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Analytical Data Package Prepared For

Fluor Hanford

Radiochemical Analysis By

TAL Richland TARL

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

Data Package Contains 40 *Pages*

Report Nbr: 37588

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W05248	X07-048	B1PKP6	J7J110123-1	J8NR81AA	9J8NR810	7305564
		B1PKP3	J7J110123-2	J8NTN1AC	9J8NTN10	7305563
		B1PKP3	J7J110123-2	J8NTN2AA	9J8NTN20	7305562
		B1PKP5	J7J110123-3	J8NTP1AA	9J8NTP10	7305564
		B1PKP2	J7J110123-4	J8NTT1AA	9J8NTT10	7305562
		B1PKP2	J7J110123-4	J8NTT1AC	9J8NTT10	7305563

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Comments:

0077355

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Fluor Hanford
1200 Jadwin Ave.
Richland, WA 99352

November 29, 2007

Attention: Steve Trent

SAF Number	:	X07-048
Date SDG Closed	:	October 10, 2007
Number of Samples	:	Four (4)
Sample Type	:	Water
SDG Number	:	W05248
Data Deliverable	:	45-Day / Summary

CASE NARRATIVE

I. Introduction

On October 10, 2007 four water samples were received at TestAmerica Laboratories Richland (TALR) for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Fluor Hanford specific IDs:

PGW ID#	STLR ID#	DATE OF RECEIPT	MATRIX
B1PKP6	J8NR8	10/10/07	WATER
B1PKP3	J8NTN	10/10/07	WATER
B1PKP5	J8NTP	10/10/07	WATER
B1PKP2	J8NTT	10/10/07	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:

Gas Proportional Counting
Gross Alpha by method RICH-RC-5014
Gross Beta by method RICH-RC-5014
Gamma Spectroscopy
Gamma Spec (LL) by method RICH-RC-5017
Iodine-129 (LL) by method RICH-RC-5025

IV. Quality Control

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

QC and sample results are reported in the same units

V. Comments

Gas Proportional Counting
Gross Alpha by method RICH-RC-5014:
The dulicate was outside acceptance limits. It was recounted with good results. Except as noted, the LCS, batch blank, samples and sample duplicate (B1PKP3) results are within contractual requirements.

Gross Beta by method RICH-RC-5014:
The LCS, batch blank, samples and sample duplicate (B1PKP2) results are within contractual requirements.

Gamma Spectroscopy
Gamma Spec (LL) by method RICH-RC-5017:
The LCS, batch blank, samples and sample duplicate (B1PKP6) 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:

Sherryl A. Adam
Project Manager

Drinking Water Method Cross References

	DRINKING WATER ASTM METHOD CROSS REFERENCES	
Referenced Method	**Isotope(s)**	**STL Richland's SOP number**
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

Uncertainty Estimation

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

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

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

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or STL Richland.
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 STL Richland "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. Lc=(1.645 * Sqrt(2*(BkgrndCnt/BkgrndCntMin)/SCntMin)) * (ConvFct/(Eff*Yld*Abn*Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC|MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. MDC = (4.65 * Sqrt((BkgrndCnt/BkgrndCntMin)/SCntMin) + 2.71/SCntMin) * (ConvFct/(Eff * Yld * Abn * Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the **Work Order** Number.
RER	The equation Replicate Error Ratio = (S-D)/[sqrt($TPUs^2$ + $TPUd^2$)] as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by STL Richland 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.

11/29/2007 2:32:51 PM

TAL Richland Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 37588 File Name: h:\Reportdb\edd\FeadIV\Rad\W05248.Edd, h:\Reportdb\edd\FeadIV\Rad\37588.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:
9J8NR810	B1PKP6		MW6-SBB-A1	X07-048	W05248					10/10/2007 11:45

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7305564	BE-7	13966-02-4	1.53E+01	pCi/L	3.0E+01	3.0E+01	U	5.36E+01		GAMMA_GS	2.5073E+00	L	11/27/2007 08:43	I
7305564	CO-60	10198-40-0	8.60E+01	pCi/L	1.3E+01	1.3E+01		2.41E+00		GAMMA_GS	2.5073E+00	L	11/27/2007 08:43	I
7305564	CS-134	13967-70-9	8.02E-01	pCi/L	2.0E+00	2.0E+00	U	3.57E+00		GAMMA_GS	2.5073E+00	L	11/27/2007 08:43	I
7305564	CS-137	10045-97-3	2.33E+02	pCi/L	2.9E+01	2.9E+01		3.33E+00		GAMMA_GS	2.5073E+00	L	11/27/2007 08:43	I
7305564	EU-152	14683-23-9	-3.68E-01	pCi/L	4.8E+00	4.8E+00	U	8.24E+00		GAMMA_GS	2.5073E+00	L	11/27/2007 08:43	I
7305564	EU-154	15585-10-1	-2.88E+00	pCi/L	4.4E+00	4.4E+00	U	7.33E+00		GAMMA_GS	2.5073E+00	L	11/27/2007 08:43	I
7305564	EU-155	14391-16-3	-9.17E-01	pCi/L	3.9E+00	3.9E+00	U	6.67E+00		GAMMA_GS	2.5073E+00	L	11/27/2007 08:43	I
7305564	K-40	13966-00-2	-2.73E+01	pCi/L	3.3E+01	3.3E+01	U	6.74E+01		GAMMA_GS	2.5073E+00	L	11/27/2007 08:43	I
7305564	RU-106	13967-48-1	-1.43E+01	pCi/L	1.6E+01	1.6E+01	U	2.61E+01		GAMMA_GS	2.5073E+00	L	11/27/2007 08:43	I
7305564	SB-125	14234-35-6	-9.82E-02	pCi/L	5.5E+00	5.5E+00	U	9.38E+00		GAMMA_GS	2.5073E+00	L	11/27/2007 08:43	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:
9J8NTN10	B1PKP3		MW6-SBB-A1	X07-048	W05248					10/10/2007 11:45

