

Analytical Data Package Prepared For  
**Pacific Northwest National Lab**

Radiochemical Analysis By

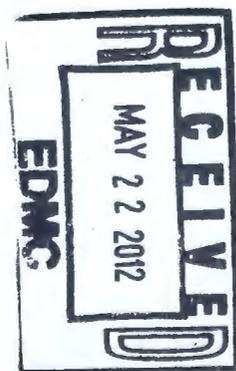
**STL Richland STLRL**

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

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

**Report Nbr: 32855**

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W04942	S06-006	B1J970	J6F120178-1	H68MH1AA	9H68MH10	6166193
		B1J970	J6F120178-1	H68MH1AC	9H68MH10	6166195
		B1J970	J6F120178-1	H68MH1AD	9H68MH10	6166196
		B1J970	J6F120178-1	H68MH1AE	9H68MH10	6166192
		B1J970	J6F120178-1	H68MH1AF	9H68MH10	6166201
		B1J970	J6F120178-1	H68MH1AG	9H68MH10	6166191
		B1J970	J6F120178-1	H68MH1AH	9H68MH10	6166203
		B1J970	J6F120178-1	H68MH1AJ	9H68MH10	6166204
		B1J9C9	J6F120178-2	H68ML1AA	9H68ML10	6166191
		B1J971	J6F120178-3	H68MR1AA	9H68MR10	6166193
		B1J971	J6F120178-3	H68MR1AC	9H68MR10	6166195
		B1J971	J6F120178-3	H68MR1AD	9H68MR10	6166196
		B1J971	J6F120178-3	H68MR1AE	9H68MR10	6166192
		B1J971	J6F120178-3	H68MR1AF	9H68MR10	6166201
		B1J971	J6F120178-3	H68MR1AG	9H68MR10	6166191



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Comments:

Report Nbr: 32855

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W04942	S06-006	B1J971	J6F120178-3	H68MR1AH	9H68MR10	6166203
		B1J971	J6F120178-3	H68MR1AJ	9H68MR10	6166204
		B1J9D0	J6F120178-4	H68MW1AA	9H68MW10	6166191
		B1J979	J6F120178-5	H68M51AA	9H68M510	6166193
		B1J979	J6F120178-5	H68M51AC	9H68M510	6166189
		B1J979	J6F120178-5	H68M51AD	9H68M510	6166195
		B1J979	J6F120178-5	H68M51AE	9H68M510	6166196
		B1J979	J6F120178-5	H68M51AF	9H68M510	6166192
		B1J979	J6F120178-5	H68M51AG	9H68M510	6166201
		B1J979	J6F120178-5	H68M51AH	9H68M510	6166205
		B1J979	J6F120178-5	H68M51AJ	9H68M510	6166191
		B1J979	J6F120178-5	H68M51AK	9H68M510	6166203
		B1J979	J6F120178-5	H68M51AL	9H68M510	6166204
		A06-006		B1JCL0	J6F120184-1	H68N51AA
B1JCL0	J6F120184-1			H68N51AC	9H68N510	6166205
B1JCL0	J6F120184-1			H68N51AD	9H68N510	6166206
B1JCL0	J6F120184-1			H68N52AE	9H68N520	6205575
B1JCL7	J6F120184-2			H68N71AA	9H68N710	6166189
B1JCL7	J6F120184-2			H68N71AC	9H68N710	6166205
B1JCL7	J6F120184-2			H68N71AD	9H68N710	6166206
B1JCL7	J6F120184-2			H68N71AE	9H68N710	6166204
B1JCL1	J6F120184-3			H68N81AA	9H68N810	6166189
B1JCL1	J6F120184-3			H68N81AC	9H68N810	6166205
B1JCL1	J6F120184-3			H68N81AD	9H68N810	6166206
B1JCL1	J6F120184-3			H68N81AE	9H68N810	6166204
B1JCL2	J6F120184-4			H68N91AA	9H68N910	6166189

Comments:

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SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W04942	A06-006	B1JCL2	J6F120184-4	H68N91AC	9H68N910	6166205
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		B1JCL2	J6F120184-4	H68N91AE	9H68N910	6166204
		B1JCM5	J6F120186-1	H68PC1AA	9H68PC10	6166189
		B1JCM5	J6F120186-1	H68PC1AC	9H68PC10	6166205
		B1JCM5	J6F120186-1	H68PC1AD	9H68PC10	6166206
		B1JCM5	J6F120186-1	H68PC1AE	9H68PC10	6166204
		B1JCM4	J6F120186-2	H68PE1AA	9H68PE10	6166189
		B1JCM4	J6F120186-2	H68PE1AC	9H68PE10	6166205
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		B1JCM4	J6F120186-2	H68PE1AE	9H68PE10	6166204
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		B1JCM6	J6F120199-1	H68TE1AC	9H68TE10	6166205
		B1JCM6	J6F120199-1	H68TE1AD	9H68TE10	6166206
		B1JCM6	J6F120199-1	H68TE1AE	9H68TE10	6166204
	G06-006	B1JDC2	J6F130346-1	H7A4N1AA	9H7A4N10	6166189
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		B1JDC2	J6F130346-1	H7A4N1AD	9H7A4N10	6166196
		B1JDC2	J6F130346-1	H7A4N1AE	9H7A4N10	6166201
		B1JDC2	J6F130346-1	H7A4N1AF	9H7A4N10	6166203
		B1JDJ3	J6F130346-2	H7A4V1AA	9H7A4V10	6166189
		B1JDJ3	J6F130346-2	H7A4V1AC	9H7A4V10	6166195
		B1JDJ3	J6F130346-2	H7A4V1AD	9H7A4V10	6166196
		B1JDJ3	J6F130346-2	H7A4V1AE	9H7A4V10	6166202
		B1JDJ3	J6F130346-2	H7A4V1AF	9H7A4V10	6166203
		B1JDJ7	J6F130346-3	H7A401AA	9H7A4010	6166189

Comments:

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SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W04942	G06-006	B1JDJ7	J6F130346-3	H7A401AC	9H7A4010	6166195
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		B1JDJ7	J6F130346-3	H7A401AF	9H7A4010	6166203
		B1JDN3	J6F130349-1	H7A451AA	9H7A4510	6166189
		B1JDN3	J6F130349-1	H7A451AC	9H7A4510	6166195
		B1JDN3	J6F130349-1	H7A451AD	9H7A4510	6166196
		B1JDN3	J6F130349-1	H7A451AE	9H7A4510	6166201
		B1JDN3	J6F130349-1	H7A451AF	9H7A4510	6166203
		B1JDL8	J6F130349-2	H7A471AA	9H7A4710	6166189
		B1JDL8	J6F130349-2	H7A471AC	9H7A4710	6166195
		B1JDL8	J6F130349-2	H7A471AD	9H7A4710	6166196
		B1JDL8	J6F130349-2	H7A471AE	9H7A4710	6166201
		B1JDL8	J6F130349-2	H7A471AF	9H7A4710	6166203
		B1JDL4	J6F130349-3	H7A481AA	9H7A4810	6166189
	B1JDL4	J6F130349-3	H7A481AC	9H7A4810	6166195	
	B1JDL4	J6F130349-3	H7A481AD	9H7A4810	6166196	
	B1JDL4	J6F130349-3	H7A481AE	9H7A4810	6166201	
	B1JDL4	J6F130349-3	H7A481AF	9H7A4810	6166203	
	W06-006	B1J9Y9	J6F140227-1	H7DKJ1AA	9H7DKJ10	6166195
B1JB28		J6F140227-2	H7DKL1AA	9H7DKL10	6166195	

Comments:

## STL Richland

2800 George Washington Way  
Richland, WA 99354Tel: 509 375 3131 Fax: 509 375 5590  
www.stl-inc.com**Certificate of Analysis**Pacific Northwest National Laboratories  
Sigma V Building  
Richland, WA 99352

July 28, 2005

Attention: Dot Stewart

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SAF Number	:	S06-006, A06-006, G06-006, W06-006
Date SDG Closed	:	June 13, 2006
Number of Samples	:	Twenty (20)
Sample Type	:	Water
SDG Number	:	W04942
Data Deliverable	:	45-Day / Summary

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**CASE NARRATIVE****I. Introduction**

Between June 09, 2006 and June 13, 2006, twenty water samples were received at STL Richland (STLR) for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Pacific Northwest National Laboratories (PGW) specific IDs:

<u>PGW ID#</u>	<u>STLR ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
B1J970	H68MH	WATER	6/09/06
B1J9C9	H68ML	WATER	6/09/06
B1J971	H68MR	WATER	6/09/06
B1J9D0	H68MW	WATER	6/09/06
B1J979	H68M5	WATER	6/09/06
B1JCL0	H68N5	WATER	6/12/06
B1JCL7	H68N7	WATER	6/12/06
B1JCL1	H68N8	WATER	6/12/06
B1JCL2	H68N9	WATER	6/12/06
B1JCM5	H68PC	WATER	6/12/06
B1JCM4	H68PE	WATER	6/12/06
B1JCM6	H68TE	WATER	6/12/06
B1JDJ7	H7A40	WATER	6/13/06

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B1JDJ3	H7A4V	WATER	6/13/06
B1JDC2	H7A4N	WATER	6/13/06
B1JDN3	H7A45	WATER	6/13/06
B1JDL8	H7A47	WATER	6/13/06
B1JDL4	H7A48	WATER	6/13/06
B1J9Y9	H7DKJ	WATER	6/13/06
B1JB28	H7DKL	WATER	6/13/06

## 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**

Plutonium-238, -239/240 by method RICH-RC-5010

Americium 241 by method RICH-RC-5072

Neptunium-237 by method RICH-RC-5064

### **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

Gamma Spec by method RICH-RC-5017

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

### **Liquid Scintillation Counting**

Technetium-99 by TEVA method RICH-RC-5065

Tritium by method RICH-RC-5007

### **Laser Induced Phosphorimetry**

Total Uranium by method RICH-RC-5058

## 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**

#### Plutonium-238, -239/240 by method RICH-RC-5010

Reduced volumes were analyzed based on elevated screen results for samples B1J979, B1J970, B1J9C9, B1J971, B1J9D0 and B1J970 DUP. Other than noted the LCS, batch blank, samples and sample duplicate (B1J971) results are within contractual requirements.

#### Americium by method RICH-RC-5072

Reduced volumes were analyzed based on elevated screen results for samples B1J970, B1J971 and B1J971 DUP. Other than noted the LCS, batch blank, samples and sample duplicate (B1J971) results are within contractual requirements.

#### Neptunium 237 by method RICH-RC-5064

The CRDL is not met due to high beta screens for samples B1J970, B1J971 and B1J971 DUP. Smaller aliquots were taken. Other than noted, the LCS, batch blank, samples and sample duplicate (B1J971) results are within contractual requirements.

### **Gas Proportional Counting**

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

Reduced volumes were analyzed based on elevated screen results for samples B1J979, B1J970, B1J971, B1JDL8, B1JDL4, B1J9Y9, B1JB28 and B1JDL8 DUP. Other than noted the LCS, batch blank, samples and sample duplicate (B1JDL8) results are within contractual requirements.

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

Reduced volumes were analyzed based on elevated screen results for samples B1J979, B1J970, B1J971 and B1JDC2. The activity for samples B1J979 and B1JDC2 is greater than the MDA which is greater than the CRDL. Other than noted the LCS, batch blank, samples and sample duplicate (B1JDL4) results are within contractual requirements.

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

The LCS, batch blank, samples and sample duplicate (B1JDJ3) results are within contractual requirements.

### **Gamma Spectroscopy**

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

The LCS, batch blank, samples and sample duplicate (B1D6K3) results are within contractual requirements.

#### Gamma Spec by method RICH-RC-5017:

The LCS in the batch looked like a blank. It looked like no spike vial had been added. A new LCS was made up and analyzed with good results. Data is accepted. Except as noted, the LCS, batch blank, samples and sample duplicate (B1JDC2) results are within contractual requirements.

Pacific Northwest National Laboratories  
July 28, 2006

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

The LCS, batch blank, samples and sample duplicate (B1J979) results are within contractual requirements.

**Liquid Scintillation Counting**

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

The LCS, batch blank, samples, sample duplicate (B1JCL2), and sample matrix spike (B1JCL1) results are within contractual requirements.

Tritium by method RICH-RC-5007:

The LCS, batch blank, samples and sample duplicate (B1JDN3) results are within contractual requirements.

**Total Uranium**

Total Uranium by method RICH-RC-5058:

The duplicate result was not within contractual limits on the first analysis. The sample and sample duplicate was reanalyzed with acceptable results. The LCS, batch blank, samples, sample duplicate (B1JCL0), and sample matrix spike (B1JCL7) 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 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr89/90	RICH-RC-5006
ASTM D2460	Total Radium	RICH-RC-5027
Standard Method 7500-U-C & ASTM D5174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007
NOTE:		
The Gross Alpha LCS is prepared with Am-241 (unless otherwise specified in the case narrative)		
The Gross Beta LCS is prepared with Sr/Y-90 (unless otherwise specified in the case narrative)		

## Uncertainty Estimation

STL 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 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></i> - Combined Uncertainty.</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></i> the combined uncertainty. 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%. $Lc = (1.645 * \text{Sqrt}(2 * (\text{BkgndCnt}/\text{BkgndCntMin})/\text{SCntMin})) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol}) * \text{IngrFct})$ . 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 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.

7/28/2006 3:45:53 PM

### STL Richland Report

Lab Code: STLRL

FormNbr: R      FormatType: FEAD      Version: 05      Rpt Nbr: 32855      File Name: h:\Reportdb\edd\FeadIV\Rad\W04942.Edd, h:\Reportdb\edd\FeadIV\Rad\32855.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:				
9H68M510	B1J979		MW6-SBB-A1	S06-006	W04942					06/09/2006 10:06				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6166189	H-3	10028-17-8	7.98E+03	pCi/L	3.1E+02	4.7E+02		2.92E+02	100.0	906.0_H3_LSC	5.00E-03	L	07/16/200 08:23	I
6166195	ALPHA	12587-46-1	1.17E+01	pCi/L	3.3E+00	4.0E+00		1.87E+00	100.0	9310_ALPHABETA	5.92E-02	L	07/21/200 17:38	I
6166196	BETA	12587-47-2	3.78E+03	pCi/L	3.7E+01	4.8E+02		4.65E+00	100.0	9310_ALPHABETA	1.247E-01	L	07/21/200 14:18	I
6166192	AM-241	14596-10-2	0.00E+00	pCi/L	3.9E-01	3.9E-01	U	4.37E-01	38.2	AMCMISO_EIE_PL	1.393E-01	L	07/16/200 11:49	I
6166201	BE-7	13966-02-4	1.09E+01	pCi/L	3.8E+01	3.8E+01	U	6.86E+01		GAMMALL_GS	2.00E+00	L	07/24/200 10:38	I
6166201	CO-60	10198-40-0	4.91E-02	pCi/L	2.1E+00	2.1E+00	U	4.25E+00		GAMMALL_GS	2.00E+00	L	07/24/200 10:38	I
6166201	CS-134	13967-70-9	-9.81E-01	pCi/L	2.2E+00	2.2E+00	U	3.88E+00		GAMMALL_GS	2.00E+00	L	07/24/200 10:38	I
6166201	CS-137	10045-97-3	4.45E+01	pCi/L	8.4E+00	8.4E+00		3.64E+00		GAMMALL_GS	2.00E+00	L	07/24/200 10:38	I
6166201	EU-152	14683-23-9	3.12E+00	pCi/L	6.0E+00	6.0E+00	U	1.14E+01		GAMMALL_GS	2.00E+00	L	07/24/200 10:38	I
6166201	EU-154	15585-10-1	-2.75E+00	pCi/L	7.7E+00	7.7E+00	U	1.36E+01		GAMMALL_GS	2.00E+00	L	07/24/200 10:38	I
6166201	EU-155	14391-16-3	5.60E-01	pCi/L	6.0E+00	6.0E+00	U	1.07E+01		GAMMALL_GS	2.00E+00	L	07/24/200 10:38	I
6166201	K-40	13966-00-2	3.66E+01	pCi/L	5.8E+01	5.8E+01	U	5.68E+01		GAMMALL_GS	2.00E+00	L	07/24/200 10:38	I
6166201	RU-106	13967-48-1	-1.05E+01	pCi/L	2.2E+01	2.2E+01	U	3.84E+01		GAMMALL_GS	2.00E+00	L	07/24/200 10:38	I
6166201	SB-125	14234-35-6	7.07E-01	pCi/L	6.8E+00	6.8E+00	U	1.23E+01		GAMMALL_GS	2.00E+00	L	07/24/200 10:38	I
6166205	I-129L	15046-84-1	3.09E+00	pCi/L	5.3E-01	5.3E-01		3.25E-01	94.9	I129LL_SEP_LEPS	3.8948E+00	L	07/18/200 13:15	I
6166193	NP-237	13994-20-2	-2.76E-02	pCi/L	3.9E-02	3.9E-02	U	3.90E-01	87.5	NP237_LLE_PLAT	1.391E-01	L	07/24/200 22:54	I
6166191	PU-238	13981-16-3	0.00E+00	pCi/L	1.4E-01	1.4E-01	U	1.57E-01	88.8	PUISO_PLATE_AE	1.397E-01	L	07/12/200 18:12	I
6166191	PU-239	PU-239/240	1.13E+00	pCi/L	5.2E-01	5.4E-01		3.27E-01	88.8	PUISO_PLATE_AE	1.397E-01	L	07/12/200 18:12	I
6166203	SR-90	10098-97-2	2.04E+03	pCi/L	1.2E+01	3.1E+02		6.18E-01	81.1	SRISO_SEP_PRE	7.697E-01	L	07/24/200 07:12	I
6166204	Uranium	7440-61-1	1.71E+01	ug/L	2.0E+00	2.0E+00		8.35E-02		UTOT_KPA	2.51E-02	ML	07/21/200 15:11	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:				
9H68MH10	B1J970		MW6-SBB-A1	S06-006	W04942					06/09/2006 11:41				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6166195	ALPHA	12587-46-1	6.19E+01	pCi/L	6.2E+00	1.4E+01		1.76E+00	100.0	9310_ALPHABETA	1.075E-01	L	07/21/200 17:38	I
6166196	BETA	12587-47-2	6.95E+03	pCi/L	4.0E+01	9.4E+02		3.39E+00	100.0	9310_ALPHABETA	1.918E-01	L	07/21/200 14:18	I
6166192	AM-241	14596-10-2	2.83E-01	pCi/L	3.8E-01	3.8E-01	U	6.15E-01	85.9	AMCMISO_EIE_PL	8.98E-02	L	07/15/200 17:19	I
6166201	BE-7	13966-02-4	-9.31E+01	pCi/L	7.6E+01	7.6E+01	U	1.20E+02		GAMMALL_GS	2.0003E+00	L	07/24/200 08:52	I
6166201	CO-60	10198-40-0	-2.69E-01	pCi/L	2.1E+00	2.1E+00	U	4.01E+00		GAMMALL_GS	2.0003E+00	L	07/24/200 08:52	I
6166201	CS-134	13967-70-9	-2.53E-01	pCi/L	2.5E+00	2.5E+00	U	4.68E+00		GAMMALL_GS	2.0003E+00	L	07/24/200 08:52	I

STL Richland

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.

