

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 136 Pages

Report Nbr: 37191

**RECEIVED**  
MAY 07 2008  
EDMC

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
<u>W05227</u>	I07-061	B1P5B7	J7H310404-1	J54D21AA	9J54D210	7260250
		B1P5D7	J7H310404-2	J54D41AA	9J54D410	7260250
		B1P5F0	J7H310404-3	J54D51AA	9J54D510	7260250
	G07-008	B1P480	J7H310406-1	J54EA1AA	9J54EA10	7260247
		B1P482	J7H310406-2	J54ED1AA	9J54ED10	7260247
		B1P478	J7H310406-3	J54EF1AA	9J54EF10	7260247
	W07-008	B1P918	J7I040124-1	J55X21AA	9J55X210	7260249
	I07-062	B1P5W7	J7I040127-1	J55X61AA	9J55X610	7260250
		B1P5W7	J7I040127-1	J55X61AD	9J55X610	7260249
		B1P5W7	J7I040127-1	J55X62AC	9J55X620	7260255
		B1P6D6	J7I040127-2	J55X91AA	9J55X910	7260249
	I07-061	B1P5J2	J7I040129-1	J551C1AA	9J551C10	7260250
		B1P5J6	J7I040129-2	J551V1AA	9J551V10	7260250
		B1P5H0	J7I040131-1	J55111AA	9J551110	7260250
		B1P5D5	J7I040131-2	J55131AA	9J551310	7260253

Comments:

**RECEIVED**

JAN 15 2008

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## Report Nbr: 37191

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH	
W05227	I07-061	B1P5D5	J7I040131-2	J55131AC	9J551310	7260268	
		B1P5D5	J7I040131-2	J55131AD	9J551310	7260251	
		B1P5D5	J7I040131-2	J55131AE	9J551310	7260250	
		B1P5D5	J7I040131-2	J55131AF	9J551310	7260256	
		B1P5D5	J7I040131-2	J55131AG	9J551310	7260255	
		B1P5D5	J7I040131-2	J55131AH	9J551310	7260254	
		B1P5J0	J7I050107-1	J565A1AA	9J565A10	7260250	
	I07-050	W07-009	B1P5F5	J7I050108-1	J565G1AA	9J565G10	7260250
			B1NK11	J7I050109-1	J565H1AA	9J565H10	7260250
	W07-008	S07-009	B1PJ40	J7I050110-1	J565L1AA	9J565L10	7260246
			B1PJ40	J7I050110-1	J565L1AC	9J565L10	7260247
	S07-009	S07-009	B1P9M0	J7I050111-1	J565W1AA	9J565W10	7260249
			B1P9N9	J7I050111-2	J565X1AA	9J565X10	7260249
	S07-009	S07-009	B1PFP3	J7I070207-1	J6DV71AA	9J6DV710	7260246
B1PFP3			J7I070207-1	J6DV71AC	9J6DV710	7260247	

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Comments:

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## Certificate of Analysis

Fluor Hanford  
1200 Jadwin Ave.  
Richland, WA 99352

October 30, 2007

Attention: Steve Trent

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SAF Number	:	I07-066, G07-009, W07-009, I07-067, S07-009
Date SDG Closed	:	September 18, 2007
Number of Samples	:	Twenty (20)
Sample Type	:	Water
SDG Number	:	W05235
Data Deliverable	:	45-Day / Summary

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### CASE NARRATIVE

#### I. Introduction

Between September 14, 2007 and September 18, 2007 twenty 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:

<u>PGW ID#</u>	<u>STLR ID#</u>	<u>DATE OF RECEIPT</u>	<u>MATRIX</u>
B1PF34	J61JN	9/14/07	WATER
B1PF63	J61M8	9/14/07	WATER
B1PF71	J61NE	9/14/07	WATER
B1PF97	J619L	9/17/07	WATER
B1PDJ2	J619X	9/17/07	WATER
B1PJH7	J6195	9/17/07	WATER
B1PJF6	J6196	9/17/07	WATER
B1PJH8	J6199	9/17/07	WATER
B1PJF7	J62AA	9/17/07	WATER
B1PH15	J62AW	9/17/07	WATER
B1PH21	J62A7	9/17/07	WATER
B1PH18	J62CA	9/17/07	WATER
B1PFY8	J62CF	9/17/07	WATER

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B1PH24	J62CM	9/17/07	WATER
B1PH04	J62CV	9/17/07	WATER
B1PF90	J62J3	9/17/07	WATER
B1PF76	J62J7	9/17/07	WATER
B1PF77	J62J9	9/17/07	WATER
B1PF26	J645X	9/18/07	WATER
B1PF15	J6452	9/18/07	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:

### Alpha Spectroscopy

Neptunium-237 by method RICH-RC-5009

Uranium 234, 235 and 238 by method RICH-RC-5039

### Gas Proportional Counting

Gross Alpha by method RICH-RC-5014

Gross Beta by method RICH-RC-5014

Strontium-90 by method RICH-RC-5006

### Gamma Spectroscopy

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

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

### Liquid Scintillation Counting

Selenium-79 by method RICH-RC-5043

Technetium-99 by TEVA method RICH-RC-5065

Carbon-14 by method RICH-RC-5022

## 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.

Fluor Hanford  
October 30, 2007

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## V. Comments

### **Alpha Spectroscopy**

#### Neptunium-237 by method RICH-RC-5009:

The LCS, batch blank, sample and sample duplicate (B1P5D5) results are within contractual requirements.

#### Uranium 234, 235 and 238 by method RICH-RC-5039:

The LCS, batch blank, sample and sample duplicate (B1P5D5) results are within contractual requirements.

### **Gas Proportional Counting**

#### Gross Alpha by method RICH-RC-5014:

The LCS, batch blank, samples and sample duplicate (B1PFP3) results are within contractual requirements.

#### Gross Beta by method RICH-RC-5014:

Sample B1P480 did not meet the CRDL due to reduced aliquots based on weight screens. The results are greater than the achieved MDA. The duplicate sample volume size was entered incorrectly in the original analysis. The error was corrected and now the duplicate results agree with the sample. Data is accepted. Except as noted, the LCS, batch blank, samples and sample duplicate (B1PJ40) results are within contractual requirements.

#### Strontium-90 by method RICH-RC-5006

Two batches were processed together which resulted in rinse portions to be added to the wrong beakers. The contaminated samples were repoured and caught up with the rest of the batch. Data is accepted. Except as noted, the LCS, batch blank, samples and sample duplicate (B1P5W7) results are within contractual requirements.

### **Gamma Spectroscopy**

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

The LCS, batch blank, samples and sample duplicate (B1P5D5) results are within contractual requirements.

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

The LCS, batch blank, samples and sample duplicate (BLP5J0) results are within contractual requirements.

### **Liquid Scintillation Counting**

#### Selenium-79 by method RICH-RC-5043:

There is no LCS for selenium-79. The batch blank, samples and sample duplicate (B1P5D5) results are within contractual requirements.

#### Technetium-99 by TEVA method RICH-RC-5065:

The LCS, batch blank, samples, sample duplicate (B1P918), and sample matrix spike (B1P9M0) results are within contractual requirements.

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October 30, 2007

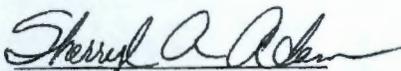
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Carbon-14 by method RICH-RC-5022:

The LCS, batch blank, samples and sample duplicate (B1P5D5) 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,  $R = \text{constants} * f(x, y, z, \dots)$ . 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

<b>Action Lev</b>	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.
<b>Batch</b>	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
<b>Bias</b>	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
<b>COC No</b>	Chain of Custody Number assigned by the Client or STL Richland.
<b>Count Error (#s)</b>	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.
<b>Total Uncert (#s) <i>u<sub>c</sub> - Combined Uncertainty.</i></b>	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, <i>u<sub>c</sub> the combined uncertainty.</i> The uncertainty is absolute and in the same units as the result.
<b>(#s), Coverage Factor</b>	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
<b>CRDL (RL)</b>	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)
<b>Lc</b>	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%. $Lc = (1.645 * \sqrt{2 * (BkgmdCnt / BkgmdCntMin) / SCntMin}) * (ConvFct / (Eff * Yld * Abn * Vol) * IngrFct)$ . 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.
<b>Lot-Sample No</b>	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.
<b>MDC MDA</b>	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%. $MDC = (4.65 * \sqrt{((BkgmdCnt / BkgmdCntMin) / SCntMin) + 2.71 / SCntMin}) * (ConvFct / (Eff * Yld * Abn * Vol) * IngrFct)$ . For LSC methods the batch blank is used as a measure of the background variability.
<b>Primary Detector</b>	The instrument identifier associated with the analysis of the sample aliquot.
<b>Ratio U-234/U-238</b>	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.
<b>Rst/MDC</b>	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.
<b>Rst/TotUcert</b>	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.
<b>Report DB No</b>	Sample Identifier used by the report system. The number is based upon the first five digits of the Work Order Number.
<b>RER</b>	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.
<b>SDG</b>	Sample Delivery Group Number assigned by the Client or assigned by STL Richland upon sample receipt.
<b>Sum Rpt Alpha Spec Rst(s)</b>	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.
<b>Work Order</b>	The LIMS software assign test specific identifier.
<b>Yield</b>	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

10/30/2007 8:36:31 AM

TAL Richland Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Verion: 05 Rpt Nbr: 37191 File Name: h:\Reportdb\edd\Fead\Rad\W05227.Edd, h:\Reportdb\edd\Fead\Rad\37191.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:				
9J54D210	B1P5B7		MW6-SBB-A1	I07-061	W05227					08/30/2007 13:42				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260250	I-129L	15046-84-1	2.31E-03	pCi/L	1.2E-01	1.2E-01	U	2.28E-01	96.8	I129LL_SEP_LEPS	3.9562E+00	L	10/17/2007 13:42	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:				
9J54D410	B1P5D7		MW6-SBB-A1	I07-061	W05227					08/30/2007 12:04				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260250	I-129L	15046-84-1	1.52E+00	pCi/L	3.4E-01	3.4E-01	U	6.02E-01	96.2	I129LL_SEP_LEPS	3.9421E+00	L	10/17/2007 15:25	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:				
9J54D510	B1P5F0		MW6-SBB-A1	I07-061	W05227					08/30/2007 09:54				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260250	I-129L	15046-84-1	4.54E-01	pCi/L	2.5E-01	2.5E-01	U	3.91E-01	92.2	I129LL_SEP_LEPS	3.9617E+00	L	10/17/2007 17:09	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:				
9J54EA10	B1P480		MW6-SBB-A1	G07-008	W05227					08/30/2007 11:13				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260247	BETA	12587-47-2	1.91E+04	pCi/L	1.3E+02	2.5E+03		1.75E+01	100.0	9310_ALPHABETA	2.09E-02	L	10/19/2007 17:52	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:				
9J54ED10	B1P482		MW6-SBB-A1	G07-008	W05227					08/30/2007 12:58				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260247	BETA	12587-47-2	1.28E+01	pCi/L	2.1E+00	2.7E+00		2.95E+00	100.0	9310_ALPHABETA	1.927E-01	L	10/19/2007 17:01	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:				
9J54EF10	B1P478		MW6-SBB-A1	G07-008	W05227					08/30/2007 11:56				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260247	BETA	12587-47-2	7.70E+03	pCi/L	4.7E+01	1.0E+03		3.82E+00	100.0	9310_ALPHABETA	1.522E-01	L	10/19/2007 17:01	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:				
9J551110	B1P5H0		MW6-SBB-A1	I07-061	W05227					08/31/2007 12:51				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260250	I-129L	15046-84-1	7.32E-02	pCi/L	1.5E-01	1.5E-01	U	2.84E-01	97.3	I129LL_SEP_LEPS	3.9427E+00	L	10/18/2007 05:36	I

TAL Richland

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

1

rptFeadRadSummaryEdd v3.48

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.

10/30/2007 8:36:31 AM

TAL Richland Report

Lab Code: TARL

FormNbr: R      FormatType: FEAD      Version: 05      Rpt Nbr: 37191      File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.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:				
9J551310	B1P5D5		MW6-SBB-A1	107-061	W05227					08/31/2007 10:21				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260268	C-14	14762-75-5	4.67E+00	pCi/L	3.5E+00	7.0E+00	U	8.13E+00	100.0	C14_LSC	2.00E-01	L	10/09/2007 20:10	I
7260251	BE-7	13966-02-4	-1.01E+00	pCi/L	2.3E+01	2.3E+01	U	4.10E+01		GAMMALL_GS	2.0006E+00	L	10/19/2007 10:32	I
7260251	CO-60	10198-40-0	-1.68E+00	pCi/L	1.6E+00	1.6E+00	U	2.48E+00		GAMMALL_GS	2.0006E+00	L	10/19/2007 10:32	I
7260251	CS-134	13967-70-9	7.25E-01	pCi/L	1.7E+00	1.7E+00	U	3.23E+00		GAMMALL_GS	2.0006E+00	L	10/19/2007 10:32	I
7260251	CS-137	10045-97-3	1.37E+00	pCi/L	1.7E+00	1.7E+00	U	3.23E+00		GAMMALL_GS	2.0006E+00	L	10/19/2007 10:32	I
7260251	EU-152	14683-23-9	1.25E+00	pCi/L	4.0E+00	4.0E+00	U	7.30E+00		GAMMALL_GS	2.0006E+00	L	10/19/2007 10:32	I
7260251	EU-154	15585-10-1	-2.81E-01	pCi/L	4.7E+00	4.7E+00	U	8.72E+00		GAMMALL_GS	2.0006E+00	L	10/19/2007 10:32	I
7260251	EU-155	14391-16-3	-1.10E+00	pCi/L	3.2E+00	3.2E+00	U	5.62E+00		GAMMALL_GS	2.0006E+00	L	10/19/2007 10:32	I
7260251	K-40	13966-00-2	-1.06E+01	pCi/L	4.1E+01	4.1E+01	U	8.43E+01		GAMMALL_GS	2.0006E+00	L	10/19/2007 10:32	I
7260251	RU-106	13967-48-1	1.23E+01	pCi/L	1.5E+01	1.5E+01	U	2.99E+01		GAMMALL_GS	2.0006E+00	L	10/19/2007 10:32	I
7260251	SB-125	14234-35-6	6.91E-01	pCi/L	4.0E+00	4.0E+00	U	7.17E+00		GAMMALL_GS	2.0006E+00	L	10/19/2007 10:32	I
7260250	I-129L	15046-84-1	9.81E-02	pCi/L	1.6E-01	1.6E-01	U	3.03E-01	95.9	I129LL_SEP_LEPS	3.9245E+00	L	10/18/2007 05:36	I
7260253	NP-237	13994-20-2	3.30E-02	pCi/L	8.4E-02	8.4E-02	U	1.97E-01	98.1	NP237_LLE_PLAT	2.007E-01	L	10/09/2007 15:34	I
7260256	Se-79	15758-45-9	-2.11E-01	pCi/L	3.7E+00	1.1E+01	U	8.89E+00	70.8	SE79_SEP_IE_LS	2.0022E-01	L	09/28/2007 04:41	I
7260255	SR-90	10098-97-2	4.31E-01	pCi/L	3.8E-01	4.0E-01	U	8.02E-01	51.0	SRIISO_SEP_PRE	1.0024E+00	L	10/19/2007 08:50	I
7260254	U-234	13966-29-5	8.58E-01	pCi/L	3.3E-01	3.5E-01		1.24E-01	99.2	UIISO_PLATE_AEA	1.979E-01	L	10/09/2007 15:15	I
7260254	U-235	15117-96-1	2.83E-02	pCi/L	6.2E-02	6.2E-02	U	1.24E-01	99.2	UIISO_PLATE_AEA	1.979E-01	L	10/09/2007 15:15	I
7260254	U-238	U-238	5.20E-01	pCi/L	2.5E-01	2.7E-01		1.24E-01	99.2	UIISO_PLATE_AEA	1.979E-01	L	10/09/2007 15:15	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:				
9J551C10	B1P5J2		MW6-SBB-A1	107-061	W05227					08/31/2007 10:45				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260250	I-129L	15046-84-1	9.97E-01	pCi/L	2.9E-01	2.9E-01	U	5.07E-01	94.9	I129LL_SEP_LEPS	3.8715E+00	L	10/17/2007 21:23	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:				
9J551V10	B1P5J6		MW6-SBB-A1	107-061	W05227					08/31/2007 12:32				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260250	I-129L	15046-84-1	3.00E+00	pCi/L	4.9E-01	4.9E-01		2.66E-01	96.8	I129LL_SEP_LEPS	3.9275E+00	L	10/18/2007 05:35	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:
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TAL Richland      U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.      2  
 rptFeadRadSummaryEdd v3.48      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.

