

Analytical Data Package Prepared For

# Fluor Hanford

Radiochemical Analysis By

**TestAmerica TARL**

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

*Data Package Contains \_\_\_\_\_ Pages*

**Report Nbr: 39735**

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W05438	X08-048	B1W526	J8G100338-1	KRC0E1AA	9KRC0E10	8214342
		B1W526	J8G100338-1	KRC0E1AC	9KRC0E10	8214337
		B1W526	J8G100338-1	KRC0E1AD	9KRC0E10	8214341
		B1W526	J8G100338-1	KRC0E1AE	9KRC0E10	8214331

**RECEIVED**  
 JAN 14 2009  
**EDMC**

Comments:

RECEIVED AUGUST 27, 2008

0079830

## Certificate of Analysis

Fluor Hanford  
1200 Jadwin Ave.  
Richland, WA 99352

August 27, 2008

Attention: Steve Trent

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SAF Number	:	X08-048
Date SDG Closed	:	July 24, 2008
Number of Samples	:	One (1)
Sample Type	:	Water
SDG Number	:	W05438
Data Deliverable	:	30-Day / Summary

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### CASE NARRATIVE

#### I. Introduction

One July 10, 2008 one water sample was received at STL Richland (STLR) for radiochemical analysis. Upon receipt, the sample was assigned the following laboratory ID numbers to correspond with the Fluor Hanford specific IDs:

<u>PGW ID#</u>	<u>TALR ID#</u>	<u>DATE OF RECEIPT</u>	<u>MATRIX</u>
B1W526	KRC0E	7/10/08	WATER

#### II. Sample Receipt

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

#### III. Analytical Results/Methodology

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

The requested analyses were:

**Alpha Spectroscopy**

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

Neptunium-237 by method RICH-RC-5009

**Gamma Spectroscopy**

Iodine-129 by method RICH-RC-5025

**Liquid Scintillation Counting**

Selenium-79 by method RICH-RC-5043

**IV. Quality Control**

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

QC and sample results are reported in the same units.

**V. Comments**

**Alpha Spectroscopy**

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

The LCS, batch blank, sample and sample duplicate (B1W526) results are within contractual requirements.

Neptunium-237 by method RICH-RC-5009:

The LCS did not meet the RDL due to a low tracer yield. The activity detected in the LCS is greater than the IDC, data is accepted. Except as noted, the LCS, batch blank, sample and sample duplicate (B1W526) results are within contractual requirements.

**Gamma Spectroscopy**

Iodine-129 by method RICH-RC-5025:

The LCS, batch blank, sample and sample duplicate (B1W526) results are within contractual requirements.

**Liquid Scintillation Counting**

Selenium-79 by method RICH-RC-5043:

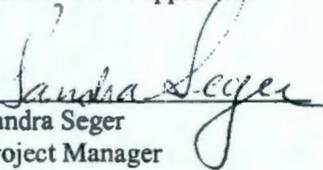
There is no LCS for selenium-79. Except as noted, the LCS, batch blank, samples and sample duplicate (B1W526) results are within contractual requirements.

Fluor Hanford  
August 27, 2008

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

Reviewed and approved:

  
- Sandra Seger  
Project Manager

## Drinking Water Method Cross References

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

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

### Uncertainty Estimation

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

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

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

## Report Definitions

<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 $(\text{Result}/\text{Expected})-1$ as defined by ANSI N13.30.
<b>COC No</b>	Chain of Custody Number assigned by the Client or TestAmerica.
<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 TestAmerica "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%. $Lc = (1.645 * \text{Sqrt}(2 * (\text{BkgndCnt}/\text{BkgndCntMin})/\text{SCntMin})) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol}) * \text{IngrFct})$ . For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
<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%. $MDC = (4.65 * \text{Sqrt}((\text{BkgndCnt}/\text{BkgndCntMin})/\text{SCntMin}) + 2.71/\text{SCntMin}) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol}) * \text{IngrFct})$ . For LSC methods the batch blank is used as a measure of the background variability.
<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 <b>Work Order</b> Number.
<b>RER</b>	The equation Replicate Error Ratio = $(S-D)/[\text{sqrt}(\text{TPUs}^2 + \text{TPUD}^2)]$ as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
<b>SDG</b>	Sample Delivery Group Number assigned by the Client or assigned by TestAmerica 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.

