0073814

SAF-RC-032
100-F Remaining Sites Burial Grounds - Soil Full Protocol
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Randy Coffman	X9-07	KW 8/28/07 INITIAL/DATE
Jeanette Duncan	H4-21	KW 8/28/07 INITIAL/DATE

COMMENTS:

SDG J00121 SAF-RC-032

X Rad only Chem only Rad & Chem

X Complete Partial

Waste Site: 118-F-5 Verification Shallow Zone

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SEP 04 2007
EDMC

Analytical Data Package Prepared For

Washington Closure Hanford

RECEIVED
AUG 2007

Radiochemical Analysis By

TAL Richland

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

Assigned Laboratory Code: STLRL

Data Package Contains 50 Pages

Report No.: 36496

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
J00121	RC-032	J15792	J7H030165-1	J353M1AD	9J353M10	7218151
		J15792	J7H030165-1	J353M1AG	9J353M10	7218158
		J15792	J7H030165-1	J353M1AC	9J353M10	7218159
		J15792	J7H030165-1	J353M1AF	9J353M10	7218160
		J15792	J7H030165-1	J353M1AA	9J353M10	7218161
		J15792	J7H030165-1	J353M1AE	9J353M10	7218164

Certificate of Analysis

SEVERN TRENT STL

STL Richland
2800 George Washington Way
Richland, WA 99354

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

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

August 27, 2007

Attention: Joan Kessner

SAF Number	:	RC-032
Date SDG Closed	:	August 2, 2007
Number of Samples	:	One (1)
Sample Type	:	Soil
SDG Number	:	J00121
Data Deliverable	:	15 – Day / Summary

CASE NARRATIVE

I. Introduction

On August 2, 2007 one soil 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 Washington Closure Hanford (WCH) specific ID:

WCH ID#	STLR ID#	MATRIX	DATE OF RECEIPT
J15792	J353M	SOIL	8/2/07

I. Sample Receipt

The sample was received in good condition. The COC requested a seven day turn around time but the client has instructed TestAmerica to log all RC-032 SAFs as a 15 day turn around time.

III. Analytical Results/Methodology

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

The requested analyses were:

Alpha Spectroscopy
Plutonium-238, -239/240 by method RICH-RC-5010
Gas Proportional Counting
Total Strontium by method RICH-RC-5006
Gamma Spectroscopy
Gamma Spec by method RICH-RC-5017
Liquid Scintillation Counter
Carbon-14 by method RICH-RC-5022
Nickel-63 by method RICH-RC-5069
Tritium by method RICH-RC-5007

IV. Quality Control

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

QC and sample results are reported in the same units.

V. Comments

Alpha Spectroscopy
Plutonium-238, -239/240 by method RICH-RC-5010:
The LCS, batch blank, sample and sample duplicate (J15792) results are within contractual requirements.

Gas Proportional Counting
Total Strontium by method RICH-RC-5006:
The LCS, batch blank, sample and sample duplicate (J15792) results are within contractual requirements.

Gamma Spectroscopy
Gamma Spec by method RICH-RC-5017:
There was insufficient volume for a duplicate. Sample J15792 was recounted on a different detector for the duplicate (J15792 DUP). Except as noted, the LCS, batch blank, sample and sample duplicate (J15792) results are within contractual requirements.

Liquid Scintillation Counter
Carbon-14 by method RICH-RC-5022:
The LCS, batch blank, sample and sample duplicate (J15792) results are within contractual requirements.

Nickel-63 by method RICH-RC-5069:
The LCS, batch blank, sample and sample duplicate (J15792) results are within contractual requirements.

Tritium by method RICH-RC-5007
The LCS, batch blank, sample and sample duplicate (J15792) 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:

Sandra Seger
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

TAL Richland STLRL

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

Date: 27-Aug-07

Report No. : 36496

SDG No: J00121

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
7218151 RICHRC5010									
J15792									
	J353M1AD	PU-238	7.06E-03 +- 1.44E-02	U	pCi/g	93%	3.38E-02	1.00E+00	
		PU239/40	-1.41E-03 +- 1.44E-02	U	pCi/g	93%	3.38E-02	1.00E+00	
J15792 DUP									
	J353M1AJ	PU-238	0.00E+00 +- 1.78E-02	U	pCi/g	70%	4.18E-02	1.00E+00	200.0
		PU239/40	-3.49E-03 +- 1.81E-02	U	pCi/g	70%	4.92E-02	1.00E+00	-84.7
7218164 GAMMA_GS									
J15792									
	J353M1AE	AG-108M	-4.79E-03 +- 7.13E-03	U	pCi/g		1.16E-02		
		BA-133	2.95E-05 +- 1.12E-02	U	pCi/g		1.62E-02		
		CO-60	-1.68E-02 +- 1.17E-02	U	pCi/g		1.78E-02	5.00E-02	
		CS-137	-9.93E-03 +- 9.95E-03	U	pCi/g		1.63E-02	1.00E-01	
		EU-152	-3.37E-02 +- 2.32E-02	U	pCi/g		3.53E-02	1.00E-01	
		EU-154	-4.18E-02 +- 3.80E-02	U	pCi/g		6.07E-02	1.00E-01	
		EU-155	3.92E-02 +- 2.38E-02	U	pCi/g		4.07E-02	1.00E-01	
J15792 DUP									
	J353M1AP	AG-108M	1.95E-03 +- 5.92E-03	U	pCi/g		1.02E-02		
		BA-133	4.13E-03 +- 9.18E-03	U	pCi/g		1.37E-02		
		CO-60	-1.42E-03 +- 8.76E-03	U	pCi/g		1.51E-02	5.00E-02	
		CS-137	-2.67E-04 +- 8.50E-03	U	pCi/g		1.44E-02	1.00E-01	
		EU-152	-7.29E-03 +- 1.95E-02	U	pCi/g		3.30E-02	1.00E-01	
		EU-154	-7.38E-03 +- 3.02E-02	U	pCi/g		5.14E-02	1.00E-01	
		EU-155	3.33E-02 +- 2.37E-02	U	pCi/g		3.97E-02	1.00E-01	
7218161 SRTOT_SEP_PRECIP_GPC									
J15792									
	J353M1AA	STRONTIUM	9.19E-02 +- 7.14E-02	U	pCi/g	80%	1.35E-01		
J15792 DUP									
	J353M1AN	STRONTIUM	1.02E-02 +- 5.84E-02	U	pCi/g	81%	1.36E-01		160.2
7218158 C14_CHEM_LSC									
J15792									
	J353M1AG	C-14	7.81E-01 +- 7.28E-01	U	pCi/g	100%	8.10E-01	5.00E+01	
J15792 DUP									
	J353M1AK	C-14	7.22E-01 +- 7.22E-01	U	pCi/g	100%	8.08E-01	5.00E+01	7.8
7218159 NI63_LSC									
J15792									
	J353M1AC	NI-63	-8.06E-01 +- 3.76E+00	U	pCi/g	100%	5.13E+00	3.00E+01	
J15792 DUP									
	J353M1AL	NI-63	-3.04E+00 +- 3.61E+00	U	pCi/g	97%	5.07E+00	3.00E+01	-116.1
7218160 906.0_H3_LSC									

TAL Richland

rptSTLRchSaSummary2 V5.1.3
A2002

RPD - Relative Percent Difference.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

Sample Results Summary

Date: 27-Aug-07

TAL Richland STLRL

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

Report No. : 36496

SDG No: J00121

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
7218160	906.0_H3_LSC								
	J15792								
	J353M1AF	H-3	4.33E-03 +- 5.67E-03	U	pCi/g	100%	1.12E-02	4.00E+02	
	J15792 DUP								
	J353M1AM	H-3	7.00E-03 +- 6.72E-03	U	pCi/g	100%	1.33E-02	4.00E+02	47.2

No. of Results: 26

TAL Richland

rptSTLRchSaSummary2 V5.1.3
A2002

RPD - Relative Percent Difference.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

QC Results Summary
TAL Richland STLRL

Date: 27-Aug-07

Ordered by Method, Batch No, QC Type,.

