX0EVAIA			

Lot No., Due Date: J3A250402; 01/28/2013
 Client, Site: 127642; S00X235B00 HANFORD
 QC Batch No., Method Test: 3025037; M6010_S 6010A
 SDG, Matrix: J01680; SOIL

1.0 Initial Calibration

- 1.1 Performed at required frequency with required number of levels? Yes No N/A 2nd
- 1.2 Correlation coefficient within QC limits? Yes No N/A 2nd
- 1.3 Initial calibration verification (ICV) analyzed immediately after calibr. and results within QC limits of +/- 10% at 0.75 ppm? Yes No N/A 2nd
- 1.4 ICB analyzed immediately after ICV and concentration of all parameters +/- report limit from zero? RL per RadCalc. Yes No N/A 2nd

2.0 Continuing Calibration

- 2.1 CCV analyzed at required frequency and all parameters within QC limits or +/- 10% at 0.7500 ppm? Yes No N/A 2nd
- 2.2 CCB analyzed at required frequency and all results +/- reporting limit from zero? Yes No N/A 2nd

3.0 Sample Analysis

- 3.1 Were any samples with concentration above the linear range diluted and reanalyzed? Yes No N/A 2nd
- 3.2 Were all sample holding times met? Yes No N/A 2nd

4.0 QC Samples

- 4.1 All results for the preparation blank < reporting limits? Yes No N/A 2nd
- 4.2 MS or MS/MSD recoveries within 20% at 1 ppm and within 20% RPD (for MSD)? Yes No N/A 2nd
- 4.3 LCS precent recovery within 20% at 1 ppm and 20% RPD (for LCSD)? Yes No N/A 2nd
- 4.4 Analytical spikes within QC limits where applicable? Yes No N/A 2nd
- 4.5 ICP only: One serial dilution performed and within 10% of parent per SDG? Yes No N/A 2nd
- 4.6 ICP only: RLV run per batch and within 20% of current values? Yes No N/A 2nd
- 4.7 ICP only: ICSA,ICSAB analyzed at the required frequencies and within 20% of values per dilution record? Yes No N/A 2nd

5.0 Other

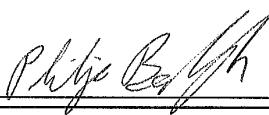
- 5.1 Are all nonconformances included and noted? Yes No N/A 2nd
- 5.2 Is the correct date and time of analysis shown? Yes No N/A 2nd
- 5.3 Did the analyst sign and date the digestion log for the analytical run? Yes No N/A 2nd
- 5.4 Correct methodology used? Yes No N/A 2nd
- 5.5 Transcriptions checked? Yes No N/A 2nd
- 5.6 Calculations checked at minimum frequency? Yes No N/A 2nd
- 5.7 Units checked? Yes No N/A 2nd
- 5.8 Verified that appropriate data transferred to ReportDB? Yes No N/A 2nd

6.0 Comments on any 'No' response:

First Level 
 TestAmerica Richland
 QAS_RADCALCv4.8.58

Date 1/28/13

Second



Date 1/28/13

1/28/13
1/28 1/28/13

Page 1

Clouseau Nonconformance Memo



NCM #: **10-22652**
NCM Initiated By: Traci KROUPA
Date Opened: 01/28/2013
Date Closed:

Classification: **Deficiency**
Status: **PMREVIEW**
Production Area: Classical Chemistry
Tests: 6010A
Lot #'s (Sample #'s): J3A250000 (37), J3A250402 (1,2,3,4,5,6,7,8,9),
QC Batches: 3025037,

Nonconformance: Incorrect prep/analysis procedure followed
Subcategory: Other (explanation required)

Problem Description / Root Cause

Name	Date	Description
Traci KROUPA	01/28/2013	The RLV did not pass within the acceptable limits for Be. A RLV was re-analyzed with a passing result for all analytes. Two samples were analyzed before an additional RLV was analyzed. The third RLV was analyzed with a passing result.

Corrective Action

Name	Date	Corrective Action
Traci KROUPA	01/28/2013	The instrument was stable with no effect on the data obtained. The data was reported.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note
			Response	Response Note	

Quality Assurance Verification

Verified By	Due Date	Status	Notes
		This section not yet completed by QA.	