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7305563	BETA	12587-47-2	1.26E+02	pCi/L	6.2E+00	1.7E+01		3.68E+00	100.0	9310_ALPHABETA	1.516E-01	L	11/27/2007 13:12	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:
9J8NTN20	B1PKP3		MW6-SBB-A1	X07-048	W05248					10/10/2007 11:45

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7305562	ALPHA	12587-46-1	7.87E+01	pCi/L	7.0E+00	2.0E+01		1.84E+00	100.0	9310_ALPHABETA	1.379E-01	L	11/28/2007 20:26	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:
9J8NTP10	B1PKP5		MW6-SBB-A1	X07-048	W05248					10/10/2007 11:45

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7305564	BE-7	13966-02-4	6.42E-01	pCi/L	2.9E+01	2.9E+01	U	5.05E+01		GAMMA_GS	2.5007E+00	L	11/27/2007 08:45	I
7305564	CO-60	10198-40-0	7.81E+01	pCi/L	1.2E+01	1.2E+01		2.15E+00		GAMMA_GS	2.5007E+00	L	11/27/2007 08:45	I
7305564	CS-134	13967-70-9	5.93E-01	pCi/L	2.0E+00	2.0E+00	U	3.58E+00		GAMMA_GS	2.5007E+00	L	11/27/2007 08:45	I
7305564	CS-137	10045-97-3	2.28E+02	pCi/L	2.8E+01	2.8E+01		3.03E+00		GAMMA_GS	2.5007E+00	L	11/27/2007 08:45	I
7305564	EU-152	14683-23-9	-3.14E+00	pCi/L	4.7E+00	4.7E+00	U	7.64E+00		GAMMA_GS	2.5007E+00	L	11/27/2007 08:45	I
7305564	EU-154	15585-10-1	3.65E-01	pCi/L	3.8E+00	3.8E+00	U	7.25E+00		GAMMA_GS	2.5007E+00	L	11/27/2007 08:45	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.

7305564	EU-155	14391-16-3	2.57E+00	pCi/L	3.2E+00	3.2E+00	U	5.67E+00	GAMMA_GS	2.5007E+00	L	11/27/2007	08:45	I
7305564	K-40	13966-00-2	-1.46E+01	pCi/L	2.7E+01	2.7E+01	U	5.69E+01	GAMMA_GS	2.5007E+00	L	11/27/2007	08:45	I
7305564	RU-106	13967-48-1	2.88E+00	pCi/L	1.6E+01	1.6E+01	U	2.92E+01	GAMMA_GS	2.5007E+00	L	11/27/2007	08:45	I
7305564	SB-125	14234-35-6	1.50E+00	pCi/L	5.5E+00	5.5E+00	U	9.72E+00	GAMMA_GS	2.5007E+00	L	11/27/2007	08:45	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:
9J8NTT10	B1PKP2		MW6-SBB-A1	X07-048	W05248					10/10/2007 11:45

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7305562	ALPHA	12587-46-1	7.37E+01	pCi/L	6.9E+00	1.8E+01		2.20E+00	100.0	9310_ALPHABETA	1.226E-01	L	11/27/2007 10:28	I
7305563	BETA	12587-47-2	1.19E+02	pCi/L	6.1E+00	1.6E+01		3.70E+00	100.0	9310_ALPHABETA	1.459E-01	L	11/27/2007 13:12	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.

Thursday, November 29, 2007

TAL Richland QC Blank Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W05248.Edd, h:\Reportdb\edd\FeadIV\Rad\37588.Edd

Lab Sample Id:	KADC31AB	**Sdg/Rept Nbr:**	W05248 37588	**Collection Date:**	10/10/2007 11:45
Client Id:	NA	**Matrix:**	WATER WATER	**Sample On Date:**	
Moisture/Solids%*:		**QC Type:**	BLK	**Received Date:**	10/10/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AI	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 LCL/UCL	R Typ
7305562	ALPHA	-8.23E-02	pCi/L	1.7E-01	U	5.93E-01	100.0		9310_ALPHAB	1.994E-01	11/27/2007				D
BLK	12587-46-1			1.7E-01						L	10:28				

TAL Richland

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.

Thursday, November 29, 2007

TAL Richland QC Blank Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W05248.Edd, h:\Reportdb\edd\FeadIV\Rad\37588.Edd

Lab Sample Id:	KADC41AB	**Sdg/Rept Nbr:**	W05248 37588	**Collection Date:**	10/10/2007 11:45
Client Id:	NA	**Matrix:**	WATER WATER	**Sample On Date:**	
Moisture/Solids%*:		**QC Type:**	BLK	**Received Date:**	10/10/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AK	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 LCL/UCL	R Typ
7305563	BETA	1.14E+00	pCi/L	1.2E+00	U	2.49E+00	100.0		9310_ALPHAB	2.012E-01	11/27/2007				D
BLK	12587-47-2			1.2E+00						L	13:12				

TAL Richland
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.

Thursday, November 29, 2007

TAL Richland QC Blank Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W05248.Edd, h:\Reportdb\edd\FeadIV\Rad\37588.Edd