10/30/2007 8:36:31 AM

TAL Richland Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 37191 File Name: h:\Reportdb\edd\Fead\Rad\W05227.Edd, h:\Reportdb\edd\Fead\Rad\37191.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:				
9J55X210	B1P918		MW6-SBB-A1	W07-008	W05227					08/31/2007 10:56				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260249	TC-99	14133-76-7	8.66E+02	pCi/L	1.6E+01	5.6E+01		9.67E+00	100.0	TC99_ETVDSK_LS	1.244E-01	L	10/09/2007 10:09	I
9J55X610	B1P5W7		MW6-SBB-A1	I07-062	W05227					08/31/2007 12:32				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260250	I-129L	15046-84-1	1.04E-01	pCi/L	1.3E-01	1.3E-01	U	2.57E-01	95.9	I129LL_SEP_LEPS	3.8603E+00	L	10/17/2007 18:52	I
7260249	TC-99	14133-76-7	1.04E+01	pCi/L	4.3E+00	6.1E+00		9.58E+00	100.0	TC99_ETVDSK_LS	1.258E-01	L	10/09/2007 10:10	I
9J55X620	B1P5W7		MW6-SBB-A1	I07-062	W05227					08/31/2007 12:32				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260255	SR-90	10098-97-2	-1.93E-02	pCi/L	1.6E-01	2.2E-01	U	4.91E-01	88.8	SRISO_SEP_PRE	1.0002E+00	L	10/19/2007 08:50	I
9J55X910	B1P6D6		MW6-SBB-A1	I07-062	W05227					08/31/2007 08:28				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260249	TC-99	14133-76-7	1.59E+03	pCi/L	2.2E+01	9.9E+01		9.68E+00	100.0	TC99_ETVDSK_LS	1.241E-01	L	10/09/2007 10:10	I
9J565A10	B1P5J0		MW6-SBB-A1	I07-061	W05227					09/04/2007 14:07				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260250	I-129L	15046-84-1	1.12E+00	pCi/L	3.3E-01	3.3E-01	U	5.40E-01	95.4	I129LL_SEP_LEPS	3.9219E+00	L	10/18/2007 07:18	I
9J565G10	B1P5F5		MW6-SBB-A1	I07-061	W05227					09/04/2007 11:19				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260250	I-129L	15046-84-1	1.38E+00	pCi/L	3.9E-01	3.9E-01	U	6.29E-01	94.6	I129LL_SEP_LEPS	3.9217E+00	L	10/18/2007 07:19	I
9J565H10	B1NK11		MW6-SBB-A1	I07-050	W05227					09/04/2007 12:35				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260250	I-129L	15046-84-1	7.69E-01	pCi/L	2.7E-01	2.7E-01	U	4.37E-01	100.0	I129LL_SEP_LEPS	3.9519E+00	L	10/18/2007 09:21	I

TAL Richland

rptFeadRadSummaryEdd v3.48

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.

10/30/2007 8:36:31 AM

## TAL Richland Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 37191 File Name: h:\Reportdb\edd\FeadIV\Rad\W05227.Edd, h:\Reportdb\edd\FeadIV\Rad\37191.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:				
9J565L10	B1PJ40		MW6-SBB-A1	W07-009	W05227					09/04/2007 13:38				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260246	ALPHA	12587-46-1	1.27E+00	pCi/L	9.2E-01	9.7E-01	U	1.42E+00	100.0	9310_ALPHABETA	1.436E-01	L	10/20/2007 10:30	I
7260247	BETA	12587-47-2	3.08E+01	pCi/L	2.8E+00	4.9E+00		2.71E+00	100.0	9310_ALPHABETA	2.005E-01	L	10/19/2007 17:01	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:				
9J565W10	B1P9M0		MW6-SBB-A1	W07-008	W05227					09/04/2007 12:31				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260249	TC-99	14133-76-7	1.07E+02	pCi/L	6.8E+00	1.2E+01		9.55E+00	100.0	TC99_ETVDSK_LS	1.26E-01	L	10/09/2007 10:10	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:				
9J565X10	B1P9N9		MW6-SBB-A1	W07-008	W05227					09/04/2007 10:35				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260249	TC-99	14133-76-7	1.11E+02	pCi/L	6.9E+00	1.2E+01		9.57E+00	100.0	TC99_ETVDSK_LS	1.259E-01	L	10/09/2007 10:10	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:				
9J6DV710	B1PPF3		MW6-SBB-A1	S07-009	W05227					09/06/2007 08:00				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7260246	ALPHA	12587-46-1	-1.02E-02	pCi/L	2.2E-01	2.2E-01	U	7.75E-01	100.0	9310_ALPHABETA	2.006E-01	L	10/19/2007 18:44	I
7260247	BETA	12587-47-2	2.80E-02	pCi/L	1.1E+00	1.1E+00	U	2.45E+00	100.0	9310_ALPHABETA	2.006E-01	L	10/19/2007 17:01	I

Tuesday, October 30, 2007

**TAL Richland Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W05227.Edd, h:\Reportdb\edd\Fead\Rad\37191.Edd

Lab Sample Id: J61L31DN

Sdg/Rept Nbr: W05227 37191

Collection Date: 08/31/2007 10:56

Client Id: INTRA-LAB BL

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BH	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qual	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
7260249	TC-99 14133-76-7	1.37E+03	pCi/L	1.3E+02 9.9E+01			100.0		TC99_ETVDSK	5.00E-03	10/09/2007 10:09				D

Tuesday, October 30, 2007

**TAL Richland Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J61NK1DN

Sdg/Rept Nbr: W05227 37191

Collection Date: 08/31/2007 10:21

Client Id: INTRA-LAB BL

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BZ	H					
Batch # / Qc Type	Analy/ CAS#	Result/ Orig Rst	Unit	To/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Allq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
7260268	C-14 14762-75-5	1.84E+03	pCi/L	2.4E+02 1.3E+02			100.0		C14_LSC	5.00E-03 L	10/09/2007 18:03				D

Tuesday, October 30, 2007

**TAL Richland QC Blank Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J61L31AB

Sdg/Rept Nbr: W05227 37191

Collection Date: 08/31/2007 10:56

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BF	H					
Batch # / Qc Type	Analy/ 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	REP/ UCL	LCS LCL/UCL	R Typ
7260249 BLK	TC-99 14133-76-7	1.85E+00	pCi/L	5.6E+00 4.0E+00	U	9.46E+00	100.0		TC99_ETVDSK	1.273E-01 L	10/09/2007 10:10				D

Tuesday, October 30, 2007

**TAL Richland QC Blank Report**

Lab Code: TARL

FormNbr: R      FormatType: FEAD      VersionNbr: 05      File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J61L81AB      Sdg/Rept Nbr: W05227      37191      Collection Date: 09/04/2007 14:07  
 Client Id: NA      Matrix: WATER      WATER      Sample On Date:  
 Moisture/Solids%\*:      QC Type: BLK      Received Date: 09/04/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp				
	MW6-SBB-A19981								BI	H				
Batch # / Qc Type	Analy/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qual MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Allq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
7260250 BLK	I-129L 15046-84-1	2.01E-01	pCi/L	1.6E-01 1.6E-01	U	2.70E-01 97.3		I129LL_SEP_L	4.0009E+00 L	10/18/2007 09:22				D

Tuesday, October 30, 2007

**TAL Richland QC Blank Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J61LT1AB

Sdg/Rept Nbr: W05227 37191

Collection Date: 09/06/2007 08:00

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 09/06/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BK	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
7260246 BLK	ALPHA 12587-46-1	1.42E-01	pCi/L	2.4E-01 2.4E-01	U	4.87E-01	100.0		9310_ALPHAB	2.008E-01 L	10/19/2007 17:14				D

Tuesday, October 30, 2007

**TAL Richland QC Blank Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J61LX1AB

Sdg/Rept Nbr: W05227 37191

Collection Date: 09/04/2007 13:38

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 09/04/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BM	H					
Batch # / Qc Type	Analy/ CAS#	Result/ Orig Rst	Unit	To/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Allq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
7260247 BLK	BETA 12587-47-2	-5.11E-02	pCi/L	9.3E-01 9.3E-01	U	1.90E+00	100.0		9310_ALPHAB	2.006E-01	10/19/2007 17:52				D

Tuesday, October 30, 2007

**TAL Richland QC Blank Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05227.Edd, h:\Reportdb\edd\FeadIV\Rad\37191.Edd

Lab Sample Id: J61MJ1AB

Sdg/Rept Nbr: W05227 37191

Collection Date: 08/31/2007 10:21

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BO	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qual	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	REF/ UCL	LCS LCL/UCL	R Typ
7260251	BE-7	1.17E+01	pCi/L	2.1E+01	U	3.86E+01			GAMMALL_GS	2.0006E+00	10/19/2007				D
BLK	13966-02-4			2.1E+01						L	10:32				
7260251	CO-60	4.37E-01	pCi/L	1.5E+00	U	3.03E+00			GAMMALL_GS	2.0006E+00	10/19/2007				D
BLK	10198-40-0			1.5E+00						L	10:32				
7260251	CS-134	1.83E+00	pCi/L	1.7E+00	U	3.44E+00			GAMMALL_GS	2.0006E+00	10/19/2007				D
BLK	13967-70-9			1.7E+00						L	10:32				
7260251	CS-137	-1.35E-01	pCi/L	1.5E+00	U	2.77E+00			GAMMALL_GS	2.0006E+00	10/19/2007				D
BLK	10045-97-3			1.5E+00						L	10:32				
7260251	EU-152	-1.67E+00	pCi/L	3.6E+00	U	6.24E+00			GAMMALL_GS	2.0006E+00	10/19/2007				D
BLK	14683-23-9			3.6E+00						L	10:32				
7260251	EU-154	8.07E-01	pCi/L	5.2E+00	U	9.83E+00			GAMMALL_GS	2.0006E+00	10/19/2007				D
BLK	15585-10-1			5.2E+00						L	10:32				
7260251	EU-155	3.60E+00	pCi/L	3.0E+00	U	5.63E+00			GAMMALL_GS	2.0006E+00	10/19/2007				D
BLK	14391-16-3			3.0E+00						L	10:32				
7260251	K-40	-2.57E+01	pCi/L	3.1E+01	U	6.42E+01			GAMMALL_GS	2.0006E+00	10/19/2007				D
BLK	13966-00-2			3.1E+01						L	10:32				
7260251	RU-106	3.52E+00	pCi/L	1.5E+01	U	2.72E+01			GAMMALL_GS	2.0006E+00	10/19/2007				D
BLK	13967-48-1			1.5E+01						L	10:32				
7260251	SB-125	-3.36E+00	pCi/L	3.7E+00	U	5.97E+00			GAMMALL_GS	2.0006E+00	10/19/2007				D
BLK	14234-35-6			3.7E+00						L	10:32				

Tuesday, October 30, 2007

**TAL Richland QC Blank Report**

Lab Code: TARL

FormNbr: R      FormatType: FEAD      VersionNbr: 05      File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J61MN1AB      Sdg/Rept Nbr: W05227      37191      Collection Date: 08/31/2007 10:21  
 Client Id: NA      Matrix: WATER      WATER      Sample On Date:  
 Moisture/Solids%\*:      QC Type: BLK      Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BQ	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/ Yield	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
7260253 BLK	NP-237 13994-20-2	6.43E-02	pCVL	1.3E-01 1.3E-01	U	2.90E-01	91.2		NP237_LLE_P	1.988E-01 L	10/09/2007 15:34				D

Tuesday, October 30, 2007

## TAL Richland QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J61MP1AB

Sdg/Rept Nbr: W05227 37191

Collection Date: 08/31/2007 10:21

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BS	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
7260254 BLK	U-234 13966-29-5	1.86E-02	pCi/L	6.3E-02 6.3E-02	U	1.75E-01	101.9		UIISO_PLATE_	1.975E-01 L	10/09/2007 18:43				D
7260254 BLK	U-235 15117-96-1	-2.48E-03	pCi/L	6.2E-02 6.2E-02	U	1.25E-01	101.9		UIISO_PLATE_	1.975E-01 L	10/09/2007 18:43				D
7260254 BLK	U-238 U-238	2.11E-02	pCi/L	6.3E-02 6.3E-02	U	1.66E-01	101.9		UIISO_PLATE_	1.975E-01 L	10/09/2007 18:43				D

Tuesday, October 30, 2007

**TAL Richland QC Blank Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J61MQ1AB

Sdg/Rept Nbr: W05227 37191

Collection Date: 08/31/2007 12:32

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BU	H					
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/ Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
7260255 BLK	SR-90 10098-97-2	2.87E-01	pCi/L	2.7E-01 2.7E-01	U	5.36E-01	85.2		SRISO_SEP_P	1.0007E+00 L	10/19/2007 08:50				D

Tuesday, October 30, 2007

**TAL Richland QC Blank Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J61MT1AB

Sdg/Rept Nbr: W05227 37191

Collection Date: 08/31/2007 10:21

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	F Suffix	R Typ					
	MW6-SBB-A19981								BW	H					
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
7260256 BLK	Se-79 15758-45-9	2.44E+00	pCi/L	1.1E+01 3.7E+00	U	8.74E+00	72.1		SE79_SEP_IE	2.002E-01 L	09/28/2007 08:06				D

Tuesday, October 30, 2007

## TAL Richland QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J61NK1AB

Sdg/Rept Nbr: W05227 37191

Collection Date: 08/31/2007 10:21

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BX	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	To/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Allq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
7260268 BLK	C-14 14762-75-5	1.45E+01	pCi/L	8.0E+00 3.8E+00		8.14E+00	100.0		C14_LSC	2.00E-01 L	10/09/2007 18:45				D

Tuesday, October 30, 2007

**TAL Richland QC Control Sample Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J61L31CS

Sdg/Rept Nbr: W05227 37191

Collection Date: 08/31/2007 10:56

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BG	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	To/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
7260249 BS	TC-99 14133-76-7	5.21E+02	pCi/L	3.6E+01 1.3E+01		9.72E+00	100.0	5.44E+02 95.8	TC99_ETVDSK	1.24E-01 L	10/09/2007 10:10			70 130	D

Tuesday, October 30, 2007

**TAL Richland QC Control Sample Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J61L81CS

Sdg/Rept Nbr: W05227 37191

Collection Date: 09/04/2007 14:07

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 09/04/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BJ	H					
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
7260250 BS	I-129L 15046-84-1	9.42E+00	pCi/L	1.2E+00 1.2E+00		2.84E-01	96.9	9.62E+00 97.9	I129LL_SEP_L	3.9785E+00 L	10/18/2007 09:22			70 130	D

Tuesday, October 30, 2007

## TAL Richland QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05227.Edd, h:\Reportdb\edd\FeadIV\Rad\37191.Edd

Lab Sample Id: J61LT1CS

Sdg/Rept Nbr: W05227 37191

Collection Date: 09/06/2007 08:00

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 09/06/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	F Suffix	R Typ					
	MW6-SBB-A19981								BL	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	To/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
7260246 BS	ALPHA 12587-46-1	1.92E+01	pCi/L	4.9E+00 2.0E+00		5.32E-01	100.0	2.27E+01 84.6	9310_ALPHAB	2.002E-01 L	10/19/2007 17:14			70 130	D

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.