Report No. : 36496

SDG No.: J00121

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC|MDA
RICHRC5010								
7218151 BLANK QC,								
J38861AA	PU-238	-2.57E-03 +- 2.62E-02	U	pCi/g	51%			6.15E-02
	PU239/40	3.85E-02 +- 5.31E-02	U	pCi/g	51%			9.46E-02
J38861AD	PU-238	-1.90E-03 +- 1.94E-02	U	pCi/g	68%			4.55E-02
	PU239/40	-1.90E-03 +- 1.94E-02	U	pCi/g	68%			4.55E-02
7218151 LCS,								
J38861AE	PU239/40	5.99E+00 +- 1.05E+00		pCi/g	55%	91%	-0.1	7.69E-02
J38861AC	PU239/40	6.67E+00 +- 1.40E+00		pCi/g	40%	98%	0.0	9.63E-02
GAMMA_GS								
7218164 BLANK QC,								
J389H1AA	AG-108M	1.07E-03 +- 2.82E-03	U	pCi/g				5.14E-03
	BA-133	3.25E-03 +- 4.70E-03	U	pCi/g				7.60E-03
	CO-60	-2.86E-04 +- 4.18E-03	U	pCi/g				7.65E-03
	CS-137	-1.44E-03 +- 3.60E-03	U	pCi/g				6.13E-03
	EU-152	1.26E-02 +- 9.93E-03	U	pCi/g				1.88E-02
	EU-154	-1.45E-02 +- 1.10E-02	U	pCi/g				1.60E-02
	EU-155	8.15E-03 +- 1.03E-02	U	pCi/g				1.79E-02
7218164 LCS,								
J389H1AC	CS-137	2.39E-01 +- 4.16E-02		pCi/g		93%	-0.1	2.71E-02
	K-40	1.75E+01 +- 2.20E+00		pCi/g		90%	-0.1	2.08E-01
	RA-226	8.94E-01 +- 1.25E-01		pCi/g		78%	-0.2	4.35E-02
	RA-228	1.75E+00 +- 2.48E-01		pCi/g		93%	-0.1	8.44E-02
	U-238	1.01E+00 +- 1.47E-01		pCi/g		96%	0.0	4.36E-02
SRTOT_SEP_PRECIP_GPC								
7218161 BLANK QC,								
J389G1AA	STRONTIUM	-4.75E-02 +- 5.51E-02	U	pCi/g	80%			1.43E-01
7218161 LCS,								
J389G1AC	STRONTIUM	1.07E+00 +- 3.10E-01		pCi/g	85%	95%	0.0	1.34E-01
C14_CHEM_LSC								
7218158 BLANK QC,								
J389C1AA	C-14	1.80E-01 +- 2.80E-01	U	pCi/g	100%			3.25E-01
7218158 LCS,								
J389C1AC	C-14	7.16E+00 +- 1.01E+00		pCi/g	100%	100%	0.0	3.26E-01
NI63_LSC								
7218159 BLANK QC,								
J389E1AA	NI-63	-5.85E+00 +- 3.88E+00	U	pCi/g	98%			5.63E+00
7218159 LCS,								
J389E1AC	NI-63	5.51E+02 +- 5.58E+01		pCi/g	83%	91%	-0.1	6.69E+00
906.0_H3_LSC								
7218160 BLANK QC,								
J389F1AA	H-3	-2.96E-02 +- 1.63E-01	U	pCi/g	100%			3.37E-01

TAL Richland

rptSTLRchQcSummary V5.1.3 A2002

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

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

QC Results Summary
TAL Richland STLRL

Ordered by Method, Batch No, QC Type,.

Date: 27-Aug-07

Report No. : 36496

SDG No.: J00121

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC|MDA
7218160 LCS, J389F1AC	H-3	2.61E+00 +- 2.71E-01		pCi/g	100%	96%	0.0	3.35E-01

No. of Results: 26

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

rptSTLRchQcSum
mary V5.1.3 A2002

TESTAMERICA RICHLAND

FORM I

SAMPLE RESULTS

Date: 27-Aug-07

Lab Name:	TA Richland	SDG:	J00121	Collection Date:	8/1/2007 8:05:00 AM
Lot-Sample No.:	J7H030165-1	Report No. :	36496	Received Date:	8/2/2007 2:55:00 PM
Client Sample ID:	J15792	COC No. :	RC-032-138	Matrix:	SOIL

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: 7218151	RICHRC5010			Work Order: J353M1AD			Report DB ID: 9J353M10					
PU-238	***7.06E-03***	U	1.4E-02	1.4E-02	3.38E-02	pCi/g	93%	*0.21*	8/14/07 10:53 p		1.02	ALP37
						7.35E-03	1.00E+00	*0.98*			G	
PU239/40	***-1.41E-03***	U	1.4E-02	1.4E-02	3.38E-02	pCi/g	93%	*-0.04*	8/14/07 10:53 p		1.02	ALP37
						7.35E-03	1.00E+00	*-0.2*			G	
Batch: 7218158	C14_CHEM_LSC			Work Order: J353M1AG			Report DB ID: 9J353M10					
C-14	***7.81E-01***	U	3.6E-01	7.3E-01	8.10E-01	pCi/g	100%	*0.96*	8/23/07 12:22 a		2.007	LSC4
						3.88E-01	5.00E+01	*(2.1)*			G	
Batch: 7218159	NI63_LSC			Work Order: J353M1AC			Report DB ID: 9J353M10					
NI-63	***-8.06E-01***	U	2.1E+00	3.8E+00	5.13E+00	pCi/g	100%	*-0.16*	8/9/07 08:42 p		0.27	LSC4
						2.49E+00	3.00E+01	*-0.43*			G	
Batch: 7218160	906.0_H3_LSC			Work Order: J353M1AF			Report DB ID: 9J353M10					
H-3	***4.33E-03***	U	4.8E-03	5.7E-03	1.12E-02	pCi/g	100%	*0.39*	8/17/07 04:19 a		150.3	LSC6
						5.36E-03	4.00E+02	*(1.5)*			G	
Batch: 7218161	SRTOT_SEP_PRECIP_GPC			Work Order: J353M1AA			Report DB ID: 9J353M10					
STRONTIUM	***9.19E-02***	U	6.7E-02	7.1E-02	1.35E-01	pCi/g	80%	*0.68*	8/10/07 01:50 p		6.03	GPC28A
						6.26E-02		*(2.6)*			G	
Batch: 7218164	GAMMA_GS			Work Order: J353M1AE			Report DB ID: 9J353M10					
AG-108M	***-4.79E-03***	U	7.1E-03	7.1E-03	1.16E-02	pCi/g		*-0.41*	8/8/07 08:00 a		890.4	GER6$1
								-(1.3)			G	

TAL Richland
rptSTLRchSample
V5.1.3 A2002

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 not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 27-Aug-07

Lab Name:	TA Richland	SDG:	J00121	Collection Date:	8/1/2007 8:05:00 AM
Lot-Sample No.:	J7H030165-1	Report No. :	36496	Received Date:	8/2/2007 2:55:00 PM
Client Sample ID:	J15792	COC No. :	RC-032-138	Matrix:	SOIL

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
BA-133	***2.95E-05***	U	1.1E-02	1.1E-02	1.62E-02	pCi/g		*0.*	8/8/07 08:00 a		890.4	GER6$1
								0.01			G	
CO-60	***-1.68E-02***	U	1.2E-02	1.2E-02	1.78E-02	pCi/g		*-0.94*	8/8/07 08:00 a		890.4	GER6$1
							5.00E-02	*-(2.9)*			G	
CS-137	***-9.93E-03***	U	1.0E-02	1.0E-02	1.63E-02	pCi/g		*-0.61*	8/8/07 08:00 a		890.4	GER6$1
							1.00E-01	*-(2.)*			G	
EU-152	***-3.37E-02***	U	2.3E-02	2.3E-02	3.53E-02	pCi/g		*-0.95*	8/8/07 08:00 a		890.4	GER6$1
							1.00E-01	*-(2.9)*			G	
EU-154	***-4.18E-02***	U	3.8E-02	3.8E-02	6.07E-02	pCi/g		*-0.69*	8/8/07 08:00 a		890.4	GER6$1
							1.00E-01	*-(2.2)*			G	
EU-155	***3.92E-02***	U	2.4E-02	2.4E-02	4.07E-02	pCi/g		*0.96*	8/8/07 08:00 a		890.4	GER6$1
							1.00E-01	*(3.3)*			G	

