

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: 33340

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W04974	W06-008	B1K331	J6H030376-1	JALPC1AA	9JALPC10	6227361
		B1K2R6	J6H030376-2	JALPJ1AA	9JALPJ10	6227364
		B1K2R6	J6H030376-2	JALPJ1AC	9JALPJ10	6227361
		B1K319	J6H030376-3	JALPR1AA	9JALPR10	6227361
		B1K2R2	J6H030376-4	JALPW1AA	9JALPW10	6227364
		B1K2R2	J6H030376-4	JALPW1AC	9JALPW10	6227366
		B1K2R2	J6H030376-4	JALPW1AD	9JALPW10	6227361
		B1K339	J6H040202-1	JAM8C1AA	9JAM8C10	6227361
		B1K323	J6H040202-2	JAM8J1AA	9JAM8J10	6227361
		B1K315	J6H040202-3	JAM8P1AA	9JAM8P10	6227361
		B1K2N6	J6H040202-4	JAM8R1AA	9JAM8R10	6227364
		B1K2N6	J6H040202-4	JAM8R1AC	9JAM8R10	6227361
		B1K2N7	J6H040202-5	JAM8I1AA	9JAM8I10	6227364
		B1K2N7	J6H040202-5	JAM8I1AC	9JAM8I10	6227361
	W06-006	B1JBC5	J6H070163-1	JARMA1AA	9JARMA10	6227361

Comments:

Report Nbr: 33340

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH	
W04974	W06-008	B1K311	J6H070164-1	JARMG1AA	9JARMG10	6227361	
		B1K2V2	J6H070164-2	JARMN1AA	9JARMN10	6227364	
		B1K2V2	J6H070164-2	JARMN1AC	9JARMN10	6227367	
		B1K2V2	J6H070164-2	JARMN1AD	9JARMN10	6227361	
		B1K2V1	J6H070164-3	JARMW1AA	9JARMW10	6227364	
		B1K2V1	J6H070164-3	JARMW1AC	9JARMW10	6227367	
		B1K2V1	J6H070164-3	JARMW1AD	9JARMW10	6227361	
	I06-046	W06-008	B1JKP6	J6H070209-1	JATC91AA	9JATC910	6227369
			B1JKP5	J6H070209-2	JATDA1AA	9JATDA10	6227369
	W06-008	W06-008	B1K281	J6H070210-1	JATDH1AA	9JATDH10	6227364
			B1K281	J6H070210-1	JATDH1AD	9JATDH10	6227366
			B1K281	J6H070210-1	JATDH1AE	9JATDH10	6227361
			B1K281	J6H070210-1	JATDH1AF	9JATDH10	6227371
			B1K281	J6H070210-1	JATDH2AC	9JATDH20	6242202
			B1K284	J6H070210-2	JATDQ1AA	9JATDQ10	6227364
			B1K284	J6H070210-2	JATDQ1AC	9JATDQ10	6227372
			B1K284	J6H070210-2	JATDQ1AE	9JATDQ10	6227366
			B1K284	J6H070210-2	JATDQ1AF	9JATDQ10	6227361
			B1K284	J6H070210-2	JATDQ1AG	9JATDQ10	6227371
			B1K284	J6H070210-2	JATDQ2AD	9JATDQ20	6242202
			B1K285	J6H070210-3	JATDV1AA	9JATDV10	6227364
			B1K285	J6H070210-3	JATDV1AC	9JATDV10	6227372
			B1K285	J6H070210-3	JATDV1AE	9JATDV10	6227366
			B1K285	J6H070210-3	JATDV1AF	9JATDV10	6227361
			B1K285	J6H070210-3	JATDV1AG	9JATDV10	6227371
			B1K285	J6H070210-3	JATDV2AD	9JATDV20	6242202

Comments:

Report Nbr: 33340

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W04974	W06-008	B1K226	J6H070210-4	JATD01AA	9JATD010	6227364
		B1K226	J6H070210-4	JATD01AC	9JATD010	6227372
		B1K226	J6H070210-4	JATD01AE	9JATD010	6227366
		B1K226	J6H070210-4	JATD01AF	9JATD010	6227361
		B1K226	J6H070210-4	JATD01AG	9JATD010	6227371
		B1K226	J6H070210-4	JATD02AD	9JATD020	6242202

Comments:

STL Richland
2800 George Washington Way
Richland, WA 99354

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

Certificate of Analysis

Pacific Northwest National Laboratories
Sigma V Building
Richland, WA 99352

September 26, 2006

Attention: Dot Stewart

SAF Number	:	W06-008, W06-006, I06-046
Date SDG Closed	:	August 14, 2006
Number of Samples	:	Nineteen (19)
Sample Type	:	Water
SDG Number	:	W04974
Data Deliverable	:	45-Day / Summary

CASE NARRATIVE

I. Introduction

Between August 3, 2006 and August 7, 2006, nineteen water samples were received at STL Richland (STLR) for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Pacific Northwest National Laboratories (PGW) specific IDs:

<u>PGW ID#</u>	<u>STLR ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
B1K331	JALPC	WATER	8/3/06
B1K2R6	JALPJ	WATER	8/3/06
B1K319	JALPR	WATER	8/3/06
B1K2R2	JALPW	WATER	8/3/06
B1K339	JAM8C	WATER	8/3/06
B1K323	JAM8J	WATER	8/3/06
B1K315	JAM8P	WATER	8/3/06
B1K2N6	JAM8R	WATER	8/3/06
B1K2N7	JAM8I	WATER	8/3/06
B1JBC5	JARMA	WATER	8/3/06
B1K311	JARMG	WATER	8/4/06
B1K2V2	JARMN	WATER	8/4/06
B1K2V1	JARMW	WATER	8/4/06

B1JKP6	JATC9	WATER	8/7/06
B1JKP5	JATDA	WATER	8/7/06
B1K281	JATDH	WATER	8/7/06
B1K284	JATDQ	WATER	8/7/06
B1K285	JATDV	WATER	8/7/06
B1K226	JATD0	WATER	8/7/06

II. Sample Receipt

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

III. Analytical Results/Methodology

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

The requested analyses were:

Gas Proportional Counting

Gross Alpha by method RICH-RC-5014

Gross Beta by method RICH-RC-5014

Strontium-90 by method RICH-RC-5006

Gamma Spectroscopy

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

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

Liquid Scintillation Counting

Technetium-99 by TEVA method RICH-RC-5065

Tritium by method RICH-RC-5007

Laser Induced Phosphorimetry

Total Uranium by method RICH-RC-5058

IV. Quality Control

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

QC and sample results are reported in the same units.

V. Comments

Gas Proportional Counting

Gross Alpha by method RICH-RC-5014:

The LCS, batch blank, samples and sample duplicate (B1K284) results are within contractual requirements.

Gross Beta by method RICH-RC-5014:

The original analysis and its recount had a low LCS. The samples were reanalyzed. Reduced volumes were analyzed based on an elevated screen results for samples B1K226, B1K281, B1K285 and B1K285 DUP. Samples B1K226 and B1K281 do not meet CRDL but have results greater than the MDA which is greater than the CRDL. Except as noted the LCS, batch blank, samples and sample duplicate (B1K285) results are within contractual requirements.

Strontium-90 by method RICH-RC-5006

The LCS, batch blank, samples and sample duplicate (B1JKP6) results are within contractual requirements.

Gamma Spectroscopy

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

The LCS, batch blank, samples and sample duplicate (B1K285) results are within contractual requirements.

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

The iodine 129 analysis was not completed at the time of reporting.

Liquid Scintillation Counting

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

The LCS, batch blank, samples, sample duplicate (B1JBC5), and sample matrix spike (B1K331) results are within contractual requirements.

Tritium by method RICH-RC-5007:

The LCS, batch blank, samples and sample duplicate (B1K2N7) results are within contractual requirements.

Total Uranium

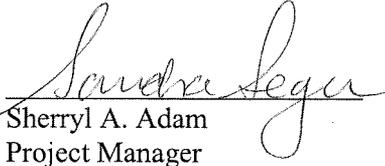
Total Uranium by method RICH-RC-5058:

The LCS, batch blank, samples, sample duplicate (B1K281), and sample matrix spike (B1K284) results are within contractual requirements.

Pacific Northwest National Laboratories
September 26, 2006

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

for

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

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or STL Richland.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) <i>u_c- Combined Uncertainty.</i>	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, <i>u_c the combined uncertainty</i> . The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or STL Richland "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. $Lc = (1.645 * \text{Sqrt}(2 * (\text{BkgrndCnt} / \text{BkgrndCntMin}) / \text{SCntMin})) * (\text{ConvFct} / (\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$. 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.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. $MDC = (4.65 * \text{Sqrt}((\text{BkgrndCnt} / \text{BkgrndCntMin}) / \text{SCntMin}) + 2.71 / \text{SCntMin}) * (\text{ConvFct} / (\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$. For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the Work Order Number.
RER	The equation Replicate Error Ratio = $(S-D) / [\text{sqrt}(\text{TPUs}^2 + \text{TPUd}^2)]$ 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.
SDG	Sample Delivery Group Number assigned by the Client or assigned by STL Richland upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

