**Analytical Data Package Prepared For** 



# Fluor Hanford

Radiochemical Analysis By

# TestAmerica TARL

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

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

Report Nbr: 39591

SDG Nbr	ORDER Nbr	<b>CLIENT ID NUMBER</b>	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W05424	108-037	B1V9R6	J8F050181-1	KPE1L1AA	9KPE1L10	8170557
		B1V9R6	J8F050181-1	<b>KPE1L1AC</b>	9KPE1L10	8170563
		B1V9R6	J8F050181-1	KPE1L1AD	9KPE1L10	8170553
		B1V9R6	J8F050181-1	KPE1L1AE	9KPE1L10	8170550
		B1V9R6	J8F050181-1	<b>KPE1L1AF</b>	9KPE1L10	8170556
		B1V9R6	J8F050181-1	KPE1L1AG	9KPE1L10	8170555
	S08-004	B1TWR9	J8F050186-1	KPE3V1AA	9KPE3V10	8170553
		B1TWR9	J8F050186-1	KPE3V2AC	9KPE3V20	8197204
		<b>B1TX74</b>	J8F050186-2	KPE3X1AA	9KPE3X10	8170562
		<b>B1TX74</b>	J8F050186-2	KPE3X1AC	9KPE3X10	8170560
		<b>B1TX74</b>	J8F050186-2	KPE3X1AD	9KPE3X10	8170561
		<b>B1TX74</b>	J8F050186-2	KPE3X1AE	9KPE3X10	8170552
		B1TX74	J8F050186-2	KPE3X1AG	9KPE3X10	8170559
		B1TX74	J8F050186-2	KPE3X1AH	9KPE3X10	8170558
	S08-005	B1V7H4	J8F050191-1	KPE4X1AA	9KPE4X10	8170550

Comments:

# Report Nbr: 39591

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W05424	108-037	B1V9T3	J8F050195-1	KPE6D1AA	9KPE6D10	8170550
		B1V658	J8F050195-2	KPE6P1AA	9KPE6P10	8170563
		B1V658	J8F050195-2	KPE6P1AC	9KPE6P10	8170553
		B1V658	J8F050195-2	KPE6P1AD	9KPE6P10	8170550
		B1V658	J8F050195-2	KPE6P1AE	9KPE6P10	8170556
		B1V658	J8F050195-2	KPE6P1AF	9KPE6P10	8170555
		B1V657	J8F050195-3	KPE7T1AA	9KPE7T10	8170563
		B1V657	J8F050195-3	KPE7T1AC	9KPE7T10	8170553
		B1V657	J8F050195-3	KPE7T1AD	9KPE7T10	8170550
		B1V657	J8F050195-3	KPE7T1AG	9KPE7T10	8170555
		B1V657	J8F050195-3	KPE7T2AE	<b>9KPE7T20</b>	8197274
		B1V657	J8F050195-3	KPE7T2AF	9KPE7T20	8197204
	S08-005	B1V7V9	J8F050319-1	KPF2X1AA	9KPF2X10	8170553
		B1V7V9	J8F050319-1	KPF2X1AC	9KPF2X10	8170550
		B1V7V8	J8F050319-2	KPF3F1AA	9KPF3F10	8170553
		<b>B1V7V8</b>	J8F050319-2	KPF3F1AC	9KPF3F10	8170550
	W08-005	B1V8C6	J8F050322-1	KPF3R1AA	9KPF3R10	8170564
	108-037	B1V695	J8F050327-1	KPF4V1AA	9KPF4V10	8170550
		B1V691	J8F050327-2	KPF461AA	9KPF4610	8170550
	S08-005	B1V7X5	J8F090190-1	KPLVT1AA	9KPLVT10	8170550
	108-043	B1VKT9	J8F090197-1	KPLWM1AA	9KPLWM10	8170557
		B1VKT9	J8F090197-1	KPLWM1AC	9KPLWM10	8170563
		B1VKT9	J8F090197-1	<b>KPLWM1AD</b>	9KPLWM10	8170553
		B1VKT9	J8F090197-1	<b>KPLWM1AE</b>	9KPLWM10	8170550
		B1VKT9	J8F090197-1	KPLWM1A	9KPLWM10	8170555
		B1VKT9	J8F090197-1	KPLWM2AF	9KPLWM20	8197274

