0065489

SAF-B03-018
ERDF Groundwater Well Samples
FINAL DATA PACKAGE

MAIL COMPLETE COPY OF DATA PACKAGE TO:

Tom Lazarski	H9-03	____NB 6/1/05_____ INITIAL/DATE
Rich Weiss	H9-01	____NB 6/1/05_____ INITIAL/DATE

COMMENTS: (PLEASE INCLUDE THE FOLLOWING ON THE FAX COVER SHEET)

SDG ____W04598____ SAF-B03-018

X Rad only Chem only Rad & Chem

X Complete Partial

RECEIVED
JUN 20 2005
EDMC

Analytical Data Package Prepared For

Bechtel Hanford

RECEIVED MAY 2005

Radiochemical Analysis By

STL Richland

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

Assigned Laboratory Code: STLRL

Data Package Contains 54 *Pages*

Report No.: 29003

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
W04598	B03-018	B1CD03	J5C240242-1	G6XRM1AD	9G6XRM10	5126274
		B1CD03	J5C240242-1	G6XRM1AE	9G6XRM10	5126275
		B1CD03	J5C240242-1	G6XRM2AA	9G6XRM20	5126278
		B1CD03	J5C240242-1	G6XRM1AC	9G6XRM10	5126279
		B1CD03	J5C240242-1	G6XRM1AG	9G6XRM10	5126281
		B1CD03	J5C240242-1	G6XRM1AH	9G6XRM10	5126283
		B1CD03	J5C240242-1	G6XRM2AF	9G6XRM20	5143560

SEVERN TRENT STL

STL Richland
2800 George Washington Way
Richland, WA 99354

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

Certificate of Analysis

Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

May 31, 2005

Attention: Joan Kessner

SAF Number	:	B03-018
Date SDG Closed	:	April 6, 2005
Number of Samples	:	One (1)
Sample Type	:	Water
SDG Number	:	W04598
Data Deliverable	:	45-Day / Summary

CASE NARRATIVE

I. Introduction

On March 23, 2005, one water sample was received at STL Richland (STLR) for radiochemical analysis. Upon receipt, the sample was assigned the following laboratory ID number to correspond with the Bechtel Hanford, Inc. (BHI) specific ID:

BHI ID#	STLR ID#	MATRIX	DATE OF RECEIPT
B1CD03	G6XRM	WATER	3/23/05

II. Sample Receipt

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

III. Analytical Results/Methodology

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

The requested analyses were:

Gas Proportional Counting
Gross Alpha by method RICH-RC-5014
Gross Beta by method RICH-RC-5014
Total Radium by method RICH-RC-5027
Gamma Spectroscopy
Iodine-129 by method RICH-RC-5017

Liquid Scintillation Counter
Carbon-14 by method RICH-RC-5022
Technetium-99 by method RICH-RC-5065
Laser Induced Phosphorimetry
Total Uranium by method RICH-RC-5058

IV. Quality Control

The analytical results for each analysis performed under SDG W04598 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, sample and sample duplicate (B1CD03) results are within contractual requirements.

Gross Beta by method RICH-RC-5014:
The duplicate was lost during analysis due to an analyst error; spilled sample during processing. Except as noted, the LCS, batch blank and sample results are within contractual requirements.

Total Radium by method RICH-RC-5027:
The LCS, batch blank, sample and sample duplicate (B1CD08) results are within contractual requirements.

Gamma Spectroscopy
Iodine-129 by method RICH-RC-5017:
The LCS, batch blank, sample and sample duplicate (B1CD03) results are within contractual requirements.

Liquid Scintillation Counter
Carbon-14 by method RICH-RC-5022:
The LCS, batch blank, sample and sample duplicate (B1CD03) results are within contractual requirements.

Technetium-99 by method RICH-RC-5065:
The LCS, batch blank, sample, sample duplicate (B1CD03) and sample matrix spike (B1CD03) results are within contractual requirements.

Laser Induced Phosphorimetry

Total Uranium by method RICH-RC-5058:

The LCS, batch blank, sample, sample duplicate (B1CD03) and sample matrix spike (B1CD03) results are within contractual requirements.

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

Reviewed and approved:

for Becky Warrington
Project Manager

Drinking Water Method Cross References

	DRINKING WATER ASTM METHOD CROSS REFERENCES	
Referenced Method	**Isotope(s)**	**STL Richland's SOP number**
EPA 901.1	Cs-134, I-131	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr89/90	RICH-RC-5006
ASTM D2460	Total Radium	RICH-RC-5027
Standard Method 7500-U-C & ASTM D5174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007
NOTE:		
The Gross Alpha LCS is prepared with Am-241 (unless otherwise specified in the case narrative)		
The Gross Beta LCS is prepared with Sr/Y-90 (unless otherwise specified in the case narrative)		

Uncertainty Estimation

STL Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, R = constants * f(x,y,z,...). 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/vn), 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) ***u_c - Combined Uncertainty.***	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, ***u_c the combined uncertainty.*** The uncertainty is absolute and in the same units as the result.
(#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 * Sqrt(2*(BkgrndCnt/BkgrndCntMin)/SCntMin)) * (ConvFct/(Eff*Yld*Abn*Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
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 * Sqrt((BkgrndCnt/BkgrndCntMin)/SCntMin) + 2.71/SCntMin) * (ConvFct/(Eff * Yld * Abn * Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability.
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)/[sqrt($TPUs^2$ + $TPUd^2$)] as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
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.

Sample Results Summary

STL Richland STLRL

Ordered by Method, Batch No., Client Sample ID.

Date: 31-May-05

Report No. : 29003

SDG No: W04598

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RPD
5126281 I129_SEP_LEPS_GS									
B1CD03									
	G6XRM1AG	I-129L	5.91E+00 +- 2.9E+00		pCi/L	95%	1.61E+00		
B1CD03 DUP									
	G6XRM1AR	I-129L	7.91E+00 +- 2.4E+00	U	pCi/L	96%	3.99E+00		
5126278 9310_ALPHABETA_GPC									
B1CD03									
	G6XRM2AA	ALPHA	2.20E+00 +- 1.6E+00		pCi/L	100%	2.04E+00	3.00E+00	
B1CD03 DUP									
	G6XRM2AP	ALPHA	1.59E+00 +- 1.3E+00	U	pCi/L	100%	1.67E+00	3.00E+00	32.2
5126279 9310_ALPHABETA_GPC									
B1CD03									
	G6XRM1AC	BETA	1.72E+01 +- 3.4E+00		pCi/L	100%	3.08E+00	4.00E+00	
5126283 RICHRC5027									
B1CD03									
	G6XRM1AH	TOTAL ALPHA RA	9.63E-03 +- 7.9E-02	U	pCi/L	100%	1.94E-01	1.00E+00	
B1CD03 DUP									
	G6XRM1AT	TOTAL ALPHA RA	2.07E-01 +- 1.9E-01	U	pCi/L	100%	2.92E-01	1.00E+00	182.2
5126274 UTOT_KPA									
B1CD03									
	G6XRM1AD	TOTAL-URANIUM	2.14E+00 +- 2.2E-01		ug/L		8.55E-02	1.44E-04	
B1CD03 DUP									
	G6XRM1AK	TOTAL-URANIUM	2.10E+00 +- 2.2E-01		ug/L		8.62E-02	1.44E-04	
5126275 C14_LSC									
B1CD03									
	G6XRM1AE	C-14	7.91E+00 +- 4.3E+00		pCi/L	100%	7.83E+00	2.00E+02	
B1CD03 DUP									
	G6XRM1AL	C-14	6.49E+00 +- 4.2E+00	U	pCi/L	100%	7.84E+00	2.00E+02	19.8
5143560 TC99_ETVDSK_LSC									
B1CD03									
	G6XRM2AF	TC-99	5.67E+01 +- 9.4E+00		pCi/L	100%	1.03E+01	1.50E+01	
B1CD03 DUP									
	G6XRM1AV	TC-99	5.34E+01 +- 9.2E+00		pCi/L	100%	1.03E+01	1.50E+01	6.1

No. of Results: 13

RPD - Relative Percent Difference.

U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

QC Results Summary
STL Richland STLRL

Ordered by Method, Batch No, QC Type,.

