

SAF-RC-190

100N Field Remediation – Soil In-Process

FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21

KW 5/3/11
INITIAL/DATE

COMMENTS:

SDG JP0165

SAF-RC-190

Rad only

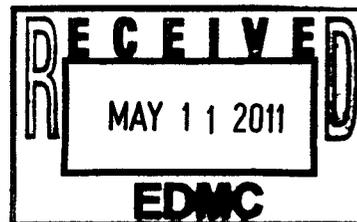
Chem only

Rad & Chem

Complete

Partial

Sample Location: 100-N-63:2



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 27 Pages

Report No.: 46391

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.
JP0165	RC-190	J1HHK6	J1D200536-1	MG9QG1AC	9MG9QG10	1110361
		J1HHK6	J1D200536-1	MG9QG1AA	9MG9QG10	1110362

Certificate of Analysis

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

TestAmerica Laboratories, Inc.

April 28, 2011

Attention: Joan Kessner

SAF Number : RC-190
Date SDG Closed : April 20, 2011
Number of Samples : One (1)
Sample Type : Soil
SDG Number : JP0165
Data Deliverable : 7- Day / Summary

CASE NARRATIVE

I. Introduction

On April 20, 2011 one soil 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:

<u>WCH ID#</u>	<u>TARL ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
J1HHK6	MG9QG	SOIL	4/20/11

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:

Gamma Spectroscopy
Gamma Spec by method RL-GAM-001
Liquid Scintillation Counting
Technetium-99 by method RL-LSC-013

IV. Quality Control

Washington Closure Hanford
April 28, 2011

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

Gamma Spectroscopy

Gamma Spec by method RL-GAM-001:

The CRDL was not met on some analytes. Except as noted; the LCS, batch blank, sample and sample duplicate (J1HHK6) results are within contractual requirements.

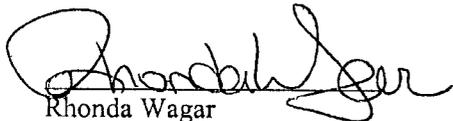
Liquid Scintillation Counting

Technetium-99 by method RL-LSC-013:

The LCS recovery was slightly below the acceptance criteria, 69%. A recount confirmed the original recovery. 69%. All other QC acceptance requirements are within limits. The data will be reported for client review. Except as noted; the LCS, batch blank, sample, sample duplicate (J1HHK6), and sample matrix spike (J1HHK6) results are within contractual requirements.

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

Reviewed and approved:



Rhonda Wagar
Project Manager

Drinking Water Method Cross References

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

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

Uncertainty Estimation

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

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

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

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or TestAmerica.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) <i>u_c - Combined Uncertainty.</i>	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, <i>u_c the combined uncertainty.</i> The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or TestAmerica "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. $Lc = (1.645 * \text{Sqrt}(2 * (\text{BkgrndCnt}/\text{BkgrndCntMin})/\text{SCntMin})) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol}) * \text{IngrFct})$. 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: 28-Apr-11

TestAmerica TARL

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

Report No. : 46391

SDG No: JP0165

Client Id		Parameter	Result +/- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
Batch	Work Order								
1110361 GAMMA_GS									
J1HHK6									
	MG9QG1AC	AMERICIUM 241	3.37E-02 +/- 1.8E-01	U	pCi/g		3.15E-01		
		CO-60	-6.81E-03 +/- 2.2E-02	U	pCi/g		3.74E-02	5.00E-02	
		CS-137	1.33E-02 +/- 2.0E-02	U	pCi/g		3.61E-02	1.00E-01	
		EU-152	-1.52E-02 +/- 4.9E-02	U	pCi/g		8.37E-02	1.00E-01	
		EU-154	-4.36E-02 +/- 6.6E-02	U	pCi/g		1.07E-01	1.00E-01	
		EU-155	3.82E-02 +/- 6.0E-02	U	pCi/g		1.02E-01	1.00E-01	
		RA-226	5.65E-01 +/- 1.1E-01		pCi/g		5.77E-02		
J1HHK6 DUP									
	MG9QG1AD	AMERICIUM 241	-2.66E-02 +/- 4.0E-02	U	pCi/g		6.71E-02		1712.0
		CO-60	4.27E-03 +/- 2.3E-02	U	pCi/g		4.11E-02	5.00E-02	-870.2
		CS-137	4.77E-03 +/- 2.3E-02	U	pCi/g		4.12E-02	1.00E-01	94.5
		EU-152	-3.55E-02 +/- 6.3E-02	U	pCi/g		1.00E-01	1.00E-01	-80.2
		EU-154	2.21E-02 +/- 7.3E-02	U	pCi/g		1.30E-01	1.00E-01	-611.3
		EU-155	2.84E-02 +/- 5.9E-02	U	pCi/g		1.00E-01	1.00E-01	29.5
		RA-226	4.94E-01 +/- 1.3E-01		pCi/g		7.81E-02		13.4
1110362 TC99_ETVDSK_LSC									
J1HHK6									
	MG9QG1AA	TC-99	5.15E-02 +/- 3.6E-01	U	pCi/g	100%	6.36E-01	1.50E+01	
J1HHK6 DUP									
	MG9QG1AF	TC-99	-2.92E-01 +/- 3.5E-01	U	pCi/g	100%	6.38E-01	1.50E+01	-285.7
No. of Results: 16									

