0095863

SAF-RC-073
100-D/DR Burial Grounds & Remaining Sites – Other In-Process
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

No Distribution Required

COMMENTS:

SDG JP0139 SAF RC-073

Rad only Chem only ☑ Rad & Chem

☑ Complete Partial

Waste Site: 100-D-50:6 Pipelines

RECEIVED
APR 21 2011
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 62 ***Pages***

Report No.: 46160

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.
JP0139	RC-073	J1FJ98	J1C240565-1	MF5MN1AH	9MF5MN10	1083444
		J1FJ98	J1C240565-1	MF5MN1AE	9MF5MN10	1083446
		J1FJ98	J1C240565-1	MF5MN1AF	9MF5MN10	1083450
		J1FJ98	J1C240565-1	MF5MN1AG	9MF5MN10	1083451
		J1FJ98	J1C240565-1	MF5MN1AD	9MF5MN10	1083453
		J1FJ98	J1C240565-1	MF5MN1AA	9MF5MN10	1083462
		J1FJ98	J1C240565-1	MF5MN4AJ	9MF5MN40	1090385

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

TestAmerica Laboratories, Inc.

April 8, 2011

Attention: Joan Kessner

SAF Number	:	RC-073
Date SDG Closed	:	March 24, 2011
Number of Samples	:	One (1)
Sample Type	:	Other
SDG Number	:	JP0139
Data Deliverable	:	7– Day / Summary

CASE NARRATIVE

I. Introduction

On March 24, 2011 one other sample was received at TestAmerica for radiochemical analysis. Upon receipt, the sample was assigned the following laboratory ID number to correspond with the Washington Closure Hanford (WCH) specific ID:

WCH ID#	TARL ID#	MATRIX	DATE OF RECEIPT
J1FJ98	MF5MN	OTHER	02/01/11

II. Sample Receipt

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

III. Analytical Results/Methodology

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

The requested analyses were:

Gas Proportional Counting
Gross Alpha by method RL-GPC-001
Gross Beta by method RL-GPC-001
Strontium-90 by method RL-GPC-003
Gamma Spectroscopy
Gamma Spec by method RL-GAM-001

Liquid Scintillation Counting
Nickel-63 by method RL-LCS-017
Laser Induced Phosphorimetry
Total Uranium by method RL-KPA-003
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

Gas Proportional Counting
Gross Alpha by method RL-GPC-001:
The LCS, batch blank, sample and sample duplicate (J1FJ98) results are within contractual requirements.

Gross Beta by method RL-GPC-001 :
The LCS, batch blank, sample and sample duplicate (J1FJ98) results are within contractual requirements.

Strontium-90 by method RL-GPC-003 :
During the final plating of the sample the LCS was bumped causing a minimal sample loss to occur. Recoveries were still acceptable, the data was accepted. Except as noted the LCS, batch blank, sample and sample duplicate (J1FJ98) results are within contractual requirements.

Gamma Spectroscopy
Gamma Spec by method RL-GAM-001 :
There was insufficient volume for a duplicate. Sample J1FJ98 was recounted on a different detector for the duplicate (J1FJ98 DUP). Except as noted, the LCS, batch blank, sample and sample duplicate (J1FJ98) results are within contractual requirements.

Liquid Scintillation Counting
Nickel-63 by method RL-LCS-017 :
The LCS, batch blank, sample and sample duplicate (J1FJ98) results are within contractual requirements.

Total Uranium
Total Uranium by method RL-KPA-003 :
This was a rerun of batch 1083448 because initially the CRDL was not met. The samples were then reran with a larger sample volume, the matrix spike had a recovery lower than the acceptance criteria, possibly due to a matrix interference. Except as noted the LCS, batch blank, sample, sample duplicate (J1FJ98), and sample matrix spike (J1FJ98) results are within contractual requirements.

Chemical Analysis

Washington Closure Hanford
April 8, 2011

Hexavalent Chromium by EPA method 7196A
The matrix spike recovered low at 23.9%. The post digestive matrix spike recovered at 83.2% and the insoluble matrix spike recovered at 102.7%. This implies strong reducing capacity in the sample, but not enough to exhaust the insoluble matrix spike. The duplicate was not within acceptable criteria possibly due to the in-homogeneity of the sample. Except as noted; the LCS, batch blank, sample, sample duplicate (J1FJ98) and sample matrix spike (J1FJ98) 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:

Whitney Ritari
for 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 = constants * f(x,y,z,...). 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/?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) ***u_c - Combined Uncertainty.***	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, ***u_c the combined uncertainty.*** The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or TestAmerica "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. Lc=(1.645 * Sqrt(2*(BkgrndCnt/BkgrndCntMin)/SCntMin)) * (ConvFct/(Eff*Yld*Abn*Vol) * 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((BkgrndCnt/BkgrndCntMin)/SCntMin) + 2.71/SCntMin) * (ConvFct/(Eff * Yld * Abn * Vol) * 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($TPUs^2$ + $TPUd^2$)] 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

TestAmerica TARL

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

Date: 08-Apr-11

Report No. : 46160

SDG No: JP0139

Batch	Client Id / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
1090385 UTOT_KPA									
J1FJ98									
	MF5MN4AJ	TOTAL-URANIUM	1.27E-02 +- 1.4E-03	U	ug/g		3.42E-01	1.00E+00	
J1FJ98 DUP									
	MF5MN3AN	TOTAL-URANIUM	6.79E-03 +- 8.0E-04	U	ug/g		3.44E-01	1.00E+00	60.6
1083444 GAMMA_GS									
J1FJ98									
	MF5MN1AH	AMERICIUM 241	1.02E-02 +- 4.2E-02	U	pCi/g		7.37E-02		
		CO-60	1.09E-04 +- 8.2E-03	U	pCi/g		1.51E-02	5.00E-02	
		CS-137	6.63E-02 +- 1.9E-02		pCi/g		1.30E-02	1.00E-01	
		EU-152	5.08E-03 +- 1.9E-02	U	pCi/g		3.37E-02	1.00E-01	
		EU-154	-1.01E-02 +- 2.2E-02	U	pCi/g		3.75E-02	1.00E-01	
		EU-155	9.05E-03 +- 1.6E-02	U	pCi/g		2.97E-02	1.00E-01	
J1FJ98 DUP									
	MF5MN1AK	AMERICIUM 241	-2.01E-02 +- 3.2E-02	U	pCi/g		5.29E-02		-610.9
		CO-60	1.30E-03 +- 8.1E-03	U	pCi/g		1.53E-02	5.00E-02	168.9
		CS-137	3.51E-02 +- 1.5E-02		pCi/g		1.70E-02	1.00E-01	61.5
		EU-152	-6.59E-03 +- 2.7E-02	U	pCi/g		4.64E-02	1.00E-01	-1544.4
		EU-154	-4.38E-03 +- 2.6E-02	U	pCi/g		4.64E-02	1.00E-01	-78.5
		EU-155	-7.61E-03 +- 2.5E-02	U	pCi/g		4.22E-02	1.00E-01	2307.0
1083450 9310_ALPHABETA_GPC									
J1FJ98									
	MF5MN1AF	ALPHA	2.99E+00 +- 3.5E+00	U	pCi/g	100%	6.15E+00	1.00E+01	
J1FJ98 DUP									
	MF5MN1AP	ALPHA	1.91E+00 +- 3.0E+00	U	pCi/g	100%	5.74E+00	1.00E+01	43.9
1083451 9310_ALPHABETA_GPC									
J1FJ98									
	MF5MN1AG	BETA	4.67E+00 +- 2.6E+00	U	pCi/g	100%	4.86E+00	1.50E+01	
J1FJ98 DUP									
	MF5MN1AQ	BETA	3.16E+00 +- 2.4E+00	U	pCi/g	100%	4.82E+00	1.50E+01	38.5
1083453 SRTOT_SEP_PRECIP_GPC									
J1FJ98									
	MF5MN1AD	STRONTIUM	-6.63E-02 +- 1.3E-01	U	pCi/g	31%	3.26E-01		
J1FJ98 DUP									
	MF5MN1AR	STRONTIUM	5.77E-02 +- 1.5E-01	U	pCi/g	29%	3.42E-01		-2877.2
1083446 NI63_LSC									
J1FJ98									
	MF5MN1AE	NI-63	-2.19E+00 +- 7.5E+00	U	pCi/g	91%	1.55E+01	3.00E+01	
J1FJ98 DUP									

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A2002

RPD - Relative Percent Difference.

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

Sample Results Summary

TestAmerica TARL

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

Date: 08-Apr-11

Report No. : 46160

SDG No: JP0139

Batch	Client Id / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
1083446	**NI63_LSC**								
	J1FJ98 DUP								
	MF5MN1AL	NI-63	-1.37E+00 +- 7.0E+00	U	pCi/g	90%	1.44E+01	3.00E+01	-46.0
1083462	**7196_CR6**								
	J1FJ98								
	MF5MN1AA	HEXCHROME	2.98E-01 +- 0.0E+00		mg/kg	N/A	1.54E-01	1.55E-01	
	MF5MN1AV	HEXCHROME	1.09E+00 +- 0.0E+00		mg/kg	N/A	1.48E-01	3.50E-01	113.9

No. of Results: 24

TestAmerica

rptSTLRchSaSummary2 V5.2.12 A2002

RPD - Relative Percent Difference.

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

QC Results Summary

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Date: 08-Apr-11

Report No. : 46160

SDG No.: JP0139

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC|MDA
UTOT_KPA								
1090385 BLANK QC,								
MF5792AA	TOTAL-URANIUM	5.45E-04 +- 6.5E-05	U	ug/g				3.45E-01
1090385 LCS,								
MF5792AD	TOTAL-URANIUM	9.05E-01 +- 1.1E-01		ug/g		89%	-0.1	3.44E-01
MF5792AC	TOTAL-URANIUM	9.54E-01 +- 1.1E-01		ug/g		96%	0.0	3.43E-01
1090385 MATRIX SPIKE, J1FJ98								
MF5MN3AM	TOTAL-URANIUM	2.26E-02 +- 4.0E-03	U	ug/g		2%	-1.0	3.45E-01
GAMMA_GS								
1083444 BLANK QC,								
MF57X1AA	AMERICIUM 241	-1.99E-02 +- 2.3E-02	U	pCi/g				3.74E-02
	CO-60	-4.18E-03 +- 1.7E-02	U	pCi/g				2.97E-02
	CS-137	4.98E-03 +- 1.6E-02	U	pCi/g				2.89E-02
	EU-152	-1.62E-02 +- 4.7E-02	U	pCi/g				7.74E-02
	EU-154	3.42E-02 +- 4.7E-02	U	pCi/g				9.29E-02
	EU-155	-5.81E-03 +- 3.6E-02	U	pCi/g				6.10E-02
1083444 LCS,								
MF57X1AC	CS-137	1.13E+00 +- 1.6E-01		pCi/g		104%	0.0	4.06E-02
	RA-226	1.11E+00 +- 1.8E-01		pCi/g		97%	0.0	6.60E-02
	RA-228	9.19E-01 +- 2.0E-01		pCi/g		98%	0.0	1.16E-01
	U-238	1.09E+00 +- 1.6E-01		pCi/g		91%	-0.1	7.51E-02
9310_ALPHABETA_GPC								
1083450 BLANK QC,								
MF58D1AA	ALPHA	1.09E+00 +- 1.4E+00	U	pCi/g	100%			2.38E+00
1083450 LCS,								
MF58D1AC	ALPHA	7.87E+01 +- 1.8E+01		pCi/g	100%	90%	-0.1	1.99E+00
9310_ALPHABETA_GPC								
1083451 BLANK QC,								
MF58F1AA	BETA	2.86E+00 +- 2.1E+00	U	pCi/g	100%			4.23E+00
1083451 LCS,								
MF58F1AC	BETA	6.53E+01 +- 9.7E+00		pCi/g	100%	99%	0.0	3.47E+00
SRTOT_SEP_PRECIP_GPC								
1083453 BLANK QC,								
MF58J1AA	STRONTIUM	-1.58E-02 +- 5.6E-02	U	pCi/g	92%			1.37E-01
1083453 LCS,								
MF58J1AC	STRONTIUM	8.83E-01 +- 2.6E-01		pCi/g	79%	78%	-0.2	1.46E-01
NI63_LSC								
1083446 BLANK QC,								
MF5741AA	NI-63	5.12E-01 +- 7.2E+00	U	pCi/g	93%			1.45E+01
1083446 LCS,								
MF5741AC	NI-63	4.86E+02 +- 4.7E+01		pCi/g	81%	86%	-0.1	1.49E+01
7196_CR6								
1083462 MATRIX SPIKE, J1FJ98								

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rptSTLRchQcSummary V5.2.12
A2002

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

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

QC Results Summary

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Date: 08-Apr-11

Report No. : 46160

SDG No.: JP0139

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC|MDA
MF5MN1AT	HEXCHROME	2.58E+00 +- 0.0E+00		mg/kg	N/A	24%	-0.8	1.48E-01
1083462 LCS, MF5831AC	HEXCHROME	1.96E+01 +- 0.0E+00		mg/kg	N/A	98%	0.0	1.55E-01
1083462 BLANK QC, MF5831AA	HEXCHROME	1.55E-01 +- 0.0E+00	U	mg/kg	N/A			1.55E-01

No. of Results: 25

TestAmerica
rptSTLRchQcSummary V5.2.12
A2002

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

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

TestAmerica Laboratories, Inc.