8/27/2008 9:25:34 AM

### TestAmerica Report

Lab Code: TARL

FormNbr: R      FormatType: FEAD      Version: 05      Rpt Nbr: 39735      File Name: h:\Reportdb\edd\FeadIVRad\W05438.Edd, h:\Reportdb\edd\FeadIVRad\39735.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:				
9KRC0E10	B1W526		MW6-SBB-A1	X08-048	W05438					07/10/2008 09:32				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8214337	I-129	15046-84-1	4.04E+00	pCi/L	1.8E+00	1.8E+00	U	3.13E+00		I129_SEP_LEPS_G	5.003E-01	L	08/19/2008 14:28	I
8214342	NP-237	13994-20-2	-3.11E-02	pCi/L	8.4E-02	8.4E-02	U	2.67E-01	94.4	NP237_LLE_PLAT	2.002E-01	L	08/06/2008 21:23	I
8214341	Se-79	15758-45-9	3.28E+01	pCi/L	1.2E+01	2.3E+01		2.59E+01	32.7	SE79_SEP_IE_LS	2.001E-01	L	08/13/2008 18:35	I
8214331	U-234	13966-29-5	1.05E+00	pCi/L	3.8E-01	4.2E-01		1.94E-01	88.6	UIISO_PLATE_AEA	2.00E-01	L	08/12/2008 17:14	I
8214331	U-235	15117-96-1	2.75E-02	pCi/L	7.0E-02	7.0E-02	U	1.65E-01	88.6	UIISO_PLATE_AEA	2.00E-01	L	08/12/2008 17:14	I
8214331	U-238	U-238	7.16E-01	pCi/L	3.2E-01	3.4E-01		1.65E-01	88.6	UIISO_PLATE_AEA	2.00E-01	L	08/12/2008 17:14	I

Wednesday, August 27, 2008

### TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\IVRad\W05438.Edd, h:\Reportdb\edd\Fead\IVRad\39735.Edd

Lab Sample Id: KTHQ41AB

Sdg/Rept Nbr: W05438 39735

Collection Date: 07/10/2008 09:32

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 07/10/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AF	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Toi/Cnt Uncert 2S	Qual	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8214331	U-234	-3.79E-02	pCi/L	7.1E-02	U	2.47E-01	94.8		UIISO_PLATE_	2.001E-01	08/12/2008				D
BLK	13966-29-5			7.1E-02						L	17:14				
8214331	U-235	-3.16E-02	pCi/L	7.0E-02	U	2.33E-01	94.8		UIISO_PLATE_	2.001E-01	08/12/2008				D
BLK	15117-96-1			6.9E-02						L	17:14				
8214331	U-238	2.54E-02	pCi/L	9.5E-02	U	2.47E-01	94.8		UIISO_PLATE_	2.001E-01	08/12/2008				D
BLK	U-238			9.5E-02						L	17:14				

Wednesday, August 27, 2008

### TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05438.Edd, h:\Reportdb\edd\Fead\VRad\39735.Edd

Lab Sample Id: KTHRE1AB

Sdg/Rept Nbr: W05438 39735

Collection Date: 07/10/2008 09:32

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 07/10/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AH	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	RER/ UCL	LCS LCL/UCL	R Typ
8214337 BLK	I-129 15046-84-1	-2.55E-01	pCi/L	1.0E+00 1.0E+00	U	1.84E+00			I129_SEP_LEP	5.003E-01 L	08/19/2008 16:14				D

Wednesday, August 27, 2008

### TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05438.Edd, h:\Reportdb\edd\FeadIV\Rad\39735.Edd

Lab Sample Id: KTHRR1AB

Sdg/Rept Nbr: W05438

39735

Collection Date: 07/10/2008 09:32

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 07/10/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AJ	H					
Batch #/ Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8214341 BLK	Se-79 15758-45-9	6.67E+00	pCi/L	1.2E+01 6.2E+00	U	1.45E+01	58.3		SE79_SEP_IE	2.002E-01	08/13/2008 20:21				D

Wednesday, August 27, 2008

**TestAmerica QC Blank Report**

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05438.Edd, h:\Reportdb\edd\FeadIV\Rad\39735.Edd

Lab Sample Id: KTHRT1AB

Sdg/Rept Nbr: W05438 39735

Collection Date: 07/10/2008 09:32

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 07/10/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AK	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Concl/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8214342 BLK	NP-237 13994-20-2	-2.61E-02	pCi/L	1.4E-01 1.4E-01	U	3.68E-01	54.6		NP237_LLE_P	2.002E-01	08/06/2008 21:23				D

Wednesday, August 27, 2008

### TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R      FormatType: FEAD      VersionNbr: 05      File Name: h:\Reportdb\edd\FeadIV\Rad\W05438.Edd, h:\Reportdb\edd\FeadIV\Rad\39735.Edd

Lab Sample Id: KTHQ41CS	Sdg/Rept Nbr: W05438      39735	Collection Date: 07/10/2008 09:32
Client Id: NA	Matrix: WATER      WATER	Sample On Date:
Moisture/Solids%*:	QC Type: BS	Received Date: 07/10/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AG	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	RER/ UCL	LCS LCL/UCL	R Typ
8214331 BS	U-234 13966-29-5	8.12E+00	pCi/L	1.7E+00 1.0E+00		2.28E-01	90.2	8.63E+00 94.1	UIISO_PLATE_	2.003E-01 L	08/12/2008 17:14			70 130	D
8214331 BS	U-238 U-238	8.63E+00	pCi/L	1.8E+00 1.1E+00		1.88E-01	90.2	9.04E+00 95.5	UIISO_PLATE_	2.003E-01 L	08/12/2008 17:14			70 130	D