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.

QC Results Summary

Date: 28-Apr-11

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Report No. : 46391

SDG No.: JP0165

Batch	Work Order	Parameter	Result +/- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC MDA
GAMMA_GS									
1110361 BLANK QC,									
	MG92A1AA	AMERICIUM 241	-1.92E-03 +/- 4.5E-02	U	pCi/g				7.66E-02
		CO-60	-4.50E-03 +/- 1.1E-02	U	pCi/g				1.89E-02
		CS-137	-5.27E-03 +/- 1.2E-02	U	pCi/g				1.97E-02
		EU-152	-7.99E-03 +/- 3.6E-02	U	pCi/g				5.49E-02
		EU-154	1.14E-02 +/- 3.0E-02	U	pCi/g				5.70E-02
		EU-155	-1.80E-03 +/- 3.0E-02	U	pCi/g				5.12E-02
		RA-226	1.23E-01 +/- 4.0E-02	U	pCi/g				6.26E-02
1110361 LCS,									
	MG92A1AC	CS-137	1.10E+00 +/- 1.5E-01		pCi/g		102%	0.0	2.73E-02
		RA-226	9.43E-01 +/- 1.4E-01		pCi/g		83%	-0.2	4.63E-02
		RA-228	1.15E+00 +/- 1.9E-01		pCi/g		123%	0.2	8.09E-02
		U-238	1.04E+00 +/- 1.5E-01		pCi/g		87%	-0.1	4.89E-02
TC99_ETVDSK_LSC									
1110362 BLANK QC,									
	MG92M1AA	TC-99	4.32E-02 +/- 3.6E-01	U	pCi/g	100%			6.23E-01
1110362 LCS,									
	MG92M1AC	TC-99	4.76E+01 +/- 3.0E+00		pCi/g	100%	69%	-0.3	6.26E-01
1110362 MATRIX SPIKE, J1HHK6									
	MG9QG1AE	TC-99	2.00E+02 +/- 1.1E+01		pCi/g	100%	88%	-0.1	6.31E-01
No. of Results: 14									

TestAmerica Bias - (Result/Expected)-1 as defined by ANSI N13.30.
 rptSTLRchQcSummary V5.2.12 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.
 A2002