FORM I

SAMPLE RESULTS

Date: 08-Apr-11

Lab Name: TestAmerica
Lot-Sample No.: J1C240565-1
Client Sample ID: J1FJ98

SDG: JP0139
Report No. : 46160
COC No. : RC-073-119

Collection Date: 3/24/2011 10:05:00 AM
Received Date: 3/24/2011 12:00:00 PM
Matrix: OTHER 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/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1083444	GAMMA_GS			**Work Order:** MF5MN1AH			**Report DB ID:** 9MF5MN10					
AMERICIUM 241	***1.02E-02***	U	4.2E-02	4.2E-02	7.37E-02	pCi/g		*0.14*	3/28/11 06:11 a		423.4	GER11$1
								0.49			g	
CO-60	***1.09E-04***	U	8.2E-03	8.2E-03	1.51E-02	pCi/g		*0.01*	3/28/11 06:11 a		423.4	GER11$1
							5.00E-02	*0.03*			g	
CS-137	***6.63E-02***		1.9E-02	1.9E-02	1.30E-02	pCi/g		*(5.1)*	3/28/11 06:11 a		423.4	GER11$1
							1.00E-01	*(7.1)*			g	
EU-152	***5.08E-03***	U	1.9E-02	1.9E-02	3.37E-02	pCi/g		*0.15*	3/28/11 06:11 a		423.4	GER11$1
							1.00E-01	*0.53*			g	
EU-154	***-1.01E-02***	U	2.2E-02	2.2E-02	3.75E-02	pCi/g		*-0.27*	3/28/11 06:11 a		423.4	GER11$1
							1.00E-01	*-0.93*			g	
EU-155	***9.05E-03***	U	1.6E-02	1.6E-02	2.97E-02	pCi/g		*0.31*	3/28/11 06:11 a		423.4	GER11$1
							1.00E-01	*(1.1)*			g	
Batch: 1083446	NI63_LSC			**Work Order:** MF5MN1AE			**Report DB ID:** 9MF5MN10					
NI-63	***-2.19E+00***	U	6.1E+00	7.5E+00	1.55E+01	pCi/g	91%	*-0.14*	4/3/11 01:52 p		0.23	LSC3
						7.27E+00	3.00E+01	*-0.58*			g	
Batch: 1083450	9310_ALPHABETA_GPC			**Work Order:** MF5MN1AF			**Report DB ID:** 9MF5MN10					
ALPHA	***2.99E+00***	U	3.4E+00	3.5E+00	6.15E+00	pCi/g	100%	*0.49*	3/30/11 08:16 p		0.0505	GPC10B
						2.54E+00	1.00E+01	*(1.7)*			g	
Batch: 1083451	9310_ALPHABETA_GPC			**Work Order:** MF5MN1AG			**Report DB ID:** 9MF5MN10					
BETA	***4.67E+00***	U	2.5E+00	2.6E+00	4.86E+00	pCi/g	100%	*0.96*	3/30/11 06:25 p		0.2001	GPC27B
						2.26E+00	1.50E+01	*(3.6)*			g	

TestAmerica
rptSTLRchSample
V5.2.12 A2002

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

TestAmerica Laboratories, Inc.

FORM I

SAMPLE RESULTS

Date: 08-Apr-11

Lab Name: TestAmerica
Lot-Sample No.: J1C240565-1
Client Sample ID: J1FJ98

SDG: JP0139
Report No. : 46160
COC No. : RC-073-119

Collection Date: 3/24/2011 10:05:00 AM
Received Date: 3/24/2011 12:00:00 PM
Matrix: OTHER 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/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1083453	SRTOT_SEP_PRECIP_GPC			**Work Order:**	MF5MN1AD		**Report DB ID:**	9MF5MN10				
STRONTIUM	***-6.63E-02***	U	1.3E-01	1.3E-01	3.26E-01	pCi/g	31%	*-0.2*	4/5/11 03:06 p		5.98	GPC27A
						1.51E-01		*-(1.)*			g	
Batch: 1083462	7196_CR6			**Work Order:**	MF5MN1AA		**Report DB ID:**	9MF5MN10				
HEXCHROME	***2.98E-01***			0.0E+00	1.54E-01	mg/kg	N/A	*(1.9)*	3/25/11 09:00 a		2.5	
							1.55E-01	*N/A*			g	
Batch: 1090385	UTOT_KPA			**Work Order:**	MF5MN4AJ		**Report DB ID:**	9MF5MN40				
TOTAL-URANIUM	***1.27E-02***	U	0.0E+00	1.4E-03	3.42E-01	ug/g		*0.04*	4/6/11 03:26 p		0.01005	KPAW3
						1.21E-01	1.00E+00	*(18.7)*			ML	

No. of Results: 12 **Comments:**

TestAmerica
rptSTLRchSample
V5.2.12 A2002

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

FORM I

SAMPLE RESULTS

Date: 08-Apr-11

Lab Name:	TestAmerica	SDG:	JP0139	Collection Date:	3/24/2011 10:05:00 AM
Lot-Sample No.:	J1C240565-1	Report No. :	46160	Received Date:	3/24/2011 12:00:00 PM
Client Sample ID:	J1FJ98	COC No. :	RC-073-119	Matrix:	OTHER 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/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

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

TestAmerica Laboratories, Inc.

FORM II

Date: 08-Apr-11

DUPLICATE RESULTS

Lab Name:	TestAmerica	**SDG:**	JP0139	**Collection Date:**	3/24/2011 10:05:00 AM
Lot-Sample No.:	J1C240565-1	**Report No. :**	46160	**Received Date:**	3/24/2011 12:00:00 PM
Client Sample ID:	J1FJ98	**COC No. :**	RC-073-119	**Matrix:**	OTHER 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: 1083462	7196_CR6			**Work Order:** MF5MN1AV		**Report DB ID:** MF5MN1ER			**Orig Sa DB ID:** 9MF5MN10			
HEXCHROME	1.09E+00			0.0E+00	1.48E-01	mg/kg	N/A	(7.3)	3/25/11 09:00 a		2.5	
	2.98E-01		**RPD**	**113.9**		3.50E-01		N/A			g	

No. of Results: 1 **Comments:**

TestAmerica
rptSTLRchDupV5.2
.12 A2002

RPD - Relative Percent Difference.
MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

FORM II

Date: 08-Apr-11

DUPLICATE RESULTS

Lab Name: TestAmerica
Lot-Sample No.: J1C240565-1
Client Sample ID: J1FJ98 DUP

SDG: JP0139
Report No. : 46160
COC No. : RC-073-119

Collection Date: 3/24/2011 10:05:00 AM
Received Date: 3/24/2011 12:00:00 PM
Matrix: OTHER 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: 1083444	GAMMA_GS			Work Order: MF5MN1AK		Report DB ID: MF5MN1KR			Orig Sa DB ID: 9MF5MN10			
AMERICIUM 241	-2.01E-02	U	3.2E-02	3.2E-02	5.29E-02	pCi/g		-0.38	3/28/11 09:40 a		423.4	GER10$1
	1.02E-02	U	RPD	-610.9				-(1.3)			g	
CO-60	1.30E-03	U	8.1E-03	8.1E-03	1.53E-02	pCi/g		0.08	3/28/11 09:40 a		423.4	GER10$1
	1.09E-04	U	RPD	168.9		5.00E-02		0.32			g	
CS-137	3.51E-02		1.5E-02	1.5E-02	1.70E-02	pCi/g		(2.1)	3/28/11 09:40 a		423.4	GER10$1
	6.63E-02		RPD	61.5		1.00E-01		(4.8)			g	
EU-152	-6.59E-03	U	2.7E-02	2.7E-02	4.64E-02	pCi/g		-0.14	3/28/11 09:40 a		423.4	GER10$1
	5.08E-03	U	RPD	-1544.4		1.00E-01		-0.48			g	
EU-154	-4.38E-03	U	2.6E-02	2.6E-02	4.64E-02	pCi/g		-0.09	3/28/11 09:40 a		423.4	GER10$1
	-1.01E-02	U	RPD	-78.5		1.00E-01		-0.34			g	
EU-155	-7.61E-03	U	2.5E-02	2.5E-02	4.22E-02	pCi/g		-0.18	3/28/11 09:40 a		423.4	GER10$1
	9.05E-03	U	RPD	2307.0		1.00E-01		-0.6			g	
Batch: 1083446	NI63_LSC			Work Order: MF5MN1AL		Report DB ID: MF5MN1LR			Orig Sa DB ID: 9MF5MN10			
NI-63	-1.37E+00	U	5.7E+00	7.0E+00	1.44E+01	pCi/g	90%	-0.1	4/3/11 02:15 p		0.25	LSC3
	-2.19E+00	U	RPD	-46.0		3.00E+01		-0.39			g	
Batch: 1083450	9310_ALPHABETA_GPC			Work Order: MF5MN1AP		Report DB ID: MF5MN1PR			Orig Sa DB ID: 9MF5MN10			
ALPHA	1.91E+00	U	3.0E+00	3.0E+00	5.74E+00	pCi/g	100%	0.33	3/30/11 08:16 p		0.0504	GPC10C
	2.99E+00	U	RPD	43.9		1.00E+01		(1.3)			g	
Batch: 1083451	9310_ALPHABETA_GPC			Work Order: MF5MN1AQ		Report DB ID: MF5MN1QR			Orig Sa DB ID: 9MF5MN10			

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.12 A2002

RPD - Relative Percent Difference.
MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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TestAmerica Laboratories, Inc.

FORM II

Date: 08-Apr-11

DUPLICATE RESULTS

Lab Name:	TestAmerica	**SDG:**	JP0139	**Collection Date:**	3/24/2011 10:05:00 AM
Lot-Sample No.:	J1C240565-1	**Report No. :**	46160	**Received Date:**	3/24/2011 12:00:00 PM
Client Sample ID:	J1FJ98 DUP	**COC No. :**	RC-073-119	**Matrix:**	OTHER 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
BETA	3.16E+00	U	2.4E+00	2.4E+00	4.82E+00	pCi/g	100%	0.66	3/30/11 06:25 p		0.2004	GPC27D
	4.67E+00	U	RPD	38.5		1.50E+01		(2.6)			g	
Batch: 1083453	SRTOT_SEP_PRECIP_GPC			**Work Order:**	MF5MN1AR	**Report DB ID:**	MF5MN1RR		**Orig Sa DB ID:** 9MF5MN10			
STRONTIUM	5.77E-02	U	1.5E-01	1.5E-01	3.42E-01	pCi/g	29%	0.17	4/5/11 03:06 p		6.04	GPC27B
	-6.63E-02	U	RPD	-2877.2				0.76			g	
Batch: 1090385	UTOT_KPA			**Work Order:**	MF5MN3AN	**Report DB ID:**	MF5MN3NR		**Orig Sa DB ID:** 9MF5MN40			
TOTAL-URANIUM	6.79E-03	U	0.0E+00	8.0E-04	3.44E-01	ug/g		0.02	4/6/11 01:13 p		0.00999	KPAW3
	1.27E-02	U	RPD	60.6		1.00E+00		(17.)			ML	

No. of Results: 11 **Comments:**

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

TestAmerica Laboratories, Inc.

FORM II

BLANK RESULTS

Date: 08-Apr-11

Lab Name: TestAmerica

Matrix: OTHER

SDG: JP0139

Report No. : 46160

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: 1083462	7196_CR6			**Work Order:** MF5831AA			**Report DB ID:** MF5831AB					
HEXCHROME	1.55E-01	U		0.0E+00	1.55E-01	mg/kg	N/A	1.	3/25/11 09:00 a		2.5	
						1.55E-01		N/A			g	
Batch: 1090385	UTOT_KPA			**Work Order:** MF5792AA			**Report DB ID:** MF5792AB					
TOTAL-URANIUM	5.45E-04	U	0.0E+00	6.5E-05	3.45E-01	ug/g		0.	4/6/11 12:38 p		0.00996	KPAW3
					1.22E-01	1.00E+00		(16.7)			ML	
Batch: 1083446	NI63_LSC			**Work Order:** MF5741AA			**Report DB ID:** MF5741AB					
NI-63	5.12E-01	U	5.9E+00	7.2E+00	1.45E+01	pCi/g	93%	0.04	4/3/11 02:38 p		0.24	LSC3
					6.80E+00	3.00E+01		0.14			g	
Batch: 1083444	GAMMA_GS			**Work Order:** MF57X1AA			**Report DB ID:** MF57X1AB					
AMERICIUM 241	-1.99E-02	U	2.3E-02	2.3E-02	3.74E-02	pCi/g		-0.53	3/28/11 06:11 a		348.0	GER14$1
								-(1.7)			g	
CO-60	-4.18E-03	U	1.7E-02	1.7E-02	2.97E-02	pCi/g		-0.14	3/28/11 06:11 a		348.0	GER14$1
						5.00E-02		-0.49			g	
CS-137	4.98E-03	U	1.6E-02	1.6E-02	2.89E-02	pCi/g		0.17	3/28/11 06:11 a		348.0	GER14$1
						1.00E-01		0.63			g	
EU-152	-1.62E-02	U	4.7E-02	4.7E-02	7.74E-02	pCi/g		-0.21	3/28/11 06:11 a		348.0	GER14$1
						1.00E-01		-0.7			g	
EU-154	3.42E-02	U	4.7E-02	4.7E-02	9.29E-02	pCi/g		0.37	3/28/11 06:11 a		348.0	GER14$1
						1.00E-01		(1.4)			g	
EU-155	-5.81E-03	U	3.6E-02	3.6E-02	6.10E-02	pCi/g		-0.1	3/28/11 06:11 a		348.0	GER14$1
						1.00E-01		-0.33			g	
Batch: 1083450	9310_ALPHABETA_GPC			**Work Order:** MF58D1AA			**Report DB ID:** MF58D1AB					

TestAmerica
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V5.2.12 A2002

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

TestAmerica Laboratories, Inc.

FORM II

BLANK RESULTS

Date: 08-Apr-11

Lab Name: TestAmerica

Matrix: OTHER

SDG: JP0139

Report No. : 46160

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
ALPHA	1.09E+00	U	1.3E+00	1.4E+00	2.38E+00	pCi/g	100%	0.46	3/30/11 08:16 p		0.0569	GPC10D
					9.44E-01	1.00E+01		(1.6)			g	
Batch: 1083451	9310_ALPHABETA_GPC			**Work Order:**	MF58F1AA		**Report DB ID:**	MF58F1AB				
BETA	2.86E+00	U	2.1E+00	2.1E+00	4.23E+00	pCi/g	100%	0.68	3/30/11 06:25 p		0.2001	GPC27C
					1.98E+00	1.50E+01		(2.7)			g	
Batch: 1083453	SRTOT_SEP_PRECIP_GPC			**Work Order:**	MF58J1AA		**Report DB ID:**	MF58J1AB				
STRONTIUM	-1.58E-02	U	5.6E-02	5.6E-02	1.37E-01	pCi/g	92%	-0.11	4/5/11 03:06 p		6.04	GPC27C
					6.42E-02			-0.56			g	

No. of Results: 12 Comments:

TestAmerica
rptSTLRchBlank
V5.2.12 A2002

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

TestAmerica Laboratories, Inc.

