

SAF-RC-074
100-D/DR Burial Grounds & Remaining
Sites – Soil In-Process
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt

H4-21

KW 5/3/11
INITIAL/DATE

COMMENTS:

SDG JP0166

SAF RC-074

Rad only

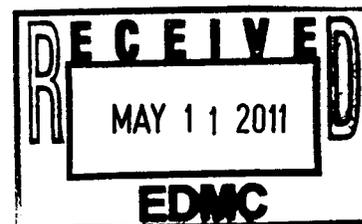
Chem only

Rad & Chem

Complete

Partial

Waste Site: 118-D-2 Excavation Area 1



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 39 Pages

Report No.: 46365

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.
JP0166	RC-074	J1HH88	J1D200526-1	MG9NQ1AD	9MG9NQ10	1110363
		J1HH88	J1D200526-1	MG9NQ1AA	9MG9NQ10	1110365
		J1HH88	J1D200526-1	MG9NQ1AC	9MG9NQ10	1110367
		J1HH89	J1D200526-2	MG9N01AD	9MG9N010	1110363
		J1HH89	J1D200526-2	MG9N01AA	9MG9N010	1110365
		J1HH89	J1D200526-2	MG9N01AC	9MG9N010	1110367
		J1HH90	J1D200526-3	MG9N11AD	9MG9N110	1110363
		J1HH90	J1D200526-3	MG9N11AA	9MG9N110	1110365
		J1HH90	J1D200526-3	MG9N11AC	9MG9N110	1110367

Certificate of Analysis

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

TestAmerica Laboratories, Inc.

April 27, 2011

Attention: Joan Kessner

SAF Number	:	RC-074
Date SDG Closed	:	April 20, 2011
Number of Samples	:	Three (3)
Sample Type	:	Soil
SDG Number	:	JP0166
Data Deliverable	:	7-- Day / Summary

CASE NARRATIVE

I. Introduction

On April 20, 2011 three soil samples were received at TestAmerica for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID number to correspond with the Washington Closure Hanford (WCH) specific ID:

<u>WCH ID#</u>	<u>TARL ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
J1HH88	MG9NQ	SOIL	4/20/11
J1HH89	MG9N0	SOIL	4/20/11
J1HH90	MG8N1	SOIL	4/20/11

II. Sample Receipt

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

III. Analytical Results/Methodology

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

The requested analyses were:

Gas Proportional Counting
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

Washington Closure Hanford
April 27, 2011

IV. Quality Control

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

QC and sample results are reported in the same units.

V. Comments

Gas Proportional Counting

Strontium-90 by method RL-GPC-003:

The LCS, batch blank, samples and sample duplicate (J1HH89) results are within contractual requirements.

Gamma Spectroscopy

Gamma Spec by method RL-GAM-001:

The LCS, batch blank, samples and sample duplicate (J1HH88) results are within contractual requirements.

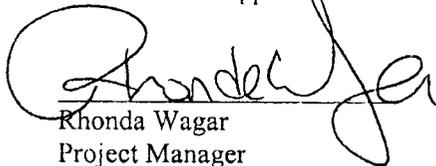
Liquid Scintillation Counting

Nickel-63 by method RL-LCS-017:

The LCS, batch blank, samples and sample duplicate (J1HH90) results are within contractual requirements.

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

Reviewed and approved:


Rhonda Wagor
Project Manager

Drinking Water Method Cross References

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

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

Uncertainty Estimation

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

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

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

Report Definitions

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

Sample Results Summary

Date: 27-Apr-11

TestAmerica TARL

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

Report No. : 46365

SDG No: JP0166

Client Id		Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
Batch	Work Order								
1110363 GAMMA_GS									
J1HH88									
	MG9NQ1AD	AG-108M	3.44E-04 +- 1.6E-02	U	pCi/g		2.78E-02		
		AMERICIUM 241	4.36E-02 +- 8.1E-02	U	pCi/g		1.37E-01		
		CO-60	1.09E-01 +- 3.3E-02	U	pCi/g		4.83E-02	5.00E-02	
		CS-137	9.90E-01 +- 1.4E-01		pCi/g		2.84E-02	1.00E-01	
		EU-152	-8.96E-02 +- 1.4E-01	U	pCi/g		8.33E-02	1.00E-01	
		EU-154	4.83E-03 +- 5.5E-02	U	pCi/g		9.57E-02	1.00E-01	
		EU-155	2.67E-02 +- 6.0E-02	U	pCi/g		1.01E-01	1.00E-01	
J1HH88 DUP									
	MG9NQ1AE	AG-108M	-8.59E-03 +- 1.5E-02	U	pCi/g		2.53E-02		-216.7
		AMERICIUM 241	-3.10E-02 +- 1.6E-01	U	pCi/g		2.77E-01		1189.1
		CO-60	7.38E-02 +- 2.4E-02	U	pCi/g		4.61E-02	5.00E-02	38.9
		CS-137	6.50E-01 +- 9.6E-02		pCi/g		2.86E-02	1.00E-01	41.5
		EU-152	-6.06E-03 +- 4.7E-02	U	pCi/g		7.88E-02	1.00E-01	-174.6
		EU-154	2.33E-02 +- 5.5E-02	U	pCi/g		9.77E-02	1.00E-01	131.3
		EU-155	-6.37E-03 +- 5.4E-02	U	pCi/g		8.95E-02	1.00E-01	325.7
J1HH89									
	MG9N01AD	AG-108M	-1.32E-02 +- 1.9E-02	U	pCi/g		3.09E-02		
		AMERICIUM 241	4.26E-02 +- 8.0E-02	U	pCi/g		1.36E-01		
		CO-60	5.57E-03 +- 1.6E-02	U	pCi/g		2.92E-02	5.00E-02	
		CS-137	2.42E+00 +- 3.2E-01		pCi/g		2.94E-02	1.00E-01	
		EU-152	-1.39E-01 +- 6.9E-02	U	pCi/g		9.43E-02	1.00E-01	
		EU-154	-2.61E-04 +- 5.2E-02	U	pCi/g		9.12E-02	1.00E-01	
		EU-155	-8.79E-03 +- 6.0E-02	U	pCi/g		9.86E-02	1.00E-01	
J1HH90									
	MG9N11AD	AG-108M	-1.59E-03 +- 1.4E-02	U	pCi/g		2.34E-02		
		AMERICIUM 241	9.83E-02 +- 1.5E-01	U	pCi/g		2.67E-01		
		CO-60	-6.80E-03 +- 1.7E-02	U	pCi/g		2.91E-02	5.00E-02	
		CS-137	1.62E-02 +- 1.9E-02	U	pCi/g		3.39E-02	1.00E-01	
		EU-152	-1.69E-02 +- 4.3E-02	U	pCi/g		7.35E-02	1.00E-01	
		EU-154	2.50E-02 +- 5.6E-02	U	pCi/g		9.94E-02	1.00E-01	
		EU-155	6.17E-02 +- 5.1E-02	U	pCi/g		8.85E-02	1.00E-01	
1110365 SRTOT_SEP_PRECIP_GPC									
J1HH88									
	MG9NQ1AA	STRONTIUM	8.13E+00 +- 2.2E+00		pCi/g	62%	1.83E-01		
J1HH89									
	MG9N01AA	STRONTIUM	3.67E+00 +- 9.9E-01		pCi/g	63%	1.68E-01		
J1HH89 DUP									