FORM I

SAMPLE RESULTS

Date: 28-Apr-11

Lab Name: TestAmerica
 Lot-Sample No.: J1D200536-1
 Client Sample ID: J1HHK6

SDG: JP0165
 Report No.: 46391
 COC No.: RC-190-047

Collection Date: 4/19/2011 12:40:00 PM
 Received Date: 4/20/2011 11:05:00 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: 1110361 GAMMA_GS Report DB ID: 9MG9QG10												
AMERICIUM 241	3.37E-02	U	1.8E-01	1.8E-01	3.15E-01	pCi/g		0.11	4/21/11 06:00 p	354.2	354.2	GER13\$1
								0.37			g	
CO-60	-6.81E-03	U	2.2E-02	2.2E-02	3.74E-02	pCi/g	5.00E-02	-0.18	4/21/11 06:00 p	354.2	354.2	GER13\$1
								-0.62			g	
CS-137	1.33E-02	U	2.0E-02	2.0E-02	3.61E-02	pCi/g	1.00E-01	0.37	4/21/11 06:00 p	354.2	354.2	GER13\$1
								(1.3)			g	
EU-152	-1.52E-02	U	4.9E-02	4.9E-02	8.37E-02	pCi/g	1.00E-01	-0.18	4/21/11 06:00 p	354.2	354.2	GER13\$1
								-0.62			g	
EU-154	-4.36E-02	U	6.6E-02	6.6E-02	1.07E-01	pCi/g	1.00E-01	-0.41	4/21/11 06:00 p	354.2	354.2	GER13\$1
								(-1.3)			g	
EU-155	3.82E-02	U	6.0E-02	6.0E-02	1.02E-01	pCi/g	1.00E-01	0.37	4/21/11 06:00 p	354.2	354.2	GER13\$1
								(1.3)			g	
RA-226	5.65E-01		1.1E-01	1.1E-01	5.77E-02	pCi/g		(9.8)	4/21/11 06:00 p	354.2	354.2	GER13\$1
								(10.)			g	
Batch: 1110362 TC99_ETVDSK_LSC Report DB ID: 9MG9QG10												
TC-99	5.15E-02	U	2.6E-01	3.6E-01	6.36E-01	pCi/g	100%	0.08	4/26/11 02:45 a	2.0	2.0	LSC4
							3.05E-01	0.28			g	

No. of Results: 8 Comments:

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/Mdaa/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.
 V5.2.12 A2002

FORM II

Date: 28-Apr-11

DUPLICATE RESULTS

Lab Name: TestAmerica
 Lot-Sample No.: J1D200536-1
 Client Sample ID: J1HHK6 DUP
 SDG: JP0165
 Report No.: 46391
 COC No.: RC-190-047
 Matrix: SOIL
 Collection Date: 4/19/2011 12:40:00 PM
 Received Date: 4/20/2011 11:05:00 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: 1110361 GAMMA_GS												
AMERICIUM 241	-2.66E-02	U	4.0E-02	4.0E-02	6.71E-02	pCi/g		-0.4	4/21/11 07:52 p	356.3	356.3	GER14\$1
	3.37E-02	U	RPD	1712.0				-(1.3)			g	
CO-60	4.27E-03	U	2.3E-02	2.3E-02	4.11E-02	pCi/g		0.1	4/21/11 07:52 p	356.3	356.3	GER14\$1
	-6.81E-03	U	RPD	-870.2		5.00E-02		0.37			g	
CS-137	4.77E-03	U	2.3E-02	2.3E-02	4.12E-02	pCi/g		0.12	4/21/11 07:52 p	356.3	356.3	GER14\$1
	1.33E-02	U	RPD	94.5		1.00E-01		0.41			g	
EU-152	-3.55E-02	U	6.3E-02	6.3E-02	1.00E-01	pCi/g		-0.35	4/21/11 07:52 p	356.3	356.3	GER14\$1
	-1.52E-02	U	RPD	-80.2		1.00E-01		-(1.1)			g	
EU-154	2.21E-02	U	7.3E-02	7.3E-02	1.30E-01	pCi/g		0.17	4/21/11 07:52 p	356.3	356.3	GER14\$1
	-4.36E-02	U	RPD	-611.3		1.00E-01		0.61			g	
EU-155	2.84E-02	U	5.9E-02	5.9E-02	1.00E-01	pCi/g		0.28	4/21/11 07:52 p	356.3	356.3	GER14\$1
	3.82E-02	U	RPD	29.5		1.00E-01		0.96			g	
RA-226	4.94E-01	U	1.3E-01	1.3E-01	7.81E-02	pCi/g		(6.3)	4/21/11 07:52 p	356.3	356.3	GER14\$1
	5.65E-01	U	RPD	13.4				(7.8)			g	

Batch:	1110362	TC99_ETVDSK_LSC	Work Order:	MG9QG1AF	Report DB ID:	MG9QG1FR	Orig Sa DB ID:	9MG9QG10
TC-99	-2.92E-01	U	2.5E-01	3.5E-01	6.38E-01	pCi/g	100%	4/26/11 04:50 a
	5.15E-02	U	RPD	-285.7	1.50E+01			-1.7
								1.99
								g
								LSC4

No. of Results: 8 Comments:

TestAmerica RPD - Relative Percent Difference.
 rptSTLRchDupV5.2 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: 28-Apr-11