Wednesday, August 27, 2008

### TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05438.Edd, h:\Reportdb\edd\Fead\VRad\39735.Edd

Lab Sample Id: KTHRE1CS

Sdg/Rept Nbr: W05438 39735

Collection Date: 07/10/2008 09:32

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 07/10/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AI	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8214337 BS	I-129 15046-84-1	4.80E+01	pCi/L	7.1E+00 7.1E+00		2.81E+00		5.03E+01 95.4	I129_SEP_LEP	5.00E-01 L	08/19/2008 16:15			70 130	D

Wednesday, August 27, 2008

### TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R      FormatType: FEAD      VersionNbr: 05      File Name: h:\Reportdb\edd\FeadIVRad\W05438.Edd, h:\Reportdb\edd\FeadIVRad\39735.Edd

**Lab Sample Id:** KTHRT1CS      **Sdg/Rept Nbr:** W05438      39735      **Collection Date:** 07/10/2008 09:32  
**Client Id:** NA      **Matrix:** WATER      WATER      **Sample On Date:**  
**Moisture/Solids%\*:**      **QC Type:** BS      **Received Date:** 07/10/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AL	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qual	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Allq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8214342 BS	NP-237 13994-20-2	8.78E+00	pCi/L	7.3E+00 1.7E+00		6.52E-01	46.7	9.29E+00 94.5	NP237_LLE_P	2.001E-01 L	08/06/2008 21:24			70 130	D

Wednesday, August 27, 2008

### TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\IVRad\W05438.Edd, h:\Reportdb\edd\Fead\IVRad\39735.Edd

Lab Sample Id: KRC0E1FR

Sdg/Rept Nbr: W05438

39735

Collection Date: 07/10/2008 09:32

Client Id: B1W526

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 07/10/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
X08-048	MW6-SBB-A19981								AB	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	To/Cnt Uncert 2S	Qual	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8214331 DUP	U-234 13968-29-5	1.09E+00 1.05E+00	pCi/L	4.2E-01 3.7E-01		1.99E-01	97.3		UIISO_PLATE_	2.003E-01 L	08/12/2008 17:14	3.2 20.0	0.1 3		D
8214331 DUP	U-235 15117-96-1	3.16E-02 2.75E-02	pCi/L	6.5E-02 6.4E-02	U	1.51E-01	97.3		UIISO_PLATE_	2.003E-01 L	08/12/2008 17:14	13.8 20.0	0.1 3		D
8214331 DUP	U-238 U-238	8.91E-01 7.16E-01	pCi/L	3.7E-01 3.4E-01		2.17E-01	97.3		UIISO_PLATE_	2.003E-01 L	08/12/2008 17:14	21.9 20.0	0.7 3		D

Wednesday, August 27, 2008

### TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIVRad\W05438.Edd, h:\Reportdb\edd\FeadIVRad\39735.Edd

Lab Sample Id: KRC0E1GR

Sdg/Rept Nbr: W05438 39735

Collection Date: 07/10/2008 09:32

Client Id: B1W526

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 07/10/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
X08-048	MW6-SBB-A19981								AC	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
8214337	I-129	4.51E+00	pCi/L	1.8E+00	U	3.00E+00			I129_SEP_LEP	5.003E-01	08/19/2008	11.1	0.4		D
DUP	15046-84-1	4.04E+00		1.8E+00						L	14:29		3		

Wednesday, August 27, 2008

### TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05438.Edd, h:\Reportdb\edd\Fead\VRad\39735.Edd

Lab Sample Id: KRC0E1HR

Sdg/Rept Nbr: W05438 39735

Collection Date: 07/10/2008 09:32

Client Id: B1W526

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 07/10/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
X08-048	MW6-SBB-A19981								AD	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
8214341 DUP	Se-79 15758-45-9	3.25E+01 3.28E+01	pCi/L	1.4E+01 7.1E+00		1.48E+01	57.2		SE79_SEP_IE	2.001E-01 L	08/13/2008 19:28	1.1 20.0	0. 3		D

Wednesday, August 27, 2008

### TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05438.Edd, h:\Reportdb\edd\FeadIV\Rad\39735.Edd

Lab Sample Id: KRC0E1JR

Sdg/Rept Nbr: W05438 39735

Collection Date: 07/10/2008 09:32

Client Id: B1W526

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 07/10/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
X08-048	MW6-SBB-A19981								AE	H					
Batch # / Qc Type	Analy/ 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	RER/ UCL	LCS LCL/UCL	R Typ
8214342 DUP	NP-237 13994-20-2	2.77E-02 -3.11E-02	pCi/L	7.1E-02 7.1E-02	U	1.66E-01	90.3		NP237_LLE_P	2.004E-01 L	08/06/2008 21:23	0.0 20.0	1.2 3		D

TestAmerica

rptFeadRadEdd v3.68

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

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

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

//

**Lot No., Due Date:** J8G100338; 08/25/2008  
**Client, Site:** 384868; PGW 615HANFORD HANFORD  
**QC Batch No., Method Test:** 8214331; RUI SO U Iso by ALP  
**SDG, Matrix:** W05438; WATER

