

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: 34391**

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W05085	W07-012	B1LHV3	J6L210129-1	JLXMP1AA	9JLXMP10	6363299
		B1LHV3	J6L210129-1	JLXMP1AC	9JLXMP10	6363303
		B1LHV3	J6L210129-1	JLXMP1AD	9JLXMP10	6363295
		B1LHV3	J6L210129-1	JLXMP1AE	9JLXMP10	6363297
		B1LHY9	J6L210129-2	JLXMQ1AA	9JLXMQ10	6363299
		B1LHY9	J6L210129-2	JLXMQ1AC	9JLXMQ10	6363303
		B1LHY9	J6L210129-2	JLXMQ1AD	9JLXMQ10	6363295
		B1LHY9	J6L210129-2	JLXMQ1AE	9JLXMQ10	6363297
	A07-012	B1LJT0	J6L210130-1	JLXM91AA	9JLXM910	6363296
		B1LJT0	J6L210130-1	JLXM91AC	9JLXM910	6363295
	S07-012	B1LC05	J6L210131-1	JLXNL1AA	9JLXNL10	6363296
		B1LC05	J6L210131-1	JLXNL1AC	9JLXNL10	6363295
		B1LBW9	J6L210131-2	JLXNM1AA	9JLXNM10	6363296
	I07-007	B1L9C7	J6L210132-1	JLXN51AA	9J6L2110	6355287
S07-011	B1L3K1	J6L210205-1	JL0DF1AA	9JL0DF10	6363300	

Comments:

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SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH		
W05085	S07-011	B1L3R0	J6L210337-1	JL1AQ1AA	9JL1AQ10	6363298		
		B1L3R0	J6L210337-1	JL1AQ1AC	9JL1AQ10	6363299		
	S07-010	B1KPX1	J6L210338-1	JL1CG1AA	9JL1CG10	6363295		
		B1KPX1	J6L210338-1	JL1CG1AC	9JL1CG10	6363297		
		B1KPX0	J6L210338-2	JL1CJ1AA	9JL1CJ10	6363295		
		B1KPX0	J6L210338-2	JL1CJ1AC	9JL1CJ10	6363297		
		B1KPR5	J6L210338-3	JL1CL1AA	9JL1CL10	6363301		
		B1KPR5	J6L210338-3	JL1CL1AC	9JL1CL10	6363298		
	I07-002		B1KPR5	J6L210338-3	JL1CL1AD	9JL1CL10	6363299	
			B1KPR5	J6L210338-3	JL1CL1AE	9JL1CL10	6363294	
			B1KPR5	J6L210338-3	JL1CL1AF	9JL1CL10	6363295	
			B1KM41	J6L210340-1	JL1CQ1AA	9JL1CQ10	6363298	
			B1KM41	J6L210340-1	JL1CQ1AC	9JL1CQ10	6363299	
			B1KM41	J6L210340-1	JL1CQ1AD	9JL1CQ10	6363291	
		B1KM41	J6L210340-1	JL1CQ1AE	9JL1CQ10	6363300		
		B1KM42	J6L210340-2	JL1CT1AA	9JL1CT10	6363291		
		B1KM42	J6L210340-2	JL1CT1AC	9JL1CT10	6363300		
		I07-009		B1L1V8	J6L220175-1	JL2HN1AA	9JL2HN10	6363293
				B1L1V8	J6L220175-1	JL2HN1AC	9JL2HN10	6363294
				B1L1V8	J6L220175-1	JL2HN1AD	9JL2HN10	6363303
B1L1V8	J6L220175-1			JL2HN1AE	9JL2HN10	6363296		
	I07-016	B1L1V8	J6L220175-1	JL2HN1AF	9JL2HN10	6363300		
		B1LK86	J6L220179-1	JL2HX1AA	9JL2HX10	6363296		
W07-011		B1L775	J6L220182-1	JL2JC1AA	9JL2JC10	6363301		
		B1L775	J6L220182-1	JL2JC1AC	9JL2JC10	6363299		
		B1L775	J6L220182-1	JL2JC1AD	9JL2JC10	6363303		

Comments:

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SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W05085	W07-011	B1L775	J6L220182-1	JL2JC1AE	9JL2JC10	6363295
		B1L775	J6L220182-1	JL2JC1AF	9JL2JC10	6363297
	S07-012	B1LBY4	J6L220185-1	JL2L01AA	9JL2L010	6363303
			J6L220185-1	JL2L01AC	9JL2L010	6363296
			J6L220185-1	JL2L01AE	9JL2L010	6363295
		B1LBY1	J6L220185-2	JL2L41AA	9JL2L410	6363303
			J6L220185-2	JL2L41AC	9JL2L410	6363296
			J6L220185-2	JL2L41AE	9JL2L410	6363295
			A07-012	B1LJT6	J6L220196-1	JL2PL1AA
	B1LJT6	J6L220196-1		JL2PL1AC	9JL2PL10	6363296
	B1LJT6	J6L220196-1		JL2PL1AD	9JL2PL10	6363295
	B1LJR2	J6L220196-1	JL2PL1AE	9JL2PL10	6363297	
		J6L280244-1	JL8AG1AA	9JL8AG10	6363296	
		J6L280244-1	JL8AG1AC	9JL8AG10	6363295	

Comments:



# Certificate of Analysis

Pacific Northwest National Laboratories  
Sigma V Building  
Richland, WA 99352

**STL Richland**  
2800 George Washington Way  
Richland, WA 99354

Tel: 509 375 3131 Fax: 509 375 5590  
www.stl-inc.com

January 31, 2007

Attention: Dot Stewart

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SAF Number	:	W07-012, A07-012, S07-012, I07-007, S07-011, S07-010, I07-002, I07-009, I07-016, W07-011,
Date SDG Closed	:	December 22, 2006
Number of Samples	:	Twenty (20)
Sample Type	:	Water
SDG Number	:	W05085
Data Deliverable	:	45-Day / Summary

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## CASE NARRATIVE

### I. Introduction

Between December 19, 2006 and December 22, 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>DATE OF RECEIPT</u>	<u>MATRIX</u>
B1LHY9	JLXMQ	12/19/06	WATER
B1LHV3	JLXMP	12/19/06	WATER
B1LJT0	JLXM9	12/19/06	WATER
B1LBW9	JLXNM	12/19/06	WATER
B1LC05	JLXNL	12/19/06	WATER
B1L9C7	J6L21	12/20/06	WATER
B1L3K1	JL0DF	12/20/06	WATER
B1L3R0	JL1AQ	12/20/06	WATER
B1KPX0	JL1CJ	12/20/06	WATER
B1KPX1	JL1CG	12/20/06	WATER
B1KPR5	JL1CL	12/20/06	WATER
B1KM42	JL1CT	12/20/06	WATER
B1KM41	JL1CQ	12/20/06	WATER
B1L1V8	JL2HN	12/21/06	WATER
B1LK86	JL2HX	12/21/06	WATER
	JL2JC	12/21/06	WATER

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B1LBY1	JL2L4	12/21/06	WATER
B1LBY4	JL2L0	12/21/06	WATER
B1LJT6	JL2PL	12/21/06	WATER
B1LJR2	JL8AG	12/22/06	WATER

## II. Sample Receipt

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

## III. Analytical Results/Methodology

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

The requested analyses were:

### **Alpha Spectroscopy**

Neptunium-237 by method RICH-RC-5009

### **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 by method RICH-RC-5017

Gamma Spec (LL) 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

Carbon-14 by method RICH-RC-5022

### **Laser Induced Phosphorimetry**

Total Uranium by method RICH-RC-5058

### **Chemical Analysis**

Hexavalent Chromium by EPA method 7196A

## 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**

Neptunium-237 by method RICH-RC-5009:

The LCS, batch blank, samples and sample duplicate (B1L1V8) results are within contractual requirements.

**Gas Proportional Counting**

Gross Alpha by method RICH-RC-5014:

The original analysis had an LCS recovery of 72%. It was recounted and the LCS had a 79% recovery. Data is accepted. Except as noted, the LCS, batch blank, samples and sample duplicate (B1KPR5) results are within contractual requirements.

Gross Beta by method RICH-RC-5014:

Sample B1L775 did not meet MDA due to high dissolved solids. The results exceed the achieved MDA. Data is accepted. Except as noted, the LCS, batch blank, samples and sample duplicate (B1D170) results are within contractual requirements.

Strontium-90 by method RICH-RC-5006

The LCS, batch blank, samples and sample duplicate (B1L3K1) results are within contractual requirements.

**Gamma Spectroscopy**

Gamma Spec by method RICH-RC-5017:

The LCS, batch blank, samples and sample duplicate (B1LHV3) results are within contractual requirements.

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

There was insufficient sample for duplicate analysis. Therefore, the sample was counted on a different detector for a replicate. Except as noted, the LCS, batch blank, samples and sample duplicate (B1KM42) results are within contractual requirements.

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

The LCS, batch blank, samples and sample duplicate (B1LC05) results are within contractual requirements.

**Liquid Scintillation Counting**

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

The LCS, batch blank, samples, sample duplicate (B1LJT0), and sample matrix spike (B1LBY4) results are within contractual requirements.

Tritium by method RICH-RC-5007:

The LCS, batch blank, samples and sample duplicate (B1LJT6) results are within contractual requirements.

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January 31, 2007

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Carbon-14 by method RICH-RC-5022:

The LCS, batch blank, samples and sample duplicate (B1L1V8) results are within contractual requirements.

**Total Uranium**

Total Uranium by method RICH-RC-5058:

The LCS, batch blank, samples, sample duplicate (B1L775), and sample matrix spike (B1LJT6) results are within contractual requirements.

**Chemical Analysis**

Hexavalent Chromium by EPA method 7196A

The LCS, batch blank, samples, sample duplicate (B1L9C7), sample matrix spike (B1L9C7), and matrix spike duplicate results (B1L9C7) 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) <math>u_c</math> - 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, $u_c$ 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.

1/31/2007 2:07:09 PM

### STL Richland Report

Lab Code: STLRL

FormNbr: R      FormatType: FEAD      Version: 05      Rpt Nbr: 34391      File Name: h:\Reportdb\edd\FeadIV\Rad\W05085.Edd, h:\Reportdb\edd\FeadIV\Rad\34391.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:				
9JL0DF10	B1L3K1		MW6-SBB-A1	S07-011	W05085					12/20/2006 08:21				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6363300	SR-90	10098-97-2	8.50E+00	pCi/L	6.3E-01	1.4E+00		4.14E-01	78.8	SRISO_SEP_PRE	1.008E+00	L	01/28/2007 08:33	I
9JL1AQ10	B1L3R0		MW6-SBB-A1	S07-011	W05085					12/20/2006 10:01				
6363298	ALPHA	12587-46-1	2.08E+00	pCi/L	1.5E+00	1.6E+00		2.04E+00	100.0	9310_ALPHABETA	2.015E-01	L	01/25/2007 13:55	I
6363299	BETA	12587-47-2	7.90E+00	pCi/L	1.8E+00	2.0E+00		2.71E+00	100.0	9310_ALPHABETA	2.005E-01	L	01/25/2007 12:24	I
9JL1CG10	B1KPX1		MW6-SBB-A1	S07-010	W05085					12/20/2006 10:38				
6363295	TC-99	14133-76-7	5.47E-02	pCi/L	4.0E+00	5.7E+00	U	9.61E+00	100.0	TC99_ETVDSK_LS	1.278E-01	L	01/19/2007 19:01	I
6363297	Uranium	7440-61-1	6.78E+00	ug/L	6.9E-01	6.9E-01		8.38E-02		UTOT_KPA	2.50E-02	ML	01/29/2007 15:41	I
9JL1CJ10	B1KPX0		MW6-SBB-A1	S07-010	W05085					12/20/2006 10:38				
6363295	TC-99	14133-76-7	6.56E+00	pCi/L	4.3E+00	6.2E+00	U	9.84E+00	100.0	TC99_ETVDSK_LS	1.247E-01	L	01/19/2007 19:01	I
6363297	Uranium	7440-61-1	6.57E+00	ug/L	6.7E-01	6.7E-01		7.62E-02		UTOT_KPA	2.75E-02	ML	01/29/2007 15:43	I
9JL1CL10	B1KPR5		MW6-SBB-A1	S07-010	W05085					12/20/2006 12:05				
6363301	H-3	10028-17-8	1.60E+05	pCi/L	1.3E+03	6.1E+03		2.95E+02	100.0	906.0_H3_LSC	5.00E-03	L	01/23/2007 05:11	I
6363298	ALPHA	12587-46-1	5.33E+00	pCi/L	2.0E+00	2.4E+00		2.04E+00	100.0	9310_ALPHABETA	1.218E-01	L	01/25/2007 12:26	I
6363299	BETA	12587-47-2	1.33E+01	pCi/L	2.5E+00	3.0E+00		3.62E+00	100.0	9310_ALPHABETA	1.625E-01	L	01/25/2007 12:24	I
6363294	C-14	14762-75-5	1.24E+04	pCi/L	5.6E+01	1.4E+03		8.11E+00	100.0	C14_LSC	2.00E-01	L	01/25/2007 21:35	I
6363295	TC-99	14133-76-7	6.89E+00	pCi/L	4.3E+00	6.2E+00	U	9.71E+00	100.0	TC99_ETVDSK_LS	1.261E-01	L	01/19/2007 19:01	I

STL Richland

rptFeadRadSummaryEdd v3.48

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

1/31/2007 2:07:10 PM

# STL Richland Report

Lab Code: STLRL

FormNbr: R      FormatType: FEAD      Version: 05      Rpt Nbr: 34391      File Name: h:\Reportdb\edd\FeadIV\Rad\W05085.Edd, h:\Reportdb\edd\FeadIV\Rad\34391.Edd

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
9JL1CQ10	B1KM41												12/20/2006 10:38	
6363298	ALPHA	12587-46-1	2.47E+00	pCi/L	1.4E+00	1.5E+00		1.30E+00	100.0	9310_ALPHABETA	2.013E-01	L	01/25/2007 13:55	I
6363299	BETA	12587-47-2	1.26E+03	pCi/L	1.6E+01	1.6E+02		2.71E+00	100.0	9310_ALPHABETA	2.023E-01	L	01/25/2007 12:24	I
6363291	BE-7	13966-02-4	-1.09E+01	pCi/L	1.8E+01	1.8E+01	U	3.01E+01		GAMMA_GS	2.5012E+00	L	01/22/2007 11:39	I
6363291	CO-60	10198-40-0	-3.37E-02	pCi/L	2.0E+00	2.0E+00	U	3.94E+00		GAMMA_GS	2.5012E+00	L	01/22/2007 11:39	I
6363291	CS-134	13967-70-9	-1.07E-01	pCi/L	2.1E+00	2.1E+00	U	3.80E+00		GAMMA_GS	2.5012E+00	L	01/22/2007 11:39	I
6363291	CS-137	10045-97-3	2.82E-01	pCi/L	1.8E+00	1.8E+00	U	3.41E+00		GAMMA_GS	2.5012E+00	L	01/22/2007 11:39	I
6363291	EU-152	14683-23-9	1.38E-01	pCi/L	4.3E+00	4.3E+00	U	7.87E+00		GAMMA_GS	2.5012E+00	L	01/22/2007 11:39	I
6363291	EU-154	15585-10-1	-1.98E+00	pCi/L	3.8E+00	3.8E+00	U	6.76E+00		GAMMA_GS	2.5012E+00	L	01/22/2007 11:39	I
6363291	EU-155	14391-16-3	2.92E+00	pCi/L	4.1E+00	4.1E+00	U	7.94E+00		GAMMA_GS	2.5012E+00	L	01/22/2007 11:39	I
6363291	K-40	13966-00-2	-8.51E+01	pCi/L	3.7E+01	3.7E+01	U	7.73E+01		GAMMA_GS	2.5012E+00	L	01/22/2007 11:39	I
6363291	RU-106	13967-48-1	2.40E+01	pCi/L	1.8E+01	1.8E+01	U	3.75E+01		GAMMA_GS	2.5012E+00	L	01/22/2007 11:39	I
6363291	SB-125	14234-35-6	4.43E-01	pCi/L	4.3E+00	4.3E+00	U	7.97E+00		GAMMA_GS	2.5012E+00	L	01/22/2007 11:39	I
6363300	SR-90	10098-97-2	7.57E+02	pCi/L	5.8E+00	1.1E+02		4.36E-01	79.3	SRISO_SEP_PRE	9.715E-01	L	01/28/2007 08:33	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:				
9JL1CT10	B1KM42		MW6-SBB-A1	I07-002	W05085					12/20/2006 10:38				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6363291	BE-7	13966-02-4	-4.85E-01	pCi/L	1.9E+01	1.9E+01	U	3.56E+01		GAMMA_GS	2.5003E+00	L	01/22/2007 11:39	I
6363291	CO-60	10198-40-0	1.24E+00	pCi/L	1.7E+00	1.7E+00	U	3.96E+00		GAMMA_GS	2.5003E+00	L	01/22/2007 11:39	I
6363291	CS-134	13967-70-9	-1.81E-01	pCi/L	2.2E+00	2.2E+00	U	4.03E+00		GAMMA_GS	2.5003E+00	L	01/22/2007 11:39	I
6363291	CS-137	10045-97-3	1.09E+00	pCi/L	2.0E+00	2.0E+00	U	3.88E+00		GAMMA_GS	2.5003E+00	L	01/22/2007 11:39	I
6363291	EU-152	14683-23-9	2.14E+00	pCi/L	4.8E+00	4.8E+00	U	9.09E+00		GAMMA_GS	2.5003E+00	L	01/22/2007 11:39	I
6363291	EU-154	15585-10-1	1.39E-02	pCi/L	6.7E+00	6.7E+00	U	1.27E+01		GAMMA_GS	2.5003E+00	L	01/22/2007 11:39	I
6363291	EU-155	14391-16-3	1.23E+00	pCi/L	3.9E+00	3.9E+00	U	6.95E+00		GAMMA_GS	2.5003E+00	L	01/22/2007 11:39	I
6363291	K-40	13966-00-2	-2.87E+01	pCi/L	3.6E+01	3.6E+01	U	7.83E+01		GAMMA_GS	2.5003E+00	L	01/22/2007 11:39	I
6363291	RU-106	13967-48-1	7.93E-01	pCi/L	1.7E+01	1.7E+01	U	3.25E+01		GAMMA_GS	2.5003E+00	L	01/22/2007 11:39	I
6363291	SB-125	14234-35-6	2.37E+00	pCi/L	4.8E+00	4.8E+00	U	9.18E+00		GAMMA_GS	2.5003E+00	L	01/22/2007 11:39	I
6363300	SR-90	10098-97-2	7.13E+02	pCi/L	5.6E+00	1.1E+02		4.28E-01	78.1	SRISO_SEP_PRE	1.0041E+00	L	01/28/2007 08:33	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:
9JL2HN10	B1L1V8		MW6-SBB-A1	I07-009	W05085					12/21/2006 09:28