Date: 31-May-05

Report No. : 29003

SDG No.: W04598

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	Recovery	Bias	MDC|MDA
I129_SEP_LEPS_GS								
5126281 BLANK QC								
G91N01AA	I-129L	2.63E-01 +- 6.7E-01	U	pCi/L	97%			1.40E+00
5126281 LCS								
G91N01AC	I-129L	1.99E+01 +- 3.7E+00		pCi/L	95%	87%	-0.1	1.99E+00
9310_ALPHABETA_GPC								
5126278 BLANK QC								
G91NM1AA	ALPHA	1.70E-01 +- 3.9E-01	U	pCi/L	100%			9.07E-01
5126278 LCS								
G91NM1AC	ALPHA	1.81E+01 +- 4.5E+00		pCi/L	100%	78%	-0.2	7.05E-01
9310_ALPHABETA_GPC								
5126279 BLANK QC								
G91NP1AA	BETA	-4.81E-01 +- 1.1E+00	U	pCi/L	100%			2.64E+00
5126279 LCS								
G91NP1AC	BETA	1.80E+01 +- 3.7E+00		pCi/L	100%	78%	-0.2	2.72E+00
RICHRC5027								
5126283 BLANK QC								
G91N61AA	TOTAL ALPHA RA	1.66E-01 +- 1.8E-01	U	pCi/L	94%			3.12E-01
5126283 LCS								
G91N61AC	TOTAL ALPHA RA	4.35E+00 +- 1.4E+00		pCi/L	97%	121%	0.2	2.85E-01
UTOT_KPA								
5126274 MATRIX SPIKE								
G6XRM1AJ	TOTAL-URANIUM	3.34E+01 +- 4.2E+00		ug/L		96%	0.0	8.03E-02
5126274 BLANK QC								
G91M81AA	TOTAL-URANIUM	-3.04E-04 +- 3.7E-05	U	ug/L				8.32E-02
5126274 LCS								
G91M81AD	TOTAL-URANIUM	3.49E+01 +- 3.6E+00		ug/L		99%	0.0	8.09E-02
G91M81AC	TOTAL-URANIUM	3.47E+01 +- 4.1E+00		ug/L		99%	0.0	8.09E-02
C14_LSC								
5126275 BLANK QC								
G91NC1AA	C-14	2.14E+00 +- 4.0E+00	U	pCi/L	100%			7.84E+00
5126275 LCS								
G91NC1AC	C-14	4.32E+01 +- 5.8E+00		pCi/L	100%	90%	-0.1	7.83E+00
TC99_ETVDSK_LSC								
5143560 MATRIX SPIKE								
G6XRM1AU	TC-99	3.90E+02 +- 3.0E+01		pCi/L	100%	107%	0.1	1.05E+01
5143560 BLANK QC								
HA4VE1AA	TC-99	2.12E+00 +- 6.2E+00	U	pCi/L	100%			1.03E+01
5143560 LCS								
HA4VE1AC	TC-99	1.92E+02 +- 1.7E+01		pCi/L	100%	91%	-0.1	1.02E+01

No. of Results: 17

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Bias - (Result/Expected)-1 as defined by ANSI N13.30.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 31-May-05

Lab Name:	STL Richland	**SDG:**	W04598	**Collection Date:**	3/23/2005 12:27:00 PM
Lot-Sample No.:	J5C240242-1	**Report No. :**	29003	**Received Date:**	3/23/2005 2:30:00 PM
Client Sample ID:	B1CD03	**COC No. :**	B03-018-114	**Matrix:**	WATER

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5126274	UTOT_KPA			**Work Order:**	G6XRM1AD		**Report DB ID:**	9G6XRM10				
TOTAL-URANIUM	***2.14E+00***			2.2E-01	8.55E-02	ug/L		*(25.)*	5/26/05 11:44 a		0.0245	KPAW3
						3.03E-02	1.44E-04	*(19.6)*			ML	
Batch: 5126275	C14_LSC			**Work Order:**	G6XRM1AE		**Report DB ID:**	9G6XRM10				
C-14	***7.91E+00***		3.5E+00	4.3E+00	7.83E+00	pCi/L	100%	*(1.)*	5/12/05 01:02 a		0.2	LSC3
						3.75E+00	2.00E+02	*(3.7)*			L	
Batch: 5126278	9310_ALPHABETA_GPC			**Work Order:**	G6XRM2AA		**Report DB ID:**	9G6XRM20				
ALPHA	***2.20E+00***		1.6E+00	1.6E+00	2.04E+00	pCi/L	100%	*(1.1)*	5/25/05 12:36 p		0.1977	GPC12A
						7.24E-01	3.00E+00	*(2.7)*			L	
Batch: 5126279	9310_ALPHABETA_GPC			**Work Order:**	G6XRM1AC		**Report DB ID:**	9G6XRM10				
BETA	***1.72E+01***		2.4E+00	3.4E+00	3.08E+00	pCi/L	100%	*(5.6)*	5/21/05 11:47 a		0.1953	GPC26A
						1.47E+00	4.00E+00	*(10.)*			L	
Batch: 5126281	I129_SEP_LEPS_GS			**Work Order:**	G6XRM1AG		**Report DB ID:**	9G6XRM10				
I-129L	***5.91E+00***		0.0E+00	2.9E+00	1.61E+00	pCi/L	95%	*(3.7)*	5/25/05 02:59 p		1.0	LEP4$1
						7.70E-01		*(4.1)*			L	
Batch: 5126283	RICHRC5027			**Work Order:**	G6XRM1AH		**Report DB ID:**	9G6XRM10				
TOTAL ALPHA RA	***9.63E-03***	U	7.9E-02	7.9E-02	1.94E-01	pCi/L	100%	*0.05*	5/25/05 03:42 a		0.5202	GPC10E
						7.09E-02	1.00E+00	*0.24*			L	
Batch: 5143560	TC99_ETVDSK_LSC			**Work Order:**	G6XRM2AF		**Report DB ID:**	9G6XRM20				
TC-99	***5.67E+01***		5.9E+00	9.4E+00	1.03E+01	pCi/L	100%	*(5.5)*	5/25/05 04:28 a		0.1254	LSC4
						4.96E+00	1.50E+01	*(12.)*			L	

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V4.13 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 31-May-05

Lab Name:	STL Richland	SDG:	W04598	Collection Date:	3/23/2005 12:27:00 PM
Lot-Sample No.:	J5C240242-1	Report No. :	29003	Received Date:	3/23/2005 2:30:00 PM
Client Sample ID:	B1CD03	COC No. :	B03-018-114	Matrix:	WATER

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 7 Comments:

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MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM II

Date: 31-May-05

DUPLICATE RESULTS

Lab Name:	**STL Richland**	**SDG:**	W04598	**Collection Date:**	3/23/2005 12:27:00 PM
Lot-Sample No.:	**J5C240242-1**	**Report No. :**	29003	**Received Date:**	3/23/2005 2:30:00 PM
Client Sample ID:	**B1CD03 DUP**	**COC No. :**	B03-018-114	**Matrix:**	WATER