### STL Richland Report

FormNbr: R      FormatType: FEAD      Version: 05      Rpt Nbr: 32855      File Name: h:\Reportdb\edd\Fead\Rad\W04942.Edd, h:\Reportdb\edd\Fead\Rad\32855.Edd

6166201	CS-137	10045-97-3	9.02E+02	pCi/L	1.1E+02	1.1E+02		5.18E+00		GAMMALL_GS	2.0003E+00	L	07/24/200	08:52	I
6166201	EU-152	14683-23-9	-7.81E-02	pCi/L	1.1E+01	1.1E+01	U	1.97E+01		GAMMALL_GS	2.0003E+00	L	07/24/200	08:52	I
6166201	EU-154	15585-10-1	-1.78E+00	pCi/L	6.1E+00	6.1E+00	U	1.13E+01		GAMMALL_GS	2.0003E+00	L	07/24/200	08:52	I
6166201	EU-155	14391-16-3	1.57E+00	pCi/L	8.1E+00	8.1E+00	U	1.38E+01		GAMMALL_GS	2.0003E+00	L	07/24/200	08:52	I
6166201	K-40	13966-00-2	-1.43E+00	pCi/L	4.2E+01	4.2E+01	U	9.25E+01		GAMMALL_GS	2.0003E+00	L	07/24/200	08:52	I
6166201	RU-106	13967-48-1	3.69E+00	pCi/L	2.5E+01	2.5E+01	U	4.61E+01		GAMMALL_GS	2.0003E+00	L	07/24/200	08:52	I
6166201	SB-125	14234-35-6	7.78E+00	pCi/L	1.4E+01	1.4E+01	U	2.51E+01		GAMMALL_GS	2.0003E+00	L	07/24/200	08:52	I
6166193	NP-237	13994-20-2	-4.75E-02	pCi/L	6.7E-02	6.8E-02	U	6.71E-01	85.5	NP237_LLE_PLAT	8.94E-02	L	07/24/200	22:53	I
6166191	PU-238	13981-16-3	8.19E-02	pCi/L	1.6E-01	1.6E-01	U	2.22E-01	93.2	PUISO_PLATE_AE	8.96E-02	L	07/12/200	18:10	I
6166191	PU-239	PU-239/240	1.97E+01	pCi/L	2.5E+00	4.0E+00		3.92E-01	93.2	PUISO_PLATE_AE	8.96E-02	L	07/12/200	18:10	I
6166203	SR-90	10098-97-2	3.39E+03	pCi/L	2.1E+01	5.2E+02		9.61E-01	79.6	SRISO_SEP_PRE	5.246E-01	L	07/24/200	05:54	I
6166204	Uranium	7440-61-1	9.57E+01	ug/L	1.1E+01	1.1E+01		8.00E-02		UTOT_KPA	2.62E-02	ML	07/21/200	15:06	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:				
9H68ML10	B1J9C9		MW6-SBB-A1	S06-006	W04942					06/09/2006 11:41				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6166191	PU-238	13981-16-3	0.00E+00	pCi/L	2.8E-01	2.8E-01	U	3.09E-01	96.3	PUISO_PLATE_AE	6.40E-02	L	07/12/200 18:11	I
6166191	PU-239	PU-239/240	7.32E+00	pCi/L	1.8E+00	2.1E+00		7.83E-01	96.3	PUISO_PLATE_AE	6.40E-02	L	07/12/200 18:11	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:				
9H68MR10	B1J971		MW6-SBB-A1	S06-006	W04942					06/09/2006 11:41				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6166195	ALPHA	12587-46-1	5.29E+01	pCi/L	5.4E+00	1.2E+01		1.78E+00	100.0	9310_ALPHABETA	1.075E-01	L	07/21/200 17:38	I
6166196	BETA	12587-47-2	6.85E+03	pCi/L	4.1E+01	8.9E+02		3.31E+00	100.0	9310_ALPHABETA	1.818E-01	L	07/21/200 14:18	I
6166192	AM-241	14596-10-2	6.27E-01	pCi/L	5.1E-01	5.2E-01		2.83E-01	93.6	AMCMISO_EIE_PL	8.94E-02	L	07/15/200 17:18	I
6166201	BE-7	13966-02-4	-4.40E+01	pCi/L	6.8E+01	6.8E+01	U	1.12E+02		GAMMALL_GS	2.0003E+00	L	07/24/200 10:37	I
6166201	CO-60	10198-40-0	-1.91E+00	pCi/L	2.0E+00	2.0E+00	U	2.73E+00		GAMMALL_GS	2.0003E+00	L	07/24/200 10:37	I
6166201	CS-134	13967-70-9	2.00E-01	pCi/L	2.9E+00	2.9E+00	U	5.43E+00		GAMMALL_GS	2.0003E+00	L	07/24/200 10:37	I
6166201	CS-137	10045-97-3	8.80E+02	pCi/L	1.1E+02	1.1E+02		5.62E+00		GAMMALL_GS	2.0003E+00	L	07/24/200 10:37	I
6166201	EU-152	14683-23-9	-3.92E+00	pCi/L	1.1E+01	1.1E+01	U	1.83E+01		GAMMALL_GS	2.0003E+00	L	07/24/200 10:37	I
6166201	EU-154	15585-10-1	7.16E-01	pCi/L	4.9E+00	4.9E+00	U	1.05E+01		GAMMALL_GS	2.0003E+00	L	07/24/200 10:37	I
6166201	EU-155	14391-16-3	-7.28E-01	pCi/L	8.3E+00	8.3E+00	U	1.40E+01		GAMMALL_GS	2.0003E+00	L	07/24/200 10:37	I
6166201	K-40	13966-00-2	1.63E+01	pCi/L	4.3E+01	4.3E+01	U	9.69E+01		GAMMALL_GS	2.0003E+00	L	07/24/200 10:37	I

7/28/2006 3:45:53 PM

### STL Richland Report

Lab Code: STLRL

FormNbr: R      FormatType: FEAD      Version: 05      Rpt Nbr: 32855      File Name: h:\Reportdb\edd\Fead\Rad\W04942.Edd, h:\Reportdb\edd\Fead\Rad\32855.Edd

6166201	RU-106	13967-48-1	-4.21E+00	pCi/L	3.0E+01	3.0E+01	U	5.28E+01	GAMMALL_GS	2.0003E+00	L	07/24/200	10:37	I	
6166201	SB-125	14234-35-6	7.29E+00	pCi/L	1.4E+01	1.4E+01	U	2.41E+01	GAMMALL_GS	2.0003E+00	L	07/24/200	10:37	I	
6166193	NP-237	13994-20-2	-2.09E-02	pCi/L	4.2E-02	4.2E-02	U	5.00E-01	91.2	NP237_LLE_PLAT	9.01E-02	L	07/24/200	22:54	I
6166191	PU-238	13981-16-3	2.43E-01	pCi/L	2.8E-01	2.8E-01	U	2.19E-01	95.2	PUISO_PLATE_AE	8.98E-02	L	07/12/200	18:12	I
6166191	PU-239	PU-239/240	1.74E+01	pCi/L	2.4E+00	3.3E+00		5.11E-01	95.2	PUISO_PLATE_AE	8.98E-02	L	07/12/200	18:12	I
6166203	SR-90	10098-97-2	3.29E+03	pCi/L	2.0E+01	5.0E+02		1.02E+00	83.4	SRISO_SEP_PRE	4.75E-01	L	07/24/200	07:12	I
6166204	Uranium	7440-61-1	9.55E+01	ug/L	1.1E+01	1.1E+01		8.12E-02		UTOT_KPA	2.58E-02	ML	07/21/200	15:09	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:				
9H68MW10	B1J9D0		MW6-SBB-A1	S06-006	W04942					06/09/2006 11:41				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6166191	PU-238	13981-16-3	1.38E-01	pCi/L	2.5E-01	2.5E-01	U	4.87E-01	101.1	PUISO_PLATE_AE	7.91E-02	L	07/12/200 18:12	I
6166191	PU-239	PU-239/240	8.42E+00	pCi/L	1.7E+00	2.0E+00		4.12E-01	101.1	PUISO_PLATE_AE	7.91E-02	L	07/12/200 18:12	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9H68N510	B1JCL0		MW6-SBB-A1	A06-006	W04942					06/12/2006 09:33				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6166189	H-3	10028-17-8	1.37E+04	pCi/L	3.9E+02	7.1E+02		2.92E+02	100.0	906.0_H3_LSC	5.00E-03	L	07/16/200 09:45	I
6166205	I-129L	15046-84-1	3.55E+00	pCi/L	5.6E-01	5.6E-01		2.97E-01	95.4	I129LL_SEP_LEPS	3.9398E+00	L	07/18/200 16:52	I
6166206	TC-99	14133-76-7	3.83E+02	pCi/L	1.1E+01	2.9E+01		9.75E+00	100.0	TC99_ETVDSK_LS	1.268E-01	L	07/20/200 04:07	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:				
9H68N520	B1JCL0		MW6-SBB-A1	A06-006	W04942					06/12/2006 09:33				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6205575	Uranium	7440-61-1	6.13E+00	ug/L	6.3E-01	6.3E-01		8.32E-02		UTOT_KPA	2.52E-02	ML	07/25/200 13:34	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:				
9H68N710	B1JCL7		MW6-SBB-A1	A06-006	W04942					06/12/2006 10:23				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6166189	H-3	10028-17-8	1.10E+04	pCi/L	3.5E+02	6.0E+02		2.90E+02	100.0	906.0_H3_LSC	5.00E-03	L	07/16/200 11:07	I
6166205	I-129L	15046-84-1	1.38E+00	pCi/L	3.2E-01	3.2E-01	U	5.86E-01	94.3	I129LL_SEP_LEPS	3.9062E+00	L	07/18/200 18:35	I
6166206	TC-99	14133-76-7	5.51E+01	pCi/L	5.7E+00	9.0E+00		9.80E+00	100.0	TC99_ETVDSK_LS	1.259E-01	L	07/20/200 05:10	I
6166204	Uranium	7440-61-1	7.08E+00	ug/L	7.2E-01	7.2E-01		8.35E-02		UTOT_KPA	2.51E-02	ML	07/21/200 15:18	I



7/28/2006 3:45:53 PM

## STL Richland Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

Version: 05

Rpt Nbr: 32855

File Name: h:\Reportdb\edd\Fead\Rad\W04942.Edd, h:\Reportdb\edd\Fead\Rad\32855.Edd

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
9H68TE10	B1JCM6												06/12/2006 12:03	
6166189	H-3	10028-17-8	3.78E+03	pCi/L	2.3E+02	3.0E+02		2.90E+02	100.0	906.0_H3_LSC	5.00E-03	L	07/16/200 17:55	I
6166205	I-129L	15046-84-1	1.12E-01	pCi/L	1.6E-01	1.6E-01	U	3.07E-01	96.5	I129LL_SEP_LEPS	3.9365E+00	L	07/19/200 09:11	I
6166206	TC-99	14133-76-7	5.69E+01	pCi/L	5.8E+00	9.1E+00		9.93E+00	100.0	TC99_ETVDSK_LS	1.247E-01	L	07/20/200 12:28	I
6166204	Uranium	7440-61-1	1.91E+01	ug/L	2.3E+00	2.3E+00		8.42E-02		UTOT_KPA	2.49E-02	ML	07/21/200 15:32	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:				
9H7A4010	B1JDJ7		MW6-SBB-A1	G06-006	W04942					06/13/2006 11:41				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6166189	H-3	10028-17-8	-2.24E+01	pCi/L	1.2E+02	1.3E+02	U	2.90E+02	100.0	906.0_H3_LSC	5.00E-03	L	07/17/200 02:06	I
6166195	ALPHA	12587-46-1	2.77E-01	pCi/L	4.9E-01	5.0E-01	U	1.06E+00	100.0	9310_ALPHABETA	2.004E-01	L	07/22/200 06:16	I
6166196	BETA	12587-47-2	1.09E+03	pCi/L	1.5E+01	1.4E+02		2.63E+00	100.0	9310_ALPHABETA	1.99E-01	L	07/21/200 14:18	I
6166202	BE-7	13966-02-4	-9.67E+00	pCi/L	2.0E+01	2.0E+01	U	3.42E+01		GAMMA_GS	2.5002E+00	L	07/21/200 06:24	I
6166202	CO-60	10198-40-0	-9.20E-01	pCi/L	1.8E+00	1.8E+00	U	3.09E+00		GAMMA_GS	2.5002E+00	L	07/21/200 06:24	I
6166202	CS-134	13967-70-9	-4.31E-01	pCi/L	1.7E+00	1.7E+00	U	3.09E+00		GAMMA_GS	2.5002E+00	L	07/21/200 06:24	I
6166202	CS-137	10045-97-3	5.82E-01	pCi/L	1.6E+00	1.6E+00	U	3.03E+00		GAMMA_GS	2.5002E+00	L	07/21/200 06:24	I
6166202	EU-152	14683-23-9	4.98E-01	pCi/L	4.6E+00	4.6E+00	U	8.09E+00		GAMMA_GS	2.5002E+00	L	07/21/200 06:24	I
6166202	EU-154	15585-10-1	4.08E+00	pCi/L	5.7E+00	5.7E+00	U	1.16E+01		GAMMA_GS	2.5002E+00	L	07/21/200 06:24	I
6166202	EU-155	14391-16-3	-1.09E+00	pCi/L	4.9E+00	4.9E+00	U	8.36E+00		GAMMA_GS	2.5002E+00	L	07/21/200 06:24	I
6166202	K-40	13966-00-2	-3.61E+01	pCi/L	5.3E+01	5.3E+01	U	1.15E+02		GAMMA_GS	2.5002E+00	L	07/21/200 06:24	I
6166202	RU-106	13967-48-1	-2.08E+00	pCi/L	1.7E+01	1.7E+01	U	2.93E+01		GAMMA_GS	2.5002E+00	L	07/21/200 06:24	I
6166202	SB-125	14234-35-6	-2.23E+00	pCi/L	4.1E+00	4.1E+00	U	6.86E+00		GAMMA_GS	2.5002E+00	L	07/21/200 06:24	I
6166203	SR-90	10098-97-2	5.22E+02	pCi/L	4.4E+00	7.6E+01		3.74E-01	90.2	SRISO_SEP_PRE	1.0008E+00	L	07/24/200 06:12	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9H7A4510	B1JDN3		MW6-SBB-A1	G06-006	W04942					06/13/2006 07:30				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6166189	H-3	10028-17-8	3.73E+01	pCi/L	1.2E+02	1.3E+02	U	2.92E+02	100.0	906.0_H3_LSC	5.00E-03	L	07/17/200 03:28	I
6166195	ALPHA	12587-46-1	-2.07E-01	pCi/L	9.8E-02	1.1E-01	U	1.03E+00	100.0	9310_ALPHABETA	2.014E-01	L	07/22/200 06:16	I
6166196	BETA	12587-47-2	2.07E+00	pCi/L	1.3E+00	1.4E+00	U	2.64E+00	100.0	9310_ALPHABETA	1.99E-01	L	07/21/200 14:18	I
6166201	BE-7	13966-02-4	1.34E+01	pCi/L	2.0E+01	2.0E+01	U	3.92E+01		GAMMALL_GS	2.0004E+00	L	07/24/200 10:38	I
6166201	CO-60	10198-40-0	1.76E+00	pCi/L	1.6E+00	1.6E+00	U	3.75E+00		GAMMALL_GS	2.0004E+00	L	07/24/200 10:38	I

STL Richland

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

5

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.

### STL Richland Report

FormNbr: R      FormatType: FEAD      Version: 05      Rpt Nbr: 32855      File Name: h:\Reportdb\edd\FeadIV\Rad\W04942.Edd, h:\Reportdb\edd\FeadIV\Rad\32855.Edd

6166201	CS-134	13967-70-9	4.27E-01	pCi/L	1.8E+00	1.8E+00	U	3.52E+00	GAMMALL_GS	2.0004E+00	L	07/24/200	10:38	I	
6166201	CS-137	10045-97-3	-9.48E-01	pCi/L	1.5E+00	1.5E+00	U	2.49E+00	GAMMALL_GS	2.0004E+00	L	07/24/200	10:38	I	
6166201	EU-152	14683-23-9	-1.07E+00	pCi/L	4.6E+00	4.6E+00	U	8.07E+00	GAMMALL_GS	2.0004E+00	L	07/24/200	10:38	I	
6166201	EU-154	15585-10-1	-2.84E-01	pCi/L	4.7E+00	4.7E+00	U	9.04E+00	GAMMALL_GS	2.0004E+00	L	07/24/200	10:38	I	
6166201	EU-155	14391-16-3	-6.89E-01	pCi/L	3.5E+00	3.5E+00	U	6.07E+00	GAMMALL_GS	2.0004E+00	L	07/24/200	10:38	I	
6166201	K-40	13966-00-2	1.56E+01	pCi/L	2.7E+01	2.7E+01	U	5.86E+01	GAMMALL_GS	2.0004E+00	L	07/24/200	10:38	I	
6166201	RU-106	13967-48-1	-5.25E+00	pCi/L	1.7E+01	1.7E+01	U	2.98E+01	GAMMALL_GS	2.0004E+00	L	07/24/200	10:38	I	
6166201	SB-125	14234-35-6	-3.90E-02	pCi/L	4.1E+00	4.1E+00	U	7.46E+00	GAMMALL_GS	2.0004E+00	L	07/24/200	10:38	I	
6166203	SR-90	10098-97-2	-4.07E-03	pCi/L	6.4E-02	1.7E-01	U	3.92E-01	80.7	SRISO_SEP_PRE	1.0002E+00	L	07/24/200	06:12	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9H7A4710	B1JDL8		MW6-SBB-A1	G06-006	W04942					06/13/2006 08:56				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6166189	H-3	10028-17-8	1.20E+02	pCi/L	1.2E+02	1.4E+02	U	2.91E+02	100.0	906.0_H3_LSC	5.00E-03	L	07/17/200 06:11	I
6166195	ALPHA	12587-46-1	4.53E-01	pCi/L	6.7E-01	6.7E-01	U	1.36E+00	100.0	9310_ALPHABETA	1.915E-01	L	07/22/200 06:16	I
6166196	BETA	12587-47-2	2.79E+03	pCi/L	2.4E+01	3.6E+02		2.74E+00	100.0	9310_ALPHABETA	2.00E-01	L	07/21/200 14:18	I
6166201	BE-7	13966-02-4	1.64E+01	pCi/L	2.8E+01	2.8E+01	U	5.21E+01		GAMMALL_GS	2.004E+00	L	07/24/200 10:39	I
6166201	CO-60	10198-40-0	2.43E-01	pCi/L	2.6E+00	2.6E+00	U	4.99E+00		GAMMALL_GS	2.004E+00	L	07/24/200 10:39	I
6166201	CS-134	13967-70-9	6.65E-02	pCi/L	2.4E+00	2.4E+00	U	4.44E+00		GAMMALL_GS	2.004E+00	L	07/24/200 10:39	I
6166201	CS-137	10045-97-3	2.49E-01	pCi/L	2.4E+00	2.4E+00	U	4.37E+00		GAMMALL_GS	2.004E+00	L	07/24/200 10:39	I
6166201	EU-152	14683-23-9	3.97E-01	pCi/L	6.0E+00	6.0E+00	U	1.04E+01		GAMMALL_GS	2.004E+00	L	07/24/200 10:39	I
6166201	EU-154	15585-10-1	-3.37E+00	pCi/L	7.1E+00	7.1E+00	U	1.23E+01		GAMMALL_GS	2.004E+00	L	07/24/200 10:39	I
6166201	EU-155	14391-16-3	7.16E+00	pCi/L	6.8E+00	6.8E+00	U	1.22E+01		GAMMALL_GS	2.004E+00	L	07/24/200 10:39	I
6166201	K-40	13966-00-2	-8.09E+01	pCi/L	6.5E+01	6.5E+01	U	1.40E+02		GAMMALL_GS	2.004E+00	L	07/24/200 10:39	I
6166201	RU-106	13967-48-1	-2.15E+01	pCi/L	2.1E+01	2.1E+01	U	3.25E+01		GAMMALL_GS	2.004E+00	L	07/24/200 10:39	I
6166201	SB-125	14234-35-6	-2.67E-01	pCi/L	5.6E+00	5.6E+00	U	9.94E+00		GAMMALL_GS	2.004E+00	L	07/24/200 10:39	I
6166203	SR-90	10098-97-2	1.50E+03	pCi/L	9.0E+00	2.2E+02		4.75E-01	84.0	SRISO_SEP_PRE	1.0035E+00	L	07/24/200 07:12	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9H7A4810	B1JDL4		MW6-SBB-A1	G06-006	W04942					06/13/2006 11:39				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6166189	H-3	10028-17-8	5.12E+01	pCi/L	1.2E+02	1.3E+02	U	2.92E+02	100.0	906.0_H3_LSC	5.00E-03	L	07/17/200 07:33	I
6166195	ALPHA	12587-46-1	5.62E-01	pCi/L	7.8E-01	7.9E-01	U	1.55E+00	100.0	9310_ALPHABETA	1.556E-01	L	07/22/200 07:27	I

STL Richland

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.