Lab Sample Id:	KADC51AB	**Sdg/Rept Nbr:**	W05248	37588	**Collection Date:** 10/10/2007 11:45
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 10/10/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AM	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 LCL/UCL	R Typ
7305564	BE-7	-1.53E+01	pCi/L	1.6E+01	U	2.44E+01			GAMMA_GS	2.5017E+00	11/27/2007				D
BLK	13966-02-4			1.6E+01						L	08:45				
7305564	CO-60	-9.79E-01	pCi/L	1.3E+00	U	2.19E+00			GAMMA_GS	2.5017E+00	11/27/2007				D
BLK	10198-40-0			1.3E+00						L	08:45				
7305564	CS-134	1.35E+00	pCi/L	1.5E+00	U	3.00E+00			GAMMA_GS	2.5017E+00	11/27/2007				D
BLK	13967-70-9			1.5E+00						L	08:45				
7305564	CS-137	5.67E-01	pCi/L	1.3E+00	U	2.35E+00			GAMMA_GS	2.5017E+00	11/27/2007				D
BLK	10045-97-3			1.3E+00						L	08:45				
7305564	EU-152	1.51E-01	pCi/L	2.8E+00	U	4.97E+00			GAMMA_GS	2.5017E+00	11/27/2007				D
BLK	14683-23-9			2.8E+00						L	08:45				
7305564	EU-154	9.55E-01	pCi/L	3.6E+00	U	7.03E+00			GAMMA_GS	2.5017E+00	11/27/2007				D
BLK	15585-10-1			3.6E+00						L	08:45				
7305564	EU-155	1.05E+00	pCi/L	2.0E+00	U	3.71E+00			GAMMA_GS	2.5017E+00	11/27/2007				D
BLK	14391-16-3			2.0E+00						L	08:45				
7305564	K-40	1.14E+01	pCi/L	2.8E+01	U	1.56E+01			GAMMA_GS	2.5017E+00	11/27/2007				D
BLK	13966-00-2			2.8E+01						L	08:45				
7305564	RU-106	4.27E+00	pCi/L	1.1E+01	U	2.15E+01			GAMMA_GS	2.5017E+00	11/27/2007				D
BLK	13967-48-1			1.1E+01						L	08:45				
7305564	SB-125	2.84E+00	pCi/L	3.0E+00	U	5.74E+00			GAMMA_GS	2.5017E+00	11/27/2007				D
BLK	14234-35-6			3.0E+00						L	08:45				

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.

Thursday, November 29, 2007

TAL Richland QC Control Sample Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W05248.Edd, h:\Reportdb\edd\FeadIV\Rad\37588.Edd

Lab Sample Id:	KADC31CS	**Sdg/Rept Nbr:**	W05248 37588	**Collection Date:**	10/10/2007 11:45
Client Id:	NA	**Matrix:**	WATER WATER	**Sample On Date:**	
Moisture/Solids%*:		**QC Type:**	BS	**Received Date:**	10/10/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AJ	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 LCL/UCL	R Typ
7305562	ALPHA	1.80E+01	pCi/L	4.6E+00		4.94E-01	100.0	2.29E+01	9310_ALPHAB	1.978E-01	11/27/2007			70	D
BS	12587-46-1			1.9E+00				78.6		L	10:28			130	

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.

Thursday, November 29, 2007

TAL Richland QC Control Sample Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W05248.Edd, h:\Reportdb\edd\FeadIV\Rad\37588.Edd

Lab Sample Id:	KADC41CS	**Sdg/Rept Nbr:**	W05248 37588	**Collection Date:**	10/10/2007 11:45
Client Id:	NA	**Matrix:**	WATER WATER	**Sample On Date:**	
Moisture/Solids%*:		**QC Type:**	BS	**Received Date:**	10/10/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AL	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 LCL/UCL	R Typ
7305563	BETA	2.25E+01	pCi/L	3.7E+00		2.55E+00	100.0	2.25E+01	9310_ALPHAB	2.013E-01	11/27/2007			70	D
BS	12587-47-2			2.4E+00				100.3		L	13:12			130	

TAL Richland

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.

Thursday, November 29, 2007

TAL Richland QC Control Sample Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W05248.Edd, h:\Reportdb\edd\FeadIV\Rad\37588.Edd

Lab Sample Id:	KADC51CS	**Sdg/Rept Nbr:**	W05248 37588	**Collection Date:**	10/10/2007 11:45
Client Id:	NA	**Matrix:**	WATER WATER	**Sample On Date:**	
Moisture/Solids%*:		**QC Type:**	BS	**Received Date:**	10/10/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AN	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 LCL/UCL	R Typ
7305564	CO-60	3.16E+01	pCi/L	6.1E+00		2.70E+00		3.07E+01	GAMMA_GS	2.5001E+00	11/27/2007			70	D
BS	10198-40-0			6.1E+00				103.0		L	08:47			130	
7305564	CS-137	4.12E+01	pCi/L	6.5E+00		2.88E+00		3.96E+01	GAMMA_GS	2.5001E+00	11/27/2007			70	D
BS	10045-97-3			6.5E+00				104.2		L	08:47			130	
7305564	EU-152	7.33E+01	pCi/L	1.3E+01		7.51E+00		6.12E+01	GAMMA_GS	2.5001E+00	11/27/2007			70	D
BS	14683-23-9			1.3E+01				119.7		L	08:47			130	

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.

Thursday, November 29, 2007

TAL Richland QC Duplicate Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W05248.Edd, h:\Reportdb\edd\FeadIV\Rad\37588.Edd

Lab Sample Id: J8NR81CR **Sdg/Rept Nbr:** W05248 37588 **Collection Date:** 10/10/2007 11:45