9/26/2006 1:28:24 PM

STL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 33340 File Name: h:\Reportdb\edd\Fead\IVRad\W04974.Edd, h:\Reportdb\edd\Fead\IVRad\33340.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:				
9JALPC10	B1K331		MW6-SBB-A1	W06-008	W04974					08/03/2006 12:09				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6227361	TC-99	14133-76-7	1.95E+02	pCi/L	8.5E+00	1.9E+01		9.64E+00	100.0	TC99_ETVDSK_LS	1.253E-01	L	09/13/2006 04:07	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9JALPJ10	B1K2R6		MW6-SBB-A1	W06-008	W04974					08/03/2006 09:55				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6227364	H-3	10028-17-8	1.21E+04	pCi/L	3.8E+02	6.5E+02		3.07E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/17/2006 03:29	I
6227361	TC-99	14133-76-7	3.37E+03	pCi/L	3.2E+01	2.4E+02		9.64E+00	100.0	TC99_ETVDSK_LS	1.26E-01	L	09/13/2006 04:07	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9JALPR10	B1K319		MW6-SBB-A1	W06-008	W04974					08/03/2006 11:24				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6227361	TC-99	14133-76-7	2.70E+02	pCi/L	9.7E+00	2.4E+01		9.63E+00	100.0	TC99_ETVDSK_LS	1.258E-01	L	09/13/2006 04:07	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9JALPW10	B1K2R2		MW6-SBB-A1	W06-008	W04974					08/03/2006 08:40				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6227364	H-3	10028-17-8	6.07E+03	pCi/L	2.8E+02	4.0E+02		3.06E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/17/2006 04:51	I
6227366	BE-7	13966-02-4	-8.89E+00	pCi/L	1.5E+01	1.5E+01	U	2.48E+01		GAMMALL_GS	2.0002E+00	L	08/26/2006 09:43	I
6227366	CO-60	10198-40-0	2.20E+01	pCi/L	6.0E+00	6.0E+00		3.82E+00		GAMMALL_GS	2.0002E+00	L	08/26/2006 09:43	I
6227366	CS-134	13967-70-9	1.00E+00	pCi/L	1.9E+00	1.9E+00	U	3.67E+00		GAMMALL_GS	2.0002E+00	L	08/26/2006 09:43	I
6227366	CS-137	10045-97-3	1.18E-01	pCi/L	1.6E+00	1.6E+00	U	3.01E+00		GAMMALL_GS	2.0002E+00	L	08/26/2006 09:43	I
6227366	EU-152	14683-23-9	-5.67E-01	pCi/L	3.7E+00	3.7E+00	U	6.65E+00		GAMMALL_GS	2.0002E+00	L	08/26/2006 09:43	I
6227366	EU-154	15585-10-1	3.08E+00	pCi/L	5.1E+00	5.1E+00	U	1.06E+01		GAMMALL_GS	2.0002E+00	L	08/26/2006 09:43	I
6227366	EU-155	14391-16-3	-1.43E+00	pCi/L	3.9E+00	3.9E+00	U	6.70E+00		GAMMALL_GS	2.0002E+00	L	08/26/2006 09:43	I
6227366	K-40	13966-00-2	-3.59E+01	pCi/L	3.4E+01	3.4E+01	U	6.70E+01		GAMMALL_GS	2.0002E+00	L	08/26/2006 09:43	I
6227366	RU-106	13967-48-1	-5.28E+00	pCi/L	1.4E+01	1.4E+01	U	2.45E+01		GAMMALL_GS	2.0002E+00	L	08/26/2006 09:43	I
6227366	SB-125	14234-35-6	1.46E-01	pCi/L	4.1E+00	4.1E+00	U	7.38E+00		GAMMALL_GS	2.0002E+00	L	08/26/2006 09:43	I
6227361	TC-99	14133-76-7	5.74E+04	pCi/L	1.3E+02	4.1E+03		9.69E+00	100.0	TC99_ETVDSK_LS	1.247E-01	L	09/13/2006 04:07	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				

9/26/2006 1:28:25 PM

STL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 33340 File Name: h:\Reportdb\ledd\FeadIV\Rad\W04974.Edd, h:\Reportdb\ledd\FeadIV\Rad\33340.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:				
9JAM8110	B1K2N7		MW6-SBB-A1	W06-008	W04974					08/03/2006 08:46				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6227364	H-3	10028-17-8	1.34E+04	pCi/L	3.9E+02	7.0E+02		3.05E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/17/2006 07:35	I
6227361	TC-99	14133-76-7	7.11E+03	pCi/L	4.6E+01	5.1E+02		9.78E+00	100.0	TC99_ETVDSK_LS	1.256E-01	L	09/13/2006 04:07	I
9JAM8C10	B1K339		MW6-SBB-A1	W06-008	W04974					08/03/2006 10:10				
6227361	TC-99	14133-76-7	1.30E+03	pCi/L	2.0E+01	9.7E+01		9.73E+00	100.0	TC99_ETVDSK_LS	1.252E-01	L	09/13/2006 04:07	I
9JAM8J10	B1K323		MW6-SBB-A1	W06-008	W04974					08/03/2006 11:39				
6227361	TC-99	14133-76-7	4.71E+01	pCi/L	5.5E+00	8.9E+00		9.77E+00	100.0	TC99_ETVDSK_LS	1.252E-01	L	09/13/2006 04:07	I
9JAM8P10	B1K315		MW6-SBB-A1	W06-008	W04974					08/03/2006 12:39				
6227361	TC-99	14133-76-7	2.55E+01	pCi/L	4.9E+00	7.4E+00		9.71E+00	100.0	TC99_ETVDSK_LS	1.249E-01	L	09/13/2006 04:07	I
9JAM8R10	B1K2N6		MW6-SBB-A1	W06-008	W04974					08/03/2006 07:30				
6227364	H-3	10028-17-8	1.70E+02	pCi/L	1.3E+02	1.5E+02	U	3.07E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/17/2006 06:13	I
6227361	TC-99	14133-76-7	2.95E+00	pCi/L	4.1E+00	5.9E+00	U	9.73E+00	100.0	TC99_ETVDSK_LS	1.246E-01	L	09/13/2006 04:07	I
9JARMA10	B1JBC5		MW6-SBB-A1	W06-006	W04974					08/04/2006 10:27				
6227361	TC-99	14133-76-7	7.48E+03	pCi/L	4.7E+01	5.3E+02		9.81E+00	100.0	TC99_ETVDSK_LS	1.245E-01	L	09/13/2006 04:08	I
9JARMG10	B1K311		MW6-SBB-A1	W06-008	W04974					08/04/2006 09:30				
6227361	TC-99	14133-76-7	3.12E+01	pCi/L	5.0E+00	7.8E+00		9.82E+00	100.0	TC99_ETVDSK_LS	1.266E-01	L	09/13/2006 04:08	I

STL Richland U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. 2

rptFeadRadSummaryEdd v3.48 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

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

9/26/2006 1:28:25 PM

STL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 33340 File Name: h:\Reportdb\edd\Fead\Rad\W04974.Edd, h:\Reportdb\edd\Fead\Rad\33340.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:				
9JARMN10	B1K2V2		MW6-SBB-A1	W06-008	W04974					08/04/2006 11:48				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6227364	H-3	10028-17-8	3.44E+05	pCi/L	1.9E+03	1.4E+04		3.06E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/17/2006 10:18	I
6227367	I-129L	15046-84-1	8.28E+00	pCi/L	1.9E+00	1.9E+00	U	2.79E+00	45.7	I129LL_ETVDSK_S	2.0066E+00	L	09/14/2006 14:44	I
6227361	TC-99	14133-76-7	3.16E+03	pCi/L	3.1E+01	2.3E+02		9.77E+00	100.0	TC99_ETVDSK_LS	1.259E-01	L	09/13/2006 04:08	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:				
9JARMW10	B1K2V1		MW6-SBB-A1	W06-008	W04974					08/04/2006 11:48				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6227364	H-3	10028-17-8	3.46E+05	pCi/L	1.9E+03	1.4E+04		3.07E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/17/2006 11:40	I
6227367	I-129L	15046-84-1	4.16E+00	pCi/L	1.2E+00	1.2E+00	U	2.05E+00	49.5	I129LL_ETVDSK_S	2.0031E+00	L	09/14/2006 16:56	I
6227361	TC-99	14133-76-7	3.15E+03	pCi/L	3.1E+01	2.3E+02		9.84E+00	100.0	TC99_ETVDSK_LS	1.254E-01	L	09/13/2006 04:08	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:				
9JATC910	B1JKP6		MW6-SBB-A1	I06-046	W04974					08/07/2006 08:30				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6227369	SR-90	10098-97-2	1.83E-01	pCi/L	2.8E-01	2.9E-01	U	5.98E-01	50.7	SRISO_SEP_PRE	9.999E-01	L	09/15/2006 05:57	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:				
9JATD010	B1K226		MW6-SBB-A1	W06-008	W04974					08/07/2006 10:56				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6227364	H-3	10028-17-8	3.26E+03	pCi/L	2.2E+02	2.8E+02		3.05E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/17/2006 21:13	I
6227372	ALPHA	12587-46-1	4.05E+00	pCi/L	2.2E+00	2.3E+00		3.13E+00	100.0	9310_ALPHABETA	6.03E-02	L	08/29/2006 10:22	I
6227366	BE-7	13966-02-4	8.84E+00	pCi/L	1.3E+01	1.3E+01	U	2.59E+01		GAMMALL_GS	2.0004E+00	L	08/28/2006 05:59	I
6227366	CO-60	10198-40-0	1.81E+01	pCi/L	5.4E+00	5.4E+00		4.09E+00		GAMMALL_GS	2.0004E+00	L	08/28/2006 05:59	I
6227366	CS-134	13967-70-9	-7.37E-01	pCi/L	1.5E+00	1.5E+00	U	2.62E+00		GAMMALL_GS	2.0004E+00	L	08/28/2006 05:59	I
6227366	CS-137	10045-97-3	4.93E-01	pCi/L	2.3E+00	2.3E+00	U	4.85E+00		GAMMALL_GS	2.0004E+00	L	08/28/2006 05:59	I
6227366	EU-152	14683-23-9	-2.84E-01	pCi/L	3.9E+00	3.9E+00	U	6.95E+00		GAMMALL_GS	2.0004E+00	L	08/28/2006 05:59	I
6227366	EU-154	15585-10-1	7.84E-01	pCi/L	4.9E+00	4.9E+00	U	9.75E+00		GAMMALL_GS	2.0004E+00	L	08/28/2006 05:59	I
6227366	EU-155	14391-16-3	3.15E+00	pCi/L	3.3E+00	3.3E+00	U	6.57E+00		GAMMALL_GS	2.0004E+00	L	08/28/2006 05:59	I
6227366	K-40	13966-00-2	-1.90E+01	pCi/L	3.4E+01	3.4E+01	U	7.23E+01		GAMMALL_GS	2.0004E+00	L	08/28/2006 05:59	I

9/26/2006 1:28:25 PM

STL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 33340 File Name: h:\Reportdb\edd\Fead\VRad\W04974.Edd, h:\Reportdb\edd\Fead\VRad\33340.Edd