TestAmerica RPD - Relative Percent Difference.
 rptSTLRchSaSummary2 V5.2.12 A2002 U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

Sample Results Summary

Date: 27-Apr-11

TestAmerica TARL

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

Report No. : 46365

SDG No: JP0166

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
1110365	SRTOT_SEP_PRECIP_GPC								
	J1HH89 DUP								
	MG9N01AE	STRONTIUM	2.89E+00 +- 7.8E-01		pCi/g	62%	1.68E-01		23.6
	J1HH90								
	MG9N11AA	STRONTIUM	2.32E-01 +- 1.1E-01		pCi/g	60%	1.59E-01		
1110367	NI63_LSC								
	J1HH88								
	MG9NQ1AC	NI-63	-4.00E+00 +- 6.2E+00	U	pCi/g	100%	1.42E+01	3.00E+01	
	J1HH89								
	MG9N01AC	NI-63	-4.10E+00 +- 9.4E+00	U	pCi/g	66%	2.03E+01	3.00E+01	
	J1HH90								
	MG9N11AC	NI-63	-4.20E-01 +- 6.8E+00	U	pCi/g	96%	1.55E+01	3.00E+01	
	J1HH90 DUP								
	MG9N11AE	NI-63	-4.51E+00 +- 6.1E+00	U	pCi/g	96%	1.38E+01	3.00E+01	-165.9
	No. of Results:	36							

TestAmerica

RPD - Relative Percent Difference.

rptSTLRchSaSummary2 V5.2.12
A2002

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

QC Results Summary

Date: 27-Apr-11

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Report No. : 46365

SDG No.: JP0166

Batch	Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC MDA
GAMMA_GS									
1110363 BLANK QC,									
	MG92P1AA	AG-108M	4.64E-03 +- 1.0E-02	U	pCi/g				1.87E-02
		AMERICIUM 241	-3.95E-02 +- 4.3E-02	U	pCi/g				6.93E-02
		CO-60	-1.41E-03 +- 1.1E-02	U	pCi/g				1.89E-02
		CS-137	4.24E-03 +- 1.2E-02	U	pCi/g				2.15E-02
		EU-152	-1.11E-02 +- 4.0E-02	U	pCi/g				5.68E-02
		EU-154	1.87E-02 +- 2.9E-02	U	pCi/g				5.75E-02
		EU-155	-1.20E-03 +- 3.1E-02	U	pCi/g				5.30E-02
1110363 LCS,									
	MG92P1AC	CS-137	1.13E+00 +- 1.6E-01		pCi/g		104%	0.0	3.49E-02
		RA-226	9.91E-01 +- 1.6E-01		pCi/g		87%	-0.1	5.93E-02
		RA-228	8.87E-01 +- 2.0E-01		pCi/g		95%	-0.1	1.20E-01
		U-238	1.00E+00 +- 1.5E-01		pCi/g		83%	-0.2	6.67E-02
SRTOT_SEP_PRECIP_GPC									
1110365 BLANK QC,									
	MG92R1AA	STRONTIUM	2.30E-01 +- 9.6E-02		pCi/g	84%			1.24E-01
1110365 LCS,									
	MG92R1AC	STRONTIUM	1.10E+00 +- 3.1E-01		pCi/g	88%	98%	0.0	1.28E-01
NI63_LSC									
1110367 BLANK QC,									
	MG92V1AA	NI-63	2.42E+01 +- 8.0E+00		pCi/g	100%			1.27E+01
1110367 LCS,									
	MG92V1AC	NI-63	4.74E+02 +- 4.6E+01		pCi/g	93%	81%	-0.2	1.32E+01
No. of Results: 15									

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

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

FORM I
SAMPLE RESULTS

Date: 27-Apr-11

Lab Name: TestAmerica SDG: JP0166 Collection Date: 4/19/2011 12:50:00 PM
 Lot-Sample No.: J1D200526-1 Report No.: 46365 Received Date: 4/20/2011 11:10:00 AM
 Client Sample ID: J1HH88 COC No.: RC-074-222 Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL), Rst/TotUcert	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1110363	GAMMA_GS Report DB ID: 9MG9NQ10											
AG-108M	3.44E-04	U	1.6E-02	1.6E-02	2.78E-02	pCi/g		0.01	4/21/11 07:19 a	368.1	368.1	GER10\$1
								0.04		g		
AMERICIUM 241	4.36E-02	U	8.1E-02	8.1E-02	1.37E-01	pCi/g		0.32	4/21/11 07:19 a	368.1	368.1	GER10\$1
								(1.1)		g		
CO-60	1.09E-01	U	3.3E-02	3.3E-02	4.83E-02	pCi/g		(2.3)	4/21/11 07:19 a	368.1	368.1	GER10\$1
								(6.7)		g		
CS-137	9.90E-01	U	1.4E-01	1.4E-01	2.84E-02	pCi/g	5.00E-02	(34.8)	4/21/11 07:19 a	368.1	368.1	GER10\$1
								(14.3)		g		
EU-152	-8.96E-02	U	1.4E-01	1.4E-01	8.33E-02	pCi/g	1.00E-01	(-1.1)	4/21/11 07:19 a	368.1	368.1	GER10\$1
								(-1.3)		g		
EU-154	4.83E-03	U	5.5E-02	5.5E-02	9.57E-02	pCi/g		0.05	4/21/11 07:19 a	368.1	368.1	GER10\$1
								0.18		g		
EU-155	2.67E-02	U	6.0E-02	6.0E-02	1.01E-01	pCi/g		0.26	4/21/11 07:19 a	368.1	368.1	GER10\$1
								0.88		g		