BLANK RESULTS

Lab Name: TestAmerica SDG: JP0165
 Matrix: SOIL Report No.: 46391

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: 1110362 TC99_ETVDSK_LSC Report DB ID: MG92M1AA												
TC-99	4.32E-02	U	2.6E-01	3.6E-01	6.23E-01	pCi/g	100%	0.07	4/26/11 05:53 a		2.02	LSC4
					2.99E-01	1.50E+01		0.24			g	
Batch: 1110361 GAMMA_GS Report DB ID: MG92A1AB												
AMERICIUM 241	-1.92E-03	U	4.5E-02	4.5E-02	7.66E-02	pCi/g		-0.03	4/21/11 09:40 p		348.0	GER10\$1
CO-60	-4.50E-03	U	1.1E-02	1.1E-02	1.89E-02	pCi/g		-0.09	4/21/11 09:40 p		g	GER10\$1
CS-137	-5.27E-03	U	1.2E-02	1.2E-02	1.97E-02	pCi/g		-0.82	4/21/11 09:40 p		g	GER10\$1
EU-152	-7.99E-03	U	3.6E-02	3.6E-02	5.49E-02	pCi/g		-0.27	4/21/11 09:40 p		348.0	GER10\$1
EU-154	1.14E-02	U	3.0E-02	3.0E-02	5.70E-02	pCi/g		-0.91	4/21/11 09:40 p		g	GER10\$1
EU-155	-1.80E-03	U	3.0E-02	3.0E-02	5.12E-02	pCi/g		-0.15	4/21/11 09:40 p		348.0	GER10\$1
RA-226	1.23E-01	U	4.0E-02	4.0E-02	6.26E-02	pCi/g		-0.45	4/21/11 09:40 p		g	GER10\$1
								0.2	4/21/11 09:40 p		348.0	GER10\$1
								0.76	4/21/11 09:40 p		g	GER10\$1
								-0.04	4/21/11 09:40 p		348.0	GER10\$1
								-0.12	4/21/11 09:40 p		g	GER10\$1
								(2.)	4/21/11 09:40 p		348.0	GER10\$1
								(6.2)			g	

No. of Results: 8 Comments:

TestAmerica MDC|MDA, Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rpt:STLRchBlank 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 II
LCS RESULTS**

Date: 28-Apr-11

Lab Name: TestAmerica SDG: JP0165
 Matrix: SOIL Report No.: 46391

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: 1110362 TC99_ETVDSK_LSC Work Order: MG92M1AC Report DB ID: MG92M1CS													
TC-99	4.76E+01		9.7E-01	3.0E+00	6.26E-01	pCi/g	100%	6.87E+01	3.0E-01	69%	4/26/11 06:55 a	2.01	LSC4
							Rec Limits:	70	130	-0.3		g	
Batch: 1110361 GAMMA_GS Work Order: MG92A1AC Report DB ID: MG92A1CS													
CS-137	1.10E+00		1.5E-01	1.5E-01	2.73E-02	pCi/g		1.08E+00	1.1E-02	102%	4/21/11 09:41 p	350.1	GER11\$1
							Rec Limits:	70	130	0.0		g	
RA-226	9.43E-01		1.4E-01	1.4E-01	4.63E-02	pCi/g		1.14E+00	1.2E-02	83%	4/21/11 09:41 p	350.1	GER11\$1
							Rec Limits:	70	130	-0.2		g	
RA-228	1.15E+00		1.9E-01	1.9E-01	8.09E-02	pCi/g		9.34E-01	9.7E-03	123%	4/21/11 09:41 p	350.1	GER11\$1
							Rec Limits:	70	130	0.2		g	
U-238	1.04E+00		1.5E-01	1.5E-01	4.89E-02	pCi/g		1.20E+00	1.2E-02	87%	4/21/11 09:41 p	350.1	GER11\$1
							Rec Limits:	70	130	-0.1		g	

No. of Results: 5 Comments:

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

FORM II

Date: 28-Apr-11

MATRIX SPIKE RESULTS

Lab Name: TestAmerica SDG: JP0165 Matrix: SOIL
 Lot-Sample No.: J1D200536-1, J1HHK6 Report No.: 46391