6227366	RU-106	13967-48-1	1.57E+00	pCi/L	1.5E+01	1.5E+01	U	2.81E+01		GAMMALL_GS	2.0004E+00	L	08/28/2006 05:59	I
6227366	SB-125	14234-35-6	2.89E+00	pCi/L	3.6E+00	3.6E+00	U	7.16E+00		GAMMALL_GS	2.0004E+00	L	08/28/2006 05:59	I
6227361	TC-99	14133-76-7	6.52E+03	pCi/L	4.4E+01	4.7E+02		9.90E+00	100.0	TC99_ETVDSK_LS	1.25E-01	L	09/13/2006 04:08	I
6227371	Uranium	7440-61-1	1.39E+01	ug/L	1.6E+00	1.6E+00		8.35E-02		UTOT_KPA	2.51E-02	ML	08/24/2006 11:26	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9JATD020	B1K226		MW6-SBB-A1	W06-008	W04974					08/07/2006 10:56				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6242202	BETA	12587-47-2	1.42E+03	pCi/L	2.0E+01	1.9E+02		4.94E+00	100.0	9310_ALPHABETA	8.04E-02	L	09/06/2006 08:28	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:				
9JATDA10	B1JKP5		MW6-SBB-A1	I06-046	W04974					08/07/2006 10:33				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6227369	SR-90	10098-97-2	8.83E+02	pCi/L	5.4E+00	1.3E+02		4.86E-01	63.7	SRISO_SEP_PRE	1.0019E+00	L	09/15/2006 05:57	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:				
9JATDH10	B1K281		MW6-SBB-A1	W06-008	W04974					08/07/2006 09:55				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6227364	H-3	10028-17-8	1.16E+04	pCi/L	3.7E+02	6.3E+02		3.05E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/17/2006 13:02	I
6227366	BE-7	13966-02-4	3.98E+00	pCi/L	2.1E+01	2.1E+01	U	3.95E+01		GAMMALL_GS	2.0004E+00	L	08/26/2006 11:35	I
6227366	CO-60	10198-40-0	-6.19E-01	pCi/L	2.9E+00	2.9E+00	U	5.27E+00		GAMMALL_GS	2.0004E+00	L	08/26/2006 11:35	I
6227366	CS-134	13967-70-9	1.03E+00	pCi/L	2.4E+00	2.4E+00	U	4.81E+00		GAMMALL_GS	2.0004E+00	L	08/26/2006 11:35	I
6227366	CS-137	10045-97-3	1.78E+00	pCi/L	2.3E+00	2.3E+00	U	4.68E+00		GAMMALL_GS	2.0004E+00	L	08/26/2006 11:35	I
6227366	EU-152	14683-23-9	1.15E+00	pCi/L	5.1E+00	5.1E+00	U	9.57E+00		GAMMALL_GS	2.0004E+00	L	08/26/2006 11:35	I
6227366	EU-154	15585-10-1	-5.81E-02	pCi/L	7.6E+00	7.6E+00	U	1.47E+01		GAMMALL_GS	2.0004E+00	L	08/26/2006 11:35	I
6227366	EU-155	14391-16-3	-1.72E+00	pCi/L	4.7E+00	4.7E+00	U	8.08E+00		GAMMALL_GS	2.0004E+00	L	08/26/2006 11:35	I
6227366	K-40	13966-00-2	1.60E+01	pCi/L	5.6E+01	5.6E+01	U	1.28E+02		GAMMALL_GS	2.0004E+00	L	08/26/2006 11:35	I
6227366	RU-106	13967-48-1	-8.35E+00	pCi/L	1.8E+01	1.8E+01	U	3.13E+01		GAMMALL_GS	2.0004E+00	L	08/26/2006 11:35	I
6227366	SB-125	14234-35-6	-5.60E+00	pCi/L	5.4E+00	5.4E+00	U	8.16E+00		GAMMALL_GS	2.0004E+00	L	08/26/2006 11:35	I
6227361	TC-99	14133-76-7	1.51E+03	pCi/L	2.2E+01	1.1E+02		9.88E+00	100.0	TC99_ETVDSK_LS	1.245E-01	L	09/13/2006 04:08	I
6227371	Uranium	7440-61-1	7.38E+00	ug/L	8.7E-01	8.7E-01		8.32E-02		UTOT_KPA	2.52E-02	ML	08/24/2006 11:12	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
----------------	------------	-----------	--------------	---------	----------	----------	--------------------	------------------	-----------------	------------------

9/26/2006 1:28:25 PM

STL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 33340 File Name: h:\Reportdb\ledd\Fead\I\Rad\W04974.Edd, h:\Reportdb\ledd\Fead\I\Rad\33340.Edd

9JATDH20	B1K281	MW6-SBB-A1	W06-008	W04974									08/07/2006 09:55	
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6242202	BETA	12587-47-2	4.11E+02	pCi/L	1.3E+01	5.9E+01		5.78E+00	100.0	9310_ALPHABETA	1.116E-01	L	09/06/2006 07:37	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:				
9JATDQ10	B1K284		MW6-SBB-A1	W06-008	W04974					08/07/2006 07:30				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6227364	H-3	10028-17-8	2.38E+01	pCi/L	1.3E+02	1.4E+02	U	3.05E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/17/2006 18:29	I
6227372	ALPHA	12587-46-1	7.89E-02	pCi/L	3.0E-01	3.0E-01	U	7.15E-01	100.0	9310_ALPHABETA	1.995E-01	L	08/29/2006 07:38	I
6227366	BE-7	13966-02-4	-1.22E+01	pCi/L	1.7E+01	1.7E+01	U	2.84E+01		GAMMALL_GS	2.0017E+00	L	08/26/2006 11:36	I
6227366	CO-60	10198-40-0	-3.00E-01	pCi/L	1.5E+00	1.5E+00	U	2.81E+00		GAMMALL_GS	2.0017E+00	L	08/26/2006 11:36	I
6227366	CS-134	13967-70-9	-5.31E-01	pCi/L	1.8E+00	1.8E+00	U	3.22E+00		GAMMALL_GS	2.0017E+00	L	08/26/2006 11:36	I
6227366	CS-137	10045-97-3	7.89E-01	pCi/L	1.6E+00	1.6E+00	U	3.13E+00		GAMMALL_GS	2.0017E+00	L	08/26/2006 11:36	I
6227366	EU-152	14683-23-9	-4.64E-01	pCi/L	4.0E+00	4.0E+00	U	7.32E+00		GAMMALL_GS	2.0017E+00	L	08/26/2006 11:36	I
6227366	EU-154	15585-10-1	1.04E+00	pCi/L	5.1E+00	5.1E+00	U	1.01E+01		GAMMALL_GS	2.0017E+00	L	08/26/2006 11:36	I
6227366	EU-155	14391-16-3	-7.75E-01	pCi/L	3.5E+00	3.5E+00	U	6.10E+00		GAMMALL_GS	2.0017E+00	L	08/26/2006 11:36	I
6227366	K-40	13966-00-2	-1.59E+01	pCi/L	2.5E+01	2.5E+01	U	5.06E+01		GAMMALL_GS	2.0017E+00	L	08/26/2006 11:36	I
6227366	RU-106	13967-48-1	9.15E+00	pCi/L	1.5E+01	1.5E+01	U	2.92E+01		GAMMALL_GS	2.0017E+00	L	08/26/2006 11:36	I
6227366	SB-125	14234-35-6	-3.52E+00	pCi/L	4.2E+00	4.2E+00	U	6.88E+00		GAMMALL_GS	2.0017E+00	L	08/26/2006 11:36	I
6227361	TC-99	14133-76-7	6.56E+00	pCi/L	4.2E+00	6.1E+00	U	9.64E+00	100.0	TC99_ETVDSK_LS	1.264E-01	L	09/13/2006 04:08	I
6227371	Uranium	7440-61-1	6.62E-03	ug/L	8.2E-04	8.2E-04	U	8.32E-02		UTOT_KPA	2.52E-02	ML	08/24/2006 11:16	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:				
9JATDQ20	B1K284		MW6-SBB-A1	W06-008	W04974					08/07/2006 07:30				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6242202	BETA	12587-47-2	1.31E+00	pCi/L	1.3E+00	1.4E+00	U	2.77E+00	100.0	9310_ALPHABETA	2.001E-01	L	09/06/2006 07:37	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:				
9JATDV10	B1K285		MW6-SBB-A1	W06-008	W04974					08/07/2006 09:14				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6227364	H-3	10028-17-8	5.21E+03	pCi/L	2.6E+02	3.6E+02		3.05E+02	100.0	906.0_H3_LSC	5.00E-03	L	08/17/2006 19:51	I
6227372	ALPHA	12587-46-1	6.26E+01	pCi/L	5.1E+00	1.4E+01		1.65E+00	100.0	9310_ALPHABETA	9.00E-02	L	08/29/2006 10:22	I
6227366	BE-7	13966-02-4	3.18E+00	pCi/L	1.5E+01	1.5E+01	U	2.76E+01		GAMMALL_GS	1.9636E+00	L	08/26/2006 11:37	I
6227366	CO-60	10198-40-0	6.21E+00	pCi/L	2.7E+00	2.7E+00	U	6.14E+00		GAMMALL_GS	1.9636E+00	L	08/26/2006 11:37	I

STL Richland U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. 5
 rptFeadRadSummaryEdd v3.48 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

9/26/2006 1:28:25 PM

STL Richland Report

Lab Code: STLRL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 33340 File Name: h:\Reportdb\ledd\Fead\I\Rad\W04974.Edd, h:\Reportdb\ledd\Fead\I\Rad\33340.Edd