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5126274	UTOT_KPA			**Work Order:** G6XRM1AK		**Report DB ID:** G6XRM1KR			**Orig Sa DB ID:** 9G6XRM10			
TOTAL-URANIUM	2.10E+00			2.2E-01	8.62E-02	ug/L		(24.4)	5/26/05 11:52 a		0.0243	KPAW3
	2.14E+00		**RPD**	**1.7**		1.44E-04		(19.6)			ML	
Batch: 5126275	C14_LSC			**Work Order:** G6XRM1AL		**Report DB ID:** G6XRM1LR			**Orig Sa DB ID:** 9G6XRM10			
C-14	6.49E+00	U	3.5E+00	4.2E+00	7.84E+00	pCi/L	100%	0.83	5/12/05 01:45 a		0.2	LSC3
	7.91E+00		**RPD**	**19.8**		2.00E+02		(3.1)			L	
Batch: 5126278	9310_ALPHABETA_GPC			**Work Order:** G6XRM2AP		**Report DB ID:** G6XRM2PR			**Orig Sa DB ID:** 9G6XRM20			
ALPHA	1.59E+00	U	1.3E+00	1.3E+00	1.67E+00	pCi/L	100%	0.95	5/25/05 12:36 p		0.2018	GPC12B
	2.20E+00		**RPD**	**32.2**		3.00E+00		(2.4)			L	
Batch: 5126281	I129_SEP_LEPS_GS			**Work Order:** G6XRM1AR		**Report DB ID:** G6XRM1RR			**Orig Sa DB ID:** 9G6XRM10			
I-129L	7.91E+00	U	0.0E+00	2.4E+00	3.99E+00	pCi/L	96%	(2.)	5/25/05 03:00 p		1.0	LEP5$1
	5.91E+00		**RPD**	**28.9**				(6.6)			L	
Batch: 5126283	RICHRC5027			**Work Order:** G6XRM1AT		**Report DB ID:** G6XRM1TR			**Orig Sa DB ID:** 9G6XRM10			
TOTAL ALPHA RA	2.07E-01	U	1.8E-01	1.9E-01	2.92E-01	pCi/L	100%	0.71	5/25/05 03:42 a		0.4741	GPC11A
	9.63E-03	U	**RPD**	**182.2**		1.00E+00		(2.2)			L	
Batch: 5143560	TC99_ETVDSK_LSC			**Work Order:** G6XRM1AV		**Report DB ID:** G6XRM1VR			**Orig Sa DB ID:** 9G6XRM20			
TC-99	5.34E+01		5.8E+00	9.2E+00	1.03E+01	pCi/L	100%	(5.2)	5/25/05 03:25 a		0.126	LSC4
	5.67E+01		**RPD**	**6.1**		1.50E+01		(11.6)			L	

STL Richland **RPD - Relative Percent Difference.**

rptSTLRchDupV4.1 3 A97 **MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.**

U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM II

Date: 31-May-05

DUPLICATE RESULTS

Lab Name:	STL Richland	SDG:	W04598	Collection Date:	3/23/2005 12:27:00 PM
Lot-Sample No.:	J5C240242-1	Report No. :	29003	Received Date:	3/23/2005 2:30:00 PM
Client Sample ID:	B1CD03 DUP	COC No. :	B03-018-114	Matrix:	WATER

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 6 Comments:

STL Richland RPD - Relative Percent Difference.

rptSTLRchDupV4.1 3 A97 MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

FORM II

BLANK RESULTS

Date: 31-May-05

Lab Name: STL Richland

Matrix: WATER

SDG: W04598

Report No. : 29003

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA ,	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5126275	C14_LSC			**Work Order:**	G91NC1AA		**Report DB ID:**	G91NC1AB				
C-14	2.14E+00	U	3.3E+00	4.0E+00	7.84E+00	pCi/L	100%	0.27	5/11/05 11:38 p		0.2	LSC3
					3.75E+00	1.00E+02		(1.1)			L	
Batch: 5126278	9310_ALPHABETA_GPC			**Work Order:**	G91NM1AA		**Report DB ID:**	G91NM1AB				
ALPHA	1.70E-01	U	3.9E-01	3.9E-01	9.07E-01	pCi/L	100%	0.19	5/21/05 01:14 p		0.2053	GPC10E
					3.26E-01	3.00E+00		0.87			L	
Batch: 5126279	9310_ALPHABETA_GPC			**Work Order:**	G91NP1AA		**Report DB ID:**	G91NP1AB				
BETA	-4.81E-01	U	1.1E+00	1.1E+00	2.64E+00	pCi/L	100%	-0.18	5/21/05 11:47 a		0.2003	GPC26B
					1.26E+00	4.00E+00		-0.84			L	
Batch: 5126281	I129_SEP_LEPS_GS			**Work Order:**	G91N01AA		**Report DB ID:**	G91N01AB				
I-129L	2.63E-01	U	0.0E+00	6.7E-01	1.40E+00	pCi/L	97%	0.19	5/25/05 03:55 p		1.0003	LEP5$1
					6.91E-01			0.79			L	
Batch: 5126283	RICHRC5027			**Work Order:**	G91N61AA		**Report DB ID:**	G91N61AB				
TOTAL ALPHA RA	1.66E-01	U	1.8E-01	1.8E-01	3.12E-01	pCi/L	94%	0.53	5/25/05 03:42 a		0.5078	GPC11B
					1.28E-01	1.00E+00		(1.8)			L	
Batch: 5126274	UTOT_KPA			**Work Order:**	G91M81AA		**Report DB ID:**	G91M81AB				
TOTAL-URANIUM	-3.04E-04	U		3.7E-05	8.32E-02	ug/L		0.	5/26/05 11:32 a		0.0252	KPAW3
					2.94E-02	1.44E-04		-(16.6)			ML	
Batch: 5143560	TC99_ETVDSK_LSC			**Work Order:**	HA4VE1AA		**Report DB ID:**	HA4VE1AB				
TC-99	2.12E+00	U	4.3E+00	6.2E+00	1.03E+01	pCi/L	100%	0.21	5/25/05 05:30 a		0.1284	LSC4
					4.95E+00	1.50E+01		0.69			L	

STL Richland
rptSTLRchBlank
V4.13 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM II

BLANK RESULTS

Date: 31-May-05

Lab Name: STL Richland

Matrix: WATER

SDG: W04598

Report No. : 29003

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA ,	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 7 Comments:

STL Richland MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

rptSTLRchBlank
V4.13 A97

FORM II

LCS RESULTS

Date: 31-May-05

Lab Name: STL Richland

Matrix: WATER

SDG: W04598

Report No. : 29003

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 5126275	C14_LSC			**Work Order:** G91NC1AC			**Report DB ID:** G91NC1CS						
C-14	4.32E+01		4.6E+00	5.8E+00	7.83E+00	pCi/L	100%	4.81E+01	1.6E+00	90%	5/12/05 12:20 a	0.2	LSC3
							Rec Limits:	70	130	-0.1		L	
Batch: 5126278	9310_ALPHABETA_GPC			**Work Order:** G91NM1AC			**Report DB ID:** G91NM1CS						
ALPHA	1.81E+01		2.6E+00	4.5E+00	7.05E-01	pCi/L	100%	2.32E+01	7.5E-01	78%	5/21/05 01:14 p	0.2033	GPC12A
							Rec Limits:	70	130	-0.2		L	
Batch: 5126279	9310_ALPHABETA_GPC			**Work Order:** G91NP1AC			**Report DB ID:** G91NP1CS						
BETA	1.80E+01		2.3E+00	3.7E+00	2.72E+00	pCi/L	100%	2.30E+01	2.8E-01	78%	5/21/05 11:47 a	0.1967	GPC26C
							Rec Limits:	70	130	-0.2		L	
Batch: 5126281	I129_SEP_LEPS_GS			**Work Order:** G91N01AC			**Report DB ID:** G91N01CS						
I-129L	1.99E+01		0.0E+00	3.7E+00	1.99E+00	pCi/L	95%	2.27E+01	7.6E-01	87%	5/25/05 03:56 p	1.0014	LEP4$1
							Rec Limits:	70	130	-0.1		L	
Batch: 5126283	RICHRC5027			**Work Order:** G91N61AC			**Report DB ID:** G91N61CS						
TOTAL ALPHA RA	4.35E+00		6.0E-01	1.4E+00	2.85E-01	pCi/L	97%	3.60E+00	1.8E-01	121%	5/25/05 03:42 a	0.5091	GPC11C
							Rec Limits:	70	130	0.2		L	
Batch: 5126274	UTOT_KPA			**Work Order:** G91M81AC			**Report DB ID:** G91M81CS						
TOTAL-URANIUM	3.47E+01			4.1E+00	8.09E-02	ug/L		3.51E+01	2.1E-01	99%	5/26/05 11:36 a	0.0259	KPAW3
							Rec Limits:	70	130	0.0		ML	
Batch: 5126274	UTOT_KPA			**Work Order:** G91M81AD			**Report DB ID:** G91M81DS						
TOTAL-URANIUM	3.49E+01			3.6E+00	8.09E-02	ug/L		3.51E+01	2.1E-01	99%	5/26/05 11:40 a	0.0259	KPAW3
							Rec Limits:	70	130	0.0		ML	
Batch: 5143560	TC99_ETVDSK_LSC			**Work Order:** HA4VE1AC			**Report DB ID:** HA4VE1CS						

STL Richland **Bias** - (Result/Expected)-1 as defined by ANSI N13.30.

