

Analytical Data Package Prepared For

Fluor Hanford

Radiochemical Analysis By

TestAmerica TARL

2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.

Data Package Contains _____ Pages

Report Nbr: 39411

RECEIVED
JUL 28 2008
EDMC

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W05412	W08-005	B1V8X7	J8E140121-1	KM5021AA	9KM50210	8148558
		B1V910	J8E140121-10	KM51V1AA	9KM51V10	8148558
		B1V910	J8E140121-10	KM51V1AC	9KM51V10	8148557
		B1V8K8	J8E140121-11	KM51W1AA	9KM51W10	8148558
		B1V8K8	J8E140121-11	KM51W1AC	9KM51W10	8148557
		B1V918	J8E140121-2	KM5051AA	9KM50510	8148558
		B1V917	J8E140121-3	KM51C1AA	9KM51C10	8148558
		B1V914	J8E140121-4	KM51F1AA	9KM51F10	8148558
		B1V8J4	J8E140121-5	KM51H1AA	9KM51H10	8148558
		B1V8K4	J8E140121-6	KM51L1AA	9KM51L10	8148558
W08-005	W08-005	B1V8D6	J8E140121-7	KM51M1AA	9KM51M10	8148557
		B1V8M1	J8E140121-8	KM51P1AA	9KM51P10	8148557
		B1V8L7	J8E140121-9	KM51Q1AA	9KM51Q10	8148557
		B1V881	J8E200179-1	KNHN11AA	9KNHN110	8148561
		B1V8D1	J8E200179-2	KNHN61AA	9KNHN610	8148561

Comments:

Report Nbr: 39411

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W05412	W08-005	B1V9D6	J8E200179-3	KNHN91AA	9KNHN910	8148561
	S08-005	B1V7M2	J8E200181-1	KNHP31AA	9KNHP310	8148560
		B1V7N6	J8E200181-2	KNHQ41AA	9KNHQ410	8148557
	W08-005	B1V8Y1	J8E200189-1	KNHRX1AA	9KNHRX10	8148558
		B1V8W9	J8E200189-2	KNHR91AA	9KNHR910	8148558
		B1V8F6	J8E200189-3	KNHTJ1AA	9KNHTJ10	8148557
		B1V8Y5	J8E210149-1	KNKNC1AA	9KNKNC10	8148558

Comments:

Certificate of Analysis

Fluor Hanford
1200 Jadwin Ave.
Richland, WA 99352

June 30, 2008

Attention: Steve Trent

SAF Number	:	W08-005, S08-005
Date SDG Closed	:	May 20, 2008
Number of Samples	:	Twenty (20)
Sample Type	:	Water
SDG Number	:	W05412
Data Deliverable	:	45-Day / Summary

CASE NARRATIVE

I. Introduction

Between May 13, 2008 and May 19, 2008 twenty water samples were received at STL Richland (STLR) for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Fluor Hanford specific IDs:

<u>PGW ID#</u>	<u>STLR ID#</u>	<u>DATE OF RECEIPT</u>	<u>MATRIX</u>
B1V8X7	KM502	5/13/08	WATER
B1V918	KM505	5/13/08	WATER
B1V917	KM51C	5/13/08	WATER
B1V914	KM51F	5/13/08	WATER
B1V8J4	KM51H	5/13/08	WATER
B1V8K4	KM51L	5/13/08	WATER
B1V8D6	KM51M	5/13/08	WATER
B1V8M1	KM51P	5/13/08	WATER
B1V8L7	KM51Q	5/13/08	WATER
B1V910	KM51V	5/13/08	WATER
B1V8K8	KM51W	5/13/08	WATER
B1V881	KNHN1	5/19/08	WATER
B1V8D1	KNHN6	5/19/08	WATER

Fluor Hanford
June 30, 2008

B1V9D6	KNHN9	5/19/08	WATER
B1V7M2	KNHP3	5/16/08	WATER
B1V7N6	KNHQ4	5/16/08	WATER
B1V8Y1	KNHRX	5/16/08	WATER
B1V8W9	KNHR9	5/16/08	WATER
B1V8F6	KNHTJ	5/16/08	WATER
B1V8Y5	KNKNC	5/19/08	WATER

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:

Gamma Spectroscopy

Gamma Spec (LL) by method RICH-RC-5017

Iodine-129 (LL) by method RICH-RC-5025

Liquid Scintillation Counting

Technetium-99 by method RICH-RC-5078

Chemical Analysis

Total Coliform by method 9223

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

Gamma Spectroscopy

Gamma Spec (LL) by method RICH-RC-5017:

There was insufficient volume for a duplicate. Sample B1V8Y5 was recounted on a different detector for the duplicate (B1V8Y5 DUP). Except as noted, the LCS, batch blank, samples and sample duplicate (B1V8Y5) results are within contractual requirements.

Iodine-129 (LL) by method RICH-RC-5025:

The LCS, batch blank, sample and sample duplicate (B1V7M2) results are within contractual requirements.

Fluor Hanford
June 30, 2008

Liquid Scintillation Counting

Technetium-99 by method RICH-RC-5078:

The LCS, batch blank, samples, sample duplicate (B1V910), and sample matrix spike (B1V8K8) results are within contractual requirements.

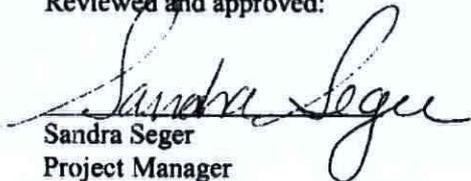
Chemical Analysis

Total Coliform by method 9223

The LCS, batch blank, samples and sample duplicate (B1V881) 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:


Sandra Seger
Project Manager

Drinking Water Method Cross References

DRINKING WATER ASTM METHOD CROSS REFERENCES		
Referenced Method	Isotope(s)	TestAmerica Richland's SOP No.
EPA 901.1	Cs-134, I-131	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 00-02	Gross Alpha (Coprecipitation)	RICH-RC-5021
EPA 903.0	Total Alpha Radium (Ra-226)	RICH-RC-5027
EPA 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr-89/90	RICH-RC-5006
ASTM D5174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007

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

Uncertainty Estimation

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

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

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

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation $(\text{Result}/\text{Expected})-1$ as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or TestAmerica.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) u_c - Combined Uncertainty.	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, u_c , the combined uncertainty. The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or TestAmerica "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. $Lc = (1.645 * \text{Sqrt}(2 * (\text{BkgndCnt}/\text{BkgndCntMin})/\text{SCntMin})) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$. 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%. $MDC = (4.65 * \text{Sqrt}(\text{BkgndCnt}/\text{BkgndCntMin})/\text{SCntMin}) + 2.71/\text{SCntMin}) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$. 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.

6/30/2008 10:26:49 AM

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 39411 File Name: h:\Reportbledd\FeadIVRad\W05412.Edd, h:\Reportbledd\FeadIVRad\39411.Edd

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%:	Distilled Volume	Sample On Date:	Collection Date:				
9KM50210	B1V9X7		MW6-SBB-A1	W08-005	W05412					05/12/2008 12:51				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8148558	BE-7	13966-02-4	3.27E+00	pCi/L	1.4E+01	1.4E+01	U	2.56E+01		GAMMALL_GS	2.00E+00	L	06/12/2008 14:22	I
8148558	CO-60	10198-40-0	1.85E+00	pCi/L	1.6E+00	1.6E+00	U	3.20E+00		GAMMALL_GS	2.00E+00	L	06/12/2008 14:22	I
8148558	CS-134	13967-70-9	3.46E-01	pCi/L	1.3E+00	1.3E+00	U	2.34E+00		GAMMALL_GS	2.00E+00	L	06/12/2008 14:22	I
8148558	CS-137	10045-97-3	1.27E+00	pCi/L	1.3E+00	1.3E+00	U	2.45E+00		GAMMALL_GS	2.00E+00	L	06/12/2008 14:22	I
8148558	EU-152	14683-23-9	-2.16E+00	pCi/L	3.2E+00	3.2E+00	U	5.34E+00		GAMMALL_GS	2.00E+00	L	06/12/2008 14:22	I
8148558	EU-154	15585-10-1	3.62E+00	pCi/L	3.5E+00	3.5E+00	U	7.26E+00		GAMMALL_GS	2.00E+00	L	06/12/2008 14:22	I
8148558	EU-155	14391-16-3	1.58E+00	pCi/L	3.6E+00	3.6E+00	U	6.31E+00		GAMMALL_GS	2.00E+00	L	06/12/2008 14:22	I
8148558	K-40	13966-00-2	8.73E+00	pCi/L	2.1E+01	2.1E+01	U	1.97E+01		GAMMALL_GS	2.00E+00	L	06/12/2008 14:22	I
8148558	RU-106	13967-48-1	-8.92E+00	pCi/L	1.2E+01	1.2E+01	U	2.01E+01		GAMMALL_GS	2.00E+00	L	06/12/2008 14:22	I
8148558	SB-125	14234-35-6	-2.45E+00	pCi/L	3.3E+00	3.3E+00	U	5.45E+00		GAMMALL_GS	2.00E+00	L	06/12/2008 14:22	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%:	Distilled Volume	Sample On Date:	Collection Date:				
9KM50510	B1V918		MW6-SBB-A1	W08-005	W05412					05/12/2008 12:14				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8148558	BE-7	13966-02-4	-6.27E-01	pCi/L	1.5E+01	1.5E+01	U	2.70E+01		GAMMALL_GS	2.0001E+00	L	06/12/2008 14:23	I
8148558	CO-60	10198-40-0	1.78E+00	pCi/L	1.7E+00	1.7E+00	U	3.73E+00		GAMMALL_GS	2.0001E+00	L	06/12/2008 14:23	I
8148558	CS-134	13967-70-9	-3.15E-01	pCi/L	1.7E+00	1.7E+00	U	3.07E+00		GAMMALL_GS	2.0001E+00	L	06/12/2008 14:23	I
8148558	CS-137	10045-97-3	-1.22E-01	pCi/L	1.4E+00	1.4E+00	U	2.49E+00		GAMMALL_GS	2.0001E+00	L	06/12/2008 14:23	I
8148558	EU-152	14683-23-9	1.57E+00	pCi/L	3.9E+00	3.9E+00	U	6.98E+00		GAMMALL_GS	2.0001E+00	L	06/12/2008 14:23	I
8148558	EU-154	15585-10-1	-2.77E-01	pCi/L	4.2E+00	4.2E+00	U	8.05E+00		GAMMALL_GS	2.0001E+00	L	06/12/2008 14:23	I
8148558	EU-155	14391-16-3	2.75E+00	pCi/L	3.0E+00	3.0E+00	U	5.52E+00		GAMMALL_GS	2.0001E+00	L	06/12/2008 14:23	I
8148558	K-40	13966-00-2	-2.03E+00	pCi/L	2.9E+01	2.9E+01	U	6.08E+01		GAMMALL_GS	2.0001E+00	L	06/12/2008 14:23	I
8148558	RU-106	13967-48-1	1.65E+00	pCi/L	1.4E+01	1.4E+01	U	2.48E+01		GAMMALL_GS	2.0001E+00	L	06/12/2008 14:23	I
8148558	SB-125	14234-35-6	-2.19E+00	pCi/L	4.0E+00	4.0E+00	U	6.79E+00		GAMMALL_GS	2.0001E+00	L	06/12/2008 14:23	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%:	Distilled Volume	Sample On Date:	Collection Date:				
9KM51C10	B1V917		MW6-SBB-A1	W08-005	W05412					05/12/2008 07:30				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8148558	BE-7	13966-02-4	4.84E+00	pCi/L	2.3E+01	2.3E+01	U	4.05E+01		GAMMALL_GS	2.0003E+00	L	06/12/2008 14:24	I
8148558	CO-60	10198-40-0	-2.45E+00	pCi/L	2.1E+00	2.1E+00	U	3.21E+00		GAMMALL_GS	2.0003E+00	L	06/12/2008 14:24	I

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
 B Qual - Analyte was found in the associated laboratory blank above the MDC.