6227366	CS-134	13967-70-9	8.51E-01	pCi/L	1.5E+00	1.5E+00	U	3.03E+00	GAMMALL_GS	1.9636E+00	L	08/26/2006	11:37	I
6227366	CS-137	10045-97-3	-3.20E+00	pCi/L	2.5E+00	2.5E+00	U	4.57E+00	GAMMALL_GS	1.9636E+00	L	08/26/2006	11:37	I
6227366	EU-152	14683-23-9	-1.26E+00	pCi/L	3.5E+00	3.5E+00	U	6.15E+00	GAMMALL_GS	1.9636E+00	L	08/26/2006	11:37	I
6227366	EU-154	15585-10-1	-2.14E+00	pCi/L	4.4E+00	4.4E+00	U	7.78E+00	GAMMALL_GS	1.9636E+00	L	08/26/2006	11:37	I
6227366	EU-155	14391-16-3	-3.75E-01	pCi/L	3.4E+00	3.4E+00	U	6.15E+00	GAMMALL_GS	1.9636E+00	L	08/26/2006	11:37	I
6227366	K-40	13966-00-2	-1.31E+01	pCi/L	3.4E+01	3.4E+01	U	7.27E+01	GAMMALL_GS	1.9636E+00	L	08/26/2006	11:37	I
6227366	RU-106	13967-48-1	4.65E+00	pCi/L	1.3E+01	1.3E+01	U	2.45E+01	GAMMALL_GS	1.9636E+00	L	08/26/2006	11:37	I
6227366	SB-125	14234-35-6	2.47E+00	pCi/L	3.9E+00	3.9E+00	U	7.49E+00	GAMMALL_GS	1.9636E+00	L	08/26/2006	11:37	I
6227361	TC-99	14133-76-7	3.12E+03	pCi/L	3.1E+01	2.3E+02		9.79E+00 100.0	TC99_ETVDSK_LS	1.258E-01	L	09/13/2006	04:08	I
6227371	Uranium	7440-61-1	1.79E+02	ug/L	2.1E+01	2.1E+01		8.32E-02	UTOT_KPA	2.52E-02	ML	08/24/2006	11:22	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:				
9JATDV20	B1K285		MW6-SBB-A1	W06-008	W04974					08/07/2006 09:14				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
6242202	BETA	12587-47-2	8.73E+02	pCi/L	1.4E+01	1.2E+02		3.87E+00	100.0	9310_ALPHABETA	9.97E-02	L	09/06/2006 08:28	I

Tuesday, September 26, 2006

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\Rad\W04974.Edd, h:\Reportdb\ledd\Fead\Rad\33340.Edd

Lab Sample Id: JCC521DB

Sdg/Rept Nbr: W04974 33340

Collection Date: 08/04/2006 11:48

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 08/04/2006

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
6227367 BLK	I-129L 15046-84-1	1.69E-01	pCi/L	2.6E-01 2.6E-01	U	5.27E-01	92.7		I129LL_ETVDS	2.00E+00 L	09/14/2006 16:57				D

Tuesday, September 26, 2006

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\W04974.Edd, h:\Reportdb\ledd\Fead\W04974.Edd, h:\Reportdb\ledd\Fead\W04974.Edd, h:\Reportdb\ledd\Fead\W04974.Edd

Lab Sample Id: JCC561AB

Sdg/Rept Nbr: W04974 33340

Collection Date: 08/07/2006 08:30

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 08/07/2006

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
6227369 BLK	SR-90 10098-97-2	1.44E-01	pCi/L	2.2E-01 2.0E-01	U	4.61E-01	65.8		SRISO_SEP_P	1.0004E+00 L	09/15/2006 05:57				D

Tuesday, September 26, 2006

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W04974.Edd, h:\Reportdb\edd\Fead\VRad\33340.Edd

Lab Sample Id: JCC591AB

Sdg/Rept Nbr: W04974

33340

Collection Date: 08/07/2006 09:55

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 08/07/2006

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
6227371 BLK	Uranium 7440-61-1	1.22E-02	ug/L	1.4E-03 1.4E-03	U	8.35E-02			UTOT_KPA	2.51E-02 ML	08/24/2006 11:02				D

Tuesday, September 26, 2006

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\W04974.Edd, h:\Reportdb\edd\Fead\W04974.Edd, h:\Reportdb\edd\Fead\W04974.Edd, h:\Reportdb\edd\Fead\W04974.Edd

Lab Sample Id: JCC5D1AB

Sdg/Rept Nbr: W04974 33340

Collection Date: 08/04/2006 10:27

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 08/04/2006

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
6227361 BLK	TC-99 14133-76-7	5.34E+00	pCi/L	6.0E+00 4.2E+00	U	9.76E+00	100.0		TC99_ETVDSK	1.259E-01 L	09/13/2006 04:08				D

Tuesday, September 26, 2006

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\VRad\W04974.Edd, h:\Reportdb\ledd\Fead\VRad\33340.Edd

Lab Sample Id: JCC5L1AB

Sdg/Rept Nbr: W04974 33340

Collection Date: 08/03/2006 08:46

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 08/03/2006

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
6227364 BLK	H-3 10028-17-8	9.83E+01	pCi/L	1.4E+02 1.3E+02	U	3.06E+02	100.0		906.0_H3_LSC	5.00E-03 L	08/17/2006 00:46				D

Tuesday, September 26, 2006

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\I\Rad\W04974.Edd, h:\Reportdb\ledd\Fead\I\Rad\33340.Edd

Lab Sample Id: JCC5L1DX

Sdg/Rept Nbr: W04974

33340

Collection Date: 08/03/2006 08:46

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 08/03/2006

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
6227364 BLK	H-3 10028-17-8	1.21E+02	pCi/L	1.4E+02 1.3E+02	U	3.05E+02	100.0		906.0_H3_LSC	5.00E-03 L	08/17/2006 15:46				D

Tuesday, September 26, 2006

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\VRad\W04974.Edd, h:\Reportdb\ledd\Fead\VRad\33340.Edd

Lab Sample Id: JCC5V1AB

Sdg/Rept Nbr: W04974

33340

Collection Date: 08/07/2006 09:14

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 08/07/2006

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
6227366 BLK	BE-7 13966-02-4	-2.87E+00	pCi/L	1.5E+01 1.5E+01	U	2.64E+01			GAMMALL_GS	2.0001E+00 L	08/28/2006 06:00				D
6227366 BLK	CO-60 10198-40-0	1.37E+00	pCi/L	1.6E+00 1.6E+00	U	3.61E+00			GAMMALL_GS	2.0001E+00 L	08/28/2006 06:00				D
6227366 BLK	CS-134 13967-70-9	-6.50E-01	pCi/L	1.5E+00 1.5E+00	U	2.67E+00			GAMMALL_GS	2.0001E+00 L	08/28/2006 06:00				D
6227366 BLK	CS-137 10045-97-3	4.95E-01	pCi/L	1.7E+00 1.7E+00	U	3.22E+00			GAMMALL_GS	2.0001E+00 L	08/28/2006 06:00				D
6227366 BLK	EU-152 14683-23-9	-3.93E-01	pCi/L	4.2E+00 4.2E+00	U	7.46E+00			GAMMALL_GS	2.0001E+00 L	08/28/2006 06:00				D
6227366 BLK	EU-154 15585-10-1	-4.38E-01	pCi/L	4.5E+00 4.5E+00	U	8.61E+00			GAMMALL_GS	2.0001E+00 L	08/28/2006 06:00				D
6227366 BLK	EU-155 14391-16-3	-2.29E+00	pCi/L	3.6E+00 3.6E+00	U	5.95E+00			GAMMALL_GS	2.0001E+00 L	08/28/2006 06:00				D
6227366 BLK	K-40 13966-00-2	2.56E+01	pCi/L	2.9E+01 2.9E+01	U	6.41E+01			GAMMALL_GS	2.0001E+00 L	08/28/2006 06:00				D
6227366 BLK	RU-106 13967-48-1	-3.97E+00	pCi/L	1.5E+01 1.5E+01	U	2.61E+01			GAMMALL_GS	2.0001E+00 L	08/28/2006 06:00				D
6227366 BLK	SB-125 14234-35-6	-2.94E-01	pCi/L	4.3E+00 4.3E+00	U	7.63E+00			GAMMALL_GS	2.0001E+00 L	08/28/2006 06:00				D

Tuesday, September 26, 2006

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\I\Rad\W04974.Edd, h:\Reportdb\ledd\Fead\I\Rad\33340.Edd

Lab Sample Id: JCC6A1AB

Sdg/Rept Nbr: W04974

33340

Collection Date: 08/07/2006 07:30

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 08/07/2006

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
6227372 BLK	ALPHA 12587-46-1	0.00E+00	pCi/L	2.0E-01 2.0E-01	U	4.72E-01	100.0		9310_ALPHAB	2.005E-01 L	08/29/2006 10:22				D

Tuesday, September 26, 2006

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\I\Rad\W04974.Edd, h:\Reportdb\ledd\Fead\I\Rad\33340.Edd

Lab Sample Id: JCC6D2AB

Sdg/Rept Nbr: W04974 33340

Collection Date: 08/07/2006 09:14

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 08/07/2006

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
6242202 BLK	BETA 12587-47-2	1.12E+00	pCi/L	9.7E-01 9.6E-01	U	1.84E+00	100.0		9310_ALPHAB	2.00E-01 L	09/06/2006 08:28				D

Tuesday, September 26, 2006

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\I\Rad\W04974.Edd, h:\Reportdb\ledd\Fead\I\Rad\33340.Edd

Lab Sample Id: JCC521ES

Sdg/Rept Nbr: W04974 33340

Collection Date: 08/04/2006 11:48

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 08/04/2006

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
6227367 BS	I-129L 15046-84-1	1.70E+01	pCi/L	2.3E+00 2.3E+00		7.85E-01	95.0	1.93E+01 87.7	I129LL_ETVDS	2.00E+00 L	09/14/2006 18:59			70 130	D

Tuesday, September 26, 2006

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\W04974.Edd, h:\Reportdb\ledd\Fead\W04974.Edd, h:\Reportdb\ledd\Fead\W04974.Edd, h:\Reportdb\ledd\Fead\W04974.Edd

Lab Sample Id: JCC561CS

Sdg/Rept Nbr: W04974 33340

Collection Date: 08/07/2006 08:30

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 08/07/2006

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
6227369 BS	SR-90 10098-97-2	1.17E+01	pCi/L	1.9E+00 6.7E-01		5.46E-01	65.7	1.36E+01 85.8	SRISO_SEP_P	1.0006E+00 L	09/15/2006 05:32			70 130	D

Tuesday, September 26, 2006

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\VRad\W04974.Edd, h:\Reportdb\ledd\Fead\VRad\33340.Edd

Lab Sample Id: JCC591CS

Sdg/Rept Nbr: W04974 33340

Collection Date: 08/07/2006 09:55

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 08/07/2006

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
6227371 BS	Uranium 7440-61-1	3.45E+01	ug/L	4.1E+00 4.1E+00		8.42E-02		3.62E+01 95.4	UTOT_KPA	2.49E-02 ML	08/24/2006 11:06			70 130	D