FORM II

LCS RESULTS

Date: 08-Apr-11

Lab Name: TestAmerica

Matrix: OTHER

SDG: JP0139

Report No. : 46160

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 1083462	7196_CR6			**Work Order:** MF5831AC			**Report DB ID:** MF5831AS						
HEXCHROME	1.96E+01			0.0E+00	1.55E-01	mg/kg	N/A	2.00E+01		98%	3/25/11 09:00 a	2.5	
							Rec Limits:	80	120	0.0		g	
Batch: 1090385	UTOT_KPA			**Work Order:** MF5792AC			**Report DB ID:** MF5792CS						
TOTAL-URANIUM	9.54E-01		0.0E+00	1.1E-01	3.43E-01	ug/g		9.96E-01	6.7E-03	96%	4/6/11 12:40 p	0.01001	KPAW3
							Rec Limits:	70	130	0.0		ML	
Batch: 1090385	UTOT_KPA			**Work Order:** MF5792AD			**Report DB ID:** MF5792DS						
TOTAL-URANIUM	9.05E-01		0.0E+00	1.1E-01	3.44E-01	ug/g		1.01E+00	6.8E-03	89%	4/6/11 12:52 p	0.00997	KPAW3
							Rec Limits:	70	130	-0.1		ML	
Batch: 1083446	NI63_LSC			**Work Order:** MF5741AC			**Report DB ID:** MF5741CS						
NI-63	4.86E+02		1.9E+01	4.7E+01	1.49E+01	pCi/g	81%	5.64E+02	9.5E+00	86%	4/3/11 03:01 p	0.27	LSC3
							Rec Limits:	70	130	-0.1		g	
Batch: 1083444	GAMMA_GS			**Work Order:** MF57X1AC			**Report DB ID:** MF57X1CS						
CS-137	1.13E+00		1.6E-01	1.6E-01	4.06E-02	pCi/g		1.09E+00	1.1E-02	104%	3/28/11 06:12 a	350.1	GER7$1
							Rec Limits:	70	130	0.0		g	
RA-226	1.11E+00		1.8E-01	1.8E-01	6.60E-02	pCi/g		1.14E+00	1.2E-02	97%	3/28/11 06:12 a	350.1	GER7$1
							Rec Limits:	70	130	0.0		g	
RA-228	9.19E-01		2.0E-01	2.0E-01	1.16E-01	pCi/g		9.42E-01	9.7E-03	98%	3/28/11 06:12 a	350.1	GER7$1
							Rec Limits:	70	130	0.0		g	
U-238	1.09E+00		1.6E-01	1.6E-01	7.51E-02	pCi/g		1.20E+00	1.2E-02	91%	3/28/11 06:12 a	350.1	GER7$1
							Rec Limits:	70	130	-0.1		g	
Batch: 1083450	9310_ALPHABETA_GPC			**Work Order:** MF58D1AC			**Report DB ID:** MF58D1CS						
ALPHA	7.87E+01		7.9E+00	1.8E+01	1.99E+00	pCi/g	100%	8.75E+01	8.8E-01	90%	3/30/11 08:16 p	0.0521	GPC10A
							Rec Limits:	70	130	-0.1		g	

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

rptSTLRchLcs
V5.2.12 A2002

TestAmerica Laboratories, Inc.

FORM II

LCS RESULTS

Date: 08-Apr-11

Lab Name: TestAmerica

Matrix: OTHER

SDG: JP0139

Report No. : 46160

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 1083451	9310_ALPHABETA_GPC			Work Order:	MF58F1AC		Report DB ID:	MF58F1CS					
BETA	6.53E+01		5.2E+00	9.7E+00	3.47E+00	pCi/g	100%	6.58E+01	2.5E+00	99%	3/30/11 06:25 p	0.2071	GPC27A
							Rec Limits:	70	130	0.0		g	
Batch: 1083453	SRTOT_SEP_PRECIP_GPC			Work Order:	MF58J1AC		Report DB ID:	MF58J1CS					
STRONTIUM	8.83E-01		1.3E-01	2.6E-01	1.46E-01	pCi/g	79%	1.14E+00	3.1E-02	78%	4/5/11 03:06 p	5.97	GPC27D
							Rec Limits:	70	130	-0.2		g	

No. of Results: 11 Comments:

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

rptSTLRchLcs
V5.2.12 A2002

TestAmerica Laboratories, Inc.

FORM II

MATRIX SPIKE RESULTS

Date: 08-Apr-11

Lab Name: TestAmerica

SDG: JP0139

Lot-Sample No.: J1C240565-1, J1FJ98

Report No. : 46160

Matrix: OTHER OTHERSOLID

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	Analy Method, Primary Detector
Batch: 1083462	Work Order: MF5MN1AT			Report DB ID: MF5MN1CW			Orig Sa DB ID: 9MF5MN10					
HEXCHROME	2.58E+00			0.0E+00	1.48E-01	mg/kg	N/A	23.90%	1.08E+01	3/25/11 09:00 a	2.5	7196_CR6
	2.98E-01										g	
Batch: 1090385	Work Order: MF5MN3AM			Report DB ID: MF5MN3MW			Orig Sa DB ID: 9MF5MN30					
TOTAL-URANIUM	2.26E-02	U	0.0E+00	4.0E-03	3.45E-01	ug/g		2.24%	1.01E+00	4/6/11 03:29 p	0.00996	UTOT_KPA
									6.8E-03		ML	KPAW3

Number of Results: 2

Comments:

TestAmerica
rptSTLRchMs
V5.2.12 A2002

RER - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
Bias - (Result/Expected)-1 as defined by ANSI N13.30.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

3/31/2011 10:41:04 AM

Lot No., Due Date: J1C240565; 03/31/2011
Client, Site: 127642; S00N063A00 HANFORD
QC Batch No., Method Test: 1083450; RALPHA-A Alpha by GPC-Am
SDG, Matrix: JP0139; OTHER

	Yes	No	N/A
1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?			✓
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?	✓		
3.5 Are the sample yields and MDAs within contract limits?	✓		
4.0 Raw Data			
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?			✓
4.4 Were spectra reviewed/meet contractual requirements?			✓
4.5 Were raw counts reviewed for anomalies?	✓		
5.0 Other			
5.1 Are all nonconformances included and noted?			✓
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?	✓		
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

Thomas D McE

First Level _____ **Date** 3/31/11

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 1083450

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis 1. Are the sample yields within acceptance criteria?			✓
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other 1. Are all Non-conformances included and noted?			✓
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: CRDL = 10.0 pci/g

Second Level Review: [signature] Date: 3/31/11

LS-038B, Rev. 10, 9/07

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

3/31/2011 10:00:47 AM

Lot No., Due Date: J1C240565; 03/31/2011
Client, Site: 127642; S00N063A00 HANFORD
QC Batch No., Method Test: 1083451; RBETA-SR Beta by GPC-Sr/Y
SDG, Matrix: JP0139; OTHER

	Yes	No	N/A
1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?			✓
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?	✓		
3.5 Are the sample yields and MDAs within contract limits?	✓		
4.0 Raw Data			
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?			✓
4.4 Were spectra reviewed/meet contractual requirements?			✓
4.5 Were raw counts reviewed for anomalies?	✓		
5.0 Other			
5.1 Are all nonconformances included and noted?			✓
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?	✓		
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

Thomas D McE

First Level _____ **Date** 3/31/11

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 1083451

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis 1. Are the sample yields within acceptance criteria?			✓
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other 1. Are all Non-conformances included and noted?			✓
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: CRDL = 15.0 pci/g

Second Level Review: [signature] Date: 5/31/11

LS-038B, Rev. 10, 9/07

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

4/6/2011 11:29:42 AM

Lot No., Due Date: J1C240565; 03/31/2011
Client, Site: 127642; S00N063A00 HANFORD
QC Batch No., Method Test: 1083453; RSRTOT SrTot by GPC
SDG, Matrix: JP0139; OTHER

1.0 COC
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? Yes No N/A ✓

2.0 QC Batch
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A ✓

2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A ✓

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A ✓

2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N/A ✓

3.0 QC & Samples
3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A ✓

3.2 Is the LCS result, yield, and MDA within contract limits? Yes No N/A ✓

3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A ✓

3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes No N/A ✓

3.5 Are the sample yields and MDAs within contract limits? Yes No N/A ✓

4.0 Raw Data
4.1 Were results calculated in the correct units? Yes No N/A ✓

4.2 Were analysis volumes entered correctly? Yes No N/A ✓

4.3 Were Yields entered correctly? Yes No N/A ✓

4.4 Were spectra reviewed/meet contractual requirements? Yes No N/A ✓

4.5 Were raw counts reviewed for anomalies? Yes No N/A ✓

5.0 Other
5.1 Are all nonconformances included and noted? Yes No N/A ✓

5.2 Are all required forms filled out? Yes No N/A ✓

5.3 Was the correct methodology used? Yes No N/A ✓

5.4 Was transcription checked? Yes No N/A ✓

5.5 Were all calculations checked at a minimum frequency? Yes No N/A ✓

5.6 Are worksheet entries complete and correct? Yes No N/A ✓

6.0 Comments on any No response:
NCM 10-17977

First Level [signature] Date 4/6/11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 1083453

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis 1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other 1. Are all Non-conformances included and noted?	✓		
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: _____

Second Level Review: [signature] Date: 4/6/11

LS-038B, Rev. 10, 9/07

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: 10-17977
NCM Initiated By: Lisa Antonson
Date Opened: 04/06/2011
Date Closed:

Classification: **Deficiency**
Status: **PMREVIEW**
Production Area: Environmental - Sep
Tests: SrTot by GPC
Lot #'s (Sample #'s): J1C240000 (453), J1C240565 (1),
QC Batches: 1083453,

Nonconformance: Other (describe in detail)
Subcategory: Other (explanation required)

Problem Description / Root Cause

Name	Date	Description
Lisa Antonson	04/06/2011	The technician noted that during final plating the LCS was bumped and a minimal sample loss occured. Recoveries are acceptable, data accepted.

Corrective Action

Name	Date	Corrective Action
Lisa Antonson	04/06/2011	none

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

3/29/2011 9:38:12 AM

Lot No., Due Date: J1C240565; 03/31/2011
Client, Site: 127642; S00N063A00 HANFORD
QC Batch No., Method Test: 1083444; RGAMMA Gamma by GER
SDG, Matrix: JP0139; OTHER

	Yes	No	N/A
1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?			✓
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	X	✓ RW 3/29/11	
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?	✓		
3.5 Are the sample yields and MDAs within contract limits?	✓		
4.0 Raw Data			
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?			✓
4.4 Were spectra reviewed/meet contractual requirements?	✓		
4.5 Were raw counts reviewed for anomalies?	✓		
5.0 Other			
5.1 Are all nonconformances included and noted?	✓		
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?	✓		
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:
~~NCM 10-17879~~ RW 3/29/11

First Level Tina Anderson Date 3/29/11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 1083444

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis 1. Are the sample yields within acceptance criteria?			✓
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other 1. Are all Non-conformances included and noted?			✓
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: _____

Second Level Review: Whitney Ritari Date: 4/8/11

LS-038B, Rev. 10, 9/07

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

4/5/2011 11:00:35 AM

Lot No., Due Date: J1C240565; 03/31/2011
Client, Site: 127642; S00N063A00 HANFORD
QC Batch No., Method Test: 1083446; RNI63 NI-63 by LSC
SDG, Matrix: JP0139; OTHER

	Yes	No	N/A
1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?	✓		
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?	✓		
3.5 Are the sample yields and MDAs within contract limits?	✓		
4.0 Raw Datas			
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?	✓		
4.4 Were spectra reviewed/meet contractual requirements?			✓
4.5 Were raw counts reviewed for anomalies?	✓		
5.0 Other			
5.1 Are all nonconformances included and noted?			✓
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?	✓		
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

First Level [signature] Date 4/5/11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 1083446

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis 1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other 1. Are all Non-conformances included and noted?			✓
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: _____

Second Level Review: Jodie Date: 4/5/11

LS-038B, Rev. 10, 9/07

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

4/7/2011 11:54:48 AM

Lot No., Due Date: J1C240565; 03/31/2011
Client, Site: 127642; S00N063A00 HANFORD
QC Batch No., Method Test: 1090385; RUNAT UNat by KPA
SDG, Matrix: JP0139; OTHER

1.0 COC
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? Yes No N/A ✓

2.0 QC Batch
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A ✓

2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A ✓

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A ✓

2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N/A ✓

3.0 QC & Samples
3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A ✓

3.2 Is the LCS result, yield, and MDA within contract limits? Yes No N/A ✓

3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A ✓

3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes No N/A ✓

3.5 Are the sample yields and MDAs within contract limits? Yes No N/A ✓

4.0 Raw Data
4.1 Were results calculated in the correct units? Yes No N/A ✓

4.2 Were analysis volumes entered correctly? Yes No N/A ✓

4.3 Were Yields entered correctly? Yes No N/A ✓

4.4 Were spectra reviewed/meet contractual requirements? Yes No N/A ✓

4.5 Were raw counts reviewed for anomalies? Yes No N/A ✓

5.0 Other
5.1 Are all nonconformances included and noted? Yes No N/A ✓

5.2 Are all required forms filled out? Yes No N/A ✓

5.3 Was the correct methodology used? Yes No N/A ✓

5.4 Was transcription checked? Yes No N/A ✓

5.5 Were all calculations checked at a minimum frequency? Yes No N/A ✓

5.6 Are worksheet entries complete and correct? Yes No N/A ✓

6.0 Comments on any No response:
NCM 10-17982

First Level Lisa Anderson Date 4/7/11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 1090385

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis 1. Are the sample yields within acceptance criteria?			✓
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?	✓	✓	
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other 1. Are all Non-conformances included and noted?	✓		
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: _____

Second Level Review: Jodie C. Date: 4/7/11

LS-038B, Rev. 10, 9/07

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: 10-17982
NCM Initiated By: Lisa Antonson
Date Opened: 04/07/2011
Date Closed:

Classification: Anomaly
Status: PMREVIEW
Production Area: Environmental - Prep
Tests: UNat by KPA
Lot #'s (Sample #'s): J1C240000 (448), J1C240565 (1),
QC Batches: 1090385,

Nonconformance: Other (describe in detail)
Subcategory: Other (explanation required)

Problem Description / Root Cause

Name	Date	Description
Lisa Antonson	04/07/2011	This batch is a rerun of 1083448 because CRDL was not met. The samples were rerun with increased volume. In the rerun batch, the technician put the spike vial in the sample instead of the MS. The samples were switched and recounted. The MS has below acceptable recovery, suspect Matrix interference. The data will be uploaded for client review.