TestAmerica
 rptReadRadSummaryEdd v3.48

6/30/2008 10:26:49 AM

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 39411 File Name: h:\Reportdb\edd\FeadIVRadW05412.Edd, h:\Reportdb\edd\FeadIVRad39411.Edd

Lab Sample Id:	Client Id:	Test User:	Contract Nbr:	SAF Nbr:	Sdg Nbr:	QC Type:	Moisture/Solids%:	Distilled Volume:	Sample On Date:	Collection Date:
8148558	CS-134	13967-70-9	2.07E+00	pCi/L	2.6E+00	2.6E+00	U	4.88E+00	GAMMALL_GS	05/12/2008 13:04
8148558	CS-137	10045-97-3	-1.94E+00	pCi/L	1.9E+00	1.9E+00	U	3.05E+00	GAMMALL_GS	06/12/2008 14:24
8148558	EU-152	14683-23-9	-1.74E+00	pCi/L	5.6E+00	5.6E+00	U	9.58E+00	GAMMALL_GS	06/12/2008 14:24
8148558	EU-154	15585-10-1	-1.90E+00	pCi/L	6.0E+00	6.0E+00	U	1.04E+01	GAMMALL_GS	06/12/2008 14:24
8148558	EU-155	14391-16-3	-2.76E+00	pCi/L	4.2E+00	4.2E+00	U	6.84E+00	GAMMALL_GS	06/12/2008 14:24
8148558	K-40	13966-00-2	-4.58E+01	pCi/L	4.9E+01	4.9E+01	U	9.95E+01	GAMMALL_GS	06/12/2008 14:24
8148558	RU-106	13967-48-1	2.78E+00	pCi/L	1.9E+01	1.9E+01	U	3.47E+01	GAMMALL_GS	06/12/2008 14:24
8148558	SB-125	14234-35-6	2.78E+00	pCi/L	5.5E+00	5.5E+00	U	9.84E+00	GAMMALL_GS	06/12/2008 14:24
9KM51F10	B1V914									
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method
8148558	BE-7	13966-02-4	6.43E+00	pCi/L	1.1E+01	1.1E+01	U	2.05E+01	GAMMALL_GS	GAMMALL_GS
8148558	CO-60	10198-40-0	1.27E+01	pCi/L	3.3E+00	3.3E+00	U	2.30E+00	GAMMALL_GS	GAMMALL_GS
8148558	CS-134	13967-70-9	6.54E-01	pCi/L	1.3E+00	1.3E+00	U	2.37E+00	GAMMALL_GS	GAMMALL_GS
8148558	CS-137	10045-97-3	9.72E-01	pCi/L	1.2E+00	1.2E+00	U	2.30E+00	GAMMALL_GS	GAMMALL_GS
8148558	EU-152	14683-23-9	-2.41E+00	pCi/L	2.7E+00	2.7E+00	U	4.31E+00	GAMMALL_GS	GAMMALL_GS
8148558	EU-154	15585-10-1	4.03E-01	pCi/L	3.3E+00	3.3E+00	U	6.20E+00	GAMMALL_GS	GAMMALL_GS
8148558	EU-155	14391-16-3	1.73E+00	pCi/L	2.4E+00	2.4E+00	U	4.49E+00	GAMMALL_GS	GAMMALL_GS
8148558	K-40	13966-00-2	-1.78E+00	pCi/L	2.4E+01	2.4E+01	U	4.94E+01	GAMMALL_GS	GAMMALL_GS
8148558	RU-106	13967-48-1	-3.07E+00	pCi/L	1.1E+01	1.1E+01	U	1.89E+01	GAMMALL_GS	GAMMALL_GS
8148558	SB-125	14234-35-6	5.45E-01	pCi/L	2.6E+00	2.6E+00	U	4.65E+00	GAMMALL_GS	GAMMALL_GS
9KM51H10	B1V8J4									
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method
8148558	BE-7	13966-02-4	-5.03E+00	pCi/L	2.1E+01	2.1E+01	U	3.54E+01	GAMMALL_GS	GAMMALL_GS
8148558	CO-60	10198-40-0	6.71E+01	pCi/L	1.0E+01	1.0E+01	U	2.93E+00	GAMMALL_GS	GAMMALL_GS
8148558	CS-134	13967-70-9	-1.19E+00	pCi/L	2.2E+00	2.2E+00	U	3.69E+00	GAMMALL_GS	GAMMALL_GS
8148558	CS-137	10045-97-3	1.75E+00	pCi/L	2.0E+00	2.0E+00	U	3.77E+00	GAMMALL_GS	GAMMALL_GS
8148558	EU-152	14683-23-9	1.99E+00	pCi/L	4.7E+00	4.7E+00	U	8.47E+00	GAMMALL_GS	GAMMALL_GS
8148558	EU-154	15585-10-1	-2.92E-02	pCi/L	5.7E+00	5.7E+00	U	1.05E+01	GAMMALL_GS	GAMMALL_GS
8148558	EU-155	14391-16-3	1.77E+00	pCi/L	3.6E+00	3.6E+00	U	6.43E+00	GAMMALL_GS	GAMMALL_GS

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
 B Qual - Analyte was found in the associated laboratory blank above the MDC.

TestAmerica
 rptFeadRadSummaryEdd v3.48

6/30/2008 10:26:49 AM

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 39411 File Name: h:\Reportdb\edd\Fead\IVRad\W05412.Edd, h:\Reportdb\edd\Fead\IVRad\39411.Edd

8148558	K-40	13966-00-2	-2.32E+01	pCi/L	4.0E+01	4.0E+01	U	7.95E+01	GAMMALL_GS	1.9999E+00	L	06/12/2008	14:24	I
8148558	RU-106	13967-48-1	-1.47E+01	pCi/L	1.8E+01	1.8E+01	U	2.94E+01	GAMMALL_GS	1.9999E+00	L	06/12/2008	14:24	I
8148558	SB-125	14234-35-6	2.13E+00	pCi/L	4.6E+00	4.6E+00	U	8.35E+00	GAMMALL_GS	1.9999E+00	L	06/12/2008	14:24	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr	QC Type	Moisture/Solids%*	Distilled Volume	Sample On Date:	Collection Date:				
9KM51L10	B1V8K4		MW6-SBB-A1	W08-005	W05412				05/12/2008 10:09					
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8148558	BE-7	13966-02-4	-7.95E+00	pCi/L	1.4E+01	1.4E+01	U	2.32E+01		GAMMALL_GS	2.00E+00	L	06/12/2008 18:21	I
8148558	CO-60	10198-40-0	1.56E+00	pCi/L	1.5E+00	1.5E+00	U	3.09E+00		GAMMALL_GS	2.00E+00	L	06/12/2008 18:21	I
8148558	CS-134	13967-70-9	5.30E-01	pCi/L	1.4E+00	1.4E+00	U	2.58E+00		GAMMALL_GS	2.00E+00	L	06/12/2008 18:21	I
8148558	CS-137	10045-97-3	-6.08E-01	pCi/L	1.4E+00	1.4E+00	U	2.39E+00		GAMMALL_GS	2.00E+00	L	06/12/2008 18:21	I
8148558	EU-152	14683-23-9	4.72E+00	pCi/L	3.5E+00	3.5E+00	U	6.53E+00		GAMMALL_GS	2.00E+00	L	06/12/2008 18:21	I
8148558	EU-154	15585-10-1	-8.99E-01	pCi/L	2.8E+00	2.8E+00	U	5.01E+00		GAMMALL_GS	2.00E+00	L	06/12/2008 18:21	I
8148558	EU-155	14391-16-3	-7.52E-01	pCi/L	3.0E+00	3.0E+00	U	5.11E+00		GAMMALL_GS	2.00E+00	L	06/12/2008 18:21	I
8148558	K-40	13966-00-2	9.28E-01	pCi/L	2.3E+01	2.3E+01	U	2.02E+01		GAMMALL_GS	2.00E+00	L	06/12/2008 18:21	I
8148558	RU-106	13967-48-1	2.28E+00	pCi/L	1.2E+01	1.2E+01	U	2.21E+01		GAMMALL_GS	2.00E+00	L	06/12/2008 18:21	I
8148558	SB-125	14234-35-6	-3.58E+00	pCi/L	3.4E+00	3.4E+00	U	5.32E+00		GAMMALL_GS	2.00E+00	L	06/12/2008 18:21	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr	QC Type	Moisture/Solids%*	Distilled Volume	Sample On Date:	Collection Date:				
9KM51M10	B1V8D6		MW6-SBB-A1	W08-005	W05412				05/12/2008 09:04					
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8148557	TC-99	14133-76-7	1.21E+01	pCi/L	4.7E+00	7.0E+00		9.94E+00	100.0	TC99_SEP_LSC	1.2502E-01	L	06/21/2008 02:04	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr	QC Type	Moisture/Solids%*	Distilled Volume	Sample On Date:	Collection Date:				
9KM51P10	B1V8M1		MW6-SBB-A1	W08-005	W05412				05/12/2008 13:26					
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8148557	TC-99	14133-76-7	4.84E+01	pCi/L	5.7E+00	9.0E+00		9.95E+00	100.0	TC99_SEP_LSC	1.25E-01	L	06/21/2008 02:04	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr	QC Type	Moisture/Solids%*	Distilled Volume	Sample On Date:	Collection Date:				
9KM51Q10	B1V8L7		MW6-SBB-A1	W08-005	W05412				05/12/2008 14:04					
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8148557	TC-99	14133-76-7	2.32E+01	pCi/L	5.0E+00	7.5E+00		9.90E+00	100.0	TC99_SEP_LSC	1.2501E-01	L	06/21/2008 02:04	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr	QC Type	Moisture/Solids%*	Distilled Volume	Sample On Date:	Collection Date:
TestAmerica										
rptFeadRadSummaryEdd v3.48										
U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.										3
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).										
B Qual- Analyte was found in the associated laboratory blank above the MDC.										