Tuesday, September 26, 2006

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\I\Rad\W04974.Edd, h:\Reportdb\ledd\Fead\I\Rad\33340.Edd

Lab Sample Id: JCC591DS

Sdg/Rept Nbr: W04974 33340

Collection Date: 08/07/2006 09:55

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 08/07/2006

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
6227371 BS	Uranium 7440-61-1	3.40E+00	ug/L	3.5E-01 3.5E-01		8.25E-02		3.58E+00 95.0	UTOT_KPA	2.54E-02 ML	08/24/2006 11:08			70 130	D

Tuesday, September 26, 2006

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\I\Rad\W04974.Edd, h:\Reportdb\ledd\Fead\I\Rad\33340.Edd

Lab Sample Id: JCC5D1CS

Sdg/Rept Nbr: W04974

33340

Collection Date: 08/04/2006 10:27

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 08/04/2006

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
6227361 BS	TC-99 14133-76-7	5.28E+02	pCi/L	4.3E+01 1.3E+01		9.86E+00	100.0	5.40E+02 97.7	TC99_ETVDSK	1.249E-01 L	09/13/2006 04:08			70 130	D

Tuesday, September 26, 2006

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\VRad\W04974.Edd, h:\Reportdb\ledd\Fead\VRad\33340.Edd

Lab Sample Id: JCC5L1CS

Sdg/Rept Nbr: W04974 33340

Collection Date: 08/03/2006 08:46

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 08/03/2006

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
6227364 BS	H-3 10028-17-8	2.65E+03	pCi/L	2.6E+02 2.1E+02		3.07E+02	100.0	2.72E+03 97.6	906.0_H3_LSC	5.00E-03 L	08/17/2006 02:07			70 130	D

Tuesday, September 26, 2006

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\VRad\W04974.Edd, h:\Reportdb\ledd\Fead\VRad\33340.Edd

Lab Sample Id: JCC5L1EM

Sdg/Rept Nbr: W04974 33340

Collection Date: 08/03/2006 08:46

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 08/03/2006

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
6227364 BS	H-3 10028-17-8	2.57E+03	pCi/L	2.5E+02 2.1E+02		3.04E+02	100.0	2.72E+03 94.4	906.0_H3_LSC	5.00E-03 L	08/17/2006 17:07			70 130	D

Tuesday, September 26, 2006

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\Rad\W04974.Edd, h:\Reportdb\ledd\Fead\Rad\33340.Edd

Lab Sample Id: JCC5V1CS

Sdg/Rept Nbr: W04974 33340

Collection Date: 08/07/2006 09:14

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 08/07/2006

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
6227366 BS	CO-60 10198-40-0	4.09E+01	pCi/L	7.9E+00 7.9E+00		3.56E+00		3.78E+01 108.2	GAMMALL_GS	2.0005E+00 L	08/28/2006 06:00			70 130	D
6227366 BS	CS-137 10045-97-3	2.69E+01	pCi/L	6.2E+00 6.2E+00		3.90E+00		2.46E+01 109.2	GAMMALL_GS	2.0005E+00 L	08/28/2006 06:00			70 130	D
6227366 BS	EU-152 14683-23-9	7.81E+01	pCi/L	1.5E+01 1.5E+01		8.31E+00		7.64E+01 102.2	GAMMALL_GS	2.0005E+00 L	08/28/2006 06:00			70 130	D

Tuesday, September 26, 2006

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W04974.Edd, h:\Reportdb\edd\Fead\I\Rad\33340.Edd

Lab Sample Id: JCC6A1CS

Sdg/Rept Nbr: W04974 33340

Collection Date: 08/07/2006 07:30

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 08/07/2006

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
6227372 BS	ALPHA 12587-46-1	1.63E+01	pCi/L	3.5E+00 1.4E+00		4.49E-01	100.0	2.32E+01 70.2	9310_ALPHAB	2.005E-01 L	08/29/2006 10:22			70 130	D

Tuesday, September 26, 2006

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\eddd\Feadi\Rad\W04974.Edd, h:\Reportdb\eddd\Feadi\Rad\33340.Edd

Lab Sample Id: JCC6D3CS

Sdg/Rept Nbr: W04974 33340

Collection Date: 08/07/2006 09:14

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 08/07/2006

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
6242202 BS	BETA 12587-47-2	2.30E+01	pCi/L	3.5E+00 1.8E+00		1.93E+00	100.0	2.28E+01 100.9	9310_ALPHAB	2.001E-01 L	09/06/2006 08:28			70 130	D

Tuesday, September 26, 2006

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W04974.Edd, h:\Reportdb\edd\Fead\I\Rad\33340.Edd

Lab Sample Id: JAM811DR

Sdg/Rept Nbr: W04974 33340

Collection Date: 08/03/2006 08:46

Client Id: B1K2N7

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 08/03/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
W06-008	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
6227364 DUP	H-3 10028-17-8	1.32E+04 1.34E+04	pCi/L	6.9E+02 3.9E+02		3.05E+02	100.0		906.0_H3_LSC	5.00E-03 L	08/17/2006 08:57	1.9 20.0	0.5 3		D

Tuesday, September 26, 2006

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\VRad\W04974.Edd, h:\Reportdb\ledd\Fead\VRad\33340.Edd

Lab Sample Id: JARMA1CR

Sdg/Rept Nbr: W04974 33340

Collection Date: 08/04/2006 10:27

Client Id: B1JBC5

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 08/04/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
W06-006	MW6-SBB-A19981								AZ	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6227361 DUP	TC-99 14133-76-7	7.46E+03 7.48E+03	pCi/L	5.3E+02 4.7E+01		9.84E+00	100.0		TC99_ETVDSK	1.248E-01 L	09/13/2006 04:08	.3 20.0	0.1 3		D

Tuesday, September 26, 2006

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W04974.Edd, h:\Reportdb\edd\Fead\VRad\33340.Edd

Lab Sample Id: JARMN1ER

Sdg/Rept Nbr: W04974 33340

Collection Date: 08/04/2006 11:48

Client Id: B1K2V2

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 08/04/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
W06-008	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
6227367 DUP	I-129L 15046-84-1	9.60E+00 8.28E+00	pCi/L	2.7E+00 2.7E+00	U	4.08E+00	27.0		I129LL_ETVDS	2.0011E+00 L	09/14/2006 14:45	14.8 20.0	0.7 3		D

Tuesday, September 26, 2006

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04974.Edd, h:\Reportdb\edd\FeadIV\Rad\33340.Edd

Lab Sample Id: JATC91CR

Sdg/Rept Nbr: W04974

33340

Collection Date: 08/07/2006 08:30

Client Id: B1JKP6

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 08/07/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
I06-046	MW6-SBB-A19981								BB	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qual	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6227369 DUP	SR-90 10098-97-2	5.69E-02 1.83E-01	pCi/L	2.4E-01 2.0E-01	U	5.28E-01	60.3		SRISO_SEP_P	1.0007E+00 L	09/15/2006 05:57	105.0 20.0	0.7 3		D

Tuesday, September 26, 2006

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W04974.Edd, h:\Reportdb\edd\Fead\Rad\33340.Edd

Lab Sample Id: JATDH1GR

Sdg/Rept Nbr: W04974 33340

Collection Date: 08/07/2006 09:55

Client Id: B1K281

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 08/07/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
W06-008	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
6227371	Uranium	7.46E+00	ug/L	8.8E-01		8.38E-02			UTOT_KPA	2.50E-02	08/24/2006	1.1	0.1		D
DUP	7440-61-1	7.38E+00		8.8E-01						ML	11:14	20.0	3		

Tuesday, September 26, 2006

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04974.Edd, h:\Reportdb\edd\FeadIV\Rad\33340.Edd

Lab Sample Id: JATDQ1JR

Sdg/Rept Nbr: W04974

33340

Collection Date: 08/07/2006 07:30

Client Id: B1K284

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 08/07/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
W06-008	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
6227372 DUP	ALPHA 12587-46-1	6.97E-02 7.89E-02	pCi/L	2.8E-01 2.8E-01	U	6.84E-01	100.0		9310_ALPHAB	2.002E-01 L	08/29/2006 07:38	12.4 20.0	0. 3		D

Tuesday, September 26, 2006

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\eddd\FeadIV\Rad\W04974.Edd, h:\Reportdb\eddd\FeadIV\Rad\33340.Edd

Lab Sample Id: JATDV1HR

Sdg/Rept Nbr: W04974 33340

Collection Date: 08/07/2006 09:14

Client Id: B1K285

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 08/07/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
W06-008	MW6-SBB-A19981								BF	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
6227366 DUP	BE-7 13966-02-4	-3.07E-01 3.18E+00	pCi/L	1.4E+01 1.4E+01	U	2.60E+01			GAMMALL_GS	1.9636E+00 L	08/26/2006 11:38	242.6 20.0	0.3 3		D
6227366 DUP	CO-60 10198-40-0	5.06E+00 6.21E+00	pCi/L	2.8E+00 2.8E+00	U	6.06E+00			GAMMALL_GS	1.9636E+00 L	08/26/2006 11:38	20.5 20.0	0.6 3		D
6227366 DUP	CS-134 13967-70-9	-2.24E-01 8.51E-01	pCi/L	1.6E+00 1.6E+00	U	3.03E+00			GAMMALL_GS	1.9636E+00 L	08/26/2006 11:38	343.1 20.0	0.9 3		D
6227366 DUP	CS-137 10045-97-3	5.95E-01 -3.20E+00	pCi/L	1.6E+00 1.6E+00	U	3.12E+00			GAMMALL_GS	1.9636E+00 L	08/26/2006 11:38	0.0 20.0	3.3 3		D
6227366 DUP	EU-152 14683-23-9	4.83E+00 -1.26E+00	pCi/L	4.1E+00 4.1E+00	U	8.24E+00			GAMMALL_GS	1.9636E+00 L	08/26/2006 11:38	340.6 20.0	2.1 3		D
6227366 DUP	EU-154 15585-10-1	5.41E+00 -2.14E+00	pCi/L	5.4E+00 5.4E+00	U	1.18E+01			GAMMALL_GS	1.9636E+00 L	08/26/2006 11:38	462.5 20.0	2. 3		D
6227366 DUP	EU-155 14391-16-3	4.36E-01 -3.75E-01	pCi/L	3.2E+00 3.2E+00	U	5.88E+00			GAMMALL_GS	1.9636E+00 L	08/26/2006 11:38	2680.8 20.0	0.4 3		D
6227366 DUP	K-40 13966-00-2	-1.42E+01 -1.31E+01	pCi/L	3.5E+01 3.5E+01	U	7.29E+01			GAMMALL_GS	1.9636E+00 L	08/26/2006 11:38	0.0 20.0	0. 3		D
6227366 DUP	RU-106 13967-48-1	9.58E+00 4.65E+00	pCi/L	1.5E+01 1.5E+01	U	2.92E+01			GAMMALL_GS	1.9636E+00 L	08/26/2006 11:38	69.2 20.0	0.5 3		D
6227366 DUP	SB-125 14234-35-6	-2.06E+00 2.47E+00	pCi/L	4.0E+00 4.0E+00	U	6.81E+00			GAMMALL_GS	1.9636E+00 L	08/26/2006 11:38	2199.3 20.0	1.6 3		D