Comments:

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	ВАТСН
 W05424	108-043	B1VKV0				
W03424	100-043		J8F090197-2	KPLWR1AA	9KPLWR10	8170557
		B1VKV0	J8F090197-2	<b>KPLWR1AC</b>	9KPLWR10	8170563
		B1VKV0	J8F090197-2	KPLWR1AD	9KPLWR10	8170553
		B1VKV0	J8F090197-2	KPLWR1AE	9KPLWR10	8170550
		B1VKV0	J8F090197-2	<b>KPLWR1AF</b>	9KPLWR10	8170556
		B1VKV0	J8F090197-2	<b>KPLWR1AG</b>	9KPLWR10	8170555
	W08-006	B1VR34	J8F100263-1	KPNCT1AA	9KPNCT10	8190389
	108-038	B1V6C8	J8F100266-1	<b>KPNDQ1AA</b>	9KPNDQ10	8170550
		B1V6C9	J8F100266-2	KPND31AA	9KPND310	8170550
		B1V6C0	J8F100266-3	KPND61AA	9KPND610	8170550
	W08-006	<b>B1VR96</b>	J8F110338-1	KPQWR1AA	9KPQWR10	8190391



# Certificate of Analysis

Fluor Hanford 1200 Jadwin Ave. Richland, WA 99352

July 28, 2008

Attention: Steve Trent

SAF Number : I08-037, S08-004, S08-005, W08-005, I08-043,

W08-006, I08-038

Date SDG Closed : June 11, 2008
Number of Samples : Twenty (20)
Sample Type : Water

SDG Number : W05424

Data Deliverable : 45-Day / Summary

## **CASE NARRATIVE**

#### I. Introduction

Between June 4, 2008 and June 11, 2008 twenty water samples were received at STL Richland (STLR) for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Fluor Hanford specific IDs:

PGW ID#	STLR ID#	DATE OF RECEIPT	<b>MATRIX</b>
B1V9R6	JPE1L	6/04/08	WATER
BITWR9	KPE3V	6/04/08	WATER
BITX74	KPE3X	6/04/08	WATER
B1V7H4	KPE4X	6/04/08	WATER
B1V9T3	KPE6D	6/04/08	WATER
B1V658	KPE6P	6/04/08	WATER
B1V657	KPE7T	6/04/08	WATER
B1V7V9	KPF2X	6/05/08	WATER
B1V7V8	KPF3F	6/05/08	WATER
B1V8C6	KPF3R	6/05/08	WATER
B1V695	KPF4V	6/05/08	WATER
B1V691	KPF46	6/05/08	WATER
B1V7X5	KPLVT	6/09/08	WATER

B1VKT9	KPLWM	6/09/08	WATER	
B1VKV0	KPLWR	6/09/08	WATER	
B1VR34	KPNCT	6/10/08	WATER	
B1V6C8	KPNDQ	6/10/08	WATER	
B1V6C9	KPND3	6/10/08	WATER	
B1V6C0	KPND6	6/10/08	WATER	
B1VR96	KPQWR	6/11/08	WATER	

#### II. Sample Receipt

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

#### III. Analytical Results/Methodology

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

The requested analyses were:

#### Alpha Spectroscopy

Uranium 234, 235 and 238 by method RICH-RC-5039

Neptunium-237 by method RICH-RC-5009

#### **Gas Proportional Counting**

Gross Alpha by method RICH-RC-5014

Gross Beta by method RICH-RC-5014

Strontium-90 by method RICH-RC-5006

#### Gamma Spectroscopy

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

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

Iodine-129 by method RICH-RC-5025

#### Liquid Scintillation Counting

Selenium-79 by method RICH-RC-5043

Technetium-99 by TEVA method RICH-RC-5065

Tritium by method RICH-RC-5007

Carbon-14 by method RICH-RC-5022

#### Laser Induced Phosphorimetry

Total Uranium by method RICH-RC-5058

#### **Chemical Analysis**

Total Coliform by method 9223

### 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

#### Uranium 234, 235 and 238 by method RICH-RC-5039:

The LCS, batch blank, sample and sample duplicate (B1V657) results are within contractual requirements.