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Tuesday, October 30, 2007

**TAL Richland QC Control Sample Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J61LX1CS

Sdg/Rept Nbr: W05227 37191

Collection Date: 09/04/2007 13:38

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 09/04/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BN	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	To/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Allq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
7260247 BS	BETA 12587-47-2	2.25E+01	pCi/L	3.3E+00 1.7E+00		1.73E+00	100.0	2.30E+01 97.8	9310_ALPHAB	2.005E-01	10/19/2007 17:52			70 130	D

Tuesday, October 30, 2007

**TAL Richland QC Control Sample Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J61MJ1CS

Sdg/Rept Nbr: W05227 37191

Collection Date: 08/31/2007 10:21

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 08/31/2007

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
7260251 BS	CO-60 10198-40-0	4.38E+01	pCi/L	7.8E+00 7.8E+00		2.54E+00		3.83E+01 114.4	GAMMALL_GS	2.0004E+00 L	10/19/2007 10:33			70 130	D
7260251 BS	CS-137 10045-97-3	5.42E+01	pCi/L	8.7E+00 8.7E+00		3.06E+00		4.94E+01 109.8	GAMMALL_GS	2.0004E+00 L	10/19/2007 10:33			70 130	D
7260251 BS	EU-152 14683-23-9	8.65E+01	pCi/L	1.5E+01 1.5E+01		8.30E+00		7.67E+01 112.8	GAMMALL_GS	2.0004E+00 L	10/19/2007 10:33			70 130	D

Tuesday, October 30, 2007

## TAL Richland QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05227.Edd, h:\Reportdb\edd\FeadIV\Rad\37191.Edd

Lab Sample Id: J61MN1CS

Sdg/Rept Nbr: W05227 37191

Collection Date: 08/31/2007 10:21

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BR	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	To/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
7260253 BS	NP-237 13994-20-2	8.91E+00	pCi/L	2.0E+00 1.3E+00		2.97E-01	91.9	9.16E+00 97.3	NP237_LLE_P	1.994E-01 L	10/09/2007 15:34			70 130	D

Tuesday, October 30, 2007

**TAL Richland QC Control Sample Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\WRad\W05227.Edd, h:\Reportdb\edd\Fead\WRad\37191.Edd

Lab Sample Id: J61MP1CS

Sdg/Rept Nbr: W05227 37191

Collection Date: 08/31/2007 10:21

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BT	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	To/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
7260254 BS	U-234 13966-29-5	8.81E+00	pCi/L	2.1E+00 1.4E+00		2.33E-01	51.7	8.69E+00 101.4	UIISO_PLATE_	2.012E-01 L	10/09/2007 18:43			70 130	D
7260254 BS	U-238 U-238	8.17E+00	pCi/L	2.0E+00 1.4E+00		2.33E-01	51.7	9.10E+00 89.8	UIISO_PLATE_	2.012E-01 L	10/09/2007 18:43			70 130	D

Tuesday, October 30, 2007

**TAL Richland QC Control Sample Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\eddd\Fead\Rad\W05227.Edd, h:\Reportdb\eddd\Fead\Rad\37191.Edd

Lab Sample Id: J61MQ1CS

Sdg/Rept Nbr: W05227 37191

Collection Date: 08/31/2007 12:32

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BV	H					
Batch # / Qc Type	Analy/ CAS#	Result/ Orig Rst	Unit	To/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
7260255 BS	SR-90 10098-97-2	1.53E+01	pCi/L	2.4E+00 9.4E-01		7.72E-01	57.5	1.36E+01 112.2	SRISO_SEP_P	1.0021E+00 L	10/19/2007 05:52			70 130	D

Tuesday, October 30, 2007

## TAL Richland QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J61NK1CS

Sdg/Rept Nbr: W05227 37191

Collection Date: 08/31/2007 10:21

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BY	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	ToI/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
7260268 BS	C-14 14762-75-5	4.78E+01	pCi/L	1.1E+01 4,8E+00		8.14E+00	100.0	4.58E+01 104.4	C14_LSC	2.00E-01 L	10/09/2007 19:27			70 130	D

Tuesday, October 30, 2007

**TAL Richland QC Duplicate Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W05227.Edd, h:\Reportdb\edd\Fead\I\Rad\37191.Edd

Lab Sample Id: J55131JR

Sdg/Rept Nbr: W05227 37191

Collection Date: 08/31/2007 10:21

Client Id: B1P5D5

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
107-061	MW6-SBB-A19981								AV	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rat	Unit	ToI/Cnt Uncert 2S	Qual	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Allq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
7260251	BE-7	6.03E+00	pCi/L	2.2E+01	U	3.97E+01			GAMMALL_GS	1.9361E+00	10/19/2007	280.9	0.5		D
DUP	13966-02-4	-1.01E+00		2.2E+01						L	10:32	20.0	3		
7260251	CO-60	-7.63E-02	pCi/L	1.9E+00	U	3.49E+00			GAMMALL_GS	1.9361E+00	10/19/2007	0.0	1.2		D
DUP	10198-40-0	-1.68E+00		1.9E+00						L	10:32	20.0	3		
7260251	CS-134	-7.16E-01	pCi/L	1.9E+00	U	3.31E+00			GAMMALL_GS	1.9361E+00	10/19/2007	29585.	1.1		D
DUP	13967-70-9	7.25E-01		1.9E+00						L	10:32	20.0	3		
7260251	CS-137	1.33E+00	pCi/L	1.7E+00	U	3.24E+00			GAMMALL_GS	1.9361E+00	10/19/2007	3.1	0.		D
DUP	10045-97-3	1.37E+00		1.7E+00						L	10:32	20.0	3		
7260251	EU-152	2.20E+00	pCi/L	4.2E+00	U	7.64E+00			GAMMALL_GS	1.9361E+00	10/19/2007	54.6	0.3		D
DUP	14683-23-9	1.25E+00		4.2E+00						L	10:32	20.0	3		
7260251	EU-154	-3.44E+00	pCi/L	5.0E+00	U	8.37E+00			GAMMALL_GS	1.9361E+00	10/19/2007	0.0	0.9		D
DUP	15585-10-1	-2.81E-01		5.0E+00						L	10:32	20.0	3		
7260251	EU-155	1.82E-01	pCi/L	2.7E+00	U	4.69E+00			GAMMALL_GS	1.9361E+00	10/19/2007	0.0	0.7		D
DUP	14391-16-3	-1.10E+00		2.7E+00						L	10:32	20.0	3		
7260251	K-40	-3.10E+01	pCi/L	3.8E+01	U	7.72E+01			GAMMALL_GS	1.9361E+00	10/19/2007	0.0	0.8		D
DUP	13966-00-2	-1.06E+01		3.8E+01						L	10:32	20.0	3		
7260251	RU-106	-5.05E+00	pCi/L	1.8E+01	U	3.07E+01			GAMMALL_GS	1.9361E+00	10/19/2007	480.5	1.4		D
DUP	13967-48-1	1.23E+01		1.8E+01						L	10:32	20.0	3		
7260251	SB-125	-8.82E-01	pCi/L	4.0E+00	U	6.99E+00			GAMMALL_GS	1.9361E+00	10/19/2007	0.0	0.5		D
DUP	14234-35-6	6.91E-01		4.0E+00						L	10:32	20.0	3		

Tuesday, October 30, 2007

**TAL Richland QC Duplicate Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\W05227.Edd, h:\Reportdb\edd\Fead\W05227.Edd

Lab Sample Id: J55131KR

Sdg/Rept Nbr: W05227 37191

Collection Date: 08/31/2007 10:21

Client Id: B1P5D5

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
I07-061	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 LCL/UCL	R Typ
7260253	NP-237	3.37E-02	pCi/L	8.6E-02	U	2.02E-01	96.9		NP237_LLE_P	1.99E-01	10/09/2007	2.0	0.		D
DUP	13994-20-2	3.30E-02		8.6E-02						L	15:34	20.0	3		

Tuesday, October 30, 2007

**TAL Richland QC Duplicate Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W05227.Edd, h:\Reportdb\edd\Fead\Rad\37191.Edd

Lab Sample Id: J55131LR

Sdg/Rept Nbr: W05227 37191

Collection Date: 08/31/2007 10:21

Client Id: B1P5D5

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
107-061	MW6-SBB-A19981								AX	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	To/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
7260254 DUP	U-234 13966-29-5	8.83E-01 8.58E-01	pCi/L	3.6E-01 3.3E-01		1.65E-01	103.9		UIISO_PLATE_	1.986E-01 L	10/09/2007 15:15	2.9 20.0	0.1 3		D
7260254 DUP	U-235 15117-96-1	5.91E-02 2.83E-02	pCi/L	8.8E-02 8.7E-02	U	1.24E-01	103.9		UIISO_PLATE_	1.986E-01 L	10/09/2007 15:15	70.6 20.0	0.5 3		D
7260254 DUP	U-238 U-238	3.57E-01 5.20E-01	pCi/L	2.2E-01 2.1E-01		1.74E-01	103.9		UIISO_PLATE_	1.986E-01 L	10/09/2007 15:15	37.1 20.0	1. 3		D

Tuesday, October 30, 2007

**TAL Richland QC Duplicate Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J55131MR

Sdg/Rept Nbr: W05227 37191

Collection Date: 08/31/2007 10:21

Client Id: B1P5D5

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
107-061	MW6-SBB-A19981								AY	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	To/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
7260256 DUP	Se-79 15758-45-9	5.14E-01 -2.11E-01	pCi/L	3.3E+01 1.1E+01	U	2.71E+01	23.2		SE79_SEP_IE	2.0086E-01 L	09/28/2007 06:23	479.7 20.0	0. 3		D

Tuesday, October 30, 2007

**TAL Richland QC Duplicate Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J55131NR

Sdg/Rept Nbr: W05227 37191

Collection Date: 08/31/2007 10:21

Client Id: B1P5D5

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
107-061	MW6-SBB-A19981								AZ	H					
Batch # / Qc Type	Analy/ 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
7260268 DUP	C-14 14762-75-5	4.79E+00 4.67E+00	pCi/L	7.0E+00 3.5E+00	U	8.13E+00	100.0		C14_LSC	2.00E-01 L	10/09/2007 20:52	2.5 20.0	0. 3		D

Tuesday, October 30, 2007

## TAL Richland QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W05227.Edd, h:\Reportdb\edd\Fead\Rad\37191.Edd

Lab Sample Id: J55X21CR

Sdg/Rept Nbr: W05227

37191

Collection Date: 08/31/2007 10:56

Client Id: B1P918

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
W07-008	MW6-SBB-A19981								BA	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	To/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Allq Size/	Date/Time Analyzed	RPD/ UCL	REP/ UCL	LCS LCL/UCL	R Typ
7260249 DUP	TC-99 14133-76-7	8.92E+02 8.66E+02	pCi/L	5.8E+01 1.6E+01		9.61E+00	100.0		TC99_ETVDSK	1.252E-01 L	10/09/2007 10:09	3.0 20.0	0.6 3		D

Tuesday, October 30, 2007

**TAL Richland QC Duplicate Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J55X61ER

Sdg/Rept Nbr: W05227 37191

Collection Date: 08/31/2007 12:32

Client Id: B1P5W7

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 08/31/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
107-062	MW6-SBB-A19981								BB	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	To/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
7260255 DUP	SR-90 10098-97-2	4.63E-01	pCi/L	2.9E-01 2.9E-01	U	5.26E-01	77.3		SRISO_SEP_P	1.0006E+00 L	10/19/2007 08:50				D

Tuesday, October 30, 2007

**TAL Richland QC Duplicate Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J565A1CR

Sdg/Rept Nbr: W05227

37191

Collection Date: 09/04/2007 14:07

Client Id: B1P5J0

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 09/04/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
I07-061	MW6-SBB-A19981								BC	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	To/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
7260250 DUP	I-129L 15046-84-1	9.16E-01 1.12E+00	pCi/L	3.9E-01 3.9E-01	U	5.27E-01	95.9		I129LL_SEP_L	3.9498E+00 L	10/18/2007 07:19	19.9 20.0	0.7 3		D

Tuesday, October 30, 2007

**TAL Richland QC Duplicate Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J565L1DR

Sdg/Rept Nbr: W05227 37191

Collection Date: 09/04/2007 13:38

Client Id: B1PJ40

Matrix: WATER WATER

Sample On Date:

Molsture/Solids%\*:

QC Type: DUP

Received Date: 09/04/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
W07-009	MW6-SBB-A19981								BD	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	To/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
7260247 DUP	BETA 12587-47-2	3.04E+01 3.08E+01	pCi/L	4.8E+00 2.8E+00		2.75E+00	100.0		9310_ALPHAB	2.005E-01 L	10/19/2007 17:01	1.2 20.0	0.1 3		D

Tuesday, October 30, 2007

**TAL Richland QC Duplicate Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05227.Edd, h:\Reportdb\edd\Fead\VRad\37191.Edd

Lab Sample Id: J6DV71DR

Sdg/Rept Nbr: W05227 37191

Collection Date: 09/06/2007 08:00

Client Id: B1PFP3

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 09/06/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
S07-009	MW6-SBB-A19981								CA	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	ToVCnt 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
7260246	ALPHA	1.76E-01	pCi/L	3.7E-01	U	8.31E-01	100.0		9310_ALPHAB	2.008E-01	10/19/2007	224.6	0.7		D
DUP	12587-46-1	-1.02E-02		3.7E-01						L	19:48	20.0	3		

Tuesday, October 30, 2007

**TAL Richland Qc Matrix Spike Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W05227.Edd, h:\Reportdb\edd\Fead\Rad\37191.Edd

Lab Sample Id: J565W1CW

Sdg/Rept Nbr: W05227 37191

Collection Date: 09/04/2007 12:31

Client Id: B1P9M0

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: MS

Received Date: 09/04/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
W07-008	MW6-SBB-A19981								BE	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	To/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
7260249 MS	TC-99 14133-76-7	3.47E+03	pCi/L	2.1E+02 3.2E+01		9.66E+00	100.0	3.64E+03 95.5	TC99_ETVDSK	1.245E-01 L	10/09/2007 10:10			60 140	D
7260249 MS	TC-99 14133-76-7	3.37E+03	pCi/L	2.1E+02 3.2E+01		9.66E+00	100.0	3.64E+03 92.6	TC99_ETVDSK	1.245E-01 L	10/09/2007 10:10			60 140	D

Lot No., Due Date: J71040131; 10/22/2007  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 7260253 ; RNP237 Np-237 w/tracer  
 SDG, Matrix: W05227; WATER

Item	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 OK	✓		
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. No Positive Results OK	✓		
8.23 Result <= Action Level, when Defined. OK; No Action Level Found => NP-237  OK; No Callin Level Found => NP-237	✓		
8.24 Result + 3s >=0, Not Too Negative. OK	✓		
8.25 Counting Spectrum are within FWHM Limits. FWHM > maxFWHM => J61MN1AC NP-237 58.2>0 Q:V1	✓		

8.26 Instruments have Current Calibrations. Yes No N/A

8.27 Correct Count Library Used. Yes No N/A  
 Library Not Specified => J55131AA I:[NUC\_LIBR]ALPHA Q:  
 J55131AK I:[NUC\_LIBR]ALPHA Q:  
 J61MN1AA I:[NUC\_LIBR]ALPHA Q:  
 J61MN1AC I:[NUC\_LIBR]ALPHA Q:

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 *Sha Austenson* Date 10/18/07

## Data Review Checklist RADIOCHEMISTRY Second Level Review

Batch Number: 7260253  
W05227

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			
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>B. QC Samples</b>			
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?	✓		
<b>C. Other</b>			
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: Sheryl A. Adams Date: 10-18-07

Lot No., Due Date: J71040131; 10/22/2007  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 7260254; RUIISO Also by ALP  
 SDG, Matrix: W05227; WATER

	Yes	No	N/A
8.0 Correction Calculation Protocol Used. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.01 The Appropriate Methods Were Used To Analyze the Samples OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.02 Final Results Are in the Appropriate Activity Units OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.03 Batch Contains the Required QC Appropriate for the Method OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.04 The Correct Tracer and QC Vials Where Used in the Samples OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.05 Sample was Appropriately Traced Before or After Fractionating the Sample OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.06 At Least the Minimum Sample Volume Was Used OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.07 The Correct Count Geometry was Used. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.09 Method Blank is within Control Limits. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.1 Comments:			
8.11 Matrix Blank is within Control Limits. No Matrix Blanks (MBLks) found in Batch!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.13 QAS Specified Duplicate Equation Value within Control Limits. RPD > UCL : 20.0=> J55131AL U-235 71.0 J55131AL U-235 71.0 J55131AL U-238 37.0 J55131AL U-238 37.0 (RPD)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.14 LCS within Control Limits. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.15 MLCS within Control Limits. No Matrix Spikes (MLCS) found in Batch!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.16 MS within Control Limits. No Matrix Spike Samples (MS) found in Batch!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.17 Tracer within Control Limits. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.18 Samples are above Minimum Tracer Yield (No Failed Samples) OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.19 Sample Specific MDC <= CRDL. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.2 Comments:			
8.21 Result < Lc, Activity Not Detected, U Flag. No Limit Specified!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.22 Result < Mdc, Activity Not Detected, U Flag. Batch Positive Result => J55131AH U-234 8.6E-01 L:1.2E-01 J55131AH U-238 5.2E-01 L:1.2E-01	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.23 Result <= Action Level, when Defined. OK; No Action Level Found => U-234 U-235 U-238  OK; No Callin Level Found => U-234	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