Batch: 1110365	SRTOT_SEP_PRECIP_GPC	Work Order: MG9NQ1AA	Report DB ID: 9MG9NQ10
STRONTIUM	8.13E+00	2.2E+00	62% (44.3)
		3.8E-01	8.59E-02 (7.5)

Batch: 1110367	NI63_LSC	Work Order: MG9NQ1AC	Report DB ID: 9MG9NQ10
NI-63	-4.00E+00	6.2E+00	100% -0.28
		5.2E+00	4/27/11 01:13 a
		6.66E+00	3.00E+01 -(-1.3)
			0.25
			g

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

FORM I

Date: 27-Apr-11

SAMPLE RESULTS

Lab Name: TestAmerica
 Lot-Sample No.: J1D200526-1
 Client Sample ID: J1HH88
 SDG: JP0166
 Report No.: 46365
 COC No.: RC-074-222
 Matrix: SOIL
 Collection Date: 4/19/2011 12:50:00 PM
 Received Date: 4/20/2011 11:10:00 AM

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
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No. of Results: 9 Comments:

FORM I

Date: 27-Apr-11

SAMPLE RESULTS

Lab Name: TestAmerica
 Lot-Sample No.: J1D200526-2
 Client Sample ID: J1HH89

SDG: JP0166
 Report No.: 46365
 COC No.: RC-074-222

Collection Date: 4/19/2011 12:55:00 PM
 Received Date: 4/20/2011 11:10:00 AM
 Matrix: SOIL

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: 1110363 GAMMA_GS												
AG-108M	-1.32E-02	U	1.9E-02	1.9E-02	3.09E-02	pCi/g	9MG9N010	-0.43 (-1.4)	4/21/11 10:50 a	368.2	368.2	GER10\$1
AMERICIUM 241	4.26E-02	U	8.0E-02	8.0E-02	1.36E-01	pCi/g		0.31 (1.1)	4/21/11 10:50 a	368.2	368.2	GER10\$1
CO-60	5.57E-03	U	1.6E-02	1.6E-02	2.92E-02	pCi/g	5.00E-02	0.19 0.69	4/21/11 10:50 a	368.2	368.2	GER10\$1
CS-137	2.42E+00	U	3.2E-01	3.2E-01	2.94E-02	pCi/g	1.00E-01	(82.) (15.2)	4/21/11 10:50 a	368.2	368.2	GER10\$1
EU-152	-1.39E-01	U	6.9E-02	6.9E-02	9.43E-02	pCi/g	1.00E-01	-(1.5) (-4.1)	4/21/11 10:50 a	368.2	368.2	GER10\$1
EU-154	-2.61E-04	U	5.2E-02	5.2E-02	9.12E-02	pCi/g	1.00E-01	0 -0.01	4/21/11 10:50 a	368.2	368.2	GER10\$1
EU-155	-8.79E-03	U	6.0E-02	6.0E-02	9.86E-02	pCi/g	1.00E-01	-0.09 -0.29	4/21/11 10:50 a	368.2	368.2	GER10\$1
Batch: 1110365 SRTOT_SEP_PRECIP_GPC												
STRONTIUM	3.67E+00	U	2.6E-01	9.9E-01	1.68E-01	pCi/g	63%	(21.8) (7.4)	4/25/11 07:08 a	5.99	5.99	GPC26B
Batch: 1110367 NI63_LSC												
NI-63	-4.10E+00	U	7.7E+00	9.4E+00	2.03E+01	pCi/g	3.00E+01	-0.2 -0.87	4/27/11 01:36 a	0.25	0.25	LSC3

TestAmerica rpt\$TLRchSample 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: 27-Apr-11

Lab Name: TestAmerica SDG: JP0166 Collection Date: 4/19/2011 12:55:00 PM
 Lot-Sample No.: J1D200526-2 Report No.: 46365 Received Date: 4/20/2011 11:10:00 AM
 Client Sample ID: J1HH89 COC No.: RC-074-222 Matrix: SOIL

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
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No. of Results: 9 Comments:

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

Date: 27-Apr-11

**FORM I
SAMPLE RESULTS**

Lab Name: TestAmerica SDG: JP0166 Collection Date: 4/19/2011 1:00:00 PM
 Lot-Sample No.: J1D200526-3 Report No.: 46365 Received Date: 4/20/2011 11:10:00 AM
 Client Sample ID: J1HH90 COC No.: RC-074-222 Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL), Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1110363 GAMMA_GS Work Order: MG9N11AD Report DB ID: 9MG9N110											
AG-108M	-1.59E-03	U	1.4E-02	1.4E-02	2.34E-02	pCi/g	-0.07 -0.23	4/21/11 10:51 a	356.5	356.5	GER13\$1
AMERICIUM 241	9.83E-02	U	1.5E-01	1.5E-01	2.67E-01	pCi/g	0.37 (1.3)	4/21/11 10:51 a	356.5	356.5	GER13\$1
CO-60	-6.80E-03	U	1.7E-02	1.7E-02	2.91E-02	pCi/g	-0.23 -0.8	4/21/11 10:51 a	356.5	356.5	GER13\$1
CS-137	1.62E-02	U	1.9E-02	1.9E-02	3.39E-02	pCi/g	0.48 (1.7)	4/21/11 10:51 a	356.5	356.5	GER13\$1
EU-152	-1.69E-02	U	4.3E-02	4.3E-02	7.35E-02	pCi/g	-0.23 -0.78	4/21/11 10:51 a	356.5	356.5	GER13\$1
EU-154	2.50E-02	U	5.6E-02	5.6E-02	9.94E-02	pCi/g	0.25 0.9	4/21/11 10:51 a	356.5	356.5	GER13\$1
EU-155	6.17E-02	U	5.1E-02	5.1E-02	8.85E-02	pCi/g	0.7 (2.4)	4/21/11 10:51 a	356.5	356.5	GER13\$1
Batch: 1110365 SRTOT_SEP_PRECIP_GPC Work Order: MG9N11AA Report DB ID: 9MG9N110											
STRONTIUM	2.32E-01		9.2E-02	1.1E-01	1.59E-01	pCi/g	(1.5) (4.2)	4/25/11 07:08 a	5.99	5.99	GPC26D
Batch: 1110367 NI63_LSC Work Order: MG9N11AC Report DB ID: 9MG9N110											
NI-63	-4.20E-01	U	5.7E+00	6.8E+00	1.55E+01	pCi/g	-0.03 -0.12	4/27/11 01:59 a	0.25	0.25	LSC3