#### Neptunium-237 by method RICH-RC-5009:

The LCS, batch blank, sample and sample duplicate (B1VKV0) results are within contractual requirements.

#### **Gas Proportional Counting**

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

Samples B1TX74 and B1TX74 DUP were analyzed with reduced aliquots based on weight screens. Except as noted, the LCS, batch blank, samples and sample duplicate (B1TX74) results are within contractual requirements.

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

The LCS, batch blank, samples and sample duplicate (B1TX74) results are within contractual requirements.

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

The samples were traced with an incorrect tracer. The samples were reanalyzed. Except as noted, the LCS, batch blank, samples and sample duplicate (B1V657) results are within contractual requirements.

#### Gamma Spectroscopy

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

There was insufficient volume for a duplicate. Sample B1V7V9 was recounted on a different detector for the duplicate (B1V7V9 DUP). Except as noted, the LCS, batch blank, samples and sample duplicate (B1V7V9) results are within contractual requirements.

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

The LCS, batch blank, samples and sample duplicate (B1V6C8) results are within contractual requirements.

#### Iodine-129 by method RICH-RC-5025:

The LCS, batch blank, samples and sample duplicate (BITX74) results are within contractual requirements.

Fluor Hanford July 28, 2008

#### **Liquid Scintillation Counting**

Selenium-79 by method RICH-RC-5043:

Samples B1V657 and B1VKT9 were reanalyzed due to low tracer yields. There is no LCS for selenium-79. Except as noted, the batch blank, samples and sample duplicate (B1VKT9) results are within contractual requirements.

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

The LCS, batch blank, samples, sample duplicate (B1TX74), and sample matrix spike (B1TX74) results are within contractual requirements.

#### Tritium by method RICH-RC-5007:

The LCS, batch blank, samples and sample duplicate (B1TX74) results are within contractual requirements.

#### Carbon-14 by method RICH-RC-5022:

The LCS, batch blank, samples and sample duplicate (B1V658) results are within contractual requirements.

#### **Total Uranium**

#### Total Uranium by method RICH-RC-5058:

The LCS, batch blank, samples, sample duplicate (B1TX74), and sample matrix spike (B1TX74) results are within contractual requirements.

#### **Chemical Analysis**

Total Coliform by method 9223

Batch: 8170564

The LCS, batch blank, sample and sample duplicate (B1V8C6) results are within contractual requirements.

Batch: 8190389

The LCS, batch blank, sample and sample duplicate (B1VR34) results are within contractual requirements.

Batch: 8190391

The LCS, batch blank, sample and sample duplicate (B1VR96) 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)	TestAmerica Richland's SOP No								
EPA 901.1	Cs-134, I-131	RICH-RC-5017								
EPA 900.0	Alpha & Beta	RICH-RC-5014								
EPA 00-02	Gross Alpha (Coprecipitation)	RICH-RC-5021								
EPA 903.0	Total Alpha Radium (Ra-226)	RICH-RC-5027								
EPA 903.1	Ra-226	RICH-RC-5005								
EPA 904.0	Ra-228	RICH-RC-5005								
EPA 905.0	Sr-89/90	RICH-RC-5006								
ASTM D5174	Uranium	RICH-RC-5058								
EPA 906.0	Tritium	RICH-RC-5007								

## Results in this report relate only to the sample(s) analyzed.

### **Uncertainty Estimation**

TestAmerica 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<sub>i</sub>) 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<sub>e</sub>) 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/?n), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

**Report Definitions** 

	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 TestAmerica.
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 <sub>c</sub> _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, $u_e$ 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 TestAmerica "default" nominal detection limit. Often referred to the reporting level (RL)
Le	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 <b>Work Order</b> 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 TestAmerica 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.