### STL Richland Report

FormNbr: R      FormatType: FEAD      Version: 05      Rpt Nbr: 32855      File Name: h:\Reportdb\edd\Fead\Rad\W04942.Edd, h:\Reportdb\edd\Fead\Rad\32855.Edd

6166196	BETA	12587-47-2	5.36E+00	pCi/L	1.5E+00	1.7E+00		2.47E+00	100.0	9310_ALPHABETA	2.032E-01	L	07/21/200	14:18	I
6166201	BE-7	13966-02-4	4.45E+00	pCi/L	1.7E+01	1.7E+01	U	3.20E+01		GAMMALL_GS	2.0008E+00	L	07/24/200	10:39	I
6166201	CO-60	10198-40-0	-2.54E-01	pCi/L	1.5E+00	1.5E+00	U	2.83E+00		GAMMALL_GS	2.0008E+00	L	07/24/200	10:39	I
6166201	CS-134	13967-70-9	5.76E-01	pCi/L	1.5E+00	1.5E+00	U	3.02E+00		GAMMALL_GS	2.0008E+00	L	07/24/200	10:39	I
6166201	CS-137	10045-97-3	-2.73E-01	pCi/L	1.5E+00	1.5E+00	U	2.75E+00		GAMMALL_GS	2.0008E+00	L	07/24/200	10:39	I
6166201	EU-152	14683-23-9	-1.78E+00	pCi/L	3.7E+00	3.7E+00	U	6.35E+00		GAMMALL_GS	2.0008E+00	L	07/24/200	10:39	I
6166201	EU-154	15585-10-1	1.95E+00	pCi/L	4.1E+00	4.1E+00	U	8.82E+00		GAMMALL_GS	2.0008E+00	L	07/24/200	10:39	I
6166201	EU-155	14391-16-3	-1.62E+00	pCi/L	3.3E+00	3.3E+00	U	5.62E+00		GAMMALL_GS	2.0008E+00	L	07/24/200	10:39	I
6166201	K-40	13966-00-2	-2.11E+01	pCi/L	3.2E+01	3.2E+01	U	6.73E+01		GAMMALL_GS	2.0008E+00	L	07/24/200	10:39	I
6166201	RU-106	13967-48-1	-5.14E+00	pCi/L	1.3E+01	1.3E+01	U	2.28E+01		GAMMALL_GS	2.0008E+00	L	07/24/200	10:39	I
6166201	SB-125	14234-35-6	-1.35E+00	pCi/L	3.7E+00	3.7E+00	U	6.45E+00		GAMMALL_GS	2.0008E+00	L	07/24/200	10:39	I
6166203	SR-90	10098-97-2	1.54E+00	pCi/L	3.3E-01	4.0E-01		4.72E-01	81.3	SRISO_SEP_PRE	9.999E-01	L	07/24/200	06:13	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:				
9H7A4N10	B1JDC2		MW6-SBB-A1	G06-006	W04942					06/13/2006 10:00				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6166189	H-3	10028-17-8	1.85E+02	pCi/L	1.3E+02	1.4E+02	U	2.91E+02	100.0	906.0_H3_LSC	5.00E-03	L	07/16/200 23:22	I
6166195	ALPHA	12587-46-1	1.20E+00	pCi/L	1.5E+00	1.5E+00	U	2.77E+00	100.0	9310_ALPHABETA	3.88E-02	L	07/22/200 09:44	I
6166196	BETA	12587-47-2	3.41E+03	pCi/L	4.2E+01	4.2E+02		6.69E+00	100.0	9310_ALPHABETA	8.17E-02	L	07/21/200 14:18	I
6166201	BE-7	13966-02-4	-1.47E+00	pCi/L	2.4E+01	2.4E+01	U	4.44E+01		GAMMALL_GS	2.003E+00	L	07/24/200 10:38	I
6166201	CO-60	10198-40-0	-1.07E+00	pCi/L	1.8E+00	1.8E+00	U	3.24E+00		GAMMALL_GS	2.003E+00	L	07/24/200 10:38	I
6166201	CS-134	13967-70-9	7.66E-02	pCi/L	2.0E+00	2.0E+00	U	3.89E+00		GAMMALL_GS	2.003E+00	L	07/24/200 10:38	I
6166201	CS-137	10045-97-3	-4.21E-01	pCi/L	1.8E+00	1.8E+00	U	3.27E+00		GAMMALL_GS	2.003E+00	L	07/24/200 10:38	I
6166201	EU-152	14683-23-9	-6.74E+00	pCi/L	5.4E+00	5.4E+00	U	8.15E+00		GAMMALL_GS	2.003E+00	L	07/24/200 10:38	I
6166201	EU-154	15585-10-1	-3.39E+00	pCi/L	5.2E+00	5.2E+00	U	8.87E+00		GAMMALL_GS	2.003E+00	L	07/24/200 10:38	I
6166201	EU-155	14391-16-3	2.97E+00	pCi/L	5.0E+00	5.0E+00	U	9.10E+00		GAMMALL_GS	2.003E+00	L	07/24/200 10:38	I
6166201	K-40	13966-00-2	-1.18E+01	pCi/L	3.0E+01	3.0E+01	U	6.17E+01		GAMMALL_GS	2.003E+00	L	07/24/200 10:38	I
6166201	RU-106	13967-48-1	-4.38E+00	pCi/L	2.0E+01	2.0E+01	U	3.53E+01		GAMMALL_GS	2.003E+00	L	07/24/200 10:38	I
6166201	SB-125	14234-35-6	-4.44E+00	pCi/L	4.9E+00	4.9E+00	U	7.67E+00		GAMMALL_GS	2.003E+00	L	07/24/200 10:38	I
6166203	SR-90	10098-97-2	1.81E+03	pCi/L	1.1E+01	2.8E+02		4.89E-01	82.5	SRISO_SEP_PRE	1.0007E+00	L	07/24/200 05:54	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:
9H7A4V10	B1JDJ3		MW6-SBB-A1	G06-006	W04942					06/13/2006 12:30

STL Richland

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.

rptFeadRadSummaryEdd v3.48

### STL Richland Report

FormNbr: R      FormatType: FEAD      Version: 05      Rpt Nbr: 32855      File Name: h:\Reportdb\edd\FeadIV\Rad\W04942.Edd, h:\Reportdb\edd\FeadIV\Rad\32855.Edd

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6166189	H-3	10028-17-8	-4.98E+01	pCi/L	1.2E+02	1.3E+02	U	2.93E+02	100.0	906.0_H3_LSC	5.00E-03	L	07/17/200 00:44	I
6166195	ALPHA	12587-46-1	3.16E-01	pCi/L	5.6E-01	5.6E-01	U	1.21E+00	100.0	9310_ALPHABETA	2.022E-01	L	07/22/200 06:16	I
6166196	BETA	12587-47-2	6.88E+02	pCi/L	1.2E+01	8.7E+01		2.67E+00	100.0	9310_ALPHABETA	1.99E-01	L	07/21/200 14:18	I
6166202	BE-7	13966-02-4	7.35E-01	pCi/L	1.6E+01	1.6E+01	U	2.88E+01		GAMMA_GS	2.5025E+00	L	07/21/200 06:23	I
6166202	CO-60	10198-40-0	-1.42E-01	pCi/L	1.3E+00	1.3E+00	U	2.47E+00		GAMMA_GS	2.5025E+00	L	07/21/200 06:23	I
6166202	CS-134	13967-70-9	-4.21E-01	pCi/L	1.6E+00	1.6E+00	U	2.77E+00		GAMMA_GS	2.5025E+00	L	07/21/200 06:23	I
6166202	CS-137	10045-97-3	1.01E-01	pCi/L	1.2E+00	1.2E+00	U	2.26E+00		GAMMA_GS	2.5025E+00	L	07/21/200 06:23	I
6166202	EU-152	14683-23-9	-1.52E+00	pCi/L	3.6E+00	3.6E+00	U	6.24E+00		GAMMA_GS	2.5025E+00	L	07/21/200 06:23	I
6166202	EU-154	15585-10-1	-4.13E+00	pCi/L	4.3E+00	4.3E+00	U	6.68E+00		GAMMA_GS	2.5025E+00	L	07/21/200 06:23	I
6166202	EU-155	14391-16-3	5.23E-01	pCi/L	3.6E+00	3.6E+00	U	6.37E+00		GAMMA_GS	2.5025E+00	L	07/21/200 06:23	I
6166202	K-40	13966-00-2	-4.05E+00	pCi/L	2.0E+01	2.0E+01	U	4.11E+01		GAMMA_GS	2.5025E+00	L	07/21/200 06:23	I
6166202	RU-106	13967-48-1	7.54E+00	pCi/L	1.4E+01	1.4E+01	U	2.68E+01		GAMMA_GS	2.5025E+00	L	07/21/200 06:23	I
6166202	SB-125	14234-35-6	2.06E+00	pCi/L	3.3E+00	3.3E+00	U	6.41E+00		GAMMA_GS	2.5025E+00	L	07/21/200 06:23	I
6166203	SR-90	10098-97-2	3.18E+02	pCi/L	3.4E+00	4.6E+01		3.18E-01	92.7	SRISO_SEP_PRE	9.995E-01	L	07/24/200 06:12	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9H7DKJ10	B1J9Y9		MW6-SBB-A1	W06-006	W04942					06/13/2006 10:28

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6166195	ALPHA	12587-46-1	3.77E-01	pCi/L	1.2E+00	1.2E+00	U	2.54E+00	100.0	9310_ALPHABETA	5.07E-02	L	07/22/200 09:44	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:
9H7DKL10	B1JB28		MW6-SBB-A1	W06-006	W04942					06/13/2006 09:56

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6166195	ALPHA	12587-46-1	4.09E-01	pCi/L	8.0E-01	8.1E-01	U	1.64E+00	100.0	9310_ALPHABETA	7.77E-02	L	07/22/200 09:44	I

Friday, July 28, 2006

# STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04942.Edd, h:\Reportdb\edd\FeadIV\Rad\32855.Edd

Lab Sample Id: H7FQ11AB

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/13/2006 07:30

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 06/13/2006

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	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
6166189 BLK	H-3 10028-17-8	-1.88E+01	pCi/L	1.3E+02 1.2E+02	U	2.92E+02	100.0		906.0_H3_LSC	5.00E-03 L	07/16/2006 05:39				D

Friday, July 28, 2006

### STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04942.Edd, h:\Reportdb\edd\FeadIV\Rad\32855.Edd

Lab Sample Id: H7FQ11DX

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/13/2006 07:30

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 06/13/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BL	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
6166189	H-3	-6.06E+00	pCi/L	1.3E+02	U	2.92E+02	100.0		906.0_H3_LSC	5.00E-03	07/16/2006				D
BLK	10028-17-8			1.2E+02						L	20:39				

Friday, July 28, 2006

# STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\IVRad\W04942.Edd, h:\Reportdb\edd\Fead\IVRad\32855.Edd

Lab Sample Id: H7FR71AB

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/13/2006 11:39

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 06/13/2006

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	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
6166196	BETA	-1.99E-01	pCi/L	1.2E+00	U	2.75E+00	100.0		9310_ALPHAB	1.998E-01	07/21/2006				D
BLK	12587-47-2			1.2E+00						L	14:18				

Friday, July 28, 2006

### STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W04942.Edd, h:\Reportdb\edd\Fead\I\Rad\32855.Edd

Lab Sample Id: H7FRE1AB

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/09/2006 11:41

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 06/09/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BP	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
6166191 BLK	PU-238 13981-16-3	0.00E+00	pCi/L	9.3E-02 9.3E-02	U	1.03E-01	89.2		PUISO_PLATE	1.997E-01 L	07/12/2006 18:13				D
6166191 BLK	PU-239 PU-239/240	0.00E+00	pCi/L	9.3E-02 9.3E-02	U	1.03E-01	89.2		PUISO_PLATE	1.997E-01 L	07/12/2006 18:13				D

Friday, July 28, 2006

### STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W04942.Edd, h:\Reportdb\edd\Fead\Rad\32855.Edd

Lab Sample Id: H7FRJ1AB

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/09/2006 11:41

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 06/09/2006

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	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
6166192 BLK	AM-241 14596-10-2	1.18E-01	pCi/L	1.7E-01 1.7E-01	U	1.60E-01	75.9		AMCMISO_EIE	1.998E-01 L	07/16/2006 11:49				D

Friday, July 28, 2006

# STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W04942.Edd, h:\Reportdb\edd\Fead\Rad\32855.Edd

Lab Sample Id: H7FRT1AB

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/09/2006 11:41

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 06/09/2006

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	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
6166193 BLK	NP-237 13994-20-2	0.00E+00	pCi/L	1.3E-01 1.3E-01	U	1.43E-01	84.8		NP237_LLE_P	1.999E-01 L	07/24/2006 22:55				D

Friday, July 28, 2006

### STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W04942.Edd, h:\Reportdb\edd\Fead\Rad\32855.Edd

Lab Sample Id: H7FRX1AB

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/13/2006 08:56

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 06/13/2006

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	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
6166195 BLK	ALPHA 12587-46-1	7.01E-02	pCi/L	2.2E-01 2.2E-01	U	4.77E-01	100.0		9310_ALPHAB	2.018E-01 L	07/22/2006 09:44				D

Friday, July 28, 2006

### STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W04942.Edd, h:\Reportdb\edd\Fead\I\Rad\32855.Edd

Lab Sample Id: H7FT21AB

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/12/2006 09:33

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 06/12/2006

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	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
6166204 BLK	Uranium 7440-61-1	1.06E-02	ug/L	1.4E-03 1.4E-03	U	8.22E-02			UTOT_KPA	2.55E-02 ML	07/21/2006 14:57				D

Friday, July 28, 2006

### STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\IVRad\W04942.Edd, h:\Reportdb\edd\Fead\IVRad\32855.Edd

Lab Sample Id: H7FTD1AB

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/13/2006 10:00

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 06/13/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								CA	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
6166201 BLK	BE-7 13966-02-4	3.63E-01	pCi/L	1.8E+01 1.8E+01	U	3.19E+01			GAMMALL_GS	2.003E+00 L	07/24/2006 12:23				D
6166201 BLK	CO-60 10198-40-0	1.08E+00	pCi/L	1.6E+00 1.6E+00	U	3.54E+00			GAMMALL_GS	2.003E+00 L	07/24/2006 12:23				D
6166201 BLK	CS-134 13967-70-9	1.52E+00	pCi/L	1.7E+00 1.7E+00	U	3.51E+00			GAMMALL_GS	2.003E+00 L	07/24/2006 12:23				D
6166201 BLK	CS-137 10045-97-3	-1.22E+00	pCi/L	1.5E+00 1.5E+00	U	2.43E+00			GAMMALL_GS	2.003E+00 L	07/24/2006 12:23				D
6166201 BLK	EU-152 14683-23-9	-1.26E+00	pCi/L	3.5E+00 3.5E+00	U	6.21E+00			GAMMALL_GS	2.003E+00 L	07/24/2006 12:23				D
6166201 BLK	EU-154 15585-10-1	3.73E-01	pCi/L	4.7E+00 4.7E+00	U	9.17E+00			GAMMALL_GS	2.003E+00 L	07/24/2006 12:23				D
6166201 BLK	EU-155 14391-16-3	1.40E+00	pCi/L	2.9E+00 2.9E+00	U	5.56E+00			GAMMALL_GS	2.003E+00 L	07/24/2006 12:23				D
6166201 BLK	K-40 13966-00-2	-4.31E+01	pCi/L	3.5E+01 3.5E+01	U	6.85E+01			GAMMALL_GS	2.003E+00 L	07/24/2006 12:23				D
6166201 BLK	RU-106 13967-48-1	-2.54E+00	pCi/L	1.3E+01 1.3E+01	U	2.41E+01			GAMMALL_GS	2.003E+00 L	07/24/2006 12:23				D
6166201 BLK	SB-125 14234-35-6	1.40E+00	pCi/L	3.9E+00 3.9E+00	U	7.29E+00			GAMMALL_GS	2.003E+00 L	07/24/2006 12:23				D

Friday, July 28, 2006

### STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W04942.Edd, h:\Reportdb\edd\Fead\VRad\32855.Edd

Lab Sample Id: H7FTH1AB

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/13/2006 12:30

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 06/13/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								CC	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
6166202 BLK	BE-7 13966-02-4	-1.22E+01	pCi/L	2.1E+01 2.1E+01	U	3.63E+01			GAMMA_GS	2.5013E+00 L	07/21/2006 08:09				D
6166202 BLK	CO-60 10198-40-0	9.31E-01	pCi/L	1.6E+00 1.6E+00	U	3.71E+00			GAMMA_GS	2.5013E+00 L	07/21/2006 08:09				D
6166202 BLK	CS-134 13967-70-9	-7.66E-01	pCi/L	2.1E+00 2.1E+00	U	3.72E+00			GAMMA_GS	2.5013E+00 L	07/21/2006 08:09				D
6166202 BLK	CS-137 10045-97-3	4.58E-01	pCi/L	1.7E+00 1.7E+00	U	3.35E+00			GAMMA_GS	2.5013E+00 L	07/21/2006 08:09				D
6166202 BLK	EU-152 14683-23-9	1.87E+00	pCi/L	4.8E+00 4.8E+00	U	8.94E+00			GAMMA_GS	2.5013E+00 L	07/21/2006 08:09				D
6166202 BLK	EU-154 15585-10-1	6.20E+00	pCi/L	5.4E+00 5.4E+00	U	1.26E+01			GAMMA_GS	2.5013E+00 L	07/21/2006 08:09				D
6166202 BLK	EU-155 14391-16-3	-6.26E-01	pCi/L	4.0E+00 4.0E+00	U	6.94E+00			GAMMA_GS	2.5013E+00 L	07/21/2006 08:09				D
6166202 BLK	K-40 13966-00-2	-2.16E+01	pCi/L	4.3E+01 4.3E+01	U	9.64E+01			GAMMA_GS	2.5013E+00 L	07/21/2006 08:09				D
6166202 BLK	RU-106 13967-48-1	-1.25E+01	pCi/L	1.6E+01 1.6E+01	U	2.59E+01			GAMMA_GS	2.5013E+00 L	07/21/2006 08:09				D
6166202 BLK	SB-125 14234-35-6	1.63E+00	pCi/L	4.5E+00 4.5E+00	U	8.42E+00			GAMMA_GS	2.5013E+00 L	07/21/2006 08:09				D

Friday, July 28, 2006

### STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W04942.Edd, h:\Reportdb\edd\Fead\I\Rad\32855.Edd

Lab Sample Id: H7FTM1AB

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/13/2006 12:30

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 06/13/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								CE	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
6166203 BLK	SR-90 10098-97-2	1.00E-01	pCi/L	1.7E-01 1.5E-01	U	3.64E-01	88.8		SRISO_SEP_P	1.0011E+00 L	07/24/2006 06:13				D

Friday, July 28, 2006

### STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04942.Edd, h:\Reportdb\edd\FeadIV\Rad\32855.Edd

Lab Sample Id: H7FVC1AB

Sdg/Rept Nbr: W04942 32855

Collection Date: 06/09/2006 10:06

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 06/09/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								CG	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
6166205 BLK	I-129L 15046-84-1	-2.30E-02	pCi/L	1.2E-01 1.2E-01	U	2.21E-01	96.8		I129LL_SEP_L	3.9557E+00 L	07/19/2006 10:30				D