Client Id: B1PKP6 **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** DUP **Received Date:** 10/10/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
X07-048	MW6-SBB-A19981								AF	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 LCL/UCL	R Typ
7305564	BE-7	9.30E+00	pCi/L	3.1E+01	U	5.33E+01			GAMMA_GS	2.5073E+00	11/27/2007	49.1	0.3		D
DUP	13966-02-4	1.53E+01		3.1E+01						L	12:30	20.0	3		
7305564	CO-60	8.29E+01	pCi/L	1.3E+01		2.90E+00			GAMMA_GS	2.5073E+00	11/27/2007	3.6	0.3		D
DUP	10198-40-0	8.60E+01		1.3E+01						L	12:30	20.0	3		
7305564	CS-134	4.58E-01	pCi/L	1.9E+00	U	3.40E+00			GAMMA_GS	2.5073E+00	11/27/2007	54.6	0.3		D
DUP	13967-70-9	8.02E-01		1.9E+00						L	12:30	20.0	3		
7305564	CS-137	2.28E+02	pCi/L	2.8E+01		3.11E+00			GAMMA_GS	2.5073E+00	11/27/2007	2.1	0.2		D
DUP	10045-97-3	2.33E+02		2.8E+01						L	12:30	20.0	3		
7305564	EU-152	-3.00E+00	pCi/L	5.0E+00	U	8.24E+00			GAMMA_GS	2.5073E+00	11/27/2007	0.0	0.7		D
DUP	14683-23-9	-3.68E-01		5.0E+00						L	12:30	20.0	3		
7305564	EU-154	-6.17E-01	pCi/L	4.5E+00	U	8.12E+00			GAMMA_GS	2.5073E+00	11/27/2007	0.0	0.7		D
DUP	15585-10-1	-2.88E+00		4.5E+00						L	12:30	20.0	3		
7305564	EU-155	5.98E-01	pCi/L	3.0E+00	U	5.26E+00			GAMMA_GS	2.5073E+00	11/27/2007	0.0	0.7		D
DUP	14391-16-3	-9.17E-01		3.0E+00						L	12:30	20.0	3		
7305564	K-40	-1.36E+01	pCi/L	2.8E+01	U	5.89E+01			GAMMA_GS	2.5073E+00	11/27/2007	0.0	0.7		D
DUP	13966-00-2	-2.73E+01		2.8E+01						L	12:30	20.0	3		
7305564	RU-106	-2.70E+00	pCi/L	1.5E+01	U	2.63E+01			GAMMA_GS	2.5073E+00	11/27/2007	0.0	1.1		D
DUP	13967-48-1	-1.43E+01		1.5E+01						L	12:30	20.0	3		
7305564	SB-125	3.84E+00	pCi/L	5.2E+00	U	9.41E+00			GAMMA_GS	2.5073E+00	11/27/2007	210.5	1.1		D
DUP	14234-35-6	-9.82E-02		5.2E+00						L	12:30	20.0	3		

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.

Thursday, November 29, 2007

TAL Richland QC Duplicate Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W05248.Edd, h:\Reportdb\edd\FeadIV\Rad\37588.Edd

Lab Sample Id:	J8NTN2DR	**Sdg/Rept Nbr:**	W05248	37588	**Collection Date:** 10/10/2007 11:45
Client Id:	B1PKP3	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 10/10/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
X07-048	MW6-SBB-A19981								AG	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 LCL/UCL	R Typ
7305562	ALPHA	7.04E+01	pCi/L	1.7E+01		1.50E+00	100.0		9310_ALPHAB	1.424E-01	11/28/2007	11.2	0.7		D
DUP	12587-46-1	7.87E+01		6.4E+00						L	20:26	20.0	3		

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.

Thursday, November 29, 2007

TAL Richland QC Duplicate Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W05248.Edd, h:\Reportdb\edd\FeadIV\Rad\37588.Edd

Lab Sample Id:	J8NTT1DR	**Sdg/Rept Nbr:**	W05248	37588	**Collection Date:** 10/10/2007 11:45
Client Id:	B1PKP2	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 10/10/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
X07-048	MW6-SBB-A19981								AH	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 LCL/UCL	R Typ
7305563	BETA	1.14E+02	pCi/L	1.6E+01		3.68E+00	100.0		9310_ALPHAB	1.417E-01	11/27/2007	4.5	0.5		D
DUP	12587-47-2	1.19E+02		6.0E+00						L	13:12	20.0	3		

TAL Richland

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.

SEVERN STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

11/29/2007 12:26:44 PM

Lot No., Due Date: J7J110123; 12/10/2007

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 7305562; RALPHA-A Alpha by GPC-Am

SDG, Matrix: W05248; WATER

	Yes	No	N/A
8.0 Correction Calculation Protocol Used. OK	✓		
8.01 The Appropriate Methods Were Used To Analyze the Samples OK	✓		
8.02 Final Results Are in the Appropriate Activity Units OK	✓		
8.03 Batch Contains the Required QC Appropriate for the Method OK	✓		
8.04 The Correct Tracer and QC Vials Where Used in the Samples OK	✓		
8.05 Sample was Appropriately Traced Before or After Fractionating the Sample OK	✓		
8.06 At Least the Minimum Sample Volume Was Used Analysis Volume => J8NTN1AA 137.90<200.00 J8NTT1AA 122.60<200.00 J8NTN2AA 137.90<200.00 Q:VB		✓	
8.07 The Correct Count Geometry was Used. OK	✓		
8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. OK	✓		
8.09 Method Blank is within Control Limits. OK	✓		
8.1 Comments:			
8.11 Matrix Blank is within Control Limits. No Matrix Blanks (MBlks) found in Batch!			✓
8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). OK	✓		
8.13 QAS Specified Duplicate Equation Value within Control Limits. RPD > UCL : 20.0=> J8NTN1AD ALPHA 25.0 (RPD)		✓	
8.14 LCS within Control Limits. OK	✓		
8.15 MLCS within Control Limits. No Matrix Spikes (MLCS) found in Batch!			✓
8.16 MS within Control Limits. No Matrix Spike Samples (MS) found in Batch!			✓
8.17 Tracer within Control Limits. OK	✓		
8.18 Samples are above Minimum Tracer Yield (No Failed Samples) OK	✓		
8.19 Sample Specific MDC <= CRDL. OK	✓		
8.2 Comments:			
8.21 Result < Lc, Activity Not Detected, U Flag. No Limit Specified!			✓
8.22 Result < Mdc, Activity Not Detected, U Flag. Batch Positive Result => J8NTN1AA ALPHA 8.5E+01 L:1.8E+00 J8NTT1AA ALPHA 7.4E+01 L:2.2E+00 J8NTN2AA ALPHA 7.9E+01 L:1.8E+00		✓	
8.23 Result <= Action Level, when Defined. OK; No Action Level Found => ALPHA OK; No Callin Level Found => ALPHA	✓		
8.24 Result + 3s >=0, Not Too Negative. OK	✓		

8.25 Counting Spectrum are within FWHM Limits. Yes No N/A ✓
No FWHM found in Batch Data!

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: NCM 10-11348

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

First Level Review Lisa Gustafson Date 11/29/07

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 7305562
W05248

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: See NCM

Second Level Review: Shirley A. Adam Date: 11-29-07

Clouseau
Nonconformance Memo

TestAmerica

NCM #:	10-11348		
NCM Initiated By:	Lisa Antonson	Classification:	**Anomaly**
Date Opened:	11/29/2007	Status:	**PMREVIEW**
Date Closed:		Production Area:	Environmental - Prep
		Tests:	Alpha by GPC-Am
		Lot #'s (Sample #'s):	J7J110123 (2,4), J7K010000 (562),
		QC Batches:	7305562,
Nonconformance:	Other (describe in detail)		
Subcategory:	Other (explanation required)		

Problem Description / Root Cause

Name	Date	Description
Lisa Antonson	11/29/2007	The dups didn't match in the initial count. They were recounted and now come within limits.