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: 34391      File Name: h:\Reportdb\edd\FeadIV\Rad\W05085.Edd, h:\Reportdb\edd\FeadIV\Rad\34391.Edd

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6363294	C-14	14762-75-5	5.14E+00	pCi/L	3.5E+00	7.1E+00	U	8.11E+00	100.0	C14_LSC	2.00E-01	L	01/25/2007 22:17	I
6363303	BE-7	13966-02-4	2.05E+00	pCi/L	2.3E+01	2.3E+01	U	4.36E+01		GAMMALL_GS	1.999E+00	L	01/22/2007 19:21	I
6363303	CO-60	10198-40-0	-3.68E-02	pCi/L	2.4E+00	2.4E+00	U	4.76E+00		GAMMALL_GS	1.999E+00	L	01/22/2007 19:21	I
6363303	CS-134	13967-70-9	-1.31E+00	pCi/L	2.4E+00	2.4E+00	U	4.10E+00		GAMMALL_GS	1.999E+00	L	01/22/2007 19:21	I
6363303	CS-137	10045-97-3	-8.99E-01	pCi/L	2.0E+00	2.0E+00	U	3.54E+00		GAMMALL_GS	1.999E+00	L	01/22/2007 19:21	I
6363303	EU-152	14683-23-9	9.12E-02	pCi/L	5.4E+00	5.4E+00	U	9.77E+00		GAMMALL_GS	1.999E+00	L	01/22/2007 19:21	I
6363303	EU-154	15585-10-1	1.62E+00	pCi/L	5.1E+00	5.1E+00	U	1.14E+01		GAMMALL_GS	1.999E+00	L	01/22/2007 19:21	I
6363303	EU-155	14391-16-3	-7.77E-01	pCi/L	3.7E+00	3.7E+00	U	6.66E+00		GAMMALL_GS	1.999E+00	L	01/22/2007 19:21	I
6363303	K-40	13966-00-2	-4.62E+01	pCi/L	4.0E+01	4.0E+01	U	8.99E+01		GAMMALL_GS	1.999E+00	L	01/22/2007 19:21	I
6363303	RU-106	13967-48-1	1.36E+00	pCi/L	1.8E+01	1.8E+01	U	3.44E+01		GAMMALL_GS	1.999E+00	L	01/22/2007 19:21	I
6363303	SB-125	14234-35-6	-1.48E+00	pCi/L	5.1E+00	5.1E+00	U	9.14E+00		GAMMALL_GS	1.999E+00	L	01/22/2007 19:21	I
6363296	I-129L	15046-84-1	2.37E-01	pCi/L	3.0E-01	3.0E-01	U	3.46E-01	99.5	I129LL_SEP_LEPS	3.9328E+00	L	01/29/2007 17:36	I
6363293	NP-237	13994-20-2	-1.73E-02	pCi/L	9.0E-02	9.0E-02	U	2.44E-01	93.6	NP237_LLE_PLAT	2.012E-01	L	01/23/2007 14:39	I
6363300	SR-90	10098-97-2	-4.01E-02	pCi/L	1.8E-01	1.8E-01	U	4.36E-01	77.9	SRISO_SEP_PRE	1.0036E+00	L	01/28/2007 08:35	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*	Distilled Volume	Sample On Date:	Collection Date:
9JL2HX10	B1LK86		MW6-SBB-A1	I07-016	W05085					12/21/2006 12:05

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6363296	I-129L	15046-84-1	3.16E-01	pCi/L	1.6E-01	1.6E-01	U	3.45E-01	100.0	I129LL_SEP_LEPS	3.8567E+00	L	01/29/2007 17:36	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:
9JL2JC10	B1L775		MW6-SBB-A1	W07-011	W05085					12/21/2006 10:00

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6363301	H-3	10028-17-8	3.09E+03	pCi/L	2.1E+02	2.7E+02		2.95E+02	100.0	906.0_H3_LSC	5.00E-03	L	01/23/2007 06:33	I
6363299	BETA	12587-47-2	6.56E+02	pCi/L	1.5E+01	1.2E+02		5.91E+00	100.0	9310_ALPHABETA	7.04E-02	L	01/25/2007 13:14	I
6363303	BE-7	13966-02-4	1.62E+01	pCi/L	2.3E+01	2.3E+01	U	4.55E+01		GAMMALL_GS	1.9993E+00	L	01/22/2007 19:21	I
6363303	CO-60	10198-40-0	5.40E+00	pCi/L	3.1E+00	3.1E+00	U	7.28E+00		GAMMALL_GS	1.9993E+00	L	01/22/2007 19:21	I
6363303	CS-134	13967-70-9	5.55E-01	pCi/L	2.1E+00	2.1E+00	U	4.29E+00		GAMMALL_GS	1.9993E+00	L	01/22/2007 19:21	I
6363303	CS-137	10045-97-3	-3.98E-01	pCi/L	1.9E+00	1.9E+00	U	3.51E+00		GAMMALL_GS	1.9993E+00	L	01/22/2007 19:21	I
6363303	EU-152	14683-23-9	-2.86E-01	pCi/L	5.7E+00	5.7E+00	U	1.03E+01		GAMMALL_GS	1.9993E+00	L	01/22/2007 19:21	I
6363303	EU-154	15585-10-1	4.19E+00	pCi/L	5.5E+00	5.5E+00	U	1.29E+01		GAMMALL_GS	1.9993E+00	L	01/22/2007 19:21	I
6363303	EU-155	14391-16-3	-4.55E-01	pCi/L	3.8E+00	3.8E+00	U	6.70E+00		GAMMALL_GS	1.9993E+00	L	01/22/2007 19:21	I

1/31/2007 2:07:10 PM

### STL Richland Report

Lab Code: STLRL

FormNbr: R      FormatType: FEAD      Version: 05      Rpt Nbr: 34391      File Name: h:\Reportdb\edd\FeadIV\Rad\W05085.Edd, h:\Reportdb\edd\FeadIV\Rad\34391.Edd

6363303	K-40	13966-00-2	-4.65E+01	pCi/L	4.3E+01	4.3E+01	U	9.29E+01	GAMMALL_GS	1.9993E+00	L	01/22/2007 19:21	I
6363303	RU-106	13967-48-1	2.29E+01	pCi/L	2.2E+01	2.2E+01	U	4.56E+01	GAMMALL_GS	1.9993E+00	L	01/22/2007 19:21	I
6363303	SB-125	14234-35-6	-1.37E+00	pCi/L	5.4E+00	5.4E+00	U	9.52E+00	GAMMALL_GS	1.9993E+00	L	01/22/2007 19:21	I
6363295	TC-99	14133-76-7	2.57E+03	pCi/L	2.8E+01	1.8E+02		9.82E+00 100.0	TC99_ETVDSK_LS	1.256E-01	L	01/19/2007 19:01	I
6363297	Uranium	7440-61-1	1.49E+01	ug/L	1.8E+00	1.8E+00		8.25E-02	UTOT_KPA	2.54E-02	ML	01/29/2007 15:46	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:				
9JL2L010	B1LBY4		MW6-SBB-A1	S07-012	W05085					12/21/2006 10:54				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6363303	BE-7	13966-02-4	-9.16E+00	pCi/L	2.5E+01	2.5E+01	U	4.37E+01		GAMMALL_GS	2.0021E+00	L	01/22/2007 21:09	I
6363303	CO-60	10198-40-0	2.25E+01	pCi/L	5.8E+00	5.8E+00		5.76E+00		GAMMALL_GS	2.0021E+00	L	01/22/2007 21:09	I
6363303	CS-134	13967-70-9	5.59E-01	pCi/L	2.7E+00	2.7E+00	U	5.12E+00		GAMMALL_GS	2.0021E+00	L	01/22/2007 21:09	I
6363303	CS-137	10045-97-3	-9.15E-01	pCi/L	2.0E+00	2.0E+00	U	3.53E+00		GAMMALL_GS	2.0021E+00	L	01/22/2007 21:09	I
6363303	EU-152	14683-23-9	1.87E+00	pCi/L	5.2E+00	5.2E+00	U	9.85E+00		GAMMALL_GS	2.0021E+00	L	01/22/2007 21:09	I
6363303	EU-154	15585-10-1	6.12E+00	pCi/L	7.8E+00	7.8E+00	U	1.67E+01		GAMMALL_GS	2.0021E+00	L	01/22/2007 21:09	I
6363303	EU-155	14391-16-3	3.04E+00	pCi/L	5.2E+00	5.2E+00	U	9.96E+00		GAMMALL_GS	2.0021E+00	L	01/22/2007 21:09	I
6363303	K-40	13966-00-2	-5.40E+01	pCi/L	5.0E+01	5.0E+01	U	1.12E+02		GAMMALL_GS	2.0021E+00	L	01/22/2007 21:09	I
6363303	RU-106	13967-48-1	-3.40E+00	pCi/L	1.9E+01	1.9E+01	U	3.43E+01		GAMMALL_GS	2.0021E+00	L	01/22/2007 21:09	I
6363303	SB-125	14234-35-6	-4.28E+00	pCi/L	5.9E+00	5.9E+00	U	9.53E+00		GAMMALL_GS	2.0021E+00	L	01/22/2007 21:09	I
6363296	I-129L	15046-84-1	2.91E+00	pCi/L	4.8E-01	4.8E-01		2.86E-01 98.4		I129LL_SEP_LEPS	3.915E+00	L	01/29/2007 19:20	I
6363295	TC-99	14133-76-7	8.75E+03	pCi/L	5.1E+01	6.0E+02		9.85E+00 100.0		TC99_ETVDSK_LS	1.246E-01	L	01/19/2007 19:01	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9JL2L410	B1LBY1		MW6-SBB-A1	S07-012	W05085					12/21/2006 11:45				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6363303	BE-7	13966-02-4	1.68E-01	pCi/L	2.2E+01	2.2E+01	U	4.12E+01		GAMMALL_GS	1.9947E+00	L	01/22/2007 21:10	I
6363303	CO-60	10198-40-0	1.53E+00	pCi/L	2.0E+00	2.0E+00	U	4.72E+00		GAMMALL_GS	1.9947E+00	L	01/22/2007 21:10	I
6363303	CS-134	13967-70-9	-5.79E-01	pCi/L	2.4E+00	2.4E+00	U	4.30E+00		GAMMALL_GS	1.9947E+00	L	01/22/2007 21:10	I
6363303	CS-137	10045-97-3	7.28E-01	pCi/L	2.0E+00	2.0E+00	U	4.09E+00		GAMMALL_GS	1.9947E+00	L	01/22/2007 21:10	I
6363303	EU-152	14683-23-9	2.49E+00	pCi/L	5.4E+00	5.4E+00	U	1.03E+01		GAMMALL_GS	1.9947E+00	L	01/22/2007 21:10	I
6363303	EU-154	15585-10-1	-3.20E+00	pCi/L	6.2E+00	6.2E+00	U	1.08E+01		GAMMALL_GS	1.9947E+00	L	01/22/2007 21:10	I
6363303	EU-155	14391-16-3	-1.11E+00	pCi/L	4.3E+00	4.3E+00	U	7.41E+00		GAMMALL_GS	1.9947E+00	L	01/22/2007 21:10	I
6363303	K-40	13966-00-2	-5.45E+01	pCi/L	4.3E+01	4.3E+01	U	9.23E+01		GAMMALL_GS	1.9947E+00	L	01/22/2007 21:10	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.

rptFeadRadSummaryEdd v3.48

1/31/2007 2:07:10 PM

# STL Richland Report

Lab Code: STLRL

FormNbr: R      FormatType: FEAD      Version: 05      Rpt Nbr: 34391      File Name: h:\Reportdb\edd\FeadIV\Rad\W05085.Edd, h:\Reportdb\edd\FeadIV\Rad\34391.Edd

6363303	RU-106	13967-48-1	-1.29E+01	pCi/L	2.0E+01	2.0E+01	U	3.41E+01	GAMMALL_GS	1.9947E+00	L	01/22/2007 21:10	I
6363303	SB-125	14234-35-6	1.62E+00	pCi/L	6.0E+00	6.0E+00	U	1.13E+01	GAMMALL_GS	1.9947E+00	L	01/22/2007 21:10	I
6363296	I-129L	15046-84-1	3.46E+00	pCi/L	5.6E-01	5.6E-01		2.19E-01 98.1	I129LL_SEP_LEPS	3.8916E+00	L	01/29/2007 19:21	I
6363295	TC-99	14133-76-7	1.74E+03	pCi/L	2.3E+01	1.2E+02		9.81E+00 100.0	TC99_ETVDSK_LS	1.256E-01	L	01/19/2007 19:01	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9JL2PL10	B1LJT6		MW6-SBB-A1	A07-012	W05085					12/21/2006 12:40				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6363301	H-3	10028-17-8	9.44E+03	pCi/L	3.3E+02	5.1E+02		2.94E+02	100.0	906.0_H3_LSC	5.00E-03	L	01/23/2007 07:55	I
6363296	I-129L	15046-84-1	3.00E+00	pCi/L	6.6E-01	6.6E-01		2.74E-01	102.4	I129LL_SEP_LEPS	3.9144E+00	L	01/29/2007 19:22	I
6363295	TC-99	14133-76-7	4.28E+01	pCi/L	5.4E+00	8.6E+00		9.79E+00	100.0	TC99_ETVDSK_LS	1.255E-01	L	01/19/2007 19:01	I
6363297	Uranium	7440-61-1	6.78E+00	ug/L	8.0E-01	8.0E-01		8.25E-02		UTOT_KPA	2.54E-02	ML	01/29/2007 15:50	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:				
9JL8AG10	B1LJR2		MW6-SBB-A1	A07-012	W05085					12/22/2006 09:10				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6363296	I-129L	15046-84-1	-1.93E-02	pCi/L	1.2E-01	1.2E-01	U	2.23E-01	96.5	I129LL_SEP_LEPS	3.9011E+00	L	01/29/2007 21:11	I
6363295	TC-99	14133-76-7	5.16E+01	pCi/L	5.5E+00	9.1E+00		9.65E+00	100.0	TC99_ETVDSK_LS	1.276E-01	L	01/19/2007 19:01	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9JLXM910	B1LJT0		MW6-SBB-A1	A07-012	W05085					12/19/2006 13:54				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6363296	I-129L	15046-84-1	1.63E-01	pCi/L	1.4E-01	1.4E-01	U	2.89E-01	100.0	I129LL_SEP_LEPS	3.8914E+00	L	01/29/2007 14:55	I
6363295	TC-99	14133-76-7	5.63E+01	pCi/L	5.7E+00	9.5E+00		9.71E+00	100.0	TC99_ETVDSK_LS	1.261E-01	L	01/19/2007 19:01	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9JLXMP10	B1LHV3		MW6-SBB-A1	W07-012	W05085					12/19/2006 10:25				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6363299	BETA	12587-47-2	1.34E+02	pCi/L	5.5E+00	1.8E+01		2.98E+00	100.0	9310_ALPHABETA	2.003E-01	L	01/25/2007 12:24	I
6363303	BE-7	13966-02-4	-2.96E+00	pCi/L	2.1E+01	2.1E+01	U	3.80E+01		GAMMALL_GS	1.9501E+00	L	01/22/2007 21:08	I
6363303	CO-60	10198-40-0	1.27E+00	pCi/L	1.7E+00	1.7E+00	U	4.12E+00		GAMMALL_GS	1.9501E+00	L	01/22/2007 21:08	I
6363303	CS-134	13967-70-9	2.34E+00	pCi/L	2.4E+00	2.4E+00	U	5.13E+00		GAMMALL_GS	1.9501E+00	L	01/22/2007 21:08	I
6363303	CS-137	10045-97-3	-2.44E+00	pCi/L	1.9E+00	1.9E+00	U	2.62E+00		GAMMALL_GS	1.9501E+00	L	01/22/2007 21:08	I
6363303	EU-152	14683-23-9	-2.20E+00	pCi/L	5.2E+00	5.2E+00	U	8.84E+00		GAMMALL_GS	1.9501E+00	L	01/22/2007 21:08	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.