Friday, July 28, 2006

### STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04942.Edd, h:\Reportdb\edd\FeadIV\Rad\32855.Edd

Lab Sample Id: H7FVR1AB

Sdg/Rept Nbr: W04942 32855

Collection Date: 06/12/2006 11:22

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 06/12/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								CI	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
6166206 BLK	TC-99 14133-76-7	2.64E+00	pCi/L	6.0E+00 4.2E+00	U	9.88E+00	100.0		TC99_ETVDSK	1.247E-01	07/20/2006 13:31				D

Friday, July 28, 2006

### STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W04942.Edd, h:\Reportdb\edd\Fead\VRad\32855.Edd

Lab Sample Id: H9W1J1AB

Sdg/Rept Nbr: W04942 32855

Collection Date: 06/12/2006 09:33

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 06/12/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								CK	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/ ML	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6205575 BLK	Uranium 7440-61-1	6.42E-03	ug/L	1.2E-03 1.2E-03	U	8.35E-02			UTOT_KPA	2.51E-02	07/25/2006 13:23				D

Friday, July 28, 2006

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04942.Edd, h:\Reportdb\edd\FeadIV\Rad\32855.Edd

Lab Sample Id: H7FQ11CS

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/13/2006 07:30

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 06/13/2006

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	Qual	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6166189 BS	H-3 10028-17-8	2.40E+03	pCi/L	2.4E+02 2.0E+02		2.93E+02	100.0	2.73E+03 88.1	906.0_H3_LSC	5.00E-03 L	07/16/2006 07:01			70 130	D

Friday, July 28, 2006

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04942.Edd, h:\Reportdb\edd\FeadIV\Rad\32855.Edd

Lab Sample Id: H7FQ11EM

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/13/2006 07:30

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 06/13/2006

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	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
6166189 BS	H-3 10028-17-8	2.56E+03	pCi/L	2.5E+02 2.0E+02		2.92E+02	100.0	2.73E+03 93.8	906.0_H3_LSC	5.00E-03 L	07/16/2006 22:01			70 130	D

Friday, July 28, 2006

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04942.Edd, h:\Reportdb\edd\FeadIV\Rad\32855.Edd

Lab Sample Id: H7FR71CS

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/13/2006 11:39

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 06/13/2006

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	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6166196 BS	BETA 12587-47-2	2.23E+01	pCi/L	3.7E+00 2.4E+00		2.59E+00	100.0	2.26E+01 98.4	9310_ALPHAB	2.025E-01 L	07/21/2006 14:18			70 130	D

Friday, July 28, 2006

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadI\Rad\W04942.Edd, h:\Reportdb\edd\FeadI\Rad\32855.Edd

Lab Sample Id: H7FRE1CS

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/09/2006 11:41

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 06/09/2006

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/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6166191	PU-239	4.05E+00	pCi/L	9.2E-01		1.67E-01	97.8	4.38E+00	PUISO_PLATE	1.992E-01	07/12/2006			70	D
BS	PU-239/240			7.5E-01				92.5		L	22:02			130	

Friday, July 28, 2006

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadI\Rad\W04942.Edd, h:\Reportdb\edd\FeadI\Rad\32855.Edd

Lab Sample Id: H7FRJ1CS

Sdg/Rept Nbr: W04942 32855

Collection Date: 06/09/2006 11:41

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 06/09/2006

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
6166192 BS	AM-241 14596-10-2	2.04E+01	pCi/L	4.1E+00 2.5E+00		2.04E-01	57.4	2.34E+01 87.4	AMCMISO_EIE	2.002E-01 L	07/16/2006 11:49			70 130	D

Friday, July 28, 2006

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W04942.Edd, h:\Reportdb\edd\Fead\Rad\32855.Edd

Lab Sample Id: H7FRT1CS

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/09/2006 11:41

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 06/09/2006

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	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6166193 BS	NP-237 13994-20-2	9.65E+00	pCi/L	1.9E+00 1.4E+00		1.32E-01	88.7	9.07E+00 106.4	NP237_LLE_P	2.001E-01	07/24/2006 22:55			70 130	D

Friday, July 28, 2006

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W04942.Edd, h:\Reportdb\edd\Fead\Rad\32855.Edd

Lab Sample Id: H7FRX1CS

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/13/2006 08:56

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 06/13/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp				
	MW6-SBB-A19981								BW	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
6166195 BS	ALPHA 12587-46-1	2.02E+01	pCi/L	4.3E+00 1.5E+00	4.09E-01	100.0	2.29E+01 87.9	9310_ALPHAB	2.012E-01 L	07/22/2006 09:44			70 130	D

Friday, July 28, 2006

### STL Richland QC Control Sample Report

Lab Code: STLR

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04942.Edd, h:\Reportdb\edd\FeadIV\Rad\32855.Edd

Lab Sample Id: H7FT21CS

Sdg/Rept Nbr: W04942 32855

Collection Date: 06/12/2006 09:33

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 06/12/2006

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	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
6166204 BS	Uranium 7440-61-1	3.39E+00	ug/L	3.5E-01 3.5E-01		8.03E-02		3.43E+00 98.9	UTOT_KPA	2.61E-02 ML	07/21/2006 15:02			70 130	D

Friday, July 28, 2006

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04942.Edd, h:\Reportdb\edd\FeadIV\Rad\32855.Edd

Lab Sample Id: H7FT21DS

Sdg/Rept Nbr: W04942 32855

Collection Date: 06/12/2006 09:33

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 06/12/2006

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	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
6166204 BS	Uranium 7440-61-1	3.38E+01	ug/L	4.0E+00 4.0E+00		8.28E-02		3.58E+01 94.5	UTOT_KPA	2.53E-02 ML	07/21/2006 15:04			70 130	D

Friday, July 28, 2006

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04942.Edd, h:\Reportdb\edd\FeadIV\Rad\32855.Edd

Lab Sample Id: H7FTD2CS

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/13/2006 10:00

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 06/13/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								CB	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
6166201 BS	CO-60 10198-40-0	4.44E+01	pCi/L	8.9E+00 8.9E+00		4.90E+00		3.82E+01 116.3	GAMMALL_GS	1.9999E+00 L	07/27/2006 20:51			70 130	D
6166201 BS	CS-137 10045-97-3	2.86E+01	pCi/L	7.5E+00 7.5E+00		4.17E+00		2.48E+01 115.4	GAMMALL_GS	1.9999E+00 L	07/27/2006 20:51			70 130	D
6166201 BS	EU-152 14683-23-9	9.14E+01	pCi/L	2.0E+01 2.0E+01	U	2.38E+01		7.64E+01 119.6	GAMMALL_GS	1.9999E+00 L	07/27/2006 20:51			70 130	D

Friday, July 28, 2006

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W04942.Edd, h:\Reportdb\edd\Fead\Rad\32855.Edd

Lab Sample Id: H7FTH1CS

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/13/2006 12:30

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 06/13/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								CD	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
6166202 BS	CO-60 10198-40-0	3.15E+01	pCi/L	7.3E+00 7.3E+00		3.26E+00		3.12E+01 101.0	GAMMA_GS	2.5008E+00 L	07/21/2006 08:09			70 130	D
6166202 BS	CS-137 10045-97-3	2.29E+01	pCi/L	6.3E+00 6.3E+00		3.98E+00		2.00E+01 114.6	GAMMA_GS	2.5008E+00 L	07/21/2006 08:09			70 130	D
6166202 BS	EU-152 14683-23-9	7.84E+01	pCi/L	1.5E+01 1.5E+01	U	2.23E+01		6.15E+01 127.4	GAMMA_GS	2.5008E+00 L	07/21/2006 08:09			70 130	D

Friday, July 28, 2006

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W04942.Edd, h:\Reportdb\edd\Fead\I\Rad\32855.Edd

Lab Sample Id: H7FTM1CS

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/13/2006 12:30

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 06/13/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								CF	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
6166203 BS	SR-90 10098-97-2	1.40E+01	pCi/L	2.2E+00 7.6E-01		3.75E-01	89.3	1.37E+01 102.3	SRISO_SEP_P	1.001E+00 L	07/24/2006 06:13			70 130	D

Friday, July 28, 2006

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04942.Edd, h:\Reportdb\edd\FeadIV\Rad\32855.Edd

Lab Sample Id: H7FVC1CS

Sdg/Rept Nbr: W04942 32855

Collection Date: 06/09/2006 10:06

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 06/09/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								CH	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
6166205 BS	I-129L 15046-84-1	9.75E+00	pCi/L	1.2E+00 1.2E+00		3.33E-01	93.0	9.73E+00 100.2	I129LL_SEP_L	3.9627E+00 L	07/19/2006 10:30			70 130	D

Friday, July 28, 2006

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W04942.Edd, h:\Reportdb\edd\Fead\Rad\32855.Edd

Lab Sample Id: H7FVR1CS

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/12/2006 11:22

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 06/12/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								CJ	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
6166206 BS	TC-99 14133-76-7	5.13E+02	pCi/L	3.6E+01 1.3E+01		9.83E+00	100.0	5.48E+02 93.5	TC99_ETVDSK	1.259E-01 L	07/20/2006 14:33			70 130	D

Friday, July 28, 2006

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W04942.Edd, h:\Reportdb\edd\Fead\I\Rad\32855.Edd

Lab Sample Id: H9W1J1CS

Sdg/Rept Nbr: W04942 32855

Collection Date: 06/12/2006 09:33

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 06/12/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp				
	MW6-SBB-A19981								CL	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
6205575 BS	Uranium 7440-61-1	3.53E+01	ug/L	4.2E+00 4.2E+00	8.32E-02		3.59E+01 98.4	UTOT_KPA	2.52E-02 ML	07/25/2006 13:30			70 130	D

Friday, July 28, 2006

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\IVRad\W04942.Edd, h:\Reportdb\edd\Fead\IVRad\32855.Edd

Lab Sample Id: H9W1J1DS

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/12/2006 09:33

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 06/12/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								CM	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
6205575 BS	Uranium 7440-61-1	3.31E+00	ug/L	3.4E-01 3.4E-01		8.28E-02		3.59E+00 92.0	UTOT_KPA	2.53E-02 ML	07/25/2006 13:32			70 130	D

Friday, July 28, 2006

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04942.Edd, h:\Reportdb\edd\FeadIV\Rad\32855.Edd

Lab Sample Id: H68M51MR

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/09/2006 10:06

Client Id: B1J979

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 06/09/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
S06-006	MW6-SBB-A19981								AV	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
6166205 DUP	I-129L 15046-84-1	1.61E+00 3.09E+00	pCi/L	4.0E-01 4.0E-01		3.20E-01	93.8		I129LL_SEP_L	3.9223E+00 L	07/18/2006 15:08	63.1 20.0	5.2 3		D

Friday, July 28, 2006

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W04942.Edd, h:\Reportdb\edd\Fead\Rad\32855.Edd

Lab Sample Id: H68MH1KR

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/09/2006 11:41

Client Id: B1J970

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 06/09/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
S06-006	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
6166191 DUP	PU-238 13981-16-3	8.37E-02 8.19E-02	pCi/L	1.7E-01 1.7E-01	U	2.27E-01	90.6		PUISO_PLATE	8.99E-02 L	07/12/2006 18:10	2.2 20.0	0. 3		D
6166191 DUP	PU-239 PU-239/240	2.18E+01 1.97E+01	pCi/L	4.3E+00 2.7E+00		2.27E-01	90.6		PUISO_PLATE	8.99E-02 L	07/12/2006 18:10	10.3 20.0	0.7 3		D

Friday, July 28, 2006

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04942.Edd, h:\Reportdb\edd\FeadIV\Rad\32855.Edd

Lab Sample Id: H68MR1KR

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/09/2006 11:41

Client Id: B1J971

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 06/09/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
S06-006	MW6-SBB-A19981								AX	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
6166192	AM-241	4.71E-01	pCi/L	4.8E-01	U	3.19E-01	86.1		AMCMISO_EIE	8.96E-02	07/16/2006	28.4	0.5		D
DUP	14596-10-2	6.27E-01		4.7E-01						L	11:48	20.0	3		

Friday, July 28, 2006

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W04942.Edd, h:\Reportdb\edd\Fead\I\Rad\32855.Edd

Lab Sample Id: H68MR1LR

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/09/2006 11:41

Client Id: B1J971

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 06/09/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
S06-006	MW6-SBB-A19981								AY	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
6166193	NP-237	-2.79E-02	pCi/L	5.6E-02	U	6.67E-01	68.7		NP237_LLE_P	8.93E-02	07/24/2006	0.0	0.2		D
DUP	13994-20-2	-2.09E-02		5.6E-02						L	22:54	20.0	3		

Friday, July 28, 2006

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W04942.Edd, h:\Reportdb\edd\Fead\Rad\32855.Edd

Lab Sample Id: H68N52FR

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/12/2006 09:33

Client Id: B1JCL0

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 06/12/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
A06-006	MW6-SBB-A19981								AZ	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
6205575 DUP	Uranium 7440-61-1	6.12E+00 6.13E+00	ug/L	6.3E-01 6.3E-01		8.22E-02			UTOT_KPA	2.55E-02 ML	07/25/2006 13:36	.2 20.0	0. 3		D

Friday, July 28, 2006

### STL Richland QC Duplicate Report

Lab Code: STLR

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\eddd\Fead\IVRad\W04942.Edd, h:\Reportdb\eddd\Fead\IVRad\32855.Edd

Lab Sample Id: H68N91GR

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/12/2006 12:16

Client Id: B1JCL2

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 06/12/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
A06-006	MW6-SBB-A19981								BC	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
6166206	TC-99	4.20E+01	pCi/L	8.3E+00		9.95E+00	100.0		TC99_ETVDSK	1.248E-01	07/20/2006	4.6	0.3		D
DUP	14133-76-7	4.40E+01		5.4E+00						L	09:20	20.0	3		

Friday, July 28, 2006

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W04942.Edd, h:\Reportdb\edd\Fead\I\Rad\32855.Edd

Lab Sample Id: H7A451GR

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/13/2006 07:30

Client Id: B1JDN3

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 06/13/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
G06-006	MW6-SBB-A19981								BD	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
6166189	H-3	2.86E+01	pCi/L	1.3E+02	U	2.92E+02	100.0		906.0_H3_LSC	5.00E-03	07/17/2006	26.3	0.1		D
DUP	10028-17-8	3.73E+01		1.2E+02						L	04:49	20.0	3		

Friday, July 28, 2006

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W04942.Edd, h:\Reportdb\edd\Fead\I\Rad\32855.Edd

Lab Sample Id: H7A471GR

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/13/2006 08:56

Client Id: B1JDL8

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 06/13/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
G06-006	MW6-SBB-A19981								BE	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
6166195 DUP	ALPHA 12587-46-1	-7.10E-02 4.53E-01	pCi/L	3.0E-01 3.0E-01	U	1.19E+00	100.0		9310_ALPHAB	1.915E-01 L	07/22/2006 06:16	274.4 20.0	2.4 3		D

Friday, July 28, 2006

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W04942.Edd, h:\Reportdb\edd\Fead\I\Rad\32855.Edd

Lab Sample Id: H7A481GR

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/13/2006 11:39

Client Id: B1JDL4

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 06/13/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
G06-006	MW6-SBB-A19981								BF	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
6166196	BETA	6.69E+00	pCi/L	1.9E+00		2.74E+00	100.0		9310_ALPHAB	2.008E-01	07/21/2006	22.1	1.		D
DUP	12587-47-2	5.36E+00		1.7E+00						L	14:18	20.0	3		

Friday, July 28, 2006

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04942.Edd, h:\Reportdb\edd\FeadIV\Rad\32855.Edd

Lab Sample Id: H7A4N1GR

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/13/2006 10:00

Client Id: B1JDC2

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 06/13/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
G06-006	MW6-SBB-A19981								BG	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
6166201	BE-7	2.07E+00	pCi/L	1.8E+01	U	3.35E+01			GAMMALL_GS	2.0005E+00	07/24/2006	1179.7	0.3		D
	DUP 13966-02-4	-1.47E+00		1.8E+01						L	12:23	20.0	3		
6166201	CO-60	-2.86E-01	pCi/L	1.3E+00	U	2.58E+00			GAMMALL_GS	2.0005E+00	07/24/2006	0.0	0.8		D
	DUP 10198-40-0	-1.07E+00		1.3E+00						L	12:23	20.0	3		
6166201	CS-134	-3.28E-01	pCi/L	1.9E+00	U	3.36E+00			GAMMALL_GS	2.0005E+00	07/24/2006	0.0	0.3		D
	DUP 13967-70-9	7.66E-02		1.9E+00						L	12:23	20.0	3		
6166201	CS-137	6.49E-01	pCi/L	1.9E+00	U	3.63E+00			GAMMALL_GS	2.0005E+00	07/24/2006	937.7	0.8		D
	DUP 10045-97-3	-4.21E-01		1.9E+00						L	12:23	20.0	3		
6166201	EU-152	1.40E-01	pCi/L	4.5E+00	U	8.16E+00			GAMMALL_GS	2.0005E+00	07/24/2006	0.0	2.2		D
	DUP 14683-23-9	-6.74E+00		4.5E+00						L	12:23	20.0	3		
6166201	EU-154	1.75E+00	pCi/L	4.7E+00	U	9.77E+00			GAMMALL_GS	2.0005E+00	07/24/2006	0.0	1.6		D
	DUP 15585-10-1	-3.39E+00		4.7E+00						L	12:23	20.0	3		
6166201	EU-155	-1.34E-02	pCi/L	5.1E+00	U	8.87E+00			GAMMALL_GS	2.0005E+00	07/24/2006	201.8	0.8		D
	DUP 14391-16-3	2.97E+00		5.1E+00						L	12:23	20.0	3		
6166201	K-40	9.87E+00	pCi/L	2.8E+01	U	5.94E+01			GAMMALL_GS	2.0005E+00	07/24/2006	0.0	1.1		D
	DUP 13966-00-2	-1.18E+01		2.8E+01						L	12:23	20.0	3		
6166201	RU-106	5.95E+00	pCi/L	1.6E+01	U	3.05E+01			GAMMALL_GS	2.0005E+00	07/24/2006	1320.2	0.9		D
	DUP 13967-48-1	-4.38E+00		1.6E+01						L	12:23	20.0	3		
6166201	SB-125	-1.37E+00	pCi/L	4.0E+00	U	6.99E+00			GAMMALL_GS	2.0005E+00	07/24/2006	0.0	1.1		D
	DUP 14234-35-6	-4.44E+00		4.0E+00						L	12:23	20.0	3		

Friday, July 28, 2006

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W04942.Edd, h:\Reportdb\edd\Fead\I\Rad\32855.Edd