No. of Results: 13 Comments:

TAL Richland
rptSTLRchSample
V5.1.3 A2002

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 not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

TESTAMERICA RICHLAND

FORM II

Date: 27-Aug-07

DUPLICATE RESULTS

Lab Name:	TA Richland	SDG:	J00121	Collection Date:	8/1/2007 8:05:00 AM
Lot-Sample No.:	J7H030165-1	Report No. :	36496	Received Date:	8/2/2007 2:55:00 PM
Client Sample ID:	J15792 DUP	COC No. :	RC-032-138	Matrix:	SOIL

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: 7218151	RICHRC5010			Work Order: J353M1AJ		Report DB ID: J353M1JR			Orig Sa DB ID: 9J353M10			
PU-238	0.00E+00	U	0.0E+00	1.8E-02	4.18E-02	pCi/g	70%	0.	8/14/07 10:53 p		1.06	ALP39
	7.06E-03	U	RPD	200.0		1.00E+00		0.			G	
PU239/40	-3.49E-03	U	1.8E-02	1.8E-02	4.92E-02	pCi/g	70%	-0.07	8/14/07 10:53 p		1.06	ALP39
	-1.41E-03	U	RPD	-84.7		1.00E+00		-0.38			G	
Batch: 7218158	C14_CHEM_LSC			Work Order: J353M1AK		Report DB ID: J353M1KR			Orig Sa DB ID: 9J353M10			
C-14	7.22E-01	U	3.6E-01	7.2E-01	8.08E-01	pCi/g	100%	0.89	8/23/07 01:04 a		2.009	LSC4
	7.81E-01	U	RPD	7.8		5.00E+01		(2.)			G	
Batch: 7218159	NI63_LSC			Work Order: J353M1AL		Report DB ID: J353M1LR			Orig Sa DB ID: 9J353M10			
NI-63	-3.04E+00	U	2.0E+00	3.6E+00	5.07E+00	pCi/g	97%	-0.6	8/9/07 10:24 p		0.28	LSC4
	-8.06E-01	U	RPD	-116.1		3.00E+01		-(1.7)			G	
Batch: 7218160	906.0_H3_LSC			Work Order: J353M1AM		Report DB ID: J353M1MR			Orig Sa DB ID: 9J353M10			
H-3	7.00E-03	U	5.7E-03	6.7E-03	1.33E-02	pCi/g	100%	0.53	8/17/07 05:41 a		150.3	LSC6
	4.33E-03	U	RPD	47.2		4.00E+02		(2.1)			G	
Batch: 7218161	SRTOT_SEP_PRECIP_GPC			Work Order: J353M1AN		Report DB ID: J353M1NR			Orig Sa DB ID: 9J353M10			
STRONTIUM	1.02E-02	U	5.8E-02	5.8E-02	1.36E-01	pCi/g	81%	0.07	8/10/07 01:50 p		6.03	GPC28B
	9.19E-02	U	RPD	160.2				0.35			G	
Batch: 7218164	GAMMA_GS			Work Order: J353M1AP		Report DB ID: J353M1PR			Orig Sa DB ID: 9J353M10			

TAL Richland RPD - Relative Percent Difference.

rptSTLRchDupV5.1 .3 A2002 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 not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II

Date: 27-Aug-07

DUPLICATE RESULTS

Lab Name:	TA Richland	SDG:	J00121	Collection Date:	8/1/2007 8:05:00 AM
Lot-Sample No.:	J7H030165-1	Report No. :	36496	Received Date:	8/2/2007 2:55:00 PM
Client Sample ID:	J15792 DUP	COC No. :	RC-032-138	Matrix:	SOIL

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
AG-108M	1.95E-03	U	5.9E-03	5.9E-03	1.02E-02	pCi/g		0.19	8/8/07 11:27 a		890.4	GER7$1
	-4.79E-03	U	RPD	-475.4				0.66			G	
BA-133	4.13E-03	U	9.2E-03	9.2E-03	1.37E-02	pCi/g		0.3	8/8/07 11:27 a		890.4	GER7$1
	2.95E-05	U	RPD	197.2				0.9			G	
CO-60	-1.42E-03	U	8.8E-03	8.8E-03	1.51E-02	pCi/g		-0.09	8/8/07 11:27 a		890.4	GER7$1
	-1.68E-02	U	RPD	-168.9		5.00E-02		-0.32			G	
CS-137	-2.67E-04	U	8.5E-03	8.5E-03	1.44E-02	pCi/g		-0.02	8/8/07 11:27 a		890.4	GER7$1
	-9.93E-03	U	RPD	-189.5		1.00E-01		-0.06			G	
EU-152	-7.29E-03	U	1.9E-02	1.9E-02	3.30E-02	pCi/g		-0.22	8/8/07 11:27 a		890.4	GER7$1
	-3.37E-02	U	RPD	-128.8		1.00E-01		-0.75			G	
EU-154	-7.38E-03	U	3.0E-02	3.0E-02	5.14E-02	pCi/g		-0.14	8/8/07 11:27 a		890.4	GER7$1
	-4.18E-02	U	RPD	-140.0		1.00E-01		-0.49			G	
EU-155	3.33E-02	U	2.4E-02	2.4E-02	3.97E-02	pCi/g		0.84	8/8/07 11:27 a		890.4	GER7$1
	3.92E-02	U	RPD	16.4		1.00E-01		(2.8)			G	

No. of Results: 13 Comments:

TAL Richland
rptSTLRchDupV5.1
.3 A2002

RPD - Relative Percent Difference.
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 not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II
BLANK RESULTS

Date: 27-Aug-07

Lab Name: TA Richland
Matrix: SOIL

SDG: J00121
Report No. : 36496

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: 7218158	C14_CHEM_LSC			Work Order: J389C1AA			Report DB ID: J389C1AB					
C-14	1.80E-01	U	1.4E-01	2.8E-01	3.25E-01	pCi/g	100%	0.55	8/22/07 10:57 p		5.0	LSC4
					1.56E-01	5.00E+01		(1.3)			G	
Batch: 7218151	RICHRC5010			Work Order: J38861AA			Report DB ID: J38861AB					
PU-238	-2.57E-03	U	2.6E-02	2.6E-02	6.15E-02	pCi/g	51%	-0.04	8/14/07 10:54 p		1.0	ALP40
					1.34E-02	1.00E+00		-0.2			G	
PU239/40	3.85E-02	U	5.3E-02	5.3E-02	9.46E-02	pCi/g	51%	0.41	8/14/07 10:54 p		1.0	ALP40
					2.99E-02	1.00E+00		(1.5)			G	
Batch: 7218151	RICHRC5010			Work Order: J38861AD			Report DB ID: J38861DX					
PU-238	-1.90E-03	U	1.9E-02	1.9E-02	4.55E-02	pCi/g	68%	-0.04	8/14/07 10:54 p		1.01	ALP44
					9.89E-03	1.00E+00		-0.2			G	
PU239/40	-1.90E-03	U	1.9E-02	1.9E-02	4.55E-02	pCi/g	68%	-0.04	8/14/07 10:54 p		1.01	ALP44
					9.89E-03	1.00E+00		-0.2			G	
Batch: 7218159	NI63_LSC			Work Order: J389E1AA			Report DB ID: J389E1AB					
NI-63	-5.85E+00	U	2.2E+00	3.9E+00	5.63E+00	pCi/g	98%	-(1.)	8/10/07 12:07 a		0.25	LSC4
					2.74E+00	3.00E+01		-(3.)			G	
Batch: 7218160	906.0_H3_LSC			Work Order: J389F1AA			Report DB ID: J389F1AB					
H-3	-2.96E-02	U	1.4E-01	1.6E-01	3.37E-01	pCi/g	100%	-0.09	8/17/07 01:34 a		5.0	LSC6
					1.61E-01	4.00E+02		-0.36			G	
Batch: 7218164	GAMMA_GS			Work Order: J389H1AA			Report DB ID: J389H1AB					
AG-108M	1.07E-03	U	2.8E-03	2.8E-03	5.14E-03	pCi/g		0.21	8/8/07 08:02 a		859.27	GER7$1
								0.76			G	