1/31/2007 2:07:10 PM

# STL Richland Report

Lab Code: STLRL

FormNbr: R      FormatType: FEAD      Version: 05      Rpt Nbr: 34391      File Name: h:\Reportdb\edd\FeadIV\Rad\W05085.Edd, h:\Reportdb\edd\FeadIV\Rad\34391.Edd

6363303	EU-154	15585-10-1	-5.46E+00	pCi/L	5.6E+00	5.6E+00	U	8.16E+00	GAMMALL_GS	1.9501E+00	L	01/22/2007 21:08	I	
6363303	EU-155	14391-16-3	4.66E+00	pCi/L	4.1E+00	4.1E+00	U	7.74E+00	GAMMALL_GS	1.9501E+00	L	01/22/2007 21:08	I	
6363303	K-40	13966-00-2	-1.19E+00	pCi/L	3.1E+01	3.1E+01	U	6.56E+01	GAMMALL_GS	1.9501E+00	L	01/22/2007 21:08	I	
6363303	RU-106	13967-48-1	3.03E+00	pCi/L	1.8E+01	1.8E+01	U	3.48E+01	GAMMALL_GS	1.9501E+00	L	01/22/2007 21:08	I	
6363303	SB-125	14234-35-6	1.92E+00	pCi/L	5.3E+00	5.3E+00	U	9.90E+00	GAMMALL_GS	1.9501E+00	L	01/22/2007 21:08	I	
6363295	TC-99	14133-76-7	4.79E+02	pCi/L	1.2E+01	3.8E+01		9.72E+00	100.0	TC99_ETVDSK_LS	1.26E-01	L	01/19/2007 19:01	I
6363297	Uranium	7440-61-1	2.45E+00	ug/L	2.5E-01	2.5E-01		8.32E-02		UTOT_KPA	2.52E-02	ML	01/29/2007 15:37	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:				
9JLXMQ10	B1LHY9		MW6-SBB-A1	W07-012	W05085					12/19/2006 12:58				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6363299	BETA	12587-47-2	8.08E+02	pCi/L	1.3E+01	1.0E+02		2.73E+00	100.0	9310_ALPHABETA	2.008E-01	L	01/25/2007 12:24	I
6363303	BE-7	13966-02-4	-6.81E+00	pCi/L	2.2E+01	2.2E+01	U	3.92E+01		GAMMALL_GS	2.0071E+00	L	01/22/2007 19:20	I
6363303	CO-60	10198-40-0	1.12E+00	pCi/L	2.8E+00	2.8E+00	U	5.72E+00		GAMMALL_GS	2.0071E+00	L	01/22/2007 19:20	I
6363303	CS-134	13967-70-9	-1.98E+00	pCi/L	2.1E+00	2.1E+00	U	3.13E+00		GAMMALL_GS	2.0071E+00	L	01/22/2007 19:20	I
6363303	CS-137	10045-97-3	-2.15E+00	pCi/L	2.2E+00	2.2E+00	U	3.51E+00		GAMMALL_GS	2.0071E+00	L	01/22/2007 19:20	I
6363303	EU-152	14683-23-9	3.59E+00	pCi/L	5.0E+00	5.0E+00	U	9.86E+00		GAMMALL_GS	2.0071E+00	L	01/22/2007 19:20	I
6363303	EU-154	15585-10-1	1.85E+00	pCi/L	6.8E+00	6.8E+00	U	1.40E+01		GAMMALL_GS	2.0071E+00	L	01/22/2007 19:20	I
6363303	EU-155	14391-16-3	-7.54E-01	pCi/L	4.6E+00	4.6E+00	U	8.25E+00		GAMMALL_GS	2.0071E+00	L	01/22/2007 19:20	I
6363303	K-40	13966-00-2	-5.76E+01	pCi/L	5.1E+01	5.1E+01	U	1.12E+02		GAMMALL_GS	2.0071E+00	L	01/22/2007 19:20	I
6363303	RU-106	13967-48-1	-3.13E-01	pCi/L	1.9E+01	1.9E+01	U	3.52E+01		GAMMALL_GS	2.0071E+00	L	01/22/2007 19:20	I
6363303	SB-125	14234-35-6	-1.35E+00	pCi/L	5.8E+00	5.8E+00	U	1.01E+01		GAMMALL_GS	2.0071E+00	L	01/22/2007 19:20	I
6363295	TC-99	14133-76-7	3.11E+03	pCi/L	3.0E+01	2.2E+02		9.81E+00	100.0	TC99_ETVDSK_LS	1.249E-01	L	01/19/2007 19:01	I
6363297	Uranium	7440-61-1	3.62E+00	ug/L	3.7E-01	3.7E-01		8.22E-02		UTOT_KPA	2.55E-02	ML	01/29/2007 15:39	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:				
9JLXNL10	B1LC05		MW6-SBB-A1	S07-012	W05085					12/19/2006 11:34				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6363296	I-129L	15046-84-1	4.26E-01	pCi/L	2.4E-01	2.4E-01	U	3.46E-01	97.6	I129LL_SEP_LEPS	3.8175E+00	L	01/29/2007 14:57	I
6363295	TC-99	14133-76-7	4.41E+01	pCi/L	5.3E+00	8.6E+00		9.64E+00	100.0	TC99_ETVDSK_LS	1.274E-01	L	01/19/2007 19:01	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9JLXNM10	B1LBW9		MW6-SBB-A1	S07-012	W05085					12/19/2006 11:46

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

1/31/2007 2:07:10 PM

### STL Richland Report

Lab Code: STLRL

FormNbr: R      FormatType: FEAD      Version: 05      Rpt Nbr: 34391      File Name: h:\Reportdb\edd\FeadIV\Rad\W05085.Edd, h:\Reportdb\edd\FeadIV\Rad\34391.Edd

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6363296	I-129L	15046-84-1	4.35E-01	pCi/L	1.9E-01	1.9E-01	U	3.65E-01	100.0	I129LL_SEP_LEPS	3.8346E+00	L	01/29/2007 17:35	I

Wednesday, January 31, 2007

### STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05085.Edd, h:\Reportdb\edd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL9T01AB

Sdg/Rept Nbr: W05085

34391

Collection Date: 12/21/2006 09:28

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 12/21/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	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
6363293 BLK	NP-237 13994-20-2	4.49E-02	pCi/L	1.1E-01 1.1E-01	U	2.69E-01	73.7		NP237_LLE_P	2.011E-01 L	01/23/2007 14:40				D

Wednesday, January 31, 2007

### STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05085.Edd, h:\Reportdb\edd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL9T21AB

Sdg/Rept Nbr: W05085

34391

Collection Date: 12/21/2006 09:28

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 12/21/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BF	H					
Batch # / Qc Type	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
6363294 BLK	C-14 14762-75-5	-3.06E-01	pCi/L	6.6E+00 3.3E+00	U	8.11E+00	100.0		C14_LSC	2.00E-01 L	01/25/2007 20:10				D

Wednesday, January 31, 2007

# STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W05085.Edd, h:\Reportdb\edd\Fead\Rad\34391.Edd

Lab Sample Id: JL9T41AB

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/19/2006 13:54

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 12/19/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BH	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6363295 BLK	TC-99 14133-76-7	-3.83E+00	pCi/L	5.5E+00 3.9E+00	U	9.78E+00	100.0		TC99_ETVDSK	1.262E-01 L	01/19/2007 19:01				D

Wednesday, January 31, 2007

# STL Richland QC Blank Report

Lab Code: STLR

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05085.Edd, h:\Reportdb\edd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL9T71AB

Sdg/Rept Nbr: W05085

34391

Collection Date: 12/19/2006 11:34

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 12/19/2006

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	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
6363296 BLK	I-129L 15046-84-1	-3.13E-02	pCi/L	1.5E-01 1.5E-01	U	2.54E-01	99.2		I129LL_SEP_L	4.0003E+00 L	01/29/2007 21:13				D

Wednesday, January 31, 2007

# STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\eddd\Fead\I\Rad\W05085.Edd, h:\Reportdb\eddd\Fead\I\Rad\34391.Edd

Lab Sample Id: JL9T81AB

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/21/2006 10:00

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 12/21/2006

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	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6363297 BLK	Uranium 7440-61-1	6.05E-02	ug/L	8.1E-03 8.1E-03	U	8.25E-02			UTOT_KPA	2.54E-02 ML	01/29/2007 15:26				D

Wednesday, January 31, 2007

# STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\eddd\FeadIV\Rad\W05085.Edd, h:\Reportdb\eddd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL9T91AB

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/20/2006 12:05

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 12/20/2006

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
6363298 BLK	ALPHA 12587-46-1	2.44E-01	pCi/L	3.6E-01 3.5E-01	U	7.25E-01	100.0		9310_ALPHAB	2.00E-01 L	01/25/2007 12:26				D

Wednesday, January 31, 2007

# STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\FeadIV\Rad\W05085.Edd, h:\Reportdb\ledd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL9TX1AB

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/20/2006 10:38

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 12/20/2006

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
6363291 BLK	BE-7 13966-02-4	-1.87E+01	pCi/L	2.0E+01 2.0E+01	U	3.19E+01			GAMMA_GS	2.5017E+00 L	01/22/2007 12:30				D
6363291 BLK	CO-60 10198-40-0	2.14E-01	pCi/L	2.1E+00 2.1E+00	U	4.17E+00			GAMMA_GS	2.5017E+00 L	01/22/2007 12:30				D
6363291 BLK	CS-134 13967-70-9	1.79E-01	pCi/L	1.8E+00 1.8E+00	U	3.49E+00			GAMMA_GS	2.5017E+00 L	01/22/2007 12:30				D
6363291 BLK	CS-137 10045-97-3	2.57E-01	pCi/L	1.8E+00 1.8E+00	U	3.36E+00			GAMMA_GS	2.5017E+00 L	01/22/2007 12:30				D
6363291 BLK	EU-152 14683-23-9	6.79E-01	pCi/L	4.2E+00 4.2E+00	U	7.70E+00			GAMMA_GS	2.5017E+00 L	01/22/2007 12:30				D
6363291 BLK	EU-154 15585-10-1	4.87E+00	pCi/L	6.1E+00 6.1E+00	U	1.31E+01			GAMMA_GS	2.5017E+00 L	01/22/2007 12:30				D
6363291 BLK	EU-155 14391-16-3	7.61E-01	pCi/L	2.9E+00 2.9E+00	U	5.33E+00			GAMMA_GS	2.5017E+00 L	01/22/2007 12:30				D
6363291 BLK	K-40 13966-00-2	-4.21E+01	pCi/L	3.7E+01 3.7E+01	U	7.73E+01			GAMMA_GS	2.5017E+00 L	01/22/2007 12:30				D
6363291 BLK	RU-106 13967-48-1	-1.25E+01	pCi/L	1.6E+01 1.6E+01	U	2.62E+01			GAMMA_GS	2.5017E+00 L	01/22/2007 12:30				D
6363291 BLK	SB-125 14234-35-6	-1.12E-01	pCi/L	4.2E+00 4.2E+00	U	7.63E+00			GAMMA_GS	2.5017E+00 L	01/22/2007 12:30				D

Wednesday, January 31, 2007

### STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05085.Edd, h:\Reportdb\edd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL9VA1AB

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/20/2006 10:01

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 12/20/2006

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
6363299 BLK	BETA 12587-47-2	-1.99E-02	pCi/L	9.0E-01 9.0E-01	U	1.84E+00	100.0		9310_ALPHAB	2.03E-01 L	01/25/2007 13:14				D

Wednesday, January 31, 2007

# STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05085.Edd, h:\Reportdb\edd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL9VC1AB

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/20/2006 08:21

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 12/20/2006

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/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6363300 BLK	SR-90 10098-97-2	2.18E-02	pCi/L	2.0E-01 2.0E-01	U	4.57E-01	73.2		SRISO_SEP_P	1.0011E+00 L	01/28/2007 08:35				D

Wednesday, January 31, 2007

# STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\eddd\FeadIV\Rad\W05085.Edd, h:\Reportdb\eddd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL9VD1AB

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/21/2006 12:40

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 12/21/2006

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	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6363301 BLK	H-3 10028-17-8	2.67E+01	pCi/L	1.4E+02 1.2E+02	U	2.95E+02	100.0		906.0_H3_LSC	5.00E-03 L	01/22/2007 23:44				D

Wednesday, January 31, 2007

### STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\eddd\FeadIV\Rad\W05085.Edd, h:\Reportdb\eddd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL9VD1DX

Sdg/Rept Nbr: W05085

34391

Collection Date: 12/21/2006 12:40

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 12/21/2006

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
6363301 BLK	H-3 10028-17-8	4.67E+01	pCi/L	1.4E+02 1.2E+02	U	3.00E+02	100.0		906.0_H3_LSC	5.00E-03 L	01/23/2007 02:28				D

Wednesday, January 31, 2007

# STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\eddd\FeadIV\Rad\W05085.Edd, h:\Reportdb\eddd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL9VE1AB

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/19/2006 10:25

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 12/19/2006

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
6363303 BLK	BE-7 13966-02-4	-1.59E+01	pCi/L	2.5E+01 2.5E+01	U	4.23E+01			GAMMALL_GS	1.9948E+00 L	01/22/2007 21:11				D
6363303 BLK	CO-60 10198-40-0	-8.44E-01	pCi/L	2.3E+00 2.3E+00	U	4.18E+00			GAMMALL_GS	1.9948E+00 L	01/22/2007 21:11				D
6363303 BLK	CS-134 13967-70-9	1.48E-02	pCi/L	2.4E+00 2.4E+00	U	4.51E+00			GAMMALL_GS	1.9948E+00 L	01/22/2007 21:11				D
6363303 BLK	CS-137 10045-97-3	1.21E+00	pCi/L	2.3E+00 2.3E+00	U	4.55E+00			GAMMALL_GS	1.9948E+00 L	01/22/2007 21:11				D
6363303 BLK	EU-152 14683-23-9	-8.81E-01	pCi/L	5.3E+00 5.3E+00	U	9.37E+00			GAMMALL_GS	1.9948E+00 L	01/22/2007 21:11				D
6363303 BLK	EU-154 15585-10-1	-3.57E+00	pCi/L	7.1E+00 7.1E+00	U	1.25E+01			GAMMALL_GS	1.9948E+00 L	01/22/2007 21:11				D
6363303 BLK	EU-155 14391-16-3	1.76E+00	pCi/L	3.6E+00 3.6E+00	U	6.74E+00			GAMMALL_GS	1.9948E+00 L	01/22/2007 21:11				D
6363303 BLK	K-40 13966-00-2	-3.35E+01	pCi/L	4.5E+01 4.5E+01	U	9.97E+01			GAMMALL_GS	1.9948E+00 L	01/22/2007 21:11				D
6363303 BLK	RU-106 13967-48-1	-1.40E+01	pCi/L	1.8E+01 1.8E+01	U	3.03E+01			GAMMALL_GS	1.9948E+00 L	01/22/2007 21:11				D
6363303 BLK	SB-125 14234-35-6	3.82E+00	pCi/L	5.0E+00 5.0E+00	U	1.00E+01			GAMMALL_GS	1.9948E+00 L	01/22/2007 21:11				D