Corrective Action

Name	Date	Corrective Action
Lisa Antonson	04/07/2011	The samples were rerun with increased volume to meet CRDL.

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

Date Printed: 4/7/2011

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Richland Laboratory
Data Review Check List
Hexavalent Chromium

Batch Number(s): 1083462

Lab Sample Numbers or SDG: JP0139

Method/Test/Parameter: **Cr+6 in SOLID / RL-WC-004**

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

Comments on any "No" response: The MS recovered low at 23.9%. The insoluble MSD recovered within limits at 102.7%. PDMS recovered at 83.2%. Suspect reducing capacity in the sample, but not enough to exhaust the more copious insoluble MSD.

Duplicate not within acceptance criteria possibly due to inhomogeneity of sample.

~~Holding time not met. Sample was sampled at 10:05 am on 3/24/11. Digestion time ended 12:30 pm on 3/25/11.~~ RW 3/28/11

Analyst: _____ Date: 3-25-11

Second-Level Review: _____ Date: 3-15-11

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: 10-17842
NCM Initiated By: Hooshang Rahavi
Date Opened: 03/25/2011
Date Closed:

Classification: **Anomaly**
Status: **PMREVIEW**
Production Area: Classical Chemistry
Tests: 7196A
Lot #'s (Sample #'s): J1C240000 (462), J1C240565 (1),
QC Batches: 1083462,

Nonconformance: Other (describe in detail)
Subcategory: Other (explanation required)

Problem Description / Root Cause

Name	Date	Description
Hooshang Rahavi	03/25/2011	The MS recovered low at 23.9%. The insoluble MSD recovered within limits at 102.7%. PDMS recovered at 83.2%. Suspect reducing capacity in the sample, but not enough to exhaust the more copious insoluble MSD. Duplicate not within acceptance criteria possibly due to inhomogeneity of sample. ~~Holding time not met. Sample was sampled at 10:05 am on 3/24/11. Digestion time ended 12:30 pm on 3/25/11.~~ RW 3/28/11

Corrective Action

Name	Date	Corrective Action
Hooshang Rahavi	03/25/2011	Report data

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

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-073-119 | Page 1 of 1

Washington Closure Hanford

Collector ~~J Kuepfer~~ M BLANKENSHIP 3/24/11	Company Contact: Don Woolery	Telephone No.: 509-431-0448	Project Coordinator: KESSNER, JH
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Other Quick	Sampling Location: 100-D-50:6 Pipelines		SAF No.: RC-073
Ice Chest No.: N/A	Field Logbook No.: EL-1607-09	COA: R00D502000	Method of Shipment: HAND DELIVER 3/15/11
Shipped To: TestAmerica Incorporated, Richland	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: N/A

Price Code: 9L

Data Turnaround: ~~21~~ 7 Days

POSSIBLE SAMPLE HAZARDS/REMARKS

None

Special Handling and/or Storage

None

Lot # JTC240565
SDG# JP0139
Due 3.31.11

Preservation	Cool 4C	None	Cool 4C	None	None	None	None	None		
Type of Container	G/P	G	G/P	G/P	G/P	G/P	G/P	G/P		
No. of Container(s)	1	1	1	1	~~1~~ 0	~~1~~ 0	~~1~~ 0	1		
Volume	60mL	125mL	60mL	500mL	~~60mL~~ 500 ml	~~60mL~~	~~60mL~~ 3/24/11	60g		
SAMPLE ANALYSIS (MFSMN)	See item (1) in Special Instructions.	See item (2) in Special Instructions.	Chromium Hex - 7196 *	See item (3) in Special Instructions.	Gross Alpha & Gross Beta	Nickel-63; Strontium-89,90 – Total Sr	Total Uranium	RCF GEA Shipping Screen		
Sample No. / Matrix * / Sample Date / Sample Time										
J1FJ98 / OTHER / 3/15/11 3-24-11 / 1005			X	X	X	X	X			NW
J1FJ99 / OTHER / 3-24-11										NE
J1FKN1 / OTHER										SW
J1FKN2 / OTHER										SE

3/15/11 3/24/11 3/15/11

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
MAT BLANKENSHIP	3-24-11 1035	DWOOLBRY 3/24/11	1035
DWOOLBRY 3/24/11	1135	A Freier A. Freier 3-24-11	1135
A. Freier A. Freier WCH 3-24-11	1200	TAIR AMGEL 3.24.11	1200

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010TR (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV) {Mercury}
(2) Metals by ICP (TCLP) - 1311/6010 {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; Mercury (TCLP) - 1311/7470 {Mercury}
(3) Gamma Spec (Client List) {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}

24 Hr. Hold Time AJ 3-24-11

REVIEWED BY [signature] DATE 3-24-11

JP0139

Matrix *
S=Soil
SE=Sediment
SO=Solid
SI=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 3.24.11 1200 GM Screen Result (out) .3 (in) .8 Initials [CK]

Client: WCH SDG #: JP0139 NA [ ] SAF #: RC-073 NA [ ]

Work Order Number: JIC240565 Chain of Custody # RC-073-119

Shipping Container ID: hand delivery NA [ ] Air Bill # NA [X]

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

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

Item 6 through 10 for samples. Initial appropriate response.

6. Number of samples in shipping container (Each sample may contain multiple bottles): 1 sample @ 1X60MLG & 1X5COMLP
7. Sample holding times exceeded? NA [ ] Yes [ ] No [CK]
8. Samples have:
   ___ tape
   CK custody seals
   (other - soil)
   ___ hazard labels
   CK appropriate sample labels
9. Samples:
   CK are in good condition
   ___ are broken
   ___ are leaking
   ___ have air bubbles (Only for samples requiring no head space)
10. Sample pH appropriate for analysis requested Yes [ ] No [ ] N/A [CK] (Note discrepancies in #13)
    (If acidification necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition)

    RPL ID # of preservative used :

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

See other side for additional comments

Sample Custodian: [signature] Date: 3.24.11 1200

Client Informed on ___ by ___ Person contacted ___

[✓] No action necessary; process as is

Project Manager [signature] Date 3/24/11

LS-023, Rev. 12, 10/10

3/30/2011 4:52:47 PM

Sample Preparation/Analysis

Balance Id:1117411003

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

AY Gross Alpha Prp PRP003/GPC007
S7 Gross Alpha by GPC using Am-241 curve
5I CLIENT: HANFORD

Pipet #: _____

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

AnalyDueDate: 03/31/2011

Batch: 1083450 OTHER pCi/g

PM, Quote: RW2, 27038

SEQ Batch, Test: None

Prep Tech: ~~WoodT,~~ BaughB 3-30-11

Work Order, Lot, Sample DateTime	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 MF5MN-1-AF J1C240565-1-SAMP 03/24/2011 10:05		0.0505g,in AmtRec: 1XJAR60MLG,1X500MLP		#Containers: 2	50.5	100	10B	2107	3/30/11	Scr: Alpha: Beta:
2 MF5MN-1-AP-X J1C240565-1-DUP 03/24/2011 10:05		0.0504g,in AmtRec: 1XJAR60MLG,1X500MLP		#Containers: 2	50.4		10C			Scr: Alpha: Beta:
3 MF58D-1-AA-B J1C240000-450-BLK 03/25/2011 08:09 pd		0.0569g,in AmtRec:		#Containers: 1	1.3937g 1.3927g 1.0mg		10D			Scr: Alpha: Beta:
4 MF58D-1-AC-C J1C240000-450-LCS 03/25/2011 08:09 pd		0.0521g,in AmtRec:	ASD5085 12/14/10,pd 04/04/05 r	#Containers: 1	1.3870g 1.3856g 1.4mg		10A			Scr: Alpha: Beta:

Comments: MF5MN-SAMP ~~*Comments: Not enough sample for a gamma duplicate, please recount on a seperate detector. 3/27/11 tgw*~~ PBS 3-30-11

All Clients for Batch:
127642, Washington Closure Hanford LLC Bechtel Hanford, Inc. , RW2, 27038

MF5MN1AF-SAMP Constituent List:

ALPHA	RDL:1.00E+01	pCi/g	LCL:	UCL:	RPD:

MF58D1AA-BLK:

ALPHA	RDL:1.00E+01	pCi/g	LCL:	UCL:	RPD:

MF58D1AC-LCS:

Am-241	RDL:	pCi/g	LCL:70	UCL:130	RPD:35

Sample Preparation/Analysis

AY Gross Alpha Prp PRP003/GPC007
S7 Gross Alpha by GPC using Am-241 curve
5I CLIENT: HANFORD

Balance Id:1117411003
Pipet #: _____
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: ,BaughB

AnalyDueDate: 03/31/2011

Batch: 1083450 pCi/g
SEQ Batch, Test: None

Work Order, Lot, Sample DateTime	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:

```
MF5MN1AF-SAMP Calc Info:
    Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
MF58D1AA-BLK:
    Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
MF58D1AC-LCS:
    Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
```

3/31/2011 10:40:32 AM

ICOC Fraction Transfer/Status Report

ByDate: 3/31/2010, 4/5/2011, Batch: '1083450', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
1083450						
AC		Rev1C	WoodT	3/27/2011 3:03:56 PM		
SC			MaucleriS	IsBatched	3/25/2011 8:23:24 AM	ICOC_RADCALC v4.8.49
SC			WoodT	InPrep	3/27/2011 3:03:56 PM	RL-PRP-003 REVISION 1
SC			WoodT	Prep1C	3/27/2011 3:04:11 PM	RL-PRP-003 REVISION 1
SC			BaughB	InPrep	3/30/2011 4:51:02 PM	RL-PRP-004 REVISION 1
SC			BockJ	Prep2C	3/30/2011 5:13:42 PM	RL-GPC-007 REVISION 1
SC			DawkinsO	InCnt1	3/30/2011 5:39:44 PM	RL-CI-006 REVISION 1
SC			DawkinsO	CalcC	3/30/2011 10:10:33 PM	RL-CI-006 REVISION 1
SC			mcginnist	Rev1C	3/31/2011 10:40:16 AM	RL-DR-001 Rev 2
AC			WoodT	3/27/2011 3:04:11 PM		
AC			BaughB	3/30/2011 4:51:02 PM		
AC			BockJ	3/30/2011 5:13:42 PM		
AC			DawkinsO	3/30/2011 5:39:44 PM		
AC			DawkinsO	3/30/2011 10:10:33		
AC			mcginnist	3/31/2011 10:40:16		

AC: Accepting Entry; SC: Status Change

Grp Rec Cnt: 7

TestAmerica Richland

Richland Wa.

ICOCFractions v4.8.44

03/30/2011 4:53:55 PM

Sample Preparation/Analysis

Balance Id:1117411003

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

BB Gross Beta Prp PRP003/GPC007
S8 Gross Beta by GPC using Sr/Y-90 curve
5I CLIENT: HANFORD

Pipet #: _____

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

AnalyDueDate: 03/31/2011

Batch: 1083451 OTHER pCi/g PM, Quote: RW2, 27038

SEQ Batch, Test: None

Prep Tech: ~~WoodT,~~ BaughB BB 3-30-11

Work Order, Lot, Sample DateTime	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 MF5MN-1-AG J1C240565-1-SAMP 03/24/2011 10:05		0.2001g,in AmtRec: 1XJAR60MLG,1X500MLP #Containers: 2			200.1	50	27B	1850	3/30/11 DD	Scr: Alpha: Beta:
2 MF5MN-1-AQ-X J1C240565-1-DUP 03/24/2011 10:05		0.2004g,in AmtRec: 1XJAR60MLG,1X500MLP #Containers: 2			200.4		27B			Scr: Alpha: Beta:
3 MF58F-1-AA-B J1C240000-451-BLK 03/25/2011 08:09 pd		0.2001g,in AmtRec: #Containers: 1			1.4021g 1.4021g 0mg		27C			Scr: Alpha: Beta:
4 MF58F-1-AC-C J1C240000-451-LCS 03/25/2011 08:09 pd		0.2071g,in AmtRec: #Containers: 1	BESD1699 03/02/11,pd 10/01/01,r		1.4100g 1.4100g 0mg		27A			Scr: Alpha: Beta:

Comments: ~~MF5MN-SAMP "Comments: Not enough sample for a gamma duplicate, please recount on a seperate detector. 3/27/11 tgw"~~ BB 3-30-11

All Clients for Batch:
127642, Washington Closure Hanford LLC Bechtel Hanford, Inc. , RW2, 27038

MF5MN1AG-SAMP Constituent List:

BETA	RDL:1.50E+01	pCi/g	LCL:	UCL:	RPD:
MF58F1AA-BLK:					
BETA	RDL:1.50E+01	pCi/g	LCL:	UCL:	RPD:
MF58F1AC-LCS:					
Sr-90	RDL:	pCi/g	LCL:70	UCL:130	RPD:35

TestAmerica Laboratories, Inc.

Sample Preparation/Analysis

BB Gross Beta Prp PRP003/GPC007
S8 Gross Beta by GPC using Sr/Y-90 curve
5I CLIENT: HANFORD

Balance Id:1117411003
Pipet #: _____
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: ,BaughB

AnalyDueDate: 03/31/2011

Batch: 1083451 pCi/g
SEQ Batch, Test: None

Work Order, Lot, Sample DateTime	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:

```
MF5MN1AG-SAMP Calc Info:
    Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
MF58F1AA-BLK:
    Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
MF58F1AC-LCS:
    Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
```


TestAmerica Laboratories, Inc.

3/31/2011 10:00:18 AM

ICOC Fraction Transfer/Status Report

ByDate: 3/31/2010, 4/5/2011, Batch: '1083451', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
1083451						
AC		Rev1C	WoodT	3/27/2011 3:04:02 PM		
SC			MaucieriS	IsBatched	3/25/2011 8:23:29 AM	ICOC_RADCALC v4.8.49
SC			WoodT	InPrep	3/27/2011 3:04:02 PM	RL-PRP-003 REVISION 1
SC			WoodT	Prep1C	3/27/2011 3:04:15 PM	RL-PRP-003 REVISION 1
SC			BaughB	InPrep	3/30/2011 4:52:54 PM	RL-PRP-004 REVISION 1
SC			BockJ	Prep2C	3/30/2011 5:13:37 PM	RL-GPC-007 REVISION 1
SC			DawkinsO	InCnt1	3/30/2011 5:39:50 PM	RL-CI-006 REVISION 1
SC			DawkinsO	CalcC	3/30/2011 8:33:41 PM	RL-CI-006 REVISION 1
SC			mcginnist	Rev1C	3/31/2011 9:59:59 AM	RL-DR-001 Rev 2
AC			WoodT	3/27/2011 3:04:15 PM		
AC			BaughB	3/30/2011 4:52:54 PM		
AC			BockJ	3/30/2011 5:13:37 PM		
AC			DawkinsO	3/30/2011 5:39:50 PM		
AC			DawkinsO	3/30/2011 8:33:41 PM		
AC			mcginnist	3/31/2011 9:59:59		

AC: Accepting Entry; SC: Status Change

Grp Rec Cnt: 7

TestAmerica Richland

Richland Wa.