8.0 Correction Calculation Protocol Used. OK	Yes	No	N/A
8.01 The Appropriate Methods Were Used To Analyze the Samples OK	Yes	No	N/A
8.02 Final Results Are in the Appropriate Activity Units OK	Yes	No	N/A
8.03 Batch Contains the Required QC Appropriate for the Method OK	Yes	No	N/A
8.04 The Correct Tracer and QC Vials Where Used in the Samples OK	Yes	No	N/A
8.05 Sample was Appropriately Traced Before or After Fractionating the Sample OK	Yes	No	N/A
8.06 At Least the Minimum Sample Volume Was Used OK	Yes	No	N/A
8.07 The Correct Count Geometry was Used. OK	Yes	No	N/A
8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. OK	Yes	No	N/A
8.09 Method Blank is within Control Limits. OK	Yes	No	N/A
8.1 Comments:			
8.11 Matrix Blank is within Control Limits. No Matrix Blanks (MBIs) found in Batch!	Yes	No	N/A
8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). OK	Yes	No	N/A
8.13 QAS Specified Duplicate Equation Value within Control Limits. RPD > UCL : 20.0=> KRC0E1AF U-238 22.0 (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. No Matrix Spike Samples (MS) found in Batch!	Yes	No	N/A
8.17 Tracer within Control Limits. OK	Yes	No	N/A
8.18 Samples are above Minimum Tracer Yield (No Failed Samples) OK	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. Batch Positive Result => KRC0E1AE U-234 1.1E+00 L:1.9E-01 KRC0E1AE U-238 7.2E-01 L:1.6E-01	Yes	No	N/A
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 U-235 U-238	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.  
FWHM > maxFWHM => KTHQ41AC U-234 29.6>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 => KRC0E1AE I:[NUC\_LIBR]AR\_U. Q:  
 KRC0E1AF I:[NUC\_LIBR]AR\_U. Q:  
 KTHQ41AA I:[NUC\_LIBR]AR\_U. Q:  
 KTHQ41AC 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

First Level Review

*Alia Anderson*

Date

*8/13/08*

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

Batch Number: 8214331

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: Jodie A Date: 8/14/08

**Lot No., Due Date:** J8G100338; 08/25/2008  
**Client, Site:** 384868; PGW 615HANFORD HANFORD  
**QC Batch No., Method Test:** 8214342; RNP237 Np-237 w/tracer  
**SDG, Matrix:** W05438; WATER

**1.0 COC**

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

✓

**2.0 QC Batch**

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A

✓

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

✓

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

✓

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

✓

**3.0 QC & Samples**

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

✓

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

✓

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

✓

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

✓

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

✓

**4.0 Raw Data**

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

✓

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

✓

4.3 Were Yields entered correctly? Yes No N/A

✓

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

✓

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

✓

**5.0 Other**

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

✓

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

✓

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

✓

5.4 Was transcription checked? Yes No N/A

✓

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

✓

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

✓

6.0 Comments on any No response:  
 Please see NCM # 1012821

First Level Review *John West*

Date 8-7-08

## Data Review Checklist RADIOCHEMISTRY Second Level Review

Batch Number: 8214342

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?	✓		

J.C.  
8/7/08

Comments on any "No" response: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Second Level Review: *Jodice* Date: 8/7/08

# Clouseau Nonconformance Memo



NCM #: <b>10-12821</b> NCM Initiated By: John Norton Date Opened: 08/07/2008 Date Closed:	Classification: <b>Anomaly</b> Status: <b>GLREVIEW</b> Production Area: Environmental - Sep Tests: Np-237 w/tracer Lot #'s (Sample #'s): J8G100338 (1), J8H010000 (342), QC Batches: 8214342,
Nonconformance: LCS result out of limits Subcategory: Other (explanation required)	

### Problem Description / Root Cause

Name	Date	Description
John Norton	08/07/2008	The LCS did not meet the RDL due to a low tracer yield.

### Corrective Action

Name	Date	Corrective Action
John Norton	08/07/2008	The activity detected in the LCS is greater than the IDC, the data can be accepted.

### 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:** J8G100338; 08/25/2008  
**Client, Site:** 384868; PGW 615HANFORD HANFORD  
**QC Batch No., Method Test:** 8214337; RGAMLEPS Gamma by LEPS  
**SDG, Matrix:** W05438; WATER

**1.0 COC**

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

✓ Yes No N/A

**2.0 QC Batch**

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

**3.0 QC & Samples**

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

**4.0 Raw Data**

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

✓ Yes No N/A

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

✓ Yes No N/A

4.3 Were Yields entered correctly? Yes No N/A

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

**5.0 Other**

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

5.4 Was transcription checked? Yes No N/A

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

6.0 Comments on any No response:

First Level Review

*John Norton*

Date

8-20-8

## Data Review Checklist

### RADIOCHEMISTRY

#### Second Level Review

Batch Number: 8214337

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: Erika Joe Date: 8/10/18

**Lot No., Due Date:** J8G100338; 08/25/2008  
**Client, Site:** 384868; PGW 615HANFORD HANFORD  
**QC Batch No., Method Test:** 8214341; RSE79 Se-79 by LSC  
**SDG, Matrix:** W05438; WATER