Wednesday, January 31, 2007

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W05085.Edd, h:\Reportdb\edd\Fead\Rad\34391.Edd

Lab Sample Id: JL9T01CS

Sdg/Rept Nbr: W05085

34391

Collection Date: 12/21/2006 09:28

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 12/21/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BE	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
6363293 BS	NP-237 13994-20-2	7.00E+00	pCi/L	1.7E+00 1.4E+00		3.14E-01	65.4	9.14E+00 76.7	NP237_LLE_P	2.012E-01 L	01/23/2007 14:40			70 130	D

Wednesday, January 31, 2007

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\eddd\FeadIV\Rad\W05085.Edd, h:\Reportdb\eddd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL9T21CS

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/21/2006 09:28

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 12/21/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BG	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	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
6363294 BS	C-14 14762-75-5	4.76E+01	pCi/L	1.2E+01 4.8E+00		8.11E+00	100.0	4.69E+01 101.4	C14_LSC	2.00E-01 L	01/25/2007 20:52			70 130	D

Wednesday, January 31, 2007

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05085.Edd, h:\Reportdb\edd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL9T41CS

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/19/2006 13:54

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 12/19/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BI	H					
Batch # / Qc Type	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
6363295 BS	TC-99 14133-76-7	5.21E+02	pCi/L	4.1E+01 1.3E+01		9.78E+00	100.0	5.43E+02 96.0	TC99_ETVDSK	1.253E-01 L	01/19/2007 19:01			70 130	D

Wednesday, January 31, 2007

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadI\Rad\W05085.Edd, h:\Reportdb\edd\FeadI\Rad\34391.Edd

Lab Sample Id: JL9T71CS

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/19/2006 11:34

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 12/19/2006

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	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6363296 BS	I-129L 15046-84-1	8.13E+00	pCi/L	1.1E+00 1.1E+00		3.79E-01	98.3	9.59E+00 84.7	I129LL_SEP_L	3.9999E+00 L	01/29/2007 21:13			70 130	D

Wednesday, January 31, 2007

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\eddd\FeadIV\Rad\W05085.Edd, h:\Reportdb\eddd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL9T81CS

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/21/2006 10:00

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 12/21/2006

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	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6363297 BS	Uranium 7440-61-1	3.52E+01	ug/L	4.1E+00 4.1E+00		8.35E-02		3.60E+01 97.8	UTOT_KPA	2.51E-02 ML	01/29/2007 15:34			75 125	D

Wednesday, January 31, 2007

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\eddd\FeadI\Rad\W05085.Edd, h:\Reportdb\eddd\FeadI\Rad\34391.Edd

Lab Sample Id: JL9T81DS

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/21/2006 10:00

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 12/21/2006

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	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6363297 BS	Uranium 7440-61-1	3.68E+00	ug/L	3.8E-01 3.8E-01		8.35E-02		3.62E+00 101.6	UTOT_KPA	2.51E-02 ML	01/29/2007 15:35			75 125	D

Wednesday, January 31, 2007

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W05085.Edd, h:\Reportdb\edd\Fead\I\Rad\34391.Edd

Lab Sample Id: JL9T92CS

Sdg/Rept Nbr: W05085

34391

Collection Date: 12/20/2006 12:05

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 12/20/2006

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/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6363298 BS	ALPHA 12587-46-1	1.80E+01	pCi/L	4.6E+00 1.9E+00		6.79E-01	100.0	2.27E+01 79.4	9310_ALPHAB	2.011E-01 L	01/26/2007 15:01			70 130	D

Wednesday, January 31, 2007

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05085.Edd, h:\Reportdb\edd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL9TX1CS

Sdg/Rept Nbr: W05085

34391

Collection Date: 12/20/2006 10:38

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 12/20/2006

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
6363291 BS	CO-60 10198-40-0	3.23E+01	pCi/L	7.7E+00 7.7E+00		4.65E+00		3.03E+01 106.4	GAMMA_GS	2.5004E+00 L	01/22/2007 12:31			70 130	D
6363291 BS	CS-137 10045-97-3	1.98E+01	pCi/L	4.7E+00 4.7E+00		3.04E+00		2.00E+01 99.0	GAMMA_GS	2.5004E+00 L	01/22/2007 12:31			70 130	D
6363291 BS	EU-152 14683-23-9	5.96E+01	pCi/L	1.3E+01 1.3E+01	U	2.11E+01		6.12E+01 97.4	GAMMA_GS	2.5004E+00 L	01/22/2007 12:31			70 130	D

Wednesday, January 31, 2007

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05085.Edd, h:\Reportdb\edd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL9VA1CS

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/20/2006 10:01

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 12/20/2006

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	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6363299 BS	BETA 12587-47-2	2.12E+01	pCi/L	3.1E+00 1.7E+00		1.78E+00	100.0	2.25E+01 94.5	9310_ALPHAB	2.005E-01 L	01/25/2007 13:14			70 130	D

Wednesday, January 31, 2007

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W05085.Edd, h:\Reportdb\edd\Fead\Rad\34391.Edd

Lab Sample Id: JL9VC1CS

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/20/2006 08:21

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 12/20/2006

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	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6363300 BS	SR-90 10098-97-2	1.47E+01	pCi/L	2.3E+00 8.4E-01		4.53E-01	76.8	1.31E+01 112.5	SRISO_SEP_P	1.0036E+00 L	01/28/2007 08:35			70 130	D

Wednesday, January 31, 2007

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05085.Edd, h:\Reportdb\edd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL9VD1CS

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/21/2006 12:40

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 12/21/2006

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	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6363301 BS	H-3 10028-17-8	2.58E+03	pCi/L	2.5E+02 2.0E+02		2.96E+02	100.0	2.72E+03 94.8	906.0_H3_LSC	5.00E-03 L	01/23/2007 01:06			70 130	D

Wednesday, January 31, 2007

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\eddd\FeadIV\Rad\W05085.Edd, h:\Reportdb\eddd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL9VD1EM

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/21/2006 12:40

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 12/21/2006

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
6363301 BS	H-3 10028-17-8	2.38E+03	pCi/L	2.4E+02 2.0E+02		3.02E+02	100.0	2.72E+03 87.7	906.0_H3_LSC	5.00E-03 L	01/23/2007 03:49			70 130	D

Wednesday, January 31, 2007

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\eddd\FeadIV\Rad\W05085.Edd, h:\Reportdb\eddd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL9VE1CS

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/19/2006 10:25

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 12/19/2006

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
6363303 BS	CO-60 10198-40-0	3.42E+01	pCi/L	8.1E+00 8.1E+00		5.40E+00		3.83E+01 89.4	GAMMALL_GS	2.0053E+00 L	01/22/2007 21:11			70 130	D
6363303 BS	CS-137 10045-97-3	3.06E+01	pCi/L	8.0E+00 8.0E+00		5.77E+00		2.47E+01 123.8	GAMMALL_GS	2.0053E+00 L	01/22/2007 21:11			70 130	D
6363303 BS	EU-152 14683-23-9	7.41E+01	pCi/L	1.6E+01 1.6E+01		1.14E+01		7.66E+01 96.8	GAMMALL_GS	2.0053E+00 L	01/22/2007 21:11			70 130	D

Wednesday, January 31, 2007

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W05085.Edd, h:\Reportdb\edd\Fead\Rad\34391.Edd

Lab Sample Id: JL0DF1CR

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/20/2006 08:21

Client Id: B1L3K1

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 12/20/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
S07-011	MW6-SBB-A19981								AT	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
6363300	SR-90	8.09E+00	pCi/L	1.3E+00		4.34E-01	76.6		SRISO_SEP_P	9.881E-01	01/28/2007	4.9	0.4		D
DUP	10098-97-2	8.50E+00		6.3E-01						L	08:33	20.0	3		

Wednesday, January 31, 2007

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05085.Edd, h:\Reportdb\edd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL1AQ1DR

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/20/2006 10:01

Client Id: B1L3R0

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 12/20/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
S07-011	MW6-SBB-A19981								AU	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
6363299 DUP	BETA 12587-47-2	8.92E+00 7.90E+00	pCi/L	2.1E+00 1.8E+00		2.67E+00	100.0		9310_ALPHAB	2.00E-01 L	01/25/2007 12:24	12.1 20.0	0.7 3		D

Wednesday, January 31, 2007

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W05085.Edd, h:\Reportdb\edd\Fead\Rad\34391.Edd

Lab Sample Id: JL1CL1GR

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/20/2006 12:05

Client Id: B1KPR5

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 12/20/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
S07-010	MW6-SBB-A19981								AV	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
6363298 DUP	ALPHA 12587-46-1	5.25E+00 5.33E+00	pCi/L	2.3E+00 1.9E+00		1.52E+00	100.0		9310_ALPHAB	1.204E-01 L	01/25/2007 12:26	1.5 20.0	0.1 3		D

Wednesday, January 31, 2007

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05085.Edd, h:\Reportdb\edd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL1CT1DR

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/20/2006 10:38

Client Id: B1KM42

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 12/20/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
107-002	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
6363291 DUP	BE-7 13966-02-4	-7.07E+00 -4.85E-01	pCi/L	2.0E+01 2.0E+01	U	3.61E+01			GAMMA_GS	2.5003E+00 L	01/22/2007 13:25	0.0 20.0	0.5 3		D
6363291 DUP	CO-60 10198-40-0	-1.16E-01 1.24E+00	pCi/L	1.5E+00 1.5E+00	U	2.99E+00			GAMMA_GS	2.5003E+00 L	01/22/2007 13:25	241.5 20.0	1.3 3		D
6363291 DUP	CS-134 13967-70-9	-5.48E-01 -1.81E-01	pCi/L	1.9E+00 1.9E+00	U	3.31E+00			GAMMA_GS	2.5003E+00 L	01/22/2007 13:25	0.0 20.0	0.3 3		D
6363291 DUP	CS-137 10045-97-3	-8.39E-01 1.09E+00	pCi/L	1.8E+00 1.8E+00	U	3.10E+00			GAMMA_GS	2.5003E+00 L	01/22/2007 13:25	1534.6 20.0	1.5 3		D
6363291 DUP	EU-152 14683-23-9	1.53E+00 2.14E+00	pCi/L	4.5E+00 4.5E+00	U	8.43E+00			GAMMA_GS	2.5003E+00 L	01/22/2007 13:25	33.2 20.0	0.2 3		D
6363291 DUP	EU-154 15585-10-1	-2.10E+00 1.39E-02	pCi/L	6.1E+00 6.1E+00	U	1.10E+01			GAMMA_GS	2.5003E+00 L	01/22/2007 13:25	0.0 20.0	0.5 3		D
6363291 DUP	EU-155 14391-16-3	-1.30E+00 1.23E+00	pCi/L	4.2E+00 4.2E+00	U	7.41E+00			GAMMA_GS	2.5003E+00 L	01/22/2007 13:25	0.0 20.0	0.9 3		D
6363291 DUP	K-40 13966-00-2	-5.42E+01 -2.87E+01	pCi/L	4.1E+01 4.1E+01	U	8.83E+01			GAMMA_GS	2.5003E+00 L	01/22/2007 13:25	0.0 20.0	0.9 3		D
6363291 DUP	RU-106 13967-48-1	1.21E+00 7.93E-01	pCi/L	1.5E+01 1.5E+01	U	2.82E+01			GAMMA_GS	2.5003E+00 L	01/22/2007 13:25	41.6 20.0	0. 3		D
6363291 DUP	SB-125 14234-35-6	-7.81E-01 2.37E+00	pCi/L	4.4E+00 4.4E+00	U	7.70E+00			GAMMA_GS	2.5003E+00 L	01/22/2007 13:25	396.7 20.0	1. 3		D

Wednesday, January 31, 2007

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\eddd\Fead\I\Rad\W05085.Edd, h:\Reportdb\eddd\Fead\I\Rad\34391.Edd

Lab Sample Id: JL2HN1GR

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/21/2006 09:28

Client Id: B1L1V8

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 12/21/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
I07-009	MW6-SBB-A19981								AX	H					
Batch #/ Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	ToI/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6363293 DUP	NP-237 13994-20-2	-2.51E-02 -1.73E-02	pCi/L	8.9E-02 8.8E-02	U	2.64E-01	104.9		NP237_LLE_P	1.994E-01 L	01/23/2007 14:40	0.0 20.0	0.1 3		D

Wednesday, January 31, 2007

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\W05085.Edd, h:\Reportdb\edd\Fead\W05085.Edd, h:\Reportdb\edd\Fead\W05085.Edd, h:\Reportdb\edd\Fead\W05085.Edd

Lab Sample Id: JL2HN1HR

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/21/2006 09:28

Client Id: B1L1V8

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 12/21/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
I07-009	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
6363294 DUP	C-14 14762-75-5	1.73E+00 5.14E+00	pCi/L	6.8E+00 3.4E+00	U	8.11E+00	100.0		C14_LSC	2.00E-01 L	01/25/2007 22:59	99.2 20.0	0.7 3		D

Wednesday, January 31, 2007

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\FeadIV\Rad\W05085.Edd, h:\Reportdb\ledd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL2JC1GR

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/21/2006 10:00

Client Id: B1L775

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 12/21/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
W07-011	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
6363297 DUP	Uranium 7440-61-1	1.50E+01 1.49E+01	ug/L	1.8E+00 1.8E+00		8.32E-02			UTOT_KPA	2.52E-02 ML	01/29/2007 15:48	.2 20.0	0. 3		D

Wednesday, January 31, 2007

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W05085.Edd, h:\Reportdb\edd\Fead\I\Rad\34391.Edd

Lab Sample Id: JL2PL1GR

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/21/2006 12:40

Client Id: B1LJT6

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 12/21/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
A07-012	MW6-SBB-A19981								BC	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
6363301 DUP	H-3 10028-17-8	9.24E+03 9.44E+03	pCi/L	5.0E+02 3.3E+02		2.95E+02	100.0		906.0_H3_LSC	5.00E-03 L	01/23/2007 09:17	2.2 20.0	0.6 3		D

Wednesday, January 31, 2007

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\I\Rad\W05085.Edd, h:\Reportdb\ledd\Fead\I\Rad\34391.Edd

Lab Sample Id: JLXM91DR

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/19/2006 13:54

Client Id: B1LJT0

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 12/19/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
A07-012	MW6-SBB-A19981								CC	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	To/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6363295 DUP	TC-99 14133-76-7	6.20E+01 5.63E+01	pCi/L	9.9E+00 5.8E+00		9.71E+00	100.0		TC99_ETVDSK	1.263E-01 L	01/19/2007 19:01	9.6 20.0	0.8 3		D

### STL Richland QC Duplicate Report

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadI\Rad\W05085.Edd, h:\Reportdb\edd\FeadI\Rad\34391.Edd