Parameter	Spike Result, Orig Rst	Count Error (2 s)	Total Uncert (2 s)	MDC MDA	Rpt Unit, CRDL	Yield	Recovery	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 1110362	Work Order: MG9QG1AE	Report DB ID: MG9QG1EW	Orig Sa DB ID: 9MG9QG10								
TC-99	2.00E+02	1.9E+00	1.1E+01	6.31E-01	pCi/g	100%	88.13%	2.27E+02	4/26/11 03:47 a	1.99	TC99_ETVDSK_LSC
	5.15E-02							9.2E-01		g	LSC4

Number of Results: 1

Comments:

TestAmerica RER - Replicate Error Ratio = (S-D)/[sqrt((sq(TPUs)+sq(TPUD)))] as defined by ICPT BOA
 rptSTLRchMs Bias - (Result/Expected)-1 as defined by ANSI N13.30
 V5.2.12 A2002

Lot No., Due Date: J1D200536; 04/27/2011
 Client, Site: 127642; S00N063A00 HANFORD
 QC Batch No., Method Test: 1110361; RGAMMA Gamma by GER
 SDG, Matrix: JP0165; 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 10-18203

First Level *[Signature]* Date 4/22/11

Data Review Checklist RADIOCHEMISTRY Second Level Review

Batch Number: 1110301

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: CR DL = 21 pCi/g
See NCM # 10-18203

Second Level Review: [Signature] Date: 4/24/11

Clouseau Nonconformance Memo



NCM #: 10-18203	Classification: Anomaly
NCM Initiated By: Lisa Antonson	Status: PMREVIEW
Date Opened: 04/22/2011	Production Area: Counting
Date Closed:	Tests: Gamma by GER
Nonconformance: MDA not met	Lot #'s (Sample #'s): J1D200000 (361), J1D200536 (1),
Subcategory: Data accepted	QC Batches: 1110361,

Problem Description / Root Cause

Name	Date	Description
Lisa Antonson	04/22/2011	CRDL not met for all analytes due to reduced count time based on priority processing.

Corrective Action

Name	Date	Corrective Action
Lisa Antonson	04/22/2011	None

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note
			<u>Response</u>		<u>Response Note</u>

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: J1D200536; 04/27/2011
 Client, Site: 127642; S00N063A00 HANFORD
 QC Batch No., Method Test: 1110362; RTC99 Tc-99 by LSC
 SDG, Matrix: JP0165; 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 10-18245

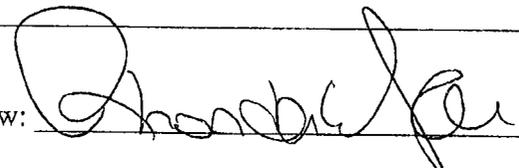
First Level *[Signature]* Date *4/28/11*

Data Review Checklist RADIOCHEMISTRY Second Level Review

Batch Number: 1110302

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
See NCM # 10-18245

Second Level Review:  Date: 4/28/11

Clouseau Nonconformance Memo



NCM #: 10-18245 NCM Initiated By: Lisa Antonson Date Opened: 04/28/2011 Date Closed:	Classification: Anomaly Status: PMREVIEW Production Area: Environmental - Sep Tests: Tc-99 by LSC Lot #'s (Sample #'s): J1D200000 (362), J1D200536 (1), QC Batches: 1110362,
Nonconformance: LCS result out of limits Subcategory: Analyte was recovered low in the LCS	

Problem Description / Root Cause

<u>Name</u>	<u>Date</u>	<u>Description</u>
Lisa Antonson	04/28/2011	The LCS was recovered low in the original count. A recount confirmed the result. The client was notified. Data will be uploaded.

Corrective Action

<u>Name</u>	<u>Date</u>	<u>Corrective Action</u>
Lisa Antonson	04/28/2011	the recount confirmed low recovery of the LCS.

Client Notification Summary

<u>Client</u>	<u>Project Manager</u>	<u>Notified</u>	<u>Response</u>	<u>How Notified</u>	<u>Note</u>
			<u>Response</u>		<u>Response Note</u>

Quality Assurance Verification

<u>Verified By</u>	<u>Due Date</u>	<u>Status</u>	<u>Notes</u>
			This section not yet completed by QA.