6/30/2008 10:26:49 AM

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 39411 File Name: h:\Reportbledd\Fead\IVRad\W05412.Edd, h:\Reportbledd\Fead\IVRad\39411.Edd

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8148558	BE-7	13966-02-4	-7.52E-01	pCi/L	1.8E+01	1.8E+01	U	3.13E+01		GAMMALL_GS	2.0003E+00	L	06/12/2008 18:22	I
8148558	CO-60	10198-40-0	5.99E+01	pCi/L	1.0E+01	1.0E+01	U	3.59E+00		GAMMALL_GS	2.0003E+00	L	06/12/2008 18:22	I
8148558	CS-134	13967-70-9	-1.30E+00	pCi/L	2.1E+00	2.1E+00	U	3.55E+00		GAMMALL_GS	2.0003E+00	L	06/12/2008 18:22	I
8148558	CS-137	10045-97-3	1.35E+00	pCi/L	1.9E+00	1.9E+00	U	3.52E+00		GAMMALL_GS	2.0003E+00	L	06/12/2008 18:22	I
8148558	EU-152	14683-23-9	-8.21E-02	pCi/L	3.8E+00	3.8E+00	U	6.59E+00		GAMMALL_GS	2.0003E+00	L	06/12/2008 18:22	I
8148558	EU-154	15585-10-1	2.12E+00	pCi/L	5.1E+00	5.1E+00	U	1.01E+01		GAMMALL_GS	2.0003E+00	L	06/12/2008 18:22	I
8148558	EU-155	14391-16-3	-4.34E-02	pCi/L	3.5E+00	3.5E+00	U	5.90E+00		GAMMALL_GS	2.0003E+00	L	06/12/2008 18:22	I
8148558	K-40	13966-00-2	-1.33E+01	pCi/L	3.0E+01	3.0E+01	U	6.02E+01		GAMMALL_GS	2.0003E+00	L	06/12/2008 18:22	I
8148558	RU-106	13967-48-1	1.09E+01	pCi/L	1.7E+01	1.7E+01	U	3.15E+01		GAMMALL_GS	2.0003E+00	L	06/12/2008 18:22	I
8148558	SB-125	14234-35-6	-3.63E+00	pCi/L	4.1E+00	4.1E+00	U	6.70E+00		GAMMALL_GS	2.0003E+00	L	06/12/2008 18:22	I
8148557	TC-99	14133-76-7	2.06E+04	pCi/L	7.8E+01	1.2E+03	U	1.01E+01	100.0	TC99_SEP_LSC	1.2502E-01	L	06/21/2008 02:04	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%:	Distilled Volume	Sample On Date:	Collection Date:				
9KM51W10 B1V8K8			MW6-SBB-A1	W08-005	W05412					05/12/2008 10:56				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8148558	BE-7	13966-02-4	-1.47E+01	pCi/L	2.3E+01	2.3E+01	U	3.78E+01		GAMMALL_GS	2.0001E+00	L	06/12/2008 18:23	I
8148558	CO-60	10198-40-0	1.56E-01	pCi/L	2.1E+00	2.1E+00	U	3.92E+00		GAMMALL_GS	2.0001E+00	L	06/12/2008 18:23	I
8148558	CS-134	13967-70-9	5.86E-01	pCi/L	2.2E+00	2.2E+00	U	3.96E+00		GAMMALL_GS	2.0001E+00	L	06/12/2008 18:23	I
8148558	CS-137	10045-97-3	-6.00E-01	pCi/L	1.9E+00	1.9E+00	U	3.36E+00		GAMMALL_GS	2.0001E+00	L	06/12/2008 18:23	I
8148558	EU-152	14683-23-9	1.37E+00	pCi/L	5.6E+00	5.6E+00	U	9.87E+00		GAMMALL_GS	2.0001E+00	L	06/12/2008 18:23	I
8148558	EU-154	15585-10-1	-2.73E+00	pCi/L	5.7E+00	5.7E+00	U	9.80E+00		GAMMALL_GS	2.0001E+00	L	06/12/2008 18:23	I
8148558	EU-155	14391-16-3	-4.61E-01	pCi/L	4.3E+00	4.3E+00	U	7.17E+00		GAMMALL_GS	2.0001E+00	L	06/12/2008 18:23	I
8148558	K-40	13966-00-2	-3.85E+01	pCi/L	5.0E+01	5.0E+01	U	1.02E+02		GAMMALL_GS	2.0001E+00	L	06/12/2008 18:23	I
8148558	RU-106	13967-48-1	2.81E+00	pCi/L	1.9E+01	1.9E+01	U	3.47E+01		GAMMALL_GS	2.0001E+00	L	06/12/2008 18:23	I
8148558	SB-125	14234-35-6	-2.98E+00	pCi/L	5.1E+00	5.1E+00	U	8.59E+00		GAMMALL_GS	2.0001E+00	L	06/12/2008 18:23	I
8148557	TC-99	14133-76-7	1.10E+03	pCi/L	1.8E+01	7.0E+01	U	9.91E+00	100.0	TC99_SEP_LSC	1.2502E-01	L	06/21/2008 02:04	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%:	Distilled Volume	Sample On Date:	Collection Date:				
9KNHP310 B1V7M2			MW6-SBB-A1	S08-005	W05412					05/14/2008 10:13				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8148560	I-129L	15046-84-1	5.25E+00	pCi/L	8.3E-01	8.3E-01	U	3.86E-01	91.9	I129LL_SEP_LEPS	3.8663E+00	L	06/24/2008 08:14	I

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

TestAmerica

rptFeadRadSummaryEdd v3.48

6/30/2008 10:26:49 AM

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 39411 File Name: h:\Reportdb\dd\Fead\VRad\W05412.Edd, h:\Reportdb\dd\Fead\VRad\39411.Edd

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr	QC Type	Moisture/Solids%:	Distilled Volume	Sample On Date:	Collection Date:			
9KNHQ410 B1V7N6			MW6-SBB-A1 S08-005	W05412					05/14/2008 11:03				
Batch Analyte	CAS#	Unit	Result	Unit	SAF Nbr	QC Type	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8148557 TC-99	14133-76-7	pCi/L	4.82E+01	pCi/L	5.7E+00	8.9E+00	9.88E+00	100.0	TC99_SEP_LSC	1.2501E-01	L	06/21/2008 02:04	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	Result	Unit <th>Sdg Nbr</th> <th>QC Type</th> <th>Moisture/Solids%:</th> <th>Distilled Volume</th> <th>Sample On Date:</th> <th>Collection Date:</th>	Sdg Nbr	QC Type	Moisture/Solids%:	Distilled Volume	Sample On Date:	Collection Date:		
9KNHR910 B1V8W9			MW6-SBB-A1 W08-005	W05412						05/14/2008 10:13			
Batch Analyte	CAS#	Unit	Result	Unit	Sdg Nbr	QC Type	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8148558 BE-7	13966-02-4	pCi/L	-8.35E+00	pCi/L	1.8E+01	1.8E+01	3.05E+01		GAMMALL_GS	2.0001E+00	L	06/12/2008 18:24	I
8148558 CO-60	10198-40-0	pCi/L	3.81E+01	pCi/L	7.1E+00	7.1E+00	2.93E+00		GAMMALL_GS	2.0001E+00	L	06/12/2008 18:24	I
8148558 CS-134	13967-70-9	pCi/L	1.83E-02	pCi/L	2.0E+00	2.0E+00	3.67E+00		GAMMALL_GS	2.0001E+00	L	06/12/2008 18:24	I
8148558 CS-137	10045-97-3	pCi/L	-2.62E-01	pCi/L	1.9E+00	1.9E+00	3.30E+00		GAMMALL_GS	2.0001E+00	L	06/12/2008 18:24	I
8148558 EU-152	14683-23-9	pCi/L	2.71E+00	pCi/L	4.5E+00	4.5E+00	8.25E+00		GAMMALL_GS	2.0001E+00	L	06/12/2008 18:24	I
8148558 EU-154	15585-10-1	pCi/L	8.18E-01	pCi/L	5.5E+00	5.5E+00	1.03E+01		GAMMALL_GS	2.0001E+00	L	06/12/2008 18:24	I
8148558 EU-155	14391-16-3	pCi/L	6.61E-01	pCi/L	3.2E+00	3.2E+00	5.63E+00		GAMMALL_GS	2.0001E+00	L	06/12/2008 18:24	I
8148558 K-40	13966-00-2	pCi/L	3.65E+00	pCi/L	4.4E+01	4.4E+01	3.28E+01		GAMMALL_GS	2.0001E+00	L	06/12/2008 18:24	I
8148558 RU-106	13967-48-1	pCi/L	4.98E+00	pCi/L	1.7E+01	1.7E+01	3.09E+01		GAMMALL_GS	2.0001E+00	L	06/12/2008 18:24	I
8148558 SB-125	14234-35-6	pCi/L	-3.72E+00	pCi/L	4.2E+00	4.2E+00	6.76E+00		GAMMALL_GS	2.0001E+00	L	06/12/2008 18:24	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	Result	Unit <th>Sdg Nbr</th> <th>QC Type</th> <th>Moisture/Solids%:</th> <th>Distilled Volume</th> <th>Sample On Date:</th> <th>Collection Date:</th>	Sdg Nbr	QC Type	Moisture/Solids%:	Distilled Volume	Sample On Date:	Collection Date:		
9KNHRX10 B1V8Y1			MW6-SBB-A1 W08-005	W05412						05/14/2008 09:20			
Batch Analyte	CAS#	Unit	Result	Unit	Sdg Nbr	QC Type	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8148558 BE-7	13966-02-4	pCi/L	-1.12E+00	pCi/L	1.2E+01	1.2E+01	2.11E+01		GAMMALL_GS	2.0003E+00	L	06/12/2008 18:23	I
8148558 CO-60	10198-40-0	pCi/L	3.58E+01	pCi/L	6.0E+00	6.0E+00	2.30E+00		GAMMALL_GS	2.0003E+00	L	06/12/2008 18:23	I
8148558 CS-134	13967-70-9	pCi/L	9.20E-02	pCi/L	1.3E+00	1.3E+00	2.32E+00		GAMMALL_GS	2.0003E+00	L	06/12/2008 18:23	I
8148558 CS-137	10045-97-3	pCi/L	1.20E+00	pCi/L	1.2E+00	1.2E+00	2.30E+00		GAMMALL_GS	2.0003E+00	L	06/12/2008 18:23	I
8148558 EU-152	14683-23-9	pCi/L	-1.60E+00	pCi/L	2.7E+00	2.7E+00	4.41E+00		GAMMALL_GS	2.0003E+00	L	06/12/2008 18:23	I
8148558 EU-154	15585-10-1	pCi/L	-1.41E+00	pCi/L	3.4E+00	3.4E+00	5.94E+00		GAMMALL_GS	2.0003E+00	L	06/12/2008 18:23	I
8148558 EU-155	14391-16-3	pCi/L	-1.09E+00	pCi/L	2.4E+00	2.4E+00	4.09E+00		GAMMALL_GS	2.0003E+00	L	06/12/2008 18:23	I
8148558 K-40	13966-00-2	pCi/L	5.00E-01	pCi/L	2.4E+01	2.4E+01	4.97E+01		GAMMALL_GS	2.0003E+00	L	06/12/2008 18:23	I
8148558 RU-106	13967-48-1	pCi/L	-2.57E+00	pCi/L	1.0E+01	1.0E+01	1.80E+01		GAMMALL_GS	2.0003E+00	L	06/12/2008 18:23	I
8148558 SB-125	14234-35-6	pCi/L	-1.93E+00	pCi/L	2.8E+00	2.8E+00	4.72E+00		GAMMALL_GS	2.0003E+00	L	06/12/2008 18:23	I