Approval History

Date Approved	Approved By	Position
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TK.128.13

Richland Laboratory
Data Review Check List
Hexavalent Chromium

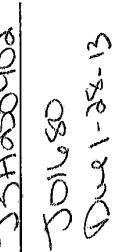
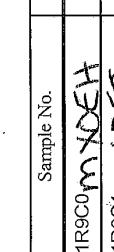
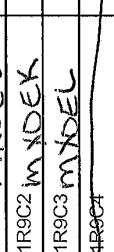
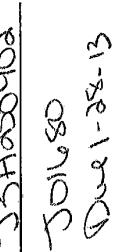
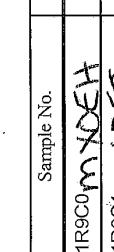
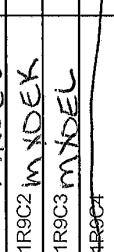
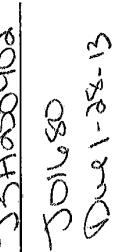
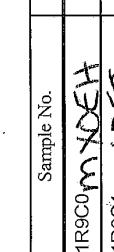
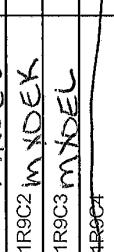
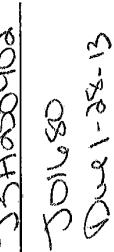
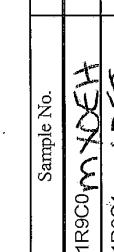
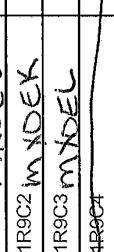
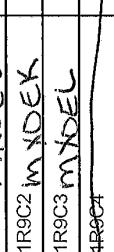
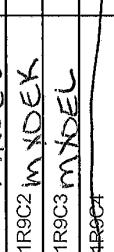
Batch Number(s):	3025038	Lab Sample Numbers or SDG:	J01680		
Method/Test/Parameter: Cr+6 <input type="checkbox"/> RL-WC-003(Aqueous) <input checked="" type="checkbox"/> RL-WC-004(Solid)					
Review Item	Yes (✓)	No (✗)	N/A (✗)	2 nd Level Review (✓)	
A. Initial Calibration					
1. Performed at required frequency with required number of levels?	✓			✓	
2. Correlation coefficient greater than 0.97?	✓			✓	
3. Initial calibration verification (ICV) analyzed immediately after calibration and results within 10% of expected?	✓			✓	
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 10% of expected?	✓			✓	
2. CCB analyzed at required frequency and all results ≤ reporting limit?	✓			✓	
C. Sample Analysis				N/A	
1. Were any samples with concentrations above the linear range diluted and reanalyzed?			✓	N/A	
2. Were all sample holding times met?	✓			✓	
D. QC Samples					
1. All results for the preparation blank below limits?	✓			✓	
2. LCS percent recovery within 85-115%	✓			✓	
3. PbCrO ₄ percent recovery within 75-125%?	✓			✓	
4. Sample and Duplicate within 20% (aqueous) or 35% (solid) RPD?	✓			✓	
5. MS or MS/MSD recoveries within 85-115% (aqueous) or 75-125% (solid)?	✓			✓	
6. On MS failure, PDMS within 85-115%?			✓	N/A	
E. Other			✓	N/A	
1. Are all nonconformances included and noted?			✓	N/A	
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 or list NCM number:

Analyst

Date 1/28/13 2nd Review

Date 1/28/13

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-074-440	Page 1 of 1
Collector R. Deel	Company Contact Joan Kessner	Telephone No. 509-375-4688	Project Coordinator KESSNER, JH	Price Code 81	Days Turnaround 1/29/13 31 Days 24 Hrs		
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Soil In-Proce	Sampling Location 100-D-100 BCL SPA		SAF No. RC-074				
Ice Chest No. N/A	Field Logbook No. EL-1607-15	COA 0D10032000	Method of Shipment Hand Deliver				
Shipped To TestAmerica Incorporated, Richland	Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A				
POSSIBLE SAMPLE HAZARDS/REMARKS None							
Special Handling and/or Storage Cool 4 Deg C							
J3A3650102  J3A250402 J01680 Due 1-28-13							
Sample No.	Matrix*	Sample Date 1/24/13	Sample Time 1500	Preservation Cool 4C		Matrix *	
J1R9C01 MxDEx	SOIL	1/24/13	1500	X	X		
J1R9C1 MxDEx	SOIL	1/24/13	1457	X	X		
J1R9C2 MxDEx	SOIL	1/24/13	1454	X	X		
J1R9C3 MxDEx	SOIL	1/24/13	1450	X	X		
J49C4	SOIL	1/24/13	CMB				
CHAIN OF POSSESSION							
Relinquished By/Removed From Test America 	Date/Time 1-24-13	Received By/Stored In WCH 	Date/Time 1/24/13	Sign/Print Names WCH 		SPECIAL INSTRUCTIONS	
Relinquished By/Removed From Test America 	Date/Time 1-24-13	Received By/Stored In WCH 	Date/Time 1/24/13	Sign/Print Names WCH 		(1) Metals by ICP - 6010 - Quick Turn {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}	
Relinquished By/Removed From Test America 	Date/Time 1-24-13	Received By/Stored In WCH 	Date/Time 1/24/13	Sign/Print Names WCH 		S-Soil SF=Substrate So=Solid St=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue W=Wire L=Liquid V=Vegetation X=Other	
Relinquished By/Removed From Test America 	Date/Time 1-25-13	Received By/Stored In WCH 	Date/Time 1/25/13 0835	Sign/Print Names WCH 			
Relinquished By/Removed From WCH	Date/Time	Received By/Stored In	Date/Time	Sign/Print Names WCH 			
Relinquished By/Removed From WCH	Date/Time	Received By/Stored In	Date/Time	Sign/Print Names WCH 			
LABORATORY SECTION	Received By	Title		Date/Time		Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time		Date/Time	
WCH-EE-011							

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-074-441	Page 1 of 1
Collector <i>R. A. Bell</i>	Company Contact Joan Kessner	Telephone No. 509-375-4688	Project Coordinator KESSLER, JH	Price Code 8L	Data Turnaround 1/24/13 and 21 Days 24 Hours
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Soil In-Proce	Sampling Location 100-D-100 BCL SPA	SAF No. RC-074	Method of Shipment Hand Deliver		
Ice Chest No. N/A	Field Logbook No. EL-1607-15	COA 0D10032000	Offsite Property No. N/A	Bill of Lading/Air Bill No. N/A	
POSSIBLE SAMPLE HAZARDS/REMARKS <i>None</i>				Preservation Cool 4C	
				Type of Container G/P	
				No. of Container(s) 1	1
				Volume 125mL	125mL
				See Item(1) in Special Instructions Instructions	
				Chromium Hex-7196- {Hexavalent Chromium}	
JR9C6 SOIL Due 1-28-13				SAMPLE ANALYSIS	
Sample No.	Matrix *	Sample Date	Sample Time		
JR9C5 1-24-13 CRM	SOIL	1/24/13	1920		
JR9C6 MXDEM	SOIL	1/24/13	1924		
JR9C7 MXDEN	SOIL	1/24/13	1937		
JR9C8 MXDER	SOIL	1/24/13	1934		
JR9C9 MXDET	SOIL	1/24/13	1934		
SPECIAL INSTRUCTIONS					
Matrix * S=Soil SE=Scaliment SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue W=Wipe L=Liquid V=Vesselation X=Other					
REVIEWED BY <i>J. A. Bell</i> DATE <i>1/25/13</i>					
(1) Metals by ICP - 6010 - Quick Turn {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}					
Relinquished By/Removed From <i>Mrs. Vicki Bell</i> Date/Time 1/24/13 15:45	Received By/Stored In <i>ms tan leonel</i> Date/Time 1/24/13 16:45	Received By/Removed From <i>ms tan leonel</i> Date/Time 1/24/13 16:45	Received By/Removed From <i>ms tan leonel</i> Date/Time 1/24/13 16:45	Received By/Removed From <i>ms tan leonel</i> Date/Time 1/24/13 16:45	Received By/Removed From <i>ms tan leonel</i> Date/Time 1/24/13 16:45
Relinquished By/Removed From <i>John Bell</i> Date/Time 1/24/13 16:45	Received By/Removed From <i>ms tan leonel</i> Date/Time 1/24/13 16:45	Received By/Removed From <i>ms tan leonel</i> Date/Time 1/24/13 16:45	Received By/Removed From <i>ms tan leonel</i> Date/Time 1/24/13 16:45	Received By/Removed From <i>ms tan leonel</i> Date/Time 1/24/13 16:45	Received By/Removed From <i>ms tan leonel</i> Date/Time 1/24/13 16:45
Relinquished By/Removed From Date/Time	Received By/Removed From Date/Time	Received By/Removed From Date/Time	Received By/Removed From Date/Time	Received By/Removed From Date/Time	Received By/Removed From Date/Time
LABORATORY SECTION	Received By	Disposal Method			Date/Time
FINAL SAMPLE DISPOSITION					Date/Time