Lab Sample Id: H7A4V1GR

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/13/2006 12:30

Client Id: B1JDJ3

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 06/13/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
G06-006	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/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6166202 DUP	BE-7 13966-02-4	7.79E+00 7.35E-01	pCi/L	1.4E+01 1.4E+01	U	2.65E+01			GAMMA_GS	2.5021E+00 L	07/21/2006 06:24	165.5 20.0	0.7 3		D
6166202 DUP	CO-60 10198-40-0	5.09E-01 -1.42E-01	pCi/L	1.4E+00 1.4E+00	U	2.83E+00			GAMMA_GS	2.5021E+00 L	07/21/2006 06:24	354.6 20.0	0.7 3		D
6166202 DUP	CS-134 13967-70-9	-2.83E-01 -4.21E-01	pCi/L	1.3E+00 1.3E+00	U	2.35E+00			GAMMA_GS	2.5021E+00 L	07/21/2006 06:24	0.0 20.0	0.2 3		D
6166202 DUP	CS-137 10045-97-3	8.18E-01 1.01E-01	pCi/L	1.2E+00 1.2E+00	U	2.43E+00			GAMMA_GS	2.5021E+00 L	07/21/2006 06:24	155.9 20.0	0.8 3		D
6166202 DUP	EU-152 14683-23-9	1.92E-02 -1.52E+00	pCi/L	2.9E+00 2.9E+00	U	5.31E+00			GAMMA_GS	2.5021E+00 L	07/21/2006 06:24	0.0 20.0	0.8 3		D
6166202 DUP	EU-154 15585-10-1	-1.60E-01 -4.13E+00	pCi/L	3.9E+00 3.9E+00	U	7.34E+00			GAMMA_GS	2.5021E+00 L	07/21/2006 06:24	0.0 20.0	1.5 3		D
6166202 DUP	EU-155 14391-16-3	-7.78E-01 5.23E-01	pCi/L	2.7E+00 2.7E+00	U	4.69E+00			GAMMA_GS	2.5021E+00 L	07/21/2006 06:24	0.0 20.0	0.7 3		D
6166202 DUP	K-40 13966-00-2	-2.18E+01 -4.05E+00	pCi/L	2.4E+01 2.4E+01	U	5.05E+01			GAMMA_GS	2.5021E+00 L	07/21/2006 06:24	0.0 20.0	1.1 3		D
6166202 DUP	RU-106 13967-48-1	1.05E+01 7.54E+00	pCi/L	1.1E+01 1.1E+01	U	2.21E+01			GAMMA_GS	2.5021E+00 L	07/21/2006 06:24	33.1 20.0	0.4 3		D
6166202 DUP	SB-125 14234-35-6	-2.17E+00 2.06E+00	pCi/L	3.0E+00 3.0E+00	U	4.91E+00			GAMMA_GS	2.5021E+00 L	07/21/2006 06:24	0.0 20.0	2. 3		D

Friday, July 28, 2006

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W04942.Edd, h:\Reportdb\edd\Fead\I\Rad\32855.Edd

Lab Sample Id: H7A4V1HR

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/13/2006 12:30

Client Id: B1JDJ3

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 06/13/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
G06-006	MW6-SBB-A19981								BI	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
6166203	SR-90	3.50E+02	pCi/L	5.1E+01		3.61E-01	81.7		SRISO_SEP_P	1.0015E+00	07/24/2006	9.4	0.9		D
DUP	10098-97-2	3.18E+02		3.8E+00						L	06:12	20.0	3		

Friday, July 28, 2006

### STL Richland Qc Matrix Spike Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W04942.Edd, h:\Reportdb\edd\Fead\I\Rad\32855.Edd

Lab Sample Id: H68N71FW

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/12/2006 10:23

Client Id: B1JCL7

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: MS

Received Date: 06/12/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
A06-006	MW6-SBB-A19981								BA	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ ML	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6166204 MS	Uranium 7440-61-1	3.61E+01	ug/L	5.2E+00 5.2E+00		8.42E-02		3.64E+01 99.0	UTOT_KPA	2.49E-02 ML	07/21/2006 15:20			60 140	D

Friday, July 28, 2006

### STL Richland Qc Matrix Spike Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W04942.Edd, h:\Reportdb\edd\Fead\Rad\32855.Edd

Lab Sample Id: H68N81GW

Sdg/Rept Nbr: W04942

32855

Collection Date: 06/12/2006 11:22

Client Id: B1JCL1

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: MS

Received Date: 06/12/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
A06-006	MW6-SBB-A19981								BB	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
6166206 MS	TC-99 14133-76-7	3.41E+03	pCi/L	2.1E+02 3.2E+01		9.88E+00	100.0	3.63E+03 94.0	TC99_ETVDSK	1.249E-01 L	07/20/2006 07:15			60 140	D

Lot No., Due Date: J6F120178; 07/28/2006  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 6166192; RAMISO Amlso by ALP  
 SDG, Matrix: W04942; WATER

1.0 COC

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

2.0 QC Batch

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

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

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

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

3.0 QC & Samples

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

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

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

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

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

4.0 Raw Data

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

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

4.3 Were Yields entered correctly?  Yes  No  N/A

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

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

5.0 Other

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

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

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

5.4 Was transcription checked?  Yes  No  N/A

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

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

6.0 Comments on any No response:

First Level Review

*[Signature]*

Date

7/17/06

**SEVERN**  
**TRENT**

**STL**

Data Review Checklist  
RADIOCHEMISTRY  
Second Level Review

OC Batch Number: 61166192  
W04942

Review Item	Yes (✓)	No (✓)	N/A (✓)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery with contract acceptance criteria?	✓		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
8. Do the MS/MSD results and yields meet acceptance criteria?			✓
9. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other			
1. Are all Nonconformances 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: Sherryl A. Adams Date: 7-17-06

**Lot No., Due Date:** J6F120178; 07/28/2006  
**Client, Site:** 384868; PGW 615HANFORD HANFORD  
**QC Batch No., Method Test:** 6166191; RPUISO Pulso by ALP  
**SDG, Matrix:** W04942; 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 Analysis Volume => H68MH1AG 89.60<200.00 H68ML1AA 64.00<200.00 H68MR1AG 89.80<200.00 H68MW1AA 79.10<200.00 H68M51AJ 139.70<200.00 Q:VB	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. 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 => H68MH1AG PU-239 2.0E+01 L:3.9E-01 H68ML1AA PU-239 7.3E+00 L:7.8E-01 H68MR1AG PU-238 2.4E-01 L:2.2E-01 H68MR1AG PU-239 1.7E+01 L:5.1E-01 H68MW1AA PU-239 8.4E+00 L:4.1E-01 H68M51AJ PU-239 1.1E+00 L:3.3E-01	Yes	No	N/A

8.23 Result <= Action Level, when Defined. OK; No Action Level Found => PU-238 PU-239  OK; No Callin Level Found => PU-238 PU-239	Yes No N/A <input checked="" type="checkbox"/>
8.24 Result + 3s >=0, Not Too Negative. OK	Yes No N/A <input checked="" type="checkbox"/>
8.25 Counting Spectrum are within FWHM Limits. FWHM > maxFWHM => H68MH1AG PU-239 34.1>0 H68MH1AK PU-239 46.701>0 H68ML1AA PU-239 37.595>0 H68MR1AG PU-239 58.986>0 H68M51AJ PU-239 49.097>0 H7FRE1AC PU-239 34.70>0 Q:V1	Yes No N/A <input checked="" type="checkbox"/>
8.26 Instruments have Current Calibrations.	Yes No N/A
8.27 Correct Count Library Used. Library Not Specified => H68MH1AG I:[NUC_LIBR]AR_PU Q: H68MH1AK I:[NUC_LIBR]AR_PU Q: H68ML1AA I:[NUC_LIBR]AR_PU Q: H68MR1AG I:[NUC_LIBR]AR_PU Q: H68MW1AA I:[NUC_LIBR]AR_PU Q: H68M51AJ I:[NUC_LIBR]AR_PU Q: H7FRE1AA I:[NUC_LIBR]AR_PU Q: H7FRE1AC I:[NUC_LIBR]AR_PU Q:	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 <input checked="" type="checkbox"/>

First Level Review Pam Andersen

Date 7-13-06



# STL

Data Review Checklist  
RADIOCHEMISTRY  
Second Level Review

OC Batch Number: 6666191  
W0494Z

Review Item	Yes (✓)	No (✓)	N/A (✓)
<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 with contract acceptance criteria?	✓		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
8. Do the MS/MSD results and yields meet acceptance criteria?			✓
9. Do the duplicate sample results and yields meet acceptance criteria?	✓		
<b>C. Other</b>			
1. Are all Nonconformances 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: Sherryl A Adam Date: 7-13-06

**Lot No., Due Date:** J6F120178; 07/28/2006  
**Client, Site:** 384868; PGW 615HANFORD HANFORD  
**QC Batch No., Method Test:** 6166193; RNP237 Np-237 w/tracer  
**SDG, Matrix:** W04942; 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 Analysis Volume => H68MH1AA 89.40<200.00 H68MR1AA 90.10<200.00 H68M51AA 139.10<200.00 Q:VB	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. 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. No Positive Results OK	Yes	No	N/A
8.23	Result <= Action Level, when Defined. OK; No Action Level Found => NP-237  OK; No Callin Level Found => NP-237	Yes	No	N/A
8.24	Result + 3s >=0, Not Too Negative. OK <i>10.08402</i>	Yes	No	N/A

8.25 Counting Spectrum are within FWHM Limits. FWHM > maxFWHM => H7FRT1AC NP-237 93.9>0 Q:V1	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
8.26 Instruments have Current Calibrations.	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
8.27 Correct Count Library Used. Library Not Specified => H68MH1AA I:[NUC_LIBR]ALPHA Q: H68MR1AA I:[NUC_LIBR]ALPHA Q: H68MR1AL I:[NUC_LIBR]ALPHA Q: H68M51AA I:[NUC_LIBR]ALPHA Q: H7FRT1AA I:[NUC_LIBR]ALPHA Q: H7FRT1AC I:[NUC_LIBR]ALPHA Q:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
8.28 Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later versions)	Yes <input type="checkbox"/> No <input type="checkbox"/> 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 <input type="checkbox"/> No <input type="checkbox"/> N/A
8.3 Comments:	
8.31 Results Blank Subtracted as Appropriate. OK	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A

First Level Review Pam Anderson

Date 7-27-06



# STL

Data Review Checklist  
RADIOCHEMISTRY  
Second Level Review

OC Batch Number: 6166193  
W0494Z

Review Item	Yes (✓)	No (✓)	N/A (✓)
<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 with contract acceptance criteria?	/		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	/		
8. Do the MS/MSD results and yields meet acceptance criteria?			/
9. Do the duplicate sample results and yields meet acceptance criteria?		/	
<b>C. Other</b>			
1. Are all Nonconformances 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: Sherry A Adams Date: 7-27-06

# Clouseau Nonconformance Memo



NCM #: <b>10-08402</b> NCM Initiated By: Pam Anderson Date Opened: 07/27/2006 Date Closed:	Classification: <b>Anomaly</b> Status: <b>GLREVIEW</b> Production Area: Environmental - Sep Tests: Np-237 w/tracer Lot #'s (Sample #'s): J6F120178 (1,3), QC Batches: 6166193
Nonconformance: MDA not met Subcategory: Matrix effect	

### Problem Description / Root Cause

<u>Name</u>	<u>Date</u>	<u>Description</u>
Pam Anderson	07/27/2006	The CRDL is not met due to high beta rad screens for samples H68MH1AA and H68MR1AL, the dup. Smaller aliquots were taken to reduce the chance of contamination in the lab.

### Corrective Action

<u>Name</u>	<u>Date</u>	<u>Corrective Action</u>
Pam Anderson	07/27/2006	Note in case narrative.

### Client Notification Summary

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

### Quality Assurance Verification

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

### Approval History

<u>Date Approved</u>	<u>Approved By</u>	<u>Position</u>
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Lot No., Due Date: J6F120178,J6F130346,J6F130349,J6F140227; 07/28/2006  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 6166195; RALPHA-A Alpha by GPC-Am  
 SDG, Matrix: W04942; 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 => H68MH1AC 107.50<200.00 H68MR1AC 107.50<200.00 H68M51AD 59.20<200.00 H7A4N1AC 38.80<200.00 H7A481AC 155.60<200.00 H7DKJ1AA 50.70<200.00 H7DKL1AA 77.70<200.00 Q:VB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 (MBIs) found in Batch!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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=> H7A471AG ALPHA 270.0 (RPD)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>
8.16 MS within Control Limits. No Matrix Spike Samples (MS) found in Batch!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>
8.22 Result < Mdc, Activity Not Detected, U Flag. Batch Positive Result => H68MH1AC ALPHA 6.2E+01 L:1.8E+00 H68MR1AC ALPHA 5.3E+01 L:1.8E+00 H68M51AD ALPHA 1.2E+01 L:1.9E+00	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8.23 Result <= Action Level, when Defined. OK; No Action Level Found => ALPHA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

OK; No Callin Level Found => ALPHA

- |      |  |     |  |     |
|------|--|-----|--|-----|
| 8.24 | Result + 3s >=0, Not Too Negative.<br>Result + 3s < 0 H7A451AC ALPHA -4.8E-02  | Yes | No <input checked="" type="checkbox"/> | N/A |
| 8.25 | Counting Spectrum are within FWHM Limits.<br>No FWHM found in Batch Data!  | Yes | No <input checked="" type="checkbox"/> | N/A |
| 8.26 | Instruments have Current Calibrations.   | Yes | No <input checked="" type="checkbox"/> | N/A |
| 8.27 | Correct Count Library Used.<br>No Count Library found in Batch Data!   | Yes | No <input checked="" type="checkbox"/> | 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 <input checked="" type="checkbox"/> | 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 <input checked="" type="checkbox"/> | N/A |
| 8.3  | Comments:  |     |  |     |
| 8.31 | Results Blank Subtracted as Appropriate.<br>OK   | Yes | No <input checked="" type="checkbox"/> | N/A |

First Level Review Paw Anderson

Date 7-25-06



# STL

Data Review Checklist  
RADIOCHEMISTRY  
Second Level Review

QC Batch Number: 6166195  
W04942

Review Item	Yes (✓)	No (✓)	N/A (✓)
<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 with contract acceptance criteria?	✓		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
8. Do the MS/MSD results and yields meet acceptance criteria?			✓
9. Do the duplicate sample results and yields meet acceptance criteria?	✓		
<b>C. Other</b>			
1. Are all Nonconformances 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: Sherryl R Adams Date: 7-15-06

Lot No., Due Date: J6F120178,J6F130346,J6F130349; 07/28/2006  
Client, Site: 384868; PGW 615HANFORD HANFORD  
QC Batch No., Method Test: 6166196; RBETA-SR Beta by GPC-Sr/Y  
SDG, Matrix: W04942; 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:  
Activity > MDA > CRDL

First Level Review



Date

7/25/06



# STL

## Data Review Checklist RADIOCHEMISTRY Second Level Review

QC Batch Number: 6166196  
W04942

Review Item	Yes (✓)	No (✓)	N/A (✓)
<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 with contract acceptance criteria?	✓		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
8. Do the MS/MSD results and yields meet acceptance criteria?			✓
9. Do the duplicate sample results and yields meet acceptance criteria?	✓		
<b>C. Other</b>			
1. Are all Nonconformances 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: 7-24-06

# Clouseau Nonconformance Memo



NCM #: <b>10-08374</b> NCM Initiated By: Steven Wheland Date Opened: 07/21/2006 Date Closed:	Classification: <b>Anomaly</b> Status: <b>GLREVIEW</b> Production Area: Environmental - Prep Tests: Beta by GPC-Sr/Y Lot #'s (Sample #'s): J6F120178 (5), J6F130346 (1), QC Batches: 6166196
Nonconformance: MDA not met Subcategory: Data accepted	

### Problem Description / Root Cause

<u>Name</u>	<u>Date</u>	<u>Description</u>
Steven Wheland	07/21/2006	Activity > MDA > CRDL

### Corrective Action

<u>Name</u>	<u>Date</u>	<u>Corrective Action</u>
Steven Wheland	07/21/2006	Report data

### Client Notification Summary

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

### Quality Assurance Verification

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

### Approval History

<u>Date Approved</u>	<u>Approved By</u>	<u>Position</u>
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**Lot No., Due Date:** J6F120178,J6F130346,J6F130349; 07/28/2006  
**Client, Site:** 384868; PGW 615HANFORD HANFORD  
**QC Batch No., Method Test:** 6166203; RSR85907 Sr-85/90 by GPC-7  
**SDG, Matrix:** W04942; 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 Analysis Volume => H68MH1AH 524.60<1000.00 H68MR1AH 475.00<1000.00 H68M51AK 769.70<1000.00 Q:VB	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. 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 => H68MH1AH SR-90 3.4E+03 L:1.1E+00 H68MH1AH SR-90 3.4E+03 L:1.6E+00 H68MH1AH SR-90 3.4E+03 L:9.6E-01 H68MR1AH SR-90 3.3E+03 L:1.2E+00 H68MR1AH SR-90 3.3E+03 L:1.6E+00 H68MR1AH SR-90 3.3E+03 L:1.0E+00 H68M51AK SR-90 2.0E+03 L:7.3E-01 H68M51AK SR-90 2.1E+03 L:1.0E+00 H68M51AK SR-90 2.0E+03 L:6.2E-01 H7A4N1AF SR-90 1.8E+03 L:5.6E-01	Yes	No	N/A

H7A4N1AF SR-90 1.8E+03 L:8.2E-01  
 H7A4N1AF SR-90 1.8E+03 L:4.9E-01  
 H7A4V1AF SR-90 3.2E+02 L:3.9E-01  
 H7A4V1AF SR-90 3.2E+02 L:5.1E-01  
 H7A4V1AF SR-90 3.2E+02 L:3.2E-01  
 H7A401AF SR-90 5.2E+02 L:4.6E-01  
 H7A401AF SR-90 5.2E+02 L:6.0E-01  
 H7A401AF SR-90 5.2E+02 L:3.7E-01  
 H7A471AF SR-90 1.5E+03 L:6.4E-01  
 H7A471AF SR-90 1.5E+03 L:7.0E-01  
 H7A471AF SR-90 1.5E+03 L:4.7E-01  
 H7A481AF SR-90 1.5E+00 L:5.1E-01  
 H7A481AF SR-90 1.5E+00 L:8.3E-01  
 H7A481AF SR-90 1.5E+00 L:4.7E-01

- |      |  |   |                             |   |
|------|--|---|-----------------------------|---|
| 8.23 | Result <= Action Level, when Defined.<br>OK; No Action Level Found => SR-90<br><br>OK; No Callin Level Found => SR-90              | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/>            |
| 8.24 | Result + 3s >=0, Not Too Negative.<br>OK   | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/>            |
| 8.25 | Counting Spectrum are within FWHM Limits.<br>No FWHM found in Batch Data!  | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> |
| 8.26 | Instruments have Current Calibrations.   | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | N/A <input type="checkbox"/>            |
| 8.27 | Correct Count Library Used.<br>No Count Library found in Batch Data!   | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | N/A <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 <input type="checkbox"/>            | No <input type="checkbox"/> | N/A <input type="checkbox"/>            |
| 8.29 | Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in later versions) | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | N/A <input type="checkbox"/>            |
| 8.3  | Comments:  |   |                             |   |
| 8.31 | Results Blank Subtracted as Appropriate.<br>OK   | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/>            |

First Level Review Pam Anderson Date 7-24-06



# STL

Data Review Checklist  
RADIOCHEMISTRY  
Second Level Review

QC Batch Number: 6166203  
W04942

Review Item	Yes (✓)	No (✓)	N/A (✓)
<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 with contract acceptance criteria?	✓		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
8. Do the MS/MSD results and yields meet acceptance criteria?			✓
9. Do the duplicate sample results and yields meet acceptance criteria?	✓		
<b>C. Other</b>			
1. Are all Nonconformances 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: Sherry A Adams Date: 7-24-06

Lot No., Due Date: J6F120178,J6F130349,J6F130346; 07/28/2006  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 6166201; RGAMMA Gamma by GER  
 SDG, Matrix: W04942; 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:

See NCM for LCS.

10-08414

First Level Review Paw Anderson

Date 7-28-06



# STL

Data Review Checklist  
RADIOCHEMISTRY  
Second Level Review

QC Batch Number: 6166201  
W04942

Review Item	Yes (✓)	No (✓)	N/A (✓)
<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 with contract acceptance criteria?	✓		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
8. Do the MS/MSD results and yields meet acceptance criteria?			✓
9. Do the duplicate sample results and yields meet acceptance criteria?	✓		
<b>C. Other</b>			
1. Are all Nonconformances 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 Adam Date: 7-28-09

# Clouseau Nonconformance Memo



NCM #: <b>10-08414</b>	Classification: <b>Anomaly</b>
NCM Initiated By: Pam Anderson	Status: <b>GLREVIEW</b>
Date Opened: 07/28/2006	Production Area: Environmental - Sep
Date Closed:	Tests: Gamma by GER
	Lot #'s (Sample #'s): J6F120178 (1,3,5), J6F130346 (1), J6F130349 (1,2,3), J6F150000 (201),
	QC Batches: 6166201
Nonconformance: Other (describe in detail)	
Subcategory: Other (explanation required)	

### Problem Description / Root Cause

<u>Name</u>	<u>Date</u>	<u>Description</u>
Pam Anderson	07/28/2006	The LCS in the batch looked like a blank. It looked like no spike vial had been added. A new LCS was made up. The new LCS has good results. Data accepted.