7/28/2008 2:55:59 PM	1		TestAmerica	Report	Lab Code: TARL
FormNbr: R	FormatType: FEAD	Version: 05	Rpt Nbr: 39591	File Name: h:\Reportdb\edd\FeadIV\Rad\W	05424.Edd, h:\Reportdb\edd\FeadIV\Rad\39591.Edd

FormN	or: R	FormatType:	FEAD Versi	ion: 05	Rpt N	br: 39591		File Name:	h:\Reportdb\	edd\FeadIV\Rad\W054	24.Edd, h:\Rep	ortdb\ed	d\FeadIV\Rad\3	39591.E	dd
Lab Sample Id		Test User	Contract Nbr MW6-SBB-A1	SAF Nb	or Sdg Nbr: W05424	QC Type		Moisture/ Solids%*:	Distilled Volume				lection Date: 2008 09:00		
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qua	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/	Time	Act
8170563	C-14	14762-75-5	1.86E+00	pCi/L	3.6E+00	4.3E+00	U	8.49E+00	0.001	C14_LSC	2.00E-01	L	06/24/2008	03:58	1
8170553	BE-7	13966-02-4	-2.90E+00	pCi/L	1.6E+01	1.6E+01	U	2.74E+0	1	GAMMALL_GS	2.0004E+00	L	07/02/2008	13:34	1
8170553	CO-60	10198-40-0	-4.57E-02	pCi/L	1.7E+00	1.7E+00	U	3.14E+00	0	GAMMALL_GS	2.0004E+00	L	07/02/2008	13:34	-
8170553	CS-134	13967-70-9	1.14E+00	pCi/L	1.7E+00	1.7E+00	U	3.15E+00	)	GAMMALL_GS	2.0004E+00	L	07/02/2008	13:34	- 1
8170553	CS-137	10045-97-3	-3.64E-01	pCi/L	1.6E+00	1.6E+00	U	2.76E+00	)	GAMMALL_GS	2.0004E+00	L	07/02/2008	13:34	- 1
8170553	EU-152	14683-23-9	4.34E-01	pCi/L	4.4E+00	4.4E+00	U	7.58E+00	)	GAMMALL_GS	2.0004E+00	L	07/02/2008	13:34	- 1
8170553	EU-154	15585-10-1	-4.64E+00	pCi/L	5.0E+00	5.0E+00	U	7.99E+00	)	GAMMALL_GS	2.0004E+00	L	07/02/2008	13:34	- 1
8170553	EU-155	14391-16-3	2.93E+00	pCi/L	4.3E+00	4.3E+00	U	7.54E+00	0	GAMMALL_GS	2.0004E+00	L	07/02/2008	13:34	1
8170553	K-40	13966-00-2	-4.92E+01	pCi/L	4.9E+01	4.9E+01	U	1.01E+02	2	GAMMALL_GS	2.0004E+00	L	07/02/2008	13:34	- 1
8170553	<b>RU-106</b>	13967-48-1	-2.45E+00	pCi/L	1.4E+01	1.4E+01	U	2.43E+01	1	GAMMALL_GS	2.0004E+00	L	07/02/2008	13:34	1
8170553	SB-125	14234-35-6	1.21E+00	pCi/L	3.9E+00	3.9E+00	U	6.97E+00	)	GAMMALL_GS	2.0004E+00	L	07/02/2008	13:34	1
8170550	1-129L	15046-84-1	9.82E+00	pCi/L	1.2E+00	1.2E+00		4.08E-01	98.1	1129LL_SEP_LEPS	3.8813E+00	L	07/16/2008	21:48	1
8170557	NP-237	13994-20-2	2.68E-02	pCi/L	9.3E-02	9.3E-02	U	2.53E-01	89.7	NP237_LLE_PLAT		L	06/26/2008	20:09	1
8170556	Se-79	15758-45-9	5.16E+00	pCi/L	4.3E+00	8.5E+00	U	1.01E+01	1 86.3	SE79 SEP_IE_LS	2.003E-01	L	07/03/2008	23:32	1
8170555	U-234	13966-29-5	1.15E+00	pCi/L	3.9E-01	4.3E-01		1.57E-01	90.1	UISO_PLATE_AEA	2.0005E-01	L	06/26/2008	19:44	1