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-074-442	Page 1 of 1
Collector <i>R. Bell</i>	Company Contact Joan Kessner	Telephone No. 509-375-4588	Project Coordinator KESSNER, JH	Price Code 8L	Data Turnaround 21 Days 24 Hours
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Soil In-Proce	Sampling Location 100-D-100 BCL SPA		SAF No. RC-074		
Ice Chest No. N/A	Field Logbook No. EL-1607-15	COA 0D10032000	Method of Shipment Hand Deliver		
Shipped To TestAmerica Incorporated, Richland	Offsite Property No. N/A	Bill of Lading/Air Bill No. N/A			
POSSIBLE SAMPLE HAZARDS/REMARKS None		Preservation Cool 4C	Cool 4C		
Special Handling and/or Storage Cool 4 Deg C		Type of Container G/P	G/P		
<i>JRA 250403</i> JRA 250403 Due 1-28-13		No. of Container(s) 1	1		
		Volume 125mL	125mL		
		See Item (1) in Chromium Hex - 7196 - Quick Turn (Hexavalent Chromium)			
Sample No.	Matrix *	Sample Date <i>1/24/13</i>	Sample Time <i>1931</i>		
J1R9D0 M 100 E1	SOIL				
J1R9D1	SOIL				
J1R9D2	SOIL				
J1R9D3	SOIL				
J1R9D4	SOIL				
SPECIAL INSTRUCTIONS					
<p>Matrix *</p> <p>S=Soil SE=Soilment SO=Soil SI=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue WI=Wipe L=Liquid VE=Vessel X=Other</p> <p>(1) Metals by ICP - 6010 - Quick Turn {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}</p>					
Relinquished By/Removed From <i>Paul Rose Ed. Bell</i>	Date/Time <i>1-24-13 15:45</i>	Received By/Stored In <i>RECEIVED 1/24/13</i>	Date/Time <i>1/24/13 19:31</i>		
Relinquished By/Removed From <i>Paul Rose Ed. Bell</i>	Date/Time <i>1/24/13 16:45</i>	Received By/Stored In <i>RECEIVED 1/24/13</i>	Date/Time <i>1/24/13 16:45</i>		
Relinquished By/Removed From <i>Wing Wicht 1-25-13</i>	Date/Time <i>1/25/13 0835</i>	Received By/Stored In <i>RECEIVED 1/25/13 0835</i>	Date/Time <i>1/25/13 0835</i>		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time		
LABORATORY SECTION	Received By		Title		
FINAL SAMPLE DISPOSITION	Disposal Method		Date/Time		
WCH-EE-011					

Sample Check-in List

Date/Time Received: 1-25-13 / 0835 Container GM Screen Result: (Airlock) .6 Initials BS]
 Sample GM Screen Result (Sample Receiving) .6 Initials BS]

Client: WCH SDG #: SD1480 NA [] SAF #: RC-074 NA []

Lot Number: J3A250402

Chain of Custody # RC-074-440, 441 & 442

Shipping Container ID: hand deliv. NA [] Air Bill Number: NA []

Samples received inside shipping container/cooler/box Yes BS] Continue with 1 through 4. Initial appropriate response.