rptSTLRchLcs
V4.13 A97

FORM II

LCS RESULTS

Date: 31-May-05

Lab Name: STL Richland

SDG: W04598

Matrix: WATER

Report No. : 29003

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
TC-99	1.92E+02		8.6E+00	1.7E+01	1.02E+01	pCi/L	100%	2.10E+02	5.1E+00	91%	5/25/05 06:33 a	0.1294	LSC4
							Rec Limits:	70	130	-0.1		L	

No. of Results: 8 **Comments:**

FORM II

MATRIX SPIKE RESULTS

Date: 31-May-05

Lab Name: STL Richland **SDG:** W04598

Lot-Sample No.: J5C240242-1 **Report No. :** 29003 **Matrix:** WATER

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rec-overy	Exp-ected	Exp Uncert	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 5126274	UTOT_KPA			**Work Order:**	G6XRM1AJ		**Report DB ID:**	G6XRM1JW		**Orig Sa DB ID:**	9G6XRM10		
TOTAL-URANIUM	3.34E+01			4.2E+00	8.03E-02	ug/L		96.05%	3.48E+01	2.1E-01	5/26/05 11:48 a	0.0261	KPAW3
	2.14E+00	***RPD***	14.9									ML	
Batch: 5143560	TC99_ETVDSK_LSC			**Work Order:**	G6XRM1AU		**Report DB ID:**	G6XRM1UW		**Orig Sa DB ID:**	9G6XRM20		
TC-99	3.90E+02		1.2E+01	3.0E+01	1.05E+01	pCi/L	100%	107.42%	3.63E+02	8.1E+00	5/25/05 02:22 a	0.1257	LSC4
	5.67E+01	***RPD***	21.3									L	

No. of Results: 2 **Comments:**

STL Richland **RER** - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

rptSTLRchMs **Bias** - (Result/Expected)-1 as defined by ANSI N13.30.

V4.13 A97

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

5/27/2005 2:12:56 PM

Lot No., Due Date: J5C240242; 05/23/2005

Client, Site: 127642; B03-018 HANFORD

QC Batch No., Method Test: 5126278; RALPHA-A Alpha by GPC-Am

SDG, Matrix: W04598; WATER

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

6.0 Comments on any No response:

NCM 10-05848 RPD is 32
sample and dup results both below CRDL
data accepted.

First Level Review Lisa Rice **Date** 5/27/05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5726278

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: Jackie Waddell Date: 5/24/05

LS-038B, Rev. 10, 8/02

Clouseau
Nonconformance Memo

SEVERN TRENT SERVICES

NCM #: **10-05848**
NCM Initiated By: lisa rice
Date Opened: 05/27/2005
Date Closed:

Classification: **Anomaly**
Status: **GLREVIEW**
Production Area: Environmental - Prep
Tests: Alpha by GPC-Am
Lot #'s (Sample #'s): J5C240242 (1), J5E060000 (278),
QC Batches: 5126278

Nonconformance: Other (describe in detail)
Subcategory: Other (explanation required)

Problem Description / Root Cause

Name	Date	Description
Lisa Rice	05/27/2005	RPD is 32, sample and dup results both below CRDL, data accepted.

Corrective Action

Name	Date	Corrective Action
Lisa Rice	05/27/2005	NA

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

Date Printed: 5/27/2005

SEVERN TRENT STL

*** RE-COUNT REQUEST ***

DUE DATE 5/23/05

CUSTOMER BHI

ANALYSIS Alpha

MATRIX Water

LOT NUMBER ~~JSC24~~ LMR 5/24/05 JSC240242

SAMPLE DELIVERY GROUP

OLD BATCH NUMBER 5126278

	LAB SAMPLE ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1)	G6XRM 1AA	Dups out
2)	G6XRM1AP X	
3)		
4)		
5)		
6)		
7)		
8)		
9)		
10)		
11)		
12)		
13)		
14)		
15)		
16)		
17)		
18)		
19)		
20)		

RC-126 10/03 REV 4

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

5/23/2005 5:51:40 PM

Lot No., Due Date: J5C240242; 05/23/2005

Client, Site: 127642; B03-018 HANFORD

QC Batch No., Method Test: 5126279; RBETA-SR Beta by GPC-Sr/Y

SDG, Matrix: W04598; WATER

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

6.0 Comments on any No response:

NCM 10-05815 Tech noted sample and dup spilled and had to be repoured. Not enough remaining sample for a dup.

First Level Review Lisa Rice **Date** 5/23/05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5726279

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 - note CN.

Second Level Review: Jackie Wadell Date: 5/24/05

LS-038B, Rev. 10, 8/02

Clouseau
Nonconformance Memo

SEVERN TRENT SERVICES

NCM #: **10-05815**
NCM Initiated By: lisa rice
Date Opened: 05/23/2005
Date Closed:

Classification: **Deficiency**
Status: **GLREVIEW**
Production Area: Environmental - Prep
Tests: Beta by GPC-Sr/Y
Lot #'s (Sample #'s): J5C240242 (1), J5E060000 (279),
QC Batches: 5126279

Nonconformance: Other (describe in detail)
Subcategory: Other (explanation required)

Problem Description / Root Cause

Name	Date	Description
Lisa Rice	05/23/2005	Tech noted sample and dup spilled during analysis, not enough remaining sample to pour up another dup. Data accepted.

Corrective Action

Name	Date	Corrective Action
Lisa Rice	05/23/2005	NA

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

Date Printed: 5/23/2005

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

5/25/2005 4:08:25 PM

Lot No., Due Date: J5C240242; 05/23/2005

Client, Site: 127642; B03-018 HANFORD

QC Batch No., Method Test: 5126283; RRATOT RaTot by GPC

SDG, Matrix: W04598; WATER

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

6.0 Comments on any No response:

First Level Review Matt Lardy **Date** 5-25-05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5126083

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: Jackie Waddell Date: 5/26/05

LS-038B, Rev. 10, 8/02

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

5/26/2005 12:37:53 PM

Lot No., Due Date: J5C240242; 05/23/2005

Client, Site: 127642; B03-018 HANFORD

QC Batch No., Method Test: 5126281; RGAMLEPS Gamma by LEPS

SDG, Matrix: W04598; WATER

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

6.0 Comments on any No response:

First Level Review Steven E. Mcleod **Date** 5/26/05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5726281

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: Jackie Waddell Date: 5/29/05

LS-038B, Rev. 10, 8/02

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

5/16/2005 11:48:46 AM

Lot No., Due Date: J5C240242; 05/23/2005

Client, Site: 127642; B03-018 HANFORD

QC Batch No., Method Test: 5126275; RC14 C-14 by LSC

SDG, Matrix: W04598; WATER

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

6.0 Comments on any No response:

First Level Review Pam Anderson **Date** 5-16-05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5126275

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: Jackie Wakefield Date: 5/16/05

LS-038B, Rev. 10, 8/02

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

5/26/2005 2:32:35 PM

Lot No., Due Date: J5C240242; 05/23/2005

Client, Site: 127642; B03-018 HANFORD

QC Batch No., Method Test: 5143560; RTC99 Tc-99 by LSC

SDG, Matrix: W04598; WATER

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

6.0 Comments on any No response:

First Level Review Steven E. Whiland **Date** 5/26/05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5743560

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: Jackie Waddell Date: 5/29/05

LS-038B, Rev. 10, 8/02

SEVERN TRENT STL

*** RE-ANALYSIS REQUEST ***

DUE DATE 5/23/05
LMC 5/23/05

CUSTOMER BHI

ANALYSIS TC99

MATRIX Water

LOT NUMBER J5C240212

SAMPLE DELIVERY GROUP

OLD BATCH NUMBER 5126277

NEW BATCH NUMBER 5U35260

LAB SAMPLE ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1) GLEXRMIAF	too much quench
2)	
3)	
4)	
5)	
6)	
7)	
8)	
9)	
10)	
11)	
12)	
13)	
14)	
15)	
16)	
17)	
18)	
19)	
20)	
LAB QC ID	Assigned with new batch.