ICOCFractions v4.8.44

3/27/2011 4:16:45 PM

Sample Preparation/Analysis

Balance Id:1120373922

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

CH Sr-Total Prp PRP003, Sep GPC003
TH Total Strontium by GPC
5I CLIENT: HANFORD

PRIORITY

Pipet #:

Sep1 DT/Tm Tech: 10:15 4/5/11 APA

AnalyDueDate: 03/31/2011 JP0139

Batch: 1083453 OTHER pCi/g

PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: WoodT

Work Order, Lot, Sample DateTime	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 MF5MN-1-AD J1C240565-1-SAMP 03/24/2011 10:05		5.98g,in AmtRec: 1XJAR60MLG,1X500MLP	SRTA20842 03/16/11 #Containers: 2	1.5	1.4455g -1.4150g 30.5 mg	50	27A Scr:	1531 Alpha:	4/5/11 CM Beta:	
2 MF5MN-1-AR-X J1C240565-1-DUP 03/24/2011 10:05		6.04g,in AmtRec: 1XJAR60MLG,1X500MLP	SRTA20843 03/16/11 #Containers: 2		1.4319g -1.4030g 28.9 mg		27B Scr:	Alpha:	Beta:	
3 MF58J-1-AA-B J1C240000-453-BLK 03/25/2011 08:09 pd		6.04g,in AmtRec:	SRTA20844 03/16/11 #Containers: 1		1.5097g -1.4174g 92.3 mg		27C Scr:	Alpha:	Beta:	
4 MF58J-1-AC-C J1C240000-453-LCS 03/25/2011 08:09 pd	*see comments	5.97g,in AmtRec:	STSB1584 03/10/11 #Containers: 1		1.5010g -1.4225g 78.5 mg		27D Scr:	Alpha:	Beta:	

Comments: ~~MF5MN-SAMP "Comments: Not enough sample for a gamma duplicate, please recount on a seperate detector. 3/27/11 tgw"~~ 4/5/11 APA

* sample MF585 bumped slightly during final plating. Minimal sample loss. 4/5/11 APA

All Clients for Batch:
127642, Washington Closure Hanford LLC Bechtel Hanford, Inc. , RW2, 27038

MF5MN1AD-SAMP Constituent List:

Sr-90	RDL:1	pCi/g	LCL:70	UCL:130	RPD:35
MF58J1AA-BLK:					
Sr-90	RDL:1	pCi/g	LCL:	UCL:	RPD:
MF58J1AC-LCS:					
Sr-90	RDL:1	pCi/g	LCL:70	UCL:130	RPD:35

TestAmerica Laboratories, Inc.

3/27/2011 4:16:46 PM

Sample Preparation/Analysis

CH Sr-Total Prp PRP003, Sep GPC003
TH Total Strontium by GPC
5I CLIENT: HANFORD

PRIORITY

Balance Id:1120373922
Pipet #: _____
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: ,WoodT

AnalyDueDate: 03/31/2011

Batch: 1083453 pCi/g
SEQ Batch, Test: None

Work Order, Lot, Sample DateTime	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:

```
MF5MN1AD-SAMP Calc Info:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MF58J1AA-BLK:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MF58J1AC-LCS:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```


TestAmerica Laboratories, Inc.

4/6/2011 11:27:07 AM

ICOC Fraction Transfer/Status Report

ByDate: 4/6/2010, 4/11/2011, Batch: '1083453', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
1083453						
AC		Rev1C	WoodT	3/27/2011 3:58:02 PM		
SC			MaucieriS	IsBatched	3/25/2011 8:23:34 AM	ICOC_RADCALC v4.8.49
SC			WoodT	InPrep	3/27/2011 3:58:02 PM	RL-PRP-003 REVISION 1
SC			WoodT	Prep1C	3/28/2011 1:04:03 AM	RL-PRP-003 REVISION 1
SC			BouslaughP	Prep1C	3/28/2011 7:38:12 AM	RL-PRP-003 REVISION 1
SC			AshworthA	Sep2C	4/5/2011 12:06:10 PM	RL-GPC-003 REVISION 1
SC			ClarkR	InCnt1	4/5/2011 12:45:34 PM	RL-CI-006 REVISION 1
SC			DawkinsO	CalcC	4/6/2011 1:00:48 AM	RL-CI-006 REVISION 1
SC			antonsonl	Rev1C	4/6/2011 11:26:48 AM	RL-DR-001 Rev 2
AC			WoodT	3/28/2011 1:04:03		
AC			BouslaughP	3/28/2011 7:38:12		
AC			AshworthA	4/5/2011 12:06:10 PM		
AC			ClarkR	4/5/2011 12:45:34 PM		
AC			DawkinsO	4/6/2011 1:00:48 AM		
AC			antonsonl	4/6/2011 11:26:48		

AC: Accepting Entry; SC: Status Change

Grp Rec Cnt: 7

TestAmerica Richland

Richland Wa.

ICOCFractions v4.8.44

3/27/2011 1:48:00 PM

Sample Preparation/Analysis

Balance Id:1120421763

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

AX Gamma Prp PRP003/GAM001
TA Gamma by HPGE
5I CLIENT: HANFORD

PRIORITY

Pipet #: _____

AnalyDueDate: 03/31/2011

Sep1 DT/Tm Tech:

Batch: 1083444 OTHER pCi/g

PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: WoodT

Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MF5MN-1-AH J1C240565-1-SAMP 03/24/2011 10:05			423.40g,in AmtRec: 1XJAR60MLG,1X500MLP	423.40g #Containers: 2		5200	200	511 Scr:	0931 Alpha:	3/28/11 S Beta:	
2 MF5MN-1-AK-X J1C240565-1-DUP 03/24/2011 10:05			AmtRec: 1XJAR60MLG,1X500MLP	#Containers: 2				610 Scr:	1300 Alpha:	↓ Beta:	
3 MF57X-1-AA-B J1C240000-444-BLK 03/25/2011 08:09 pd			348.00g,in AmtRec:	348.00g #Containers: 1	osbk			614 Scr:	0931 Alpha:	3/28/11 S Beta:	
4 MF57X-1-AC-C J1C240000-444-LCS 03/25/2011 08:09 pd			350.10g,in AmtRec:	350.10g #Containers: 1	qc20009 08/04/09,pd 09/01/09,r			67 Scr:	0932 Alpha:	↓ Beta:	

Comments: MF5MN-SAMP "Comments: Not enough sample for a gamma duplicate, please recount on a seperate detector. 3/27/11 tgw"

All Clients for Batch:
127642, Washington Closure Hanford LLC Bechtel Hanford, Inc. , RW2, 27038

MF5MN1AH-SAMP Constituent List:

Co-60	RDL:5.00E-02	pCi/g	LCL:	UCL:	RPD:	Cs-137	RDL:1.00E-01	pCi/g	LCL:70	UCL:130	RPD:35
Cs-137DA	RDL:1.00E-01	pCi/g	LCL:70	UCL:130	RPD:35	Eu-152	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:
Eu-154	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:	Eu-155	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:

MF57X1AA-BLK:

Co-60	RDL:5.00E-02	pCi/g	LCL:	UCL:	RPD:	Cs-137	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:

TestAmerica Laboratories, Inc.

3/27/2011 1:48:00 PM

Sample Preparation/Analysis

AX Gamma Prp PRP003/GAM001
TA Gamma by HPGE
5I CLIENT: HANFORD

PRIORITY

Balance Id:1120421763
Pipet #: _____
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: ,WoodT

AnalyDueDate: 03/31/2011

Batch: 1083444 pCi/g
SEQ Batch, Test: None

Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Cs-137DA	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:	Eu-152	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:
Eu-154	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:	Eu-155	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:
MF57X1AC-LCS:											
Cs-137	RDL:0.1	pCi/g	LCL:70	UCL:130	RPD:35	Cs-137DA	RDL:0.1	pCi/g	LCL:70	UCL:130	RPD:35
K-40	RDL:--	pCi/g	LCL:70	UCL:130	RPD:35	Ra-226	RDL:0.1	pCi/g	LCL:70	UCL:130	RPD:35
RA-228	RDL:0.2	pCi/g	LCL:70	UCL:130	RPD:35	RA-228DA	RDL:0.2	pCi/g	LCL:70	UCL:130	RPD:35
U-238	RDL:	pCi/g	LCL:70	UCL:130	RPD:35						

MF5MN1AH-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MF57X1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MF57X1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.

3/29/2011 9:35:42 AM

ICOC Fraction Transfer/Status Report

ByDate: 3/29/2010, 4/3/2011, Batch: '1083444', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
1083444						
AC		Rev1C	**WoodT**	3/27/2011 1:41:42 PM		
SC			MaucieriS	IsBatched	3/25/2011 8:21:48 AM	ICOC_RADCALC v4.8.49
SC			WoodT	InPrep	3/27/2011 1:41:42 PM	RL-PRP-003 REVISION 1
SC			WoodT	Prep1C	3/27/2011 1:54:47 PM	RL-PRP-003 REVISION 1
SC			WoodT	InPrep2	3/27/2011 1:55:00 PM	RL-GAM-001 REVISION 1
SC			WoodT	Prep2C	3/27/2011 1:55:08 PM	RL-GAM-001 REVISION 1
SC			BlackCL	InCnt1	3/28/2011 12:45:13 AM	RL-CI-007 REVISION 1
SC			BlackCL	CalcC	3/29/2011 6:13:32 AM	RL-CI-007 REVISION 1
SC			antonsonl	Rev1C	3/29/2011 9:35:33 AM	RL-DR-001 Rev 2
AC			**WoodT**	3/27/2011 1:54:47 PM		
AC			**WoodT**	3/27/2011 1:55:00 PM		
AC			**WoodT**	3/27/2011 1:55:08 PM		
AC			**BlackCL**	3/28/2011 12:45:13		
AC			**BlackCL**	3/29/2011 6:13:32		
AC			**antonsonl**	3/29/2011 9:35:33		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 7

ICOCFractions v4.8.44

3/27/2011 4:21:26 PM

Sample Preparation/Analysis

Balance Id:1120373922

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

AF Ni-63 Prp PRP003/PRP005, Sep LSC017
S4 Nickel by ICP and Nickel-63 by Liquid Scint
5I CLIENT: HANFORD

PRIORITY

Pipet #:

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: WoodT

AnalyDueDate: 03/31/2011 J1P0139

Batch: 1083446 OTHER pCi/g

PM, Quote: RW2, 27038

SEQ Batch, Test: None

Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MF5MN-1-AE J1C240565-1-SAMP 03/24/2011 10:05		AmtRec: 1XJAR60MLG,1X500MLP	0.23g,in	0.23g #Containers: 2	NITA4022 03/16/11	20		Scr:	Alpha:	Beta:
2 MF5MN-1-AL-X J1C240565-1-DUP 03/24/2011 10:05		AmtRec: 1XJAR60MLG,1X500MLP	0.25g,in	0.25g #Containers: 2	NITA4023 03/16/11			Scr:	Alpha:	Beta:
3 MF574-1-AA-B J1C240000-446-BLK 03/25/2011 08:09 pd		AmtRec:	0.24g,in	0.24g #Containers: 1	NITA4024 03/16/11			Scr:	Alpha:	Beta:
4 MF574-1-AC-C J1C240000-446-LCS 03/25/2011 08:09 pd		AmtRec:	0.27g,in	0.27g #Containers: 1	NISA1403 03/10/11			Scr:	Alpha:	Beta:
5 MF574-1-AD-BN J1C240000-446-IBLK 03/25/2011 08:09 pd		AmtRec:		#Containers: 1				Scr:	Alpha:	Beta:

Comments: MF5MN-SAMP "Comments: Not enough sample for a gamma duplicate, please recount on a seperate detector. 3/27/11 tgw"

All Clients for Batch:
127642, Washington Closure Hanford LLC Bechtel Hanford, Inc. , RW2, 27038

MF5MN1AE-SAMP Constituent List:

TestAmerica Laboratories, Inc.

3/27/2011 4:21:27 PM

Sample Preparation/Analysis

AF Ni-63 Prp PRP003/PRP005, Sep LSC017
S4 Nickel by ICP and Nickel-63 by Liquid Scint
5I CLIENT: HANFORD

PRIORITY

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

AnalyDueDate: 03/31/2011

Batch: 1083446 pCi/g
SEQ Batch, Test: None

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

```
 Ni-63        RDL:30          pCi/g     LCL:70      UCL:130     RPD:35
MF5741AA-BLK:
 Ni-63        RDL:30          pCi/g     LCL:        UCL:        RPD:
MF5741AC-LCS:
 Ni-63        RDL:30          pCi/g     LCL:70      UCL:130     RPD:35
MF5741AD-IBLK:
 Ni-63        RDL:30          pCi/g     LCL:        UCL:        RPD:
MF5MN1AE-SAMP Calc Info:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MF5741AA-BLK:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MF5741AC-LCS:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MF5741AD-IBLK:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```

4/5/2011 11:00:00 AM

ICOC Fraction Transfer/Status Report

ByDate: 4/5/2010, 4/10/2011, Batch: '1083446', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
1083446						
AC		Rev1C	WoodT	3/27/2011 4:17:16 PM		
SC			MaucieriS	IsBatched	3/25/2011 8:21:54 AM	ICOC_RADCALC v4.8.49
SC			WoodT	InPrep	3/27/2011 4:17:16 PM	RL-PRP-003 REVISION 1
SC			WoodT	Prep1C	3/28/2011 1:03:50 AM	RL-PRP-003 REVISION 1
SC			BouslaughP	Prep1C	3/28/2011 7:39:36 AM	RL-PRP-003 REVISION 1
SC			ClarkR	InCnt1	4/1/2011 11:56:56 AM	RL-CI-005 REVISION 1
SC			DawkinsO	CalcC	4/3/2011 10:23:38 PM	RL-CI-005 REVISION 1
SC			WhelandS	Rev1C	4/5/2011 10:59:51 AM	RL-DR-001 Rev 2
AC			WoodT	3/28/2011 1:03:50		
AC			BouslaughP	3/28/2011 7:39:36		
AC			ClarkR	4/1/2011 11:56:56		
AC			DawkinsO	4/3/2011 10:23:38 PM		
AC			WhelandS	4/5/2011 10:59:51		

AC: Accepting Entry; SC: Status Change

Grp Rec Cnt: 6

TestAmerica Richland

Richland Wa.