Lab Sample Id: JLXMP1FR

Sdg/Rept Nbr: W05085

34391

Collection Date: 12/19/2006 10:25

Client Id: B1LHV3

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 12/19/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
W07-012	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
6363303 DUP	BE-7 13966-02-4	-1.50E+01 -2.96E+00	pCi/L	2.5E+01 2.5E+01	U	4.27E+01			GAMMALL_GS	1.9319E+00 L	01/22/2007 19:20	0.0 20.0	0.7 3		D
6363303 DUP	CO-60 10198-40-0	-7.71E-03 1.27E+00	pCi/L	2.3E+00 2.3E+00	U	4.56E+00			GAMMALL_GS	1.9319E+00 L	01/22/2007 19:20	202.4 20.0	0.8 3		D
6363303 DUP	CS-134 13967-70-9	4.44E-01 2.34E+00	pCi/L	2.5E+00 2.5E+00	U	4.90E+00			GAMMALL_GS	1.9319E+00 L	01/22/2007 19:20	136.2 20.0	1.1 3		D
6363303 DUP	CS-137 10045-97-3	2.75E-01 -2.44E+00	pCi/L	2.2E+00 2.2E+00	U	4.22E+00			GAMMALL_GS	1.9319E+00 L	01/22/2007 19:20	0.0 20.0	1.7 3		D
6363303 DUP	EU-152 14683-23-9	2.03E+00 -2.20E+00	pCi/L	6.1E+00 6.1E+00	U	1.12E+01			GAMMALL_GS	1.9319E+00 L	01/22/2007 19:20	0.0 20.0	1. 3		D
6363303 DUP	EU-154 15585-10-1	4.06E+00 -5.46E+00	pCi/L	6.4E+00 6.4E+00	U	1.41E+01			GAMMALL_GS	1.9319E+00 L	01/22/2007 19:20	0.0 20.0	2.1 3		D
6363303 DUP	EU-155 14391-16-3	5.28E-01 4.66E+00	pCi/L	3.7E+00 3.7E+00	U	6.74E+00			GAMMALL_GS	1.9319E+00 L	01/22/2007 19:20	159.3 20.0	1.6 3		D
6363303 DUP	K-40 13966-00-2	-2.57E+01 -1.19E+00	pCi/L	5.0E+01 5.0E+01	U	1.09E+02			GAMMALL_GS	1.9319E+00 L	01/22/2007 19:20	0.0 20.0	0.7 3		D
6363303 DUP	RU-106 13967-48-1	-1.61E+01 3.03E+00	pCi/L	2.0E+01 2.0E+01	U	3.32E+01			GAMMALL_GS	1.9319E+00 L	01/22/2007 19:20	0.0 20.0	1.3 3		D
6363303 DUP	SB-125 14234-35-6	1.41E+00 1.92E+00	pCi/L	5.1E+00 5.1E+00	U	9.75E+00			GAMMALL_GS	1.9319E+00 L	01/22/2007 19:20	30.4 20.0	0.1 3		D

Wednesday, January 31, 2007

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\I\Rad\W05085.Edd, h:\Reportdb\ledd\Fead\I\Rad\34391.Edd

Lab Sample Id: JLXNL1DR

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/19/2006 11:34

Client Id: B1LC05

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 12/19/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
S07-012	MW6-SBB-A19981								CE	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	ToI/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6363296 DUP	I-129L 15046-84-1	4.69E-01 4.26E-01	pCi/L	1.7E-01 1.7E-01	U	3.72E-01	96.8		I129LL_SEP_L	3.9458E+00 L	01/29/2007 14:57	9.7 20.0	0.4 3		D

Wednesday, January 31, 2007

### STL Richland Qc Matrix Spike Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W05085.Edd, h:\Reportdb\edd\Fead\I\Rad\34391.Edd

Lab Sample Id: JL2L01FW

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/21/2006 10:54

Client Id: B1LBY4

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: MS

Received Date: 12/21/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
S07-012	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/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6363295 MS	TC-99 14133-76-7	3.63E+03	pCi/L	1.0E+03 6.0E+01		9.80E+00	100.0	3.63E+03 99.9	TC99_ETVDSK	1.252E-01 L	01/19/2007 19:01			60 140	D

Wednesday, January 31, 2007

### STL Richland Qc Matrix Spike Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05085.Edd, h:\Reportdb\edd\FeadIV\Rad\34391.Edd

Lab Sample Id: JL2PL1FW

Sdg/Rept Nbr: W05085 34391

Collection Date: 12/21/2006 12:40

Client Id: B1LJT6

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: MS

Received Date: 12/21/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
A07-012	MW6-SBB-A19981								BB	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
6363297 MS	Uranium 7440-61-1	3.43E+01	ug/L	4.9E+00 4.9E+00		8.12E-02		3.51E+01 97.8	UTOT_KPA	2.58E-02 ML	01/29/2007 15:52			60 140	D

FormN	FormS	Recd	Format	Versid	SampleNbr	Contract	LabCode	LabC	CaseI	SAS	SDGNbr
W	AA	H	FEAD	05	B1L9C7	MW6-SBB-A19981	STLRL				W05085
W	AB	H	FEAD	05	B1L9C7	MW6-SBB-A19981	STLRL				W05085
W	AC	H	FEAD	05	B1L9C7	MW6-SBB-A19981	STLRL				W05085
W	AD	H	FEAD	05	B1L9C7	MW6-SBB-A19981	STLRL				W05085
W	AE	H	FEAD	05	NA	MW6-SBB-A19981	STLRL				W05085
W	AF	H	FEAD	05	NA	MW6-SBB-A19981	STLRL				W05085

AnalyticalMatrix	LabReceivedDate	CollectedDate	PercentSd	Decante	LabSampleId	LabFile	SafNor
WATER	12/20/2006	12/20/2006			9J6L2110		
WATER	12/20/2006	12/20/2006			J6L211CW		
WATER	12/20/2006	12/20/2006			J6L211DW		
WATER	12/20/2006	12/20/2006			J6L211ER		
WATER	12/20/2006	12/20/2006			JLX881AB		
WATER	12/20/2006	12/20/2006			JLX881AS		

CollectedTime	PercentM	Filename	SpecificMa
10:55		h:\Reportdb\edd\FeadIVWet\W0508	

FormNbr	FormSuffix	RecordType	CASNbr	Isotope	Result
W	AA	D	18540-29-9	HEXCHROME	+1 40E-01
W	AB	D	18540-29-9	HEXCHROME	+2 70E-01
W	AC	D	18540-29-9	HEXCHROME	+2 68E-01
W	AD	D	18540-29-9	HEXCHROME	+1 40E-01
W	AE	D	18540-29-9	HEXCHROME	+2 00E-03
W	AF	D	18540-29-9	HEXCHROME	+4 94E-01

OrigResult	ConcentrationU	ActionCode	AnalysisMethod	SampleAliquotS	SampleAliquotU
	mg/l	I	7196 CB6	+1.00E+02	MI
	mg/l	I	7196 CB6	+1.00E+02	MI
	mg/l	I	7196 CB6	+1.00E+02	MI
	mg/l	I	7196 CB6	+1.00E+02	MI
	mg/l	I	7196 CB6	+1.00E+02	MI
	mg/l	I	7196 CB6	+1.00E+02	MI

LabQualifier	DilutionFactor	DateAnalyzed	TimeAnalyzed	BatchNbr	QcType
	1	12/21/2006	00:00	6355287	
	1	12/21/2006	00:00	6355287	MS
	1	12/21/2006	00:00	6355287	MSD
	1	12/21/2006	00:00	6355287	DIJ
U	1	12/21/2006	00:00	6355287	RI K
	1	12/21/2006	00:00	6355287	BS

SpikeConc	PercentRecover	Rpd	RpdMaximum	Rpd_UCL	LCSMS_LCL
+2.63E-01	102.7				60
+2.63E-01	101.9	7		20.0	60
		0		20.0	
+5.00E-01	98.8				70

LCS_UCL	TracerYield	DetectionLimit	RL	RLType	CommentCode
		2.00E-03	2.00E-03	BDI	
140		2.00E-03	2.00E-03	BDI	
140		2.00E-03	2.00E-03	BDI	
		2.00E-03	2.00E-03	BDI	
		2.00E-03	2.00E-03	BDI	
130		2.00E-03	2.00E-03	BDI	

Lot No., Due Date: J6L220175; 02/05/2007  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 6363293; RNP237 Np-237 w/tracer  
 SDG, Matrix: W05085; WATER

8.0 Correction Calculation Protocol Used. OK	Yes	No	N/A
8.01 The Appropriate Methods Were Used To Analyze the Samples OK	Yes	No	N/A
8.02 Final Results Are in the Appropriate Activity Units OK	Yes	No	N/A
8.03 Batch Contains the Required QC Appropriate for the Method OK	Yes	No	N/A
8.04 The Correct Tracer and QC Vials Where Used in the Samples OK	Yes	No	N/A
8.05 Sample was Appropriately Traced Before or After Fractionating the Sample OK	Yes	No	N/A
8.06 At Least the Minimum Sample Volume Was Used OK	Yes	No	N/A
8.07 The Correct Count Geometry was Used. OK	Yes	No	N/A
8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. OK	Yes	No	N/A
8.09 Method Blank is within Control Limits. OK	Yes	No	N/A
8.1 Comments:			
8.11 Matrix Blank is within Control Limits. No Matrix Blanks (MBLks) 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	Yes	No	N/A
8.25 Counting Spectrum are within FWHM Limits. FWHM > maxFWHM => JL9T01AC NP-237 64.6>0 Q:V1	Yes	No	N/A

8.26 Instruments have Current Calibrations. Yes No N/A

8.27 Correct Count Library Used. Yes No N/A

Library Not Specified => JL2HN1AA I:[NUC\_LIBR]ALPHA Q:  
JL2HN1AG I:[NUC\_LIBR]ALPHA Q:  
JL9T01AA I:[NUC\_LIBR]ALPHA Q:  
JL9T01AC I:[NUC\_LIBR]ALPHA Q:

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

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

8.3 Comments:

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

First Level Review Pam Anderson

Date 1-25-07



# STL

Data Review Checklist  
RADIOCHEMISTRY  
Second Level Review

QC Batch Number: 6363293  
W05085

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: Sheryl A Adam Date: 1-25-07

Lot No., Due Date: J6L210337,J6L210338,J6L210340; 02/05/2007  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 6363298; RALPHA-A Alpha by GPC-Am  
 SDG, Matrix: W05085; 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 => JL1CL1AC 121.80<200.00 Q:VB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.07 The Correct Count Geometry was Used. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.09 Method Blank is within Control Limits. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.1 Comments:			
8.11 Matrix Blank is within Control Limits. No Matrix Blanks (MBIks) found in Batch!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.13 QAS Specified Duplicate Equation Value within Control Limits. OK (RPD)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.14 LCS within Control Limits. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.15 MLCS within Control Limits. No Matrix Spikes (MLCS) found in Batch!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.16 MS within Control Limits. No Matrix Spike Samples (MS) found in Batch!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.17 Tracer within Control Limits. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.18 Samples are above Minimum Tracer Yield (No Failed Samples) OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.19 Sample Specific MDC <= CRDL. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.2 Comments:			
8.21 Result < Lc, Activity Not Detected, U Flag. No Limit Specified!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.22 Result < Mdc, Activity Not Detected, U Flag. Batch Positive Result => JL1AQ1AA ALPHA 2.1E+00 L:2.0E+00 JL1CL1AC ALPHA 5.3E+00 L:2.0E+00 JL1CQ1AA ALPHA 2.5E+00 L:1.3E+00	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.23 Result <= Action Level, when Defined. OK; No Action Level Found => ALPHA  OK; No Callin Level Found => ALPHA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.24 Result + 3s >=0, Not Too Negative. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*NCM # 10-09368*

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. No Count Library found in Batch Data!	Yes	No	N/A
8.28	Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later versions)	Yes	No	N/A
8.29	Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in later versions)	Yes	No	N/A
8.3	Comments:			
8.31	Results Blank Subtracted as Appropriate. OK	Yes	No	N/A

First Level Review Pam Anderson

Date 1-29-07



# STL

## Data Review Checklist RADIOCHEMISTRY Second Level Review

QC Batch Number:

6363298  
W05085

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:

See NCM

Second Level Review:

Sheryl A Adams

Date: 1-29-07

# Clouseau Nonconformance Memo



NCM #: <b>10-09368</b>	Classification: <b>Anomaly</b>
NCM Initiated By: Pam Anderson	Status: <b>GLREVIEW</b>
Date Opened: 01/29/2007	Production Area: Environmental - Sep
Date Closed:	Tests: Alpha by GPC-Am
	Lot #'s (Sample #'s): J6L210337 (1), J6L210338 (3), J6L210340 (1), J6L290000 (298),
	QC Batches: 6363298
Nonconformance: Other (describe in detail)	
Subcategory: Other (explanation required)	

### Problem Description / Root Cause

<u>Name</u>	<u>Date</u>	<u>Description</u>
Pam Anderson	01/29/2007	The LCS for this alpha batch had a 72% recovery. It was recounted. The recount has a 79% recovery. The recount data will be transferred.

### Corrective Action

<u>Name</u>	<u>Date</u>	<u>Corrective Action</u>
Pam Anderson	01/29/2007	None at this time.

### 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:** J6L210337,J6L210338,J6L210340,J6L220182,J6L210129; 02/05/2007  
**Client, Site:** 384868; PGW 615HANFORD HANFORD  
**QC Batch No., Method Test:** 6363299; RBETA-SR Beta by GPC-Sr/Y  
**SDG, Matrix:** W05085; 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 => JL1CL1AD 162.50<200.00 JL2JC1AC 70.40<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. MDC/MDA > CRDL => JL2JC1AC BETA 5.9E+00>4.0E+00 Q:C1	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 => JLXMP1AA BETA 1.3E+02 L:3.0E+00 JLXMQ1AA BETA 8.1E+02 L:2.7E+00 JL1AQ1AC BETA 7.9E+00 L:2.7E+00 JL1CL1AD BETA 1.3E+01 L:3.6E+00 JL1CQ1AC BETA 1.3E+03 L:2.7E+00 JL2JC1AC BETA 6.6E+02 L:5.9E+00	Yes	No	N/A
8.23	Result <= Action Level, when Defined. OK; No Action Level Found => BETA  OK; No Callin Level Found => BETA	Yes	No	N/A

8.24 Result + 3s >=0, Not Too Negative. OK	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
8.25 Counting Spectrum are within FWHM Limits. 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. 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. OK	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

First Level Review

*Lisa Antonson*  
*Pam Anderson*

Date 1/22/07



# STL

## Data Review Checklist RADIOCHEMISTRY Second Level Review

QC Batch Number: 6363299  
W02085

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: 1-27-07

# Clouseau Nonconformance Memo



NCM #: <b>10-09355</b>	Classification: <b>Anomaly</b>
NCM Initiated By: Lisa Antonson	Status: <b>GLREVIEW</b>
Date Opened: 01/26/2007	Production Area: Environmental - Prep
Date Closed:	Tests: Beta by GPC-Sr/Y
	Lot #'s (Sample #'s): J6L210129 (1,2), J6L210337 (1), J6L210338 (3), J6L210340 (1), J6L220182 (1), J6L290000 (299),
	QC Batches: 6363299
Nonconformance: MDA not met	
Subcategory: Sample size reduced due to high residue mass	

### Problem Description / Root Cause

Name	Date	Description
Lisa Antonson	01/26/2007	Sample JL2JC1AC didn't meet MDA. Result exceeds MDA achieved, data accepted.

### Corrective Action

Name	Date	Corrective Action
Lisa Antonson	01/26/2007	NA

### Client Notification Summary

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

### Quality Assurance Verification

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

### Approval History

Date Approved	Approved By	Position
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Lot No., Due Date: J6L210205,J6L210340,J6L220175; 02/05/2007  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 6363300; RSR85907 Sr-85/90 by GPC-7  
 SDG, Matrix: W05085; 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 Pam Anderson

Date 1-29-07



# STL

Data Review Checklist  
RADIOCHEMISTRY  
Second Level Review

QC Batch Number: 6363300  
W05085

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: Sheryl A Adam Date: 1-29-07

Lot No., Due Date: J6L220175,J6L220182,J6L220185,J6L210129; 02/05/2007  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 6363303; RGAMMA Gamma by GER  
 SDG, Matrix: W05085; 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 Pam Anderson

Date 1-23-07



# STL

Data Review Checklist  
RADIOCHEMISTRY  
Second Level Review

QC Batch Number: 6 36 3303  
W05085

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 Adams Date: 1-23-07

Lot No., Due Date: J6L210340; 02/05/2007  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 6363291; RGAMMA Gamma by GER  
 SDG, Matrix: W05085; WATER

<b>1.0 COC</b>		
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No N/A
<b>2.0 QC Batch</b>		
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No N/A
2.2 Are the QC appropriate for the analysis included in the batch?	Yes	No N/A
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No N/A
2.4 Does the Worksheets include a Tracer Vial label for each sample?	Yes	No N/A
<b>3.0 QC &amp; Samples</b>		
3.1 Is the blank results, yield, and MDA within contract limits?	Yes	No N/A
3.2 Is the LCS result, yield, and MDA within contract limits?	Yes	No N/A
3.3 Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No N/A
3.4 Are the duplicate result, yields, and MDAs within contract limits?	Yes	No N/A
3.5 Are the sample yields and MDAs within contract limits?	Yes	No N/A
<b>4.0 Raw Data</b>		
4.1 Were results calculated in the correct units?	Yes	No N/A
4.2 Were analysis volumes entered correctly?	Yes	No N/A
4.3 Were Yields entered correctly?	Yes	No N/A
4.4 Were spectra reviewed/meet contractual requirements?	Yes	No N/A
4.5 Were raw counts reviewed for anomalies?	Yes	No N/A
<b>5.0 Other</b>		
5.1 Are all nonconformances included and noted?	Yes	No N/A
5.2 Are all required forms filled out?	Yes	No N/A
5.3 Was the correct methodology used?	Yes	No N/A
5.4 Was transcription checked?	Yes	No N/A
5.5 Were all calculations checked at a minimum frequency?	Yes	No N/A
5.6 Are worksheet entries complete and correct?	Yes	No N/A
6.0 Comments on any No response:	10.09332	

First Level Review Pam Anderson

Date 1-23-07



# STL

Data Review Checklist  
RADIOCHEMISTRY  
Second Level Review

QC Batch Number: 6363291  
W05085

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: 1-23-07

# Clouseau Nonconformance Memo



NCM #: <b>10-09332</b>	Classification: <b>Anomaly</b>
NCM Initiated By: Pam Anderson	Status: <b>GLREVIEW</b>
Date Opened: 01/23/2007	Production Area: Environmental - Prep
Date Closed:	Tests: Gamma by GER
	Lot #'s (Sample #'s): J6L210340 (1,2),
	QC Batches: 6363291
Nonconformance: Other (describe in detail)	
Subcategory: Other (explanation required)	

## Problem Description / Root Cause

<u>Name</u>	<u>Date</u>	<u>Description</u>
Pam Anderson	01/23/2007	There was insufficient sample for a duplicate in this gamma batch. A sample was counted on a different detector for a replicate.