TAL Richland
rptSTLRchBlank
V5.1.3 A2002

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 not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II
BLANK RESULTS

Date: 27-Aug-07

Lab Name: TA Richland
Matrix: SOIL

SDG: J00121
Report No. : 36496

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
BA-133	3.25E-03	U	4.7E-03	4.7E-03	7.60E-03	pCi/g		0.43	8/8/07 08:02 a		859.27	GER7$1
								(1.4)			G	
CO-60	-2.86E-04	U	4.2E-03	4.2E-03	7.65E-03	pCi/g		-0.04	8/8/07 08:02 a		859.27	GER7$1
						5.00E-02		-0.14			G	
CS-137	-1.44E-03	U	3.6E-03	3.6E-03	6.13E-03	pCi/g		-0.23	8/8/07 08:02 a		859.27	GER7$1
						1.00E-01		-0.8			G	
EU-152	1.26E-02	U	9.9E-03	9.9E-03	1.88E-02	pCi/g		0.67	8/8/07 08:02 a		859.27	GER7$1
						1.00E-01		(2.5)			G	
EU-154	-1.45E-02	U	1.1E-02	1.1E-02	1.60E-02	pCi/g		-0.91	8/8/07 08:02 a		859.27	GER7$1
						1.00E-01		-(2.6)			G	
EU-155	8.15E-03	U	1.0E-02	1.0E-02	1.79E-02	pCi/g		0.45	8/8/07 08:02 a		859.27	GER7$1
						1.00E-01		(1.6)			G	
Batch: 7218161	SRTOT_SEP_PRECIP_GPC			**Work Order:**	J389G1AA		**Report DB ID:**	J389G1AB				
STRONTIUM	-4.75E-02	U	5.4E-02	5.5E-02	1.43E-01	pCi/g	80%	-0.33	8/10/07 01:50 p		6.0	GPC28C
					6.64E-02			-(1.7)			G	

No. of Results: 15 **Comments:**

TAL Richland
rptSTLRchBlank
V5.1.3 A2002

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 not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

TESTAMERICA RICHLAND

FORM II
LCS RESULTS

Date: 27-Aug-07

Lab Name: TA Richland
Matrix: SOIL

SDG: J00121
Report No. : 36496

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: 7218158	C14_CHEM_LSC			Work Order: J389C1AC			Report DB ID: J389C1CS						
C-14	7.16E+00		3.0E-01	1.0E+00	3.26E-01	pCi/g	100%	7.14E+00	2.4E-01	100%	8/22/07 11:39 p	5.0	LSC4
							Rec Limits:	70	130	0.0		G	
Batch: 7218151	RICHRC5010			Work Order: J38861AC			Report DB ID: J38861CS						
PU239/40	6.67E+00		6.7E-01	1.4E+00	9.63E-02	pCi/g	40%	6.82E+00	2.3E-01	98%	8/14/07 10:54 p	1.0	ALP42
							Rec Limits:	70	130	0.0		G	
Batch: 7218151	RICHRC5010			Work Order: J38861AE			Report DB ID: J38861EM						
PU239/40	5.99E+00		5.4E-01	1.0E+00	7.69E-02	pCi/g	55%	6.59E+00	2.2E-01	91%	8/14/07 10:54 p	1.03	ALP127
							Rec Limits:	70	130	-0.1		G	
Batch: 7218159	NI63_LSC			Work Order: J389E1AC			Report DB ID: J389E1CS						
NI-63	5.51E+02		9.1E+00	5.6E+01	6.69E+00	pCi/g	83%	6.08E+02	1.7E+00	91%	8/10/07 01:49 a	0.25	LSC4
							Rec Limits:	70	130	-0.1		G	
Batch: 7218160	906.0_H3_LSC			Work Order: J389F1AC			Report DB ID: J389F1CS						
H-3	2.61E+00		2.2E-01	2.7E-01	3.35E-01	pCi/g	100%	2.71E+00	8.1E-02	96%	8/17/07 02:57 a	5.0	LSC6
							Rec Limits:	70	130	0.0		G	
Batch: 7218164	GAMMA_GS			Work Order: J389H1AC			Report DB ID: J389H1CS						
CS-137	2.39E-01		4.2E-02	4.2E-02	2.71E-02	pCi/g		2.58E-01	1.2E-02	93%	8/8/07 08:03 a	457.79	GER8$1
							Rec Limits:	70	130	-0.1		G	
K-40	1.75E+01		2.2E+00	2.2E+00	2.08E-01	pCi/g		1.95E+01	1.9E+00	90%	8/8/07 08:03 a	457.79	GER8$1
							Rec Limits:			-0.1		G	
RA-226	8.94E-01		1.3E-01	1.3E-01	4.35E-02	pCi/g		1.15E+00	5.2E-02	78%	8/8/07 08:03 a	457.79	GER8$1
							Rec Limits:			-0.2		G	
RA-228	1.75E+00		2.5E-01	2.5E-01	8.44E-02	pCi/g		1.87E+00	9.6E-02	93%	8/8/07 08:03 a	457.79	GER8$1
							Rec Limits:			-0.1		G	

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

rptSTLRchLcs
V5.1.3 A2002

FORM II
LCS RESULTS

Date: 27-Aug-07

Lab Name: TA Richland

Matrix: SOIL

SDG: J00121

Report No. : 36496

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
U-238	1.01E+00		1.5E-01	1.5E-01	4.36E-02	pCi/g		1.05E+00	5.4E-02	96%	8/8/07 08:03 a	457.79	GER8$1
							Rec Limits:			0.0		G	
Batch: 7218161	SRTOT_SEP_PRECIP_GPC			Work Order:	J389G1AC		Report DB ID:	J389G1CS					
STRONTIUM	1.07E+00		1.4E-01	3.1E-01	1.34E-01	pCi/g	85%	1.13E+00	2.2E-02	95%	8/10/07 01:50 p	6.0	GPC28D
							Rec Limits:	70	130	0.0		G	

No. of Results: 11 Comments:

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

rptSTLRchLcs
V5.1.3 A2002

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

8/16/2007 11:25:57 AM

Lot No., Due Date: J7H030165; 08/17/2007

Client, Site: 127642; HANFORD

QC Batch No., Method Test: 7218151; RPUISO Pulso by ALP

SDG, Matrix: J00121; SOIL

1.0 COC

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

2.0 QC Batch

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

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

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

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

3.0 QC & Samples

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

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

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

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

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

4.0 Raw Data

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

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

4.3 Were Yields entered correctly? Yes ✓ No N/A

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

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

5.0 Other

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

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

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

5.4 Was transcription checked? Yes ✓ No N/A

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

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

6.0 Comments on any No response:

First Level Review [signature] **Date** 8-16-7

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 7218151

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: Jodie C. Date: 8/16/07

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

8/16/2007 3:23:36 PM

Lot No., Due Date: J7H030165; 08/17/2007

Client, Site: 127642; HANFORD

QC Batch No., Method Test: 7218161; RSRTOT SrTot by GPC

SDG, Matrix: J00121; SOIL

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 John Morton **Date** 8-16-7

SEVERN TRENT **STL**

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 7218161

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: Jodie G Date: 8/20/07

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

8/16/2007 2:34:28 PM

Lot No., Due Date: J7H030165; 08/17/2007

Client, Site: 127642; HANFORD

QC Batch No., Method Test: 7218164; RGAMMA10 Gamma by GER 10D

SDG, Matrix: J00121; SOIL

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 Kristin Antonson **Date** 8/16/07