ICOCFractions v4.8.44

TestAmerica Laboratories, Inc.

TestAmerica Laboratories, Inc.

3/31/2011 8:15:47 PM

Sample Preparation/Analysis

Balance Id:1120373922

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

7Z Unat_Laser Prp PRP003/PRP005, Sep KPA001
SS Total Uranium by KPA
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 03/31/2011

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Batch: 1090385 OTHER ug/g PM, Quote: RW2, 27038

SEQ Batch, Test: None All Tests: 7SSR, 1083444 AXTA, 1083446 AFS4, 1083448 7ZSS, 1083450 AYS7, 1083451 BBS8, 1083453 CHTH, 1083462 DWEA, 1090385 7ZSS,

Prep Tech: WoodT Rock

Work Order, Lot, Sample DateTime	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:
1 MF5MN-2-AM-S J1C240565-1-MS 03/24/2011 10:05	AmtRec: 1XJAR60MLG,1X500MLP	10.05g,in	#Containers: 2	Scr:	Alpha:	Beta:		
2 MF5MN-3-AJ J1C240565-1-SAMP 03/24/2011 10:05	AmtRec: 1XJAR60MLG,1X500MLP	9.96g,in	UNSI2123 09/01/10,pd 02/01/86,r	#Containers: 2	Scr:	Alpha:	Beta:	
3 MF5MN-3-AN-X J1C240565-1-DUP 03/24/2011 10:05	AmtRec: 1XJAR60MLG,1X500MLP	9.99g,in	#Containers: 2	Scr:	Alpha:	Beta:		
4 MF579-2-AA-B J1C240000-448-BLK 03/31/2011 16:15 pd	AmtRec:	9.96g,in	#Containers: 1	Scr:	Alpha:	Beta:		
5 MF579-2-AC-C J1C240000-448-LCS 03/31/2011 16:15 pd	AmtRec:	10.01g,in	UNSI2124 09/01/10,pd 02/01/86,r #Containers: 1	Scr:	Alpha:	Beta:		
6 MF579-2-AD-C J1C240000-448-LCS 03/31/2011 16:15 pd	AmtRec:	9.97g,in	UNSI2125 09/01/10,pd 02/01/86,r #Containers: 1	Scr:	Alpha:	Beta:		

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, ec-Enrichment Cell, ct-Cocktailed Added Page 1 ISV - Insufficient Volume for Analysis WO Cnt: 6 Prep_SamplePrep v4.8.43

3/31/2011 8:15:48 PM

Sample Preparation/Analysis

7Z Unat_Laser Prp PRP003/PRP005, Sep KPA001
SS Total Uranium by KPA
5I CLIENT: HANFORD

Balance Id:1120373922
Pipet #: _____
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: ,WoodT

AnalyDueDate: 03/31/2011

Batch: 1090385 ug/g
SEQ Batch, Test: None

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

Comments: MF5MN-MS "Comments: Not enough sample for a gamma duplicate, please recount on a seperate detector. 3/27/11 tgw"

All Clients for Batch:
127642, Washington Closure Hanford LLC Bechtel Hanford, Inc. , RW2, 27038

MF5MN2AM-MS Constituent List:

MF5792AA-BLK:

MF5792AC-LCS:

MF5792AD-LCS:

MF5MN2AM-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MF5792AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MF5792AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MF5792AD-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.

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4/6/2011 3:15:46 PM

Sample Preparation/Analysis

Balance Id:1120373922

127642, Washington Closure Hanford LLC
Bechtel Hanford, Inc.

7Z Unat_Laser Prp PRP003/PRP005, Sep KPA001
SS Total Uranium by KPA
5I CLIENT: HANFORD

Pipet #: _____

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: WoodT

AnalyDueDate: 03/31/2011

Batch: 1090385 OTHER ug/g PM, Quote: RW2, 27038

SEQ Batch, Test: None All Tests: 7SSR, 1083444 AXTA, 1083446 AFS4, 1083448 7ZSS, 1083450 AYS7, 1083451 BBS8, 1083453 CHTH, 1083462 DWEA, 1090385 7ZSS,

Work Order, Lot, Sample DateTime	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:
1 MF5MN-2-AM-S J1C240565-1-MS 03/24/2011 10:05	AmtRec: 1XJAR60MLG,1X500MLP	10.05g,in	#Containers: 2	Scr:	Alpha:	Beta:		
2 MF5MN-3-AJ J1C240565-1-SAMP 03/24/2011 10:05	AmtRec: 1XJAR60MLG,1X500MLP	9.96g,in	UNSI2123 09/01/10,pd 02/01/86 r #Containers: 2	Scr:	Alpha:	Beta:		
3 MF5MN-3-AM-S J1C240565-1-MS 03/24/2011 10:05	AmtRec: 1XJAR60MLG,1X500MLP	9.96	UNSI 2123 #Containers: 2	Scr:	Alpha:	Beta:		
4 MF5MN-3-AN-X J1C240565-1-DUP 03/24/2011 10:05	AmtRec: 1XJAR60MLG,1X500MLP	9.99g,in	#Containers: 2	Scr:	Alpha:	Beta:		
5 MF5MN-4-AJ J1C240565-1-SAMP 03/24/2011 10:05	AmtRec: 1XJAR60MLG,1X500MLP	10.05g	#Containers: 2	Scr:	Alpha:	Beta:		
6 MF579-2-AA-B J1C240000-448-BLK 03/31/2011 16:15 pd	AmtRec:	9.96g,in	#Containers: 1	Scr:	Alpha:	Beta:		
7 MF579-2-AC-C J1C240000-448-LCS 03/31/2011 16:15 pd	AmtRec:	10.01g,in	UNSI2124 09/01/10,pd 02/01/86 r #Containers: 1	Scr:	Alpha:	Beta:		

TestAmerica Laboratories, Inc.

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TestAmerica Richland Wa.

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1
pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: 7

ICOC 04 5.49

4/6/2011 3:15:46 PM

Sample Preparation/Analysis

7Z Unat_Laser Prp PRP003/PRP005, Sep KPA001
SS Total Uranium by KPA
5I CLIENT: HANFORD

Balance Id:1120373922
Pipet #: _____
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: ,WoodT

AnalyDueDate: 03/31/2011

Batch: 1090385 ug/g
SEQ Batch, Test: None

Work Order, Lot, Sample DateTime	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:
8 MF579-2-AD-C		9.97g,in	UNSI2125					
J1C240000-448-LCS			09/01/10,pd 02/01/86 r					
03/31/2011 16:15 pd		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:

Comments: MF5MN-MS "Comments: Not enough sample for a gamma duplicate, please recount on a seperate detector. 3/27/11 tgw"

All Clients for Batch:
127642, Washington Closure Hanford LLC Bechtel Hanford, Inc. , RW2, 27038

MF5MN2AM-MS Constituent List:

MF5MN3AM-MS:

MF5792AA-BLK:
Uranium RDL:1 ug/g LCL: UCL: RPD:
MF5792AC-LCS:
Uranium RDL:1 ug/g LCL:70 UCL:130 RPD:35
MF5792AD-LCS:
Uranium RDL:1 ug/g LCL:70 UCL:130 RPD:35

MF5MN2AM-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MF5MN3AM-MS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MF5792AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MF5792AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MF5792AD-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

4/7/2011 11:36:40 AM

ICOC Fraction Transfer/Status Report

ByDate: 4/7/2010, 4/12/2011, Batch: '1090385', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
1090385						
AC		Rev1C	WoodT	3/31/2011 8:05:10 PM		
SC			WoodT	InPrep	3/31/2011 8:05:10 PM	RL-PRP-003 REVISION 1
SC			woodt	isBatched	3/31/2011 9:22:21 PM	ICOC_RADCALC v4.8.49
SC			BouslaughP	Prep1C	4/1/2011 2:25:01 PM	RL-PRP-003 REVISION 1
SC			BockJ	Prep2C	4/6/2011 10:49:40 AM	RL-KPA-002 REVISION 1
SC			WagnerF	Cnt1C	4/6/2011 1:26:00 PM	RL-KPA-003 REVISION 0
SC			antonsonl	Rev1C	4/7/2011 11:36:33 AM	RL-DR-001 Rev 2
AC			BouslaughP	4/1/2011 2:25:01 PM		
AC			BockJ	4/6/2011 10:49:40		
AC			WagnerF	4/6/2011 1:26:00 PM		
AC			antonsonl	4/7/2011 11:36:33		

AC: Accepting Entry; SC: Status Change

Grp Rec Cnt: 5

TestAmerica Richland

Richland Wa.

ICOCFractions v4.8.44

3/24/2011 3:32:14 PM

Sample Preparation/Analysis

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

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

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

AnalyDueDate: 03/31/2011

Batch: 1083462 OTHER mg/kg PM, Quote: RW2, 27038
SEQ Batch, Test: None All Tests: 7SSR, 7ZSS, AFS4, AXTA, AYS7, BBS8, CHTH, 1083462 DWEA,

Work Order, Lot, Sample DateTime	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 MF5MN-1-AA J1C240565-1-SAMP 03/24/2011 10:05	AmtRec: 1XJAR60MLG,1X500MLP	#Containers: 2						Scr:	Alpha:	Beta:
2 MF5MN-1-AT-S J1C240565-1-MS 03/24/2011 10:05	AmtRec: 1XJAR60MLG,1X500MLP	#Containers: 2						Scr:	Alpha:	Beta:
3 MF5MN-1-AU-D J1C240565-1-MSD 03/24/2011 10:05	AmtRec: 1XJAR60MLG,1X500MLP	#Containers: 2						Scr:	Alpha:	Beta:
4 MF5MN-1-AV-X J1C240565-1-DUP 03/24/2011 10:05	AmtRec: 1XJAR60MLG,1X500MLP	#Containers: 2						Scr:	Alpha:	Beta:
5 MF583-1-AA-B J1C240000-462-BLK 03/24/2011 15:32 pd	AmtRec:	#Containers: 1						Scr:	Alpha:	Beta:
6 MF583-1-AC-L J1C240000-462-LCSD 03/24/2011 10:05	AmtRec:	#Containers: 1						Scr:	Alpha:	Beta:

TestAmerica Laboratories, Inc.

Sample Preparation/Analysis

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

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

AnalyDueDate: 03/31/2011

Batch: 1083462 mg/kg
SEQ Batch, Test: None

Work Order, Lot, Sample DateTime	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:

Comments:

All Clients for Batch:
127642, Washington Closure Hanford LLC Bechtel Hanford, Inc. , RW2, 27038

MF5MN1AA-SAMP Constituent List:

MF5MN1AT-MS Constituent List:

MF5MN1AU-MSD:

MF5831AA-BLK:

MF5831AC-LCSD:

MF5MN1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MF5MN1AT-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MF5MN1AU-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MF5831AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MF5831AC-LCSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-13908-1

SDG Number: JP0139

Job Description: SAF# RC-073

For:
Washington Closure Hanford
2620 Fermi Avenue
Richland, WA 99354

Attention: Joan H Kessner

Approved for release.
Kae E Yoder
Project Manager II
4/12/2011 4:11 PM

Kae E Yoder
Project Manager II
kae.yoder@testamericainc.com
04/12/2011

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

TestAmerica Laboratories, Inc.
TestAmerica Denver 4955 Yarrow Street, Arvada, CO 80002
Tel (303) 736-0100 Fax (303) 431-7171 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

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CASE NARRATIVE

Client: Washington Closure Hanford

Project: WASHINGTON CLOSURE HANFORD

Report Number: 280-13908-1

SDG #: JP0139
SAF#: RC-073

Date SDG Closed: March 25, 2011
Data Deliverable: 7 Day / Summary

CLIENT ID	LAB ID	ANALYSES REQUESTED	ANALYSES PERFORMED
J1FJ98	280-13908-1	6010/7471/1311-6010-7470	6010B/7471A/1311-6010B-7470A

I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed in this Case Narrative. 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 signature on the Report Cover.

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted. Calculations are performed before rounding to avoid round-off errors in calculated results.

This report includes reporting limits (RLs) less than TestAmerica Denver's practical quantitation limits. These reporting limits are being used specifically at the client's request to meet the needs of this project. Please note that data are not normally reported to these levels without qualification, since they are inherently less reliable and potentially less defensible than required by the current NELAC standards.

The results, RLs and MDLs included in this report have been adjusted for dry weight, as appropriate.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The sample was received on 3/25/2011; the sample arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 5.2 C.

TOTAL METALS - SW846 6010B/7471A
Serial dilution of a digestate in batch 280-59402 indicates that physical and chemical interferences are present for Magnesium, Nickel and Aluminum. Results have been flagged with an "X".

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the methods. Due to high constituent concentration, the Iron and Mercury analyses of sample J1FJ98 had to be performed at dilutions. The reporting limits have been adjusted relative to the dilutions required.

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the methods. Sample J1FJ98 required a 5X dilution prior to the analysis of Aluminum, Antimony, Lead and Selenium to minimize the interference caused by the high Iron concentration. The reporting limits have been adjusted relative to the dilution required.

Low levels of Zinc are present in the method blank associated with batch 280-59402. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

It can be noted that the sample amount was greater than four times the spike amount for Chromium, Copper, Manganese and Iron in the Matrix Spike performed on sample J1FJ98; therefore, control limits are not applicable.

The Matrix Spike performed on sample J1FJ98 exhibited percent recoveries outside the control limits for Nickel, Sodium, Aluminum and Mercury, and the associated sample results have been flagged "N". There is no indication that the analytical system was operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

The duplicate analysis of sample J1FJ98 exhibited RPD data outside the control limits for Arsenic, Barium, Calcium, Cobalt, Copper, Potassium, Silver, Vanadium and Mercury, and the associated sample results have been flagged "M". There is no indication that the analytical system was operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

TCLP METALS - SW846 1311/6010B/7470A

The duplicate analysis of sample J1FJ98 exhibited RPD data outside the control limits for Chromium, and the associated sample result has been flagged "M". There is no indication that the analytical system was operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-13908-1
Sdg Number: JP0139

Lab Section	Qualifier	Description
Metals		
	U	Analyzed for but not detected.
	B	Estimated result. Result is less than the RL, but greater than MDL
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	N	Recovery exceeds upper or lower control limits
	M	Sample duplicate precision not met.
	X	Serial dilution in the analytical batch indicates that physical and chemical interferences are present.