## Corrective Action

<u>Name</u>	<u>Date</u>	<u>Corrective Action</u>
Pam Anderson	01/23/2007	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: J6L220175,J6L220179,J6L220185,J6L220196,J6L280244,J6L210130,J6L210131; 02/05/2007  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 6363296; RGAMLEPS Gamma by LEPS  
 SDG, Matrix: W05085; WATER

8.0	Correction Calculation Protocol Used. OK	Yes	No	N/A
8.01	The Appropriate Methods Were Used To Analyze the Samples Method Differs => JLXM91AA LEP<>TB JLXNL1AA LEP<>TB JLXNL1AD LEP<>TB JLXNM1AA LEP<>TB JL2HX1AA LEP<>TB JL2L01AC LEP<>TB JL2L41AC LEP<>TB JL2PL1AC LEP<>TB JL8AG1AA LEP<>TB JL9T71AA LEP<>TB JL9T71AC LEP<>TB JL2HN1AE LEP<>TB Q:V6	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 => JLXM91AA 3.891<4000.00 JLXNL1AA 3.817<4000.00 JLXNM1AA 3.835<4000.00 JL2HX1AA 3.857<4000.00 JL2L01AC 3.915<4000.00 JL2L41AC 3.892<4000.00 JL2PL1AC 3.914<4000.00 JL8AG1AA 3.901<4000.00 JL2HN1AE 3.933<4000.00 Q:VB	Yes	No	N/A
8.07	The Correct Count Geometry was Used. Count Geometry => JLXM91AA I_FA<>IFA JLXNL1AA I_FA<>IFA JLXNL1AD I_FA<>IFA JLXNM1AA I_FA<>IFA JL2HX1AA I_FA<>IFA JL2L01AC I_FA<>IFA JL2L41AC I_FA<>IFA JL2PL1AC I_FA<>IFA JL8AG1AA I_FA<>IFA JL9T71AA I_FA<>IFA JL9T71AC I_FA<>IFA JL2HN1AE I_FA<>IFA Q:VC	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 => JLXNL1AA I-129L 4.3E-01 L:3.5E-01 JLXNM1AA I-129L 4.3E-01 L:3.7E-01 JL2L01AC I-129L 2.9E+00 L:2.9E-01 JL2L41AC I-129L 3.5E+00 L:2.2E-01 JL2PL1AC I-129L 3.0E+00 L:2.7E-01	Yes	No	N/A
8.23	Result <= Action Level, when Defined. OK; No Action Level Found => I-129L  OK; No Callin Level Found => I-129L	Yes	No	N/A
8.24	Result + 3s >=0, Not Too Negative. OK	Yes	No	N/A
8.25	Counting Spectrum are within FWHM Limits. FWHM > maxFWHM => JL2L01AC I-129L 17>0 JL2L41AC I-129L 34.00>0 JL2PL1AC I-129L 28.00>0 JL9T71AC I-129L 18.00>0 Q:V1	Yes	No	N/A
8.26	Instruments have Current Calibrations.	Yes	No	N/A
8.27	Correct Count Library Used. Library Not Specified => JLXM91AA I:[NUC_LIBR]LEPS.NLB Q: JLXNL1AA I:[NUC_LIBR]LEPS.NLB Q: JLXNL1AD I:[NUC_LIBR]LEPS.NLB Q: JLXNM1AA I:[NUC_LIBR]LEPS.NLB Q: JL2HX1AA I:[NUC_LIBR]LEPS.NLB Q: JL2L01AC I:[NUC_LIBR]LEPS.NLB Q: JL2L41AC I:[NUC_LIBR]LEPS.NLB Q: JL2PL1AC I:[NUC_LIBR]LEPS.NLB Q: JL8AG1AA I:[NUC_LIBR]LEPS.NLB Q: JL9T71AA I:[NUC_LIBR]LEPS.NLB Q: JL9T71AC I:[NUC_LIBR]LEPS.NLB Q: JL2HN1AE I:[NUC_LIBR]LEPS.NLB 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

First Level Review Pam Anderson Date 1-30-07



# STL

Data Review Checklist  
RADIOCHEMISTRY  
Second Level Review

QC Batch Number: 6363296  
W05085

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: Sheryl A Adam Date: 1-30-07

Lot No., Due Date: J6L210338,J6L220182,J6L220185,J6L220196,J6L280244,J6L210130,J6L210129,J6L210131;  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 6363295; RTC99 Tc-99 by LSC  
 SDG, Matrix: W05085; 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 Incorrect Tracer/Vial => JL2L01AF TCSG<->TCSE Q:V9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8.05 Sample was Appropriately Traced Before or After Fractionating the Sample OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.06 At Least the Minimum Sample Volume Was Used OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.07 The Correct Count Geometry was Used. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.09 Method Blank is within Control Limits. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.1 Comments:			
8.11 Matrix Blank is within Control Limits. No Matrix Blanks (MBIks) 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. OK (RPD)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.14 LCS within Control Limits. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.15 MLCS within Control Limits. No Matrix Spikes (MLCS) found in Batch!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8.16 MS within Control Limits. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.17 Tracer within Control Limits. No Tracers found in Batch!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8.18 Samples are above Minimum Tracer Yield (No Failed Samples) No Tracers found in Batch!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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. No Positive Results OK Calc_IDL Not Calculated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.23 Result <= Action Level, when Defined. OK; No Action Level Found => TC-99  OK; No Callin Level Found => TC-99	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.24 Result + 3s >=0, Not Too Negative. OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.25 Counting Spectrum are within FWHM Limits. No FWHM found in Batch Data!	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 Pam Anderson

Date 1-29-07



# STL

Data Review Checklist  
RADIOCHEMISTRY  
Second Level Review

QC Batch Number: 6363295  
W05085

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 Adams Date: 1-29-07

Lot No., Due Date: J6L210338,J6L220182,J6L220196; 02/05/2007  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 6363301; RTRITIUM H-3 by LSC  
 SDG, Matrix: W05085; WATER

8.0	Correction Calculation Protocol Used. OK	Yes	No	N/A
8.01	The Appropriate Methods Were Used To Analyze the Samples No Samples found in Batch!	Yes	No	N/A
8.02	Final Results Are in the Appropriate Activity Units No Samples found in Batch!	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 => JL1CL1AA 5.00<10.00 JL2JC1AA 5.00<10.00 JL2PL1AA 5.00<10.00 Q:VB	Yes	No	N/A
8.07	The Correct Count Geometry was Used. Count Geometry => JL9VD1AF SVP15/5<>SVP10/10 JL9VD1AG SVP15/5<>SVP10/10 JL9VD1AA SVP15/5<>SVP10/10 JL9VD1AC SVP15/5<>SVP10/10 JL9VD1AD SVP15/5<>SVP10/10 JL9VD1AE SVP15/5<>SVP10/10 JL1CL1AA SVP15/5<>SVP10/10 JL2JC1AA SVP15/5<>SVP10/10 JL2PL1AA SVP15/5<>SVP10/10 JL2PL1AG SVP15/5<>SVP10/10 Q:VC	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. OK	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. OK	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. No Results found in Batch!	Yes	No	N/A
8.2	Comments:			
8.21	Result < Lc, Activity Not Detected, U Flag. No Limit Specified!	Yes	No	N/A
8.22	Result < Mdc, Activity Not Detected, U Flag. No Positive Results OK Calc_IDL Not Calculated	Yes	No	N/A

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

First Level Review Pam Anderson

Date 1-27-07



# STL

Data Review Checklist  
RADIOCHEMISTRY  
Second Level Review

QC Batch Number:

6363301

W05085

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:

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Second Level Review: Sheryl A. Adams

Date: 1-25-07

Lot No., Due Date: J6L210338,J6L220175; 02/05/2007  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 6363294; RC14 C-14 by LSC  
 SDG, Matrix: W05085; WATER

8.0	Correction Calculation Protocol Used. OK	Yes	No	N/A
8.01	The Appropriate Methods Were Used To Analyze the Samples OK	Yes	No	N/A
8.02	Final Results Are in the Appropriate Activity Units OK	Yes	No	N/A
8.03	Batch Contains the Required QC Appropriate for the Method OK	Yes	No	N/A
8.04	The Correct Tracer and QC Vials Where Used in the Samples OK	Yes	No	N/A
8.05	Sample was Appropriately Traced Before or After Fractionating the Sample OK	Yes	No	N/A
8.06	At Least the Minimum Sample Volume Was Used OK	Yes	No	N/A
8.07	The Correct Count Geometry was Used. OK	Yes	No	N/A
8.08	The Sample was Counted for the Minimum Count Time or CRDL was Achieved. OK	Yes	No	N/A
8.09	Method Blank is within Control Limits. OK	Yes	No	N/A
8.1	Comments:			
8.11	Matrix Blank is within Control Limits. No Matrix Blanks (MBIks) found in Batch!	Yes	No	N/A
8.12	Method Blank(s) < QAS Limit Value (No B Flag Necessary). OK	Yes	No	N/A
8.13	QAS Specified Duplicate Equation Value within Control Limits. OK (RPD)	Yes	No	N/A
8.14	LCS within Control Limits. OK	Yes	No	N/A
8.15	MLCS within Control Limits. No Matrix Spikes (MLCS) found in Batch!	Yes	No	N/A
8.16	MS within Control Limits. No Matrix Spike Samples (MS) found in Batch!	Yes	No	N/A
8.17	Tracer within Control Limits. No Tracers found in Batch!	Yes	No	N/A
8.18	Samples are above Minimum Tracer Yield (No Failed Samples) No Tracers found in Batch!	Yes	No	N/A
8.19	Sample Specific MDC <= CRDL. OK	Yes	No	N/A
8.2	Comments:			
8.21	Result < Lc, Activity Not Detected, U Flag. No Limit Specified!	Yes	No	N/A
8.22	Result < Mdc, Activity Not Detected, U Flag. No Positive Results OK Calc_IDL Not Calculated	Yes	No	N/A
8.23	Result <= Action Level, when Defined. OK; No Action Level Found => C-14  OK; No Callin Level Found => C-14	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. No Count Library found in Batch Data!	Yes	No	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	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 <input checked="" type="checkbox"/>	No	N/A

First Level Review

*Angela Long Pam Anderson*  
*1/26/07*

Date 1-26-07



# STL

Data Review Checklist  
RADIOCHEMISTRY  
Second Level Review

QC Batch Number: 6363294  
W05085

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: 1-27-07

Lot No., Due Date: J6L210338,J6L220182,J6L220196,J6L210129; 02/05/2007  
 Client, Site: 384868; PGW 615HANFORD HANFORD  
 QC Batch No., Method Test: 6363297; RUNAT UNat by KPA  
 SDG, Matrix: W05085; 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 => JL9T81AD 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 (MBIs) found in Batch!	Yes	No	N/A
8.12	Method Blank(s) < QAS Limit Value (No B Flag Necessary). OK	Yes	No	N/A
8.13	QAS Specified Duplicate Equation Value within Control Limits. OK (RPD)	Yes	No	N/A
8.14	LCS within Control Limits. OK	Yes	No	N/A
8.15	MLCS within Control Limits. No Matrix Spikes (MLCS) found in Batch!	Yes	No	N/A
8.16	MS within Control Limits. OK	Yes	No	N/A
8.17	Tracer within Control Limits. No Tracers found in Batch!	Yes	No	N/A
8.18	Samples are above Minimum Tracer Yield (No Failed Samples) No Tracers found in Batch!	Yes	No	N/A
8.19	Sample Specific MDC <= CRDL. OK	Yes	No	N/A
8.2	Comments:			
8.21	Result < Lc, Activity Not Detected, U Flag. No Limit Specified!	Yes	No	N/A
8.22	Result < Mdc, Activity Not Detected, U Flag. Batch Positive Result => JL1CG1AC Uranium 6.8E+00 L:8.4E-02 JL1CJ1AC Uranium 6.6E+00 L:7.6E-02 JL2JC1AF Uranium 1.5E+01 L:8.3E-02 JL2PL1AE Uranium 6.8E+00 L:8.3E-02 JLXMP1AE Uranium 2.4E+00 L:8.3E-02 JLXMQ1AE Uranium 3.6E+00 L:8.2E-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 $\geq 0$ , 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 checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/>            |
| 8.26 Instruments have Current Calibrations.   | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | N/A <input checked="" 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 checked="" 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 checked="" 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

1-30-07



STL

Data Review Checklist  
RADIOCHEMISTRY  
Second Level Review

QC Batch Number: 6363297  
W05085

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 Sheryl R. Allen Date: 1-30-07



Richland Laboratory  
Data Review Check List  
Hexavalent Chromium

Work Order Number(s): JLX88, JLN5		W05085		
Lab Sample Numbers or SDG:		J6L210132		
Method/Test/Parameter: Cr+6 in Water / RICH-WC-5003		Batch 6355287		
Review Item	Yes (✓)	No (✓)	N/A (✓)	2 <sup>nd</sup> Level Review (✓)
<b>A. Initial Calibration</b>				
1. Performed at required frequency with required number of levels?	✓			/
2. Correlation coefficient within QC limits?	✓			/
3. Initial calibration verification (ICV) analyzed immediately after calibration and results within QC limits?	✓			/
4. Initial calibration blank (ICB) analyzed immediately after ICV and concentrations of all parameters ≤ reporting limit?	✓			/
<b>B. Continuing Calibration</b>				
1. CCV analyzed at required frequency and all parameters within QC limits?	✓			/
2. CCB analyzed at required frequency and all results ≤ reporting limit?	✓			/
<b>C. Sample Analysis</b>				
1. Were any samples with concentrations above the linear range for any parameter diluted and reanalyzed?			✓	/
2. Were all sample holding times met?	✓			/
<b>D. QC Samples</b>				
1. All results for the preparation blank below limits?	✓			/
2. MS or MS/MSD recoveries within QC limits and %RPD (for MSD) acceptable?	✓			/
3. LCS percent recovery within QC limits and %RPD (for LCSD) acceptable?	✓			/
4. Analytical spikes within QC limits where applicable?			✓	/
5. ICP only: One serial dilution performed per SDG?			✓	/
6. ICP only: CRDL standard (CRI or CRA) analyzed at required frequency?			✓	/
7. ICP only: Interference check samples (ICSA, ICSAB) and HICAL analyzed at the required frequencies and within QC limits?			✓	/

Review Item	Yes (✓)	No (✓)	N/A (✓)	2 <sup>nd</sup> Level Review (✓)
<b>E. Other</b>			✓	
1. Are all nonconformances included and noted?				/
2. Is the correct date and time of analysis shown?	✓			/
3. Did the analyst sign and date the front page of the analytical run?	✓			/
4. Correct methodology used?	✓			/
5. Transcriptions checked?	✓			/
6. Calculations checked at minimum frequency?	✓			/
7. Units checked?	✓			/

Comments on any "No" response:

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Analyst: Heidi E. Muehlen

Date: 12/21/06

Second-Level Review: Joseph A. Adam

Date: 1-5-07

PNNL W6 L210129  
W05085  
due 02/02/07

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #  
**W07-012-150**  
Page 1 of 1

<b>Collector</b> Fluor Hanford K. 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> W07-012	<b>Sampling Origin</b> Hanford Site	<b>Purchase Order/Charge Code</b>		
<b>Project Title</b> RCRA, DECEMBER 2006	<b>Method of Shipment</b> Govt. Vehicle	<b>Ice Chest No.</b> SAWS 371	<b>Temp.</b>	
<b>Shipped To (Lab)</b> Severn Trent Incorporated, Richland	<b>Priority:</b> 45 Days	<b>Offsite Property No.</b>		

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

**SPECIAL INSTRUCTIONS** **Hold Time** Total Activity Exemption: Yes  No   
All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days.  
WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1LHY9		W	12-19-06	1258	1x20-mL P	Activity Scan	None
B1LHY9		W	↓	↓	1x4000-mL G/P	GAMMALL_GS: List-1 (9)	HNO3 to pH <2
B1LHY9		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
B1LHY9		W	↓	↓	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2
B1LHY9		W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1)	HNO3 to pH <2
JLXmq							

<b>Relinquished By</b> Fluor Hanford K. J. YOUNG <i>[Signature]</i>	<b>Date/Time</b> DEC 19 2006 1530	<b>Received By</b> <i>[Signature]</i>	<b>Date/Time</b> DEC 19 2006 1530	<b>Matrix *</b> 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
<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>Disposal Method (e.g., Return to customer, per lab procedure, used in process)</b>		<b>Disposed By</b>	<b>Date/Time</b>

PNNL 16L210129  
W05085  
due 02-02-07

## CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #  
**W07-012-126**  
Page 1 of 1

Collector <b>Fluor Hanford</b> <b>K. J. YOUNG</b>	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. W07-012	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title RCRA, DECEMBER 2006	<b>HNF-N-506 2</b>	Ice Chest No. Temp. <b>SAWS 371</b>
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol RCRA	Priority: 45 Days	Offsite Property No.