No [] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [] No [] No Custody Seal BS]
2. Custody Seals dated and signed? Yes [] No [] No Custody Seal BS]
3. Cooler temperature: 5.7 °C ON ICE NA []
4. Vermiculite/packing materials is NA BS] Wet [] Dry []

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes BS] No []
6. Number of samples received (Each sample may contain multiple bottles): 9
7. Containers received: 18 x 125 ml p

8. Sample holding times exceeded? NA [] Yes [] No BS]
9. Samples have:
tape hazard labels
BS custody seals appropriate sample labels
10. Matrix:
BS A (FLT, Wipe, Solid, Soil) I (Water)
BS S (Air, Niosh 7400) T (Biological, Ni-63)
11. Samples:
BS are in good condition _____ are leaking
BS are broken _____ have air bubbles (Only for samples requiring no head space)
BS Other _____
12. Sample pH appropriate for analysis requested Yes [] No [] NA BS]
 (If acidification is necessary, then document sample ID, initial pH, amount of HNO₃ added and pH after addition on table overleaf)
 RPL ID # of preservative used : n/A
13. Were any anomalies identified in sample receipt? Yes [] No BS]
14. Description of anomalies (include sample numbers): NA BS

15. Sample Location, Sample Collector Listed on COC? * Yes [] No []
*For documentation only. No corrective action needed.

16. Additional Information: W | A

Client/Courier denied temperature check. Client/Courier unpack cooler.

[B] Client/Courier unpack cooler.

Sample Custodian: John Beck Date: 1-25-13

Client Informed on _____ by _____ Person contacted _____

No action necessary; process as is
Project Manager Shando Wiles Date 1/08/13

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① 2013/05/13

LS-023, Rev. 15, 07/11

See over for additional information

Sample Preparation/Analysis										Balance Id:		
										Pipet #:		
										Sep1 DT/Tm Tech:		
										Sep2 DT/Tm Tech:		
Work Ord. Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliqout Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, InitDate	Comments:
1 MX0EH-1-AC J3A250402-1-SAMP 01/24/2013 15:00	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
2 MX0EH-1-CE-S J3A250402-1-MS 01/24/2013 15:00	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
3 MX0EH-1-CF-X J3A250402-1-DUP 01/24/2013 15:00	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4 MX0EJ-1-AC J3A250402-2-SAMP 01/24/2013 14:57	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
5 MX0EK-1-AC J3A250402-3-SAMP 01/24/2013 14:54	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
6 MX0EL-1-AC J3A250402-4-SAMP 01/24/2013 14:50	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
7 MX0EM-1-AC J3A250402-5-SAMP 01/24/2013 14:20	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TestAmerica Richland Wa.	Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 pd - Prep Dt, dc - Date Chg, r - Reference Dt, ct-Cocktailed Added	ISV - Insufficient Volume for Analysis	WO Cnt: 7	Page 1	ICO C v4.8.49							

Sample Preparation/Analysis										Balance Id:			
										Pipet #:			
										Sep1 DT/Tm Tech:			
										Sep2 DT/Tm Tech:			
										Prep Tech:			
<p>AnalyDueDate: 01/28/2013</p> <p>Batch: 3025038</p> <p>mg/kg</p> <p>SEQ Batch, Test: None</p> <p>Comments:</p>													
Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliqot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:

All Clients for Batch: 127642, Washington Closure Hanford LLC										Washington Closure Hanford LLC, RW2, 88144		
<p>MXDEH1AC-SAMP Constituent List:</p> <p>MXDEH1CE-MS Constituent List:</p> <p>MXDE71AA-BLK:</p> <p>MXDE71AC-LCS:</p>												
MXDEH1AC-SAMP Calc Info:	Uncert Level (#s) .: 2	Decay to Sadt: <input checked="" type="checkbox"/>	Blk Subt.: N	Sci.Not.: <input checked="" type="checkbox"/>	ODRS: B							
MXDEH1CE-MS Calc Info:	Uncert Level (#s) .: 2	Decay to Sadt: <input checked="" type="checkbox"/>	Blk Subt.: N	Sci.Not.: <input checked="" type="checkbox"/>	ODRS: B							
MXDE71AA-BLK:	Uncert Level (#s) .: 2	Decay to Sadt: <input checked="" type="checkbox"/>	Blk Subt.: N	Sci.Not.: <input checked="" type="checkbox"/>	ODRS: B							
MXDE71AC-LCS:	Uncert Level (#s) .: 2	Decay to Sadt: <input checked="" type="checkbox"/>	Blk Subt.: N	Sci.Not.: <input checked="" type="checkbox"/>	ODRS: B							

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2										Page 3	
pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added	ISV - Insufficient Volume for Analysis										
TestAmerica	WO Cnt: 13										
Richland Wa	ICOC v4.8.49										