8.0 Correction Calculation Protocol Used. OK	Yes	No	N/A
8.01 The Appropriate Methods Were Used To Analyze the Samples OK	Yes	No	N/A
8.02 Final Results Are in the Appropriate Activity Units OK	Yes	No	N/A
8.03 Batch Contains the Required QC Appropriate for the Method OK	Yes	No	N/A
8.04 The Correct Tracer and QC Vials Where Used in the Samples OK	Yes	No	N/A
8.05 Sample was Appropriately Traced Before or After Fractionating the Sample OK	Yes	No	N/A
8.06 At Least the Minimum Sample Volume Was Used OK	Yes	No	N/A
8.07 The Correct Count Geometry was Used. OK	Yes	No	N/A
8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. OK	Yes	No	N/A
8.09 Method Blank is within Control Limits. OK	Yes	No	N/A
8.1 Comments:			
8.11 Matrix Blank is within Control Limits. No Matrix Blanks (MBIs) found in Batch!	Yes	No	N/A
8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). OK	Yes	No	N/A
8.13 QAS Specified Duplicate Equation Value within Control Limits. OK (RPD)	Yes	No	N/A
8.14 LCS within Control Limits. No Blank Spikes (LCS) found in Batch!	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. No Matrix Spike Samples (MS) found in Batch!	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 => Se-79  OK; No Callin Level Found => Se-79	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!			<input checked="" type="checkbox"/>
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			<input checked="" type="checkbox"/>

**First Level Review**     Lisa Anderson    
**Date**     8/26/08

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

Batch Number: 8214341

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: Erika Ford Date: 8/26/18





### Sample Check-in List

Date/Time Received: 71008 1245 GM Screen Result 0.1K

Client: PCW SDG #: W05438 NA [ ] SAF #: X08-048 NA [ ]

Work Order Number: J86100338 Chain of Custody # X08-048-88

Shipping Container ID: \_\_\_\_\_ Air Bill # \_\_\_\_\_

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

6. Number of samples in shipping container: 1

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

8. Samples have:

Tape  Hazard Labels

Custody Seals  Appropriate Sample Labels

9. Samples are:

In Good Condition  Leaking

Broken  Have Air Bubbles

(Only for samples requiring no head space.)

10. Sample pH taken? NA [ ] pH < 2  pH > 2 [ ] pH > 9 [ ] Amount HNO<sub>3</sub> Added \_\_\_\_\_

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

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

13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian: [Signature] Date: 71008

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person Contacted \_\_\_\_\_

[ ] No action necessary; process as is.

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

TestAmerica Laboratories, Inc

8/7/2008 1:04:54 PM

**Sample Preparation/Analysis**

Balance Id:112048273314 A

384868, Pacific Northwest National Laboratory  
Pacific Northwest National Lab

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

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

AnalyDueDate: 08/08/2008 *W05438*

Sep1 DT/Tm Tech:

Batch: 8214331 WATER pCi/L  
SEQ Batch, Test: None

PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

Prep Tech: ,HarrisD



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 KRC0E-1-AE J8G100338-1-SAMP 07/10/2008 09:32			200.00g,in	200.00g	UITS20001 08/06/08,pd 06/15/01,r	<i>200</i>				Alpha: 1.58E-03 uCi/Sa Beta: 2.37E-03 uCi/Sa
2 KRC0E-1-AF-X J8G100338-1-DUP 07/10/2008 09:32			200.30g,in	200.30g	UITS20002 08/06/08,pd 06/15/01,r					Alpha: 1.58E-03 uCi/Sa Beta: 2.37E-03 uCi/Sa
3 KTHQ4-1-AA-B J8H010000-331-BLK 07/10/2008 09:32			200.10g,in	200.10g	UITS20003 08/06/08,pd 06/15/01,r					Alpha: Beta:
4 KTHQ4-1-AC-C J8H010000-331-LCS 07/10/2008 09:32			200.30g,in	200.30g	UISG1637 04/11/08,pd 06/15/01,r					Alpha: Beta:

Comments: *PH200 Out 8/7/08*

*BIW526*

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

KRC0E1AE-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:
KTHQ41AA-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:

TestAmerica Laboratories, Inc.