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

**FORM I
SAMPLE RESULTS**

Date: 27-Apr-11

Lab Name: TestAmerica SDG: JP0166 Collection Date: 4/19/2011 1:00:00 PM
 Lot-Sample No.: J1D200526-3 Report No.: 46365 Received Date: 4/20/2011 11:10:00 AM
 Client Sample ID: J1HH90 COC No.: RC-074-222 Matrix: SOIL

Ordered by Client Sample ID, Batch No.

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

No. of Results: 9 Comments:

FORM I

Date: 27-Apr-11

SAMPLE RESULTS

Lab Name: TestAmerica
 Lot-Sample No.: J1D200526-3
 Client Sample ID: J1HH90
 SDG: JP0166
 Report No.: 46365
 COC No.: RC-074-222
 Collection Date: 4/19/2011 1:00:00 PM
 Received Date: 4/20/2011 11:10:00 AM
 Matrix: SOIL

Ordered by Client Sample ID, Batch No.

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

Date: 27-Apr-11

DUPLICATE RESULTS

Lab Name: TestAmerica
 Lot-Sample No.: J1D200526-1
 Client Sample ID: J1HH88 DUP
 SDG: JP0166
 Report No.: 46365
 COC No.: RC-074-222
 Matrix: SOIL
 Collection Date: 4/19/2011 12:50:00 PM
 Received Date: 4/20/2011 11:10:00 AM

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: 1110363	GAMMA_GS											
AG-108M	-8.59E-03	U	1.5E-02	1.5E-02	2.53E-02	pCi/g		-0.34	4/21/11 07:19 a	368.0	368.0	GER13\$1
	3.44E-04	U	RPD	-216.7				-(1.1)		9	9	GER13\$1
AMERICIUM 241	-3.10E-02	U	1.6E-01	1.6E-01	2.77E-01	pCi/g		-0.11	4/21/11 07:19 a	368.0	368.0	GER13\$1
	4.36E-02	U	RPD	1189.1				-0.39		9	9	GER13\$1
CO-60	7.38E-02	U	2.4E-02	2.4E-02	4.61E-02	pCi/g		(1.6)	4/21/11 07:19 a	368.0	368.0	GER13\$1
	1.09E-01	U	RPD	38.9				(6.2)		9	9	GER13\$1
CS-137	6.50E-01	U	9.6E-02	9.6E-02	2.86E-02	pCi/g		(22.7)	4/21/11 07:19 a	368.0	368.0	GER13\$1
	9.90E-01	U	RPD	41.5				(13.5)		9	9	GER13\$1
EU-152	-6.06E-03	U	4.7E-02	4.7E-02	7.88E-02	pCi/g		-0.08	4/21/11 07:19 a	368.0	368.0	GER13\$1
	-8.96E-02	U	RPD	-174.6				-0.26		9	9	GER13\$1
EU-154	2.33E-02	U	5.5E-02	5.5E-02	9.77E-02	pCi/g		0.24	4/21/11 07:19 a	368.0	368.0	GER13\$1
	4.83E-03	U	RPD	131.3				0.85		9	9	GER13\$1
EU-155	-6.37E-03	U	5.4E-02	5.4E-02	8.95E-02	pCi/g		-0.07	4/21/11 07:19 a	368.0	368.0	GER13\$1
	2.67E-02	U	RPD	325.7				-0.24		9	9	GER13\$1

No. of Results: 7 Comments:

TestAmerica RPD - Relative Percent Difference.
 rpt\$TLRchDupV5.2 MDC|MDA,Le - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 .12 A2002 U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM II

Date: 27-Apr-11

DUPLICATE RESULTS

Lab Name: TestAmerica
 Lot-Sample No.: J1D200526-2
 Client Sample ID: J1HH89 DUP
 SDG: JP0166
 Report No.: 46365
 COC No.: RC-074-222
 Matrix: SOIL
 Collection Date: 4/19/2011 12:55:00 PM
 Received Date: 4/20/2011 11:10:00 AM

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: 1110365	SRTOT_SEP_PRECIP_GPC				Work Order: MG9N01AE	Report DB ID: MG9N01ER			Orig Sa DB ID: 9MG9ND10			
STRONTIUM	2.89E+00		2.3E-01	7.8E-01	1.68E-01	pCi/g	62%	(17.3)	4/25/11 07:08 a		5.99	GPC26C
	3.67E+00		RPD 23.6				(7.4)				9	

No. of Results: 1 Comments:

FORM II

Date: 27-Apr-11

DUPLICATE RESULTS

Lab Name: TestAmerica
 Lot-Sample No.: J1D200526-3
 Client Sample ID: J1HH90 DUP

SDG: JP0166
 Report No.: 46365
 COC No.: RC-074-222

Collection Date: 4/19/2011 1:00:00 PM
 Received Date: 4/20/2011 11:10:00 AM
 Matrix: SOIL

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1110367	Ni63_LSC								Orig Sa DB ID: 9MG9N110			
Ni-63	-4.51E+00	U	5.0E+00	6.1E+00	1.38E+01	pCi/g	96%	-0.33	4/27/11 02:22 a		0.26	LSC3
	-4.20E-01	U	RPD	-165.9		3.00E+01		-(1.5)			9	

No. of Results: 1 Comments:

FORM II

BLANK RESULTS

Date: 27-Apr-11

Lab Name: TestAmerica SDG: JP0166
 Matrix: SOIL Report No.: 46365

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA , CRDL	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1110367 NI63_LSC												
NI-63	2.42E+01	U	6.4E+00	8.0E+00	1.27E+01	pCi/g	100%	(1.9)	4/27/11 02:44 a	0.25	0.25	LSC3
					5.95E+00	3.00E+01		(6.1)			g	
Batch: 1110363 GAMMA_GS												
AG-108M	4.64E-03	U	1.0E-02	1.0E-02	1.87E-02	pCi/g		0.25	4/21/11 02:16 p	348.0	348.0	GER10\$1
AMERICIUM 241	-3.95E-02	U	4.3E-02	4.3E-02	6.93E-02	pCi/g		0.89	4/21/11 02:16 p	g	348.0	GER10\$1
CO-60	-1.41E-03	U	1.1E-02	1.1E-02	1.89E-02	pCi/g		-0.57	4/21/11 02:16 p	g	348.0	GER10\$1
CS-137	4.24E-03	U	1.2E-02	1.2E-02	2.15E-02	pCi/g		-(1.8)	4/21/11 02:16 p	g	348.0	GER10\$1
EU-152	-1.11E-02	U	4.0E-02	4.0E-02	5.68E-02	pCi/g		-0.07	4/21/11 02:16 p	g	348.0	GER10\$1
EU-154	1.87E-02	U	2.9E-02	2.9E-02	5.75E-02	pCi/g		-0.27	4/21/11 02:16 p	g	348.0	GER10\$1
EU-155	-1.20E-03	U	3.1E-02	3.1E-02	5.30E-02	pCi/g		0.2	4/21/11 02:16 p	g	348.0	GER10\$1
					1.00E-01	1.00E-01		0.71	4/21/11 02:16 p	g	348.0	GER10\$1
					1.00E-01	1.00E-01		-0.2	4/21/11 02:16 p	g	348.0	GER10\$1
					1.00E-01	1.00E-01		-0.56	4/21/11 02:16 p	g	348.0	GER10\$1
					1.00E-01	1.00E-01		0.33	4/21/11 02:16 p	g	348.0	GER10\$1
					1.00E-01	1.00E-01		(1.3)	4/21/11 02:16 p	g	348.0	GER10\$1
					1.00E-01	1.00E-01		-0.02	4/21/11 02:16 p	g	348.0	GER10\$1
					1.00E-01	1.00E-01		-0.08	4/21/11 02:16 p	g	348.0	GER10\$1
Batch: 1110365 SRTOT_SEP_PRECIP_GPC												
STRONTIUM	2.30E-01	U	7.6E-02	9.6E-02	1.24E-01	pCi/g	84%	(1.9)	4/25/11 07:08 a	6.01	6.01	GPC27A
					5.73E-02			(4.8)		g	g	

No. of Results: 9
 Comments:

FORM II
LCS RESULTS

Date: 27-Apr-11

Lab Name: TestAmerica SDG: JP0166
 Matrix: SOIL Report No.: 46365

Parameter	Result	Count Qual Error (2 s)	Total Uncert(2 s)	MDC MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 1110367 NI63_LSC Work Order: MG92V1AC Report DB ID: MG92V1CS												
NI-63	4.74E+02	1.8E+01	4.6E+01	1.32E+01	pCi/g	93%	5.85E+02	9.8E+00	81%	4/27/11 03:07 a	0.26	LSC3
						Rec Limits:	70	130	-0.2			
Batch: 1110363 GAMMA_GS Work Order: MG92P1AC Report DB ID: MG92P1CS												
CS-137	1.13E+00	1.6E-01	1.6E-01	3.49E-02	pCi/g		1.08E+00	1.1E-02	104%	4/21/11 02:17 p	350.1	GER13\$1
RA-226	9.91E-01	1.6E-01	1.6E-01	5.93E-02	pCi/g		1.14E+00	1.2E-02	87%	4/21/11 02:17 p	350.1	GER13\$1
RA-228	8.87E-01	2.0E-01	2.0E-01	1.20E-01	pCi/g		9.34E-01	9.7E-03	95%	4/21/11 02:17 p	350.1	GER13\$1
U-238	1.00E+00	1.5E-01	1.5E-01	6.67E-02	pCi/g		1.20E+00	1.2E-02	83%	4/21/11 02:17 p	350.1	GER13\$1
						Rec Limits:	70	130	-0.2			
Batch: 1110365 SRTOT_SEP_PRECIP_GPC Work Order: MG92R1AC Report DB ID: MG92R1CS												
STRONTIUM	1.10E+00	1.3E-01	3.1E-01	1.28E-01	pCi/g	88%	1.12E+00	1.3E-02	98%	4/25/11 07:08 a	6.0	GPC27B
						Rec Limits:	70	130	0.0			

No. of Results: 6 Comments:

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

rptSTLRchLcs
V5.2.12 A2002

Lot No., Due Date: J1D200526; 04/27/2011
 Client, Site: 127642; S00N063A00 HANFORD
 QC Batch No., Method Test: 1110365; RSRTOT SrTot by GPC
 SDG, Matrix: JP0166; SOIL

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:

First Level *Mca Antonio* Date *4/25/11*

Data Review Checklist RADIOCHEMISTRY Second Level Review

Batch Number: 1110365

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 = 1.0 pCi/g

Second Level Review: Rhonda J. [Signature] Date: 4/25/11

Lot No., Due Date: J1D200526; 04/27/2011
 Client, Site: 127642; S00N063A00 HANFORD
 QC Batch No., Method Test: 1110363; RGAMMA Gamma by GER
 SDG, Matrix: JP0166; SOIL

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 10-18205

First Level  Date 4/22/11

Data Review Checklist
RADIOCHEMISTRY
 Second Level Review

Batch Number: 11103603

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 = 0.1 pci/g
See NCM# 10-18205

Second Level Review: *[Signature]* Date: 4/29/11

Clouseau Nonconformance Memo



NCM #: 10-18205	Classification: Anomaly
NCM Initiated By: Lisa Antonson	Status: PMREVIEW
Date Opened: 04/22/2011	Production Area: Counting
Date Closed:	Tests: Gamma by GER
	Lot #'s (Sample #'s): J1D200000 (363), J1D200526 (1,2,3),
	QC Batches: 1110363,
Nonconformance: Dups not within acceptance limits	
Subcategory: Inhomogeneity of the Sample	

Problem Description / Root Cause

Name	Date	Description
Lisa Antonson	04/22/2011	The duplicate RPD is 41.48 which is out of limits. Difference is more than 1 CRDL. suspect inhomogeneity of sample.