U-235  
U-238

8.24 Result + 3s >=0, Not Too Negative.

Yes No N/A

OK

Yes  No  N/A

8.25 Counting Spectrum are within FWHM Limits.

Yes No N/A

FWHM > maxFWHM => J55131AH U-234 60.6>0  
J55131AL U-234 39.18>0  
J81MP1AC U-234 45.428>0 Q:V1

Yes  No  N/A

8.26 Instruments have Current Calibrations.

Yes No N/A

8.27 Correct Count Library Used.

Yes No N/A

Library Not Specified => J55131AH I:[NUC\_LIBR]AR\_U\_Q:  
J55131AL I:[NUC\_LIBR]AR\_U\_Q:  
J81MP1AA I:[NUC\_LIBR]AR\_U\_Q:  
J81MP1AC I:[NUC\_LIBR]AR\_U\_Q:

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

Yes  No  N/A

First Level Review

*Oliver Gustafson*

Date

*10/11/07*

STL Richland

QAS\_RADCALCv4.8.27

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TAL RICHLAND

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## Data Review Checklist RADIOCHEMISTRY Second Level Review

Batch Number: 7260254  
W05227

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			
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>B. QC Samples</b>			
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?	✓		
<b>C. Other</b>			
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: Sheryl A. Adams

Date: 10-11-07

Lot No., Due Date: J71050110, J71070207; 10/22/2007  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 7260246; RALPHA-A Alpha by GPC-Am  
 SDG, Matrix: W05227; WATER

	Yes	No	N/A
8.0 Correction Calculation Protocol Used. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.01 The Appropriate Methods Were Used To Analyze the Samples OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.02 Final Results Are in the Appropriate Activity Units OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.03 Batch Contains the Required QC Appropriate for the Method OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.04 The Correct Tracer and QC Vials Where Used in the Samples OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.05 Sample was Appropriately Traced Before or After Fractionating the Sample OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.06 At Least the Minimum Sample Volume Was Used Analysis Volume => J565L1AA 143.60<200.00 Q:VB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.07 The Correct Count Geometry was Used. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.09 Method Blank is within Control Limits. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.1 Comments:			
8.11 Matrix Blank is within Control Limits. No Matrix Blanks (MBlks) found in Batch!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.13 QAS Specified Duplicate Equation Value within Control Limits. RPD > UCL : 20.0=> J6DV71AD ALPHA 220.0 (RPD)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.14 LCS within Control Limits. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.15 MLCS within Control Limits. No Matrix Spikes (MLCS) found in Batch!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.16 MS within Control Limits. No Matrix Spike Samples (MS) found in Batch!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.17 Tracer within Control Limits. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.18 Samples are above Minimum Tracer Yield (No Failed Samples) OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.19 Sample Specific MDC <= CRDL. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.2 Comments:			
8.21 Result < Lc, Activity Not Detected, U Flag. No Limit Specified!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.22 Result < Mdc, Activity Not Detected, U Flag. No Positive Results OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.23 Result <= Action Level, when Defined. OK; No Action Level Found => ALPHA  OK; No Callin Level Found => ALPHA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.24 Result + 3s >=0, Not Too Negative. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.25 Counting Spectrum are within FWHM Limits. No FWHM found in Batch Data!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8.26 Instruments have Current Calibrations.	Yes No N/A
8.27 Correct Count Library Used. No Count Library found in Batch Data!	Yes No N/A ✓
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. OK	Yes No N/A ✓

First Level Review

*Sha Antonson*

Date

10/24/07

TA Richland

QAS\_RADCALCv4.8.29

Page 2



**Data Review Checklist**  
**RADIOCHEMISTRY**  
 Second Level Review

Batch Number: 7260246  
W05227

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			
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>B. QC Samples</b>			
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?	/		
<b>C. Other</b>			
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: *Sheryl A. Allen* Date: 10-29-07

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

Lot No., Due Date: J7H310406,J7I050110,J7I070207; 10/22/2007  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 7260247; RBETA-SR Beta by GPC-Sr/Y  
 SDG, Matrix: W05227; WATER

**1.0 ICOC**

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:  
Please see NCM#10-11085

First Level Review

*John North*

Date 10-25-7

TA Richland

QAS\_RADCALCv4.8.29

Page 1

TAL RICHLAND

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**Data Review Checklist**  
**RADIOCHEMISTRY**  
 Second Level Review

Batch Number: 7260247  
W05227

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			
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>B. QC Samples</b>			
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?	✓		
<b>C. Other</b>			
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

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Second Level Review: Sheryl A. Allen Date: 10-29-07

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

# Clouseau Nonconformance Memo



NCM #: <b>10-11085</b> NCM Initiated By: John Norton Date Opened: 10/25/2007 Date Closed:	Classification: <b>Anomaly</b> Status: <b>GLREVIEW</b> Production Area: Environmental - Prep Tests: Beta by GPC-Sr/Y Lot #'s (Sample #'s): J7H310406 (1,2,3), J7I050110 (1), J7I070207 (1), J7I170000 (247), QC Batches: 7260247,
Nonconformance: MDA not met Subcategory: Data accepted	

### Problem Description / Root Cause

Name	Date	Description
John Norton	10/25/2007	1: Sample J7H310406-1 did not meet the RDL due to the reduced size of the aliquot which was prompted by high activity detected during sample screening.  2: the duplicate sample does not show acceptable agreement with the parent sample.

### Corrective Action

Name	Date	Corrective Action
John Norton	10/25/2007	1: The activity detected in the sample was greater than the IDC, the data can be accepted.  2: On closer examination of the data it was found that the sample volume size had been entered incorrectly, when this error was corrected the duplicate and sample agreed to an acceptable degree.

### Client Notification Summary

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

### Quality Assurance Verification

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

### Approval History

Date Approved	Approved By	Position

Lot No., Due Date: J71040131, J71040127; 10/22/2007  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 7260255; RSR85907 Sr-85/90 by GPC-7  
 SDG, Matrix: W05227; WATER

<b>1.0 ICOC</b>		
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No N/A
<b>2.0 QC Batch</b>		
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
<b>3.0 QC &amp; Samples</b>		
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
<b>4.0 Raw Data</b>		
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
<b>5.0 Other</b>		
5.1 Are all nonconformances included and noted?	Yes	No N/A
5.2 Are all required forms filled out?	Yes	No N/A
5.3 Was the correct methodology used?	Yes	No N/A
5.4 Was transcription checked?	Yes	No N/A
5.5 Were all calculations checked at a minimum frequency?	Yes	No N/A
5.6 Are worksheet entries complete and correct?	Yes	No N/A
6.0 Comments on any No response: NCM 10-10966		

First Level Review *Alisa Antenson* Date 10/20/07

## Data Review Checklist RADIOCHEMISTRY Second Level Review

Batch Number: 7260255  
W05227

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			
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>B. QC Samples</b>			
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?	✓		
<b>C. Other</b>			
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

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Second Level Review: Sheryl A. Adams

Date: 10 22-07

# Clouseau Nonconformance Memo

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

NCM #: <b>10-10966</b> NCM Initiated By: <b>Debbie Manis</b> Date Opened: <b>10/02/2007</b> Date Closed:	Classification: <b>Anomaly</b> Status: <b>CHREVIEW</b> Production Area: <b>Environmental - Sep</b> Tests: <b>Sr-85/90 by GPC-7, Sr85/90 by GPC-10</b> Lot #'s (Sample #'s): <b>J71040127 (1), J71040131 (2), J71170000 (255), J71170146 (1,2), J71180000 (232),</b> QC Batches: <b>7260255, 7261232,</b>
Nonconformance: <b>Other (describe in detail)</b> Subcategory: <b>Other (explanation required)</b>	

### Problem Description / Root Cause

Name	Date	Description
Debbie Manis	10/02/2007	Processing 2 batches together, added the beaker rinse portion to the wrong sample, compromising the lcs (J63DV-1AC) of batch 7261232 and the first sample (J5586-1AC) of batch 7260255.
Lisa Antonson	10/20/2007	Sample J55X61AC was repoured and caught up to the rest of the batch.

### Corrective Action

Name	Date	Corrective Action
Debbie Manis	10/02/2007	Stopped process, notified supervision.
Lisa Antonson	10/20/2007	

### Client Notification Summary

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

### Quality Assurance Verification

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

### Approval History

Date Approved	Approved By	Position

Lot No., Due Date: J71040131; 10/22/2007  
Client, Site: 384868; PGW 615HANFORD HANFORD  
QC Batch No., Method Test: 7260251; RGAMMA Gamma by GER  
SDG, Matrix: W05227; WATER

- 1.0 **QC**
  - 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 *Frederick J. Anderson* Date 10/23/07



**Data Review Checklist**  
**RADIOCHEMISTRY**  
 Second Level Review

Batch Number: 7260251  
W05227

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			
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>B. QC Samples</b>			
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?	/		
<b>C. Other</b>			
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: Sheryl A. Adams Date: 10-29-07

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

Lot No., Due Date: J7H310404,J7I040131,J7I040129,J7I040127,J7I050107,J7I050108,J7I050109; 10/22/2007  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 7260250; RGAMLEPS Gamma by LEPS  
 SDG, Matrix: W05227; WATER,,

- |   |     |        |
|---|-----|--------|
| <b>1.0 ICOC</b>   |     |        |
| 1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?           | Yes | No N/A |
| <b>2.0 QC Batch</b>   |     |        |
| 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 |
| <b>3.0 QC &amp; Samples</b>   |     |        |
| 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 |
| <b>4.0 Raw Data</b>   |     |        |
| 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 |
| <b>5.0 Other</b>  |     |        |
| 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

*Tina Antonson*

Date

10/19/07



**Data Review Checklist**  
**RADIOCHEMISTRY**  
 Second Level Review

Batch Number: 7260250  
W05227

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			
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>B. QC Samples</b>			
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?	/		
<b>C. Other</b>			
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: \_\_\_\_\_  
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 \_\_\_\_\_  
 \_\_\_\_\_

Second Level Review: Sheryl A. Adam Date: 10-22-07

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



STL

Data Review/Verification Checklist  
RADIOCHEMISTRY, First Level Review

10/5/2007 2:05:44 PM

Lot No., Due Date: J71040131; 10/22/2007  
Client, Site: 384868; PGW 615HANFORD HANFORD  
QC Batch No., Method Test: 7260256; RSE79 Se-79 by LSC  
SDG, Matrix: W05227; WATER

1.0 ICOC

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 *John N...*

Date 10-5-7



**Data Review Checklist**  
**RADIOCHEMISTRY**  
 Second Level Review

Batch Number: 7260256  
W05227

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			
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>B. QC Samples</b>			
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?			/
<b>C. Other</b>			
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: Gerryl A. Adam Date: 10-8-07

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

Lot No., Due Date: J71040124,J71040127,J71050111; 10/22/2007  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 7260249; RTC99 Tc-99 by LSC  
 SDG, Matrix: W05227; 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 (MBIks) 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 \_\_\_\_\_ Date \_\_\_\_\_

Lot No., Due Date: J71040131; 10/22/2007  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 7260268; RC14 C-14 by LSC  
 SDG, Matrix: W05227; WATER

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

First Level Review \_\_\_\_\_ Date \_\_\_\_\_



**Data Review Checklist**  
**RADIOCHEMISTRY**  
 Second Level Review

Batch Number: 7260268  
W05227

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			
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>B. QC Samples</b>			
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?	/		
<b>C. Other</b>			
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: *Samuel A. Olson* Date: 10-23-07

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









STL

Sample Check-in List

DUE 10-15-07

Date/Time Received: 8-30-07 1510

Client: PGW SDG #: W05227 NA  SAF #: I07-061 NA

Work Order Number: J7H310404 Chain of Custody #: I07-061-8,-25,-28

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? 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 samples labels
9. Samples are:
  - in good condition
  - broken
  - leaking
  - have air bubbles
 (Only for samples requiring head space)
10. Sample pH taken? NA  pH < 2  pH > 2  pH > 9
11. Sample Location, Sample Collector Listed? \* Yes  No   
\*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes  No
13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian: [Signature] Date: 8-30-07

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person contacted \_\_\_\_\_

No action necessary; process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_

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# STL

### Sample Check-in List

DUE 10-15-07

Date/Time Received: 8-30-07 1510

Client: PGW SDG #: W05227 NA  SAF #: G07-008 NA

Work Order Number: JTH310406 Chain of Custody # G07-008-10,-13,-8

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? 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 \_\_\_\_\_ hazard labels
  - custody seals \_\_\_\_\_ appropriate samples labels
9. Samples are:
  - in good condition \_\_\_\_\_ leaking
  - \_\_\_\_\_ broken \_\_\_\_\_ have air bubbles

(Only for samples requiring head space)
10. Sample pH taken? NA  pH < 2  pH > 2  pH > 9
11. Sample Location, Sample Collector Listed? \* Yes  No   
\*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes  No
13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian: [Signature] Date: 8-30-07

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person contacted \_\_\_\_\_

No action necessary; process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_

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# STL

### Sample Check-in List

DUE 10-15-07

Date/Time Received: 8-31-07 1400

Client: PGW SDG #: W05227 NA  SAF #: W07-008 NA

Work Order Number: J7I040124 Chain of Custody #: W07-008-505

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? 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  hazard labels
  - custody seals  appropriate samples labels
9. Samples are:
  - in good condition  leaking
  - broken  have air bubbles
 (Only for samples requiring head space)
10. Sample pH taken? NA  pH < 2  pH > 2  pH > 9
11. Sample Location, Sample Collector Listed? \* Yes  No   
 \*For documentation only; No corrective action needed: \_\_\_\_\_
12. Were any anomalies identified in sample receipt? Yes  No
13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian: [Signature] Date: 8-31-07

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person contacted \_\_\_\_\_

No action necessary; process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_

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# STL

Sample Check-in List

DUE 10-15-07

Date/Time Received: 8-31-07 1400

Client: PGW

SDG #: W05227 NA  SAF #: I07-062 NA

Work Order Number: JTD40127

Chain of Custody #: I07-062-270,182

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? 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 samples labels
9. Samples are:
  - in good condition \_\_\_\_\_ leaking
  - broken \_\_\_\_\_ have air bubbles
 (Only for samples requiring head space)
10. Sample pH taken? NA  pH < 2  pH > 2  pH > 9
11. Sample Location, Sample Collector Listed? \* Yes  No   
\*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes  No
13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian: RSP Date: 8-31-07

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person contacted \_\_\_\_\_

No action necessary: process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_

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# STL

### Sample Check-in List

DUE 10-15-07

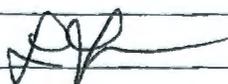
Date/Time Received: 8-31-07 1400

Client: PGW SDG #: W05227 NA  SAF #: I07-061 NA

Work Order Number: JTI040129 Chain of Custody #: I07-061-43-47

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? 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 samples labels
9. Samples are:
  - in good condition \_\_\_\_\_ leaking
  - broken \_\_\_\_\_ have air bubbles
 (Only for samples requiring head space)
10. Sample pH taken? NA  pH < 2  pH > 2  pH > 9
11. Sample Location, Sample Collector Listed? \* Yes  No   
\*For documentation only. No corrective-action needed.
12. Were any anomalies identified in sample receipt? Yes  No
13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian:  Date: 8-31-07

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person contacted \_\_\_\_\_

[ ] No action necessary; process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_

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TAL RICHLAND

FLUOR HANFORD		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>			C.O.C. # <b>107-061-21</b>	
F. H. Hall Collector Fluor Hanford Inc		J7I040131 W05227		DUE 10-15-07		Page 1 of 1
SAF No. 107-061		Contact/Requester Steve Trent		Telephone No. 509-373-5869		MSIN FAX
Project Title 2UJ1-LOL AUGUST 2007		Sampling Origin Hanford Site		Purchase Order/Charge Code		
Shipped To (Lab) Severn Trent Incorporated, Richland		Method of Shipment Govt. Vehicle		Ice Chest No. <b>SML-1</b>		Temp.
Protocol SIJRV		Priority: 45 Days		Bill of Lading/Air Bill No.		Offsite Property No.
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b> ** ** 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)			<b>SPECIAL INSTRUCTIONS</b> <b>Hold Time</b> <b>Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></b> All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days. WSCF: Batch all GW samples submitted into one SDG, daily closure. All SDG's are to be sent to Steve Trent, FH			
<b>J5513</b>						