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-13908-1
Sdg Number: JP0139

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Metals	TAL DEN		SW846 3050B
TCLP Metals (ICP)	TAL DEN	SW846 6010B	
TCLP Extraction	TAL DEN		SW846 1311
Preparation, Total Metals	TAL DEN		SW846 3010A
TCLP Mercury	TAL DEN	SW846 7470A	
TCLP Extraction	TAL DEN		SW846 1311
Preparation, Mercury	TAL DEN		SW846 7470A
Mercury (CVAA)	TAL DEN	SW846 7471A	
Preparation, Mercury	TAL DEN		SW846 7471A
ASTM D-2216	TAL DEN	ASTM D-2216	

Lab References:

TAL DEN = TestAmerica Denver

Method References:

ASTM = ASTM International

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

METHOD / ANALYST SUMMARY

Client: Washington Closure Hanford

Job Number: 280-13908-1
Sdg Number: JP0139

Method	Analyst	Analyst ID
SW846 6010B	Bowen, Heidi E	HEB
SW846 6010B	Harre, John K	JKH
SW846 7470A	Stoltz, Katie	KS
SW846 7471A	Stoltz, Katie	KS
ASTM D-2216	Berry III, Paul B	PBB

SAMPLE SUMMARY

Client: Washington Closure Hanford

Job Number: 280-13908-1
Sdg Number: JP0139

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-13908-1	J1FJ98	Solid	03/24/2011 1005	03/25/2011 1000

SAMPLE RESULTS

Client: Washington Closure Hanford

Job Number: 280-13908-1
Sdg Number: JP0139

Client Sample ID: **J1FJ98**

Lab Sample ID: 280-13908-1
Client Matrix: Solid
% Moisture: 10.1

Date Sampled: 03/24/2011 1005
Date Received: 03/25/2011 1000

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-59885	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-59402	Lab File ID:	25A1032911.asc
Dilution:	1.0			Initial Weight/Volume:	1.14 g
Analysis Date:	03/29/2011 1434			Final Weight/Volume:	100 mL
Prep Date:	03/28/2011 1530				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		42.1	M	0.64	0.98
Barium		19.5	M	0.074	0.49
Beryllium		0.032	U	0.032	0.20
Boron		0.96	U	0.96	2.0
Cadmium		0.040	U	0.040	0.20
Calcium		3260	M	13.8	48.8
Chromium		255		0.057	0.20
Cobalt		22.7	M	0.098	0.98
Copper		284	M	0.21	0.98
Magnesium		571	X	3.6	19.5
Manganese		1790		0.098	0.98
Molybdenum		43.6		0.25	2.0
Nickel		117	X N	0.12	3.9
Potassium		77.6	B M	40.0	293
Silicon		273		5.5	9.8
Silver		1.2	M	0.16	0.20
Sodium		264	N	57.6	117
Vanadium		14.4	M	0.092	2.0
Zinc		28.7		0.39	0.98

Analysis Method:	6010B	Analysis Batch:	280-59971	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-59402	Lab File ID:	25A9032911.asc
Dilution:	5.0			Initial Weight/Volume:	1.14 g
Analysis Date:	03/30/2011 0941			Final Weight/Volume:	100 mL
Prep Date:	03/28/2011 1530				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		501	X N	7.6	24.4
Antimony		5.0		1.9	2.9
Iron		397000		18.5	24.4
Lead		8.8		1.3	2.4
Selenium		4.2	U	4.2	4.9

6010B TCLP Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	280-59748	Instrument ID:	MT_026
Prep Method:	3010A	Prep Batch:	280-59520	Lab File ID:	26b032811.asc
Dilution:	1.0	Leach Batch:	280-59445	Initial Weight/Volume:	10 mL
Analysis Date:	03/29/2011 0016			Final Weight/Volume:	50 mL
Prep Date:	03/28/2011 1530				
Leach Date:	03/25/2011 1825				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL

Client: Washington Closure Hanford

Job Number: 280-13908-1
Sdg Number: JP0139

Client Sample ID: **J1FJ98**

Lab Sample ID: 280-13908-1
Client Matrix: Solid

Date Sampled: 03/24/2011 1005
Date Received: 03/25/2011 1000

6010B TCLP Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.022	U	0.022	0.50
Barium		0.27	B	0.0020	1.0
Cadmium		0.0020	U	0.0020	0.10
Chromium		0.0032	B M	0.0030	0.50
Lead		0.013	U	0.013	0.50
Selenium		0.038	B	0.024	0.10
Silver		0.0040	U	0.0040	0.50

7470A TCLP Mercury-TCLP

Analysis Method:	7470A	Analysis Batch:	280-59796	Instrument ID:	MT_033
Prep Method:	7470A	Prep Batch:	280-59583	Lab File ID:	110329AB.txt
Dilution:	1.0	Leach Batch:	280-59445	Initial Weight/Volume:	30 mL
Analysis Date:	03/29/2011 1159			Final Weight/Volume:	30 mL
Prep Date:	03/28/2011 1730				
Leach Date:	03/25/2011 1825				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		0.000030	U	0.000030	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-60080	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-59427	Lab File ID:	110330AB.txt
Dilution:	5.0			Initial Weight/Volume:	0.69 g
Analysis Date:	03/30/2011 1622			Final Weight/Volume:	50 mL
Prep Date:	03/30/2011 0830				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.73	M N	0.027	0.082

Client: Washington Closure Hanford

Job Number: 280-13908-1
Sdg Number: JP0139

General Chemistry

Client Sample ID: **J1FJ98**

Lab Sample ID: 280-13908-1
Client Matrix: Solid

Date Sampled: 03/24/2011 1005
Date Received: 03/25/2011 1000

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	10.1		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-59387 Analysis Date: 03/25/2011 1328 DryWt Corrected: N

QUALITY CONTROL RESULTS

Client: Washington Closure Hanford

Job Number: 280-13908-1
Sdg Number: JP0139

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-59402					
LCS 280-59402/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-59402/1-A	Method Blank	T	Solid	3050B	
280-13908-1	J1FJ98	T	Solid	3050B	
280-13908-1DU	Duplicate	T	Solid	3050B	
280-13908-1MS	Matrix Spike	T	Solid	3050B	
Prep Batch: 280-59427					
LCS 280-59427/2-A	Lab Control Sample	T	Solid	7471A	
MB 280-59427/1-A	Method Blank	T	Solid	7471A	
280-13908-1	J1FJ98	T	Solid	7471A	
280-13908-1DU	Duplicate	T	Solid	7471A	
280-13908-1MS	Matrix Spike	T	Solid	7471A	
Prep Batch: 280-59445					
LCS 280-59445/2-B	Lab Control Sample	P	Solid	1311	
LCS 280-59445/2-C	Lab Control Sample	P	Solid	1311	
LB 280-59445/1-B	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 280-59445/1-C	TCLP SPLPE Leachate Blank	P	Solid	1311	
280-13908-1	J1FJ98	P	Solid	1311	
280-13908-1DU	Duplicate	P	Solid	1311	
280-13908-1MS	Matrix Spike	P	Solid	1311	
Prep Batch: 280-59520					
LCS 280-59445/2-B	Lab Control Sample	P	Solid	3010A	280-59445
LB 280-59445/1-B	TCLP SPLPE Leachate Blank	P	Solid	3010A	280-59445
280-13908-1	J1FJ98	P	Solid	3010A	280-59445
280-13908-1DU	Duplicate	P	Solid	3010A	280-59445
280-13908-1MS	Matrix Spike	P	Solid	3010A	280-59445
Prep Batch: 280-59583					
LCS 280-59445/2-C	Lab Control Sample	P	Solid	7470A	280-59445
LB 280-59445/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	280-59445
280-13908-1	J1FJ98	P	Solid	7470A	280-59445
280-13908-1DU	Duplicate	P	Solid	7470A	280-59445
280-13908-1MS	Matrix Spike	P	Solid	7470A	280-59445
Analysis Batch:280-59748					
LCS 280-59445/2-B	Lab Control Sample	P	Solid	6010B	280-59520
LB 280-59445/1-B	TCLP SPLPE Leachate Blank	P	Solid	6010B	280-59520
280-13908-1	J1FJ98	P	Solid	6010B	280-59520
280-13908-1DU	Duplicate	P	Solid	6010B	280-59520
280-13908-1MS	Matrix Spike	P	Solid	6010B	280-59520

Client: Washington Closure Hanford

Job Number: 280-13908-1
Sdg Number: JP0139

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:280-59796					
LCS 280-59445/2-C	Lab Control Sample	P	Solid	7470A	280-59583
LB 280-59445/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	280-59583
280-13908-1	J1FJ98	P	Solid	7470A	280-59583
280-13908-1DU	Duplicate	P	Solid	7470A	280-59583
280-13908-1MS	Matrix Spike	P	Solid	7470A	280-59583
Analysis Batch:280-59885					
LCS 280-59402/2-A	Lab Control Sample	T	Solid	6010B	280-59402
MB 280-59402/1-A	Method Blank	T	Solid	6010B	280-59402
280-13908-1	J1FJ98	T	Solid	6010B	280-59402
280-13908-1DU	Duplicate	T	Solid	6010B	280-59402
280-13908-1MS	Matrix Spike	T	Solid	6010B	280-59402
Analysis Batch:280-59971					
LCS 280-59402/2-A	Lab Control Sample	T	Solid	6010B	280-59402
MB 280-59402/1-A	Method Blank	T	Solid	6010B	280-59402
280-13908-1	J1FJ98	T	Solid	6010B	280-59402
280-13908-1DU	Duplicate	T	Solid	6010B	280-59402
280-13908-1MS	Matrix Spike	T	Solid	6010B	280-59402
Analysis Batch:280-60080					
LCS 280-59427/2-A	Lab Control Sample	T	Solid	7471A	280-59427
MB 280-59427/1-A	Method Blank	T	Solid	7471A	280-59427
280-13908-1	J1FJ98	T	Solid	7471A	280-59427
280-13908-1DU	Duplicate	T	Solid	7471A	280-59427
280-13908-1MS	Matrix Spike	T	Solid	7471A	280-59427

Report Basis
P = TCLP
T = Total

General Chemistry

Analysis Batch:280-59387					
280-13908-1	J1FJ98	T	Solid	D-2216	
280-13908-1DU	Duplicate	T	Solid	D-2216	

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-13908-1
Sdg Number: JP0139

Method Blank - Batch: 280-59402

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 280-59402/1-A	Analysis Batch:	280-59885	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-59402	Lab File ID:	25A1032911.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	03/29/2011 1430	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	03/28/2011 1530				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Arsenic	0.66	U	0.66	1.0
Barium	0.076	U	0.076	0.50
Beryllium	0.033	U	0.033	0.20
Boron	0.98	U	0.98	2.0
Cadmium	0.041	U	0.041	0.20
Calcium	14.1	U	14.1	50.0
Chromium	0.058	U	0.058	0.20
Cobalt	0.10	U	0.10	1.0
Copper	0.22	U	0.22	1.0
Magnesium	3.7	U	3.7	20.0
Manganese	0.10	U	0.10	1.0
Molybdenum	0.26	U	0.26	2.0
Nickel	0.12	U	0.12	4.0
Potassium	41.0	U	41.0	300
Silicon	5.7	U	5.7	10.0
Silver	0.16	U	0.16	0.20
Sodium	59.0	U	59.0	120
Vanadium	0.094	U	0.094	2.0
Zinc	0.554	B	0.40	1.0

Method Blank - Batch: 280-59402

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 280-59402/1-A	Analysis Batch:	280-59971	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-59402	Lab File ID:	25A9032911.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	03/30/2011 0937	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	03/28/2011 1530				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	1.6	U	1.6	5.0
Antimony	0.38	U	0.38	0.60
Iron	3.8	U	3.8	5.0
Lead	0.27	U	0.27	0.50
Selenium	0.86	U	0.86	1.0

Client: Washington Closure Hanford

Job Number: 280-13908-1
Sdg Number: JP0139

Lab Control Sample - Batch: 280-59402

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 280-59402/2-A	Analysis Batch:	280-59885	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-59402	Lab File ID:	25A1032911.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	03/29/2011 1432	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	03/28/2011 1530				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	100	94.98	95	85 - 110	
Barium	200	210.0	105	87 - 112	
Beryllium	5.00	5.01	100	84 - 114	
Boron	100	96.96	97	81 - 110	
Cadmium	10.0	10.43	104	87 - 110	
Calcium	5000	5053	101	82 - 114	
Chromium	20.0	20.66	103	84 - 114	
Cobalt	50.0	50.21	100	87 - 110	
Copper	25.0	25.05	100	88 - 110	
Magnesium	5000	5004	100	90 - 110	
Manganese	50.0	51.87	104	88 - 110	
Molybdenum	100	100.8	101	86 - 110	
Nickel	50.0	50.24	100	87 - 110	
Potassium	5000	5221	104	89 - 110	
Silicon	1000	224.6	22	10 - 70	
Silver	5.00	5.39	108	87 - 114	
Sodium	5000	5144	103	90 - 112	
Vanadium	50.0	52.34	105	88 - 110	
Zinc	50.0	50.34	101	76 - 114	

Lab Control Sample - Batch: 280-59402

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 280-59402/2-A	Analysis Batch:	280-59971	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-59402	Lab File ID:	25A9032911.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	03/30/2011 0939	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	03/28/2011 1530				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	191.7	96	82 - 116	
Antimony	50.0	47.02	94	82 - 110	
Iron	100	103.3	103	87 - 120	
Lead	50.0	46.69	93	86 - 110	
Selenium	200	190.2	95	83 - 110	