Corrective Action

Name	Date	Corrective Action
Lisa Antonson	04/22/2011	accept data, recount available at client request.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position

Lot No., Due Date: J1D200526; 04/27/2011
 Client, Site: 127642; S00N063A00 HANFORD
 QC Batch No., Method Test: 1110367; RNI63 Ni-63 by LSC
 SDG, Matrix: JP0166; SOIL

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:

First Level

Pre Antonson Date 4/27/11

Data Review Checklist
RADIOCHEMISTRY
 Second Level Review

Batch Number: 1110367

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 = 30 pci/g

Second Level Review: [Signature] Date: 1/22/10

Washington Closure Hanford Page 1 of 1

Collector: K Lucas RC-074-222

Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Soil In-Proce Price Code: 8L

Ice Chest No.: N/A Data Turnaround: 24 Days

Shipped To: TestAmerica Incorporated, Richland Method of Shipment: Fed-Ex

Bill of Lading/Air Bill No.: N/A Date: 4/13/11

Sample No.	Matrix *	Sample Date	Sample Time	Preservation	None	None	None	None
J1HH88	SOIL	4/19/11	1250		G/P	G/P		
J1HH89	SOIL	4/19/11	1255		1	0		
J1HH90	SOIL	4/19/11	1300		500mL	500mL		

SAMPLE ANALYSIS

CHAIN OF POSSESSION

Relinquished By/Removed From: K. Lucas Date/Time: 4-19-11

Received By/Store In: J. F. Beck Date/Time: 4-19-11

Relinquished By/Removed From: J. F. Beck Date/Time: 4-20-11

Received By/Store In: [Signature] Date/Time: 4-20-11

SPECIAL INSTRUCTIONS

None

(1) Gamma Spec (Client List) (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Silver-108 metastable)

LABORATORY SECTION Title: JP0166

FINAL SAMPLE DISPOSITION Date/Time: 4-20-11





Now-Reg

3/23/2011 12:30:14PM

Page 1 of 4

J1HH 88
89
90

Analysis Report for RCF27385

J1FJM8 SAF:RC-074 100D/118-D-2 EX1-7 Excavation Area 1

GAMMA SPECTRUM ANALYSIS

Sample Identification : RCF27385
 Sample Description : J1FJM8 SAF:RC-074 100D/118-D-2 EX1-7 Excavation Area 1
 Sample Type : 80g pillbox

 Sample Size : 7.800E+01 grams
 Facility : Default

 Sample Taken On : 3/23/2011 8:30:00AM
 Acquisition Started : 3/23/2011 9:47:23AM

 Procedure : 80 Gram Pill Box
 Operator : RCT
 Detector Name : OLI2
 Geometry : 80 Gram Pill Box
 Live Time : 3600.0 seconds
 Real Time : 3603.9 seconds

 Dead Time : 0.11 %

 Peak Locate Threshold : 3.00
 Peak Locate Range (in channels) : 40 - 4096
 Peak Area Range (in channels) : 40 - 4096
 Identification Energy Tolerance : 1.000 keV

 Energy Calibration Used Done On : 3/15/2011
 Efficiency Calibration Used Done On : 12/2/2010
 Efficiency Calibration Description : OLI2 80gPB EC 120110 SN82752-238

 Sample Number : 12875

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
CS-137	0.995	9.66E+00	6.86E-01	
AM-241	0.999	4.08E-01	2.10E-01	

WCH

Sample Check-in List

Date/Time Received: 4.20.11@1110 GM Screen Result (out) 3 (in) 6 Initials [initials]
 Client: WCH SDG #: JFD166 NA [] SAF #: RC-074 NA []
 Work Order Number: JFD200526 Chain of Custody # RC-074-222
 Shipping Container ID: Hand Delivery NA [] Air Bill # _____ NA []

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

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

Item 6 through 10 for samples. Initial appropriate response.

6. Number of samples in shipping container (Each sample may contain multiple bottles): 3 @ 1 container
7. Sample holding times exceeded? NA [] Yes [] No per sample
8. Samples have:
 tape custody seals hazard labels appropriate sample labels

9. Samples:
 are in good condition (see) _____ are leaking
 are broken _____ have air bubbles (Only for samples requiring no head space)
10. Sample pH appropriate for analysis requested Yes [] No [] N/A (Note discrepancies in #13)
 (If acidification necessary, then document sample ID, initial pH, amount of HNO₃ added and pH after addition)
 RPL ID # of preservative used : _____
11. Sample Location, Sample Collector Listed? * Yes No []
 *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [] No
13. Description of anomalies (include sample numbers): NA

See other side for additional comments

Sample Custodian: [Signature] Date: 4.20.11@1110TACR

Client Informed on _____ by _____ Person contacted _____

No action necessary; process as is

Project Manager: [Signature] Date: 4/20/11

04/21/2011 9:26:22 AM
 27642, Washington Closure Hanford LLC
 Bechtel Hanford, Inc.

Sample Preparation/Analysis

Balance Id: 1120373922

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

PRIORITY

Pipet #:

Sep1 DT/Tm Tech: 19:45 4/24/11 APA

AnalyteDueDate: 04/27/2011

Batch: 1110365 SOIL pCi/g

PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: BouslaughP

Work Order, Lot, Sample Date Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MG9N0-1-AA J1D200526-1-SAMP 04/19/2011 12:50	5.99g, in	SRTA20858 03/29/11	1.5	1.48133 1.41919 62.2m3	50min	26A	0732	4/28/11		
2 MG9N0-1-AA J1D200526-2-SAMP 04/19/2011 12:55	5.99g, in	SRTA20859 03/29/11		1.45749 1.39489 62.6 m3		26B				
3 MG9N0-1-AE-X J1D200526-2-DUP 04/19/2011 12:55	5.99g, in	SRTA20860 03/29/11		1.48579 1.42409 61.7 m3		26C				
4 MG9N1-1-AA J1D200526-3-SAMP 04/19/2011 13:00	5.99g, in	SRTA20861 03/29/11		1.47359 1.41349 60.1 m3		26D				
5 MG92R-1-AA-B J1D200000-365-BLK 04/20/2011 14:44 pd	6.01g, in	SRTA20862 03/29/11		1.51029 1.42589 84.4 m3		27A				
6 MG92R-1-AC-C J1D200000-365-LCS 04/20/2011 14:44 pd	6.00g, in	STSB1534 01/26/11		1.50369 1.41619 87.5 m3		27B				