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

6/30/2008 10:26:49 AM

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 39411 File Name: h:\Reportdb\Fead\IVRad\W05412.Edd, h:\Reportdb\Fead\IVRad\39411.Edd

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr	QC Type	Moisture/Solids%*	Distilled Volume	Method	Sample On Date:	Collection Date:
9KNHTJ10	B1V8F6		MW6-SBB-A1	W08-005	W05412					05/14/2008 11:40	
Batch 8148557	TC-99	14133-76-7	Result 1.14E+02	Unit pCi/L	CntU 7.2E+00	TotU 2S 1.3E+01	MDA 9.93E+00	TrcYield 100.0	TC99_SEP_LSC		06/21/2008 02:04
9KNKNC10	B1V8Y5		MW6-SBB-A1	W08-005	W05412					05/19/2008 11:27	
Batch 8148558	BE-7	13966-02-4	Result -1.70E+01	Unit pCi/L	CntU 2S 1.6E+01	TotU 2S 1.6E+01	MDA 2.56E+01	TrcYield	GAMMALL_GS		06/12/2008 18:32
8148558	CO-60	10198-40-0	4.42E+01	pCi/L	7.6E+00	7.6E+00	3.16E+00		GAMMALL_GS		06/12/2008 18:32
8148558	CS-134	13967-70-9	-1.32E+00	pCi/L	2.0E+00	2.0E+00	3.25E+00		GAMMALL_GS		06/12/2008 18:32
8148558	CS-137	10045-97-3	1.01E+00	pCi/L	1.7E+00	1.7E+00	3.09E+00		GAMMALL_GS		06/12/2008 18:32
8148558	EU-152	14683-23-9	2.39E-01	pCi/L	4.4E+00	4.4E+00	7.51E+00		GAMMALL_GS		06/12/2008 18:32
8148558	EU-154	15585-10-1	-2.56E+00	pCi/L	5.1E+00	5.1E+00	8.62E+00		GAMMALL_GS		06/12/2008 18:32
8148558	EU-155	14391-16-3	3.07E+00	pCi/L	4.3E+00	4.3E+00	7.68E+00		GAMMALL_GS		06/12/2008 18:32
8148558	K-40	13966-00-2	-3.81E+01	pCi/L	5.1E+01	5.1E+01	1.03E+02		GAMMALL_GS		06/12/2008 18:32
8148558	RU-106	13967-48-1	2.85E+00	pCi/L	1.5E+01	1.5E+01	2.68E+01		GAMMALL_GS		06/12/2008 18:32
8148558	SB-125	14234-35-6	-3.62E+00	pCi/L	4.3E+00	4.3E+00	7.05E+00		GAMMALL_GS		06/12/2008 18:32

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

Monday, June 30, 2008

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05412.Edd, h:\Reportdb\edd\Fead\VRad\39411.Edd

Lab Sample Id: KNXF21AB

Sdg/Rept Nbr: W05412

Collection Date: 05/12/2008 09:59

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%:

QC Type: BLK

Received Date: 05/13/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType
	MW6-SBB-A19981								AV	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Allq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Type
8148557 BLK	TC-99 14133-76-7	-5.62E+00	pCi/L	U	9.92E+00	100.0		TC99_SEP_LS	1.2502E-01	06/21/2008 02:04				D

TestAmerica
rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

Monday, June 30, 2008

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Report\bledd\FeadIVRad\W05412.Edd, h:\Report\bledd\FeadIVRad\39411.Edd

Lab Sample Id: KNXGD1AB

Sdg/Rept Nbr: W05412

Collection Date: 05/19/2008 11:27

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%*: BLK

QC Type: BLK

Received Date: 05/20/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
	MW6-SBB-A19981								AX	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Toi/Cnt Uncert 2S	Qual	MDC	Tracer Yield	Spk Conc/ %Rec	Analyt Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8148558 BLK	13966-02-4	-4.79E+00	pCi/L	1.3E+01	U	2.33E+01	GAMMALL_GS	L	GAMMALL_GS	1.9999E+00	06/12/2008 18:33				D
8148558 BLK	10198-40-0	9.44E-01	pCi/L	1.6E+00	U	3.22E+00	GAMMALL_GS	L	GAMMALL_GS	1.9999E+00	06/12/2008 18:33				D
8148558 BLK	13967-70-9	9.17E-01	pCi/L	1.4E+00	U	2.83E+00	GAMMALL_GS	L	GAMMALL_GS	1.9999E+00	06/12/2008 18:33				D
8148558 BLK	10045-97-3	3.32E-01	pCi/L	1.3E+00	U	2.41E+00	GAMMALL_GS	L	GAMMALL_GS	1.9999E+00	06/12/2008 18:33				D
8148558 BLK	14683-23-9	-2.79E+00	pCi/L	3.4E+00	U	5.48E+00	GAMMALL_GS	L	GAMMALL_GS	1.9999E+00	06/12/2008 18:33				D
8148558 BLK	15585-10-1	-1.79E-01	pCi/L	3.7E+00	U	7.02E+00	GAMMALL_GS	L	GAMMALL_GS	1.9999E+00	06/12/2008 18:33				D
8148558 BLK	14391-16-3	7.31E-01	pCi/L	2.7E+00	U	4.68E+00	GAMMALL_GS	L	GAMMALL_GS	1.9999E+00	06/12/2008 18:33				D
8148558 BLK	13966-00-2	-2.21E+01	pCi/L	2.1E+01	U	3.98E+01	GAMMALL_GS	L	GAMMALL_GS	1.9999E+00	06/12/2008 18:33				D
8148558 BLK	13967-48-1	3.98E+00	pCi/L	1.2E+01	U	2.32E+01	GAMMALL_GS	L	GAMMALL_GS	1.9999E+00	06/12/2008 18:33				D
8148558 BLK	SB-125	-2.60E+00	pCi/L	3.9E+00	U	6.36E+00	GAMMALL_GS	L	GAMMALL_GS	1.9999E+00	06/12/2008 18:33				D
8148558 BLK	14234-35-6			3.9E+00											

TestAmerica

rptFeadRadEdd v3.68

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Monday, June 30, 2008

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Feadi\Rad\W05412.Edd, h:\Reportdb\edd\Feadi\Rad\39411.Edd

Lab Sample Id: KNXGK1AB

Sdg/Rept Nbr: W05412 39411

Collection Date: 05/14/2008 10:13

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 05/16/2008

SAF Nbr Contract Nbr
MW6-SBB-A19981

Test User Case Nbr SAS Nbr Suffix Distilled Volume File Id FSuffix RTyp

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt	Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Concl/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8148560	I-129L	3.51E-02	pCi/L	1.3E-01	1.3E-01	U	2.54E-01	96.2		I129LL_SEP_L	3.9261E+00	06/24/2008				D
BLK	15046-84-1										L	08:16				

TestAmerica

rptFeadRadEdd v3.68

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 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

Monday, June 30, 2008

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportbledd\Fead\VRad\W05412.Edd, h:\Reportbledd\Fead\VRad\39411.Edd

Lab Sample Id: KNXF21CS

Sdg/Rept Nbr: W05412

Collection Date: 05/12/2008 09:59

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%*

QC Type: BS

Received Date: 05/13/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType
	MW6-SBB-A19981								AW	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCU/CL	R Type
8148557	TC-99	5.24E+02	pCi/L	3.7E+01		9.98E+00	100.0	5.47E+02	TC99_SEP_LS	1.2501E-01	06/21/2008			70	D
BS	14133-76-7			1.3E+01				95.8		L	02:04			130	

TestAmerica
rptFeadRadEdd v3.68

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B Qual- Analyte was found in the associated laboratory blank above the MDC.

Monday, June 30, 2008

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\IVRad\W05412.Edd, h:\Reportdb\edd\Fead\IVRad\39411.Edd

Lab Sample Id: KNXGD1CS

Sdg/Rept Nbr: W05412 39411

Collection Date: 05/19/2008 11:27

Client Id: NA

Matrix: WATER

Sample On Date: 05/20/2008

Moisture/Solids%*: BS

Received Date: 05/20/2008

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Allq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ	FSuffix	RTyp	
8148558 BS	CO-60	4.23E+01	pCi/L	7.6E+00	3.03E+00	3.03E+00	3.78E+01	111.7	GAMMALL_GS	1.9999E+00	06/12/2008 18:31	70	130	70	D	AY	H	
8148558 BS	10198-40-0	5.53E+01	pCi/L	7.6E+00	3.44E+00	3.44E+00	4.96E+01	111.5	GAMMALL_GS	1.9999E+00	06/12/2008 18:31	70	130	70	D	AY	H	
8148558 BS	CS-137	8.45E+01	pCi/L	9.2E+00	8.83E+00	8.83E+00	7.54E+01	112.1	GAMMALL_GS	1.9999E+00	06/12/2008 18:31	70	130	70	D	AY	H	
8148558 BS	10045-97-3			1.6E+01														
8148558 BS	EU-152			1.6E+01														
8148558 BS	14683-23-9			1.6E+01														

Contract Nbr: MW6-SBB-A19981

TestAmerica

rptFeadRadEdd v3.68

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 B Qual- Analyte was found in the associated laboratory blank above the MDC.