RC-048, 10/03, Rev 7

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

5/31/2005 9:01:53 AM

Lot No., Due Date: J5C240242; 05/23/2005

Client, Site: 127642; B03-018 HANFORD

QC Batch No., Method Test: 5126274; RUNAT UNat by KPA

SDG, Matrix: W04598; WATER

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

6.0 Comments on any No response:

First Level Review Pam Anderson **Date** 5-31-05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5126374

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: Jackie Weddell Date: 5/31/05

LS-038B, Rev. 10, 8/02

Q-27023 BHI

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **B03-018-114**

Page 1 of 1

Collector R.T. SICKLE	Contact/Requester JH KESSNER	Telephone No. 509-375-4688 MSIN FAX
SAF No. B03-018	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title ERDF Groundwater Well Samples	DTS-SAWS-H89	Ice Chest No. SMC 584 Temp.
Shipped To (Lab) Severn Trent Incorporated, Richland	Method of Shipment	Bill of Lading/Air Bill No.
Protocol GPP	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **
SDG
W04598 J5C240242

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under this SAF into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to JH Kessner (fax 509-372-9609)

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1CD03		W	3-23-05	1227	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2) ✓ 1, ALPHA/BETA	HNO3 to pH <2
B1CD03		W			1x20-mL P	Activity Scan	None
B1CD03		W			2x1000-mL G/P	C14_LSC: C-14 (1) ✓	None
B1CD03		W			2x1000-mL G/P	I129_SEP_LEPS_GS: I-129 (1)	None
B1CD03 D03		W			1x1000-mL G/P	RATOT_AEAGEA: Radium (1) ✗	HNO3 to pH <2
B1CD03		W			1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1) ✓	HCl to pH <2
B1CD03		W			1x500-mL G/P	UTOT_KPA: Uranium (1) ✓	HNO3 to pH <2

G6XRM

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R.T. SICKLE			MAR 23 2005 1430	T. Heidelberg			MAR 23 2005 1430
						L100CPM	

Matrix *

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

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

SEVERN TRENT STL

Sample Check-in List

Date/Time Received: 3-23 1430

Client: PGW BHI SDG #: W04598 NA [ ] SAF #: B03-018 NA [ ]

S05-003
I05-025

Work Order Number: J5C240242 Chain of Custody # I05-025-8 B03-018-114 S05-003-41 + 42

Shipping Container ID: SAWS 113 Air Bill # na

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: 4 °C NA [ ] 5. Vermiculite/packing materials is NA [✓] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 21
7. Sample holding times exceeded? NA [ ] Yes [ ] No [✓]
8. Samples have:
   - ✓ tape
   - ✓ custody seals
   - ✓ hazard labels
   - ✓ appropriate samples labels
9. Samples are:
   - ✓ in good condition
   - broken
   - leaking
   - have air bubbles (Only for samples requiring head space)
10. Sample pH taken? NA [ ] pH<2 [✓] pH>2 [ ] pH>9 [ ]
11. Sample Location, Sample Collector Listed? * Yes [ ] No [✓]
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers): _____

Sample Custodian: Heidelberg Date: 3-23-05

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

LS-023, 9/03, Rev. 5

5/20/2005 11:17:12 AM

Sample Preparation/Analysis

Balance Id:1120482733

127642, Bechtel Hanford, Inc. , Bechtel Hanford, Inc.

AZ Gross Alpha PrpRC5014
S7 Gross Alpha by GPC using Am-241 curve
5I CLIENT: HANFORD

Pipet #: 229

Report Due: 05/23/2005 W04598

Sep1 DT/Tm Tech: NA

Batch: 5126278 WATER pCi/L PM, Quote: BG2, 27023

Sep2 DT/Tm Tech: NA

SEQ Batch, Test: None

Prep Tech: ,GiroirB

[redacted]

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 G6XRM-1-AA J5C240242-1-SAMP [redacted] 03/23/2005 12:27		197.70g,in AmtRec: 4XLP,2X4LP,2X500P,20ML #Containers: 9		1.5	45.2	50	10c	1340		5/21/05 r Scr Rst: Alpha: 1.04E+02 pCi/L Beta: 4.18E+01 pCi/L
2 G6XRM-1-AP-X J5C240242-1-DUP [redacted] 03/23/2005 12:27		201.80g,in AmtRec: 4XLP,2X4LP,2X500P,20ML #Containers: 9			46.4		10d			Scr Rst: Alpha: 1.04E+02 pCi/L Beta: 4.18E+01 pCi/L
3 G91NM-1-AA-B J5E060000-278-BLK [redacted] 03/23/2005 12:27		205.30g,in AmtRec: #Containers: 1			0		10e			Scr Rst: Alpha: Beta:
4 G91NM-1-AC-C J5E060000-278-LCS [redacted] 03/23/2005 12:27		203.30g,in AmtRec: #Containers: 1	asd3468 04/25/05,pd 03/25/05,r		0.4		12a			Scr Rst: Alpha: Beta:

Comments:-
pH verified @ 2 on prep. By

All Clients for Batch:
127642, Bechtel Hanford, Inc. Bechtel Hanford, Inc. , BG2, 27023

G6XRM1AA-SAMP Constituent List:

ALPHA	RDL:3	pCi/L	LCL:	UCL:	RPD:
G91NM1AA-BLK:					
ALPHA	RDL:3	pCi/L	LCL:	UCL:	RPD:
G91NM1AC-LCS:					
Am-241	RDL:	pCi/L	LCL:70	UCL:130	RPD:20

G6XRM1AA-SAMP Calc Info:

Rec 1

5/24/2005 4:38:32 PM

Sample Preparation/Analysis

127642, Bechtel Hanford, Inc. , Bechtel
Hanford, Inc.

AZ Gross Alpha PrpRC5014
S7 Gross Alpha by GPC using Am-241 curve
5I CLIENT: HANFORD

Report Due: 05/23/2005

Batch: 5126278 **WATER** **pCi/L** **PM, Quote: BG2, 27023**
SEQ Batch, Test: None

[redacted]

Balance Id:1120482733
Pipet #: NA
Sep1 DT/Tm Tech: NA
Sep2 DT/Tm Tech: NA
Prep Tech: GiroirB

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 G6XRM-1-AA J5C240242-1-SAMP [redacted] 03/23/2005 12:27		197.70g,in								
		AmtRec: 4XLP,2X4LP,2X500P,20ML	#Containers: 9					Scr Rst:	Alpha: 1.04E+02 pCi/L	Beta: 4.18E+01 pCi/L
2 G6XRM-1-AP-X J5C240242-1-DUP [redacted] 03/23/2005 12:27		201.80g,in								
		AmtRec: 4XLP,2X4LP,2X500P,20ML	#Containers: 9					Scr Rst:	Alpha: 1.04E+02 pCi/L	Beta: 4.18E+01 pCi/L
3 G6XRM-2-AA J5C240242-1-SAMP [redacted] 03/23/2005 12:27	197.70			1.5	45.2 rect weight =43.9	50	129		1302	5/25/05 r
		AmtRec: 4XLP,2X4LP,2X500P,20ML	#Containers: 9					Scr Rst:	Alpha: 1.04E+02 pCi/L	Beta: 4.18E+01 pCi/L
4 G6XRM-2-AP-X J5C240242-1-DUP [redacted] 03/23/2005 12:27	201.80				46.4 rect weight = 44.0		126			
		AmtRec: 4XLP,2X4LP,2X500P,20ML	#Containers: 9					Scr Rst:	Alpha: 1.04E+02 pCi/L	Beta: 4.18E+01 pCi/L
5 G91NM-1-AA-B J5E060000-278-BLK [redacted] 03/23/2005 12:27		205.30g,in								
		AmtRec:	#Containers: 1					Scr Rst:	Alpha:	Beta:
6 G91NM-1-AC-C J5E060000-278-LCS [redacted] 03/23/2005 12:27		203.30g,in	asd3468 04/25/05,pd 03/25/05,r							
		AmtRec:	#Containers: 1					Scr Rst:	Alpha:	Beta:

5/27/2005 2:11:14 PM

ICOC Fraction Transfer/Status Report

ByDate: 5/27/2004, 6/1/2005, Batch: '5126278', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5126278						
AC		**CalcC**	**GiroirB**	5/21/2005 10:47:37		
SC			heidelbergt	IsBatched	5/6/2005 10:27:24 AM	ICOC_RADCALC v4.8.08
SC			GiroirB	Prep1C	5/21/2005 10:47:37 AM	RICH-RC-5014 REVISION 6
SC			StringerR	InCnt1	5/21/2005 10:49:47 AM	RICH-RD-0003 REVISION 4
SC			StringerR	CalcC	5/21/2005 2:05:49 PM	RICH-RD-0003 REVISION 4
SC			BlackCL	InCnt1	5/25/2005 10:12:40 AM	RICH-RD-0003 REVISION 4
SC			StringerR	CalcC	5/25/2005 1:23:44 PM	RICH-RD-0003 REVISION 4
AC			**StringerR**	5/21/2005 10:49:47		
AC			**StringerR**	5/21/2005 2:05:49 PM		
AC			**BlackCL**	5/25/2005 10:12:40		
AC			**StringerR**	5/25/2005 1:23:44 PM		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 5

ICOCFractions v4.8.09

5/20/2005 4:04:51 PM

Sample Preparation/Analysis

Balance Id:1120482733

127642, Bechtel Hanford, Inc. , Bechtel Hanford, Inc.