Corrective Action

Name	Date	Corrective Action
Lisa Antonson	11/29/2007	The samples were recounted.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

11/28/2007 10:20:26 AM

Lot No., Due Date: J7J110123; 12/10/2007

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 7305563; RBETA-SR Beta by GPC-Sr/Y

SDG, Matrix: W05248; WATER

	Yes	No	N/A
8.0 Correction Calculation Protocol Used. OK	✓		
8.01 The Appropriate Methods Were Used To Analyze the Samples OK	✓		
8.02 Final Results Are in the Appropriate Activity Units OK	✓		
8.03 Batch Contains the Required QC Appropriate for the Method OK	✓		
8.04 The Correct Tracer and QC Vials Where Used in the Samples OK	✓		
8.05 Sample was Appropriately Traced Before or After Fractionating the Sample OK	✓		
8.06 At Least the Minimum Sample Volume Was Used Analysis Volume => J8NTN1AC 151.60<200.00 J8NTT1AC 145.90<200.00 Q:VB		✓	
8.07 The Correct Count Geometry was Used. OK	✓		
8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. OK	✓		
8.09 Method Blank is within Control Limits. OK	✓		
8.1 Comments:			
8.11 Matrix Blank is within Control Limits. No Matrix Blanks (MBlks) found in Batch!			✓
8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). OK	✓		
8.13 QAS Specified Duplicate Equation Value within Control Limits. OK (RPD)	✓		
8.14 LCS within Control Limits. OK	✓		
8.15 MLCS within Control Limits. No Matrix Spikes (MLCS) found in Batch!			✓
8.16 MS within Control Limits. No Matrix Spike Samples (MS) found in Batch!			✓
8.17 Tracer within Control Limits. OK	✓		
8.18 Samples are above Minimum Tracer Yield (No Failed Samples) OK	✓		
8.19 Sample Specific MDC <= CRDL. OK	✓		
8.2 Comments:			
8.21 Result < Lc, Activity Not Detected, U Flag. No Limit Specified!			✓
8.22 Result < Mdc, Activity Not Detected, U Flag. Batch Positive Result => J8NTN1AC BETA 1.3E+02 L:3.7E+00 J8NTT1AC BETA 1.2E+02 L:3.7E+00		✓	
8.23 Result <= Action Level, when Defined. OK; No Action Level Found => BETA OK; No Callin Level Found => BETA	✓		
8.24 Result + 3s >=0, Not Too Negative. OK	✓		

8.25 Counting Spectrum are within FWHM Limits. Yes No N/A ✓
No FWHM found in Batch Data!

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 Lisa Anderson Date 11/28/07

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 7305563
W05248

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: Beryl A. Wilson Date: 11-28-07

SEVERN STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

11/28/2007 1:42:00 PM

Lot No., Due Date: J7J110123; 12/10/2007

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 7305564; RGAMMA Gamma by GER

SDG, Matrix: W05248; WATER

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

6.0 Comments on any No response:

First Level Review [signature] **Date** 11/28/07

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 7305564
W05248

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: Kerryl W Wilson Date: 11-28-07

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

J7J110123 W05248 DUE 11-23-07 J8NR8

C.O.C. # X07-048-13

Page 1 of 1

Collector: Fluor Hanford – D. WALL	Contact/Requester: Steve Trent	Telephone No.: 509-373-5869 MSIN FAX
SAF No.: X07-048	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: SPECIAL SAMPLING, SEPTEMBER 2007	HNF-N-506-11	Ice Chest No. Temp.
Shipped To (Lab): Severn Trent Incorporated, Richland	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol: SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** 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)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Do not combine X SAF samples with other sets. Need SDG to be stand alone.
All labs except WSCF: Do not exceed SDG closure of 14 days.
WSCF: SDG will close on a daily basis; X SAF samples into own SDG.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1PKP6		W	10/10/07	1145	1x20-mL P	Activity Scan	None
B1PKP6		W	↓	↓	3x1000-mL G/P	GAMMA_GS: List-1 (10)	HNO3 to pH <2

Rev 10/10/07

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Fluor Hanford L. D. WALL	L. D. Wall		OCT 10 2007 1154		S. Smith	S. Smith	OCT 10 2007 1400
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

J7J110123 W05248 DUE 11-23-07 J8NTN

C.O.C. # X07-048-10

Page 1 of 1

Collector: Fluor Hanford L. D. WALL	Contact/Requester: Steve Trent	Telephone No.: 509-373-5869 MSIN FAX
SAF No.: X07-048	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: SPECIAL SAMPLING, SEPTEMBER 2007	HNF-N-506-11	Ice Chest No.: GRP-03-028 Temp.
Shipped To (Lab): Severn Trent Incorporated, Richland	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol: SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** 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)

SPECIAL INSTRUCTIONS Hold Time — Total Activity Exemption: Yes ☑ No ☐
Do not combine X SAF samples with other sets. Need SDG to be stand alone.
All labs except WSCF: Do not exceed SDG closure of 14 days.
WSCF: SDG will close on a daily basis; X SAF samples into own SDG.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1PKP3		W	10/10/07	1145	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1PKP3		W	↓	↓	1x20-mL P	Activity Scan	None