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1P5D5		W	8/31/07	1021	1x20-mL P	Activity Scan	None
B1P5D5		W			2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
B1P5D5		W			2x1000-mL G/P	C14_LSC: C-14 (1)	None
B1P5D5		W			1x4000-mL G/P	GAMMALL_GS: List-1 (9)	HNO3 to pH <2
B1P5D5		W			1x1000-mL G/P	NP237_LLE_PLATE_AEA:Np-237(1)	HNO3 to pH <2
B1P5D5		W			2x1000-mL G/P	Selenium-79	HNO3 to pH <2
B1P5D5		W			3x1000-mL G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)	HNO3 to pH <2
B1P5D5		W			1x1000-mL G/P	UIISO_PLATE_AEA: List-1 (3)	HNO3 to pH <2

Relinquished By Fluor Hanford Inc	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time AUG 31 2007	Received By <i>[Signature]</i>	Print LVLANE TAL-R	Sign <i>[Signature]</i>	Date/Time AUG 31 2007	Matrix *
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	S = Soil      DS = Drum Solid SE = Sediment      DL = Drum Liquid SO = Solid      T = Tissue SL = Sludge      WI = Wine W = Water      L = Liquid O = Oil      V = Vegetation A = Air      X = Other
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	
<b>FINAL SAMPLE DISPOSITION</b>	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By			Date/Time	



# STL

### Sample Check-in List

DUE 10-15-07

Date/Time Received: 8-31-07 1415

Client: PGW SDG # W05227 NA  SAF # I07-061 NA

Work Order Number: J7I040131 Chain of Custody # I07-061-37,-21

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? 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 samples labels
9. Samples are:
  - in good condition \_\_\_\_\_ leaking
  - broken \_\_\_\_\_ have air bubbles
 (Only for samples requiring head space)
10. Sample pH taken? NA  pH < 2  pH > 2  pH > 9
11. Sample Location, Sample Collector Listed? \* Yes  No   
\*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes  No
13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian: [Signature] Date: 8-31-07

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person contacted \_\_\_\_\_

No action necessary; process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_

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STL

Sample Check-in List

DUE 10-19-07

Date/Time Received: 9-4-07 1520

7. fwa/s/07

Client: PGW

SDG #: W05226 NA [] SAF #: I07-061 NA []

Work Order Number: JTI050107

Chain of Custody # I07-061-40

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? 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  hazard labels
  - custody seals  appropriate samples labels
9. Samples are:
  - in good condition  leaking
  - broken  have air bubbles
 (Only for samples requiring head space)
10. Sample pH taken? NA [] pH < 2  pH 2-9  pH > 9 []
11. Sample Location, Sample Collector Listed? \* Yes  No []  
 \*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [] No
13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian: [Signature] Date: 9-4-07

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person contacted \_\_\_\_\_

[ ] No action necessary; process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_

LS-023, 9/03, Rev. 5





STL

Sample Check-in List

Date/Time Received: 9-4-07 1520

Client: PGW SDG #: W05227 NA [ ] SAF #: I07-061 NA [ ]

Work Order Number: JTI050108 Chain of Custody #: I07-061-31

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? 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 samples labels
- 9. Samples are:
  - in good condition
  - \_\_\_\_\_ broken
  - \_\_\_\_\_ leaking
  - \_\_\_\_\_ have air bubbles
  - (Only for samples requiring head space)
- 10. Sample pH taken? NA [ ] pH<2 [ ] pH>2  pH>9 [ ]
- 11. Sample Location, Sample Collector Listed? \* Yes  No [ ]
- \*For documentation only. No corrective action needed:
- 12. Were any anomalies identified in sample receipt? Yes [ ] No
- 13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian: [Signature] Date: 9-4-07

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person contacted \_\_\_\_\_

[ ] No action necessary; process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_

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STL

Sample Check-in List

DUE 10-19-07

Date/Time Received: 9-4-07 1520

Client: PGW SDG #: W05227 NA [ ] SAF #: I07-050 NA [ ]

Work Order Number: J7I050109 Chain of Custody #: I07-050-11

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? 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  hazard labels
    - custody seals  appropriate samples labels
  - 9. Samples are:
    - in good condition  leaking
    - broken  have air bubbles
 (Only for samples requiring head space)
  - 10. Sample pH taken? NA [ ] pH < 2 [ ] pH > 2  pH > 9 [ ]
  - 11. Sample Location, Sample Collector Listed? \* Yes  No [ ]
- \*For documentation only. No corrective action needed.

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

13. Description of anomalies (include sample numbers):

Sample Custodian: RPJ Date: 9-4-07

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person contacted \_\_\_\_\_

[ ] No action necessary; process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_





# STL

### Sample Check-in List

Date/Time Received: 9-4-07 1520

Client: PGW SDG #: W05227 NA  SAF #: W07-009 NA

Work Order Number: J71050110 Chain of Custody #: W07-009-92

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? 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 samples labels
9. Samples are:
  - in good condition
  - broken
  - leaking
  - have air bubbles
 (Only for samples requiring head space)
10. Sample pH taken? NA  pH < 2  pH > 2  pH > 9
11. Sample Location, Sample Collector Listed? \* Yes  No   
 \*For documentation only. No corrective action needed: \_\_\_\_\_
12. Were any anomalies identified in sample receipt? Yes  No
13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian: RJP Date: 9-4-07

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person contacted \_\_\_\_\_

No action necessary; process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_

LS-023, 9/03, Rev. 5







# STL

### Sample Check-in List

DUE 10-19-07

Date/Time Received: 9-4-07 1520

Client: PGW SDG# W05227 NA  SAF# W07-008 NA

Work Order Number: JTI050111 Chain of Custody # W07-008-275-299

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? 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 samples labels
9. Samples are:
  - in good condition \_\_\_\_\_ leaking
  - broken \_\_\_\_\_ have air bubbles
 (Only for samples requiring head space)
10. Sample pH taken? NA  pH<2  pH>2  pH>9
11. Sample Location, Sample Collector Listed? \* Yes  No   
\*For documentation only.; No corrective action needed:
12. Were any anomalies identified in sample receipt? Yes  No
13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian: [Signature] Date: 9-4-07

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person contacted \_\_\_\_\_

No action necessary; process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_

LS-023, 9/03, Rev. 5





# STL

### Sample Check-in List

DUE 10-22-07

Date/Time Received: 9-6-07 1525

Client: PGW SDG#: W05227 NA  SAF#: S07-009 NA

Work Order Number: 511070207 Chain of Custody #: S07-009-254

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? 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 samples labels
9. Samples are:
  - in good condition
  - \_\_\_\_\_ broken
  - \_\_\_\_\_ leaking
  - \_\_\_\_\_ have air bubbles
  - (Only for samples requiring head space)
10. Sample pH taken? NA  pH < 2  pH > 2  pH > 9
11. Sample Location, Sample Collector Listed? \* Yes  No   
\*For documentation only. No corrective action needed:
12. Were any anomalies identified in sample receipt? Yes  No
13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian: [Signature] Date: 9-6-07

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person contacted: \_\_\_\_\_

[ ] No action necessary: process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_

LS-023, 9/03, Rev. 5

TAL RICHLAND

10/4/2007 12:24:06 PM **Sample Preparation/Analysis** Balance Id:11  
 384868, Pacific Northwest National Laboratory , KO Np-237 PrpRC5086, SepRC5064(5003) Pipet #:  
 Pacific Northwest National Lab XW Neptunium-237 with tracer by alpha spec  
 AnalyDueDate: 10/15/2007 **W05227** 51 CLIENT: HANFORD Sep1 DT/Tm Tech: 10-8-07 6:00 <sup>SA</sup> <sub>ref</sub>  
 Batch: 7260253 WATER pCi/L PM, Quote: SA , 57671 Sep2 DT/Tm Tech:  
 SEQ Batch, Test: None Prep Tech: ,BockJ



Work Ord, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	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 J5513-1-AA J71040131-2-SAMP 08/31/2007 10:21			200.70g,in	200.70g	NPTA6767 08/01/07,pd 06/01/01,r			200				
AmtRec: VIAL20,9XLP,3X4LP #Containers: 13 Scr: Alpha: -2.38E-04 uCi/Sa Beta: 2.28E-03 uCi/Sa												
2 J5513-1-AK-X J71040131-2-DUP 08/31/2007 10:21			199.00g,in	199.00g	NPTA6768 08/01/07,pd 06/01/01,r							
AmtRec: VIAL20,9XLP,3X4LP #Containers: 13 Scr: Alpha: -2.38E-04 uCi/Sa Beta: 2.28E-03 uCi/Sa												
3 J61MN-1-AA-B J71170000-253-BLK 08/31/2007 10:21			198.80g,in	198.80g	NPTA6769 08/01/07,pd 06/01/01,r							
AmtRec: #Containers: 1 Scr: Alpha: Beta:												
4 J61MN-1-AC-C J71170000-253-LCS 08/31/2007 10:21			199.40g,in	199.40g	NPSE0435 08/15/07,pd 06/01/01,r							
AmtRec: #Containers: 1 Scr: Alpha: Beta:												

Comments: PH < 2.0 8/10-4-07

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

J55131AA-SAMP Constituent List:  
 Np-237 RDL:0.6 pCi/L LCL: UCL: RPD:  
 J61MNLAA-BLK:  
 Np-237 RDL:0.6 pCi/L LCL: UCL: RPD:  
 J61MNLAC-LCS:

J55131AA-SAMP Calc Info:

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TAL RICHLAND

10/4/2007 12:24:07 PM

Sample Preparation/Analysis

Balance Id:11

KO Np-237 PrpRC5086, SepRC5064(5003)  
XW Neptunium-237 with tracer by alpha spec

Pipet #:

AnalyDueDate: 10/15/2007

5I CLIENT: HANFORD

Sep1 DT/Tm Tech:

Batch: 7260253

pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,BockJ



Work Ord, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
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Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
J61MN1AA-BLK:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
J61MN1AC-LCS:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

Approved By \_\_\_\_\_ Date: \_\_\_\_\_

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TAL RICHLAND

10/4/2007 12:32:02 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory  
Pacific Northwest National Lab

7Y Ulso PrpRC5016/5086, SepRC5067(5039)  
SR Uranium-234,235,238 by Alpha Spec  
SI CLIENT: HANFORD

Pipet #:

AnalyDueDate: 10/15/2007 *WO 5227*

Sep1 DT/Tm Tech:

Batch: 7260254 WATER pCi/L

PM, Quote: SA, 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,BockJ



Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 J5513-1-AH J71040131-2-SAMP  08/31/2007 10:21			197.90g,in	197.90g	UJTC18422 10/01/07.pd 01/20/04.r	<i>200</i>				
AmtRec: VIAL20,9XLP,3X4LP #Containers: 13 Scr: Alpha: -2.38E-04 uCi/Sa Beta: 2.28E-03 uCi/Sa										
2 J5513-1-AL-X J71040131-2-DUP  08/31/2007 10:21			198.60g,in	198.60g	UJTC18423 10/01/07.pd 01/20/04.r					
AmtRec: VIAL20,9XLP,3X4LP #Containers: 13 Scr: Alpha: -2.38E-04 uCi/Sa Beta: 2.28E-03 uCi/Sa										
3 J61MP-1-AA-B J71170000-254-BLK  08/31/2007 10:21			197.50g,in	197.50g	UJTC18424 10/01/07.pd 01/20/04.r					
AmtRec: #Containers: 1 Scr: Alpha: Beta:										
4 J61MP-1-AC-C J71170000-254-LCS  08/31/2007 10:21			201.20g,in	201.20g	UISG1505 09/20/07.pd 01/20/04.r					
AmtRec: #Containers: 1 Scr: Alpha: Beta:										

Comments: *PH < 2.0 JB 10-4-07*

All Clients for Batch:

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

J55131AH-SAMP Constituent List:

U-232	RDL:	pCi/L	LCL: 20	UCL: 105	RPD: 20	U-234	RDL: 1.00E+00	pCi/L	LCL:	UCL:	RPD:
U-235	RDL: 1.00E+00	pCi/L	LCL:	UCL:	RPD:	U-238	RDL: 1.00E+00	pCi/L	LCL:	UCL:	RPD:

J61MP1AA-BLK:

U-232	RDL:	pCi/L	LCL: 20	UCL: 105	RPD: 20	U-234	RDL: 1.00E+00	pCi/L	LCL:	UCL:	RPD:
U-235	RDL: 1.00E+00	pCi/L	LCL:	UCL:	RPD:	U-238	RDL: 1.00E+00	pCi/L	LCL:	UCL:	RPD:

STL Richland Key: In - Initial Amt, fl - Final Amt, dl - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1  
Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktalled Added

ISV - Insufficient Volume for Analysis

WO Cnt: 4  
Prep\_SamplePrep v4.8.26

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TAL RICHLAND

10/4/2007 12:32:03 PM

Sample Preparation/Analysis

Balance Id:1120482733

7Y Uiso PrpRC5016/5086, SepRC5067(5039)  
 SR Uranium-234,235,238 by Alpha Spec  
 5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 10/15/2007

Sep1 DT/Tm Tech:

Batch: 7260254  
 SEQ Batch, Test: None

pCi/L

Sep2 DT/Tm Tech:

Prep Tech: ,BockJ



Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Allquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
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J61MPIAC-LCS:  
 U-232 RDL: pCi/L LCL:20 UCL:105 RPD:20 Uranium RDL: pCi/L LCL:70 UCL:130 RPD:20

J55131AH-SAMP Calc Info:  
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  
 J61MPIAA-BLK:  
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  
 J61MPIAC-LCS:  
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By \_\_\_\_\_ Date: \_\_\_\_\_

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TAL RICHLAND

10/17/2007 4:09:47 PM

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  
SI CLIENT: HANFORD

Pipet #: 246

AnalyDueDate: 10/19/2007 W05227

Sep1 DT/Tm Tech:

Batch: 7260246 WATER pCi/L  
SEQ Batch, Test: None

PM, Quote: SA , 57671

Sep2 DT/Tm Tech:

Prep Tech: ,ClarkR /APA



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 J565L-1-AA J71050110-1-SAMP 09/04/2007 13:38 AmtRec: VIAL20,LP #Containers: 2	143.60g,in			1.5	29.1	100	10A	1121	10/20/0700	
2 J6DV7-1-AA J71070207-1-SAMP 09/06/2007 08:00 AmtRec: VIAL20,LP #Containers: 2	200.60g,in			1.1		50	10F	1910	10/19/0700	
3 J6DV7-1-AD-X J71070207-1-DUP 09/06/2007 08:00 AmtRec: VIAL20,LP #Containers: 2	200.80g,in			0.7			10A	2014	10/19/0700	
4 J61LT-1-AA-B J71170000-246-BLK 09/06/2007 08:00 AmtRec: VIAL20,LP #Containers: 1	200.80g,in			0.7		100	10F	1805	10/19/0700	
5 J61LT-1-AC-C J71170000-246-LCS 09/06/2007 08:00 AmtRec: VIAL20,LP #Containers: 1	200.20g,in		ASD4292 09/19/07,pd	0.8			10A			

Comments: pH < 2.0; Aliquots Reduced due to Weigh Screen RC 10/17/07

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

J565L1AA-SAMP Constituent List:  
ALPHA RDL:3 pCi/L LCL: UCL: RPD:

TA Richland Key: in - Initial Amt, fl - Final Amt, dl - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1  
Richland Wa. pd - Prep DL, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added ISV - Insufficient Volume for Analysis

WO Cnt: 5  
Prep\_SamplePrep v4.8.29

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TAAL RICHLAND

10/17/2007 4:09:49 PM

Sample Preparation/Analysis

Balance Id:1120482733

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

Pipet #: \_\_\_\_\_

Sep1 DT/Tm Tech: \_\_\_\_\_

Sep2 DT/Tm Tech: \_\_\_\_\_

AnalyDueDate: 10/19/2007

Batch: 7260246  
SEQ Batch, Test: None

pCi/L

Prep Tech: ,ClarkR



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:
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J61LT1AA-BLK:  
ALPHA RDL:3 pCi/L LCL: UCL: RPD:

J61LT1AC-LCS:  
Am-241 RDL: pCi/L LCL:70 UCL:130 RPD:20

J565L1AA-SAMP Calc Info:  
Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

J61LT1AA-BLK:  
Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

J61LT1AC-LCS:  
Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By \_\_\_\_\_

Date: \_\_\_\_\_

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RQC054

TestAmerica Laboratories, Inc.  
 Analysis Worksheet - Non-Actinides Alpha & Beta

Run Date: 10/23/07  
 Time: 17:33:16

QC Batch: 7260247

Page: 1

S8:Gross Beta by GPC using S  
 BC:Gross Beta PrpRC5014  
 SI:CLIENT: HANFORD

Filter: Y / N

Balance #: \_\_\_\_\_

Pipet #: \_\_\_\_\_

Sep1 Dt/Tm/Person: \_\_\_\_\_

Sep2 Dt/Tm/Person: \_\_\_\_\_

Tracer Vial	Work Order#	Total Sample	Volume Analyzed	PPT.Wt.	Tracer Yield	Dish Size	Count Time(min)	Detector ID	Time Off	CR Analyst Init/Date
	J54EA1AA									
	J54ED1AA									
	J54EF1AA									
	J565L1AC									
	J565L1AD X									
	J565L2AC	200.50	75.0		1.5	100	32A	2053		10/23/070A
	J565L2AD X	200.50	74.9		1.5	100	32C	↓	↓	
	J6DV71AC									
	J61LX1AA B									
	J61LX1AC C									

Comments:

TAL RICHLAND

10/17/2007 3:58:35 PM **Sample Preparation/Analysis** Balance Id:1120482733  
 384868, Pacific Northwest National Laboratory BC Gross Beta PrpRC5014 Pipet #: 246  
 Pacific Northwest National Lab S8 Gross Beta by GPC using Sr/Y-90 curve  
**AnalyDueDate: 10/15/2007** W05226 5I CLIENT: HANFORD  
**Batch: 7260247** **WATER** **pCi/L** PM, Quote: SA, 57671 Sep1 DT/Tm Tech:  
 SEQ Batch, Test: None Sep2 DT/Tm Tech:  
Prep Tech: ClarkR TAPA

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Allquot 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 J54EA-1-AA J7H310406-1-SAMP 08/30/2007 11:13	20.90g,in									
<div style="display: flex; justify-content: space-between; font-family: monospace;"> <span>1.5</span> <span>13.0</span> <span>200</span> <span>26B</span> <span>1932</span> <span>10/19/0700</span> </div>										
<div style="display: flex; justify-content: space-between; font-size: small;"> <span>AmtRec: VIAL20,LP</span> <span>#Containers: 2</span> <span>Scr: Alpha: 2.40E-03 uCi/Sa</span> <span>Beta: 4.04E-03 uCi/Sa</span> </div>										
2 J54ED-1-AA J7H310406-2-SAMP 08/30/2007 12:58	192.70g,in									
<div style="display: flex; justify-content: space-between; font-family: monospace;"> <span>74.9</span> <span>100</span> <span>27A</span> <span>1751</span> <span>10/19/0700</span> </div>										
<div style="display: flex; justify-content: space-between; font-size: small;"> <span>AmtRec: VIAL20,LP</span> <span>#Containers: 2</span> <span>Scr: Alpha: 3.75E-05 uCi/Sa</span> <span>Beta: -2.17E-05 uCi/Sa</span> </div>										
3 J54EF-1-AA J7H310406-3-SAMP 08/30/2007 11:56	152.20g,in									
<div style="display: flex; justify-content: space-between; font-family: monospace;"> <span>92.3</span> <span>27B</span> <span>1751</span> <span>10/19/0700</span> </div>										
<div style="display: flex; justify-content: space-between; font-size: small;"> <span>AmtRec: VIAL20,LP</span> <span>#Containers: 2</span> <span>Scr: Alpha: 9.30E-04 uCi/Sa</span> <span>Beta: 3.36E-04 uCi/Sa</span> </div>										
4 J565L-1-AC J71050110-1-SAMP 09/04/2007 13:38	200.50g,in									
<div style="display: flex; justify-content: space-between; font-family: monospace;"> <span>75.0</span> <span>27C</span> <span>1751</span> <span>10/19/0700</span> </div>										
<div style="display: flex; justify-content: space-between; font-size: small;"> <span>AmtRec: VIAL20,LP</span> <span>#Containers: 2</span> <span>Scr: Alpha: 1.11E-04 uCi/Sa</span> <span>Beta: 8.66E-05 uCi/Sa</span> </div>										
5 J565L-1-AD-X J71050110-1-DUP 09/04/2007 13:38	200.50g,in									
<div style="display: flex; justify-content: space-between; font-family: monospace;"> <span>74.5</span> <span>27D</span> <span>1751</span> <span>10/19/0700</span> </div>										
<div style="display: flex; justify-content: space-between; font-size: small;"> <span>AmtRec: VIAL20,LP</span> <span>#Containers: 2</span> <span>Scr: Alpha: 1.11E-04 uCi/Sa</span> <span>Beta: 8.66E-05 uCi/Sa</span> </div>										
6 J6DV7-1-AC J71070207-1-SAMP 09/06/2007 08:00	200.60g,in									
<div style="display: flex; justify-content: space-between; font-family: monospace;"> <span>0.4</span> <span>28A</span> <span>1751</span> <span>10/19/0700</span> </div>										
<div style="display: flex; justify-content: space-between; font-size: small;"> <span>AmtRec: VIAL20,LP</span> <span>#Containers: 2</span> <span>Scr: Alpha: 1.58E-04 uCi/Sa</span> <span>Beta: -5.79E-05 uCi/Sa</span> </div>										
7 J61LX-1-AA-B J71170000-247-BLK 09/04/2007 13:38	200.60g,in									
<div style="display: flex; justify-content: space-between; font-family: monospace;"> <span>0.4</span> <span>200</span> <span>26C</span> <span>1932</span> <span>10/19/0700</span> </div>										
<div style="display: flex; justify-content: space-between; font-size: small;"> <span>AmtRec:</span> <span>#Containers: 1</span> <span>Scr:</span> <span>Alpha:</span> <span>Beta:</span> </div>										

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TAL RICHLAND

10/17/2007 3:58:36 PM

Sample Preparation/Analysis

Balance Id:1120482733

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

Pipet #: \_\_\_\_\_

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

AnalyDueDate: 10/15/2007

Batch: 7260247  
 SEQ Batch, Test: None

pCi/L

Prep Tech: ,ClarkR



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:
8 J61LX-1-AC-C J71170000-247-LCS 09/04/2007 13:38		200.50g,in	BESB3141 10/01/07,pd	1.5	0.3	200	26D	1932	10/19/0200	
		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:		

Comments: J54EA-SAMP \*Comments Aliquot reduced due to Sample Screen RC 10/17/2007\*  
*pH < 2.0 ; Aliquots Reduced due to weight screen RC 10/17/07*

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

J54EA1AA-SAMP Constituent List:  
 BETA RDL:4.00E+00 pCi/L LCL: UCL: RPD:  
 J61LX1AA-BLK: BETA RDL:4 pCi/L LCL: UCL: RPD:  
 J61LX1AC-LCS: Sr-90 RDL: pCi/L LCL:70 UCL:130 RPD:20  
 J54EA1AA-SAMP Calc Info:  
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  
 J61LX1AA-BLK: Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  
 J61LX1AC-LCS: Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By \_\_\_\_\_ Date: \_\_\_\_\_

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TAL RICHLAND

10/9/2007 2:18:26 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory  
Pacific Northwest National Lab

CL Sr-90 Prp/SepRC5006(5071)  
TL Sr-85 by NaI and Sr-90 by GPC 7 day ingrowth  
51 CLIENT: HANFORD

Pipet #:          *PRM*

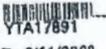
Sep1 DT/Tm Tech: *10/10/07 13:25:48*

Sep2 DT/Tm Tech: *10/10/07 09:10:12*  
*PRM*

AnalyDueDate: 10/15/2007 *W05227*

Batch: 7260255 WATER pCi/L PM, Quote: SA, 57671  
SEQ Batch, Test: None

Prep Tech: ClarkR

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:	
1 J55X6-1-AC J71040127-1-SAMP 		1000.90g,in	SRTB15307 09/11/07,pd 05/22/07,r	<i>10-11-07</i>			100	SA				
<i>Sample lost</i>												
08/31/2007 12:32	AmtRec: VIAL20,500MLP,3XLP,2X4LP #Containers: 7							Scr:	Alpha: -2.56E-04 uCi/Sa	Beta: -7.47E-04 uCi/Sa		
2 J55X6-1-AE-X J71040127-1-DUP 		1000.60g,in	SRTB15308 09/11/07,pd 05/22/07,r	<i>1.554</i> <i>1.9854</i> <i>0.7827</i>	<i>1.5</i>	<i>25.1</i>		9"	1454		<i>10/10/07 r</i> <i>10/18/07</i> <i>10/19/07</i>	
 YIA17891 Ex:8/11/2008												
08/31/2007 12:32	AmtRec: VIAL20,500MLP,3XLP,2X4LP #Containers: 7							Scr:	Alpha: -2.56E-04 uCi/Sa	Beta: -7.47E-04 uCi/Sa		
3 J55X6-2-AC J71040127-1-SAMP 		1000.20g,in	SRTB15336 10/02/07,pd 05/22/07,r	<i>1.818</i> <i>2.0078</i> <i>0.9055</i>		<i>24.9</i>		3"	1454		<i>10/10/07 R</i> <i>10/18/07</i> <i>10/19/07</i>	
 YIA17892 Ex:8/11/2008												
08/31/2007 12:32	AmtRec: VIAL20,500MLP,3XLP,2X4LP #Containers: 7							Scr:	Alpha: -2.56E-04 uCi/Sa	Beta: -7.47E-04 uCi/Sa		
4 J5513-1-AG J71040131-2-SAMP 		1002.40g,in	SRTB15309 09/11/07,pd 05/22/07,r	<i>1.514</i> <i>2.0044</i> <i>0.7580</i>		<i>17.1</i>		9"	1529		<i>10/10/07 r</i> <i>10/18/07</i> <i>10/19/07</i>	
 YIA17893 Ex:8/11/2008												
08/31/2007 10:21	AmtRec: VIAL20,9XLP,3X4LP #Containers: 13							Scr:	Alpha: -2.38E-04 uCi/Sa	Beta: 2.28E-03 uCi/Sa		

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TAL RICHLAND

10/9/2007 2:18:29 PM Sample Preparation/Analysis Balance Id:1120482733

AnalyDueDate: 10/15/2007 CL Sr-90 Prp/SepRC5006(5071) Pipet #:  
 Batch: 7260255 TL Sr-85 by NaI and Sr-90 by GPC 7 day ingrowth Sep1 DT/Tm Tech:  
 SEQ Batch, Test: None 5I CLIENT: HANFORD Sep2 DT/Tm Tech:

Work Order, Lot, Sample Date/Time pCi/L Prep Tech: ,ClarkR

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
5 J61MQ-1-AA-B J71170000-255-BLK	1000.70g,in	SRTB15310	09/11/07.pd 05/22/07.r	1.938 1.9934 0.8694	1.5	24.9	100	3"	1529	10/10/07	
08/31/2007 12:32 AmtRec: #Containers: 1 Ex:6/11/2006 Scr: Alpha: Beta:											
6 J61MQ-1-AC-C J71170000-255-LCS	1002.10g,in	SRSR1381	08/15/07.pd 05/22/07.r	1.519 2.0088 0.4562	19.3			9"	1610	10/10/07	
08/31/2007 12:32 AmtRec: #Containers: 1 Ex:6/11/2006 Scr: Alpha: Beta:											

Comments: *pH < 2.0; Sample 3-J55X6 Repoured RC 10/9/07*

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

J55X61AC-SAMP Constituent List:											
Sr-85	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Sr-90	RDL:2	pCi/L	LCL:70	UCL:130	RPD:20
J61MQ1AA-BLK:											
Sr-85	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Sr-90	RDL:2	pCi/L	LCL:	UCL:	RPD:
J61MQ1AC-LCS:											
Sr-85	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Sr-90	RDL:2	pCi/L	LCL:70	UCL:130	RPD:20
J55X61AC-SAMP Calc Info:											
Uncert Level (#s): 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B											
J61MQ1AA-BLK:											

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TAL RICHLAND

10/9/2007 2:18:29 PM

**Sample Preparation/Analysis**

Balance Id:1120482733

CL Sr-90 Prp/SepRC5006(5071)  
 TL Sr-85 by Nai and Sr-90 by GPC 7 day ingrowth  
 51 CLIENT: HANFORD

Pipet #: \_\_\_\_\_

AnalyDueDate: 10/15/2007

Sep1 DT/Tm Tech: \_\_\_\_\_

Batch: 7260255  
 SEQ Batch, Test: None

pCi/L

Sep2 DT/Tm Tech: \_\_\_\_\_

Prep Tech: ,ClarkR



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
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Uncert Level (#s): 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B  
 761MQLAC-LCS:  
 Uncert Level (#s): 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B

Approved By \_\_\_\_\_ Date: \_\_\_\_\_

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TAL RICHLAND

10/18/2007 8:52:43 AM **Sample Preparation/Analysis** Balance Id:1120482733  
 384868, Pacific Northwest National Laboratory , AW Gamma PrpRC5017 Pipet #: \_\_\_\_\_  
 Pacific Northwest National Lab TA Gamma by HPGE Sep1 DT/Tm Tech: \_\_\_\_\_  
**AnalyDueDate: 10/15/2007** *W05227* 5I CLIENT: HANFORD Sep2 DT/Tm Tech: \_\_\_\_\_  
**Batch: 7260251 WATER** pCi/L PM, Quote: SA , 57671 Prep Tech: ClarkR  
 SEQ Batch, Test: None



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 J5513-1-AD J71040131-2-SAMP 08/31/2007 10:21	2000.60g,in									
<div style="display: flex; justify-content: space-between;"> <span><i>100ml 200</i></span> <span><i>64</i></span> <span><i>1352</i></span> <span><i>10/19/07</i></span> </div>										
AmtRec: VIAL20,9XLP,3X4LP			#Containers: 13		Scr:		Alpha: -2.38E-04 uCi/Sa		Beta: 2.28E-03 uCi/Sa	
2 J5513-1-AJ-X J71040131-2-DUP 08/31/2007 10:21	1936.10g,in									
<div style="display: flex; justify-content: space-between;"> <span></span> <span><i>66</i></span> <span><i>1352</i></span> </div>										
AmtRec: VIAL20,9XLP,3X4LP			#Containers: 13		Scr:		Alpha: -2.38E-04 uCi/Sa		Beta: 2.28E-03 uCi/Sa	
3 J61MJ-1-AA-B J71170000-251-BLK 08/31/2007 10:21	2000.60g,in									
<div style="display: flex; justify-content: space-between;"> <span></span> <span><i>67</i></span> <span><i>1353</i></span> </div>										
AmtRec:			#Containers: 1		Scr:		Alpha:		Beta:	
4 J61MJ-1-AC-C J71170000-251-LCS 08/31/2007 10:21	2000.40g,in		QCAG1407							
<div style="display: flex; justify-content: space-between;"> <span></span> <span><i>68</i></span> <span><i>1353</i></span> </div>										
AmtRec:			#Containers: 1		Scr:		Alpha:		Beta:	

**Comments:** J5513-SAMP "Comments DUP Reduced due to ISV RC 10/17/2007"  
 J61MJ-BLK "Comments LCS repoured RC 10/18/2007"  
*pH < 2.0 10/18/07 RC*

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

J55131AD-SAMP Constituent List:

Co-60	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
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:	UCL:	RPD:	Eu-155	RDL:.00E+00	pCi/L	LCL:	UCL:	RPD:
K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Sb-125	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:

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TAL RICHLAND

10/18/2007 8:52:44 AM

Sample Preparation/Analysis

Balance Id:1120482733

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

Pipet #:

AnalyDueDate: 10/15/2007

Sep1 DT/Tm Tech:

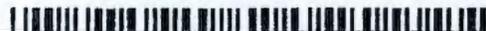
Batch: 7260251

pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ClarkR



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:	
J61MJ1AA-BLK:											
Co-60	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
Cs-137	RDL:6.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-137DA	RDL:6.00E+00	pCi/L	LCL:	UCL:	RPD:
Eu-154	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Eu-155	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Sb-125	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
J61MJ1AC-LCS:											
Cs-137	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
RA-228	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20	RA-228DA	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20
U-238	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20						
J55131AD-SAMP Calc Info:											
Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B											
J61MJ1AA-BLK:											
Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B											
J61MJ1AC-LCS:											
Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B											

Approved By \_\_\_\_\_ Date: \_\_\_\_\_

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TAL RICHLAND

10/2/2007 1:15:37 PM **Sample Preparation/Analysis** Balance Id: 1120482733  
 384868, Pacific Northwest National Laboratory BN I-129 Prp/SepRC5025 Pipet #: \_\_\_\_\_  
 Pacific Northwest National Lab TB Gamma by LEPD  
 AnalyDueDate: 10/15/2007 *W05227* 5I CLIENT: HANFORD Sep1 DT/Tm Tech: \_\_\_\_\_  
 Batch: 7260250 WATER pCi/L PM, Quote: SA, 57671 Sep2 DT/Tm Tech: \_\_\_\_\_  
 SEQ Batch, Test: None Prep Tech: ClarkR



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 J54D2-1-AA J7H310404-1-SAMP 08/30/2007 13:42	3956.20g.in	3956.20g.in	ITA6599 08/27/07			100	L2	1522	10/17/07	
		AmtRec: VIAL20,2X4LP	#Containers: 3			35.8		Alpha: 1.61E-05 uCi/Sa	Beta: -6.96E-04 uCi/Sa	
2 J54D4-1-AA J7H310404-2-SAMP 08/30/2007 12:04	3942.10g.in	3942.10g.in	ITA6600 08/27/07				L2	1705	10/17/07	
		AmtRec: VIAL20,2X4LP	#Containers: 3			35.6		Alpha: 8.53E-04 uCi/Sa	Beta: 1.30E-03 uCi/Sa	
3 J54D5-1-AA J7H310404-3-SAMP 08/30/2007 09:54	3961.70g.in	3961.70g.in	ITA6601 08/27/07				L2	1549	10/17/07	
		AmtRec: VIAL20,2X4LP	#Containers: 3			34.1		Alpha: -8.04E-05 uCi/Sa	Beta: -2.60E-04 uCi/Sa	
4 J55X6-1-AA J71040127-1-SAMP 08/31/2007 12:32	3860.30g.in	3860.30g.in	ITA6602 08/27/07				L2	2032	10/17/07	
		AmtRec: VIAL20,500MLP,3XLP,2X4LP	#Containers: 7			35.5		Alpha: -2.56E-04 uCi/Sa	Beta: -7.47E-04 uCi/Sa	
5 J551C-1-AA J71040129-1-SAMP 08/31/2007 10:45	3871.50g.in	3871.50g.in	ITA6603 08/27/07				L2	2303	10/17/07	
		AmtRec: VIAL20,2X4LP	#Containers: 3			35.1		Alpha: 2.22E-03 uCi/Sa	Beta: -1.73E-03 uCi/Sa	
6 J551V-1-AA J71040129-2-SAMP 08/31/2007 12:32	3927.50g.in	3927.50g.in	ITA6604 08/27/07				L2	0715	10/18/07	
		AmtRec: VIAL20,2X4LP	#Containers: 3			35.8		Alpha: -5.78E-04 uCi/Sa	Beta: 2.60E-04 uCi/Sa	
7 J5511-1-AA J71040131-1-SAMP 08/31/2007 12:51	3942.70g.in	3942.70g.in	ITA6605 08/27/07				L4	0716		
		AmtRec: VIAL20,2X4LP	#Containers: 3			36.0		Alpha: 2.01E-04 uCi/Sa	Beta: -4.34E-04 uCi/Sa	

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TAL RICHLAND

10/2/2007 1:15:40 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

Pipet #: \_\_\_\_\_

AnalyDueDate: 10/15/2007

Sep1 DT/Tm Tech:

Batch: 7260250 WATER pCi/L  
SEQ Batch, Test: None

PM, Quote: SA , 57671

Sep2 DT/Tm Tech:

Prep Tech: ,ClarkR



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, Ini/Date	Comments:
8 J5513-1-AE J71040131-2-SAMP 08/31/2007 10:21	3924.50g,in	3924.50g,in	ITA6606 08/27/07		35.5	100	L5	0714	10/15/07	
		AmtRec: VIAL20,9XLP,3X4LP		#Containers: 13		Scr:		Alpha: -2.38E-04 uCi/Sa	Beta: 2.28E-03 uCi/Sa	
9 J565A-1-AA J71050107-1-SAMP 09/04/2007 14:07	3921.90g,in	3921.90g,in	ITA6607 08/27/07		35.3		L2	0555		
		AmtRec: VIAL20,2X4LP		#Containers: 3		Scr:		Alpha: 1.31E-03 uCi/Sa	Beta: 4.33E-04 uCi/Sa	
10 J565A-1-AC-X J71050107-1-DUP 09/04/2007 14:07	3949.80g,in	3949.80g,in	ITA6608 08/27/07		35.5		L4	0559		
		AmtRec: VIAL20,2X4LP		#Containers: 3		Scr:		Alpha: 1.31E-03 uCi/Sa	Beta: 4.33E-04 uCi/Sa	
11 J565G-1-AA J71050108-1-SAMP 09/04/2007 11:19	3921.70g,in	3921.70g,in	ITA6609 08/27/07		35.0		L5	0859		
		AmtRec: VIAL20,2X4LP		#Containers: 3		Scr:		Alpha: 8.68E-04 uCi/Sa	Beta: 8.71E-04 uCi/Sa	
12 J565H-1-AA J71050109-1-SAMP 09/04/2007 12:35	3951.90g,in	3951.90g,in	ITA6610 08/27/07		37.0		L2	1107	10/15/07	
		AmtRec: VIAL20,2X4LP		#Containers: 3		Scr:		Alpha: 1.22E-03 uCi/Sa	Beta: -1.23E-03 uCi/Sa	
13 J61LB-1-AA-B J71170000-250-BLK 09/04/2007 14:07	4000.90g,in	4000.90g,in	ITA6611 08/27/07		36.0		L4	1102		
		AmtRec:		#Containers: 1		Scr:		Alpha:	Beta:	
14 J61LB-1-AC-C J71170000-250-LCS 09/04/2007 14:07	3978.50g,in	3978.50g,in	ISD0780 08/15/07		36.7		L5	1102		
		AmtRec:		#Containers: 1		Scr:		Alpha:	Beta:	

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TAL RICHLAND

10/2/2007 1:15:42 PM

Sample Preparation/Analysis

Balance Id:1120482733

BN I-129 Prp/SepRC5025  
 TB Gamma by LEPD  
 5I CLIENT: HANFORD

Pipet #:

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

AnalyDueDate: 10/15/2007

Batch: 7260250  
 SEQ Batch, Test: None

pCi/L

Prep Tech: ,ClarkR



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Allquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
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Comments: *Alignors Reduced due to ISV and Balance Limitations RC 10/02/07*

All Clients for Batch:

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

J54D21AA-SAMP Constituent List:

I-129 RDL:1.00E+00 pCi/L LCL: UCL: RPD:  
 J61L81AA-BLK:  
 I-129 RDL:1.00E+00 pCi/L LCL: UCL: RPD:  
 J61L81AC-LCS:  
 I-129 RDL:5 pCi/L LCL:70 UCL:130 RPD:20

J54D21AA-SAMP Calc Info:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  
 J61L81AA-BLK:  
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  
 J61L81AC-LCS:  
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By \_\_\_\_\_ Date: \_\_\_\_\_

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TAL RICHLAND

9/20/2007 3:33:59 PM

Sample Preparation/Analysis

Balance Id:1120373922

384868, Pacific Northwest National Laboratory  
Pacific Northwest National Lab

CY Se-79 PrpRC5016, SepRC5043  
TM Selenium-79 by Liquid Scint  
5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 10/15/2007

Sep1 DT/Tm Tech:

Batch: 7260256 WATER pCi/L  
SEQ Batch, Test: None

PM, Quote: SA , 57671

Sep2 DT/Tm Tech:

Prep Tech: ,FABREM



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 J5513-1-AF J71040131-2-SAMP 08/31/2007 10:21		200.22g,in	seta0202 12/06/06		50				
		AmtRec: VIAL20,9XLP,3X4LP		#Containers: 13		Scr:	Alpha: -2.38E-04 uCi/Sa	Beta: 2.28E-03 uCi/Sa	
2 J5513-1-AM-X J71040131-2-DUP 08/31/2007 10:21		200.86g,in	seta0203 12/06/06						
		AmtRec: VIAL20,9XLP,3X4LP		#Containers: 13		Scr:	Alpha: -2.38E-04 uCi/Sa	Beta: 2.28E-03 uCi/Sa	
3 J61MT-1-AA-B J71170000-256-BLK 08/31/2007 10:21		200.20g,in	seta0204 12/06/06						
		AmtRec:		#Containers: 1		Scr:	Alpha:	Beta:	
4 J61MT-1-AC-BN J71170000-256-IBLK 08/31/2007 10:21									
		AmtRec:		#Containers: 1		Scr:	Alpha:	Beta:	

Comments:

All Clients for Batch:

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

J55131AF-SAMP Constituent List:

Se-79 RDL:3.00E+01 pCi/L LCL: UCL: RPD:  
J61MT1AA-BLK:  
Se-79 RDL:3.00E+01 pCi/L LCL: UCL: RPD:  
J61MT1AC-IBLK:  
Se-79 RDL:3.00E+01 pCi/L LCL: UCL: RPD:

J55131AF-SAMP Calc Info:

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

ISV - Insufficient Volume for Analysis

WO Cnt: 4  
Prep\_SamplePrep v4.8.26

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TAL RICHLAND

9/20/2007 3:34:00 PM

**Sample Preparation/Analysis**

Balance Id: \_\_\_\_\_

CY Se-79 PrpRC5016, SepRC5043  
 TM Selenium-79 by Liquid Scint  
 51 CLIENT: HANFORD

Pipet #: \_\_\_\_\_

AnalyDueDate: 10/15/2007

Sep1 DT/Tm Tech: \_\_\_\_\_

Batch: 7260256

pCi/L

Sep2 DT/Tm Tech: \_\_\_\_\_

SEQ Batch, Test: None

Prep Tech: \_\_\_\_\_



Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B					
J61NT1AA-BLK:									
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B					
J61NT1AC-IBLK:									
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B					

Approved By \_\_\_\_\_

Date: \_\_\_\_\_

121

TAL RICHLAND

10/4/2007 12:52:10 PM

Sample Preparation/Analysis.

Balance Id:1120482733

384868, Pacific Northwest National Laboratory  
Pacific Northwest National Lab

FP Tc-99 Prp/SepRC5065  
S5 Technetium-99 by Liquid Scint  
SI CLIENT: HANFORD

Pipet #:

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

AnalyDueDate: 10/15/2007

W05227

Batch: 7260249 WATER pCi/L  
SEQ Batch, Test: None

PM, Quote: SA , 57671

Prep Tech: ,BockJ



Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 J55X2-1-AA J71040124-1-SAMP 08/31/2007 10:56			124.40g,in	124.40g		60				
AmtRec: VIAL20,500MLP #Containers: 2 Scr: Alpha: 9.99E-05 uCi/Sa Beta: -5.42E-05 uCi/Sa										
2 J55X2-1-AC-X J71040124-1-DUP 08/31/2007 10:56			125.20g,in	125.20g						
AmtRec: VIAL20,500MLP #Containers: 2 Scr: Alpha: 9.99E-05 uCi/Sa Beta: -5.42E-05 uCi/Sa										
3 J55X6-1-AD J71040127-1-SAMP 08/31/2007 12:32			125.80g,in	125.80g						
AmtRec: VIAL20,500MLP,3XLP,2X4LP #Containers: 7 Scr: Alpha: -2.56E-04 uCi/Sa Beta: -7.47E-04 uCi/Sa										
4 J55X9-1-AA J71040127-2-SAMP 08/31/2007 08:28			124.10g,in	124.10g						
AmtRec: VIAL20,500MLP #Containers: 2 Scr: Alpha: 3.84E-05 uCi/Sa Beta: 2.70E-05 uCi/Sa										
5 J565W-1-AA J71050111-1-SAMP 09/04/2007 12:31			126.00g,in	126.00g						
AmtRec: VIAL20,500MLP #Containers: 2 Scr: Alpha: -1.46E-06 uCi/Sa Beta: 1.08E-04 uCi/Sa										
6 J565W-1-AC-S J71050111-1-MS 09/04/2007 12:31			124.50g,in	124.50g	TCSG1904 09/22/07,pd 01/19/06,r					
AmtRec: VIAL20,500MLP #Containers: 2 Scr: Alpha: -1.46E-06 uCi/Sa Beta: 1.08E-04 uCi/Sa										
7 J565X-1-AA J71050111-2-SAMP 09/04/2007 10:35			125.90g,in	125.90g						
AmtRec: VIAL20,500MLP #Containers: 2 Scr: Alpha: -9.06E-06 uCi/Sa Beta: -2.70E-05 uCi/Sa										

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

ISV - Insufficient Volume for Analysis

WO Cnt: 7

Prep\_SamplePrep v4.8.26

122

TAL RICHLAND

10/4/2007 12:52:11 PM

Sample Preparation/Analysis

Balance Id:1120482733

FP Tc-99 Prp/SepRC5065  
S5 Technetium-99 by Liquid Scint  
SI CLIENT: HANFORD

Pipet #: \_\_\_\_\_

AnalyDueDate: 10/15/2007

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Batch: 7260249  
SEQ Batch, Test: None

pCi/L

Prep Tech: ,BockJ



Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 J61L3-1-AA-B J71170000-249-BLK 08/31/2007 10:56			127.30g,in	127.30g		60				
<p>AmtRec: #Containers: 1 Scr: Alpha: Beta:</p>										
9 J61L3-1-AC-C J71170000-249-LCS 08/31/2007 10:56			124.00g,in	124.00g	TCSE2164 09/20/07,pd 01/10/06,r					
<p>AmtRec: #Containers: 1 Scr: Alpha: Beta:</p>										
10 J61L3-1-AD-BN J71170000-249-IBLK 08/31/2007 10:56										
<p>AmtRec: #Containers: 1 Scr: Alpha: Beta:</p>										

Comments: PHC20 9310-4-07

All Clients for Batch:

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

J55X21AA-SAMP Constituent List:

Tc-99 RDL:15 pCi/L LCL:70 UCL:130 RPD:20

J565W1AC-MS:

J61L31AA-BLK:

Tc-99 RDL:15 pCi/L LCL: UCL: RPD:

J61L31AC-LCS:

Tc-99 RDL:15 pCi/L LCL:70 UCL:130 RPD:20

J61L31AD-IBLK:

Tc-99 RDL:15 pCi/L LCL: UCL: RPD:

J55X21AA-SAMP Calc Info:

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

J565W1AC-MS:

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

STL 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, ci-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: 10  
Prep\_SamplePrep v4.8.26

123

TAL RICHLAND

10/4/2007 12:52:12 PM

Sample Preparation/Analysis

Balance Id: \_\_\_\_\_

FP Tc-99 Prp/SepRC5065  
 S5 Technetium-99 by Liquid Scint  
 5I CLIENT: HANFORD

Pipet #: \_\_\_\_\_

AnalyDueDate: 10/15/2007

Sep1 DT/Tm Tech: \_\_\_\_\_

Batch: 7260249  
 SEQ Batch, Test: None

pCi/L

Sep2 DT/Tm Tech: \_\_\_\_\_

Prep Tech: \_\_\_\_\_



Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
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J61L31AA-BLK:  
 Uncert Level (#s): 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B

J61L31AC-LCS:  
 Uncert Level (#s): 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B

J61L31AD-IBLK:  
 Uncert Level (#s): 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B