### Corrective Action

<u>Name</u>	<u>Date</u>	<u>Corrective Action</u>
Pam Anderson	07/28/2006	A new LCS was made.

### Client Notification Summary

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

### Quality Assurance Verification

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

### Approval History

<u>Date Approved</u>	<u>Approved By</u>	<u>Position</u>
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Lot No., Due Date: J6F130346; 07/28/2006  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 6166202; RGAMMA Gamma by GER  
 SDG, Matrix: W04942; WATER

**1.0 COC**

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

**2.0 QC Batch**

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

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

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

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

**3.0 QC & Samples**

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

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

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

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

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

**4.0 Raw Data**

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

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

4.3 Were Yields entered correctly?  Yes  No  N/A

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

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

**5.0 Other**

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

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

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

5.4 Was transcription checked?  Yes  No  N/A

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

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

6.0 Comments on any No response:

First Level Review

*Steve E. Whitcomb*

Date

7/21/06



# STL

Data Review Checklist  
RADIOCHEMISTRY  
Second Level Review

QC Batch Number: 616620Z  
W0494Z

Review Item	Yes (✓)	No (✓)	N/A (✓)
<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 with contract acceptance criteria?	/		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	/		
8. Do the MS/MSD results and yields meet acceptance criteria?			/
9. Do the duplicate sample results and yields meet acceptance criteria?	/		
<b>C. Other</b>			
1. Are all Nonconformances 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 Adam Date: 7-24-06

Lot No., Due Date: J6F120178,J6F120184,J6F120186,J6F120199; 07/28/2006  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 6166205; RGAMLEPS Gamma by LEPS  
 SDG, Matrix: W04942; WATER

**1.0 COC**

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

**2.0 QC Batch**

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

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

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

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

**3.0 QC & Samples**

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

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

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

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

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

**4.0 Raw Data**

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

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

4.3 Were Yields entered correctly?  Yes  No  N/A

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

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

**5.0 Other**

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

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

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

5.4 Was transcription checked?  Yes  No  N/A

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

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

6.0 Comments on any No response:

First Level Review

*Thomas E. O'Connell*

Date

7/19/06

**SEVERN**  
**TRENT**

**STL**

Data Review Checklist  
RADIOCHEMISTRY  
Second Level Review

QC Batch Number:

1616205  
W04942

Review Item	Yes (✓)	No (✓)	N/A (✓)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?	/		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	/		
3. Are the correct isotopes reported?	/		
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	/		
2. Does the blank result meet the Contract criteria?	/		
3. Is the blank result < the Contract Detection Limit?	/		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			/
5. Is the LCS recovery with contract acceptance criteria?	/		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	/		
8. Do the MS/MSD results and yields meet acceptance criteria?			/
9. Do the duplicate sample results and yields meet acceptance criteria?	/		
C. Other			
1. Are all Nonconformances 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:

*Sherryl A Adam*

Date:

7-20-06

Lot No., Due Date: J6F120184,J6F120186,J6F120199; 07/28/2006

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 6166206; RTC99 Tc-99 by LSC

SDG, Matrix: W04942; WATER

**1.0 COC**

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

**2.0 QC Batch**

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

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

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

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

**3.0 QC & Samples**

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

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

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

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

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

**4.0 Raw Data**

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

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

4.3 Were Yields entered correctly? Yes No N/A

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

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

**5.0 Other**

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

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

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

5.4 Was transcription checked? Yes No N/A

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

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

6.0 Comments on any No response:

First Level Review



Date

7/21/06



# STL

## Data Review Checklist RADIOCHEMISTRY Second Level Review

QC Batch Number: 6166206

Review Item	Yes (✓)	No (✓)	N/A (✓)
<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 with contract acceptance criteria?	✓		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
8. Do the MS/MSD results and yields meet acceptance criteria?	✓		
9. Do the duplicate sample results and yields meet acceptance criteria?	✓		
<b>C. Other</b>			
1. Are all Nonconformances 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: Sherrif A. Adam Date: 7-21-06

Lot No., Due Date: J6F120178,J6F120184,J6F120186,J6F120199,J6F130346,J6F130349; 07/28/2006  
Client, Site: 384868; PGW 615HANFORD HANFORD  
QC Batch No., Method Test: 6166189; RTRITIUM H-3 by LSC  
SDG, Matrix: W04942; WATER

**1.0 COC**

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

**2.0 QC Batch**

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

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

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

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

**3.0 QC & Samples**

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

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

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

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

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

**4.0 Raw Data**

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

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

4.3 Were Yields entered correctly?  Yes  No  N/A

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

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

**5.0 Other**

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

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

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

5.4 Was transcription checked?  Yes  No  N/A

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

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

6.0 Comments on any No response:

First Level Review



Date

7/18/06



# STL

Data Review Checklist  
RADIOCHEMISTRY  
Second Level Review

QC Batch Number: 6166189  
W04942

Review Item	Yes (✓)	No (✓)	N/A (✓)
<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 with contract acceptance criteria?	✓		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
8. Do the MS/MSD results and yields meet acceptance criteria?			✓
9. Do the duplicate sample results and yields meet acceptance criteria?	✓		
<b>C. Other</b>			
1. Are all Nonconformances 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. Adam Date: 7-19-06

Lot No., Due Date: J6F120184; 07/28/2006  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 6205575; RUNAT UNat by KPA  
 SDG, Matrix: W04942; 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 Incorrect Tracer/Vial => H9W1J1AD UNSC<->UNSF Q:V9	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 No Count Analysis Size found in Batch Data!	Yes	No	N/A
8.07	The Correct Count Geometry was Used. No Count Geometry found in Batch Data!	Yes	No	N/A
8.08	The Sample was Counted for the Minimum Count Time or CRDL was Achieved. No Count Duration Field Found in Batch Data!	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 (MBLs) 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. 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. Batch Positive Result => H68N52AE Uranium 6.1E+00 L:8.3E-02	Yes	No	N/A
8.23	Result <= Action Level, when Defined. OK; No Action Level Found => Uranium  OK; No Callin Level Found => Uranium	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 Paw Anderson

Date 7-26-06



# STL

Data Review Checklist  
RADIOCHEMISTRY  
Second Level Review

OC Batch Number: 6 205575  
W04942

Review Item	Yes (✓)	No (✓)	N/A (✓)
<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 with contract acceptance criteria?	✓		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
8. Do the MS/MSD results and yields meet acceptance criteria?			✓
9. Do the duplicate sample results and yields meet acceptance criteria?		✓	
<b>C. Other</b>			
1. Are all Nonconformances 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. Adam Date: 7-26-06

# Clouseau Nonconformance Memo

NCM #: <b>10-08397</b> NCM Initiated By: Pam Anderson Date Opened: 07/26/2006 Date Closed:	Classification: <b>Anomaly</b> Status: <b>GLREVIEW</b> Production Area: Environmental - Sep Tests: UNat by KPA Lot #'s (Sample #'s): J6F120184 (1), QC Batches: 6205575
Nonconformance: Other (describe in detail) Subcategory: Other (explanation required)	

### Problem Description / Root Cause

<u>Name</u>	<u>Date</u>	<u>Description</u>
Pam Anderson	07/26/2006	On batch 6166204 the duplicates were out. They were reanalyzed in this batch with acceptable results.

### Corrective Action

<u>Name</u>	<u>Date</u>	<u>Corrective Action</u>
Pam Anderson	07/26/2006	The sample and duplicate were reanalyzed.

### Client Notification Summary

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

### Quality Assurance Verification

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

### Approval History

<u>Date Approved</u>	<u>Approved By</u>	<u>Position</u>
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PNNL J6F126178  
W04942

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

S06-006-34

Page 1 of 1

Due date 7.24.06

Collector <b>DURATEK</b> D. E. PARCHEN	Contact/Requester Dot Stewart	Telephone No. 509-376-5056	MSIN FAX
SAF No. S06-006	Sampling Origin Hanford Site	Purchase Order/Charge Code	
Project Title SURV. JUNE 2006	DTS-SAWS-H103B	Ice Chest No. SML-311	Temp.
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.	
Protocol SURV	Priority: 45 Days	Offsite Property No.	

**POSSIBLE SAMPLE HAZARDS/REMARKS**  
\*\* \*\*

**SPECIAL INSTRUCTIONS** Hold Time Total Activity Exemption: Yes  No   
Batch all PNNL GW samples submitted under "W", "S", "T", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.  
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1J970		W	6-9-06	1141	1x20-mL P	Activity Scan	None
B1J970		W			1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2
B1J970		W			1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1J970		W			1x4000-mL G/P	GAMMALL_GS: List-1 (9)	HNO3 to pH <2
B1J970		W			1x1000-mL G/P	PUISO_PLATE_AEA: Pu-238 + 239/240 (2)	HNO3 to pH <2
B1J970		W			3x1000-mL G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)	HNO3 to pH <2
B1J970		W			1x1000-mL G/P	AMCMISO_EIE_PLT_AEA: Am-241 (1)	HNO3 to pH <2
B1J970		W			1x1000-mL G/P	NP237_LLE_PLATE_AEA:Np-237(1)	HNO3 to pH <2
B1J9C9 (F)		W			1x1000-mL G/P	PUISO_PLATE_AEA: Pu-238 + 239/240 (2)	HNO3 to pH <2

H68mH

H68mL

Relinquished By <b>DURATEK</b> D. E. PARCHEN	Print D. E. PARCHEN	Sign <i>D. E. PARCHEN</i>	Date/Time JUN 09 2006	Received By S. Welch	Print S. Welch	Sign <i>S. Welch</i>	Date/Time JUN 09 2006	Matrix *
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	S = Soil DS = Drum Solid SE = Sediment DI = 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	

Collector: <b>DURATEK</b>	Contact/Requester: <b>Dot Stewart</b>	Telephone No.: <b>509-376-5056</b>
SAF No.: <b>E. PARCHEN</b> <b>S06-006</b>	Sampling Origin: <b>Hanford Site</b>	Purchase Order/Charge Code:
Project Title: <b>SURV. JUNE 2006</b>	<b>DTS SAWS H103B</b>	Ice Chest No.: <b>SML-311</b> Temp.:
Shipped To (Lab): <b>Severn Trent Incorporated, Richland</b>	Method of Shipment: <b>Govt. Vehicle</b>	Bill of Lading/Air Bill No.:
Protocol: <b>SURV</b>	Priority: <b>45 Days</b>	Offsite Property No.:

**POSSIBLE SAMPLE HAZARDS/REMARKS**  
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**SPECIAL INSTRUCTIONS** Hold Time Total Activity Exemption: Yes  No   
 Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.  
 Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative	
B1J971		W	<i>6-9-06</i>	<i>1141</i>	1x20-mL P	Activity Scan	None	
B1J971		W	↓	↓	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2	
B1J971		W			1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2	
B1J971		W			1x4000-mL G/P	GAMMALL_GS: List-1 (9)	HNO3 to pH <2	
B1J971		W			1x1000-mL G/P	PUISO_PLATE_AEA: Pu-238 + 239/240 (2)	HNO3 to pH <2	
B1J971		W			3x1000-mL G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)	<i>H68mR</i>	HNO3 to pH <2
B1J971		W			1x1000-mL G/P	AMCMISO_EIE_PLT_AEA: Am-241 (1)	HNO3 to pH <2	
B1J971		W			1x1000-mL G/P	NP237_LLE_PLATE_AEA: Np-237(1)	HNO3 to pH <2	
B1J9D0 (F)		W			1x1000-mL G/P	PUISO_PLATE_AEA: Pu-238 + 239/240 (2)	<i>H68mW</i>	HNO3 to pH <2

Relinquished By: <b>DURATEK</b> <b>E. PARCHEN</b>	Print	Sign: <i>[Signature]</i>	Date/Time: <b>JUN 09 2006</b> <i>1400</i>	Received By:	Print	Sign	Date/Time: <b>JUN 09 2006</b> <i>1400</i>	Matrix *
Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:	S = Soil DS = Drum Solid SF = Sediment DI = 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:

PNNL *J6F120178*  
*W04942*

## CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **S06-006-42**  
Page 1 of 1

<b>Collector</b> DURATEK D. E. PARCHEN	<b>Contact/Requester</b> Dot Stewart	<b>Telephone No.</b> 509-376-5056	<b>MSIN</b>	<b>FAX</b>
<b>SAF No.</b> S06-006	<b>Sampling Origin</b> Hanford Site	<b>Purchase Order/Charge Code</b>		
<b>Project Title</b> SURV. JUNE 2006	<i>PTS SAWS-H103B</i>	<b>Ice Chest No.</b> <i>SML-311</i>	<b>Temp.</b>	
<b>Shipped To (Lab)</b> Severn Trent Incorporated, Richland	<b>Method of Shipment</b> Govt. Vehicle	<b>Bill of Lading/Air Bill No.</b>		
<b>Protocol</b> SURV	<b>Priority: 45 Days</b>	<b>Offsite Property No.</b>		

**POSSIBLE SAMPLE HAZARDS/REMARKS**  
\*\* \*\*

**SPECIAL INSTRUCTIONS** **Hold Time** **Total Activity Exemption: Yes  No**   
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.  
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1J979		W	<i>6-9-06</i>	<i>1006</i>	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1J979		W	↓	↓	1x20-mL P	Activity Scan	None
B1J979		W			1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2
B1J979		W			1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1J979		W			1x4000-mL G/P	GAMMALL_GS: List-1 (9)	<i>H68m5</i> HNO3 to pH <2
B1J979		W			2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
B1J979		W			1x1000-mL G/P	PUIISO_PLATE_AEA: Pu-238 + 239/240 (2)	HNO3 to pH <2
B1J979		W			3x1000-mL G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)	HNO3 to pH <2
B1J979		W			1x1000-mL G/P	AMCMISO_EIE_PLT_AEA: Am-241 (1)	HNO3 to pH <2
B1J979		W			1x1000-mL G/P	NP237_LLE_PLATE_AEA:Np-237(1)	HNO3 to pH <2

Relinquished By <b>DURATEK</b> D. E. PARCHEN <i>[Signature]</i> Date/Time <i>1400</i> <b>JUN 09 2006</b>	Received By <i>[Signature]</i> S. Welch Date/Time <i>1400</i> <b>JUN 09 2006</b>	<b>Matrix *</b> S = Soil                      DS = Drum Solid SE = Sediment              DL = Drum Liquid SO = Solid                    T = Tissue SI = Sludge                  WI = Wine W = Water                    I = Liquid O = Oil                        V = Vegetation A = Air                         X = Other	
Relinquished By	Received By		
Relinquished By	Received By		
Relinquished By	Received By		
<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

Date/Time Received: 6-9-06 14:00

Client: PGW SDG #: W04942 NA  SAF #: 506-006 NA

Work Order Number: J6F120178 Chain of Custody # 506-006-34,35,42

Shipping Container ID: SML-311 Air Bill # N/A

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: 5
7. Sample holding times exceeded? NA  Yes  No
8. Samples have:
 

<input type="checkbox"/> tape	<input type="checkbox"/> hazard labels
<input type="checkbox"/> custody seals	<input checked="" type="checkbox"/> appropriate samples labels
9. Samples are:
 

<input checked="" type="checkbox"/> in good condition	<input type="checkbox"/> leaking
<input type="checkbox"/> broken	<input type="checkbox"/> have air bubbles

 (Only for samples requiring head space)
10. Sample pH taken? NA  pH < 2  pH > 2  adjusted pH
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): N/A

Sample Custodian: \_\_\_\_\_ Date: \_\_\_\_\_

Client Sample ID	Analysis Requested	Condition	Comments/Action

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

No action necessary; process as is.

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

PNNL *16F120184*  
*W04942*  
*Due 7.27.06*

## CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **A06-006-12**  
 Page 1 of 1

Collector <b>DURATEK</b> <i>L.D. WALL</i>	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. A06-006	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title LLWMA(1)-PA, JUNE 2006	<i>DTS-SAWS-H103B</i>	Ice Chest No. Temp. <i>SM-L-311</i>
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol Other	Priority: 45 Days	Offsite Property No.

<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b> ** **	<b>SPECIAL INSTRUCTIONS</b> <b>Hold Time</b> Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL
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Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative	
B1JCL0		W	<i>6-12-06</i>	<i>0933</i>	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None	
B1JCL0		W	<i>LI</i>	<i>LI</i>	2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None	
B1JCL0		W			1x20-mL P	Activity Scan	<i>H68N5</i>	None
B1JCL0		W			1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)		HCl to pH <2
B1JCL0		W			1x500-mL G/P	UTOT_KPA: Uranium (1)		HNO3 to pH <2
<div style="position: relative; width: 100%; height: 100%;"> <span style="font-size: 2em; position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%); opacity: 0.5;">D</span> <span style="font-size: 1.5em; position: absolute; bottom: 10%; left: 20%;">6-12-06</span> </div>								

Relinquished By <b>DURATEK</b> <i>L.D. WALL</i> <i>L.D. Wall</i>	Received By <i>S. Welch</i> <i>S. Welch</i>	Date/Time <b>JUN 12 2006</b> <i>14:50</i>
Relinquished By	Received By	Date/Time
Relinquished By	Received By	Date/Time
Relinquished By	Received By	Date/Time

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

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

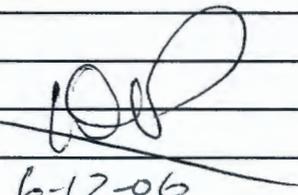
PNNL J6F120184  
W04942  
Due 7-27-06

## CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #  
**A06-006-11**  
Page 1 of 1

Collector <b>DURATEK</b> <b>L. D. WALL</b>	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. A06-006	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title LLWMA(1)-PA, JUNE 2006	<b>DTS -&gt; A68 - H103B</b>	Ice Chest No. Temp. <b>SimL 311</b>
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol Other	Priority: 45 Days	Offsite Property No.

<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b> ** **	<b>SPECIAL INSTRUCTIONS</b> Hold Time    Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL
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Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JCL7		W	6-12-06	1023	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1JCL7		W			2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
B1JCL7		W			1x20-mL P	Activity Scan	None
B1JCL7		W			1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
B1JCL7		W			1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2
							

Relinquished By	Print <b>DURATEK</b> <b>L. D. WALL</b>	Sign <i>L. D. Wall</i>	Date/Time <b>JUN 12 2006</b>	Received By	Print <i>S. Welch</i>	Sign <i>S. Welch</i>	Date/Time <b>JUN 12 2006</b>	Matrix *
Relinquished By			Date/Time	Received By			Date/Time	S = Soil                      DS = Drum Solid SF = Sediment              DI = 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	
<b>FINAL SAMPLE DISPOSITION</b>	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By			Date/Time	

PNNL *J6 F120184*  
*W04942*  
*Dec 7.27.06*

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **A06-006-13**  
 Page 1 of 1

Collector <b>DURATEK</b>	Contact/Requester Dot Stewart	Telephone No. 509-376-5056	MSIN	FAX
SAF No. A06-006 <b>L. D. WALL</b>	Sampling Origin Hanford Site	Purchase Order/Charge Code		
Project Title LLWMA(1)-PA, JUNE 2006	<b>DTS-SAWS-H103B</b>	Ice Chest No. 5mL-311	Temp.	
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.		
Protocol Other	Priority: 45 Days	Offsite Property No.		