DRW 10/10/07

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Fluor Hanford L. D. WALL	L. D. Wall	L. D. Wall	OCT 10 2007 1450	S. Smith	S. Smith	S. Smith	OCT 10 2007 1450
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

J7J110123 W05248 DUE 11-23-07 J8NTP

C.O.C. # X07-048-12

Page 1 of 1

Collector: Fluor Hanford L. D. WALL	Contact/Requester: Steve Trent	Telephone No.: 509-373-5869 MSIN FAX
SAF No.: X07-048	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: SPECIAL SAMPLING, SEPTEMBER 2007	HNF-N-506-11	Ice Chest No.: GRP-03-028 Temp.
Shipped To (Lab): Severn Trent Incorporated, Richland	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol: SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** 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)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Do not combine X SAF samples with other sets. Need SDG to be stand alone.
All labs except WSCF: Do not exceed SDG closure of 14 days.
WSCF: SDG will close on a daily basis; X SAF samples into own SDG.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1PKP5		W	10/10/07	1145	1x20-mL P	Activity Scan	None
B1PKP5		W	↓	↓	3x1000-mL G/P	GAMMA_GS: List-1 (10)	HNO3 to pH <2

DRW 10/10/07

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Fluor Hanford L. D. WALL		L.D. Wall	OCT 10 2007 1450		S. Smith	S. Smith	OCT 10 2007 1450
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

FAL RICHLAND

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

J7J110123 W05248 DUE 11-23-07 J8NTT

C.O.C. # X07-048-9

Page 1 of 1

Collector: Fluor Hanford L.D. WALL	Contact/Requester: Steve Trent	Telephone No.: 509-373-5869 MSIN FAX
SAF No.: X07-048	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: SPECIAL SAMPLING, SEPTEMBER 2007	HNF-N-506-11	Ice Chest No.: ERP-03-028 Temp.
Shipped To (Lab): Severn Trent Incorporated, Richland	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol: SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** 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)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Do not combine X SAF samples with other sets. Need SDG to be stand alone.
All labs except WSCF: Do not exceed SDG closure of 14 days.
WSCF: SDG will close on a daily basis; X SAF samples into own SDG.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1PKP2		W	10/10/07	1145	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1PKP2		W	↓	↓	1x20-mL P	Activity Scan	None

10/10/07

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Fluor Hanford L.D. WALL		L.D. Wall	10/10/07 1450	S. Smith	S. Smith		10/10/07 1450
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

DUE 11-23-07

Date/Time Received: 10-10-07 1450

Client: PGW **SDG #:** WD5248 NA[ ] **SAF #:** X07-048 NA [ ]

Work Order Number: J7J110123 **Chain of Custody #** X07-048-13, 9, 10, 12

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: 4
7. Sample holding times exceeded? NA [✓] Yes [ ] No [ ]
8. Samples have:
   - _____ Tape
   - _____ Custody Seals
   - _____ Hazard Lables
   - ✓ Appropriate Sample Lables
9. Samples are:
   - ✓ In Good Condition
   - _____ Broken
   - _____ Leaking
   - _____ Have Air Bubbles
   - (Only for samples requiring no head space.)
10. Sample pH taken? NA [ ] pH<2 [✓] pH>2 [ ] pH>9 [ ]
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:** 10-10-07

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

TAL RICHLAND

11/21/2007 9:54:49 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National Lab

AZ Gross Alpha PrpRC5014
S7 Gross Alpha by GPC using Am-241 curve
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 11/23/2007 W05248

Sep1 DT/Tm Tech:

Batch: 7305562 WATER pCi/L PM, Quote: SA , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,BockJ /APA

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 J8NTN-1-AA J7J110123-2-SAMP 10/10/2007 11:45		137.90g,in AmtRec: VIAL20,LP #Containers: 2		1.5	50.7	100	1A	1119	11/27/07 RC/D	
							Scr:	Alpha: 9.68E-07 uCi/Sa	Beta: 8.23E-06 uCi/Sa	
2 J8NTN-1-AD-X J7J110123-2-DUP 10/10/2007 11:45		142.40g,in AmtRec: VIAL20,LP #Containers: 2			45.9		1B	1119	11/27/07 RC/D	
							Scr:	Alpha: 9.68E-07 uCi/Sa	Beta: 8.23E-06 uCi/Sa	
3 J8NTT-1-AA J7J110123-4-SAMP 10/10/2007 11:45		122.60g,in AmtRec: VIAL20,LP #Containers: 2			43.3		1C	1119	11/27/07 RC/D	
							Scr:	Alpha: 5.62E-07 uCi/Sa	Beta: 8.29E-06 uCi/Sa	
4 KADC3-1-AA-B J7K010000-562-BLK 10/10/2007 11:45		199.40g,in AmtRec: #Containers: 1			0.4		1D	1119	11/27/07 RC/D	
							Scr:	Alpha:	Beta:	
5 KADC3-1-AC-C J7K010000-562-LCS 10/10/2007 11:45		197.80g,in AmtRec: #Containers: 1	ASD4337 10/31/07,pd 06/01/01 r		0.6		1F	1119	11/27/07 RC/D	
							Scr:	Alpha:	Beta:	

Comments: pH <2.0. Aliquots reduced due to weight screens. JB 11-21-07

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

J8NTN1AA-SAMP Constituent List:
ALPHA RDL:3 pCi/L LCL: UCL: RPD:

TAL RICHLAND

11/21/2007 9:54:51 AM

Sample Preparation/Analysis

AZ Gross Alpha PrpRC5014
S7 Gross Alpha by GPC using Am-241 curve
5I CLIENT: HANFORD

Balance Id:1120482733

Pipet #: _____

AnalyDueDate: 11/23/2007

Sep1 DT/Tm Tech:

Batch: 7305562 pCi/L

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,BockJ

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

KADC31AA-BLK:

KADC31AC-LCS:

J8NTN1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KADC31AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KADC31AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

32

11/28/2007 8:39:21 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868. Pacific Northwest National Laboratory ,
Pacific Northwest National Lab