Monday, June 30, 2008

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05412.Edd, h:\Reportdb\edd\Fead\VRad\39411.Edd

Lab Sample Id: KNXGK1CS

Sdg/Rept Nbr: W05412 39411

Collection Date: 05/14/2008 10:13

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*: BS

QC Type: BS

Received Date: 05/16/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BA	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert.2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Alliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8148560	I-129	1.14E+01	pCi/L	1.4E+00		5.52E-01	93.4	9.80E+00	1129LL_SEP_L	3.9791E+00	06/24/2008			70	D
BS	15046-84-1			1.4E+00				116.0		L	10:07			130	

TestAmerica

rptFeadRadEdd v3.68

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 B Qual- Analyte was found in the associated laboratory blank above the MDC.

Monday, June 30, 2008

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Feed\IVRad\W05412.Edd, h:\Reportdb\edd\Feed\IVRad\39411.Edd

Lab Sample Id: KM51V1DR

Sdg/Rept Nbr: W05412

Collection Date: 05/12/2008 09:59

Client Id: B1V910

Matrix: WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 05/13/2008

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	TC/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Concl %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8148557	TC-99	2.04E+04	pCi/L	1.2E+03		1.00E+01	100.0		TC99_SEP_LS	1.2502E-01	06/21/2008	1.1	0.3		D
DUP	14133-76-7	2.06E+04		7.7E+01						L	02:04	20.0	3		

SAF Nbr

Test User

Case Nbr

SAS Nbr

Suffix

Decant

Distilled Volume

File Id

Contract Nbr
MW6-SBB-A19981

FSuffix

RTyp

AR

H

TestAmerica

rptFeedRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
 B Qual - Analyte was found in the associated laboratory blank above the MDC.

Monday, June 30, 2008

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\Fead\W05412.Edd, h:\Reportdb\edd\Fead\W05412.Edd

Lab Sample Id: KNHP31CR
Client Id: B1V7M2
Moisture/Solids%*:

Sdg/Rept Nbr: W05412 Collection Date: 05/14/2008 10:13
Matrix: WATER Sample On Date:
QC Type: DUP Received Date: 05/16/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	F Suffix	R Typ
S08-005	MW6-SBB-A19981									AT H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt	Uncert 2S	Qc- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCU/UCL	R Typ
8148560	I-129L	4.91E+00	pCi/L	7.4E-01	7.4E-01		3.77E-01	95.4		I129LL_SEP_L	3.8654E+00	06/24/2008	6.7	0.7		D
DUP	15046-84-1	5.25E+00									L	08:16	20.0	3		

TestAmerica
rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
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Monday, June 30, 2008

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\Fead\VRad\W05412.Edd, h:\Reportdb\edd\Fead\VRad\39411.Edd
 Lab Sample Id: KNKNC1CR Sdgi/Rept Nbr: W05412 39411 Collection Date: 05/19/2008 11:27
 Client Id: B1V8Y5 Matrix: WATER WATER Sample On Date:
 Moisture/Solids%*: QC Type: DUP Received Date: 05/20/2008

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Concl %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCU/UCL	R Typ
8148558	BE-7	-1.54E+01	pCi/L	2.3E+01	U	3.83E+01			GAMMALL_GS	L	06/12/2008	0.0	0.1		D
DUP	13966-02-4	-1.70E+01		2.3E+01							22:00	20.0	3		
8148558	CO-60	3.63E+01	pCi/L	7.6E+00		4.81E+00			GAMMALL_GS	L	06/12/2008	19.7	1.5		D
DUP	10198-40-0	4.42E+01		7.6E+00							22:00	20.0	3		
8148558	CS-134	-1.73E+00	pCi/L	2.7E+00	U	4.39E+00			GAMMALL_GS	L	06/12/2008	0.0	0.2		D
DUP	13967-70-9	-1.32E+00		2.7E+00							22:00	20.0	3		
8148558	CS-137	-8.80E-01	pCi/L	2.3E+00	U	3.96E+00			GAMMALL_GS	L	06/12/2008	2938.7	1.2		D
DUP	10045-97-3	1.01E+00		2.3E+00							22:00	20.0	3		
8148558	EU-152	-2.40E-02	pCi/L	5.8E+00	U	1.00E+01			GAMMALL_GS	L	06/12/2008	244.7	0.1		D
DUP	14683-23-9	2.39E-01		5.8E+00							22:00	20.0	3		
8148558	EU-154	-1.07E+00	pCi/L	6.0E+00	U	1.06E+01			GAMMALL_GS	L	06/12/2008	0.0	0.4		D
DUP	15585-10-1	-2.56E+00		6.0E+00							22:00	20.0	3		
8148558	EU-155	7.28E-01	pCi/L	4.4E+00	U	7.58E+00			GAMMALL_GS	L	06/12/2008	123.3	0.7		D
DUP	14391-16-3	3.07E+00		4.4E+00							22:00	20.0	3		
8148558	K-40	-2.27E+01	pCi/L	4.9E+01	U	1.02E+02			GAMMALL_GS	L	06/12/2008	0.0	0.4		D
DUP	13966-00-2	-3.81E+01		4.9E+01							22:00	20.0	3		
8148558	RU-106	-7.40E+00	pCi/L	2.0E+01	U	3.37E+01			GAMMALL_GS	L	06/12/2008	0.0	0.7		D
DUP	13967-48-1	2.85E+00		2.0E+01							22:00	20.0	3		
8148558	SB-125	2.53E-01	pCi/L	5.6E+00	U	9.75E+00			GAMMALL_GS	L	06/12/2008	0.0	1.1		D
DUP	14234-35-6	-3.62E+00		5.6E+00							22:00	20.0	3		

TestAmerica
 rpt\FeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
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 B Qual- Analyte was found in the associated laboratory blank above the MDC.

Monday, June 30, 2008

TestAmerica Qc Matrix Spike Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\Fead\VRad\W05412.Edd, h:\Reportdb\edd\Fead\VRad\39411.Edd

Lab Sample Id: KM51W1DW Sdg/Rept Nbr: W05412 39411 Collection Date: 05/12/2008 10:56
 Client Id: B1V8K8 Matrix: WATER WATER Sample On Date:
 Moisture/Solids%*: QC Type: MS Received Date: 05/13/2008

SAF Nbr	W08-005	Contract Nbr	MW6-SBB-A19981	Test User		Case Nbr		SAS Nbr		Suffix		Decant		Distilled Volume		File Id		FSuffix	AS	RType	H										
Batch # / Qc Type	8148557 TC-99	Result/ Orig Rst	3.33E+03	Unit	pCi/L	Tot/Cnt Uncert 2S	2.7E+02	Qu- al		MDC	1.00E+01	Tracer Yield	100.0	Spk Conc/ %Rec	3.59E+03	92.7	Analy Method	TC99_SEP_LS	Aliq Size/	1.2501E-01	Date/Time Analyzed	06/21/2008 02:04	RPD/ UCL	60	RER/ UCL	140	LCS LCL/UCL	60	Typ	D	
MS	14133-76-7					3.6E+01																									

TestAmerica
 rptFeadRadEdd v3.68

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 B Qual- Analyte was found in the associated laboratory blank above the MDC.

RQC050

TestAmerica Laboratories, Inc.
WET CHEM BATCHSHEET

Run Date: 5/29/08
Time: 12:32:34

TestAmerica Richland

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE

METHOD: IZ COLIFORM BY METHOD 9223

QC BATCH #: 8148561

PREP DATE: 5/27/08

COMP DATE: 5/27/08

USER: WAGARR

INITIALS: DM

PREP ANAL

DATE

DATA ENTRY:

INITIALS

DATE

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
KNHN1-1-AA	J-8E200179-001	XX I 88 IZ 5I	E	5/19/08	B1V881
KNHN1-1-AC	J-8E200179-001-X	XX I 88 IZ 5I	E		B1V881 DUP
KNHN6-1-AA	J-8E200179-002	XX I 88 IZ 5I	E		B1V8D1
KNHN9-1-AA	J-8E200179-003	XX I 88 IZ 5I	E		B1V9D6
KNXGM-1-AA	J-8E270000-561-B	XX I 88 IZ 5I			INTRA-LAB BLANK
KNXGM-1-AC	J-8E270000-561-C	XX I 88 IZ 5I			INTRA-LAB CHECK 8.5

Handwritten notes: "100 mL" with arrows pointing to the first two rows of the table.

Control Limits

(0-0)

Lot No., Due Date: J8E140121, J8E200189, J8E210149; 07/07/2008
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 8148558; RGAMMA Gamma by GER
SDG, Matrix: W05412; WATER

1.0 COC

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

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

Yes No N/A

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

Yes No N/A

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

Yes No N/A

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

Yes No N/A

3.0 QC & Samples

3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A

Yes No N/A

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

Yes No N/A

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

Yes No N/A

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

Yes No N/A

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

Yes No N/A

4.0 Raw Data

4.1 Were results calculated in the correct units? Yes No N/A

Yes No N/A

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

Yes No N/A

4.3 Were Yields entered correctly? Yes No N/A

Yes No N/A

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

Yes No N/A

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

Yes No N/A

5.0 Other

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

Yes No N/A

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

Yes No N/A

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

Yes No N/A

5.4 Was transcription checked? Yes No N/A

Yes No N/A

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

Yes No N/A

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

Yes No N/A

6.0 Comments on any No response:

First Level Review

John Porto

Date

6-17-8

Data Review Checklist
RADIOCHEMISTRY
 Second Level Review

Batch Number: 8148558

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?	✓		✓ EJL/8
C. Other			
1. Are all Non-conformances included and noted?			✓
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: _____

Second Level Review: *Ernie Ojeda* Date: 6/10/18

Lot No., Due Date: J8E200181; 07/07/2008
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 8148560; RGAMLEPS Gamma by LEPS
SDG, Matrix: W05412; WATER

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 Review *Lisa Antonson* Date 6/24/08