BC Gross Beta PrpRC5014
S8 Gross Beta by GPC using Sr/Y-90 curve
5I CLIENT: HANFORD

Pipet #: 229

Report Due: 05/23/2005 W04598

Sep1 DT/Tm Tech: NA

Batch: 5126279 WATER pCi/L PM, Quote: BG2, 27023

Sep2 DT/Tm Tech: NA

SEQ Batch, Test: None

Prep Tech: GiroirB

[redacted]

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 G6XRM-1-AC J5C240242-1-SAMP [redacted] 03/23/2005 12:27		195.30g,in AmtRec: 4XLP,2X4LP,2X500P,20ML #Containers: 9		1.5	88.3	100		26a Scr Rst: Alpha: 1.04E+02 pCi/L	1235 Beta: 4.18E+01 pCi/L	5/21/05
2 G6XRM-1-AQ-X J5C240242-1-DUP [redacted] 03/23/2005 12:27	Ans Vol see note below*	AmtRec: 4XLP,2X4LP,2X500P,20ML #Containers: 9						Scr Rst: Alpha: 1.04E+02 pCi/L	Beta: 4.18E+01 pCi/L	
3 G91NP-1-AA-B J5E060000-279-BLK [redacted] 03/23/2005 12:27		200.30g,in AmtRec: #Containers: 1			0			26b Scr Rst: Alpha:	1235 Beta:	5/21/05
4 G91NP-1-AC-C J5E060000-279-LCS [redacted] 03/23/2005 12:27		196.70g,in AmtRec: #Containers: 1	besb2371 02/23/05,pd 09/21/04,r		0.5			26c Scr Rst: Alpha:	1235 Beta:	5/21/05

Comments: G6XRM-SAMP "Comments: * The beta sa and dup spilled during analysis, repoured the sample and is/luf vol avail for dup. Bg"

INS
Bg 5/20/05

pH verified @ ≤2 on prep. Bg

All Clients for Batch:
127642, Bechtel Hanford, Inc. Bechtel Hanford, Inc. , BG2, 27023

G6XRM1AC-SAMP Constituent List:

BETA	RDL:4	pCi/L	LCL:	UCL:	RPD:
G91NP1AA-BLK:					
BETA	RDL:4	pCi/L	LCL:	UCL:	RPD:
G91NP1AC-LCS:					
Sr-90	RDL:	pCi/L	LCL:70	UCL:130	RPD:20

5/23/2005 5:50:15 PM

ICOC Fraction Transfer/Status Report

ByDate: 4/23/2005, 5/24/2005, Batch: '5126279', User: *All Order by BatchNbr,WorkOrderNbr,DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			Comments
5126279							
AC			**CalcC**	**GiroirB**	5/21/2005 10:46:56		
SC				heidelbergt	IsBatched	5/6/2005 10:27:24 AM	ICOC_RADCALC v4.8.08
SC				GiroirB	Prep1C	5/21/2005 10:46:56 AM	RICH-RC-5014 REVISION 6
SC				StringerR	InCnt1	5/21/2005 10:49:41 AM	RICH-RD-0003 REVISION 4
SC				StringerR	CalcC	5/21/2005 2:05:41 PM	RICH-RD-0003 REVISION 4
AC				**StringerR**	5/21/2005 10:49:41		
AC				**StringerR**	5/21/2005 2:05:41 PM		

AC: Accepting Entry; SC: Status Change

5/20/2005 11:46:28 AM

Sample Preparation/Analysis

Balance Id:1120403183 , # 11

127642, Bechtel Hanford, Inc. , Bechtel Hanford, Inc.

BQ Total Alpha Radium Prp/SepRC5027
TD Total Alpha Radium by GPC
5I CLIENT: HANFORD

Pipet #: _____

Report Due: 05/23/2005 W04598

Sep1 DT/Tm Tech: 5/24/05 11:12 [illegible]

Batch: 5126283 WATER pCi/L
SEQ Batch, Test: None

PM, Quote: BG2, 27023
(MS)
[redacted]

Sep2 DT/Tm Tech:

Prep Tech: ,LEGLERM

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 G6XRM-1-AH J5C240242-1-SAMP [redacted] 03/23/2005 12:27		520.20g,in	RATC5661 05/02/05,pd 01/03/05,r	1.5	17.7	100	10E	0433	5/25/05 [illegible]	
		AmtRec: 4XLP,2X4LP,2X500P,20ML	#Containers: 9					Scr Rst:	Alpha: 1.04E+02 pCi/L	Beta: 4.18E+01 pCi/L
2 G6XRM-1-AT-X J5C240242-1-DUP [redacted] 03/23/2005 12:27		474.10g,in	RATC5662 05/02/05,pd 01/03/05,r		17.4		11A			
		AmtRec: 4XLP,2X4LP,2X500P,20ML	#Containers: 9					Scr Rst:	Alpha: 1.04E+02 pCi/L	Beta: 4.18E+01 pCi/L
3 G91N6-1-AA-B J5E060000-283-BLK [redacted] 03/23/2005 12:27		507.80g,in	RATC5663 05/02/05,pd 01/03/05,r		16.0		11B			
		AmtRec:	#Containers: 1					Scr Rst:	Alpha:	Beta:
4 G91N6-1-AC-C J5E060000-283-LCS [redacted] 03/23/2005 12:27		509.10g,in	RTSC0802 04/29/05,pd 01/03/05,r		16.5		11C			
		AmtRec:	#Containers: 1					Scr Rst:	Alpha:	Beta:

Comments:

All Clients for Batch:
127642, Bechtel Hanford, Inc. Bechtel Hanford, Inc. , BG2, 27023

G6XRM1AH-SAMP Constituent List:

RA	RDL:1	pCi/L	LCL:	UCL:	RPD:

G91N61AA-BLK:

RA	RDL:1	pCi/L	LCL:	UCL:	RPD:

G91N61AC-LCS:

Ra-226	RDL:	pCi/L	LCL:70	UCL:130	RPD:20

G6XRM1AH-SAMP Calc Info:

5/25/2005 4:11:12 PM

ICOC Fraction Transfer/Status Report

ByDate: 5/25/2004, 5/30/2005, Batch: '5126283', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5126283						
AC		**InRev1**	**LEGLERM**	5/20/2005 11:42:15		
SC			heidelbergt	IsBatched	5/6/2005 10:27:24 AM	ICOC_RADCALC v4.8.08
SC			LEGLERM	InPrep	5/20/2005 11:42:15 AM	RICH-RC-5027 REVISION 1
SC			LEGLERM	Prep1C	5/20/2005 2:24:41 PM	RICH-RC-5027 REVISION 1
SC			LEGLERM	Sep1C	5/24/2005 3:42:34 PM	RICH-RC-5027 REVISION 1
SC			DAWKINSO	InCnt1	5/24/2005 3:52:32 PM	RICH-RD-0003 REVISION 4
SC			BlackCL	CalcC	5/25/2005 6:03:05 AM	RICH-RD-0003 REVISION 4
SC			LardyM	InRev1	5/25/2005 4:03:41 PM	RICH-RC-0002 REV6
AC			**LEGLERM**	5/20/2005 2:24:41 PM		
AC			**LEGLERM**	5/24/2005 3:42:34 PM		
AC			**DAWKINSO**	5/24/2005 3:52:32 PM		
AC			**BlackCL**	5/25/2005 6:03:05		
AC			**LardyM**	5/25/2005 4:03:41 PM		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Page 1

Grp Rec Cnt: 6

ICOCFractions v4.8.09

5/6/2005 10:27:53 AM

Sample Preparation/Analysis

127642, Bechtel Hanford, Inc. , Bechtel
Hanford, Inc.