8/7/2008 1:04:55 PM

**Sample Preparation/Analysis**

Balance Id:112048273314 A

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

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

AnalyDueDate: 08/08/2008

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

Batch: 8214331  
 SEQ Batch, Test: None

pCi/L

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

Prep Tech: ,HarrisD



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, Ini/Date	Comments:
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KTHQ41AC-LCS:  
 U-232 RDL: pCi/L LCL:20 UCL:105 RPD:20 Uranium RDL: pCi/L LCL:70 UCL:130 RPD:20

KRC0E1AE-SAMP Calc Info:  
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

KTHQ41AA-BLK:  
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

KTHQ41AC-LCS:  
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

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

33

8/13/2008 3:45:25 PM

# ICOC Fraction Transfer/Status Report

ByDate: 8/14/2007, 8/18/2008, Batch: '8214331', User: \*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
<b>8214331</b>				
AC	<b>Rev1C</b>	<b>HarrisD</b>	8/7/2008 1:00:09 PM	
SC		antonsonl	IsBatched	8/4/2008 8:41:34 AM
SC		HarrisD	InPrep	8/7/2008 1:00:09 PM
SC		HarrisD	Prep1C	8/7/2008 1:04:57 PM
SC		AshworthA	Prep2C	8/8/2008 2:30:11 PM
SC		AshworthA	Sep1C	8/11/2008 6:25:48 PM
SC		AshworthA	Sep1C	8/11/2008 6:26:22 PM
SC		AshworthA	Sep2C	8/12/2008 2:41:56 PM
SC		ClarkR	InCnt1	8/12/2008 3:01:55 PM
SC		DAWKINSO	CalcC	8/12/2008 10:06:06 PM
SC		antonsonl	Rev1C	8/13/2008 3:45:17 PM
AC		<b>HarrisD</b>	8/7/2008 1:04:57 PM	ICOC_RADCALC v4.8.34
AC		<b>AshworthA</b>	8/8/2008 2:30:11 PM	RL-PRP-004 REVISION 0
AC		<b>AshworthA</b>	8/11/2008 6:25:48 PM	RL-PRP-004 REVISION 0
AC		<b>AshworthA</b>	8/11/2008 6:26:22 PM	PRP-010 REVISION 0
AC		<b>AshworthA</b>	8/12/2008 2:41:56 PM	PRP-010 REVISION 0
AC		<b>ClarkR</b>	8/12/2008 3:01:55 PM	ALP-004 REVISION 0
AC		<b>DAWKINSO</b>	8/12/2008 10:06:06	ALP-015 REVISION 0
AC		<b>antonsonl</b>	8/13/2008 3:45:17 PM	RL-CI-008 REVISION 0
				RL-CI-008 REVISION 0
				RL-DR-001 REV 0

AC: Accepting Entry, SC: Status Change

TestAmerica Richland

Richland Wa.

TestAmerica Laboratories, Inc. 303 39 35 40

8/5/2008 3:06:35 PM

**Sample Preparation/Analysis**

Balance Id:1120482733

384868, Pacific Northwest National Laboratory  
Pacific Northwest National Lab

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

Pipet #:

*DRM*

AnalyDueDate: 08/08/2008 *W05438*

Sep1 DT/Tm Tech: *DeAugos H/20*

Batch: 8214342 WATER pCi/L  
SEQ Batch, Test: None

PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

Prep Tech: ,HarrisD

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 KRC0E-1-AA J8G100338-1-SAMP 07/10/2008 09:32			200.20g,in	200.20g	NPTA/114 07/14/08,pd 06/01/01,r							
												
					AmtRec: 4XLP,2X4LP	#Containers: 6			Scr:	Alpha: 1.58E-03 uCi/Sa	Beta: 2.37E-03 uCi/Sa	
2 KRC0E-1-AJ-X J8G100338-1-DUP 07/10/2008 09:32			200.40g,in	200.40g	NPTA7115 07/14/08,pd 06/01/01,r							
												
					AmtRec: 4XLP,2X4LP	#Containers: 6			Scr:	Alpha: 1.58E-03 uCi/Sa	Beta: 2.37E-03 uCi/Sa	
3 KTHRT-1-AA-B J8H010000-342-BLK 07/10/2008 09:32			200.20g,in	200.20g	NPTA7116 07/14/08,pd 06/01/01,r							
												
					AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:	
4 KTHRT-1-AC-C J8H010000-342-LCS 07/10/2008 09:32			200.10g,in	200.10g	NPSE0477 07/14/08,pd 06/01/01,r							
												
					AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:	

200

Comments: *ALZAO OUT 8/5/08*

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

KRC0E1AA-SAMP Constituent List:  
Np-237 RDL:0.6 pCi/L LCL: UCL: RPD:  
KTHRT1AA-BLK:  
Np-237 RDL:0.6 pCi/L LCL: UCL: RPD:  
KTHRT1AC-LCS:

KRC0E1AA-SAMP Calc Info:

8/5/2008 3:06:36 PM

**Sample Preparation/Analysis**

Balance Id:1120482733

KO Np-237 PrpRC5086, SepRC5064(5003)  
 XW Neptunium-237 with tracer by alpha spec  
 5I CLIENT: HANFORD

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

AnalyDueDate: 08/08/2008

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

Batch: 8214342  
 SEQ Batch, Test: None

pCi/L

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

Prep Tech: ,HarrisD



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
KTHRT1AA-BLK:				
Uncert Level (#s) : 2	Decay to SaDt: Y	Blk Subt. : N	Sci.Not. : Y	ODRs: B
KTHRT1AC-LCS:				
Uncert Level (#s) : 2	Decay to SaDt: Y	Blk Subt. : N	Sci.Not. : Y	ODRs: B