SEVERN TRENT **STL**

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 7218164

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: Jodie G Date: 8/20/07

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

8/23/2007 1:42:16 PM

Lot No., Due Date: J7H030165; 08/17/2007

Client, Site: 127642; HANFORD

QC Batch No., Method Test: 7218158; RC14 C-14 by LSC

SDG, Matrix: J00121; SOIL

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

6.0 Comments on any No response:

First Level Review [signature] **Date** 8-23-7 8-23-7

STL Richland

QAS_RADCALCv4.8.27

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 7218158

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: Jodie G Date: 8/24/07

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

8/16/2007 3:14:19 PM

Lot No., Due Date: J7H030165; 08/17/2007

Client, Site: 127642; HANFORD

QC Batch No., Method Test: 7218159; RNI63 Ni-63 by LSC

SDG, Matrix: J00121; SOIL

	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 John Hoste **Date** 8-16-7

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 7218159

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: Jodie G Date: 8/20/07

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

8/17/2007 10:09:53 AM

Lot No., Due Date: J7H030165; 08/17/2007

Client, Site: 127642; HANFORD

QC Batch No., Method Test: 7218160; RTRITIUM H-3 by LSC

SDG, Matrix: J00121; SOIL

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 Lisa Lutanson **Date** _____

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 7218160

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: Jodie G Date: 8/20/07

J7H030165 J00121 DUE 8-17-07

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-032-138 Page 1 of 1

Collector: Clint Stuart	Company Contact: R.T. Coffman	Telephone No.: 528-6409	Project Coordinator: KESSNER, JH
Project Designation: 100-F Remaining Sites Burial Grounds - Soil Full Protocol	Sampling Location: 118-F-5 Verification Shallow Zone		SAF No.: RC-032
Ice Chest No.	Field Logbook No.: EFL-1174-3	COA: R118F52000	Method of Shipment: FED EX
Shipped To: Severn Trent Incorporated, Richland	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: N/A

Price Code: 8B

Data Turnaround: 7 DAY

POSSIBLE SAMPLE HAZARDS/REMARKS

NA

Special Handling and/or Storage

NA

Preservation	None	None	None	None							
Type of Container	P	P	P	P							
No. of Container(s)	1	1	1	1							
Volume	500mL	125mL	125mL	125mL							
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Carbon-14; Tritium - H3	Nickel-63; Strontium-89,90 -- Total Sr	Isotopic Plutonium							
Sample No. / Matrix * / Sample Date / Sample Time											
J15792 / SOIL / 8-1-07 / 802	X	X	X	X		J353	M			S	

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Clinton D Stuart	8-1-07 1030	JR DeBrigne	8-1-07 1030
JR DeBrigne	8-1-07 1510	3728 Lab	8-1-07 1510
3728 #3A	8-2-07 1030	JR Edmundson	8-2-07 1030
JR Edmundson WCH	8-2-07 1450	WLANE TAR	8-2-07 1450

SPECIAL INSTRUCTIONS

(1) Gamma Spectroscopy (TCL List) {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gamma Spec - Add-on {Barium-133, Silver-108 metastable}

Sampler unavailable to relinquish samples from 3728 Ref # 3A. 3728 Custodian removed samples for shipping on 8 12 107.

Matrix *: S=Soil, SE=Sediment, SO=Solid, SL=Sludge, W=Water, O=Oil, A=Air, DS=Drum Solids, DL=Drum Liquids, T=Tissue, WI=Wipe, L=Liquid, V=Vegetation, X=Other

LABORATORY SECTION	Received By: DAVID HARBINSON	Title: EHS	TAR	Date/Time: 8-8-07 14:55
FINAL SAMPLE DISPOSITION	Disposal Method		Disposed By	Date/Time

WCH-EE-011

TESTAMERICA RICHLAND

30

Seger, Sandra

From: Kessner, Joan H [jhkessne@wch-rcc.com]
Sent: Monday, August 06, 2007 6:05 AM
To: Seger, Sandra
Subject: RE: J00121 TAT Question and COC

Sandra--
15 days is fine.
Joan

From: Seger, Sandra [mailto:Sandra.Seger@testamericainc.com]
Sent: Friday, August 03, 2007 10:13 AM
To: Kessner, Joan H
Subject: J00121 TAT Question and COC

<<J00121.PDF>>

Joan,

Are we still changing the 7 day TAT for RC-032 to 15 day TAT?

Thanks,
Sandra

Confidentiality Notice: The information contained in this message is intended only for the use of the addressee, and may be confidential and/or privileged. If the reader of this message is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately.

SEVERN TRENT STL

DUE 8-17-07

Sample Check-in List

Date/Time Received: 8-2-07 1510

Client: WCH SDG #: J00121 NA [ ] SAF #: RC-032 NA [ ]

Work Order Number: J7H030165 Chain of Custody # RC-032-138

Shipping Container ID: _____ Air Bill # _____

1. Custody Seals on shipping container intact? NA [ ] Yes [✓] No [ ]

2. Custody Seals dated and signed? NA [ ] Yes [✓] No [ ]

3. Chain of Custody record present? Yes [✓] No [ ]

4. Cooler temperature: _____ NA [✓] 5. Vermiculite/packing materials is NA [✓] Wet [ ] Dry [ ]

6. Number of samples in shipping container: 1 (1-500mL P & 3-125mL P)

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? SOIL 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: [signature] Date: 8-2-07

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

TESTAMERICA RICHLAND

8/8/2007 5:11:09 AM

127642, Washington Closure Hanford
Bechtel Hanford, Inc.

AnalyDueDate: 08/17/2007

Sample Preparation/Analysis

6A Pu PrpRC5013/RC~~5019~~, SepRC5~~019~~(5039) 5087 UMA 8/8/07
SO Plutonium-238,239/40 by Alpha Spec
5I CLIENT: HANFORD

Balance Id:1120373922
Pipet #: _____
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: ,WoodT

Batch: 7218151 **SOIL** **pCi/g** **PM, Quote: SS , 27038**
SEQ Batch, Test: None

[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 J353M-1-AD J7H030165-1-SAMP [redacted] 08/01/2007 08:05		1.02g,in AmtRec: 500MLP,3X125MLP #Containers: 4	PUTC10839 08/07/07,pd 03/13/07,r	200		Scr:	Alpha:	Beta:
2 J353M-1-AJ-X J7H030165-1-DUP [redacted] 08/01/2007 08:05		1.06g,in AmtRec: 500MLP,3X125MLP #Containers: 4	PUTC10840 08/07/07,pd 03/13/07,r			Scr:	Alpha:	Beta:
3 J3886-1-AA-B J7H060000-151-BLK [redacted] 08/01/2007 08:05		1.00g,in AmtRec: #Containers: 1	PUTC10841 08/07/07,pd 03/13/07,r			Scr:	Alpha:	Beta:
4 J3886-1-AC-C J7H060000-151-LCS [redacted] 08/01/2007 08:05		1.00g,in AmtRec: #Containers: 1	PUSK0713 08/07/07,pd 03/13/07,r			Scr:	Alpha:	Beta:
5 J3886-1-AD-BX J7H060000-151-MBLK [redacted] 08/01/2007 08:05		1.01g,in AmtRec: #Containers: 1	PUTC10842 08/07/07,pd 03/13/07,r			Scr:	Alpha:	Beta:
6 J3886-1-AE-CM J7H060000-151-MLCS [redacted] 08/01/2007 08:05		1.03g,in AmtRec: #Containers: 1	PUSK0712 08/07/07,pd 03/13/07,r			Scr:	Alpha:	Beta:

3 39 10 33 44 127

TESTAMERICA RICHLAND

8/8/2007 5:11:12 AM

Sample Preparation/Analysis

6A Pu PrpRC5013/RC5019, SepRC5010(5039)
SO Plutonium-238,239/40 by Alpha Spec
5I CLIENT: HANFORD

Balance Id:1120373922

Pipet #: _____

AnalyDueDate: 08/17/2007

Sep1 DT/Tm Tech:

Batch: 7218151 pCi/g
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,WoodT

[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: Samples have been muffled 8/8/07 JSN

All Clients for Batch:
127642, Washington Closure Hanford Bechtel Hanford, Inc. , SS , 27038

J353M1AD-SAMP Constituent List:

PU-238	RDL:1	pCi/g	LCL:	UCL:	RPD:	PU-239	RDL:1	pCi/g	LCL:70	UCL:130	RPD:35
Pu-242	RDL:	pCi/g	LCL:20	UCL:105	RPD:35						
J38861AA-BLK:											
PU-238	RDL:1	pCi/g	LCL:	UCL:	RPD:	PU-239	RDL:1	pCi/g	LCL:	UCL:	RPD:
Pu-242	RDL:	pCi/g	LCL:20	UCL:105	RPD:35						
J38861AC-LCS:											
PU-239	RDL:1	pCi/g	LCL:70	UCL:130	RPD:35	Pu-242	RDL:	pCi/g	LCL:20	UCL:105	RPD:35
J38861AD-MBLK:											
PU-238	RDL:1	pCi/g	LCL:	UCL:	RPD:	PU-239	RDL:1	pCi/g	LCL:	UCL:	RPD:
Pu-242	RDL:	pCi/g	LCL:20	UCL:105	RPD:35						
J38861AE-MLCS:											
PU-239	RDL:1	pCi/g	LCL:70	UCL:130	RPD:35	Pu-242	RDL:	pCi/g	LCL:20	UCL:105	RPD:35

J353M1AD-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
J38861AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
J38861AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
J38861AD-MBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
J38861AE-MLCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

8/16/2007 11:24:41 AM

ICOC Fraction Transfer/Status Report

ByDate: 8/16/2006, 8/21/2007, Batch: '7218151', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
7218151						
AC		Rev1C	WoodT	8/7/2007 7:40:11 AM		
SC			antonsonl	IsBatched	8/6/2007 8:03:34 AM	ICOC_RADCALC v4.8.26
SC			WoodT	InPrep	8/7/2007 7:40:11 AM	RICH-RC-5013 Revision 7
SC			WoodT	Prep1C	8/8/2007 5:10:31 AM	RICH-RC-5013 REVISION 7
SC			HarveyK	Sep1C	8/14/2007 8:53:52 AM	RICH-RC-5087 REV1
SC			HarveyK	Sep2C	8/14/2007 5:24:47 PM	RICH-RC-5039 REV5
SC			DAWKINSO	InCnt1	8/14/2007 5:33:38 PM	RICH-RD-0008 REVISION 4
SC			BlackCL	CalcC	8/15/2007 8:13:46 AM	RICH-RD-0008 REVISION 4
SC			NortonJ	Rev1C	8/16/2007 11:22:37 AM	RICHRC0002 REV7
AC			WoodT	8/8/2007 5:10:31 AM		
AC			HarveyK	8/14/2007 8:53:52		
AC			HarveyK	8/14/2007 5:24:47 PM		
AC			DAWKINSO	8/14/2007 5:33:38 PM		
AC			BlackCL	8/15/2007 8:13:46		
AC			NortonJ	8/16/2007 11:22:37		7198286

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 7

ICOCFractions v4.8.27

TESTAMERICA RICHLAND

8/10/2007 11:03:31 AM

127642, Washington Closure Hanford
Bechtel Hanford, Inc.

AnalyDueDate: 08/17/2007

Sample Preparation/Analysis

CH Sr-Total PrpRC5013, SepRC5006
TH Total Strontium by GPC
5I CLIENT: HANFORD

Balance Id:1120373922

Pipet #: _____

Sep1 DT/Tm Tech: 08/09/2007 18:08,ManisD

Sep2 DT/Tm Tech:

Prep Tech: ,WoodT

Batch: 7218161 **SOIL** **pCi/g** **PM, Quote: SS , 27038**
SEQ Batch, Test: None

[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 J353M-1-AA J7H030165-1-SAMP [redacted] 08/01/2007 08:05		6.03g,in AmtRec: 500MLP,3X125MLP	SRTA16999 06/27/07,pd 05/22/07,r #Containers: 4	1.5	80.3 08/09/2007 18:08,s1	50	28a Scr:	1416 Alpha:	8/10/07 R Beta:	
2 J353M-1-AN-X J7H030165-1-DUP [redacted] 08/01/2007 08:05		6.03g,in AmtRec: 500MLP,3X125MLP	SRTA17000 06/27/07,pd 05/22/07,r #Containers: 4	1.5	81.4 08/09/2007 18:08,s1	50	28b Scr:	Alpha:	Beta:	
3 J389G-1-AA-B J7H060000-161-BLK [redacted] 08/01/2007 08:05		6.00g,in AmtRec:	SRTA17001 06/27/07,pd 05/22/07,r #Containers: 1	1.5	79.6 08/09/2007 18:08,s1	50	28c Scr:	Alpha:	Beta:	
4 J389G-1-AC-C J7H060000-161-LCS [redacted] 08/01/2007 08:05		6.00g,in AmtRec:	STSB1229 07/24/07,pd 05/22/07,r #Containers: 1	1.5	84.5 08/09/2007 18:08,s1	50	28d Scr:	Alpha:	Beta:	

Comments:

```
All Clients for Batch:
   127642, Washington Closure Hanford          Bechtel Hanford, Inc.        , SS , 27038

J353M1AA-SAMP Constituent List:
  Sr-90       RDL:1          pCi/g     LCL:70     UCL:130    RPD:35
J389G1AA-BLK:
  Sr-90       RDL:1          pCi/g     LCL:       UCL:       RPD:
J389G1AC-LCS:
  Sr-90       RDL:1          pCi/g     LCL:70     UCL:130    RPD:35
J353M1AA-SAMP Calc Info:
```

8/10/2007 11:03:32 AM

Sample Preparation/Analysis

CH Sr-Total PrpRC5013, SepRC5006
TH Total Strontium by GPC
5I CLIENT: HANFORD

Balance Id:1120373922
Pipet #: _____

AnalyDueDate: 08/17/2007

Sep1 DT/Tm Tech: 08/09/2007 18:08,ManisD

Batch: 7218161 pCi/g
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,WoodT

[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:

Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
J389G1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
J389G1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

8/16/2007 3:22:26 PM

ICOC Fraction Transfer/Status Report

ByDate: 8/16/2006, 8/21/2007, Batch: '7218161', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
7218161						
AC		CalcC	WoodT	8/8/2007 5:11:19 AM		
SC			antonsonl	IsBatched	8/6/2007 8:03:34 AM	ICOC_RADCALC v4.8.26
SC			WoodT	InPrep	8/8/2007 5:11:19 AM	RICH-RC-5013 REVISION 7
SC			WoodT	Prep1C	8/8/2007 5:11:32 AM	RICH-RC-5013 REVISION 7
SC			ManisD	InSep1	8/8/2007 5:15:41 PM	RICH-RC-5006 REVISION 7
SC			ManisD	Sep1C	8/10/2007 11:12:17 AM	RICH-RC-5006 REVISION 7
SC			BlackCL	InCnt1	8/10/2007 11:15:59 AM	RICH-RD-0003 REVISION 5
SC			StringerR	CalcC	8/10/2007 3:39:56 PM	RICH-RD-0003 REVISION 5
AC			WoodT	8/8/2007 5:11:32 AM		
AC			ManisD	8/8/2007 5:15:41 PM		
AC			ManisD	8/10/2007 11:12:17		
AC			BlackCL	8/10/2007 11:15:59		
AC			StringerR	8/10/2007 3:39:56 PM		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 6

ICOCFractions v4.8.27

TESTAMERICA RICHLAND

8/8/2007 6:59:31 AM

127642, Washington Closure Hanford
Bechtel Hanford, Inc.