Tuesday, September 26, 2006

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04974.Edd, h:\Reportdb\edd\FeadIV\Rad\33340.Edd

Lab Sample Id: JATDV2JR

Sdg/Rept Nbr: W04974

33340

Collection Date: 08/07/2006 09:14

Client Id: B1K285

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 08/07/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
W06-008	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
6242202 DUP	BETA 12587-47-2	8.40E+02 8.73E+02	pCi/L	1.4E+02 1.3E+01		3.60E+00	100.0		9310_ALPHAB	9.90E-02 L	09/06/2006 08:28	3.9 20.0	0.3 3		D

Tuesday, September 26, 2006

STL Richland Qc Matrix Spike Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\VRad\W04974.Edd, h:\Reportdb\ledd\Fead\VRad\33340.Edd

Lab Sample Id: JALPC1CW

Sdg/Rept Nbr: W04974 33340

Collection Date: 08/03/2006 12:09

Client Id: B1K331

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: MS

Received Date: 08/03/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
W06-008	MW6-SBB-A19981								AX	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
6227361 MS	TC-99 14133-76-7	3.24E+03	pCi/L	2.3E+02 3.1E+01		9.58E+00	100.0	3.56E+03 91.1	TC99_ETVDSK	1.265E-01 L	09/13/2006 04:07			60 140	D

Tuesday, September 26, 2006

STL Richland Qc Matrix Spike Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W04974.Edd, h:\Reportdb\edd\FeadIV\Rad\33340.Edd

Lab Sample Id: JATDQ1HW

Sdg/Rept Nbr: W04974

33340

Collection Date: 08/07/2006 07:30

Client Id: B1K284

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: MS

Received Date: 08/07/2006

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
W06-008	MW6-SBB-A19981								BD	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qual al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6227371 MS	Uranium 7440-61-1	3.53E+01	ug/L	4.2E+00 4.2E+00		8.35E-02		3.59E+01 98.4	UTOT_KPA	2.51E-02 ML	08/24/2006 11:18			60 140	D

Lot No., Due Date: J6H030376,J6H070210; 09/28/2006
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 6227366; RGAMMA Gamma by GER
SDG, Matrix: W04974; WATER

1.0 COC

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

✓ Yes No N/A

2.0 QC Batch

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

3.0 QC & Samples

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

4.0 Raw Data

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

✓ Yes No N/A

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

✓ Yes No N/A

4.3 Were Yields entered correctly? Yes No N/A

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

5.0 Other

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

5.4 Was transcription checked? Yes No N/A

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

6.0 Comments on any No response:

First Level Review Pam Anderson

Date 8.30.06



STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 6227366
W04974

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. Adams Date: 7-30-06

Lot No., Due Date: J6H070210; 09/28/2006
 Client, Site: 384868; PGW 615HANFORD HANFORD
 QC Batch No., Method Test: 6227372; RALPHA-A Alpha by GPC-Am
 SDG, Matrix: W04974; 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 => JATDV1AC 90.00<200.00 JATD01AC 60.30<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 => JATD01AC ALPHA 3.1E+00>3.0E+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 => JATDV1AC ALPHA 6.3E+01 L:1.6E+00 JATD01AC ALPHA 4.1E+00 L:3.1E+00	Yes	No	N/A
8.23 Result <= Action Level, when Defined. OK; No Action Level Found => ALPHA OK; No Callin Level Found => ALPHA	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	<input checked="" type="checkbox"/>
8.26	Instruments have Current Calibrations.	Yes	No	N/A	<input checked="" type="checkbox"/>
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	<input checked="" 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	No	N/A	<input checked="" type="checkbox"/>
8.3	Comments:				
8.31	Results Blank Subtracted as Appropriate. OK	Yes	No	N/A	<input checked="" type="checkbox"/>

First Level Review Pam Anderson Date 8-30-06



STL

Data Review Checklist RADIOCHEMISTRY Second Level Review

QC Batch Number: 6227372
W04974

Review Item	Yes (✓)	No (✓)	N/A (✓)
A. Sample Analysis	✓		
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery with contract acceptance criteria?	✓		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
8. Do the MS/MSD results and yields meet acceptance criteria?			✓
9. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other			✓
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: _____

Second Level Review Sherryl A Adam Date: 7-30-06

Lot No., Due Date: J6H070210; 09/28/2006
 Client, Site: 384868; PGW 615HANFORD HANFORD
 QC Batch No., Method Test: 6242202; RBETA-SR Beta by GPC-Sr/Y
 SDG, Matrix: W04974; 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. 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 => JATDH2AC BETA 5.8E+00>4.0E+00 JATD02AD BETA 4.9E+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 => JATDH2AC BETA 4.1E+02 L:5.8E+00 JATDV2AD BETA 8.7E+02 L:3.9E+00 JATD02AD BETA 1.4E+03 L:4.9E+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	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	<input checked="" 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	No	N/A	<input checked="" type="checkbox"/>
8.3	Comments:				
8.31	Results Blank Subtracted as Appropriate. OK	Yes	No	N/A	<input checked="" type="checkbox"/>

First Level Review Pam Anderson

Date 9-7-09



STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 6242202
W04974

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 Adam Date: 9-7-06

Clouseau Nonconformance Memo



NCM #: 10-08630	Classification: Anomaly
NCM Initiated By: Pam Anderson	Status: GLREVIEW
Date Opened: 09/07/2006	Production Area: Environmental - Sep
Date Closed:	Tests: Beta by GPC-Sr/Y
	Lot #'s (Sample #'s): J6H070210 (1,2,3,4), J6H150000 (373),
	QC Batches: 6242202
Nonconformance: Other (describe in detail)	
Subcategory: Other (explanation required)	

Problem Description / Root Cause

Name	Date	Description
Pam Anderson	09/07/2006	1 The LCS was low in this beta batch. A recount was still low. The batch was reanalyzed with good results. 2 Samples JATDH2AC and JATS02AD do not meet CRDL but have results >MDA>CRDL.

Corrective Action

Name	Date	Corrective Action
Pam Anderson	09/07/2006	The batch was reanalyzed.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note
	Response	Response Note			

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position
---------------	-------------	----------

Lot No., Due Date: J6H070209; 09/28/2006
 Client, Site: 384868; PGW 615HANFORD HANFORD
 QC Batch No., Method Test: 6227369; RSR85907 Sr-85/90 by GPC-7
 SDG, Matrix: W04974; WATER

1.0 COC

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

2.0 QC Batch

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

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

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

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

3.0 QC & Samples

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

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

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

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

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

4.0 Raw Data

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

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

4.3 Were Yields entered correctly? Yes No N/A

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

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

5.0 Other

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

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

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

5.4 Was transcription checked? Yes No N/A

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

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

6.0 Comments on any No response:

First Level Review



Date

9/15/06



STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 6227369

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 Adams

Date: 9-18-06

Lot No., Due Date: J6H030376,J6H040202,J6H070163,J6H070164,J6H070210; 09/28/2006
 Client, Site: 384868; PGW 615HANFORD HANFORD
 QC Batch No., Method Test: 6227361; RTC99 Tc-99 by LSC
 SDG, Matrix: W04974; WATER

1.0 COC

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

2.0 QC Batch

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

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

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

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

3.0 QC & Samples

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

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

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

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

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

4.0 Raw Data

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

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

4.3 Were Yields entered correctly? Yes No N/A

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

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

5.0 Other

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

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

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

5.4 Was transcription checked? Yes No N/A

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

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

6.0 Comments on any No response:

First Level Review

Steve E. Mahland

Date

9/13/06



STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 6227361

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?	✓		58A 9-14-04
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: Sherry A Adams Date: 9-14-04

Lot No., Due Date: J6H030376,J6H040202,J6H070164,J6H070210; 09/28/2006
 Client, Site: 384868; PGW 615HANFORD HANFORD
 QC Batch No., Method Test: 6227364; RTRITIUM H-3 by LSC
 SDG, Matrix: W04974; 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 => JALPJ1AA 5.00<10.00 JALPW1AA 5.00<10.00 JAM8R1AA 5.00<10.00 JAM811AA 5.00<10.00 JARMN1AA 5.00<10.00 JARMW1AA 5.00<10.00 JATDH1AA 5.00<10.00 JATDQ1AA 5.00<10.00 JATDV1AA 5.00<10.00 JATD01AA 5.00<10.00 Q:VB	Yes	No	N/A
8.07	The Correct Count Geometry was Used. Count Geometry => JCC5L1AF SVP15/5<=>SVP10/10 JCC5L1AG SVP15/5<=>SVP10/10 JCC5L1AA SVP15/5<=>SVP10/10 JCC5L1AC SVP15/5<=>SVP10/10 JALPJ1AA SVP15/5<=>SVP10/10 JALPW1AA SVP15/5<=>SVP10/10 JAM8R1AA SVP15/5<=>SVP10/10 JAM811AA SVP15/5<=>SVP10/10 JAM811AD SVP15/5<=>SVP10/10 JARMN1AA SVP15/5<=>SVP10/10 JARMW1AA SVP15/5<=>SVP10/10 JATDH1AA SVP15/5<=>SVP10/10 JCC5L1AH SVP15/5<=>SVP10/10 JCC5L1AD SVP15/5<=>SVP10/10 JCC5L1AE SVP15/5<=>SVP10/10 JATDQ1AA SVP15/5<=>SVP10/10 JATDV1AA SVP15/5<=>SVP10/10 JATD01AA 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. 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 => H-3 OK; No Callin Level Found => H-3	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
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 8-18-06