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

8/7/2008 9:50:51 AM

# ICOC Fraction Transfer/Status Report

ByDate: 8/8/2007, 8/12/2008, Batch: '8214342', User: \*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
<b>8214342</b>				
AC	<b>Rev1C</b>	<b>HarrisD</b>	8/5/2008 3:02:37 PM	
SC		antonsonl	IsBatched	8/4/2008 8:58:50 AM
SC		HarrisD	InPrep	8/5/2008 3:02:37 PM
SC		HarrisD	Prep1C	8/5/2008 3:06:36 PM
SC		ManisD	Sep2C	8/6/2008 5:57:14 PM
SC		DAWKINSO	InCnt1	8/6/2008 7:28:13 PM
SC		ClarkR	CalcC	8/7/2008 9:02:14 AM
SC		nortonj	Rev1C	8/7/2008 9:50:43 AM
AC		<b>HarrisD</b>	8/5/2008 3:06:36 PM	ICOC_RADCALC v4.8.34
AC		<b>ManisD</b>	8/6/2008 5:57:14 PM	RL-PRP-004 REVISION 0
AC		<b>DAWKINSO</b>	8/6/2008 7:28:13 PM	RL-PRP-004 REVISION 0
AC		<b>ClarkR</b>	8/7/2008 9:02:14 AM	RL-ALP-016 REV 0
AC		<b>nortonj</b>	8/7/2008 9:50:43 AM	RL-CI-008 REVISION 0
				RL-CI-008 REVISION 0
				RL-DR-001 REV 0

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

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8/8/2008 9:06:45 AM

**Sample Preparation/Analysis**

Balance Id:1120482733

384868, Pacific Northwest National Laboratory  
Pacific Northwest National Lab

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

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

AnalyDueDate: 08/08/2008

Sep1 DT/Tm Tech:

Batch: 8214337 WATER pCi/L  
SEQ Batch, Test: None

PM, Quote: SS, 57671

Sep2 DT/Tm Tech:

Prep Tech: HarrisD



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 KRC0E-1-AC J8G100338-1-SAMP 07/10/2008 09:32	500.30g.in	500.30g.in	ITA7480 07/23/08				L4	1608		8/19/08
AmtRec: 4XLP,2X4LP #Containers: 6 Scr: Alpha: 1.58E-03 uCi/Sa Beta: 2.37E-03 uCi/Sa										
2 KRC0E-1-AG-X J8G100338-1-DUP 07/10/2008 09:32	500.20g.in	500.20g.in	ITA7481 07/23/08				L5	1609		
AmtRec: 4XLP,2X4LP #Containers: 6 Scr: Alpha: 1.58E-03 uCi/Sa Beta: 2.37E-03 uCi/Sa										
3 KTHRE-1-AA-B J8H010000-337-BLK 07/10/2008 09:32	500.30g.in	500.30g.in	ITA7482 07/23/08				L4	1754		
AmtRec: #Containers: 1 Scr: Alpha: Beta:										
4 KTHRE-1-AC-C J8H010000-337-LCS 07/10/2008 09:32	500.00g.in	500.00g.in	ISB0295 06/16/08				L5	1755		
AmtRec: #Containers: 1 Scr: Alpha: Beta:										

36.2

35.1

34.2

35.1

Comments: *AWH 8/8/08*

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

KRC0E1AC-SAMP Constituent List:

I-129	RDL:5.00E+00	pCi/L	LCL:70	UCL:130	RPD:20
KTHRE1AA-BLK:					
I-129	RDL:5.00E+00	pCi/L	LCL:	UCL:	RPD:
KTHRE1AC-LCS:					
I-129	RDL:5	pCi/L	LCL:70	UCL:130	RPD:20

KRC0E1AC-SAMP Calc Info:

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8/8/2008 9:06:47 AM

**Sample Preparation/Analysis**

Balance Id:1120482733

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

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

AnalyDueDate: 08/08/2008

Sep1 DT/Tm Tech:

Batch: 8214337  
 SEQ Batch, Test: None

pCi/L

Sep2 DT/Tm Tech:

Prep Tech: ,HarrisD

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
										
Uncert Level (#s): 2		Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B					
KTHRE1AA-BLK:										
Uncert Level (#s): 2		Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B					
KTHRE1AC-LCS:										
Uncert Level (#s): 2		Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B					

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

8/20/2008 10:13:00 AM

# ICOC Fraction Transfer/Status Report

ByDate: 8/21/2007, 8/25/2008, Batch: '8214337', User: \*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
8214337				
AC	Rev1C	HarrisD	8/8/2008 9:01:58 AM	
SC		antonsonl	IsBatched 8/4/2008 8:41:34 AM	ICOC_RADCALC v4.8.34
SC		HarrisD	InPrep 8/8/2008 9:01:58 AM	RL-PRP-004 REVISION 0
SC		HarrisD	Prep1C 8/8/2008 9:06:47 AM	RL-PRP-004 REVISION 0
SC		BostedD	Prep2C 8/19/2008 1:55:25 PM	RL-GAM-002 REVISION 0
SC		DAWKINSO	InCnt1 8/19/2008 2:18:05 PM	RL-CI-007 REVISION 0
SC		DAWKINSO	CalcC 8/19/2008 7:36:58 PM	RL-CI-007 REVISION 0
SC		nortonj	Rev1C 8/20/2008 10:12:56 AM	RL-DR-001 REV 0
AC		HarrisD	8/8/2008 9:06:47 AM	
AC		BostedD	8/19/2008 1:55:25 PM	
AC		DAWKINSO	8/19/2008 2:18:05 PM	
AC		DAWKINSO	8/19/2008 7:36:58 PM	
AC		nortonj	8/20/2008 10:12:56	