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

Report Due: 05/23/2005

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

Batch: 5126281 **WATER** **pCi/L** **PM, Quote: BG2, 27023**
SEQ Batch, Test: None
W04598
[redacted]

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 G6XRM-1-AG J5C240242-1-SAMP [redacted] 03/23/2005 12:27	1000.0g	AmtRec: 4XLP	[redacted] ITA4374 Pr:5/4/05, Ex:1/3/06	IFA	35.0	50	L4	1549	5/25/05 K	s: 9 Scr Rst: Alpha: 1.04E+02 pCi/L Beta: 4.18E+01 pCi/L
2 G6XRM-1-AR-X J5C240242-1-DUP [redacted] 03/23/2005 12:27	1000.0g	AmtRec: 4XLP	[redacted] ITA4375 Pr:5/4/05, Ex:1/3/06		35.7		L5	1550	5/25/05 K	s: 9 Scr Rst: Alpha: 1.04E+02 pCi/L Beta: 4.18E+01 pCi/L
3 G91N0-1-AA-B J5E060000-281-BLK [redacted] 03/23/2005 12:27	1000.3	AmtRec:	[redacted] ITA4376 Pr:5/4/05, Ex:1/3/06		35.9		L5	1645	5/25/05 KR	Scr Rst: Alpha: Beta:
4 G91N0-1-AC-C J5E060000-281-LCS [redacted] 03/23/2005 12:27	1001.4	AmtRec:	[redacted] ISB0137 Pr:2/15/2005, Ex:11/18/05		37.1		L4	1646		Scr Rst: Alpha: Beta:

Comments: Ph >2 JW 5-18-5

All Clients for Batch:
127642, Bechtel Hanford, Inc. Bechtel Hanford, Inc. , BG2, 27023

G6XRM1AG-SAMP Constituent List:

I-129	RDL:5	pCi/L	LCL:70	UCL:130	RPD:20

G91N01AA-BLK:

I-129	RDL:5	pCi/L	LCL:	UCL:	RPD:

G91N01AC-LCS:

I-129	RDL:5	pCi/L	LCL:70	UCL:130	RPD:20

G6XRM1AG-SAMP Calc Info:

5/26/2005 12:37:10 PM

ICOC Fraction Transfer/Status Report

ByDate: 5/26/2004, 5/31/2005, Batch: '5126281', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5126281						
AC		**CalcC**	**NortonJ**	5/25/2005 7:24:32		
SC			heidelbergt	IsBatched	5/6/2005 10:27:24 AM	ICOC_RADCALC v4.8.08
SC			NortonJ	InPrep	5/25/2005 7:24:32 AM	RICH-RC-5025 REV3
SC			NortonJ	Prep1C	5/25/2005 2:15:00 PM	RICH-RC-5025 REV3
SC			StringerR	InCnt1	5/25/2005 2:21:55 PM	RICH-RD-0007 REVISION 5
SC			DAWKINSO	CalcC	5/25/2005 10:33:01 PM	RICH-RD-0007 REVISION 5
AC			**NortonJ**	5/25/2005 2:15:00 PM		
AC			**StringerR**	5/25/2005 2:21:55 PM		
AC			**DAWKINSO**	5/25/2005 10:33:01		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 4

ICOCFractions v4.8.09

5/6/2005 10:27:49 AM

Sample Preparation/Analysis

Balance Id: N/A

127642, Bechtel Hanford, Inc. , Bechtel
Hanford, Inc.

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

Pipet #:

Report Due: 05/23/2005

Sep1 DT/Tm Tech: 5-9-05 [illegible]

Batch: 5126275 **WATER** **pCi/L** **PM, Quote: BG2, 27023**

SEQ Batch, Test: None

W04598

Sep2 DT/Tm Tech:

[redacted]

Prep Tech:

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 G6XRM-1-AE								
J5C240242-1-SAMP								
[redacted]								
03/23/2005 12:27		AmtRec: 4XLP,2X4LP,2X500P,20ML #Containers: 9				Scr Rst:	Alpha: 1.04E+02 pCi/L	Beta: 4.18E+01 pCi/L
2 G6XRM-1-AL-X								
J5C240242-1-DUP								
[redacted]								
03/23/2005 12:27		AmtRec: 4XLP,2X4LP,2X500P,20ML #Containers: 9				Scr Rst:	Alpha: 1.04E+02 pCi/L	Beta: 4.18E+01 pCi/L
3 G91NC-1-AA-B								
J5E060000-275-BLK								
[redacted]								
03/23/2005 12:27		AmtRec:	#Containers: 1			Scr Rst:	Alpha:	Beta:
4 G91NC-1-AC-C								
J5E060000-275-LCS								
[redacted]								
03/23/2005 12:27		AmtRec:	#Containers: 1			Scr Rst:	Alpha:	Beta:
5 G91NC-1-AD-BN								
J5E060000-275-IBLK								
[redacted]								
03/23/2005 12:27		AmtRec:	#Containers: 1			Scr Rst:	Alpha:	Beta:

Comments:

All Clients for Batch:
127642, Bechtel Hanford, Inc. Bechtel Hanford, Inc. , BG2, 27023

G6XRM1AE-SAMP Constituent List:
C-14 RDL:200 pCi/L LCL:70 UCL:130 RPD:20

5/16/2005 11:17:26 AM

ICOC Fraction Transfer/Status Report

ByDate: 5/16/2004, 5/21/2005, Batch: '5126275', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5126275						
AC		**CalcC**	**McDowellD**	5/9/2005 7:57:14 AM		
SC			heidelbergt	IsBatched	5/6/2005 10:27:24 AM	ICOC_RADCALC v4.8.08
SC			McDowellD	InSep1	5/9/2005 7:57:14 AM	RICH-RC-5022 REVISION 3
SC			McDowellD	Sep1C	5/11/2005 1:35:07 PM	RICH-RC-5022 REVISION 3
SC			BlackCL	InCnt1	5/11/2005 1:47:14 PM	RICH-RD-0001 REVISION 3
SC			BlackCL	CalcC	5/12/2005 7:42:16 AM	RICH-RD-0001 REVISION 3
AC			**McDowellD**	5/11/2005 1:35:07 PM		
AC			**BlackCL**	5/11/2005 1:47:14 PM		
AC			**BlackCL**	5/12/2005 7:42:16		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 4

ICOCFractions v4.8.09

5/24/2005 1:25:39 PM

Sample Preparation/Analysis

Balance Id:n/a

127642, Bechtel Hanford, Inc. , Bechtel Hanford, Inc.

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

Pipet #: _____

Report Due: 05/23/2005

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Batch: 5143560 **WATER** **pCi/L** **PM, Quote: BG2, 27023**

SEQ Batch, Test: None All Tests: 5126274 DHSS, 5126275 5SS3, 5126277 FPS5, 5126278 AZS7, 5126279 BCS8, 5126281 BNTB, 5126283 BQTD, 5143560 FPS5,