AnalyDueDate: 08/17/2007

Sample Preparation/Analysis

AW Gamma PrpRC5017
T9 Gamma by HPGE ~~10 day ingrowth~~ PLSS 8/8/07
5I CLIENT: HANFORD

Balance Id:n/a
Pipet #: _____
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: ,WoodT, BarcoII

Batch: 7218164 **SOIL** **pCi/g** **PM, Quote: SS , 27038**
SEQ Batch, Test: None

[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 J353M-1-AE J7H030165-1-SAMP [redacted] 08/01/2007 08:05		890.40g,in AmtRec: 500MLP,3X125MLP	#Containers: 4		SMA	200 min	G6	1120	8/8/07 r	
							Scr:	Alpha:	Beta:	
2 J353M-1-AP-X J7H030165-1-DUP [redacted] 08/01/2007 08:05	* Not enough sample JW 8/8/07	AmtRec: 500MLP,3X125MLP	#Containers: 4				G7	1447	8/8/07 r	
							Scr:	Alpha:	Beta:	
3 J389H-1-AA-B J7H060000-164-BLK [redacted] 08/01/2007 08:05	859.27g,in	AmtRec:	CAL827 #Containers: 1		SMA		G7	1122	8/8/07 r	
							Scr:	Alpha:	Beta:	
4 J389H-1-AC-C J7H060000-164-LCS [redacted] 08/01/2007 08:05	457.79g,in	AmtRec:	CAL816 01/01/03,pd 01/01/02,r #Containers: 1		MA		G8	1123	8/8/07 r	
							Scr:	Alpha:	Beta:	

Comments: Not enough sample for dup, please recount on a separate detector JW 8/8/07 IB 8-8-07

All Clients for Batch:
127642, Washington Closure Hanford Bechtel Hanford, Inc. , SS , 27038

J353M1AE-SAMP Constituent List:

Co-60	RDL:5.00E-02	pCi/g	LCL:	UCL:	RPD:	Cs-137	RDL:1.00E-01	pCi/g	LCL:70	UCL:130	RPD:35
Cs-137DA	RDL:1.00E-01	pCi/g	LCL:70	UCL:130	RPD:35	Eu-152	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:
Eu-154	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:	Eu-155	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:
Ra-226	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:	RA-228	RDL:2.00E-01	pCi/g	LCL:	UCL:	RPD:
RA-228DA	RDL:2.00E-01	pCi/g	LCL:	UCL:	RPD:						

J389H1AA-BLK:

Co-60	RDL:5.00E-02	pCi/g	LCL:	UCL:	RPD:	Cs-137	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:

8/8/2007 6:59:37 AM

Sample Preparation/Analysis

AW Gamma PrpRC5017
T9 Gamma by HPGE 10 day ingrowth
5I CLIENT: HANFORD

Balance Id:n/a
Pipet #: _____
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: ,WoodT

AnalyDueDate: 08/17/2007

Batch: 7218164 pCi/g
SEQ Batch, Test: None

[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:
Cs-137DA	RDL:1.00E-01 pCi/g	LCL:	UCL:	RPD:	Eu-152	RDL:1.00E-01 pCi/g	LCL:	UCL:	RPD:	
Eu-154	RDL:1.00E-01 pCi/g	LCL:	UCL:	RPD:	Eu-155	RDL:1.00E-01 pCi/g	LCL:	UCL:	RPD:	
Ra-226	RDL:1.00E-01 pCi/g	LCL:	UCL:	RPD:	RA-228	RDL:2.00E-01 pCi/g	LCL:	UCL:	RPD:	
RA-228DA	RDL:2.00E-01 pCi/g	LCL:	UCL:	RPD:						
J389H1AC-LCS:										
Cs-137	RDL:0.1 pCi/g	LCL:70	UCL:130	RPD:35	Cs-137DA	RDL:0.1 pCi/g	LCL:70	UCL:130	RPD:35	

J353M1AE-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

J389H1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

J389H1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

8/16/2007 2:33:52 PM

ICOC Fraction Transfer/Status Report

ByDate: 8/16/2006, 8/21/2007, Batch: '7218164', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
7218164						
AC		CalcC	Barcotl	8/8/2007 6:50:05 AM		
SC			antonsonl	IsBatched	8/6/2007 8:04:20 AM	ICOC_RADCALC v4.8.26
SC			Barcotl	InPrep	8/8/2007 6:50:05 AM	RICH-RC-5017 REVISION 6
SC			Barcotl	Prep1C	8/8/2007 6:51:11 AM	RICH-RC-5017 REVISION 6
SC			WoodT	InPrep	8/8/2007 6:59:22 AM	RICH-RC-5013 Revision 7
SC			StringerR	InCnt1	8/8/2007 7:54:06 AM	RICH-RD-0007 REVISION 6
SC			StringerR	CalcC	8/8/2007 3:08:20 PM	RICH-RD-0007 REVISION 6
AC			Barcotl	8/8/2007 6:51:11 AM		
AC			WoodT	8/8/2007 6:59:22 AM		
AC			StringerR	8/8/2007 7:54:06 AM		
AC			StringerR	8/8/2007 7:54:45 AM		
AC			StringerR	8/8/2007 3:08:20 PM		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Page 1

Grp Rec Cnt: 6

ICOCFractions v4.8.27

TESTAMERICA RICHLAND

8/6/2007 8:03:43 AM

127642, Washington Closure Hanford
Bechtel Hanford, Inc.

AnalyDueDate: 08/17/2007

Sample Preparation/Analysis

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

Balance Id: 12430
Pipet #:
Sep1 DT/Tm Tech: 8-22-07 [illegible]
Sep2 DT/Tm Tech:
Prep Tech:

Batch: 7218158 **SOIL** **pCi/g** **PM, Quote: SS , 27038**
SEQ Batch, Test: None

[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 J353M-1-AG J7H030165-1-SAMP [redacted] 08/01/2007 08:05	AmtRec: 500MLP,3X125MLP	#Containers: 4				Scr:	Alpha:	Beta:
2 J353M-1-AK-X J7H030165-1-DUP [redacted] 08/01/2007 08:05	AmtRec: 500MLP,3X125MLP	#Containers: 4				Scr:	Alpha:	Beta:
3 J389C-1-AA-B J7H060000-158-BLK [redacted] 08/01/2007 08:05	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:
4 J389C-1-AC-C J7H060000-158-LCS [redacted] 08/01/2007 08:05	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:
5 J389C-1-AD-BN J7H060000-158-IBLK [redacted] 08/01/2007 08:05	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:

Comments:

All Clients for Batch:
127642, Washington Closure Hanford Bechtel Hanford, Inc. , SS , 27038

J353M1AG-SAMP Constituent List:
C-14 RDL:50 pCi/g LCL:70 UCL:130 RPD:35

STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1 ISV - Insufficient Volume for Analysis WO Cnt: 5
Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added ICOC v4.8.26

Sample Preparation/Analysis

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

Balance Id: 12430
Pipet #:
Sep1 DT/Tm Tech: 8-22-07
Sep2 DT/Tm Tech:
Prep Tech:

AnalyDueDate: 08/17/2007

Batch: 7218158
SEQ Batch, Test: None

pCi/g

[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:

```
J389C1AA-BLK:
  C-14        RDL:50        pCi/g    LCL:       UCL:       RPD:
J389C1AC-LCS:
  C-14        RDL:50        pCi/g    LCL:70     UCL:130    RPD:35
J389C1AD-IBLK:
  C-14        RDL:50        pCi/g    LCL:       UCL:       RPD:
J353M1AG-SAMP Calc Info:
    Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
J389C1AA-BLK:
    Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
J389C1AC-LCS:
    Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
J389C1AD-IBLK:
    Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
```

Approved By _____ Date: _____

TESTAMERICA RICHLAND

8/23/2007 1:40:33 PM

ICOC Fraction Transfer/Status Report

ByDate: 8/23/2006, 8/28/2007, Batch: '7218158', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
7218158						
AC		CalcC	McDowellD	8/15/2007 8:45:20		
SC			antonsonl	IsBatched	8/6/2007 8:03:34 AM	ICOC_RADCALC v4.8.26
SC			McDowellD	InSep1	8/15/2007 8:45:20 AM	RICH-RC-5022 REVISION 3
SC			McDowellD	Sep1C	8/22/2007 2:42:38 PM	RICH-RC-5022 REVISION 3
SC			StringerR	InCnt1	8/22/2007 2:46:41 PM	RICH-RD-0001 REVISION 4
SC			BlackCL	CalcC	8/23/2007 7:46:20 AM	RICH-RD-0001 REVISION 4
AC			McDowellD	8/22/2007 2:42:38 PM		
AC			StringerR	8/22/2007 2:46:41 PM		
AC			BlackCL	8/23/2007 7:46:20		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 4

ICOCFractions v4.8.27

8/9/2007 10:50:05 AM

127642, Washington Closure Hanford
Bechtel Hanford, Inc.