Client: Washington Closure Hanford

Job Number: 280-13908-1
Sdg Number: JP0139

Matrix Spike - Batch: 280-59402

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-13908-1	Analysis Batch:	280-59885	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-59402	Lab File ID:	25A1032911.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	03/29/2011 1442	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	03/28/2011 1530				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	42.1		111	157.1	103	76 - 111	
Barium	19.5		222	310.0	131	52 - 159	
Beryllium	0.032	U	5.56	5.28	95	72 - 105	
Boron	0.96	U	111	92.67	83	75 - 107	
Cadmium	0.040	U	11.1	11.45	103	40 - 130	
Calcium	3260		5560	8678	97	43 - 165	
Chromium	255		22.2	772.6	2326	70 - 200	4
Cobalt	22.7		55.6	81.82	106	72 - 106	
Copper	284		27.8	473.6	680	37 - 187	4
Magnesium	571		5560	5609	91	64 - 145	
Manganese	1790		55.6	2184	715	40 - 200	4
Molybdenum	43.6		111	151.5	97	75 - 103	
Nickel	117		55.6	191.5	135	61 - 126	N
Potassium	77.6	B	5560	6216	110	56 - 172	
Silicon	273		1110	1103	75	20 - 200	
Silver	1.2		5.56	7.77	118	75 - 141	
Sodium	264		5560	8106	141	78 - 111	N
Vanadium	14.4		55.6	85.10	127	50 - 169	
Zinc	28.7		55.6	107.9	142	70 - 200	

Matrix Spike - Batch: 280-59402

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-13908-1	Analysis Batch:	280-59971	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-59402	Lab File ID:	25A9032911.asc
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	03/30/2011 0949	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	03/28/2011 1530				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	501		222	1340	377	50 - 200	N
Antimony	5.0		55.6	52.86	86	20 - 200	
Iron	397000		111	503500	95626	70 - 200	4
Lead	8.8		55.6	67.59	106	70 - 200	
Selenium	4.2	U	222	210.2	94	76 - 104	

Client: Washington Closure Hanford

Job Number: 280-13908-1
Sdg Number: JP0139

Duplicate - Batch: 280-59402

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-13908-1	Analysis Batch:	280-59885	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-59402	Lab File ID:	25A1032911.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.05 g
Analysis Date:	03/29/2011 1439	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	03/28/2011 1530				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Arsenic	42.1		79.04	61	30	M
Barium	19.5		35.94	59	30	M
Beryllium	0.032	U	0.035	NC	30	U
Boron	0.96	U	1.0	NC	30	U
Cadmium	0.040	U	0.043	NC	30	U
Calcium	3260		1848	55	30	M
Chromium	255		382.7	40	40	
Cobalt	22.7		37.06	48	30	M
Copper	284		592.2	70	30	M
Magnesium	571		502.4	13	30	
Manganese	1790		2394	29	40	
Molybdenum	43.6		49.42	12	30	
Nickel	117		154.1	28	30	
Potassium	77.6	B	119.7	43	40	B M
Silicon	273		402.7	38	40	
Silver	1.2		1.70	36	30	M
Sodium	264		325.0	21	30	
Vanadium	14.4		40.37	95	30	M
Zinc	28.7		37.41	26	40	

Duplicate - Batch: 280-59402

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-13908-1	Analysis Batch:	280-59971	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-59402	Lab File ID:	25A9032911.asc
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	1.05 g
Analysis Date:	03/30/2011 0946	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	03/28/2011 1530				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	501		606.9	19	40	
Antimony	5.0		7.15	35	40	
Iron	397000		528600	28	40	
Lead	8.8		7.64	14	40	
Selenium	4.2	U	4.6	NC	30	U

Client: Washington Closure Hanford

Job Number: 280-13908-1
Sdg Number: JP0139

TCLP SPLPE Leachate Blank - Batch: 280-59520

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 280-59445/1-B	Analysis Batch:	280-59748	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-59520	Lab File ID:	26b032811.asc
Dilution:	1.0	Leach Batch:	280-59445	Initial Weight/Volume:	10 mL
Analysis Date:	03/29/2011 0011	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/28/2011 1530				
Leach Date:	03/25/2011 1825				

Analyte	Result	Qual	MDL	RL
Arsenic	0.022	U	0.022	0.50
Barium	0.0020	U	0.0020	1.0
Cadmium	0.0020	U	0.0020	0.10
Chromium	0.0030	U	0.0030	0.50
Lead	0.013	U	0.013	0.50
Selenium	0.024	U	0.024	0.10
Silver	0.0040	U	0.0040	0.50

Lab Control Sample - Batch: 280-59520

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LCS 280-59445/2-B	Analysis Batch:	280-59748	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-59520	Lab File ID:	26b032811.asc
Dilution:	1.0	Leach Batch:	280-59445	Initial Weight/Volume:	10 mL
Analysis Date:	03/29/2011 0014	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/28/2011 1530				
Leach Date:	03/25/2011 1825				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	4.00	3.81	95	80 - 120	
Barium	12.0	11.73	98	80 - 120	
Cadmium	1.10	1.09	99	80 - 120	
Chromium	5.20	5.10	98	80 - 120	
Lead	5.50	5.19	94	80 - 120	
Selenium	3.00	2.85	95	80 - 120	
Silver	1.05	1.03	98	80 - 120	

Client: Washington Closure Hanford

Job Number: 280-13908-1
Sdg Number: JP0139

Matrix Spike - Batch: 280-59520

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	280-13908-1	Analysis Batch:	280-59748	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-59520	Lab File ID:	26b032811.asc
Dilution:	1.0	Leach Batch:	280-59445	Initial Weight/Volume:	10 mL
Analysis Date:	03/29/2011 0021	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/28/2011 1530				
Leach Date:	03/25/2011 1825				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	0.022	U	4.00	4.02	100	80 - 120	
Barium	0.27	B	12.0	12.54	102	80 - 120	
Cadmium	0.0020	U	1.10	1.15	105	80 - 120	
Chromium	0.0032	B	5.20	5.36	103	80 - 120	
Lead	0.013	U	5.50	5.49	100	80 - 120	
Selenium	0.038	B	3.00	3.00	99	80 - 120	
Silver	0.0040	U	1.05	1.08	103	80 - 120	

Duplicate - Batch: 280-59520

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	280-13908-1	Analysis Batch:	280-59748	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-59520	Lab File ID:	26b032811.asc
Dilution:	1.0	Leach Batch:	280-59445	Initial Weight/Volume:	10 mL
Analysis Date:	03/29/2011 0023	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/28/2011 1530				
Leach Date:	03/25/2011 1825				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Arsenic	0.022	U	0.022	NC	20	U
Barium	0.27	B	0.287	5	20	B
Cadmium	0.0020	U	0.0020	NC	20	U
Chromium	0.0032	B	0.00420	26	20	B M
Lead	0.013	U	0.013	NC	20	U
Selenium	0.038	B	0.024	NC	20	U
Silver	0.0040	U	0.0040	NC	20	U

Client: Washington Closure Hanford

Job Number: 280-13908-1
Sdg Number: JP0139

TCLP SPLPE Leachate Blank - Batch: 280-59583

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LB 280-59445/1-C	Analysis Batch:	280-59796	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-59583	Lab File ID:	110329AB.txt
Dilution:	1.0	Leach Batch:	280-59445	Initial Weight/Volume:	30 mL
Analysis Date:	03/29/2011 1149	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	03/28/2011 1730				
Leach Date:	03/25/2011 1825				

Analyte	Result	Qual	MDL	RL
Mercury	0.000030	U	0.000030	0.0020

Lab Control Sample - Batch: 280-59583

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LCS 280-59445/2-C	Analysis Batch:	280-59796	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-59583	Lab File ID:	110329AB.txt
Dilution:	1.0	Leach Batch:	280-59445	Initial Weight/Volume:	30 mL
Analysis Date:	03/29/2011 1152	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	03/28/2011 1730				
Leach Date:	03/25/2011 1825				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00535	107	90 - 116	

Matrix Spike - Batch: 280-59583

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	280-13908-1	Analysis Batch:	280-59796	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-59583	Lab File ID:	110329AB.txt
Dilution:	1.0	Leach Batch:	280-59445	Initial Weight/Volume:	30 mL
Analysis Date:	03/29/2011 1203	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	03/28/2011 1730				
Leach Date:	03/25/2011 1825				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.000030	U	0.00500	0.00508	102	90 - 116	

Client: Washington Closure Hanford

Job Number: 280-13908-1
Sdg Number: JP0139

Duplicate - Batch: 280-59583

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	280-13908-1	Analysis Batch:	280-59796	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-59583	Lab File ID:	110329AB.txt
Dilution:	1.0	Leach Batch:	280-59445	Initial Weight/Volume:	30 mL
Analysis Date:	03/29/2011 1201	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	03/28/2011 1730				
Leach Date:	03/25/2011 1825				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.000030	U	0.000030	NC	20	U

Client: Washington Closure Hanford

Job Number: 280-13908-1
Sdg Number: JP0139

Method Blank - Batch: 280-59427

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 280-59427/1-A	Analysis Batch:	280-60080	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-59427	Lab File ID:	110330AB.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	03/30/2011 1613	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	03/30/2011 0830				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.0055	U	0.0055	0.017

Lab Control Sample - Batch: 280-59427

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 280-59427/2-A	Analysis Batch:	280-60080	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-59427	Lab File ID:	110330AB.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	03/30/2011 1615	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	03/30/2011 0830				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.417	0.441	106	87 - 111	

Matrix Spike - Batch: 280-59427

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-13908-1	Analysis Batch:	280-60080	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-59427	Lab File ID:	110330AB.txt
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	0.67 g
Analysis Date:	03/30/2011 1627	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	03/30/2011 0830				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.73	0.415	1.73	241	87 - 111	N

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-13908-1
Sdg Number: JP0139

Duplicate - Batch: 280-59427

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-13908-1	Analysis Batch:	280-60080	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-59427	Lab File ID:	110330AB.txt
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	0.67 g
Analysis Date:	03/30/2011 1625	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	03/30/2011 0830				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Mercury	0.73	0.908	21	20	M

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-13908-1
Sdg Number: JP0139

Duplicate - Batch: 280-59387

Method: D-2216
Preparation: N/A

Lab Sample ID:	280-13908-1	Analysis Batch:	280-59387	Instrument ID:	No Equipment
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	03/25/2011 1328	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	10.1	12.0	17	20	

5.2 FP mg 3/25

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-073-119	Page 1 of 1
Collector J Kuepfer M BLANKENSHIP	Company Contact Don Woolery	Telephone No. 509-431-0448	Project Coordinator KESSNER, JH	Price Code 9L
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Other Quick	Sampling Location 100-D-50:6 Pipelines		SAF No. RC-073	Data Turnaround ~~21~~ 7 Days
Ice Chest No. ERC-96-511	Field Logbook No. EL-1607-09	COA R00D502000	Method of Shipment FED EX	3/15/11
Shipped To TestAmerica Incorporated, ~~Richland~~ DENVER 3/15/11	Offsite Property No. NA		Bill of Lading/Air Bill No. 7945 7088 5037	

POSSIBLE SAMPLE HAZARDS/REMARKS

None

Special Handling and/or Storage

~~None~~ Cool 4°C JEB 3-24-11

Preservation	Cool 4C	None	Cool 4C	None	None	None	None	None		
Type of Container	G/P	G	G/P	G/P	G/P	G/P	G/P	G/P		
No. of Container(s)	1	1	1	1	1	1	1	1		
Volume	60mL	125mL	60mL	500mL	60mL	60mL	60mL	60g		
SAMPLE ANALYSIS	See item (1) in Special Instructions.	See item (2) in Special Instructions.	Chromium Hex - 7196	See item (3) in Special Instructions.	Gross Alpha & Gross Beta	Nickel-63; Strontium-89/90 – Total Sr	Total Uranium	RCF GEA Shipping Screen		

Sample No.	Matrix *	Sample Date	Sample Time										
J1FJ98	OTHER	3/24/11	1005	X	X	~~X~~ 3/24/11	X						
J1FJ99	OTHER												
J1FKN1 3/24/11	OTHER												
J1FKN2	OTHER												

3/15/11

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By/Removed From MASHINGTON	Date/Time 3-24-11 1035	Received By/Stored In DWOOLERY	Date/Time 3/24/11 1035
Relinquished By/Removed From DWOOLERY	Date/Time 3/24/11 1135	Received By/Stored In A. Freier A. Freier	Date/Time 1135 3-24-11
Relinquished By/Removed From WCH A. Freier A. Freier	Date/Time 1200 3-24-11	Received By/Stored In Fed Ex	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time 3/25/11 1000
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010TR (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV) {Mercury}
(2) Metals by ICP (TCLP) - 1311/6010 {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; Mercury (TCLP) - 1311/7470 {Mercury}
(3) Gamma Spec (Client List) {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}

REVIEWED BY JEB DATE 3-24-11

JP0139

Matrix *
S=Soil
SE=Sediment
SO=Solid
SI=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Project 28002142 -6010TR -Solid

Analytical Due:

Report Due: 4/1/11 (Rush 5d TAT)

Sample Check-in List

Date/Time Received: 3/25/11 1000 GM Screen Result 13 microR/hr

Client: Washington Closure Hanford SDG #: JP0139 NA[ ] SAF #: RC-073 NA [ ]

Job Number: 13908 Chain of Custody # RC-073-119

Shipping Container ID: ERC-96-511 Air Bill # 7945708850 37

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 °C: 5.2 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 Lables
   - ✓ Appropriate Sample Lables
9. Samples are:
   - ✓ In Good Condition
   - ____ Broken
   - ____ Leaking
   - ____ Have Air Bubbles
   - (Only for samples requiring no head space.)
10. Sample pH taken? NA [✓] pH<2 [ ] pH>2 [ ] pH>9 [ ] Amount HNO_3 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: [signature] Date: 3/25/11

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on ____ by ____ Person Contacted ____

[ ] No action necessary; process as is.

Project Manager [signature] Date 3/28/11

LS-023, Rev. 7, 1/08

From: (509) 375-4640 Origin ID: PSCA
WCH MAILROOM
WASHINGTON CLOSURE HANFORD
2620 FERMI AVE

RICHLAND, WA 99354

FedEx. Express

J111511022502 25

Ship Date: 24MAR11
ActWgt: 74.0 LB
CAD: 8897843/INET3130

Delivery Address Bar Code

SHIP TO: (303) 736-0100 BILL SENDER

Sample Recieving
Test America Denver
4955 YARROW ST

ARVADA, CO 80002

Ref #
Invoice #
PO #
Dept #

FRI - 25 MAR A1
PRIORITY OVERNIGHT

TRK# 7945 7088 5037
0201

XH WHHA

80002
CO-US
DEN

50DG2/BDD9/7EFB

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