POSSIBLE SAMPLE HAZARDS/REMARKS ** **	SPECIAL INSTRUCTIONS	Hold Time	Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JCL1		W	<i>6-12-06</i>	<i>1122</i>	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1JCL1		W	<i>↓</i>	<i>↓</i>	2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
B1JCL1		W	<i>↓</i>	<i>↓</i>	1x20-mL P	Activity Scan <b>H6 8N8</b>	None
B1JCL1		W	<i>↓</i>	<i>↓</i>	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
B1JCL1		W	<i>↓</i>	<i>↓</i>	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2
<i>[Signature]</i> <i>6-12-06</i>							

Relinquished By <b>DURATEK</b> <b>L. D. WALL</b>	Print <i>L. D. Wall</i>	Sign <i>[Signature]</i>	Date/Time <i>14:50</i> <b>JUN 12 2006</b>	Received By <i>S. Welch</i>	Print <b>S. Welch</b>	Sign <i>[Signature]</i>	Date/Time <i>14:50</i> <b>JUN 12 2006</b>	Matrix *
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	S = Soil SF = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solid DL = Drum Liquid T = Tissue WT = Wine L = Liquid V = Vegetation 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	

PNNL *J6A20184*  
*W04942*  
 DURATEK

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

C.O.C. # **A06-006-14**  
 Page 1 of 1

Collector <b>L. D. WALL</b>	Contact/Requester Dot Stewart	Telephone No. 509-376-5056	MSIN	FAX
SAF No. A06-006	Sampling Origin Hanford Site	Purchase Order/Charge Code		
Project Title LLWMA(1)-PA, JUNE 2006	<i>DTS - Saws - H103B</i>	Ice Chest No. <i>SMC-311</i>	Temp.	
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.		
Protocol Other	Priority: 45 Days	Offsite Property No.		

POSSIBLE SAMPLE HAZARDS/REMARKS  
 \*\* \*\*

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes  No   
 Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.  
 Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JCL2		W	<i>6-12-06</i>	<i>1216</i>	1x1000-mL P	906.0 H3_LSC: Tritium (1)	None
B1JCL2		W	<i>11</i>	<i>11</i>	2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
B1JCL2		W	<i>11</i>	<i>11</i>	1x20-mL P	Activity Scan	None
B1JCL2		W	<i>11</i>	<i>11</i>	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
B1JCL2		W	<i>11</i>	<i>11</i>	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2
<i>[Signature]</i> 6-12-06							

Relinquished By <b>DURATEK</b> <b>L. D. WALL</b>	Print <i>L.D. Wall</i>	Sign <i>[Signature]</i>	Date/Time <b>JUN 12 2006</b>	14:50	Received By <i>S. Welch</i>	Print <i>S. Welch</i>	Sign <i>[Signature]</i>	Date/Time <b>JUN 12 2006</b>	14:50	Matrix *
Relinquished By	Date/Time	Received By	Date/Time		Received By	Date/Time				
Relinquished By	Date/Time	Received By	Date/Time		Received By	Date/Time				
Relinquished By	Date/Time	Received By	Date/Time		Received By	Date/Time				

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

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



# STL

### Sample Check-in List

Date/Time Received: 6-12-06 14:50

Client: PEW SDG #: W04942 NA  SAF #: A06-006 NA

Work Order Number: J6F120184 Chain of Custody # A06-006-12,11,13,14

Shipping Container ID: SML-311 Air Bill # N/A

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: 4
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  adjusted pH
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): N/A

Sample Custodian: S. Witek Date: 6-12-06 14:50

Client Sample ID	Analysis Requested	Condition	Comments/Action

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

[ ] No action necessary; process as is.

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

PNNL

JG F120186  
W04942  
Due 7-27-06

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

A06-006-8

Page 1 of 1

Collector <b>K.J. YOUNG</b>	Contact/Requester Dot Stewart	Telephone No. 509-376-5056	MSIN	FAX
SAF No. A06-006	Sampling Origin Hanford Site	Purchase Order/Charge Code		
Project Title LLWMA(1)-PA, JUNE 2006	<b>QTS-Skews H 104</b>	Ice Chest No. <b>TJ-9</b>	Temp.	
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.		
Protocol Other	Priority: 45 Days		Offsite Property No.	

POSSIBLE SAMPLE HAZARDS/REMARKS ** **	SPECIAL INSTRUCTIONS	Hold Time	Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JCM5		W	6-12-06	11:54	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1JCM5		W			2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
B1JCM5		W			1x20-mL P	Activity Scan	None
B1JCM5		W			1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
B1JCM5		W			1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2

H687C

Relinquished By <b>K.J. YOUNG</b>	Print <i>K.J. Young</i>	Sign <i>K.J. Young</i>	Date/Time 14:50 <b>JUN 12 2006</b>	Received By <b>S. Welch</b>	Print <i>S. Welch</i>	Sign <i>S. Welch</i>	Date/Time 14:50 <b>JUN 12 2006</b>	Matrix *
Relinquished By	Date/Time	Received By	Date/Time	S = Soil                      DS = Drum Solid SF = Sediment              DI = 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					
<b>FINAL SAMPLE DISPOSITION</b>	Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By	Date/Time				

PNNL J6F120186  
W04942

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

A06-006-7

Page 1 of 1

<b>Collector</b> A.J. YOUNG	<b>Contact/Requester</b> Dot Stewart	<b>Telephone No.</b> 509-376-5056	<b>MSIN</b>	<b>FAX</b>
<b>SAF No.</b> A06-006	<b>Sampling Origin</b> Hanford Site	<b>Purchase Order/Charge Code</b>		
<b>Project Title</b> LLWMA(1)-PA, JUNE 2006	<b>Ice Chest No.</b> TS-9	<b>Temp.</b>		
<b>Shipped To (Lab)</b> Severn Trent Incorporated, Richland	<b>Method of Shipment</b> Govt. Vehicle	<b>Bill of Lading/Air Bill No.</b>		
<b>Protocol</b> Other	<b>Priority:</b> 45 Days	<b>Offsite Property No.</b>		

<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b> ** **	<b>SPECIAL INSTRUCTIONS</b>	<b>Hold Time</b>	<b>Total Activity Exemption:</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JCM4		W	6-12-06	0957	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1JCM4		W			2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
B1JCM4		W			1x20-mL P	Activity Scan	None
B1JCM4		W			1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
B1JCM4		W			1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2

<b>Relinquished By</b> A.J. YOUNG	<b>Date/Time</b> JUN 12 2006 14:50	<b>Received By</b> S. Welch	<b>Date/Time</b> JUN 12 2006 14:50	<b>Matrix *</b> S = Soil      DS = Drum Solid SF = Sediment      DI = Drum Liquid SO = Solid      T = Tissue SL = Sludge      W = Wine W = Water      L = Liquid O = Oil      V = Vegetation A = Air      X = Other
<b>Relinquished By</b>	<b>Date/Time</b>	<b>Received By</b>	<b>Date/Time</b>	
<b>Relinquished By</b>	<b>Date/Time</b>	<b>Received By</b>	<b>Date/Time</b>	
<b>Relinquished By</b>	<b>Date/Time</b>	<b>Received By</b>	<b>Date/Time</b>	
<b>FINAL SAMPLE DISPOSITION</b>	<b>Disposed Method (e.g., Return to customer, per lab procedure, used in process)</b>		<b>Disposed By</b>	<b>Date/Time</b>



# STL

### Sample Check-in List

Date/Time Received: 6-12-06 14:50

Client: PLW SDG #: W04942 NA  SAF #: A06-006 NA

Work Order Number: J6F120186 Chain of Custody # A06-006-8, 7

Shipping Container ID: TJ-9 Air Bill # N/A

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  adjusted pH
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): N/A

Sample Custodian: S. Welch Date: 6-12-06 14:50

Client Sample ID	Analysis Requested	Condition	Comments/Action

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

No action necessary; process as is.

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

Collector <b>DURATEK</b> <i>K. B. HULSE</i>	Contact/Requester Dot Stewart	Telephone No. 509-376-5056	MSIN FAX
SAF No. A06-006	Sampling Origin Hanford Site	Purchase Order/Charge Code	
Project Title LLWMA(1)-PA, JUNE 2006	<i>DTS-SAWS-H105</i>	Ice Chest No. <i>GRP-03-021</i>	Temp.
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No. <i>N/A</i>	Offsite Property No. <i>N/A</i>
Protocol Other	Priority: 45 Days		

**POSSIBLE SAMPLE HAZARDS/REMARKS**  
 \*\* \*\*

**SPECIAL INSTRUCTIONS**      **Hold Time**      **Total Activity Exemption:** Yes  No   
 Batch all PNNL GW samples submitted under "W", "S", "T", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.  
 Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JCM6		W	<i>6-12-06</i>	<i>120<sup>31</sup></i>	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1JCM6		W	↓	↓	2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1) <i>H68TE</i>	None
B1JCM6		W	↓	↓	1x20-mL P	Activity Scan	None
B1JCM6		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
B1JCM6		W	↓	↓	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2

Relinquished By <b>DURATEK</b> <i>K. B. HULSE</i>	Print	Sign <i>K. B. Hulse</i>	Date/Time <i>1320</i> <b>JUN 12 2006</b>	Relinquished By <b>DURATEK</b> <i>J. G. HOGAN</i>	Print	Sign <i>J. Hogan</i>	Date/Time <i>1320</i> <b>6-12-06</b>	<b>Matrix *</b> S = Soil      DS = Drum Solid SF = 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 <b>DURATEK</b> <i>J. G. HOGAN</i>	Date/Time <i>6-12-06</i>	Received By <i>S. Welch</i>	Date/Time <i>13:20</i> <b>6-12-06</b>	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	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

Date/Time Received: 6-12-06 13:02

Client: PGW SDG #: W04942 NA  SAF #: A06-006 NA

Work Order Number: J6F120199 Chain of Custody # A06-006-9

Shipping Container ID: GRP-03-021 Air Bill # N/A

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:
 

<input type="checkbox"/> tape	<input type="checkbox"/> hazard labels
<input type="checkbox"/> custody seals	<input checked="" type="checkbox"/> appropriate samples labels
9. Samples are:
 

<input checked="" type="checkbox"/> in good condition	<input type="checkbox"/> leaking
<input type="checkbox"/> broken	<input type="checkbox"/> have air bubbles

 (Only for samples requiring head space)
10. Sample pH taken? NA  pH < 2  pH > 2  adjusted pH
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): N/A

Sample Custodian: S. Welch Date: 6-12-06 13:20

Client Sample ID	Analysis Requested	Condition	Comments/Action

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

No action necessary; process as is.

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

PNNL *J6 F130346*  
*W04942*

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

C.O.C. # **G06-006-43**  
Page 1 of 1

*Due 7.29.06*

Collector <b>D.P. CONNOLLY</b>	Contact/Requester Dot Stewart	Telephone No. 509-376-5056	MSIN FAX
SAF No. G06-006	Sampling Origin Hanford Site	Purchase Order/Charge Code	
Project Title 1NR2-RB, JUNE 2006	<i>DTS SAWS-H105</i>	Ice Chest No. <i>GRP-03-021</i>	Temp.
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.	
Protocol SURV	Priority: 45 Days	Offsite Property No.	

**POSSIBLE SAMPLE HAZARDS/REMARKS**  
\*\* \*\*

**SPECIAL INSTRUCTIONS** Hold Time Total Activity Exemption: Yes  No   
Batch all PNNL GW samples submitted under "W", "S", "T", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.  
Submit invoices & deliverables to DL Stewart, PNNL.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JDJ7		W	<i>6-13-06</i>	<i>1141</i>	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1JDJ7		W	<i> </i>	<i> </i>	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1JDJ7		W	<i> </i>	<i> </i>	1x20-mL P	Activity Scan	None
B1JDJ7		W	<i> </i>	<i> </i>	3x1000-mL G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)	HNO3 to pH <2
B1JDJ7		W	<i> </i>	<i> </i>	3x1000-mL G/P	GAMMA_GS: List-1 (10)	HNO3 to pH <2

Relinquished By <b>D.P. CONNOLLY</b> <i>[Signature]</i>	Print Sign	Date/Time <b>JUN 13 2006</b>	15:00	Received By <i>S. Welch</i>	Print Sign	Date/Time <b>JUN 13 2006</b>	15:00	Matrix *
Relinquished By		Date/Time		Received By		Date/Time		S = Soil DS = Drum Solid SF = Sediment DI = 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		

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

PNNL J6F130346  
W04942

## CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **G06-006-37**  
Page 1 of 1

<b>Collector</b>	<b>Contact/Requester</b> Dot Stewart	<b>Telephone No.</b> MSIN FAX 509-376-5056
<b>SAF No.</b> G06-006	<b>Sampling Origin</b> Hanford Site	<b>Purchase Order/Charge Code</b>
<b>Project Title</b> 1NR2-RB, JUNE 2006	<b>Method of Shipment</b> Govt. Vehicle	<b>Ice Chest No.</b> <b>Temp.</b> GRP-03-021
<b>Shipped To (Lab)</b> Severn Trent Incorporated, Richland	<b>Priority:</b> 45 Days	<b>Bill of Lading/Air Bill No.</b>
<b>Protocol</b> SURV		<b>Offsite Property No.</b>

**POSSIBLE SAMPLE HAZARDS/REMARKS**  
\*\* \*\*

**SPECIAL INSTRUCTIONS** **Hold Time** **Total Activity Exemption:** Yes  No   
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.  
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JDJ3		W	6-13-06	1230	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1JDJ3		W			1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1JDJ3		W			1x20-mL P	Activity Scan	None
B1JDJ3		W			3x1000-mL G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)	HNO3 to pH <2
B1JDJ3		W			3x1000-mL G/P	GAMMA_GS: List-1 (10)	HNO3 to pH <2

Relinquished By <b>D.P. CONNOLLY</b> <i>[Signature]</i>	Print	Sign	Date/Time <b>JUN 13 2006</b>	15:00	Received By <i>[Signature]</i> <b>Welch</b> <i>[Signature]</i> <b>Welch</b>	Print	Sign	Date/Time <b>JUN 13 2006</b>	15:00	Matrix *
Relinquished By			Date/Time		Received By			Date/Time		S = Soil                      DS = Drum Solid SE = Sediment              DI = Drum Liquid SO = Solid                    T = Tissue SL = Sludge                  W = 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		
<b>FINAL SAMPLE DISPOSITION</b>	Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed By				Date/Time	

PNNL *J6F130346*  
*W04942*

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

C.O.C. # **G06-006-57**  
Page 1 of 1

*due 7-28-06*

Collector <b>D.P. CONNOLLY</b>	Contact/Requester Dot Stewart	Telephone No. 509-376-5056	MSIN FAX
SAF No. G06-006	Sampling Origin Hanford Site	Purchase Order/Charge Code	
Project Title 1NR2-RB, JUNE 2006	<i>DTS-SAWS-H105</i>	Ice Chest No. <i>GRP-03-021</i>	Temp.
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.	
Protocol SURV	Priority: 45 Days	Offsite Property No.	

**POSSIBLE SAMPLE HAZARDS/REMARKS**  
\*\* \*\*

**SPECIAL INSTRUCTIONS** Hold Time Total Activity Exemption: Yes  No   
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.  
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JDC2		W	<i>6-13-06</i>	<i>1000</i>	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1JDC2		W	<i> </i>	<i> </i>	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1JDC2		W	<i> </i>	<i> </i>	1x20-mL P	Activity Scan	None
B1JDC2		W	<i> </i>	<i> </i>	1x4000-mL G/P	GAMMALL_GS: List-1 (9)	HNO3 to pH <2
B1JDC2		W	<i> </i>	<i> </i>	3x1000-mL G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)	HNO3 to pH <2

*H7A4N*

Relinquished By <b>D.P. CONNOLLY</b> <i>[Signature]</i>	Date/Time <b>JUN 13 2006</b> <i>15:00</i>	Received By <i>S. Welch</i> <i>[Signature]</i>	Date/Time <b>JUN 13 2006</b> <i>15:00</i>	Matrix *
Relinquished By	Date/Time	Received By	Date/Time	S = Soil DS = Drum Solid SF = Sediment DI = 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	
<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

Date/Time Received: 6-13-06 15:00  
 Client: PEW SDG#: W04942 NA  SAF#: G06-006 NA   
 Work Order Number: J6F130346 Chain of Custody # G06-006-43,37,57  
 Shipping Container ID: GRP-03-021 Air Bill # N/A

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  adjusted pH
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): N/A

Sample Custodian: S. Welch Date: 6-13-06 15:00

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person contacted \_\_\_\_\_  
 [ ] No action necessary; process as is.  
 Project Manager \_\_\_\_\_ Date \_\_\_\_\_

PNNL J6F130349  
W04942  
Dec 7.28.06

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #  
**G06-006-87**  
Page 1 of 1

Collector <b>DURATEK</b> <b>R.T. SICKLE</b> G06-006	Contact/Requester Dot Stewart	Telephone No. 509-376-5056	MSIN FAX
Project Title 1NR2-RB, JUNE 2006	Sampling Origin Hanford Site	Purchase Order/Charge Code	
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Ice Chest No. SMC-311	Temp.
Protocol SURV	Priority: 45 Days	Offsite Property No.	

POSSIBLE SAMPLE HAZARDS/REMARKS  
\*\* \*\*

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes  No   
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.  
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JDN3		W	6-13-06	0730	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1JDN3		W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1JDN3		W			1x20-mL P	Activity Scan	None
B1JDN3		W			1x4000-mL G/P	GAMMALL_GS: List-1 (9)	HNO3 to pH <2
B1JDN3		W			3x1000-mL G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)	HNO3 to pH <2

Relinquished By <b>DURATEK</b> <b>R.T. SICKLE</b>	Date/Time JUN 13 2006	Received By S. Welch	Date/Time JUN 13 2006	Matrix *
Relinquished By	Date/Time	Received By	Date/Time	S = Soil DS = Drum Solid SE = Sediment DI = Drum Liquid SO = Solid T = Tissue SI = 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	
<b>FINAL SAMPLE DISPOSITION</b>	Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By	Date/Time

Collector <b>DURATEK</b>	Contact/Requester Dot Stewart	Telephone No. <b>MSIN FAX</b> 509-376-5056
SAF No. <b>R-T-SICKLE</b> G06-006	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title 1NR2-RB, JUNE 2006	<b>DTS-SAWOS-H103B</b>	Ice Chest No. <b>SML-311</b> Temp.
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol SURV	Priority: 45 Days	Offsite Property No.