Approval History

<u>Date Approved</u>	<u>Approved By</u>	<u>Position</u>



Non-Reg

Analysis Report for RCF27874

J1HHK6 SAF:RC-190 100NFR/100-N-63:2 soil sample in 60mL aG jar

GAMMA SPECTRUM ANALYSIS

Sample Identification : RCF27874
 Sample Description : J1HHK6 SAF:RC-190 100NFR/100-N-63:2 soil sample in 60mL aG jar
 Sample Type : 125 ml Poly Bottle

Sample Size : 1.040E+02 grams
 Facility : Default

Sample Taken On : 4/19/2011 12:40:00PM
 Acquisition Started : 4/19/2011 3:09:06PM

Procedure : 125ml Poly Bottle
 Operator : RCT
 Detector Name : REGIE2
 Geometry : 125 ml Poly Bottle
 Live Time : 7200.0 seconds
 Real Time : 7201.4 seconds

Dead Time : 0.02 %

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 : 3/11/2011
 Efficiency Calibration Used Done On : 3/17/2011
 Efficiency Calibration Description : REGIE2125mlPB 031611EC SN82753-238

Sample Number : 13786

“Qualitative Only”

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	1.000	2.59E+01	3.04E+00	
PB-212	0.711	1.13E+00	1.36E-01	
RA-226d @	0.823	7.60E-01	1.18E-01	
TH-232d	0.996	9.17E-01	1.02E-01	

Sample Check-in List

TRUR
Date/Time Received: 4-20-11@1105 GM Screen Result (out) .3 (in) .5 Initials [Signature]
Client: WCH SDG #: JPO165 NA [] SAF #: RC-190 NA []
Work Order Number: JTD200536 Chain of Custody # RC-190-047
Shipping Container ID: Hand Delivered NA [] Air Bill # NA 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: 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): 1 @ 1 bottle
7. Sample holding times exceeded? NA [] Yes [] No 500mlp.
8. Samples have:
 tape
 custody seals
 hazard labels
 appropriate sample labels

JTD200536
9. Samples: (Seal)
 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 (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@1105TRUR

Client Informed on _____ by _____ Person contacted _____

No action necessary, process as is

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

4/21/2011 5:37:15 AM **Sample Preparation/Analysis** Balance Id:1120421763
 127642, Washington Closure Hanford LLC AX Gamma Prp PRP003/GAM001 Pipet #:
 Bechtel Hanford, Inc. TA Gamma by HPGE
 AnalyzeDate: 04/27/2011 **Jp0165** 51 CLIENT: HANFORD Sep1 DT/Tm Tech:
 Batch: 1110361 SOIL pCi/g PM, Quote: RW2, 27038 Sep2 DT/Tm Tech:
 SEQ Batch, Test: None All Tests: 1110361 AXTA, 1110362 ANS5, Prep Tech: WoodT

PRIORITY

Work Order, Lot, Sample Date	Total Amt /Unit	Total Amt 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:
------------------------------	-----------------	--------------------------	--------------------------	-----------------------------	---------------------	-----------------	----------------	-------------	------------------------------	-----------------------	-----------

J1D200536-1-SAMP 04/19/2011 12:40 MG9QG-1-AC	354.20g.in	354.20g	354.20g.in	354.20g		S200	200	G13	2119	4/21/1180	
--	------------	---------	------------	---------	--	------	-----	-----	------	-----------	--

J1D200536-1-DUP 04/19/2011 12:40 MG9QG-1-AD-X	356.30g.in	356.30g	356.30g.in	356.30g				G14	2312		
---	------------	---------	------------	---------	--	--	--	-----	------	--	--

J1D200000-361-BLK 04/20/2011 14:44 pd MG92A-1-AA-B	348.00g.in	348.00g	348.00g.in	348.00g	OSQC			G10	0100		
--	------------	---------	------------	---------	------	--	--	-----	------	--	--

J1D200000-361-LCS 04/20/2011 14:44 pd MG92A-1-ACC	350.10g.in	350.10g	350.10g.in	350.10g	QC20009 08/04/09, pd 09/01/09, r			G11	0101		
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Comments:

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

MG9QG1AC-SAMP Constituent List:	RD:	UCL:	LCL:	PCi/g	RDL:	UCL:	LCL:	PCi/g	RPD:	UCL:	LCL:	PCi/g	RPD:	UCL:	LCL:
Co-60	RDL:5.00E-02	UCL:	LCL:	PCi/g	RDL:1.00E-01	UCL:	LCL:	PCi/g	RPD:	UCL:	LCL:	PCi/g	RPD:	UCL:	LCL:
Cs-137DA	RDL:1.00E-01	UCL:130	LCL:70	PCi/g	RDL:1.00E-01	UCL:130	LCL:70	PCi/g	RPD:35	UCL:130	LCL:70	PCi/g	RPD:	UCL:130	LCL:70
Eu-154	RDL:1.00E-01	UCL:	LCL:	PCi/g	RDL:1.00E-01	UCL:	LCL:	PCi/g	RPD:	UCL:	LCL:	PCi/g	RPD:	UCL:	LCL:
MG92A1AA-BLK:															
Co-60	RDL:5.00E-02	UCL:	LCL:	PCi/g	RDL:1.00E-01	UCL:	LCL:	PCi/g	RPD:	UCL:	LCL:	PCi/g	RPD:	UCL:	LCL:
Cs-137DA	RDL:1.00E-01	UCL:	LCL:	PCi/g	RDL:1.00E-01	UCL:	LCL:	PCi/g	RPD:	UCL:	LCL:	PCi/g	RPD:	UCL:	LCL:

TestAmerica Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1
 Richland Wa. pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added
 ISV - Insufficient Volume for Analysis
 WO Cnt: 4
 Prep_SamplePrep v4.8.49

4/21/2011 5:37:15 AM

Sample Preparation/Analysis

Balance Id: 1120421763

AX Gamma Prp PRP003/GAM001

Pipet #:

TA Gamma by HPGE

SI CLIENT: HANFORD

AnalysDueDate: 04/27/2011

Sep1 DT/Tm Tech:

Batch: 1110361

pCi/g

SEQ Batch, Test: None

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:
Eu-154	RDL: 1.00E-01	pCi/g	LCL: UCL:	RPD:	Eu-155	RDL: 1.00E-01	pCi/g	LCL: UCL:	RPD:		
MG92A1AC-LCS:											
Cs-137	RDL: 0.1	pCi/g	LCL: 70	RPD: 35	Cs-137DA	RDL: 0.1	pCi/g	LCL: 70	RPD: 35		
K-40	RDL: ---	pCi/g	LCL: 70	RPD: 35	Ra-226	RDL: 0.1	pCi/g	LCL: 70	RPD: 35		
RA-228	RDL: 0.2	pCi/g	LCL: 70	RPD: 35	RA-228DA	RDL: 0.2	pCi/g	LCL: 70	RPD: 35		
U-238	RDL:	pCi/g	LCL: 70	RPD: 35							
MG90GIAC-SAMP	Calc Info:										
Uncert Level (#s):	2	Decay to SaDt: Y	Blk Subst.: N	Sci. Not.: Y	ODRs: B						
MG92A1AA-BLK:											
Uncert Level (#s):	2	Decay to SaDt: Y	Blk Subst.: N	Sci. Not.: Y	ODRs: B						
MG92A1AC-LCS:											
Uncert Level (#s):	2	Decay to SaDt: Y	Blk Subst.: N	Sci. Not.: Y	ODRs: B						

4/22/2011 11:49:39 AM

ICOC Fraction Transfer/Status Report

ByDate: 4/22/2010, 4/27/2011, Batch: '1110361', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
1110361				
AC	Rev1C	WoodT	4/21/2011 12:46:30	
SC		wagarr	IsBatched	4/20/2011 2:46:10 PM
SC		WoodT	InPrep	4/21/2011 12:46:30 AM
SC		WoodT	Prep1C	4/21/2011 2:41:35 AM
SC		WoodT	InPrep2	4/21/2011 2:41:47 AM
SC		WoodT	Prep2C	4/21/2011 2:41:57 AM
SC		ClarkR	InCnt1	4/21/2011 7:51:55 AM
SC		BlackCL	CalcC	4/22/2011 7:22:33 AM
SC		antonsonl	Rev1C	4/22/2011 11:49:27 AM
AC		WoodT	4/21/2011 2:41:35	
AC		WoodT	4/21/2011 2:41:47	
AC		WoodT	4/21/2011 2:41:57	
AC		ClarkR	4/21/2011 7:51:55	
AC		BlackCL	4/22/2011 7:22:33	
AC		antonsonl	4/22/2011 11:49:27	

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

4/21/2011 9:54:28 AM

Sample Preparation/Analysis

Balance Id:1120373922

127642, Washington Closure Hanford LLC
Bechtel Hanford, Inc.