STL

Data Review Checklist RADIOCHEMISTRY Second Level Review

OC Batch Number: 6227364
W04974

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 Adams Date: 8/21-06

Lot No., Due Date: J6H070210; 09/28/2006
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 6227371; RUNAT UNat by KPA
SDG, Matrix: W04974; 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 => JCC591AD 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 => JATD01AG Uranium 1.4E+01 L:8.3E-02 JATDH1AF Uranium 7.4E+00 L:8.3E-02 JATDV1AG Uranium 1.8E+02 L:8.3E-02	Yes	No	N/A
8.23 Result <= Action Level, when Defined. OK; No Action Level Found => Uranium OK; No Callin Level Found => Uranium	Yes	No	N/A
8.24 Result + 3s >=0, Not Too Negative. OK	Yes	No	N/A

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

8.28.06



STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 6229371
W04974

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: 8-28-06

Collector D.P. CONNOLLY	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. W06-008	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title RCRA AUGUST 2006	DTS-SAWS-4109	Ice Chest No SAWS-370 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 ** ** <div style="font-size: 2em; text-align: center; margin-top: 10px;"> J6 H030376 W04974 </div>	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL
--	--

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1K2R6		W	8/3/6	0955	1x20-mL P	Activity Scan	None
B1K2R6		W	↓	↓	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1K2R6		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1) JALPS	HCl to pH <2

Relinquished By D.P. CONNOLLY	Date/Time AUG 03 2006 14:45	Received By DAVID HARBINSON	Date/Time AUG 03 2006 14:45	Matrix * 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	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By	Date/Time



STL

Sample Check-in List

Date/Time Received: 8/3/06 14:45

SKS 8/4/06
~~W06-008-270~~
~~W06-008-374~~

Client: PNNL

SDG #: W04974 NA SAF #: W00-008 NA
W06-008-376

Work Order Number: J0H030376

Chain of Custody # W06-008-372

Shipping Container ID: SAWS-H109

Air Bill # N/A 374, 270

1. Custody Seals on shipping container intact? NA Yes No
2. Custody Seals dated and signed? NA Yes No
3. Chain of Custody record present? NA Yes No
4. Cooler temperature: _____ NA 5. Vermiculite/packing materials is NA Wet Dry
6. Number of samples in shipping container: 11
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? YES NA pH < 2 pH > 2 adjusted pH
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed. Yes No
12. Were any anomalies identified in sample receipt? Yes No
13. Description of anomalies (include sample numbers): N/A

Sample Custodian: [Signature] Date: 8/3/06 14:45

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____

PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W06-008-404
DURATEK F. M. HALL		Page <u>1</u> of <u>1</u>

Collector F. M. HALL	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. W06-008	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title RCRA, AUGUST 2006	DTS-SAWS-14104	Ice Chest No. SML-442 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 ** ** <div style="font-size: 1.5em; font-family: cursive;"> J64040202 W04974 Due: 9/18/06 </div>	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL
---	---

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1K339		W	8-3-06	1010	1x20-mL P	Activity Scan	None
B1K339		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1) JAMBC	HCl to pH <2

Relinquished By DURATEK F. M. HALL	Print	Signature 	Date/Time AUG 03 2006	Received By DAVID HARBINSON	Print	Signature 	Date/Time AUG 03 2006	Matrix * 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					
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By	Date/Time			

PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W06-008-380
		Page <u>1</u> of <u>1</u>

Collector DURATEX F. M. HALL	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. W06-008	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title RCRA, AUGUST 2006	DTS-SAWS-H104	Ice Chest No. Temp. 3ML-442
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 ** ** J6H040202 W04974	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "T", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL
--	---

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1K323		W	8-3-06	1:34	1x20-mL P	Activity Scan	None
B1K323		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1) JAN 35	HCl to pH <2

Relinquished By DURATEX F. M. HALL Print Sign Date/Time 1508 AUG 03 2006	Received By DAVID HARBIS Print Sign Date/Time 1508 AUG 03 2006	Matrix * 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	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By Date/Time

PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W06-008-368
		Page <u>1</u> of <u>1</u>

Collector BURSTEY F.M. HALL	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. W06-008	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title RCRA AUGUST 2006	OTS-SHOWS-H104	Ice Chest No. Temp. SMC-442
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 ** ** <div style="font-size: 2em; font-family: cursive;"> JUN 04 0202 W04974 </div>	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "T", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL
---	---

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1K315		W	8-7-06	1239	1x20-mL P	Activity Scan	None
B1K315		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1) JAM8P	HCl to pH <2

Relinquished By BURSTEY F.M. HALL	Print 	Sign 	Date/Time 1508	Received By DAVID HARBEL-SC	Print 	Sign 	Date/Time 1508	Matrix * S = Soil DS = Drum Solid SE = Sediment DI. = Drum Lioni SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By	Date/Time AUG 03 2006	Received By	Date/Time					
Relinquished By	Date/Time	Received By	Date/Time					
Relinquished By	Date/Time	Received By	Date/Time					
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By	Date/Time			

PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W06-008-252
		Page <u>1</u> of <u>1</u>

Collector DURATEK F. M. HALL	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. W06-008	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title RCRA, AUGUST 2006	DTS-SAMS-1104	Ice Chest No. Temp. 3ML-442
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 ** ** <div style="font-size: 2em; margin-top: 10px;">JUN040202 W04974</div>	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL
--	---

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1K2N6		W	8-3-06	0730	1x20-mL P	Activity Scan	None
B1K2N6		W	↓	↓	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1K2N6		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1) JAMBR	HCl to pH <2

Relinquished By DURATEK F. M. HALL	Print	Sign 	Date/Time 1508	Received By DAVID HARDINSON	Print	Sign 	Date/Time 1508	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					
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By	Date/Time			



STL

Sample Check-in List

W06-008-253
 W06-008-252
 W06-008-368
 W06-008-388 - K
 W06-008-404 - NA

Date/Time Received: 8/3/06 15:08

Client: P/N/L

SDG #: W04971 NA SAF #: W06-008 NA

Work Order Number: J6H040202

Chain of Custody # W06-008-404

Shipping Container ID: Saws-Hold

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? NA Yes No
4. Cooler temperature: _____ NA 5. Vermiculite/packing materials is NA Wet Dry
6. Number of samples in shipping container: 12
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? YES NA pH < 2 pH > 2 adjusted pH
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed. Yes No
12. Were any anomalies identified in sample receipt? Yes No
13. Description of anomalies (include sample numbers): N/A

Sample Custodian: [Signature] Date: 8/3/06 15:08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____

PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W06-006-165
		Page <u>1</u> of <u>1</u>

Collector R. T. SICKLE	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. W06-006	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title RCRA, JUNE 2006	Logbook: DTS-SAWS-H106	Ice Chest No. SMC-SGS 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 ** ** <div style="font-size: 1.2em; font-family: cursive;"> J6H070163 W04974 DUE: 9/18/06 </div>	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "T", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL
---	---

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JBC5		W	8/4/06	1027	1x20-mL P	Activity Scan	None
B1JBC5		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1) JARMA	HCl to pH <2
 <div style="display: flex; justify-content: space-around;"> R. WALKER 8/4/06 </div> 							

Relinquished By R. T. SICKLE <i>[Signature]</i>	Date/Time AUG 04 2006	Received By DAVID HARBINSON <i>[Signature]</i>	Date/Time AUG 04 2006	Matrix *
				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	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By
				Date/Time



STL

Sample Check-in List

Date/Time Received: 8/4/06 13:55

Client: P/NL SDG # W04974 NA SAF #: W06-000 NA

Work Order Number: J0H070106 Chain of Custody # W06-008-252
W06-006-165

Shipping Container ID: N/A Air Bill # N/A W06-008-362
W06-008-283

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: 14
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? YES NA pH < 2 pH > 2 adjusted pH
11. Sample Location, Sample Collector Listed? * Yes No
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes No
13. Description of anomalies (include sample numbers): N/A

Sample Custodian: [Signature] Date: 8/4/06 13:55

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____

PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W06-008-362
Page 1 of 1		

Collector R. T. SICKLE	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. W06-008	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title RCRA AUGUST 2006	Ice Chest No. SML-595 Temp.	Method of Shipment Govt. Vehicle
Shipped To (Lab) Severn Trent Incorporated, Richland	Priority: 45 Days	Bill of Lading/Air Bill No.
Protocol RCRA	Offsite Property No.	

POSSIBLE SAMPLE HAZARDS/REMARKS ** ** <div style="font-size: 1.5em; font-family: cursive;"> J64070164 W04974 Due: 9/18/06 </div>	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL
---	---

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1K311		W	8/4/06	0930	1x20-mL P	Activity Scan	None
B1K311		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1) JARNG	HCl to pH <2
<div style="font-size: 1.5em; font-family: cursive;"> R. Wall 8/4/06 </div>							

Relinquished By R. T. SICKLE	Print	Sign	Date/Time AUG 04 2006	Received By David HARBINSON	Print	Sign	Date/Time AUG 04 2006	Matrix * 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	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By			Date/Time	

PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W06-008-283
		Page <u>1</u> of <u>1</u>

Collector R. T. SICKLE	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. W06-008	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title RCRA, AUGUST 2006	Ice Chest No. SML-595 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 ** ** <div style="font-size: 2em; text-align: center;">J6H070164 W04974</div>	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "T", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL
--	---

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1K2V2		W	8/4/06	1148	1x20-mL P	Activity Scan	None
B1K2V2		W	↓	↓	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1K2V2		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
B1K2V2		W	↓	↓	2x4000-mL G/P	I129LL_ETVDSK_SEP_GS: I-129_ETVDSK (1)	None
<div style="font-size: 1.5em; opacity: 0.5;">R. W. WALKER 8/4/06</div>							

Relinquished By R. T. SICKLE	Date/Time AUG 04 2006	Received By DAVID HARDY	Date/Time AUG 04 2006	Matrix *
Relinquished By	Date/Time	Received By	Date/Time	S = Soil DS = Drum Solid SF = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By	Date/Time	Received By	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By	Date/Time