**POSSIBLE SAMPLE HAZARDS/REMARKS**  
\* \* \*

**SPECIAL INSTRUCTIONS** Hold Time Total Activity Exemption: Yes  No   
 Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.  
 Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative	
B1JDL8		W	6-13-06	0856	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None	
B1JDL8		W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2	
B1JDL8		W			1x20-mL P	Activity Scan	<b>H7A47</b>	None
B1JDL8		W			1x4000-mL G/P	GAMMALL_GS: List-1 (9)		HNO3 to pH <2
B1JDL8		W			3x1000-mL G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)		HNO3 to pH <2

Relinquished By <b>DURATEK</b> <b>R-T-SICKLE</b>	Date/Time <b>JUN 13 2006</b>	Received By <i>S. Welch</i>	Date/Time <b>JUN 13 2006</b>	Matrix * S = Soil DS = Drum Solid SF = Sediment DI = Drum Liquid SO = Solid T = Tissue SI = 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	
<b>FINAL SAMPLE DISPOSITION</b>	Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By	Date/Time

PNNL J6F130349  
W04942

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #  
**G06-006-68**  
Page 1 of 1

**DURATEK**  
**R. T. SICKLE**

Due 7-28-06

Contact/Requester Dot Stewart	Telephone No. 509-376-5056	MSIN FAX
SAF No. G06-006	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title 1NR2-RB, JUNE 2006	Method of Shipment Govt. Vehicle	Ice Chest No. <b>SML-311</b> Temp.
Shipped To (Lab) Severn Trent Incorporated, Richland	Priority: 45 Days	Bill of Lading/Air Bill No.
Protocol SURV		Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS  
\*\* \*\*

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes  No   
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.  
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JDL4		W	6-13-06	1139	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1JDL4		W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1JDL4		W	↓	↓	1x20-mL P	Activity Scan	None
B1JDL4		W	↓	↓	1x4000-mL G/P	GAMMALL_GS: List-1 (9)	HNO3 to pH <2
B1JDL4		W	↓	↓	3x1000-mL G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)	HNO3 to pH <2

Relinquished By <b>DURATEK</b> <b>R. T. SICKLE</b>	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time JUN 13 2006 1450	Received By <i>[Signature]</i>	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time JUN 13 2006 1450	Matrix *
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	S = Soil DS = Drum Solid SF = Sediment DI = 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	
FINAL SAMPLE DISPOSITION	Disposed Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By	Date/Time				



# STL

### Sample Check-in List

Date/Time Received: 6-13-06 14:50

Client: PGW SDG #: W04942 NA [ ] SAF #: 606-006 NA [ ]

Work Order Number: JLF130349 Chain of Custody # 606-006-87,79,68

Shipping Container ID: Sml-311 Air Bill # N/A

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  adjusted pH [ ]
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): N/A

Sample Custodian: S. Wehr Date: 6-13-06 14:50

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: 6-13-06 14:50
- Client: P6W SDG #: W04942 NA  SAF #: W06-006 NA
- Work Order Number: J6F140227 Chain of Custody #: W06-006-2, 11
- Shipping Container ID: SML-311 Air Bill #: N/A
- Custody Seals on shipping container intact? NA  Yes  No
  - Custody Seals dated and signed? NA  Yes  No
  - Chain of Custody record present? Yes  No
  - Cooler temperature: \_\_\_\_\_ NA  5. Vermiculite/packing materials is NA  Wet  Dry
  - Number of samples in shipping container: 2
  - Sample holding times exceeded? NA  Yes  No
  - Samples have:
    - \_\_\_\_\_ tape
    - \_\_\_\_\_ custody seals
    - \_\_\_\_\_ hazard labels
    - \_\_\_\_\_ appropriate samples labels
  - Samples are:
    - \_\_\_\_\_ in good condition
    - \_\_\_\_\_ broken
    - \_\_\_\_\_ leaking
    - \_\_\_\_\_ have air bubbles
    - (Only for samples requiring head space)
  - Sample pH taken? NA  pH < 2  pH > 2  adjusted pH
  - Sample Location, Sample Collector Listed? \* Yes  No   
\*For documentation only. No corrective action needed.
  - Were any anomalies identified in sample receipt? Yes  No
  - Description of anomalies (include sample numbers): N/A

Sample Custodian: S. Welch Date: 6-13-06 14:50

Client Sample ID	Analysis Requested	Condition	Comments/Action

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

No action necessary; process as is.

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

6/30/2006 2:52:29 PM

### Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory ,  
Pacific Northwest National Lab

8l Am PrpRC5016/5086, SepRC5072(5003)  
SX Americium-241 by Alpha Spec  
5l CLIENT: HANFORD

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

AnalyDueDate: 07/24/2006 **W04942**

Sep1 DT/Tm Tech:

Batch: 6166192 WATER pCi/L  
SEQ Batch, Test: None

PM, Quote: HC , 57671

Sep2 DT/Tm Tech: 7-15-06 *ym-f*

Prep Tech: RutherfordJ



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 H68MH-1-AE J6F120178-1-SAMP  06/09/2006 11:41	89.80g,in	89.80g,in	AMTC2490 06/22/06,pd 06/01/01,r	200				
AmtRec: 20ML,500ML,7XLP,4LP		#Containers: 10		Scr:	Alpha: 4.85E-03 uCi/Sa	Beta: 2.24E-02 uCi/Sa	4.6E-02L	
2 H68MR-1-AE J6F120178-3-SAMP  06/09/2006 11:41	89.40g,in	89.40g,in	AMTC2491 06/22/06,pd 06/01/01,r	200				
AmtRec: 20ML,500ML,7XLP,4LP		#Containers: 10		Scr:	Alpha: -3.85E-04 uCi/Sa	Beta: 2.38E-02 uCi/Sa	4.3E-02L	
3 H68MR-1-AK-X J6F120178-3-DUP  06/09/2006 11:41	89.60g,in	89.60g,in	AMTC2492 06/22/06,pd 06/01/01,r	200				
AmtRec: 20ML,500ML,7XLP,4LP		#Containers: 10		Scr:	Alpha: -3.85E-04 uCi/Sa	Beta: 2.38E-02 uCi/Sa	4.3E-02L	
4 H68M5-1-AF J6F120178-5-SAMP  06/09/2006 10:06	139.30g,in	139.30g,in	AMTC2493 06/22/06,pd 06/01/01,r	200				
AmtRec: 20ML,500ML,8XLP,3X4LP		#Containers: 13		Scr:	Alpha: -1.23E-03 uCi/Sa	Beta: 2.49E-02 uCi/Sa	7.0E-02L	
5 H7FRJ-1-AA-B J6F150000-192-BLK  06/09/2006 11:41	199.80g,in	199.80g,in	AMTC2494 06/22/06,pd 06/01/01,r	200				
AmtRec:		#Containers: 1		Scr:	Alpha:	Beta:		
6 H7FRJ-1-AC-C J6F150000-192-LCS  06/09/2006 11:41	200.20g,in	200.20g,in	AMSK0276 06/30/06,pd 02/09/06,r	200				
AmtRec:		#Containers: 1		Scr:	Alpha:	Beta:		

130  
43  
127  
128  
129  
132

6/30/2006 2:52:31 PM

### Sample Preparation/Analysis

Balance Id:1120482733

8l Am PrpRC5016/5086, SepRC5072(5003)  
SX Americium-241 by Alpha Spec  
5l CLIENT: HANFORD

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

AnalyDueDate: 07/24/2006

Sep1 DT/Tm Tech:

Batch: 6166192  
SEQ Batch, Test: None

pCi/L

Sep2 DT/Tm Tech:

Prep Tech: ,RutherfordJ



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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**Comments:** H68MH-SAMP "Comments: Reduced aliquots on sample H68MH due to weight screen activity. jhr 06/30/06"  
 H68MR-SAMP "Comments: Reduced aliquots on sample H68MR due to weight screen activity. jhr 06/30/06"  
 H68M5-SAMP "Comments: Reduced aliquots on sample H68M5 due to weight screen activity. jhr 06/30/06"  
 pH < 2.0 JHR 6/30/06

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

H68MH1AE-SAMP Constituent List:

Am-241	RDL:1.00E+00	pCi/L	LCL:70	UCL:130	RPD:20	AM-243	RDL:	pCi/L	LCL:20	UCL:105	RPD:20
H7FRJ1AA-BLK: Am-241	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:	AM-243	RDL:	pCi/L	LCL:20	UCL:105	RPD:20
H7FRJ1AC-LCS: Am-241	RDL:1	pCi/L	LCL:70	UCL:130	RPD:20	AM-243	RDL:	pCi/L	LCL:20	UCL:105	RPD:20

H68MH1AE-SAMP Calc Info:

Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
H7FRJ1AA-BLK: Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
H7FRJ1AC-LCS: Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

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

# ICOC Fraction Transfer/Status Report

ByDate: 7/17/2005, 7/22/2006, Batch: '6166192', User: \*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
6166192				
AC	CalcC	RutherfordJ	6/30/2006 2:35:56 PM	Revision 6
SC		wagarr	IsBatched 6/15/2006 9:38:25 AM	ICOC_RADCALC v4.8.24
SC		RutherfordJ	InPrep 6/30/2006 2:35:56 PM	RICH-RC-5016 REVISION 6
SC		RutherfordJ	InPrep 6/30/2006 2:36:03 PM	RICH-RC-5016 REVISION 6
SC		RutherfordJ	Prep1C 6/30/2006 2:55:36 PM	RICH-RC-5016 REVISION 6
SC		FABREM	InSep2 7/14/2006 7:42:53 PM	RICH-RC-5003 REV 6
SC		FABREM	Sep2C 7/15/2006 11:28:16 AM	RICH-RC-5003 REV 6
SC		DAWKINSO	InCnt1 7/15/2006 3:32:54 PM	RICH-RD-0008 REVISION 4
SC		DAWKINSO	CalcC 7/16/2006 3:06:57 PM	RICH-RD-0008 REVISION 4
AC		RutherfordJ	6/30/2006 2:36:03 PM	
AC		RutherfordJ	6/30/2006 2:55:36 PM	
AC		FABREM	7/14/2006 7:42:53 PM	
AC		FABREM	7/15/2006 11:28:16	
AC		DAWKINSO	7/15/2006 3:32:54 PM	
AC		DAWKINSO	7/16/2006 3:06:57 PM	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

6/30/2006 3:59:52 PM

### Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory ,  
Pacific Northwest National Lab

6D Pu PrpRC5016, SepRC5010(5039)  
SO Plutonium-238,239/40 by Alpha Spec  
SI CLIENT: HANFORD

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

AnalyDueDate: 07/24/2006 *Wo 4942*

Sep1 DT/Tm Tech:

Batch: 6166191 WATER pCi/L  
SEQ Batch, Test: None

PM, Quote: HC , 57671

Sep2 DT/Tm Tech: *7-11-06 m.f.*

Prep Tech: RutherfordJ



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:
<i>41</i> 1 H68MH-1-AG J6F120178-1-SAMP  06/09/2006 11:41	89.60g,in	89.60g,in	PUTC10204 06/26/06,pd 06/07/94,r	200				
AmtRec: 20ML,500ML,7XLP,4LP		#Containers: 10		Scr:	Alpha: 4.85E-03 uCi/Sa	Beta: 2.24E-02 uCi/Sa	4.6E-02L	
<i>42</i> 2 H68MH-1-AK-X J6F120178-1-DUP  06/09/2006 11:41	89.90g,in	89.90g,in	PUTC10205 06/26/06,pd 06/07/94,r	200				
AmtRec: 20ML,500ML,7XLP,4LP		#Containers: 10		Scr:	Alpha: 4.85E-03 uCi/Sa	Beta: 2.24E-02 uCi/Sa	4.6E-02L	
<i>127</i> 3 H68ML-1-AA J6F120178-2-SAMP  06/09/2006 11:41	64.00g,in	64.00g,in	PUTC10206 06/26/06,pd 06/07/94,r	200				
AmtRec: LP		#Containers: 1		Scr:	Alpha: -2.14E-04 uCi/Sa	Beta: 2.80E-03 uCi/Sa	3.2E-02L	
<i>128</i> 4 H68MR-1-AG J6F120178-3-SAMP  06/09/2006 11:41	89.80g,in	89.80g,in	PUTC10207 06/26/06,pd 06/07/94,r	200				
AmtRec: 20ML,500ML,7XLP,4LP		#Containers: 10		Scr:	Alpha: -3.85E-04 uCi/Sa	Beta: 2.38E-02 uCi/Sa	4.3E-02L	
<i>129</i> 5 H68MW-1-AA J6F120178-4-SAMP  06/09/2006 11:41	79.10g,in	79.10g,in	PUTC10208 06/26/06,pd 06/07/94,r	200				
AmtRec: LP		#Containers: 1		Scr:	Alpha: 2.94E-04 uCi/Sa	Beta: 2.39E-03 uCi/Sa	3.8E-02L	
<i>131</i> 6 H68M5-1-AJ J6F120178-5-SAMP  06/09/2006 10:06	139.70g,in	139.70g,in	PUTC10209 06/26/06,pd 06/07/94,r	200				
AmtRec: 20ML,500ML,8XLP,3X4LP		#Containers: 13		Scr:	Alpha: -1.23E-03 uCi/Sa	Beta: 2.49E-02 uCi/Sa	7.0E-02L	
<i>132</i> 7 H7FRE-1-AA-B J6F150000-191-BLK  06/09/2006 11:41	199.70g,in	199.70g,in	PUTC10210 06/26/06,pd 06/07/94,r	200				
AmtRec:		#Containers: 1		Scr:	Alpha:	Beta:		

6/30/2006 3:59:54 PM

### Sample Preparation/Analysis

Balance Id:1120482733

6D Pu PrpRC5016, SepRC5010(5039)  
SO Plutonium-238,239/40 by Alpha Spec  
5I CLIENT: HANFORD

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

AnalyDueDate: 07/24/2006

Sep1 DT/Tm Tech:

Batch: 6166191  
SEQ Batch, Test: None

pCi/L

Sep2 DT/Tm Tech:

Prep Tech: ,RutherfordJ



Work Order, Lot, Sample DateTime	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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8 H7FRE-1-AC-C	199.20g,in	PUSG0848	200					
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J6F150000-191-LCS

06/26/06,pd  
06/07/04,r



06/09/2006 11:41

AmtRec:

#Containers: 1

Scr:

Alpha:

Beta:

**Comments:** H68MH-SAMP "Comments: Reduced aliquots on sample H68MH due to weight screen activity. jhr 06/30/06"  
H68ML-SAMP "Comments: Reduced aliquots on sample H68ML due to weight screen activity. jhr 06/30/06"  
H68MR-SAMP "Comments: Reduced aliquots on sample H68MR due to weight screen activity. jhr 06/30/06"  
H68MW-SAMP "Comments: Reduced aliquots on sample H68MW due to weight screen activity. jhr 06/30/06"  
H68M5-SAMP "Comments: Reduced aliquots on sample H68M5 due to weight screen activity. jhr 06/30/06"

*PH 220 JHR 6/30/06*

**All Clients for Batch:**

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

**H68MH1AG-SAMP Constituent List:**

PU-238	RDL:1	pCi/L	LCL:	UCL:	RPD:	PU-239	RDL:1	pCi/L	LCL:70	UCL:130	RPD:20
Pu-242	RDL:	pCi/L	LCL:20	UCL:105	RPD:20						
H7FRE1AA-BLK:											
PU-238	RDL:1	pCi/L	LCL:	UCL:	RPD:	PU-239	RDL:1	pCi/L	LCL:	UCL:	RPD:
Pu-242	RDL:	pCi/L	LCL:20	UCL:105	RPD:20						
H7FRE1AC-LCS:											
PU-239	RDL:1	pCi/L	LCL:70	UCL:130	RPD:20	Pu-242	RDL:	pCi/L	LCL:20	UCL:105	RPD:20

**H68MH1AG-SAMP Calc Info:**

Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
H7FRE1AA-BLK:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
H7FRE1AC-LCS:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

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

# ICOC Fraction Transfer/Status Report

ByDate: 7/13/2005, 7/18/2006, Batch: '6166191', User: \*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
6166191				
AC	CalcC	RutherfordJ	6/30/2006 3:41:55 PM	
SC		wagarr	IsBatched	6/15/2006 9:38:25 AM
SC		RutherfordJ	InPrep	6/30/2006 3:41:55 PM
SC		RutherfordJ	Prep1C	6/30/2006 3:59:57 PM
SC		AntonsonL	Sep1C	7/12/2006 8:54:59 AM
SC		FABREM	Sep2C	7/12/2006 3:32:05 PM
SC		DAWKINSO	InCnt1	7/12/2006 7:52:39 PM
SC		BlackCL	CalcC	7/13/2006 6:35:49 AM
AC		RutherfordJ	6/30/2006 3:59:57 PM	
AC		AntonsonL	7/12/2006 8:54:59	
AC		FABREM	7/12/2006 3:32:05 PM	
AC		DAWKINSO	7/12/2006 7:52:39 PM	
AC		BlackCL	7/13/2006 6:35:49	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

6/30/2006 3:14:19 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  
5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 07/24/2006

W04942

Sep1 DT/Tm Tech: *246206* 10:05 AM

Batch: 6166193 WATER pCi/L  
SEQ Batch, Test: None

PM, Quote: HC , 57671

Sep2 DT/Tm Tech: *7-24-06* *DRM*

Prep Tech: RutherfordJ



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:
127 1 H68MH-1-AA J6F120178-1-SAMP  06/09/2006 11:41	89.40g,in		NPTA6356 06/13/06,pd 04/12/05,r			200				
AmtRec: 20ML,500ML,7XLP,4LP #Containers: 10 Scr: Alpha: 4.85E-03 uCi/Sa Beta: 2.24E-02 uCi/Sa 4.6E-02L										
128 2 H68MR-1-AA J6F120178-3-SAMP  06/09/2006 11:41	90.10g,in		NPTA6357 06/13/06,pd 04/12/05,r			200				
AmtRec: 20ML,500ML,7XLP,4LP #Containers: 10 Scr: Alpha: -3.85E-04 uCi/Sa Beta: 2.38E-02 uCi/Sa 4.3E-02L										
129 3 H68MR-1-AL-X J6F120178-3-DUP  06/09/2006 11:41	89.30g,in		NPTA6358 06/13/06,pd 04/12/05,r			200				
AmtRec: 20ML,500ML,7XLP,4LP #Containers: 10 Scr: Alpha: -3.85E-04 uCi/Sa Beta: 2.38E-02 uCi/Sa 4.3E-02L										
130 4 H68M5-1-AA J6F120178-5-SAMP  06/09/2006 10:06	139.10g,in		NPTA6359 06/13/06,pd 04/12/05,r			200				
AmtRec: 20ML,500ML,8XLP,3X4LP #Containers: 13 Scr: Alpha: -1.23E-03 uCi/Sa Beta: 2.49E-02 uCi/Sa 7.0E-02L										
131 5 H7FRT-1-AA-B J6F150000-193-BLK  06/09/2006 11:41	199.90g,in		NPTA6360 06/13/06,pd 04/12/05,r			200				
AmtRec: #Containers: 1 Scr: Alpha: Beta:										
132 6 H7FRT-1-AC-C J6F150000-193-LCS  06/09/2006 11:41	200.10g,in		NPSE0380 05/11/06,pd 04/12/05,r			200				
AmtRec: #Containers: 1 Scr: Alpha: Beta:										

6/30/2006 3:14:32 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: 07/24/2006

Sep1 DT/Tm Tech:

Batch: 6166193  
SEQ Batch, Test: None

pCi/L

Sep2 DT/Tm Tech:

Prep Tech: ,RutherfordJ



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:
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**Comments:** H68MH-SAMP "Comments: Reduced aliquots on sample H68MH due to weight screen activity. jhr 06/30/06"  
 H68MR-SAMP "Comments: Reduced aliquots on sample H68MR due to weight screen activity. jhr 06/30/06"  
 H68M5-SAMP "Comments: Reduced aliquots on sample H68M5 due to weight screen activity. jhr 06/30/06"  
 pH 2.0 JHK 6/30/06

**All Clients for Batch:**

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

**H68MH1AA-SAMP Constituent List:**

Np-237 RDL:0.6 pCi/L LCL: UCL: RPD:  
 H7FRT1AA-BLK:  
 Np-237 RDL:0.6 pCi/L LCL: UCL: RPD:  
 H7FRT1AC-LCS:

**H68MH1AA-SAMP Calc Info:**

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  
 H7FRT1AA-BLK:  
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B  
 H7FRT1AC-LCS:  
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

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

# ICOC Fraction Transfer/Status Report

ByDate: 7/26/2005, 7/31/2006, Batch: '6166193', User: \*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
<b>6166193</b>				
AC	CalcC	RutherfordJ	6/30/2006 3:05:05 PM	
SC		wagarr	IsBatched 6/15/2006 9:38:25 AM	ICOC_RADCALC v4.8.24
SC		RutherfordJ	InPrep 6/30/2006 3:05:05 PM	RICH-RC-5016 REVISION 6
SC		RutherfordJ	Prep1C 6/30/2006 3:15:33 PM	RICH-RC-5016 REVISION 6
SC		ManisD	Sep1C 7/24/2006 12:27:46 PM	RICH-RC-5064 REV 6
SC		FABREM	Sep2C 7/24/2006 4:29:27 PM	RICH-RC-5003 REV 6
SC		DAWKINSO	InCnt1 7/24/2006 6:30:06 PM	RICH-RD-0008 REVISION 4
SC		BlackCL	CalcC 7/25/2006 8:02:42 AM	RICH-RD-0008 REVISION 4
AC		RutherfordJ	6/30/2006 3:15:33 PM	
AC		ManisD	7/24/2006 12:27:46	
AC		FABREM	7/24/2006 4:29:27 PM	
AC		DAWKINSO	7/24/2006 6:30:06 PM	
AC		BlackCL	7/25/2006 8:02:42	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.