Prep Tech: GiroirB,FinchA

Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 G6XRM-1-AU-S J5C240242-1-MS [redacted] 03/23/2005 12:27			125.70g,in	125.70g	TCSD0268 11/03/04,pd 08/09/04,r					
			AmtRec: 4XLP,2X4LP,2X500P,20ML	#Containers: 9				Scr Rst:	Alpha: 1.04E+02 pCi/L	Beta: 4.18E+01 pCi/L
2 G6XRM-1-AV-X J5C240242-1-DUP [redacted] 03/23/2005 12:27			126.00g,in	126.00g						
			AmtRec: 4XLP,2X4LP,2X500P,20ML	#Containers: 9				Scr Rst:	Alpha: 1.04E+02 pCi/L	Beta: 4.18E+01 pCi/L
3 G6XRM-2-AF J5C240242-1-SAMP [redacted] 03/23/2005 12:27			125.40g,in	125.40g						
			AmtRec: 4XLP,2X4LP,2X500P,20ML	#Containers: 9				Scr Rst:	Alpha: 1.04E+02 pCi/L	Beta: 4.18E+01 pCi/L
4 HA4VE-1-AA-B J5E230000-560-BLK [redacted] 03/23/2005 12:27			128.40g,in	128.40g						
			AmtRec:	#Containers: 1				Scr Rst:	Alpha:	Beta:
5 HA4VE-1-AC-C J5E230000-560-LCS [redacted] 03/23/2005 12:27			129.40g,in	129.40g	TCSC0180 09/09/04,pd 08/26/03,r					
			AmtRec:	#Containers: 1				Scr Rst:	Alpha:	Beta:
6 HA4VE-1-AD-B J5E230000-560-BLK [redacted] 03/23/2005 12:27			AmtRec:	#Containers: 1				Scr Rst:	Alpha:	Beta:

5/24/2005 1:25:43 PM

Sample Preparation/Analysis

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

Balance Id:

Pipet #: _____

Report Due: 05/23/2005

Sep1 DT/Tm Tech:

Batch: 5143560 pCi/L

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech:

[redacted]

Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Comments: G6XRM-MS "Comments: The beta sa and dup spilled during analysis, repoured the sample and isnuf vol avail for dup. Bg"

All Clients for Batch:
127642, Bechtel Hanford, Inc. Bechtel Hanford, Inc. , BG2, 27023

G6XRM1AU-MS Constituent List:

HA4VE1AA-BLK:
Tc-99 RDL:15 pCi/L LCL: UCL: RPD:
HA4VE1AC-LCS:
Tc-99 RDL:15 pCi/L LCL:70 UCL:130 RPD:20
HA4VE1AD-BLK:
Tc-99 RDL:15 pCi/L LCL: UCL: RPD:

G6XRM1AU-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HA4VE1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HA4VE1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
HA4VE1AD-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

5/26/2005 2:32:15 PM

ICOC Fraction Transfer/Status Report

ByDate: 5/26/2004, 5/31/2005, Batch: '5143560', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5143560						
AC		**CalcC**	**FinchA**	5/24/2005 1:23:20 PM		
SC			ricel	IsBatched	5/23/2005 3:22:13 PM	ICOC_RADCALC v4.8.08
SC			FinchA	InPrep	5/24/2005 1:23:20 PM	rich-rc-5065 revision 5
SC			FinchA	InSep1	5/24/2005 6:51:48 PM	RICH-RC-5065 REVISION 5
SC			FinchA	Sep1C	5/24/2005 6:52:09 PM	RICH-RC-5065 REVISION 5
SC			DAWKINSO	InCnt1	5/24/2005 7:35:30 PM	RICH-RD-0001 REVISION 3
SC			BlackCL	CalcC	5/26/2005 2:55:27 AM	RICH-RD-0001 REVISION 3
AC			**FinchA**	5/24/2005 6:51:48 PM		
AC			**FinchA**	5/24/2005 6:52:09 PM		
AC			**DAWKINSO**	5/24/2005 7:35:30 PM		
AC			**BlackCL**	5/26/2005 2:55:27		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 5

ICOCFractions v4.8.09

5/24/2005 3:52:36 PM

Sample Preparation/Analysis

Balance Id:1120482733

127642, Bechtel Hanford, Inc. , Bechtel Hanford, Inc.

DH UNat_Laser PrpRC5015
SS Total Uranium by KPA
5I CLIENT: HANFORD

Pipet #: 229

Report Due: 05/23/2005 W04598

Sep1 DT/Tm Tech: NA

Sep2 DT/Tm Tech: NA

Batch: 5126274 **WATER** **mg/L**

PM, Quote: BG2, 27023

SEQ Batch, Test: None

Prep Tech: GiroirB

[redacted]

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 G6XRM-1-AD J5C240242-1-SAMP [redacted] 03/23/2005 12:27		24.50g,in AmtRec: 4XLP,2X4LP,2X500P,20ML #Containers: 9					Scr Rst: Alpha: 1.04E+02 pCi/L	Beta: 4.18E+01 pCi/L
2 G6XRM-1-AJ-S J5C240242-1-MS [redacted] 03/23/2005 12:27		26.10g,in AmtRec: 4XLP,2X4LP,2X500P,20ML #Containers: 9	UNSF2400 04/08/05,pd 09/16/04,r				Scr Rst: Alpha: 1.04E+02 pCi/L	Beta: 4.18E+01 pCi/L
3 G6XRM-1-AK-X J5C240242-1-DUP [redacted] 03/23/2005 12:27		24.30g,in AmtRec: 4XLP,2X4LP,2X500P,20ML #Containers: 9					Scr Rst: Alpha: 1.04E+02 pCi/L	Beta: 4.18E+01 pCi/L
4 G91M8-1-AA-B J5E060000-274-BLK [redacted] 03/23/2005 12:27		25.20g,in AmtRec:	#Containers: 1				Scr Rst: Alpha:	Beta:
5 G91M8-1-AC-C J5E060000-274-LCS [redacted] 03/23/2005 12:27		25.90g,in AmtRec:	UNSF2401 04/08/05,pd 09/16/04,r #Containers: 1				Scr Rst: Alpha:	Beta:
6 G91M8-1-AD-C J5E060000-274-LCS [redacted] 03/23/2005 12:27		AmtRec:	#Containers: 1				Scr Rst: Alpha:	Beta:

STL Richland
Richland Wa.

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

Page 1

ISV - Insufficient Volume for Analysis

WO Cnt: 6
Prep_SamplePrep v4.8.08

5/24/2005 3:52:38 PM

Sample Preparation/Analysis

DH UNat_Laser PrpRC5015
SS Total Uranium by KPA
5I CLIENT: HANFORD

Report Due: 05/23/2005

Batch: 5126274 mg/L
SEQ Batch, Test: None

Balance Id:
Pipet #: 229
Sep1 DT/Tm Tech: NA
Sep2 DT/Tm Tech: NA
Prep Tech:

[redacted]

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Comments: G6XRM-SAMP "Comments: The beta sa and dup spilled during analysis, repoured the sample and isnuf vol avail for dup. Bg"

pH verified @ ≤2 in prep

All Clients for Batch:
127642, Bechtel Hanford, Inc. Bechtel Hanford, Inc. , BG2, 27023

G6XRM1AD-SAMP Constituent List:

Uranium	RDL:0.00014434	mg/L	LCL:	UCL:	RPD:

G6XRM1AJ-MS Constituent List:

G91M81AA-BLK:					
Uranium	RDL:0.00014434	pCi/L	LCL:	UCL:	RPD:
G91M81AC-LCS:					
Uranium	RDL:0.1	pCi/L	LCL:70	UCL:130	RPD:20
G91M81AD-LCS:					
Uranium	RDL:0.1	pCi/L	LCL:70	UCL:130	RPD:20

G6XRM1AD-SAMP Calc Info:				
Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
G6XRM1AJ-MS Calc Info:				
Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
G91M81AA-BLK:				
Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
G91M81AC-LCS:				
Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
G91M81AD-LCS:				
Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

Approved By _____ Date: _____

5/31/2005 9:01:08 AM

ICOC Fraction Transfer/Status Report

ByDate: 5/31/2004, 6/5/2005, Batch: '5126274', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
5126274						
AC		**Prep1C**	**RiceL**	5/25/2005 7:27:45		
SC			heidelbergt	IsBatched	5/6/2005 10:27:24 AM	ICOC_RADCALC v4.8.08
SC			RiceL	Prep1C	5/25/2005 7:27:45 AM	RICHRC5015 REVISION 4
SC			GiroirB	Prep1C	5/25/2005 12:42:59 PM	RICH-RC-5015 REVISION 4
SC			IOVINC	InCnt1	5/25/2005 1:21:00 PM	RICH-RC-5058 REVISION 6
SC			IOVINC	Cnt1C	5/26/2005 2:03:47 PM	RICH-RC-5058 REVISION 6
AC			**GiroirB**	5/25/2005 12:42:59		
AC			**IOVINC**	5/25/2005 1:21:00 PM		
AC			**IOVINC**	5/26/2005 2:03:47 PM		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 4

ICOCFractions v4.8.09