Collector R. T. SICKLE	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. W06-008	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title RCRA, AUGUST 2006	Logbook: DTS-SAWS-H106	Ice Chest No. SML-595 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
** **

JLH0701/04
W04974

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

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1K2V1		W	8/4/06	1148	1x20-mL P	Activity Scan	None
B1K2V1		W	↓	↓	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1K2V1		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1) JARMW	HCl to pH <2
B1K2V1		W	↓	↓	2x4000-mL G/P	I129LL_ETVDSK_SEP_GS: I-129_ETVDSK (1)	None
<div style="font-size: 2em; opacity: 0.5;"><i>J. Wall</i></div> <div style="font-size: 1.5em; margin-top: 10px;"><i>8/4/06</i></div>							

Relinquished By R. T. SICKLE	Print	Sign	Date/Time AUG 04 2006	1355	Received By David HARBINSKI	Print	Sign	Date/Time AUG 04 2006	1355
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	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)						Disposed By		Date/Time

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



STL

Sample Check-in List

Date/Time Received: 8/4/06 13:55

Client: PNNL SDG #: W06-008 NA [] SAF #: W06-008 NA []

Work Order Number: JG HOTO 164 Chain of Custody # W06-008-282

Shipping Container ID: DTB-SAWS-H100 Air Bill # N/A W06-008-362
SML-595 W06-008-283

1. Custody Seals on shipping container intact? NA [] Yes [] No []
2. Custody Seals dated and signed? NA [] Yes [] No []
3. Chain of Custody record present? NA [] Yes [] No []
4. Cooler temperature: _____ NA [] Yes [] No []
5. Vermiculite/packing materials is NA [] Wet [] Dry []
6. Number of samples in shipping container: 14
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? YES NA [] pH < 2 [] pH > 2 [] adjusted pH []
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed. Yes [] No []
12. Were any anomalies identified in sample receipt? Yes [] No []
13. Description of anomalies (include sample numbers): N/A

Sample Custodian: [Signature] Date: 8/4/06 13:55

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____

PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I06-046-8
		Page <u>1</u> of <u>1</u>

Collector DURATEK F. M. HALL	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. 106-046	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title 100KR4IAM(1/2)-LOI JULY 2006	DTS- SAWP H 104	Ice Chest No. SML 442 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 ** ** <div style="text-align: center; font-size: 1.5em; font-family: cursive;"> JL6H070209 W04974 Dye: 9/2/06 </div>	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL
--	---

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JKP6		W	8-2-06	0830	1x20-mL P	Activity Scan	None
B1JKP6		W	↓	↓	3x1000-mL G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1) JATC9	HNO3 to pH <2

Relinquished By DURATEK F. M. HALL	Print 	Date/Time 1425 AUG 07 2006	Received By DAVID HARBINSKI	Print 	Date/Time 1425 AUG 07 2006	Matrix * 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			
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By	Date/Time		

Collector DURATEX F. M. WALL	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. 106-046	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title 100KR4IAM(1/2)-LOI JULY 2006	ITS - Sawg H104	Ice Chest No. Temp. 5ml 442
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 ** ** <div style="font-size: 2em; text-align: center; margin-top: 10px;"> J6H070209 W04974 </div>	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL
---	---

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1JKP5		W	8-2-06	1033	1x20-mL P	Activity Scan	None
B1JKP5		W	↓	↓	3x1000-mL G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1) JATDA	HNO3 to pH <2

Relinquished By DURATEX F. M. WALL	Print 	Sign 	Date/Time 1425 AUG 07 2006	Received By David HARBISER	Print 	Sign 	Date/Time 1425 AUG 07 2006	Matrix * 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					
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By	Date/Time			



STL

Sample Check-in List

Date/Time Received: 8/7/06 14:25

SKS 8/8/06
~~I 06-046-7~~

Client: Parl

SDG #: W09974

NA

SAF #:

I 06-046

NA

Work Order Number: JOH 670209

Chain of Custody # 506-007-195

Shipping Container ID: ~~N/A~~ SKS 8/8/06
SML 442

Air Bill # N/A

506-007-11

I 06-046-8, I 06-046-7

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: 13
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? YES NA pH < 2 pH > 2 adjusted pH
11. Sample Location, Sample Collector Listed? * Yes No
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes No
13. Description of anomalies (include sample numbers): N/A

Sample Custodian: [Signature]

Date: 8/7/06 14:25

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____

PNNL **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** C.O.C. # **W06-008-82**
 Page 1 of 1

Collector DURATEX L.D. WALL	Contact/Requester Dot Stewart	Telephone No. 509-376-5056	MSIN	FAX
SAF No. W06-008	Sampling Origin Hanford Site	Purchase Order/Charge Code		
Project Title RCRA AUGUST 2006	SAWS H106	Ice Chest No. 9ML 585	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 ** ** **JONOT0210
W04974**

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

Due: 9/21/06

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative	
B1K281		W	8-20-06	0955	1x20-mL P	Activity Scan	None	
B1K281		W	↓	↓	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2	
B1K281		W			1x1000-mL P	906.0_H3_LSC: Tritium (1)	None	
B1K281		W			1x1000-mL P	9310_ALPHABETA_GPC: Gross Beta (1)	JATDH	HNO3 to pH <2
B1K281		W			1x4000-mL G/P	GAMMALL_GS: List-1 (9)		HNO3 to pH <2
B1K281		W			1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)		HCl to pH <2

Relinquished By DURATEX L.D. WALL	Print <i>L.D. Wall</i>	Sign <i>L.D. Wall</i>	Date/Time AUG 07 2006 1425	Received By DAVID HARBING	Print <i>David Harbing</i>	Sign <i>David Harbing</i>	Date/Time AUG 07 2006 1425	Matrix *
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	S = Soil DS = Drum Solid SE = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By			Date/Time	

PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W06-008-76
		Page <u>1</u> of <u>1</u>

Collector DURATEK L.D. WALL	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. W06-008	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title RCRA AUGUST 2006	SAWS-H 106	Ice Chest No. 5ML 595 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 ** ** <div style="font-size: 2em; font-family: cursive; margin-top: 10px;"> JTG H070210 W04924 </div>	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "T", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL
---	---

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative	
B1K284		W	8.7.06	0730	1x20-mL P	Activity Scan	None	
B1K284		W	↓	↓	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2	
B1K284		W			1x1000-mL P	906.0_H3_LSC: Tritium (1)	None	
B1K284		W			1x4000-mL G/P	GAMMALL_GS: List-1 (9)	JATOG	HNO3 to pH <2
B1K284		W			1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)		HCl to pH <2
B1K284		W			1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)		HNO3 to pH <2

Relinquished By DURATEK L.D. WALL	Print <i>L.D. Wall</i>	Date/Time AUG 07 2006 1425	Received By DAVID HARBINGER	Print <i>David Harbinger</i>	Date/Time AUG 07 2006 1425	Matrix *
Relinquished By	Date/Time	Received By	Date/Time	S = Soil DS = Drum Solid SF = Sediment DL = Drum Liquid SO = Solid T = Tissue SL = Sludge WT = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other		
Relinquished By	Date/Time	Received By	Date/Time			
Relinquished By	Date/Time	Received By	Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By		Date/Time	

PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W06-008-77
		Page <u>1</u> of <u>1</u>

Collector DURATEK L.D. WALL	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. W06-008	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title RCRA AUGUST 2006	SAWS 14106	Ice Chest No. Temp. 5 mL 595
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 ** ** <div style="font-size: 2em; text-align: center; margin-top: 10px;"> JG H070210 W04994 </div>	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "T", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL
--	---

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1K285		W	8-7-06	0914	1x20-mL P	Activity Scan	None
B1K285		W	↓	↓	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2
B1K285		W	↓	↓	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1K285		W	↓	↓	1x4000-mL G/P	GAMMALL_GS: List-1 (9)	HNO3 to pH <2
B1K285		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
B1K285		W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2

Relinquished By DURATEK L.D. WALL	Print Sign A.D. Wall	Date/Time AUG 07 2006 1425	Received By DAVID HARBING	Print Sign [Signature]	Date/Time AUG 07 2006 1425	Matrix *
Relinquished By	Date/Time	Received By	Date/Time	S = Soil DS = Drum Solid SF = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other		
Relinquished By	Date/Time	Received By	Date/Time			
Relinquished By	Date/Time	Received By	Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By	Date/Time		

Collector DURATEK L.D. WALL	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. W06-008	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title RCRA, AUGUST 2006	SAWS 4106	Ice Chest No. Temp. 9ML 545
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 ** ** <div style="font-size: 2em; font-family: cursive;"> J0H070210 W04974 </div>	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit invoices & deliverables to DL Stewart, PNNL
---	--

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1K226		W	8-7-06	1056	1x20-mL P	Activity Scan	None
B1K226		W	↓	↓	1x500-mL G/P	UTOT_KPA: Uranium (1)	HNO3 to pH <2
B1K226		W	↓	↓	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None
B1K226		W	↓	↓	1x4000-mL G/P	GAMMALL_GS: List-1 (9) JATDO	HNO3 to pH <2
B1K226		W	↓	↓	1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	HCl to pH <2
B1K226		W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2

Relinquished By DURATEK L.D. WALL <div style="font-size: 1.5em; font-family: cursive;">L.D. Wall</div>	Print	Sign	Date/Time AUG 07 2006	1425	Received By DAVID HARRISON <div style="font-size: 1.5em; font-family: cursive;">David Harrison</div>	Print	Sign	Date/Time AUG 07 2006	1425	Matrix * 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			
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)						Disposed By	Date/Time			



STL

Sample Check-in List

Date/Time Received: 8/7/06 14:25 S1CS 8/8/06
W06-008-52
 Client: Paul SDG #: W06-004 NA SAF #: W06-008 NA
 Work Order Number: J0N070210 Chain of Custody # W06-008-8d
 Shipping Container ID: S1CS 8/8/06 H10 SML 595 Air Bill # N/A W06-008-76
W06-008-77,52

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: 24
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? yes NA pH < 2 pH > 2 adjusted pH
11. Sample Location, Sample Collector Listed? * Yes No
 *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes No
13. Description of anomalies (include sample numbers): N/A

Sample Custodian: [Signature] Date: 8/7/06 14:25

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____
 No action necessary; process as is.
 Project Manager _____ Date _____