4/21/2011 9:26:22 AM

Sample Preparation/Analysis

Balance Id:1120373922

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

Pipet #:

AnalyteDueDate: 04/27/2011

Sep1 DT/Tm Tech:

Batch: 1110365

Sep2 DT/Tm Tech:

pCi/g

SEQ Batch, Test: None

Prep Tech: ,BouslaughP



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

All Clients for Batch:

127642, Washington Closure Hanford LLC Bechtel Hanford, Inc. , RW2, 27038

MG9NQ1AA-SAMP Constituent List:

Sr-90	RDL:1	pCi/g	LCL:70	UCL:130	RPD:35					
MG92R1AA-BLK:										
Sr-90	RDL:1	pCi/g	LCL:	UCL:	RPD:					
MG92R1AC-LCS:										
Sr-90	RDL:1	pCi/g	LCL:70	UCL:130	RPD:35					
MG9NQ1AA-SAMP Calc Info:										
Uncert Level (#s):	2	Decay to SaDt:	Y	Blk Subt.:	N	Sci.Not.:	Y	ODRs:	B	
MG92R1AA-BLK:										
Uncert Level (#s):	2	Decay to SaDt:	Y	Blk Subt.:	N	Sci.Not.:	Y	ODRs:	B	
MG92R1AC-LCS:										
Uncert Level (#s):	2	Decay to SaDt:	Y	Blk Subt.:	N	Sci.Not.:	Y	ODRs:	B	

TestAmerica

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2

Richland Wa.

pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: 6

Prep_SamplePrep v4.8.49

4/25/2011 11:01:06 AM

ICOC Fraction Transfer/Status Report

ByDate: 4/25/2010, 4/30/2011, Batch: '1110365', User: *ALL, Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
1110365				
AC	Rev1C	BouslaughP	4/21/2011 9:02:59	
SC		wagarr	IsBatched	4/20/2011 2:46:10 PM
SC		BouslaughP	InPrep	4/21/2011 9:02:59 AM
SC		WoodT	Prep1C	4/21/2011 11:11:28 PM
SC		AshworthA	Sep2C	4/24/2011 9:11:10 PM
SC		BlackCL	InCnt1	4/25/2011 6:40:51 AM
SC		ClarkR	CalcC	4/25/2011 9:28:59 AM
SC		antonsonI	Rev1C	4/25/2011 11:01:00 AM
AC		WoodT		4/21/2011 11:11:28
AC		AshworthA		4/24/2011 9:11:10 PM
AC		BlackCL		4/25/2011 6:40:51
AC		ClarkR		4/25/2011 9:28:30
AC		ClarkR		4/25/2011 9:28:59
AC		antonsonI		4/25/2011 11:01:00

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

4/21/2011 2:58:59 AM
 127642, Washington Closure Hanford LLC
 Bechtel Hanford, Inc.
 AnalyzeDate: 04/27/2011
 Batch: 1110363 SOIL
 SEQ Batch, Test: None

Sample Preparation/Analysis
 AX Gamma Prp PRP003/GAM001
 TA Gamma by HPGE
 5I CLIENT: HANFORD
 PM, Quote: RW2, 27038
 pCi/g

Balance Id: 1120421763
 Pipet #:
 Sep1 DT/Tm Tech:
 Sep2 DT/Tm Tech:
 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 MGS9Q-1-AD J1D200526-1-SAMP 04/19/2011 12:50	368.10g.in	368.10g	368.10g.in	368.00g		S20	200	610	1034	4/21/11	
2 MGS9Q-1-AE-X J1D200526-1-DUP 04/19/2011 12:50	368.00g.in	368.00g	368.00g.in	368.00g				613	1039		
3 MGS9Q-1-AD J1D200526-2-SAMP 04/19/2011 12:55	368.20g.in	368.20g	368.20g.in	368.20g				610	1416	4/21/11	
4 MGS9N1-1-AD J1D200526-3-SAMP 04/19/2011 13:00	356.50g.in	356.50g	356.50g.in	356.50g				613	1411		
5 MGS2P-1-AA-B J1D200000-363-BLK 04/20/2011 14:44 pd	348.00g.in	348.00g	348.00g.in	348.00g	OSBK			610	1736	4/21/11	
6 MGS2P-1-AC-C J1D200000-363-LCS 04/20/2011 14:44 pd	350.10g.in	350.10g	350.10g.in	350.10g	QC20009 08/04/09.pd 09/01/09.r			617	1777		

04/21/2011 2:59:00 AM

Sample Preparation/Analysis

Balance Id:1120421763

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

Pipet #:

Analyte Due Date: 04/27/2011

Sep1 DT/Tm Tech:

Batch: 1110363

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

pCi/g

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:
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Comments:

All Clients for Batch:

127642, Washington Closure Hanford LLC , Bechtel Hanford, Inc. , RW2, 27038

MG92P1AA-SAMP Constituent List:

Co-60	RDL:5.00E-02	pCi/g	LCL:70	UCL:130	RPD:35		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		RDL:1.00E-01	pCi/g	LCL:70	UCL:130	RPD:35
Eu-154	RDL:1.00E-01	pCi/g	LCL:70	UCL:130	RPD:35		RDL:1.00E-01	pCi/g	LCL:70	UCL:130	RPD:35
MG92P1AA-BLK:											
Co-60	RDL:5.00E-02	pCi/g	LCL:70	UCL:130	RPD:35		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		RDL:1.00E-01	pCi/g	LCL:70	UCL:130	RPD:35
Eu-154	RDL:1.00E-01	pCi/g	LCL:70	UCL:130	RPD:35		RDL:1.00E-01	pCi/g	LCL:70	UCL:130	RPD:35
MG92P1AC-LCS:											
Cs-137	RDL:0.1	pCi/g	LCL:70	UCL:130	RPD:35		RDL:0.1	pCi/g	LCL:70	UCL:130	RPD:35
K-40	RDL:--	pCi/g	LCL:70	UCL:130	RPD:35		RDL:0.1	pCi/g	LCL:70	UCL:130	RPD:35
RA-228	RDL:0.2	pCi/g	LCL:70	UCL:130	RPD:35		RDL:0.2	pCi/g	LCL:70	UCL:130	RPD:35
U-238	RDL:	pCi/g	LCL:70	UCL:130	RPD:35						