AZ Gross Alpha PrpRC5014
S7 Gross Alpha by GPC using Am-241 curve
5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 11/23/2007

Sep1 DT/Tm Tech:

Batch: 7305562 WATER pCi/L PM, Quote: SA , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,BockJ

Work Order. Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments.
1 J8NTN-1-AA J7J110123-2-SAMP 10/10/2007 11:45		137.90g.in AmtRec: VIAL20,LP	#Containers: 2					Scr:	Alpha: 9.68E-07 uCi/Sa	Beta: 8.23E-06 uCi/Sa
2 J8NTN-1-AD-X J7J110123-2-DUP 10/10/2007 11:45		142.40g,in AmtRec: VIAL20,LP	#Containers: 2					Scr:	Alpha: 9 68E-07 uCi/Sa	Beta: 8.23E-06 uCi/Sa
[redacted] J7J110123-2-SAMP 10/10/2007 11:45		137.90g AmtRec: VIAL20,LP	#Containers: 2	1.5	50.7	100	10A	Scr:	2116 Alpha: 9 68E-07 uCi/Sa	11/28/2007 Beta: 8.23E-06 uCi/Sa
[redacted] J7J110123-2-DUP 10/10/2007 11:45		142.40g AmtRec: VIAL20,LP	#Containers: 2		45.9		10B	Scr:	Alpha: 9.68E-07 uCi/Sa	Beta. 8.23E-06 uCi/Sa
5 J8NTT-1-AA J7J110123-4-SAMP 10/10/2007 11:45		122.60g.in AmtRec. VIAL20,LP	#Containers: 2					Scr:	Alpha: 5.62E-07 uCi/Sa	Beta 8 29E-06 uCi/Sa
6 KADC3-1-AA-B J7K010000-562-BLK 10/10/2007 11:45		199 40g.in AmtRec	#Containers: 1					Scr:	Alpha:	Beta:
7 KADC3-1-AC-C J7K010000-562-LCS 10/10/2007 11 45		197.80g.in AmtRec:	ASD4337 10/31/07,pd #Containers: 1					Scr:	Alpha:	Beta:

33

11/28/2007 8:39:22 AM

Sample Preparation/Analysis

AZ Gross Alpha PrpRC5014
S7 Gross Alpha by GPC using Am-241 curve
5I CLIENT: HANFORD

Balance Id:1120482733

Pipet #:

AnalyDueDate: 11/23/2007

Sep1 DT/Tm Tech:

Batch: 7305562 pCi/L

SEQ Batch. Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,BockJ

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

Comments:

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

J8NTN1AA-SAMP Constituent List:

ALPHA	RDL:3	pCi/L	LCL:	UCL:	RPD:
KADC31AA-BLK:					
ALPHA	RDL:3	pCi/L	LCL:	UCL:	RPD:
KADC31AC-LCS:					
Am-241	RDL:	pCi/L	LCL:70	UCL:130	RPD:20

J8NTN1AA-SAMP Calc Info:

Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
KADC31AA-BLK:				
Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
KADC31AC-LCS:				
Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

Approved By Date:

TAL RICHLAND

TAL RICHLAND

11/21/2007 10:00:33 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National Lab

BC Gross Beta PrpRC5014
S8 Gross Beta by GPC using Sr/Y-90 curve
5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 11/23/2007 W05248

Sep1 DT/Tm Tech:

Batch: 7305563 WATER pCi/L

PM, Quote: SA , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,BockJ / APA

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 J8NTN-1-AC J7J110123-2-SAMP 10/10/2007 11:45		151.60g,in AmtRec: VIAL20,LP #Containers: 2		1.5	90.9	100	2C Scr:	1359 Alpha: 9.68E-07 uCi/Sa	11/21/07 RC Beta: 8.23E-06 uCi/Sa	
2 J8NTT-1-AC J7J110123-4-SAMP 10/10/2007 11:45		145.90g,in AmtRec: VIAL20,LP #Containers: 2			86.1		2D Scr:	Alpha: 5.62E-07 uCi/Sa	Beta: 8.29E-06 uCi/Sa	
3 J8NTT-1-AD-X J7J110123-4-DUP 10/10/2007 11:45		141.70g,in AmtRec: VIAL20,LP #Containers: 2			86.0		2A Scr:	Alpha: 5.62E-07 uCi/Sa	Beta: 8.29E-06 uCi/Sa	
4 KADC4-1-AA-B J7K010000-563-BLK 10/10/2007 11:45		201.20g,in AmtRec: #Containers: 1			0.3		2B Scr:	Alpha:	Beta:	
5 KADC4-1-AC-C J7K010000-563-LCS 10/10/2007 11:45		201.30g,in AmtRec: #Containers: 1	BESB3163 10/22/07,pd 09/08/07		0.4		2C Scr:	Alpha:	Beta:	

Comments: PH < 2.0. Aliquots reduced due to weight screens. JB 11.21.07

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

J8NTN1AC-SAMP Constituent List:
BETA RDL:4 pCi/L LCL: UCL: RPD:

TA Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1 ISV - Insufficient Volume for Analysis WO Cnt: 5
Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Prep_SamplePrep v4.8.29

11/21/2007 10:00:34 AM

Sample Preparation/Analysis

BC Gross Beta PrpRC5014
S8 Gross Beta by GPC using Sr/Y-90 curve
5I CLIENT: HANFORD

Balance Id:1120482733
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: ,BockJ

AnalyDueDate: 11/23/2007

Batch: 7305563 pCi/L
SEQ Batch, Test: None

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

KADC41AA-BLK:

KADC41AC-LCS:

J8NTN1AC-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KADC41AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KADC41AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

Plus water

TAL RICHLAND

11/21/2007 1:42:33 PM

Sample Preparation/Analysis

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National Lab

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

Balance Id:1120482733
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: BockJ /APA