Approved By \_\_\_\_\_ Date: \_\_\_\_\_

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TAL RICHLAND

9/17/2007 10:35:10 AM

Sample Preparation/Analysis

Balance Id: *N/A*

384868, Pacific Northwest National Laboratory  
Pacific Northwest National Lab

55 C-14 Prp/SepRC5022  
S3 Carbon-14 by Liquid Scint  
5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 10/15/2007 *W05227*

Sep1 DT/Tm Tech: *10907*

Batch: 7260268 WATER pCi/L  
SEQ Batch, Test: None

PM, Quote: SA, 57671

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:
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1 J5513-1-AC

J71040131-2-SAMP



08/31/2007 10:21

AmtRec: VIAL20,9XLP,3X4LP #Containers: 13

Scr: Alpha: -2.38E-04 uCi/Sa Beta: 2.28E-03 uCi/Sa

2 J5513-1-AN-X

J71040131-2-DUP



08/31/2007 10:21

AmtRec: VIAL20,9XLP,3X4LP #Containers: 13

Scr: Alpha: -2.38E-04 uCi/Sa Beta: 2.28E-03 uCi/Sa

3 J61NK-1-AA-B

J71170000-268-BLK



08/31/2007 10:21

AmtRec: #Containers: 1

Scr: Alpha: Beta:

4 J61NK-1-AC-C

J71170000-268-LCS



08/31/2007 10:21

AmtRec: #Containers: 1

Scr: Alpha: Beta:

5 J61NK-1-AD-BN

J71170000-268-IBLK



08/31/2007 10:21

AmtRec: #Containers: 1

Scr: Alpha: Beta:

Comments:

All Clients for Batch:

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

J55131AC-SAMP Constituent List:

C-14 RDL:2.00E+02 pCi/L LCL:70 UCL:130 RPD:20

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

ISV - Insufficient Volume for Analysis

WO Cnt: 5

ICOC v4.8.26

125

TAL RICHLAND

9/17/2007 10:35:11 AM

Sample Preparation/Analysis

Balance Id: *N/A*

5S C-14 Prp/SepRC5022  
 S3 Carbon-14 by Liquid Scint  
 5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 10/15/2007

Sep1 DT/Tm Tech: *109020w*

Batch: 7260268

pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
J61NK1AA-BLK: C-14	RDL:2.00E+02	pCi/L	LCL:	UCL:	RPD:			
J61NK1AC-LCS: C-14	RDL:200	pCi/L	LCL:70	UCL:130	RPD:20			
J61NK1AD-IBLK: C-14	RDL:2.00E+02	pCi/L	LCL:	UCL:	RPD:			
J55131AC-SAMP Calc Info:								
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B				
J61NK1AA-BLK: Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B				
J61NK1AC-LCS: Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B				
J61NK1AD-IBLK: Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B				

Approved By \_\_\_\_\_ Date: \_\_\_\_\_

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10/18/2007 9:15:47 AM

# ICOC Fraction Transfer/Status Report

ByDate: 10/18/2006, 10/23/2007, Batch: '7260253', User: \*ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting	Comments
	7260253				
AC		CalcC	BockJ	10/4/2007 12:24:36	
SC			wagarr	IsBatched 9/17/2007 10:36:12 AM	ICOC_RADCALC v4.8.26
SC			BockJ	InPrep 10/4/2007 12:24:36 PM	RICH-RC-5016 REVISION 7
SC			BockJ	Prep1C 10/4/2007 2:13:09 PM	RICH-RC-5016 REVISION 7
SC			FABREM	Sep1C 10/8/2007 8:15:15 PM	RICH-RC-5084 REVISION 5
SC			FABREM	Sep2C 10/9/2007 11:56:38 AM	RICH-RC-5003 REVISION 7
SC			BlackCL	InCnt1 10/9/2007 12:11:23 PM	RICH-RD-0008 REVISION 4
SC			DAWKINSO	CalcC 10/9/2007 8:10:00 PM	RICH-RD-0008 REVISION 4
AC			BockJ	10/4/2007 2:13:09 PM	
AC			FABREM	10/8/2007 8:15:15 PM	
AC			FABREM	10/9/2007 11:56:38	
AC			BlackCL	10/9/2007 12:11:23	
AC			DAWKINSO	10/9/2007 8:10:00 PM	

AC: Accepting Entry; SC: Status Change

STL Richland  
Richland Wa.

10/11/2007 4:07:24 PM

# ICOC Fraction Transfer/Status Report

ByDate: 10/11/2006, 10/16/2007, Batch: '7260254', User: \*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
7260254				
AC	CalcC	BockJ	10/4/2007 2:12:57 PM	
SC		wagarr	IsBatched	9/17/2007 10:36:12 AM
SC		BockJ	Prep1C	10/4/2007 2:12:57 PM
SC		DobeckIT	Prep2C	10/5/2007 11:22:29 AM
SC		DobeckIT	Sep1C	10/8/2007 2:51:16 PM
SC		AshworthA	Sep2C	10/9/2007 1:09:28 PM
SC		BlackCL	InCnt1	10/9/2007 1:12:02 PM
SC		DAWKINSO	CalcC	10/9/2007 9:17:10 PM
AC		DobeckIT	10/5/2007 11:22:29	
AC		DobeckIT	10/8/2007 2:51:16 PM	
AC		AshworthA	10/9/2007 1:09:28 PM	
AC		BlackCL	10/9/2007 1:12:02 PM	
AC		DAWKINSO	10/9/2007 9:17:10 PM	

AC: Accepting Entry; SC: Status Change

STL Richland  
Richland Wa.

10/24/2007 3:43:09 PM

# ICOC Fraction Transfer/Status Report

ByDate: 10/24/2006, 10/29/2007, Batch: '7260246', User: \*ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting	Comments
	7260246				
AC		CalcC	ClarkR	10/17/2007 4:03:45	
SC			wagarr	IsBatched 9/17/2007 10:36:12 AM	ICOC_RADCALC v4.8.26
SC			ClarkR	InPrep 10/17/2007 4:03:45 PM	RICH-RC-5016 Revision 7
SC			ClarkR	Prep1C 10/17/2007 4:09:51 PM	RICH-RC-5014 REVISION 7
SC			BockJ	InPrep2 10/18/2007 8:39:30 AM	RICH-RC-5014 REVISION 7
SC			AshworthA	Prep2C 10/19/2007 2:14:26 PM	RICH-RC-5014 REVISION 7
SC			DAWKINSO	InCnt1 10/19/2007 3:39:49 PM	RICH-RD-0003 REVISION 5
SC			BlackCL	CalcC 10/22/2007 8:05:06 AM	RICH-RD-0003 REVISION 5
AC			ClarkR	10/17/2007 4:09:51	
AC			BockJ	10/18/2007 8:39:30	
AC			AshworthA	10/19/2007 2:14:26	
AC			DAWKINSO	10/19/2007 3:39:49	
AC			BlackCL	10/22/2007 8:05:06	

AC: Accepting Entry; SC: Status Change

STL Richland  
Richland Wa.

10/25/2007 11:41:27 AM

# ICOC Fraction Transfer/Status Report

ByDate: 10/25/2006, 10/30/2007, Batch: '7260247', User: \*ALL Order By DateTimeAccepting

Q	Batch	Work	Ord	CurStatus	Accepting	Comments
	7260247					
AC		CalcC		ClarkR	10/17/2007 3:47:37	
SC				wagarr	IsBatched 9/17/2007 10:36:12 AM	ICOC_RADCALC v4.8.26
SC				ClarkR	InPrep 10/17/2007 3:47:37 PM	RICH-RC-5016 Revision 7
SC				ClarkR	Prep1C 10/17/2007 3:58:40 PM	RICH-RC-5014 REVISION 7
SC				BockJ	InPrep2 10/18/2007 8:38:24 AM	RICH-RC-5014 REVISION 7
SC				AshworthA	Prep2C 10/19/2007 2:14:31 PM	RICH-RC-5014 REVISION 7
SC				DAWKINSO	InCnt1 10/19/2007 8:25:04 PM	RICH-RD-0003 REVISION 5
SC				BlackCL	CalcC 10/22/2007 8:05:18 AM	RICH-RD-0003 REVISION 5
SC				DAWKINSO	InCnt1 10/23/2007 8:25:20 PM	RICH-RD-0003 REVISION 5
SC				BlackCL	CalcC 10/24/2007 6:42:50 AM	RICH-RD-0003 REVISION 5
AC				ClarkR	10/17/2007 3:58:40	
AC				BockJ	10/18/2007 8:38:24	
AC				AshworthA	10/19/2007 2:14:31	
AC				DAWKINSO	10/19/2007 8:25:04	
AC				BlackCL	10/22/2007 8:05:18	
AC				DAWKINSO	10/23/2007 8:25:20	
AC				BlackCL	10/24/2007 6:42:50	

AC: Accepting Entry, SC: Status Change

STL Richland  
Richland Wa.

10/20/2007 11:16:55 AM

# ICOC Fraction Transfer/Status Report

ByDate: 10/20/2006, 10/25/2007, Batch: '7260255', User: \*ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting	Comments
	7260255				
AC		CalcC	ClarkR	9/28/2007 11:35:05	
SC			wagarr	IsBatched 9/17/2007 10:36:12 AM	ICOC_RADCALC v4.8.26
SC			ClarkR	InPrep 9/28/2007 11:35:05 AM	RICH-RC-5016 Revision 7
SC			ClarkR	Prep1C 9/28/2007 11:50:12 AM	RICH-RC-5016 REVISION 7
SC			ManisD	Sep1C 10/10/2007 2:21:54 PM	RICH-RC-5006 REV 7
SC			StringerR	InCnt1 10/10/2007 2:26:31 PM	RICH-RD-0007 REVISION 6
SC			DAWKINSO	Cnt1C 10/10/2007 11:42:34 PM	RICH-RD-0007 REVISION 6
SC			DAWKINSO	InCnt2 10/17/2007 5:01:13 PM	RICH-RD-0003 REVISION 5
SC			BlackCL	CalcC 10/19/2007 10:23:49 AM	RICH-RD-0003 REVISION 5
AC			ClarkR	9/28/2007 11:50:12	
AC			ManisD	10/10/2007 2:21:54	
AC			StringerR	10/10/2007 2:26:31	
AC			DAWKINSO	10/10/2007 11:42:34	
AC			DAWKINSO	10/17/2007 5:01:13	
AC			BlackCL	10/19/2007 10:23:49	

AC: Accepting Entry, SC: Status Change

STL Richland  
Richland Wa.

10/23/2007 4:48:09 PM

# ICOC Fraction Transfer/Status Report

ByDate: 10/23/2006, 10/28/2007, Batch: '7260251', User: \*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
<b>7260251</b>				
AC	CalcC	ClarkR	10/17/2007 7:39:56	
SC		wagarr	IsBatched	9/17/2007 10:36:12 AM
SC		ClarkR	InPrep	10/17/2007 7:39:56 AM
SC		ClarkR	Prep1C	10/17/2007 7:50:05 AM
SC		ClarkR	Prep1C	10/17/2007 7:50:21 AM
SC		BockJ	InPrep2	10/17/2007 8:17:17 AM
SC		ClarkR	Prep1C	10/18/2007 8:52:59 AM
SC		AshworthA	Prep2C	10/19/2007 10:28:52 AM
SC		BlackCL	InCnt1	10/19/2007 10:31:37 AM
SC		DAWKINSO	CalcC	10/19/2007 8:35:37 PM
AC		ClarkR		10/17/2007 7:50:05
AC		ClarkR		10/17/2007 7:50:21
AC		BockJ		10/17/2007 8:17:17
AC		BockJ		10/17/2007 8:17:33
AC		ClarkR		10/18/2007 8:52:59
AC		AshworthA		10/19/2007 10:28:52
AC		BlackCL		10/19/2007 10:31:37
AC		DAWKINSO		10/19/2007 8:35:37

AC: Accepting Entry; SC: Status Change

STL Richland  
Richland Wa.

10/19/2007 10:25:42 AM

# ICOC Fraction Transfer/Status Report

ByDate: 10/19/2006, 10/24/2007, Batch: '7260250', User: 'ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting	Comments
7260250					
AC		CalcC	ClarkR	10/2/2007 12:36:32	
SC			wagarr	IsBatched 9/17/2007 10:36:12 AM	ICOC_RADCALC v4.8.26
SC			ClarkR	InPrep 10/2/2007 12:36:32 PM	RICH-RC-5016 Revision 7
SC			ClarkR	Prep1C 10/2/2007 1:15:54 PM	RICH-RC-5016 REVISION 7
SC			BostedD	InPrep2 10/3/2007 10:03:15 AM	RICHRC5025 REVISION 4
SC			BostedD	Prep2C 10/17/2007 1:40:51 PM	RICHRC5025 REVISION 4
SC			BlackCL	InCnt1 10/17/2007 1:43:59 PM	RICH-RD-0007 REVISION 6
SC			BlackCL	CalcC 10/18/2007 12:12:16 PM	RICH-RD-0007 REVISION 6
AC			ClarkR	10/2/2007 1:15:54 PM	
AC			BostedD	10/3/2007 10:03:15	
AC			BostedD	10/17/2007 1:40:51	
AC			BlackCL	10/17/2007 1:43:59	
AC			BlackCL	10/18/2007 12:12:16	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

10/5/2007 2:04:53 PM

# ICOC Fraction Transfer/Status Report

ByDate: 10/5/2006, 10/10/2007, Batch: '7260256', User: \*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
7260256				
AC	Rev1C	FABREM	9/20/2007 2:27:44 PM	
SC		wagarr	IsBatched 9/17/2007 10:36:12 AM	ICOC_RADCALC v4.8.26
SC		FABREM	InPrep 9/20/2007 2:27:44 PM	rich-rc-5016 rEVISION 7
SC		FABREM	Sep1C 9/27/2007 12:49:17 PM	RICH-RC-5043 REVISION 3
SC		StringerR	InCnt1 9/27/2007 12:55:53 PM	RICH-RD-0001 REVISION 4
SC		BlackCL	CalcC 10/4/2007 10:33:41 AM	RICH-RD-0001 REVISION 4
SC		NortonJ	Rev1C 10/5/2007 2:01:59 PM	RICHRC0002 REV8
AC		FABREM	9/27/2007 12:49:17	
AC		StringerR	9/27/2007 12:55:53	
AC		BlackCL	10/4/2007 10:33:41	
AC		NortonJ	10/5/2007 2:01:59 PM	

AC: Accepting Entry; SC: Status Change

STL Richland  
Richland Wa.

10/19/2007 1:18:44 PM

# ICOC Fraction Transfer/Status Report

ByDate: 10/19/2006, 10/24/2007, Batch: '7260249', User: '\*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
7260249				
AC	CalcC	BockJ	10/4/2007 2:12:24 PM	
SC		wagarr	IsBatched 9/17/2007 10:36:12 AM	ICOC_RADCALC v4.8.26
SC		BockJ	Prep1C 10/4/2007 2:12:24 PM	RICH-RC-5016 REVISION 7
SC		FABREM	Sep1C 10/8/2007 5:04:20 PM	RICH-RC-5065 REVISION 6
SC		DAWKINSO	InCnt1 10/8/2007 5:57:46 PM	RICH-RD-0001 REVISION 4
SC		BlackCL	CalcC 10/9/2007 1:07:33 PM	RICH-RD-0001 REVISION 4
AC		FABREM	10/8/2007 5:04:20 PM	
AC		DAWKINSO	10/8/2007 5:57:46 PM	
AC		BlackCL	10/9/2007 1:07:33 PM	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

10/23/2007 11:38:35 AM

# ICOC Fraction Transfer/Status Report

ByDate: 10/23/2006, 10/28/2007, Batch: '7260268', User: \*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
7260268				
AC	CalcC	McDowellD	10/9/2007 11:42:21	
SC		wagarr	IsBatched 9/17/2007 10:36:12 AM	ICOC_RADCALC v4.8.26
SC		McDowellD	Sep1C 10/9/2007 11:42:21 AM	RICH-RC-5022 REVISION 3
SC		BlackCL	InCnt1 10/9/2007 11:51:42 AM	RICH-RD-0001 REVISION 4
SC		StringerR	CalcC 10/10/2007 1:10:40 PM	RICH-RD-0001 REVISION 4
AC		BlackCL	10/9/2007 11:51:42	
AC		StringerR	10/10/2007 1:10:40	

AC: Accepting Entry; SC: Status Change

STL Richland  
Richland Wa.