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

**SPECIAL INSTRUCTIONS** Hold Time Total Activity Exemption: Yes  No   
All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days.  
WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1LHV3		W	12-19-06	1025	1x20-mL P	Activity Scan	None
B1LHV3		W	↓	↓	1x4000-mL G/P	GAMMALL_GS: List-1 (9)	HNO3 to pH <2
B1LHV3		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
B1LHV3		W	↓	↓	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2
B1LHV3		W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1)	HNO3 to pH <2
<i>JLXMP</i>							

Relinquished By <b>Fluor Hanford</b> <b>K. J. YOUNG</b>	Print Sign <i>K. J. Young</i>	Date/Time <b>DEC 19 2006</b>	Received By <i>S. Smith</i>	Print Sign <i>S. Smith</i>	Date/Time <b>DEC 19 2006</b>		
Relinquished By	Date/Time	Received By	Date/Time	Matrix *			
Relinquished By	Date/Time	Received By	Date/Time	S = Soil	DS = Drum Solid		
Relinquished By	Date/Time	Received By	Date/Time	SE = Sediment	DI = Drum Liquid		
Relinquished By	Date/Time	Received By	Date/Time	SO = Solid	T = Tissue		
Relinquished By	Date/Time	Received By	Date/Time	ST = Sludge	WI = Wine		
Relinquished By	Date/Time	Received By	Date/Time	W = Water	L = Liquid		
Relinquished By	Date/Time	Received By	Date/Time	O = Oil	V = Vegetation		
Relinquished By	Date/Time	Received By	Date/Time	A = Air	X = Other		
<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: 12-19-06 1530

Client: P6W SDG #: W05085 NA  SAF #: W07-012 NA

Work Order Number: U6L210129 Chain of Custody # W07-012-126,150

Shipping Container ID: SAWS371 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  pH>9
11. Sample Location, Sample Collector Listed? \* Yes  No   
 \*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes  No
13. Description of anomalies (include sample numbers): N/A

Sample Custodian: D. Smith Date: 12-19-06 1530

Client Sample ID	Analysis Requested	Condition	Comments/Action

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

No action necessary; process as is.

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

Collector <i>J.C. HOOVER</i>	Contact/Requester Dot Stewart	Telephone No. 509-376-5056
SAF No. A07-012	Sampling Origin Hanford Site	MSIN FAX
Project Title LLWMA(1)-PA, DECEMBER 2006	<i>HNF-N-506-4</i>	Purchase Order/Charge Code
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Ice Chest No. <i>SAWS017</i> Temp.
Protocol Other	Priority: 45 Days	Bill of Lading/Air Bill No.
POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)		Offsite Property No.

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

All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days.

WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1LJT0		W	<i>12/19/06</i>	<i>1354</i>	1x20-mL P	Activity Scan	None
B1LJT0		W			2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
B1LJT0		W			1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
<del>B1LJT0</del>		<del>W</del>			<del>1x500-mL G/P</del>	<del>UTOT_KPA: Uranium (1)</del> <i>12-11-06 DP</i>	<del>HNO3 to pH &lt;2</del>
<i>JLXm9</i>							

Relinquished By <i>J.C. Hoover</i>	Print <i>J.C. Hoover</i>	Sign <i>J.C. Hoover</i>	Date/Time <i>1530</i>	Received By <i>J. Smith</i>	Print <i>J. Smith</i>	Sign <i>J. Smith</i>	Date/Time <i>1530</i>	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 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	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: 12-19-06 1530

Client: P6W SDG #: W05085 NA  SAF #: A07-012 NA

Work Order Number: UGL210130 Chain of Custody # A07-012-12

Shipping Container ID: SAW5017 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:  
 \_\_\_\_\_ tape  
 \_\_\_\_\_ custody seals  
 \_\_\_\_\_ hazard labels  
 appropriate samples labels
9. Samples are:  
 \_\_\_\_\_ in good condition  
 \_\_\_\_\_ broken  
 \_\_\_\_\_ leaking  
 \_\_\_\_\_ have air bubbles  
 (Only for samples requiring head space)
10. Sample pH taken? NA  pH < 2  pH > 2  pH > 9
11. Sample Location, Sample Collector Listed? \* Yes  No   
 \*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes  No
13. Description of anomalies (include sample numbers): N/A

Sample Custodian: S. Smith Date: 12-19-06 1530

Client Sample ID	Analysis Requested	Condition	Comments/Action

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

No action necessary; process as is.

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

PNNL 06L210131  
 W05085  
 Date 02-02-07

## CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **S07-012-40**  
 Page 1 of 1

Collector Fluor Hanford K. J. YOUNG	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. S07-012	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title SURV. DECEMBER 2006	HNF-N-506 2	Ice Chest No. Temp. SAWS 371
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol SURV	Priority: 45 Days	Offsite Property No.

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

**SPECIAL INSTRUCTIONS** Hold Time Total Activity Exemption: Yes  No   
 All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days.  
 WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1LBW9		W	12-19-06	1146	1x20-mL P	Activity Scan	None
B1LBW9		W	↓	↓	2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
JLXNM							

Relinquished By Fluor Hanford K. J. YOUNG	Print <i>K. J. Young</i>	Sign <i>K. J. Young</i>	Date/Time DEC 19 2006	1530	Received By J. Smith S. Smith	Print <i>J. Smith S. Smith</i>	Sign <i>J. Smith S. Smith</i>	Date/Time DEC 19 2006	1530	<b>Matrix *</b>
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 06L210131  
W05085  
due 02.02.07

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #  
**S07-012-102**  
Page 1 of 1

Collector <b>J.G. HOGAN</b>	Contact/Requester Dot Stewart	Telephone No. 509-376-5056	MSIN FAX
SAF No. S07-012	Sampling Origin Hanford Site	Purchase Order/Charge Code	
Project Title SURV. DECEMBER 2006	<b>HNF-N-506-4</b>	Ice Chest No. <b>SAWS 017</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**  
\*\* \*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

**SPECIAL INSTRUCTIONS** Hold Time Total Activity Exemption: Yes  No   
All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days.  
WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1LC05		W	12/19/06	1134	1x20-mL P	Activity Scan	None
B1LC05		W			2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
B1LC05		W			1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
<b>JLXNL</b>							

Relinquished By <i>J.G. Hogan</i> Print Sign <b>DEC 19 2006</b> Date/Time <b>1530</b>	Received By <i>S. Smith</i> Print Sign <b>12/19/06</b> Date/Time <b>1530</b>	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 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



# STL

### Sample Check-in List

Date/Time Received: 12-19-06 1530

Client: P6W SDG #: W05085 NA  SAF #: 507-012 NA

Work Order Number: 06L210131 Chain of Custody # 507-012-102,40

Shipping Container ID: SAW 5371  
SAW 5017 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  
 \_\_\_\_\_ custody seals  
 \_\_\_\_\_ hazard labels  
 \_\_\_\_\_ appropriate samples labels
9. Samples are:  
 \_\_\_\_\_ in good condition  
 \_\_\_\_\_ broken  
 \_\_\_\_\_ leaking  
 \_\_\_\_\_ have air bubbles  
 (Only for samples requiring head space)
10. Sample pH taken? NA  pH < 2  pH > 2  pH > 9
11. Sample Location, Sample Collector Listed? \* Yes  No   
 \*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes  No
13. Description of anomalies (include sample numbers): N/A

Sample Custodian: A. Smith Date: 12-19-06 1530

Client Sample ID	Analysis Requested	Condition	Comments/Action

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

[ ] No action necessary; process as is.

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

PNNL J6L210132  
W05085  
due 02-02-07

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #  
**107-007-34**  
Page 1 of 1

Collector FLUOR HANFORD M.R. WEIL	Contact/Requester Dot Stewart	Telephone No. 509-376-5056	MSIN	FAX
SAF No. 107-007	Sampling Origin Hanford Site	Purchase Order/Charge Code		
Project Title 100KR4IAM(1/2)-LOI NOVEMBER 2006	HNF-N-506 4	Ice Chest No. ERC-1	Temp.	
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.		
Protocol CERCLA	Priority: 45 Days	Offsite Property No.		

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

**SPECIAL INSTRUCTIONS** Hold Time Total Activity Exemption: Yes  No   
All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days.  
WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1L9C7 (F)		W	12-20-06	1055	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	Cool 4C
B1L9C9		W	↓	↓	1x20-mL P	Activity Scan	None
<i>J6L21</i>							
<i>RUP</i>							
<i>12-20-06</i>							

Relinquished By FLUOR HANFORD M.R. WEIL	Print <i>M.R. Weil</i>	Sign <i>M.R. Weil</i>	Date/Time DEC 20 2006	1435	Received By <i>S. Smith</i>	Print <i>S. Smith</i>	Sign <i>S. Smith</i>	Date/Time DEC 20 2006	1435	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					



# STL

### Sample Check-in List

Date/Time Received: 12-20-06 1435

Client: POW SDG #: W05085 NA  SAF #: I07-007 NA

Work Order Number: U6L210132 Chain of Custody # I07-007-34

Shipping Container ID: ERC-1 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:
  - \_\_\_\_\_ tape
  - \_\_\_\_\_ custody seals
  - \_\_\_\_\_ hazard labels
  - \_\_\_\_\_ appropriate samples labels
9. Samples are:
  - \_\_\_\_\_ in good condition
  - \_\_\_\_\_ broken
  - \_\_\_\_\_ leaking
  - \_\_\_\_\_ have air bubbles
 (Only for samples requiring head space)
10. Sample pH taken? NA  pH<2  pH>2  pH>9
11. Sample Location, Sample Collector Listed? \* Yes  No   
\*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes  No
13. Description of anomalies (include sample numbers): N/A

Sample Custodian: S. Smith Date: 12-20-06 1435

Client Sample ID	Analysis Requested	Condition	Comments/Action

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

No action necessary; process as is.

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

<b>Collector</b> D.P. CONNOLLY	<b>Contact/Requester</b> Dot Stewart	<b>Telephone No.</b> 509-376-5056
<b>SAF No.</b> S07-011	<b>Sampling Origin</b> Hanford Site	<b>MSIN</b> FAX
<b>Project Title</b> SURV. NOVEMBER 2006	<b>Purchase Order/Charge Code</b>	<b>Ice Chest No.</b> 51245-115
<b>Shipped To (Lab)</b> Severn Trent Incorporated, Richland	<b>Method of Shipment</b> Govt. Vehicle	<b>Temp.</b>
<b>Protocol</b> SURV	<b>Priority:</b> 45 Days	<b>Bill of Lading/Air Bill No.</b>
<b>Offsite Property No.</b>		

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

**SPECIAL INSTRUCTIONS**      **Hold Time**      **Total Activity Exemption:** Yes  No   
All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days.  
WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1L3K1		W	12-20-06	0821	1x20-mL P	Activity Scan	None
B1L3K1		W			3x1000-mL G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)	HNO3 to pH <2
JLODF							

Relinquished By <b>D.P. CONNOLLY</b> <i>[Signature]</i>	Date/Time DEC 20 2006	Received By <i>[Signature]</i>	Date/Time DEC 20 2006	<b>Matrix *</b> 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



# STL

### Sample Check-in List

Date/Time Received: 12-20-06 1355

Client: PGW SDG #: W05085 NA  SAF #: 807-011 NA

Work Order Number: UGL210205 Chain of Custody # 807-011-344

Shipping Container ID: SAWS 115 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: \_\_\_\_\_ tape \_\_\_\_\_ hazard labels  
\_\_\_\_\_ custody seals \_\_\_\_\_ appropriate samples labels
9. Samples are: \_\_\_\_\_ in good condition \_\_\_\_\_ leaking  
\_\_\_\_\_ broken \_\_\_\_\_ have air bubbles  
(Only for samples requiring head space)
10. Sample pH taken? NA  pH < 2  pH > 2  pH > 9
11. Sample Location, Sample Collector Listed? \* Yes  No   
\*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes  No
13. Description of anomalies (include sample numbers): N/A

Sample Custodian: S. Smith Date: 12-20-06 1355

Client Sample ID	Analysis Requested	Condition	Comments/Action

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

No action necessary; process as is.

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

PNNL 26210337  
W05085  
due 02-02-07

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #  
**S07-011-354**  
Page 1 of 1

Collector FLUOR HANFORD M.R. WEIL	Contact/Requester Dot Stewart	Telephone No. 509-376-3056	MSIN FAX
SAF No. S07-011	Sampling Origin Hanford Site	Purchase Order/Charge Code	
Project Title SURV. NOVEMBER 2006	HNF-N-S06 4	Ice Chest No. ERC-1	Temp.
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.	
Protocol SURV	Priority: 45 Days	Offsite Property No.	

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

**SPECIAL INSTRUCTIONS** Hold Time Total Activity Exemption: Yes  No   
All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days.  
WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
<del>B1L3R0</del>		W			1x1000-mL P	906.0_H3_LSC: Tritium (1) 11-1-06 OF	None
B1L3R0		W	12-20-06	1001	1x20-mL P	Activity Scan	None
B1L3R0		W	I	I	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
<i>JL IAQ</i>							
<i>DF</i>							
<i>12-20-06</i>							

Relinquished By FLUOR HANFORD M.R. WEIL	Print <i>M. Weil</i>	Sign <i>[Signature]</i>	Date/Time DEC 20 2006	Received By Smith S. Smith	Print <i>S. Smith</i>	Sign <i>[Signature]</i>	Date/Time DEC 20 2006	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	
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: 12.20.06 1435

Client: PBW SDG #: W05085 NA  SAF #: 807-011 NA

Work Order Number: U6L210337 Chain of Custody # 807-011-354

Shipping Container ID: ERC-1 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:
  - \_\_\_\_\_ tape
  - \_\_\_\_\_ custody seals
  - \_\_\_\_\_ hazard labels
  - appropriate samples labels
9. Samples are:
  - in good condition
  - \_\_\_\_\_ broken
  - \_\_\_\_\_ leaking
  - \_\_\_\_\_ have air bubbles
  - (Only for samples requiring head space)
10. Sample pH taken? NA  pH < 2  pH > 2  pH > 9
11. Sample Location, Sample Collector Listed? \* Yes  No   
\*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes  No
13. Description of anomalies (include sample numbers): N/A

Sample Custodian: A. Smith Date: 12.20.06 1435

Client Sample ID	Analysis Requested	Condition	Comments/Action

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

No action necessary; process as is.

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





PNNL J6L210338  
W05085  
due 02-02-07

## CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **S07-010-51**

Page 1 of 1

Collector Ft. of Hanford K. J. YOUNG	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. S07-010	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title SURV. OCTOBER 2006	HNF-M-506 2	Ice Chest No. SML 209 Temp.
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol SURV	Priority: 45 Days	Offsite Property No.