AN Tc-99 Prp/Sep PRP003/LSC013
S5 Technetium-99 by Liquid Scint
5I CLIENT: HANFORD

Pipet #:

AnalyteDueDate: 04/27/2011

Sep1 DT/Tm Tech:

Batch: 1110362 SOIL

PM, Quote: RW2, 27038

pCi/g

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	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MG9QG-1-AA J1D200536-1-SAMP 04/19/2011 12:40	2.00g,in							
2 MG9QG-1-AE-S J1D200536-1-MS 04/19/2011 12:40	1.99g,in	AmtRec: 1X500MLP	TCSG3103 12/21/10, pd 01/01/87					Alpha: Beta: Scr: #Containers: 1
3 MG9QG-1-AF-X J1D200536-1-DUP 04/19/2011 12:40	1.99g,in	AmtRec: 1X500MLP						Alpha: Beta: Scr: #Containers: 1
4 MG92M-1-AA-B J1D200000-362-BLK 04/20/2011 14:44 pd	2.02g,in	AmtRec: 1X500MLP						Alpha: Beta: Scr: #Containers: 1
5 MG92M-1-AC-C J1D200000-362-LCS 04/20/2011 14:44 pd	2.01g,in	AmtRec: 1X500MLP	TCSF2335 03/08/11, pd 01/01/87					Alpha: Beta: Scr: #Containers: 1
6 MG92M-1-AD-BN J1D200000-362-BLK 04/20/2011 14:44 pd		AmtRec: 1X500MLP						Alpha: Beta: Scr: #Containers: 1

60m,n

4/21/2011 9:54:29 AM

Sample Preparation/Analysis

Balance Id:

AN Tc-99 Prp/Sep PRP003/LSC013
S5 Technetium-99 by Liquid Scint
SI CLIENT: HANFORD

Pipet #:

AnalyDueDate: 04/27/2011

Sep1 DT/Tm Tech:

Batch: 1110362
pCi/g

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:

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

Comments:

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

MG90G1AA-SAMP Constituent List:

Tc-99 RDL:15 pCi/g LCL:70 UCL:130 RPD:35

MG90G1AE-MS Constituent List:

Tc-99 RDL:15 pCi/g LCL:70 UCL:130 RPD:35

MG92MLAA-BLK:

Tc-99 RDL:15 pCi/g LCL:70 UCL:130 RPD:35

MG92MLAC-LCS:

Tc-99 RDL:15 pCi/g LCL:70 UCL:130 RPD:35

MG92MLAD-IBLK:

Tc-99 RDL:15 pCi/g LCL:70 UCL:130 RPD:35

MG90G1AA-SAMP Calc Info:

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

MG90G1AE-MS Calc Info:

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

MG92MLAA-BLK:

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

MG92MLAC-LCS:

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

MG92MLAD-IBLK:

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

4/28/2011 10:51:19 AM

ICOC Fraction Transfer/Status Report

ByDate: 4/28/2010, 5/3/2011, Batch: '1110362', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
1110362				
AC	Rev1C	WoodT	4/21/2011 12:46:36	
SC		wagarr	IsBatched 4/20/2011 2:46:10 PM	ICOC RADCALC v4.8.49
SC		WoodT	InPrep 4/21/2011 12:46:36 AM	RL-PRP-003 REVISION 1
SC		BouslaughP	InPrep 4/21/2011 9:44:24 AM	RL-PRP-003 REVISION 1
SC		BouslaughP	Prep1C 4/21/2011 4:47:38 PM	RL-PRP-003 REVISION 1
SC		DawkinsO	InCnt1 4/25/2011 4:26:20 PM	RL-CI-005 REVISION 1
SC		antonsonl	Rev1C 4/28/2011 10:50:57 AM	RL-DR-001 Rev 2
AC		BouslaughP	4/21/2011 9:44:24	
AC		BouslaughP	4/21/2011 4:47:38 PM	
AC		DawkinsO	4/25/2011 4:26:20 PM	
AC		antonsonl	4/28/2011 10:50:57	

AC: Accepting Entry; SC: Status Change

TestAmerica Richland
Richland Wa.