Data Review Checklist
RADIOCHEMISTRY
 Second Level Review

Batch Number: 8148560

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

Comments on any "No" response: _____

Second Level Review: Erich Jrd Date: 6/25/18

Lot No., Due Date: J8E140121,J8E200181,J8E200189; 07/07/2008

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8148557; RTC99 Tc-99 by LSC

SDG, Matrix: W05412; WATER

8.0	Correction Calculation Protocol Used. OK	Yes	No	N/A
8.01	The Appropriate Methods Were Used To Analyze the Samples OK	Yes	No	N/A
8.02	Final Results Are in the Appropriate Activity Units OK	Yes	No	N/A
8.03	Batch Contains the Required QC Appropriate for the Method OK	Yes	No	N/A
8.04	The Correct Tracer and QC Vials Where Used in the Samples OK	Yes	No	N/A
8.05	Sample was Appropriately Traced Before or After Fractionating the Sample OK	Yes	No	N/A
8.06	At Least the Minimum Sample Volume Was Used OK	Yes	No	N/A
8.07	The Correct Count Geometry was Used. OK	Yes	No	N/A
8.08	The Sample was Counted for the Minimum Count Time or CRDL was Achieved. OK	Yes	No	N/A
8.09	Method Blank is within Control Limits. OK	Yes	No	N/A
8.1	Comments:			
8.11	Matrix Blank is within Control Limits. No Matrix Blanks (MBIs) found in Batch!	Yes	No	N/A
8.12	Method Blank(s) < QAS Limit Value (No B Flag Necessary). OK	Yes	No	N/A
8.13	QAS Specified Duplicate Equation Value within Control Limits. OK (RPD)	Yes	No	N/A
8.14	LCS within Control Limits. OK	Yes	No	N/A
8.15	MLCS within Control Limits. No Matrix Spikes (MLCS) found in Batch!	Yes	No	N/A
8.16	MS within Control Limits. OK	Yes	No	N/A
8.17	Tracer within Control Limits. No Tracers found in Batch!	Yes	No	N/A
8.18	Samples are above Minimum Tracer Yield (No Failed Samples) No Tracers found in Batch!	Yes	No	N/A
8.19	Sample Specific MDC <= CRDL. OK	Yes	No	N/A
8.2	Comments:			
8.21	Result < Lc, Activity Not Detected, U Flag. No Limit Specified!	Yes	No	N/A
8.22	Result < Mdc, Activity Not Detected, U Flag. No Positive Results OK Calc_IDL Not Calculated	Yes	No	N/A
8.23	Result <= Action Level, when Defined. OK; No Action Level Found => TC-99 OK; No Callin Level Found => TC-99	Yes	No	N/A
8.24	Result + 3s >=0, Not Too Negative. OK	Yes	No	N/A
8.25	Counting Spectrum are within FWHM Limits. No FWHM found in Batch Data!	Yes	No	N/A

8.26 Instruments have Current Calibrations. Yes No N/A

8.27 Correct Count Library Used. Yes No N/A
No Count Library found in Batch Data!

8.28 Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later versions) Yes No N/A

8.29 Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in later versions) Yes No N/A

8.3 Comments:

8.31 Results Blank Subtracted as Appropriate. Yes No N/A
OK

First Level Review Xina Gustafson

Date 6/26/08

Data Review Checklist RADIOCHEMISTRY Second Level Review

Batch Number: 8148557

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

Comments on any "No" response: _____

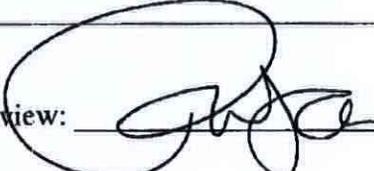
Second Level Review: Eike Jod Date: 6/30/18

Data Review Checklist RADIOCHEMISTRY Second Level Review

Batch Number: 8148561

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: Coliform analysis

Second Level Review: 

Date: 6/30/08

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

W08-005-150

Collector
D.J. Sparks

J8E1401Z

W0541Z

DUE 6 27 08

Page 1 of 1

Project Title

Contact/Requester
Steve Trum

Telephone No.
509-373-5869

MSIN

FAX

RCRA MAY 2008

Sample Origin
Hanford Site

Purchase Order/Charge Code

Protocol
RCRA

Method of Shipment
Govt. Vehicle

Ice Chest No. RC-94-057

Shipped To (Lab)

Offsite Property No.

Bill of Lading/Air Bill No.

Terms

Priority: 45 Days

SPECIAL INSTRUCTIONS

Hold Time

Total Activity Exemption: Yes No

*** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993) ***

Activity Scan

None

TC99_SEP_LSC: Tc-99 (1)

HCl to pH <2

HNO3 to pH <2

GAMMAL_GS: List-1 (9)

Relinquished By <i>D.J. Sparks</i>	Date/Time MAY 12 2008 5-13-08	Received By <i>JB Hulse</i>	Date/Time MAY 13 2008 5-13-08	Print <i>JB Hulse</i>	Sign <i>JB Hulse</i>	Date/Time MAY 13 2008 5-13-08	Matrix *
Relinquished By <i>JB Hulse</i>	Date/Time 5-13-08	Received By <i>JB Hulse</i>	Date/Time 5-13-08	Print <i>TAL</i>	Sign <i>TAL</i>	Date/Time 5-13-08	Matrix *
Relinquished By	Date/Time	Received By	Date/Time	Print	Sign	Date/Time	Matrix *
Relinquished By	Date/Time	Received By	Date/Time	Print	Sign	Date/Time	Matrix *

FINAL SAMPLE DISPOSITION

Disposal Method (e.g., Return to customer, per lab procedure, used in process)

Date/Time



Sample Check-in List

Date/Time Received: 51308 1445 GM Screen Result 0.1K

Client: PGW SDG #: W05412 NA [] SAF #: W08-005 NA []

Work Order Number: J8F140121 Chain of Custody # W08-005-144,-150,-160,-166,-130,-72,-75,-84,-85,-90,-38

Shipping Container ID: _____ Air Bill # _____

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

6. Number of samples in shipping container: 11

7. Sample holding times exceeded? NA Yes [] No []

8. Samples have:
 Tape Hazard Labels
 Custody Seals Appropriate Sample Labels

9. Samples are:
 In Good Condition Leaking
 Broken Have Air Bubbles
 (Only for samples requiring no head space.)

10. Sample pH taken? NA [] pH < 2 pH > 2 [] pH > 9 [] Amount HNO₃ Added _____

11. Sample Location, Sample Collector Listed? *
 *For documentation only. No corrective action needed.

12. Were any anomalies identified in sample receipt? Yes [] No

13. Description of anomalies (include sample numbers): _____

Sample Custodian: Date: 51308

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____



Sample Check-in List

Date/Time Received: 51908 1255 GM Screen Result D.I.K
 Client: PCW SDG #: W05412 NA [] SAF #: W08-005 NA []
 Work Order Number: J8E200179 Chain of Custody # W08-005-378,-442,-450

Shipping Container ID: _____ Air Bill # _____

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

6. Number of samples in shipping container: 3

7. Sample holding times exceeded? NA Yes [] No []

8. Samples have:

Tape
 Custody Seals

Hazard Labels
 Appropriate Sample Labels

9. Samples are:

In Good Condition
 Broken

Leaking
 Have Air Bubbles
 (Only for samples requiring no head space.)

10. Sample pH taken? NA [] pH<2 [] pH>2 pH>9 [] Amount HNO₃ Added _____

11. Sample Location, Sample Collector Listed? *
 *For documentation only. No corrective action needed.

12. Were any anomalies identified in sample receipt? Yes [] No

13. Description of anomalies (include sample numbers): _____

Sample Custodian: [Signature] Date: 51908

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[] No action necessary, process as is.

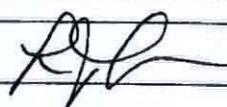
Project Manager _____ Date _____



Sample Check-in List

Date/Time Received: 5/6/08 1000 GM Screen Result 0.1 K
 Client: PGW SDG #: W05412 NA [] SAF #: 508-005 NA []
 Work Order Number: J8E200181 Chain of Custody # 508-005-54-82
 Shipping Container ID: _____ Air Bill # _____

1. Custody Seals on shipping container intact? NA [] Yes No []
2. Custody Seals dated and signed? NA [] Yes No []
3. Chain of Custody record present? NA [] Yes No []
4. Cooler Temperature: _____ NA 5. Vermiculite/packing materials is NA Wet [] Dry []
6. Number of samples in shipping container: 2
7. Sample holding times exceeded? NA Yes [] No []
8. Samples have:
 Tape Hazard Labels
 Custody Seals Appropriate Sample Labels
9. Samples are:
 In Good Condition Leaking
 Broken Have Air Bubbles
(Only for samples requiring no head space.)
10. Sample pH taken? NA [] pH < 2 pH > 2 [] pH > 9 [] Amount HNO₃ Added _____
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [] No
13. Description of anomalies (include sample numbers): _____

Sample Custodian:  Date: 5/19/08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____



Sample Check-in List

Date/Time Received: 51608 1000 GM Screen Result 0.1K
 Client: PGW SDG #: W05412 NA [] SAF #: W08-005 NA []
 Work Order Number: J8E200189 Chain of Custody # W08-005-44,26,106

Shipping Container ID: _____ Air Bill # _____

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

6. Number of samples in shipping container: 3

7. Sample holding times exceeded? NA Yes [] No []

8. Samples have:

Tape
 Custody Seals

Hazard Labels
 Appropriate Sample Labels

9. Samples are:

In Good Condition
 Broken

Leaking
 Have Air Bubbles
 (Only for samples requiring no head space.)

10. Sample pH taken? NA [] pH < 2 pH > 2 [] pH > 9 [] Amount HNO₃ Added _____

11. Sample Location, Sample Collector Listed? *
 *For documentation only. No corrective action needed.

12. Were any anomalies identified in sample receipt? Yes [] No

13. Description of anomalies (include sample numbers): _____

Sample Custodian: [Signature] Date: 51908

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____



Sample Check-in List

Date/Time Received: 05-26-08 1350 GM Screen Result C.I.K

Client: P&W SDG #: W05412 NA [] SAF #: W08-005 NA []

Work Order Number: J8E210149 Chain of Custody # W08-005-50

Shipping Container ID: _____ Air Bill # _____

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

6. Number of samples in shipping container: 1

7. Sample holding times exceeded? NA Yes [] No []

8. Samples have:
 _____ Tape
 _____ Custody Seals
 _____ Hazard Labels
/ _____ Appropriate Sample Labels

9. Samples are:
/ _____ In Good Condition
 _____ Broken
 _____ Leaking
 _____ Have Air Bubbles
 (Only for samples requiring no head space.)