AnalyDueDate: 11/23/2007 7005248

Batch: 7305564 WATER pCi/L PM, Quote: SA , 57671
SEQ Batch, Test: None

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 J8NR8-1-AA J7J110123-1-SAMP 10/10/2007 11:45		2507.30g,in AmtRec: VIAL20,3XLP #Containers: 4			NWL 200		G4	1203 Scr: Alpha: -6.06E-08 uCi/Sa	11/27/07 RC/JS Beta: -1.03E-07 uCi/Sa	
2 J8NR8-1-AC-X J7J110123-1-DUP 10/10/2007 11:45		AmtRec: VIAL20,3XLP #Containers: 4					G5	1550 Scr: Alpha: -6.06E-08 uCi/Sa	Beta: -1.03E-07 uCi/Sa	
3 J8NTP-1-AA J7J110123-3-SAMP 10/10/2007 11:45		2500.70g,in AmtRec: VIAL20,3XLP #Containers: 4					C5	1205 Scr: Alpha: -3.85E-07 uCi/Sa	11/27/07 RC/JS Beta: 8.09E-07 uCi/Sa	
4 KADC5-1-AA-B J7K010000-564-BLK 10/10/2007 11:45		2501.70g,in AmtRec: #Containers: 1					G6	1205 Scr: Alpha:	11/27/07 RC/JS Beta:	
5 KADC5-1-AC-C J7K010000-564-LCS 10/10/2007 11:45		2500.10g,in AmtRec: #Containers: 1	QCAG1422 10/31/07,pd 03/07/05				G7	1207 Scr: Alpha:	11/27/07 RC/JS Beta:	

Comments: J8NR8-SAMP "Comments. No DUP. poured due to insuff. volume. Please recount on diff. detector. JB 11/21/07"
PH < 2.0 JB 11.21.07

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

J8NR81AA-SAMP Constituent List:

TA Richland Key: In - Initial Amt, fi - Final Amt. di - Diluted Amt. s1 - Sep1, s2 - Sep2 Page 1 ISV - Insufficient Volume for Analysis WO Cnt: 5
Richland Wa. pd - Prep Dt, r - Reference Dt. ec-Enrichment Cell, ct-Cocktailed Added Prep_SamplePrep v4.8.29

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11/29/2007 12:26:10 PM

ICOC Fraction Transfer/Status Report

ByDate: 11/29/2006, 12/4/2007, Batch: '7305562', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
7305562						
AC		CalcC	BockJ	11/21/2007 9:49:47		
SC			wagarr	IsBatched	11/2/2007 9:30:10 AM	ICOC_RADCALC v4.8.29
SC			BockJ	InPrep	11/21/2007 9:49:47 AM	RICH-RC-5014 Revision 7
SC			BockJ	Prep1C	11/21/2007 9:54:53 AM	RICH-RC-5014 REVISION 7
SC			AshworthA	Prep2C	11/27/2007 8:18:56 AM	RICH-RC-5014 REVISION 7
SC			BlackCL	InCnt1	11/27/2007 8:28:42 AM	RICH-RD-0003 REVISION 5
SC			BlackCL	InCnt1	11/28/2007 9:43:00 AM	RICH-RD-0003 REVISION 5
SC			DAWKINSO	CalcC	11/28/2007 9:49:08 PM	RICH-RD-0003 REVISION 5
AC			BockJ	11/21/2007 9:54:53		
AC			AshworthA	11/27/2007 8:18:56		
AC			BlackCL	11/27/2007 8:28:42		
AC			BlackCL	11/28/2007 9:43:00		
AC			DAWKINSO	11/28/2007 9:49:08		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt:6

ICOCFractions v4.8 30

11/28/2007 10:19:55 AM

ICOC Fraction Transfer/Status Report

ByDate: 11/28/2006, 12/3/2007, Batch: '7305563', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
7305563						
AC		CalcC	BockJ	11/21/2007 9:55:05		
SC			wagarr	IsBatched	11/2/2007 9:30:10 AM	ICOC RADCALC v4.8.29
SC			BockJ	InPrep	11/21/2007 9:55:05 AM	RICH-RC-5014 Revision 7
SC			BockJ	Prep1C	11/21/2007 10:00:11 AM	RICH-RC-5014 REVISION 7
SC			AshworthA	Prep2C	11/27/2007 8:19:09 AM	RICH-RC-5014 REVISION 7
SC			BlackCL	InCnt1	11/27/2007 8:28:55 AM	RICH-RD-0003 REVISION 5
SC			BlackCL	CalcC	11/27/2007 2:22:16 PM	RICH-RD-0003 REVISION 5
AC			BockJ	11/21/2007 10:00:11		
AC			AshworthA	11/27/2007 8:19:09		
AC			BlackCL	11/27/2007 8:28:55		
AC			BlackCL	11/27/2007 2:22:16		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 5

ICOCFractions v4.8.30

11/28/2007 1:41:23 PM

ICOC Fraction Transfer/Status Report

ByDate: 11/28/2006, 12/3/2007, Batch: '7305564', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
7305564						
AC		CalcC	BockJ	11/21/2007 1:28:26		
SC			wagarr	IsBatched	11/2/2007 9:30:10 AM	ICOC_RADCALC v4.8.29
SC			BockJ	InPrep	11/21/2007 1:28:26 PM	RICH-RC-5014 Revision 7
SC			BockJ	Prep1C	11/21/2007 1:42:38 PM	RICH-RC-5017 REVISION 6
SC			AshworthA	Prep2C	11/26/2007 2:32:45 PM	RICH-RC-5017 REVISION 6
SC			BlackCL	InCnt1	11/26/2007 2:36:33 PM	RICH-RD-0007 REVISION 6
SC			DAWKINSO	CalcC	11/27/2007 9:45:16 PM	RICH-RD-0007 REVISION 6
AC			BockJ	11/21/2007 1:42:38		
AC			AshworthA	11/26/2007 2:32:45		
AC			BlackCL	11/26/2007 2:36:33		
AC			DAWKINSO	11/27/2007 9:45:16		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 5

ICOCFractions v4.8.30