AnalyDueDate: 08/17/2007

Sample Preparation/Analysis

AF Ni-63 PrpRC5013/5019, SepRC5069
S4 Nickel by ICP and Nickel-63 by Liquid Scint
5I CLIENT: HANFORD

Balance Id:1120373922

Pipet #:

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: ,WoodT

Batch: 7218159 **SOIL** **pCi/g** **PM, Quote: SS , 27038**

SEQ Batch. Test: None

[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:
1 J353M-1-AC J7H030165-1-SAMP [redacted] 08/01/2007 08:05	AmtRec: 500MLP,3X125MLP		0.27g,in	0.27g	NITA2454 07/10/07	100	#Containers: 4	Scr:	Alpha:	Beta:
2 J353M-1-AL-X J7H030165-1-DUP [redacted] 08/01/2007 08:05	AmtRec: 500MLP,3X125MLP		0.28g,in	0.28g	NITA2455 07/10/07		#Containers: 4	Scr:	Alpha:	Beta:
3 J389E-1-AA-B J7H060000-159-BLK [redacted] 08/01/2007 08:05	AmtRec:		0.25g,in	0.25g	NITA2456 07/10/07		#Containers: 1	Scr:	Alpha:	Beta:
4 J389E-1-AC-C J7H060000-159-LCS [redacted] 08/01/2007 08:05	AmtRec:		0.25g,in	0.25g	NISA0771 07/10/07		#Containers: 1	Scr:	Alpha:	Beta:
5 J389E-1-AD-BN J7H060000-159-IBLK [redacted] 08/01/2007 08:05	AmtRec:						#Containers: 1	Scr:	Alpha:	Beta:

Comments:

All Clients for Batch:
127642, Washington Closure Hanford Bechtel Hanford, Inc. , SS , 27038

J353M1AC-SAMP Constituent List:
Ni-63 RDL:30 pCi/g LCL:70 UCL:130 RPD:35

TESTAMERICA RICHLAND

Sample Preparation/Analysis

AF Ni-63 PrpRC5013/5019, SepRC5069
S4 Nickel by ICP and Nickel-63 by Liquid Scint
5l CLIENT: HANFORD

AnalyDueDate: 08/17/2007

Batch: 7218159
SEQ Batch, Test: None

pCi/g

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

```
J389E1AA-BLK:
  Ni-63        RDL:30          pCi/g     LCL:        UCL:        RPD:
J389E1AC-LCS:
  Ni-63        RDL:30          pCi/g     LCL:70      UCL:130     RPD:35
J389E1AD-IBLK:
  Ni-63        RDL:30          pCi/g     LCL:        UCL:        RPD:
J353M1AC-SAMP Calc Info:
     Uncert Level (#s).: 2     Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
J389E1AA-BLK:
     Uncert Level (#s).: 2     Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
J389E1AC-LCS:
     Uncert Level (#s).: 2     Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
J389E1AD-IBLK:
     Uncert Level (#s).: 2     Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
```

Approved By _____ Date: _____

TESTAMERICA RICHLAND

8/16/2007 3:13:18 PM

ICOC Fraction Transfer/Status Report

ByDate: 8/16/2006, 8/21/2007, Batch: '7218159', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
7218159						
AC		CalcC	WoodT	8/8/2007 5:09:10 AM		
SC			antonsonl	IsBatched	8/6/2007 8:03:34 AM	ICOC_RADCALC v4.8.26
SC			WoodT	InPrep	8/8/2007 5:09:10 AM	RICH-RC-5013 REVISION 7
SC			WoodT	Prep1C	8/8/2007 5:09:23 AM	RICH-RC-5013 REVISION 7
SC			FABREM	Sep1C	8/9/2007 12:41:33 PM	RICH-RC-5069 REVISION 6
SC			StringerR	InCnt1	8/9/2007 12:45:06 PM	RICH-RD-0001 REVISION 4
SC			BlackCL	CalcC	8/15/2007 8:11:17 AM	RICH-RD-0001 REVISION 4
AC			WoodT	8/8/2007 5:09:23 AM		
AC			FABREM	8/9/2007 12:41:33 PM		
AC			StringerR	8/9/2007 12:45:06 PM		
AC			BlackCL	8/15/2007 8:11:17		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 5

ICOCFractions v4.8.27

8/6/2007 8:03:45 AM

127642, Washington Closure Hanford
Bechtel Hanford, Inc.

AnalyDueDate: 08/17/2007

Sample Preparation/Analysis

AT H-3 Prp/SepRC5037
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Balance Id: 12445
Pipet #:
Sep1 DT/Tm Tech: 8-14-07 tm
Sep2 DT/Tm Tech:
Prep Tech:

Batch: 7218160 **SOIL** **pCi/g** **PM, Quote: SS , 27038**
SEQ Batch, Test: None

[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 J353M-1-AF J7H030165-1-SAMP [redacted] 08/01/2007 08:05	AmtRec: 500MLP,3X125MLP	#Containers: 4				Scr:	Alpha:	Beta:
2 J353M-1-AM-X J7H030165-1-DUP [redacted] 08/01/2007 08:05	AmtRec: 500MLP,3X125MLP	#Containers: 4				Scr:	Alpha:	Beta:
3 J389F-1-AA-B J7H060000-160-BLK [redacted] 08/01/2007 08:05	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:
4 J389F-1-AC-C J7H060000-160-LCS [redacted] 08/01/2007 08:05	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:
5 J389F-1-AD-BN J7H060000-160-IBLK [redacted] 08/01/2007 08:05	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:

Comments:

All Clients for Batch:
127642, Washington Closure Hanford Bechtel Hanford, Inc. , SS , 27038

J353M1AF-SAMP Constituent List:
H-3 RDL:400 pCi/g LCL:70 UCL:130 RPD:35

STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1 ISV - Insufficient Volume for Analysis WO Cnt: 5
Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added ICOC v4.8.26

TESTAMERICA RICHLAND

Sample Preparation/Analysis

AT H-3 Prp/SepRC5037
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Balance Id: 12445
Pipet #:
Sep1 DT/Tm Tech: 8-14-07 am
Sep2 DT/Tm Tech:
Prep Tech:

AnalyDueDate: 08/17/2007

Batch: 7218160 pCi/g
SEQ Batch, Test: None

[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:

```
J389F1AA-BLK:
  H-3          RDL:400        pCi/g     LCL:      UCL:      RPD:
J389F1AC-LCS:
  H-3          RDL:400        pCi/g     LCL:70    UCL:130   RPD:35
J389F1AD-IBLK:
  H-3          RDL:400        pCi/g     LCL:      UCL:      RPD:
J353M1AF-SAMP Calc Info:
     Uncert Level (#s).: 2     Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
J389F1AA-BLK:
     Uncert Level (#s).: 2     Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
J389F1AC-LCS:
     Uncert Level (#s).: 2     Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
J389F1AD-IBLK:
     Uncert Level (#s).: 2     Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
```

Approved By _____ Date: _____

TESTAMERICA RICHLAND

8/17/2007 10:09:20 AM

ICOC Fraction Transfer/Status Report

ByDate: 8/17/2006. 8/22/2007, Batch: '7218160'. User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
7218160						
AC		InCnt1	McDowellD	8/14/2007 8:40:45		
SC			antonsonl	IsBatched	8/6/2007 8:03:34 AM	ICOC_RADCALC v4.8.26
SC			McDowellD	InSep1	8/14/2007 8:40:45 AM	RICH-RC-5037 REVISION 3
SC			McDowellD	Sep1C	8/16/2007 2:13:13 PM	RICH-RC-5037 REVISION 3
SC			StringerR	InCnt1	8/16/2007 2:29:18 PM	RICH-RD-0001 REVISION 4
AC			McDowellD	8/16/2007 11:01:55		
AC			McDowellD	8/16/2007 2:13:13 PM		
AC			StringerR	8/16/2007 2:29:18 PM		

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 4

ICOCFractions v4.8.27