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

**SPECIAL INSTRUCTIONS** Hold Time Total Activity Exemption: Yes  No   
 All Labs except WSCF: Batch all PNNL GW samples submitted under A, G, I, S, and W 07 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
B1KPR5		W	12-20-06	1205	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1KPR5		W			1x20-mL P	Activity Scan	None
B1KPR5		W			1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1KPR5		W			2x1000-mL G/P	C14_LSC: C-14 (1)	None
B1KPR5		W			1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
JL1CL							

Relinquished By Ft. of Hanford K. J. YOUNG	Print	Sign	Date/Time DEC. 20 2006	1435	Received By S. Smith	Print	Sign	Date/Time DEC 20 2006	1435	<b>Matrix *</b>
Relinquished By	Date/Time	Received By	Date/Time		Relinquished By	Date/Time	Received By	Date/Time		S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By	Date/Time	Received By	Date/Time		Relinquished By	Date/Time	Received By	Date/Time		DS = Drum Solid DL = Drum Liquid T = Tissue WI = Wine L = Liquid V = Vegetation 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: 12-20-06 1435

Client: PGW SDG #: W05085 NA [ ] SAF #: 807-010 NA [ ]

Work Order Number: UGL 210338 Chain of Custody # 807-010-70,69,51

Shipping Container ID: SML209 Air Bill # W/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 [ ] Vermiculite/packing materials is NA [  ] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 3
7. Sample holding times exceeded? NA [  ] Yes [ ] No [ ]
8. Samples have:
  - \_\_\_\_\_ tape
  - \_\_\_\_\_ custody seals
  - \_\_\_\_\_ hazard labels
  - appropriate samples labels
9. Samples are:
  - in good condition
  - \_\_\_\_\_ broken
  - \_\_\_\_\_ leaking
  - \_\_\_\_\_ have air bubbles
  - (Only for samples requiring head space)
10. Sample pH taken? NA [ ] pH < 2 [  ] pH > 2 [  ] pH > 9 [ ]
11. Sample Location, Sample Collector Listed? \* Yes [  ] No [ ]  
\*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [  ]
13. Description of anomalies (include sample numbers): N/A

Sample Custodian: S. Smith Date: 12-20-06 1435

Client Sample ID	Analysis Requested	Condition	Comments/Action

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

[ ] No action necessary; process as is.

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



Collector Fluor Hanford K. J. YOUNG	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. I07-002	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title 100KR4IAM(1/2)-LOI OCTOBER 2006	<i>HNF-N-506 2</i>	Ice Chest No. <i>SMC 209</i> Temp.
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol CERCLA	Priority: 45 Days	Offsite Property No.

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

**SPECIAL INSTRUCTIONS** Hold Time Total Activity Exemption: Yes  No   
Batch all PNNL GW samples submitted under "W", "S", "T", "A" or "G" 07 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
B1KM41		W	<i>12-20-06</i>	<i>1038</i>	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2
B1KM41		W	↓	↓	1x20-mL P	Activity Scan	None
B1KM41		W	↓	↓	3x1000-mL G/P	GAMMA_GS: List-1 (10)	HNO3 to pH <2
B1KM41		W	↓	↓	3x1000-mL G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)	HNO3 to pH <2
						<i>JL1CQ</i>	

Relinquished By Fluor Hanford K. J. YOUNG <i>[Signature]</i>	Received By <i>[Signature]</i>	Date/Time <b>DEC 20 2006</b>
Relinquished By	Received By	Date/Time
Relinquished By	Received By	Date/Time
Relinquished By	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

Matrix \*

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



# STL

### Sample Check-in List

Date/Time Received: 12-20-06 1435

Client: SS 1435 POW SDG #: W05085 NA  SAF #: I07-002 NA

Work Order Number: J6L21034 Chain of Custody # I07-002-22, 23

Shipping Container ID: SMC209 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  Vermiculite/packing materials is NA  Wet  Dry
6. Number of samples in shipping container: 2
7. Sample holding times exceeded? NA  Yes  No
8. Samples have: \_\_\_\_\_ tape \_\_\_\_\_ hazard labels  
\_\_\_\_\_ custody seals \_\_\_\_\_ appropriate samples labels
9. Samples are: \_\_\_\_\_ in good condition \_\_\_\_\_ leaking  
\_\_\_\_\_ broken \_\_\_\_\_ have air bubbles  
(Only for samples requiring head space)
10. Sample pH taken? NA  pH < 2  pH > 2  pH > 9
11. Sample Location, Sample Collector Listed? \* Yes  No   
\*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes  No
13. Description of anomalies (include sample numbers): N/A

Sample Custodian: S. Smith Date: 12-20-06 1435

Client Sample ID	Analysis Requested	Condition	Comments/Action

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

No action necessary; process as is.

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

PNNL 06L220175  
 W05085  
 due 02-05-07

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **I07-009-11**  
 Page 1 of 1

Collector Fluor Hanford L.A. Vader	Contact/Requester Dot Stewart	Telephone No. 509-376-5056	MSIN FAX
SAF No. I07-009	Sampling Origin Hanford Site	Purchase Order/Charge Code	
Project Title 2UPI-IOL NOVEMBER 2006	HNF-N-506 4	Ice Chest No. ECL1	Temp.
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.	
Protocol SURV	Priority: 45 Days	Offsite Property No.	

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

**SPECIAL INSTRUCTIONS Hold Time** Total Activity Exemption: Yes  No   
 All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days.  
 WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1L1V8		W	12-21-06	0928	1x20-mL P	Activity Scan	None
B1L1V8		W			2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
B1L1V8		W			2x1000-mL G/P	C14_LSC: C-14 (1)	None
B1L1V8		W			1x4000-mL G/P	GAMMALL_GS: List-1 (9)	HNO3 to pH <2
B1L1V8		W			1x1000-mL G/P	NP237_LLE_PLATE_AEA:Np-237(1)	HNO3 to pH <2
B1L1V8		W			3x1000-mL G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)	HNO3 to pH <2
<i>JL2HN</i>							
<i>DW</i>							
<i>12-21-06</i>							

Relinquished By Fluor Hanford L.A. Vader	Print <i>L.A. Vader</i>	Sign <i>[Signature]</i>	Date/Time DEC 21 2006 13:50	Received By DAVID HARBINSON	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time DEC 21 2006 13:50	<b>Matrix *</b> S = Soil DS = Drum Solid SE = Sediment DL = 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	Received By	Date/Time	Date/Time		
Relinquished By	Date/Time	Received By	Date/Time	Received By	Date/Time	Date/Time		
Relinquished By	Date/Time	Received By	Date/Time	Received By	Date/Time	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: 12.21.06 1350

Client: P6W SDG #: W05085 NA  SAF #: I07-009 NA

Work Order Number: J6L220175 Chain of Custody # I07-009-11

Shipping Container ID: ERC-1 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: \_\_\_\_\_ tape \_\_\_\_\_ hazard labels  
\_\_\_\_\_ custody seals \_\_\_\_\_ appropriate samples labels
9. Samples are: \_\_\_\_\_ in good condition \_\_\_\_\_ leaking  
\_\_\_\_\_ broken \_\_\_\_\_ have air bubbles  
(Only for samples requiring head space)
10. Sample pH taken? NA  pH<2  pH>2  pH>9
11. Sample Location, Sample Collector Listed? \* Yes  No   
\*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes  No
13. Description of anomalies (include sample numbers): N/A

Sample Custodian: DH Date: 12.21.06 1350

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: 12-21-06 14:05

Client: POW SDG #: W05D85 NA [ ] SAF #: I07-016 NA [ ]

Work Order Number: U6L220179 Chain of Custody # I07-016-9

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

Sample Custodian: DA Date: 12-21-06 1405

Client Sample ID	Analysis Requested	Condition	Comments/Action

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

[ ] No action necessary; process as is.

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

PNNL *Vol 220182*  
*W05085*  
*Date 02-05-07*

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **W07-011-54**  
 Page 1 of 1

Collector <b>Fluor Hanford</b> <b>D. P. CONNOLLY</b>	Contact/Requester <b>Dot Stewart</b>	Telephone No. 509-376-5056	MSIN FAX
SAF No. W07-011	Sampling Origin Hanford Site	Purchase Order/Charge Code	
Project Title RCRA, NOVEMBER 2006	<i>HWF-N-506-3</i>	Ice Chest No. <i>ROSS</i>	Temp.
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.	
Protocol RCRA	Priority: 45 Days	Offsite Property No.	

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

**SPECIAL INSTRUCTIONS** **Hold Time** Total Activity Exemption: Yes  No   
 All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days.  
 WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1L775		W	<i>12-21-06</i>	<i>1000</i>	1x20-mL P	Activity Scan	None
B1L775		W	<i>/</i>	<i>/</i>	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
B1L775		W	<i>/</i>	<i>/</i>	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2
B1L775		W	<i>/</i>	<i>/</i>	1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1)	HNO3 to pH <2
B1L775		W	<i>/</i>	<i>/</i>	1x4000-mL G/P	GAMMALL_GS: List-1 (9)	HNO3 to pH <2
B1L775		W	<i>/</i>	<i>/</i>	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
						<i>JL2JC</i>	

Relinquished By <b>Fluor Hanford</b> <b>D. P. CONNOLLY</b>	Print <i>[Signature]</i> Sign	Date/Time <b>DEC 21 2006</b> <i>14:25</i>	Received By <b>DAVID HANBIRSON</b>	Print <i>[Signature]</i> Sign	Date/Time <b>DEC 21 2006</b> <i>14:25</i>	<b>Matrix *</b> 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	



STL

Sample Check-in List

Date/Time Received: 12.21.06 1425

Client: PGW SDG #: W05085 NA  SAF #: W07-011 NA

Work Order Number: 06L220187 Chain of Custody # W07-011-54

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

Sample Custodian: DH Date: 12.21.06 1425

Client Sample ID	Analysis Requested	Condition	Comments/Action

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

No action necessary; process as is.

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

PNNL J6L 220185  
W05085  
Date 02-05-07

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #  
**S07-012-134**  
Page 1 of 1

Collector <b>R. T. SICKLE</b>	Contact/Requester Dot Stewart	Telephone No. 509-376-5056	MSIN FAX
SAF No. S07-012	Sampling Origin Hanford Site	Purchase Order/Charge Code	
Project Title SURV. DECEMBER 2006	<b>HWF-N-576 3</b>	Ice Chest No. <b>SANOS-115</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**  
\*\* \*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

**SPECIAL INSTRUCTIONS** Hold Time Total Activity Exemption: Yes  No   
All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days.  
WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1LBY1		W	12-21-06	1145	1x20-mL P	Activity Scan	None
B1LBY1		W	↓	↓	2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
B1LBY1		W	↓	↓	1x4000-mL G/P	GAMMALL_GS: List-1 (9)	HNO3 to pH <2
B1LBY1		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
<b>JL2L4</b>							

Relinquished By <b>R. T. SICKLE</b>	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time <b>DEC 21 2006</b>	Received By <b>DAVID HARBINSON</b>	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time <b>DEC 21 2006</b>	<b>Matrix *</b> S = Soil DS = Drum Solid SF = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WL = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By	Date/Time	Received By	Date/Time	Received By	Date/Time	Date/Time		
Relinquished By	Date/Time	Received By	Date/Time	Received By	Date/Time	Date/Time		
Relinquished By	Date/Time	Received By	Date/Time	Received By	Date/Time	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 *J6L220185*  
*W05085*  
 Fluor Hanford *Nov 03.05 .07*  
 R.T. SICKLE

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #  
**S07-012-128**  
 Page 1 of 1

Collector R.T. SICKLE	Contact/Requester Dot Stewart	Telephone No. 509-376-5056	MSIN	FAX
SAF No. S07-012	Sampling Origin Hanford Site	Purchase Order/Charge Code		
Project Title SURV. DECEMBER 2006	<i>HNF-N-5063</i>	Ice Chest No. <i>SAMUS-115</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**  
 \*\* \*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

**SPECIAL INSTRUCTIONS** Hold Time Total Activity Exemption: Yes  No   
 All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days.  
 WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1LBY4		W	<i>12-21-06</i>	<i>1054</i>	1x20-mL P	Activity Scan	None
B1LBY4		W			2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
B1LBY4		W			1x4000-mL G/P	GAMMALL_GS: List-1 (9)	HNO3 to pH <2
B1LBY4		W			1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
						<i>JL2LO</i>	

Relinquished By Fluor Hanford R.T. SICKLE	Print <i>[Signature]</i>	Sign	Date/Time <i>14/25</i> DEC 21 2006	Received By DAVID HANBINSKI	Print <i>[Signature]</i>	Sign	Date/Time <i>14/25</i> DEC 21 2006	Matrix *
Relinquished By	Date/Time	Received By	Date/Time	Received 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	Received By	Date/Time	Received By	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time	Received By	Date/Time	Received By	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time	Received 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
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# STL

### Sample Check-in List

Date/Time Received: 12-21-06 14:25

Client: PGW SDG #: W05085 NA  SAF #: 807-012 NA

Work Order Number: UGL220185 Chain of Custody # 807-012-128, 134

Shipping Container ID: SAWS115 Air Bill # NIA

1. Custody Seals on shipping container intact? NA  Yes  No
2. Custody Seals dated and signed? NA  Yes  No
3. Chain of Custody record present? Yes  No
4. Cooler temperature: \_\_\_\_\_ NA  5. Vermiculite/packing materials is NA  Wet  Dry
6. Number of samples in shipping container: 2
7. Sample holding times exceeded? NA  Yes  No
8. Samples have: \_\_\_\_\_ tape \_\_\_\_\_ hazard labels  
\_\_\_\_\_ custody seals \_\_\_\_\_ appropriate samples labels
9. Samples are: \_\_\_\_\_ in good condition \_\_\_\_\_ leaking  
\_\_\_\_\_ broken \_\_\_\_\_ have air bubbles  
(Only for samples requiring head space)
10. Sample pH taken? NA  pH < 2  pH > 2  pH > 9
11. Sample Location, Sample Collector Listed? \* Yes  No   
\*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes  No
13. Description of anomalies (include sample numbers): NIA

Sample Custodian: DH Date: 12-21-06 1425

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>R. T. SICKLE</b>	Contact/Requester Dot Stewart	Telephone No. <b>509-376-5056</b> MSIN FAX
SAF No. A07-012	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title LLWMA(1)-PA, DECEMBER 2006	<i>HNF-N-576-3</i>	Ice Chest No. <i>SAWS 115</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**  
 \*\* \*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

**SPECIAL INSTRUCTIONS** Hold Time Total Activity Exemption: Yes  No   
 All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days.  
 WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1LJT6		W	<i>12-21-06</i>	<i>1240</i>	1x20-mL P	Activity Scan	None
B1LJT6		W			2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	None
B1LJT6		W			1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
B1LJT6		W			1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2
B1LJT6		W			1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
<i>TL2PL</i>							

Relinquished By <b>Fluor Hanford</b> <b>R. T. SICKLE</b>	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time <i>12:25</i>	Received By <b>DAVID HARBISE</b>	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time <i>12:25</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	
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: 12.21.06 1425

Client: PBW SDG #: W05085 NA  SAF #: A07-012 NA

Work Order Number: U6L220194 Chain of Custody # A07-012-24

Shipping Container ID: SAWS115 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:
  - \_\_\_\_\_ tape
  - \_\_\_\_\_ custody seals
  - \_\_\_\_\_ hazard labels
  - \_\_\_\_\_ / appropriate samples labels
9. Samples are:
  - \_\_\_\_\_ / in good condition
  - \_\_\_\_\_ broken
  - \_\_\_\_\_ leaking
  - \_\_\_\_\_ have air bubbles
  - (Only for samples requiring head space)
10. Sample pH taken? NA  pH < 2  pH > 2  pH > 9
11. Sample Location, Sample Collector Listed? \* Yes  No   
\*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes  No
13. Description of anomalies (include sample numbers): N/A

Sample Custodian: S. Smith Date: 12.21.06 1425

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: 12.22.06 15:00

Client: P6W SDG #: W05085 NA  SAF #: A07-012 NA

Work Order Number: J6L280244 Chain of Custody # A07-012-1

Shipping Container ID: SAWS115 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:
  - \_\_\_\_\_ tape
  - \_\_\_\_\_ custody seals
  - \_\_\_\_\_ hazard labels
  - appropriate samples labels
9. Samples are:
  - in good condition
  - \_\_\_\_\_ broken
  - \_\_\_\_\_ leaking
  - \_\_\_\_\_ have air bubbles
  - (Only for samples requiring head space)
10. Sample pH taken? NA  pH<2  pH>2  pH>9
11. Sample Location, Sample Collector Listed? \* Yes  No   
\*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes  No
13. Description of anomalies (include sample numbers): N/A

Sample Custodian: S. Smith Date: 12.22.06 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 \_\_\_\_\_