10. Sample pH taken? NA [] pH < 2 pH > 2 [] pH > 9 [] Amount HNO₃ Added none

11. Sample Location, Sample Collector Listed? *
 *For documentation only. No corrective action needed.

12. Were any anomalies identified in sample receipt? Yes No

13. Description of anomalies (include sample numbers): sample lined out 05-19-08, initialed and then re-wrote 05-19-08 - Receiving Tech initialed again these samples were received 05-20-08

Sample Custodian: _____ Date: 05-26-08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____

6/10/2008 3:17:30 PM

Sample Preparation/Analysis

Balance Id: 1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National Lab

AW Gamma PrpRC5017
TA Gamma by HPGE
5I CLIENT: HANFORD

AnalytDueDate: 06/27/2008
Batch: 8149558
SEQ Batch, Test: None

PM, Quote: SS, 57671

PC/I/L

Work Order Lot, Sample Date Time

Total Amt/Unit

Initial Aliquot Amt/Unit

OC Tracer Prep Date

Dish Size

Ppt or Geometry

Count Time Min

Detector Id

Count On | Off (24hr) Circle

CR Analyst, Init/Date

Comments:

Prep Tech: HarrisD

Sample ID	Work Order Lot	Sample Date Time	Total Amt/Unit	Initial Aliquot Amt/Unit	OC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments
1 KMS02-1-AA	J8E140121-1-SAMP	05/12/2008 12:51	2000.00g,in	2000.10g,in					G10	1742	6/12/08/PC	
2 KMS05-1-AA	J8E140121-2-SAMP	05/12/2008 12:14	2000.10g,in	2000.10g,in					G7	1743		Beta: -3.78E-05 uCi/Sa
3 KMS1C-1-AA	J8E140121-3-SAMP	05/12/2008 07:30	2000.30g,in	2000.20g,in					G14	1744		Beta: -4.79E-04 uCi/Sa
4 KMS1F-1-AA	J8E140121-4-SAMP	05/12/2008 13:04	2000.20g,in	1999.90g,in					G11	1744		Beta: 6.30E-06 uCi/Sa
5 KMS1H-1-AA	J8E140121-5-SAMP	05/12/2008 09:44	2000.00g,in	2000.00g,in					G15	1744		Beta: 8.88E-04 uCi/Sa
6 KMS1L-1-AA	J8E140121-6-SAMP	05/12/2008 10:09	2000.00g,in	2000.30g,in					G10	2142	6/12/08/000	Beta: -2.58E-04 uCi/Sa
7 KMS1V-1-AA	J8E140121-10-SAMP	05/12/2008 09:59	2000.30g,in	2000.30g,in					G7			Beta: 2.27E-04 uCi/Sa

6/10/2008 3:17:32 PM

Sample Preparation/Analysis

Balance Id: 1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National Lab

AW Gamma PpRC5017
TA Gamma by HPGE
SI CLIENT: HANFORD

Batch: 8148558 WATER pCvL

Sep1 DT/Tm Tech: PM, Quots: SS, 57671

Sep2 DT/Tm Tech: HarrisD

Count On | Off
(24hr) Circle

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
8 KM51W-1-AA J8E140121-11-SAMP 05/12/2008 10:56	2000.10g.in	2000.10g.in				200	G14	2143		Beta: 2.43E-04 uCi/Sa 6/12/08 GA
9 KNHRX-1-AA J8E200189-1-SAMP 05/14/2008 09:20	2000.30g.in	2000.30g.in					G14	2143		Beta: 3.70E-04 uCi/Sa
10 KNHR0-1-AA J8E200189-2-SAMP 05/14/2008 10:13	2000.10g.in	2000.10g.in					G15	2144		Beta: 7.68E-04 uCi/Sa
11 KNKNC-1-AA J8E210149-1-SAMP 05/19/2008 11:27	2000.10g.in	2000.10g.in					G13	2152		Beta: 2.37E-04 uCi/Sa
12 KNKNC-1-AC-X J8E210149-1-DUP 05/19/2008 11:27	1999.90g.in	1999.90g.in					G14	2120		Beta: 2.37E-04 uCi/Sa
13 KNXGD-1-AA-B J8E270000-558-BLK 05/19/2008 11:27	1999.90g.in	1999.90g.in					G8	2153		Beta:
14 KNXGD-1-AC-C J8E270000-558-LCS 05/19/2008 11:27	1999.90g.in	1999.90g.in					G5	2150		Beta:

see comments

6/10/2008 3:17:33 PM

Sample Preparation/Analysis

Balance Id: 1120482733

AW Gamma PrRC5017
TA Gamma by HPGE
51 CLIENT: HANFORD

Pipet #:

Analyte Due Date: 06/27/2008

Sep1 DT/Tm Tech:

Batch: 8148558

PCVL

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: , Harris D

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:
										

Comments: KINKNC-SAMP *Comments: isv for gamma dup. Please recount on a different detector. DLH 6/10/08*

PH22.0 0214 6/10/08

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, SS , 57671

KMS021AA-SAMP Constituent List:

Co-60	RDL: 0.00E+00	PCI/L	LCL: 70	UCL: 130	RPD: 20	CS-134	RDL: 0.00E+00	PCI/L	LCL: 70	UCL: 130	RPD: 20
Cs-137	RDL: 6.00E+00	PCI/L	LCL: 70	UCL: 130	RPD: 20	CS-137DA	RDL: 6.00E+00	PCI/L	LCL: 70	UCL: 130	RPD: 20
Eu-154	RDL: 0.00E+00	PCI/L	LCL: 70	UCL: 130	RPD: 20	Eu-155	RDL: 0.00E+00	PCI/L	LCL: 70	UCL: 130	RPD: 20
K-40	RDL: 0.00E+00	PCI/L	LCL: 70	UCL: 130	RPD: 20	SB-125	RDL: 0.00E+00	PCI/L	LCL: 70	UCL: 130	RPD: 20

KMXGD1AA-BLK:

Co-60	RDL: 0.00E+00	PCI/L	LCL: 70	UCL: 130	RPD: 20	CS-134	RDL: 0.00E+00	PCI/L	LCL: 70	UCL: 130	RPD: 20
Cs-137	RDL: 6.00E+00	PCI/L	LCL: 70	UCL: 130	RPD: 20	CS-137DA	RDL: 6.00E+00	PCI/L	LCL: 70	UCL: 130	RPD: 20
Eu-154	RDL: 0.00E+00	PCI/L	LCL: 70	UCL: 130	RPD: 20	Eu-155	RDL: 0.00E+00	PCI/L	LCL: 70	UCL: 130	RPD: 20
K-40	RDL: 0.00E+00	PCI/L	LCL: 70	UCL: 130	RPD: 20	SB-125	RDL: 0.00E+00	PCI/L	LCL: 70	UCL: 130	RPD: 20

KMXGD1AC-LCS:

Co-60	RDL: 15	PCI/L	LCL: 70	UCL: 130	RPD: 20	CS-137DA	RDL: 15	PCI/L	LCL: 70	UCL: 130	RPD: 20
K-40	RDL: 6	PCI/L	LCL: 70	UCL: 130	RPD: 20	Ra-226	RDL: --	PCI/L	LCL: 70	UCL: 130	RPD: 20
Eu-154	RDL: --	PCI/L	LCL: 70	UCL: 130	RPD: 20	RA-228DA	RDL: --	PCI/L	LCL: 70	UCL: 130	RPD: 20
V-238	RDL: --	PCI/L	LCL: 70	UCL: 130	RPD: 20			PCI/L	LCL: 70	UCL: 130	RPD: 20

KMS021AA-SAMP Calc Info:

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

Approved By _____ Date: _____

6/17/2008 3:34:46 PM

ICOC Fraction Transfer/Status Report

ByDate: 6/18/2007, 6/22/2008, Batch: '8148558', User: 'ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
8148558				
AC	Rev1C	HarrisD	6/10/2008 2:15:34 PM	
SC		wagarr	IsBatched	5/28/2008 9:05:23 AM
SC		HarrisD	InPrep	6/10/2008 2:15:34 PM
SC		HarrisD	Prep1C	6/10/2008 3:17:32 PM
SC		BockJ	InPrep2	6/11/2008 7:25:53 AM
SC		BockJ	Prep2C	6/12/2008 1:34:54 PM
SC		ClarkR	InCnt1	6/12/2008 1:50:25 PM
SC		ClarkR	CalcC	6/13/2008 7:26:02 AM
SC		nortonj	Rev1C	6/17/2008 3:33:26 PM
AC		HarrisD	6/10/2008 3:17:32 PM	ICOC_RADCALC v4.8.32
AC		BockJ	6/11/2008 7:25:53	RICH-RC-5014 Revision 7
AC		BockJ	6/11/2008 9:04:59	RICH-RC-5017 REVISION 6
AC		BockJ	6/12/2008 1:34:54 PM	RICH-RC-5017 REVISION 6
AC		ClarkR	6/12/2008 1:50:25 PM	RICH-RC-5017 REVISION 6
AC		ClarkR	6/13/2008 7:26:02	RICH-RD-0007 REVISION 6
AC		nortonj	6/17/2008 3:33:26 PM	RICH-RD-0007 REVISION 6
				RICH-RC-0002 REV 8

AC: Accepting Entry; SC: Status Change

TAL Richland
Richland Wa.

6/17/2008 12:48:01 PM

Sample Preparation/Analysis

Balance Id: 1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National Lab

BN I-129 Prp/SepRC5025
TB Gamma by LEPD
SI CLIENT: HANFORD

AnalytDueDate: 06/30/2008 *1055412*
Batch: 8149560 WATER *pc/l*
SEQ Batch, Test: None

PM, Quote: SS, 57671

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: J.HarrisD

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 KNHP3-1-AA J8E200181-1-SAMP 05/14/2008 10:13		3866.30g.in	ITA7329 06/16/08			100	L2	0954		1/24/08 <i>ML</i>
AmtRec: 20ML_2X4LP #Containers: 3										
2 KNHP3-1-AC-X J8E200181-1-DUP 05/14/2008 10:13		3865.40g.in	ITA7330 06/16/08			34.0	L4	0956		1/24/08 <i>ML</i>
AmtRec: 20ML_2X4LP #Containers: 3										
3 KNXGK-1-AA-B J8E270000-560-BLK 05/14/2008 10:13		3926.10g.in	ITA7331 06/16/08			35.3	L5	0956		6/24/08 <i>ML</i>
AmtRec: #Containers: 1										
KNXGK-1-AC-C J8E270000-560-LCS 05/14/2008 10:13		3979.10g.in	ISD0859 06/16/08			35.6	L2	1147		6/24/08 <i>ML</i>
AmtRec: #Containers: 1										

Comments: *DATA 6/17/08*

All Clients for Batch:
384868, Pacific Northwest National Laboratory Pacific Northwest National Lab, SS, 57671

KNHP31AA-SAMP Constituent List:

I-129	RDL:1.00E+00	PCI/L	LCL:	UCL:	RPD:
KNXGK1AA-BLK:					
I-129	RDL:1.00E+00	PCI/L	LCL:	UCL:	RPD:
KNXGK1AC-LCS:					
I-129	RDL:5	PCI/L	LCL:70	UCL:130	RPD:20

KNHP31AA-SAMP Calc Info:

6/17/2008 12:48:02 PM

Sample Preparation/Analysis

Balance Id:1120482733

BN I-129 Prp/SepRC5025
TB Gamma by LEPD
SI CLIENT: HANFORD

Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:

AnalytDueDate: 06/30/2008

Batch: 8148560

SEQ Batch, Test: None

PC/L

Prep Tech: HarrisD



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:
Uncert Level (#s): 2 XXXXXXXX-1LK:	Decay to SaDt: Y	Blk Subt.: N	Blk Subt.: N	Sci.Mot.: Y	ODRs: B					
Uncert Level (#s): 2 XXXXXXXX-LCS:	Decay to SaDt: Y	Blk Subt.: N	Blk Subt.: N	Sci.Mot.: Y	ODRs: B					
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Blk Subt.: N	Sci.Mot.: Y	ODRs: B					

Approved By _____ Date: _____

6/25/2008 10:47:31 AM

ICOC Fraction Transfer/Status Report

ByDate: 6/26/2007, 6/30/2008, Batch: '8148560', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting	Comments
	8148560				
AC		Rev1C	HarrisD	6/17/2008 12:41:11	
SC			wagarr	IsBatched	5/28/2008 9:05:23 AM
SC			HarrisD	InPrep	6/17/2008 12:41:11 PM
SC			HarrisD	Prep1C	6/17/2008 12:48:04 PM
SC			BostedD	InPrep2	6/18/2008 1:40:27 PM
SC			BostedD	Prep2C	6/24/2008 8:08:48 AM
SC			ClarkR	InCnt1	6/24/2008 8:11:22 AM
SC			antonsonl	Rev1C	6/25/2008 10:46:38 AM
AC			HarrisD	6/17/2008 12:48:04	ICOC_RADCALC v4.8.32
AC			BostedD	6/18/2008 1:40:27 PM	RICH-RC-5016 Revision 7
AC			BostedD	6/24/2008 8:08:48	RICH-RC-5017 REVISION 6
AC			ClarkR	6/24/2008 8:11:22	RICHRC5025 REVISION 4
AC			antonsonl	6/25/2008 10:46:38	RL-GAM-002 REVISION 0
					RL-CI-007 REVISION 0
					RICH-RC-0002 REV 8

AC: Accepting Entry; SC: Status Change

TAL Richland

Richland Wa.

6/10/2008 1:26:02 PM **Sample Preparation/Analysis** Balance Id:1120373922
 384868, Pacific Northwest National Laboratory AM Tc-99 Prp/SepRC5078 Pipet #:
 Pacific Northwest National Lab S5 Technetium-99 by Liquid Scint 51 CLIENT: HANFORD
 AnalyzeDate: 06/27/2008 PM, Quote: SS, 57671
 Batch: 8148557 WATER pCi/L
 SEQ Batch, Test: None All Tests: 8148557 AMS5, 8148558 AWTA, CR Analyst, Init/Date

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 KM51M-1-AA J8E140121-7-SAMP 05/12/2008 09:04	125.02g.in							
2 KM51P-1-AA J8E140121-8-SAMP 05/12/2008 13:26	125.00g.in							
3 KM51Q-1-AA J8E140121-9-SAMP 05/12/2008 14:04	125.01g.in							
4 KM51V-1-AC J8E140121-10-SAMP 05/12/2008 09:59	125.02g.in							
5 KM51V-1-AD-X J8E140121-10-DUP 05/12/2008 09:59	125.02g.in							
6 KM51W-1-AC J8E140121-11-SAMP 05/12/2008 10:56	125.02g.in							
7 KM51W-1-AD-S J8E140121-11-MS 05/12/2008 10:56	125.01g.in							

6/10/2008 1:26:03 PM **Sample Preparation/Analysis** Balance Id: 1120373922
 384868, Pacific Northwest National Laboratory AM Tc-99 Prp/SepRC5078 Pipet #:
 Pacific Northwest National Lab S5 Technetium-99 by Liquid Scint
 AnalyDueDate: 06/27/2008 5I CLIENT: HANFORD
 Batch: 8149557 WATER pCi/L PM, Quote: SS, 57671
 Sep1 DT/Tm Tech: Sep2 DT/Tm Tech: Prep Tech: , Barcoff

SEQ Batch, Test: None
 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:

8 KNHQ4-1-AA 125.01g.in
 J8E200181-2-SAMP
 05/14/2008 11:03 AmtRec: 20ML_3XLP #Containers: 4 Scr: Alpha: -5.61E-04 uCi/Sa Beta: 3.11E-04 uCi/Sa

9 KNHTJ-1-AA 125.02g.in
 J8E200189-3-SAMP
 05/14/2008 11:40 AmtRec: 20ML_3XLP #Containers: 4 Scr: Alpha: -2.80E-04 uCi/Sa Beta: 1.45E-04 uCi/Sa

10 KNXF2-1-AA-B 125.02g.in
 J8E270000-557-BLK
 05/12/2008 09:59 AmtRec: TCSE2226 04/11/08.pd #Containers: 1 Scr: Alpha: Beta:

11 KNXF2-1-AC-C 125.01g.in
 J8E270000-557-LCS
 05/12/2008 09:59 AmtRec: #Containers: 1 Scr: Alpha: Beta:

12 KNXF2-1-AD-BN 125.01g.in
 J8E270000-557-IBLK
 05/12/2008 09:59 AmtRec: #Containers: 1 Scr: Alpha: Beta:

Comments:
 All Clients for Batch:
 384868, Pacific Northwest National Laboratory Pacific Northwest National Lab, SS, 57671
 R51M1AA-SAMP Constituent List:
 Tc-99 RDL: 1.50E+01 pCi/L LCL: 70 UCL: 130 RPD: 20
 TAL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2
 Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added ISV - Insufficient Volume for Analysis
 WO Cnt: 12
 Prep_SamplePrep v4.8.32

6/10/2008 1:26:04 PM

Sample Preparation/Analysis

Balance Id:

Pipet #:

AM Tc-99 Pp/SepRC5078
S5 Technetium-99 by Liquid Scint
SI CLIENT: HANFORD

Analyte Due Date: 06/27/2008

Sep1 DT/Tm Tech:

PCVL

Sep2 DT/Tm Tech:

Batch: 8148557
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:
RM51W1AD-MS:								
KKXP21AA-BLK: Tc-99	RDL:1.50E+01	pCi/L	LCL:	UCL:	RPD:			
KKXP21AC-LCS: Tc-99	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20			
KKXP21AD-IBLK: Tc-99	RDL:1.50E+01	pCi/L	LCL:	UCL:	RPD:			
RM51W1AA-SAMP Calc Info: Uncert Level (#s): 2	Decay to Sadt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B				
RM51W1AD-MS: Uncert Level (#s): 2	Decay to Sadt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B				
KKXP21AA-BLK: Uncert Level (#s): 2	Decay to Sadt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B				
KKXP21AC-LCS: Uncert Level (#s): 2	Decay to Sadt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B				
KKXP21AD-IBLK: Uncert Level (#s): 2	Decay to Sadt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B				

Approved By _____ Date: _____

6/26/2008 4:13:16 PM

ICOC Fraction Transfer/Status Report

ByDate: 6/27/2007, 7/1/2008, Batch: '8148557', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting	Comments
	8148557				
	AC		Rev1C	Barcotl	6/10/2008 1:26:39 PM
	SC			wagarr	IsBatched 5/28/2008 9:05:23 AM
	SC			Barcotl	InPrep 6/10/2008 1:26:39 PM
	SC			Barcotl	Prep1C 6/10/2008 1:26:51 PM
	SC			Barcotl	InPrep2 6/20/2008 7:32:20 AM
	SC			Barcotl	Prep2C 6/20/2008 7:32:40 AM
	SC			BlackCL	InCnt1 6/20/2008 7:37:29 AM
	SC			ClarkR	CalcC 6/21/2008 10:04:37 AM
	SC			antonsonl	Rev1C 6/26/2008 4:12:26 PM
	AC			Barcotl	6/10/2008 1:26:51 PM
	AC			Barcotl	6/20/2008 7:32:20
	AC			Barcotl	6/20/2008 7:32:40
	AC			BlackCL	6/20/2008 7:37:29
	AC			ClarkR	6/21/2008 10:04:37
	AC			antonsonl	6/26/2008 4:12:26 PM

AC: Accepting Entry; SC: Status Change

TAL Richland
Richland Wa.

Due 7/7

5/28/2008 8:54:15 AM

Sample Preparation/Analysis

384868, Pacific Northwest National Laboratory
Pacific Northwest National Lab

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
IZ COLIFORM BY METHOD 9223

Batch: 8148561 WATER

PM, Quote: SS, 57671

51 CLIENT: HANFORD

Balance Id: *N/A*
Pipet #:

Sep1 DTTm Tech: *5. AOBPN*
Sep2 DTTm Tech:

SEQ Batch, Test: None

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, Inti/Date	Comments:
1 KNHN1-1-AA								
J8E200179-1-SAMP								
05/19/2008 11:22								
2 KNHN1-1-AC-X								
J8E200179-1-DUP								
05/19/2008 11:22								
3 KNHN6-1-AA								
J8E200179-2-SAMP								
05/19/2008 10:20								
4 KNHN9-1-AA								
J8E200179-3-SAMP								
05/19/2008 08:30								
5 KNXGM-1-AA-B								
J8E270000-561-BLK								
05/19/2008 11:22								
6 KNXGM-1-AC-C								
J8E270000-561-LCS								
05/19/2008 11:22								

5/28/2008 8:54:15 AM

Sample Preparation/Analysis

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
IZ COLIFORM BY METHOD 9223

Balance Id: *N/A*

Pipet #:

Analyte Due Date: 07/02/2008

51 CLIENT: HANFORD

Sep1 DT/Tm Tech: *5-19-08pm*

Batch: 8148561
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

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:

384868, Pacific Northwest National Laboratory Pacific Northwest National Lab, SS , 57671

080811AA-SAMP Constituent List:

080811AA-BLK:

080811AC-LCS:

080811AA-SAMP Calc Info:

Uncert Level (#s):	2	Decay to SdDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
080811AA-BLK:	2	Decay to SdDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
080811AC-LCS:	2	Decay to SdDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

Approved By _____ Date: _____

TAL Richland Richland Wa.

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

ISV - Insufficient Volume for Analysis

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

Page 2

WO Cnt: 6

ICOC v4.8.32