MG92P1AA-SAMP Calc Info:

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

4/22/2011 1:07:05 PM

ICOC Fraction Transfer/Status Report

ByDate: 4/22/2010, 4/27/2011, Batch: '1110363', User: 'ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
1110363				
AC	Rev1C	WoodT	4/21/2011 2:45:06	
SC		wagarr	IsBatched	4/20/2011 2:46:10 PM
SC		WoodT	InPrep	4/21/2011 2:45:06 AM
SC		WoodT	Prep1C	4/21/2011 2:59:08 AM
SC		WoodT	InPrep2	4/21/2011 2:59:18 AM
SC		WoodT	Prep2C	4/21/2011 2:59:31 AM
SC		BlackCL	InCnt1	4/21/2011 3:55:31 AM
SC		DawkinsO	CalcC	4/21/2011 11:36:35 PM
SC		antonsonl	Rev1C	4/22/2011 1:06:55 PM
AC		WoodT	4/21/2011 2:59:08	
AC		WoodT	4/21/2011 2:59:18	
AC		WoodT	4/21/2011 2:59:31	
AC		BlackCL	4/21/2011 3:55:31	
AC		DawkinsO	4/21/2011 11:36:35	
AC		antonsonl	4/22/2011 1:06:55 PM	

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

04/21/2011 9:40:01 AM
 127642, Washington Closure Hanford LLC
 Bechtel Hanford, Inc.
 AnalyDueDate: 04/27/2011
 Batch: 1110367 SOIL pCi/g
 PM, Quote: RW2, 27038
 Balance Id: 1120373922
 AF Ni-63 Prp PRP003/PRP005, Sep LSC017
 S4 Nickel by ICP and Nickel-63 by Liquid Scint
 51 CLIENT: HANFORD
 Pipet #:
 Sep1 DT/Tm Tech:
 Sep2 DT/Tm Tech:
 Prep Tech: BouslaughP

PRIORITY

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 MGS9N0-1-AC J1D200526-1-SAMP 04/19/2011 12:50			0.25g,in	0.25g #Containers: 1	NITA4040 03/30/11	20min				
2 MGS9N0-1-AC J1D200526-2-SAMP 04/19/2011 12:55			0.25g,in	0.25g #Containers: 1	NITA4041 03/30/11					
3 MGS9N1-1-AC J1D200526-3-SAMP 04/19/2011 13:00			0.25g,in	0.25g #Containers: 1	NITA4042 03/30/11					
4 MGS9N1-1-AE-X J1D200526-3-DUP 04/19/2011 13:00			0.26g,in	0.26g #Containers: 1	NITA4043 03/30/11					
5 MGS92V-1-AA-B J1D200000-367-BLK 04/20/2011 14:44 pd			0.25g,in	0.25g #Containers: 1	NITA4044 03/30/11					
6 MGS92V-1-AC-C J1D200000-367-LCS 04/20/2011 14:44 pd			0.26g,in	0.26g #Containers: 1	NISA1337 10/27/10					
7 MGS92V-1-AD-BN J1D200000-367-IBLK 04/20/2011 14:44 pd										

4/21/2011 9:40:01 AM

Sample Preparation/Analysis

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

Balance Id:

Pipet #:

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

AnalytDueDate: 04/27/2011

pCi/g

Batch: 1110367

SEQ Batch, Test: None

Prep Tech:

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 Analys, Init/Date	Comments:
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Comments:

All Clients for Batch:

127642, Washington Closure Hanford LLC Bechtel Hanford, Inc. , RW2, 27038

MG9NQLAC-SAMP Constituent List:

Ni-63	RDL:30	pCi/g	ICL:70	UCL:130	RPD:35					
MG92V1AA-BLK:										
Ni-63	RDL:30	pCi/g	ICL:	UCL:	RPD:					
MG92V1AC-LCS:										
Ni-63	RDL:30	pCi/g	LCL:70	UCL:130	RPD:35					
MG92V1AD-IBLK:										
Ni-63	RDL:30	pCi/g	LCL:	UCL:	RPD:					
MG9NQLAC-SAMP Calc Info:										
Uncert Level (#s):	2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B					
MG92V1AA-BLK:										
Uncert Level (#s):	2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B					
MG92V1AC-LCS:										
Uncert Level (#s):	2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B					
MG92V1AD-IBLK:										
Uncert Level (#s):	2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B					

TestAmerica

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2

ISV - Insufficient Volume for Analysis

WO Cnt: 7

Richland Wa.

pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

Prep_SamplePrep v4.8.49

4/27/2011 10:43:06 AM

ICOC Fraction Transfer/Status Report

ByDate: 4/27/2010, 5/2/2011, Batch: '1110367', User: 'ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
1110367				
AC	Rev1C	BouslaughP	4/21/2011 9:30:54	
SC		wagarr	IsBatched 4/20/2011 2:46:10 PM	ICOC_RADCALC v4.8.49
SC		BouslaughP	InPrep 4/21/2011 9:30:54 AM	RL-PRP-003 REVISION 1
SC		WoodT	Prep1C 4/21/2011 11:11:22 PM	RL-PRP-003 REVISION 1
SC		ClarkR	InCnt1 4/25/2011 2:33:29 PM	RL-CI-005 REVISION 1
SC		ClarkR	CalcC 4/27/2011 10:10:49 AM	RL-CI-005 REVISION 1
SC		antonsonl	Rev1C 4/27/2011 10:42:59 AM	RL-DR-001 Rev 2
AC		WoodT	4/21/2011 11:11:22	
AC		ClarkR	4/25/2011 2:33:29 PM	
AC		ClarkR	4/27/2011 10:10:49	
AC		antonsonl	4/27/2011 10:42:59	

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.