AC: Accepting Entry; SC: Status Change

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Richland Wa.

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8/7/2008 10:39:08 AM **Sample Preparation/Analysis** Balance Id:1120482733

384868, Pacific Northwest National Laboratory CY Se-79 PrpRC5016, SepRC5043 Pipet #: \_\_\_\_\_  
 Pacific Northwest National Lab TM Selenium-79 by Liquid Scint

**AnalyDueDate: 08/08/2008** 105438 SI CLIENT: HANFORD Sep1 DT/Tm Tech: \_\_\_\_\_

**Batch: 8214341 WATER pCi/L** PM, Quote: SS , 57671 Sep2 DT/Tm Tech: \_\_\_\_\_  
 SEQ Batch, Test: None All Tests: 8214331 7YSR, 8214337 BNTB, 8214341 CYTM, 8214342 KOXW, Prep Tech: ,HarrisD



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 KRC0E-1-AD J8G100338-1-SAMP 07/10/2008 09:32		200.10g,in	SETA0305 08/06/08						
50									
AmtRec: 4XLP,2X4LP #Containers: 6 Scr: Alpha: 1.58E-03 uCi/Sa Beta: 2.37E-03 uCi/Sa									
2 KRC0E-1-AH-X J8G100338-1-DUP 07/10/2008 09:32		200.10g,in	SETA0306 08/06/08						
AmtRec: 4XLP,2X4LP #Containers: 6 Scr: Alpha: 1.58E-03 uCi/Sa Beta: 2.37E-03 uCi/Sa									
3 KTHRR-1-AA-B J8H010000-341-BLK 07/10/2008 09:32		200.20g,in	SETA0307 08/06/08						
AmtRec: #Containers: 1 Scr: Alpha: Beta:									
4 KTHRR-1-AD-BN J8H010000-341-IBLK 07/10/2008 09:32			SETA0308						
AmtRec: #Containers: 1 Scr: Alpha: Beta:									

**Comments:**  
 PH20.0 OUT 8/7/08

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

**KRC0E1AD-SAMP Constituent List:**

Se-79	RDL:3.00E+01	pCi/L	LCL:	UCL:	RPD:
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**KTHRR1AA-BLK:**

Se-79	RDL:3.00E+01	pCi/L	LCL:	UCL:	RPD:
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**KTHRR1AD-IBLK:**

Se-79	RDL:3.00E+01	pCi/L	LCL:	UCL:	RPD:
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**KRC0E1AD-SAMP Calc Info:**

8/7/2008 10:39:09 AM

**Sample Preparation/Analysis**

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

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

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

AnalyDueDate: 08/08/2008

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

Batch: 8214341  
 SEQ Batch, Test: None

pCi/L

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

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					
KTHRR1AA-BLK:									
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B					
KTHRR1AD-IBLK:									
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B					

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

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

8/26/2008 10:19:53 AM

# ICOC Fraction Transfer/Status Report

ByDate: 8/27/2007, 8/31/2008, Batch: '8214341', User: \*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
<b>8214341</b>				
AC	Rev1C	HarrisD	8/7/2008 10:35:17	
SC		antonsonl	IsBatched	8/4/2008 8:58:31 AM ICOC_RADCALC v4.8.34
SC		HarrisD	InPrep	8/7/2008 10:35:17 AM RL-PRP-004 REVISION 0
SC		HarrisD	Prep1C	8/7/2008 10:39:09 AM RL-PRP-004 REVISION 0
SC		Barcotl	InPrep2	8/13/2008 10:47:09 AM RL-LSC-012 REVISION 0
SC		Barcotl	Prep2C	8/13/2008 10:47:50 AM RL-LSC-012 REVISION 0
SC		ClarkR	InCnt1	8/13/2008 12:03:12 PM RL-CI-005 REVISION 0
SC		ClarkR	CalcC	8/25/2008 10:40:39 AM RL-CI-005 REVISION 0
SC		antonsonl	Rev1C	8/26/2008 10:19:40 AM RL-DR-001 REV 0
AC		HarrisD	8/7/2008 10:39:09	
AC		Barcotl	8/13/2008 10:47:09	
AC		Barcotl	8/13/2008 10:47:50	
AC		ClarkR	8/13/2008 12:03:12	
AC		ClarkR	8/25/2008 10:40:39	
AC		antonsonl	8/26/2008 10:19:40	

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.