8170555	U-235	15117-96-1	1.96E-02	pCi/L	6.8E-02	6.8E-02	U	1.85E-01	90.1	UISO PLATE_AEA	2.0005E-01	L	06/26/2008	19:44	1
8170555	U-238	U-238	5.11E-01	pCi/L	2.6E-01	2.8E-01		1.85E-01	90.1	UISO_PLATE_AEA	2.0005E-01	L	06/26/2008	19:44	1
Lab Sample Id		Test User	Contract Nbr	SAF NE	or Sdg Nbr: W05424	QC Type	):	Moisture/ Solids%*:	Distilled Volume				ection Date: 008 12:40		
Batch	Analyte	CAS#	MW6-SBB-A1 Result			TotU 2S	Qua	MDA	TrcYield	Method	Alg Size	Unit	Analy Date/1	Time.	Act
8170553	BE-7	13966-02-4	-3.23E+00	pCi/L	1.6E+01	1.6E+01	U	2.70E+01		GAMMALL_GS	2.0002E+00	L	07/02/2008		
8170553	CO-60	10198-40-0	-2.87E-01	pCi/L		2.1E+00	U	3.83E+00		GAMMALL GS	2.0002E+00	L	07/02/2008		
8170553	CS-134	13967-70-9	5.11E-01	pCi/L		2.0E+00	U	3.67E+00		GAMMALL GS	2.0002E+00	L	07/02/2008		
8170553	CS-137	10045-97-3	3.63E-01	pCi/L	1.8E+00	1.8E+00	U	3.23E+00		GAMMALL GS	2.0002E+00	L	07/02/2008		
8170553	EU-152	14683-23-9	3.09E+00	pCi/L	3.4E+00	3.4E+00	U	6.50E+00		GAMMALL GS	2.0002E+00	L	07/02/2008		
8170553	EU-154	15585-10-1	-4.38E+00	pCi/L	5.7E+00	5.7E+00	U	9.22E+00		GAMMALL_GS	2.0002E+00	L	07/02/2008		
8170553	EU-155	14391-16-3	-2.60E-01	pCi/L	2.7E+00	2.7E+00	U	4.76E+00		GAMMALL_GS	2.0002E+00	L	07/02/2008		
8170553	K-40	13966-00-2	1.84E+01	pCi/L	3.9E+01	3.9E+01	U	7.98E+01		GAMMALL_GS	2.0002E+00	L	07/02/2008		
8170553	RU-106	13967-48-1	2.07E+00	pCi/L	1.6E+01		U	2.78E+01		GAMMALL GS	2.0002E+00	L	07/02/2008		

**TestAmerica** 

rptFeadRadSummaryEdd v3.48

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

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

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

772072000	8 2:55:59 PM						110	Repor					Lab Code: TARL		
FormNbr	r: R	FormatType:	FEAD Versi	on: 05	Rpt N	br: 39591		File Name:	h:\Reportdb\	edd\FeadIV\Rad\W054	24.Edd, h:\Rep	ortdb\ed	Id\FeadIV\Rad\39	9591.E	dd
3170553	SB-125	14234-35-6	-7.19E-01	pCi/L	4.0□+00	4.0E+00	U	7.09E+00	0	GAMMALL_GS	2.0002E+00	L	07/02/2008	13:35	j
Lab Sample Id: 9KPE3V20	Client Id: B1TWR9	Test User	Contract Nbr MW6-SBB-A1	SAF Nb S08-004	r Sdg Nbr: W05424	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:		1	lection Date: 2008 12:40		
Batch 3197204	Analyte SR-90	CAS# 10098-97-2	Result 2.61E-01	Unit pCi/L	CntU 2S 3.3E-01	TotU 2S 3.3E-01	Qual U	MDA 6.85E-01	TrcYield 77.9	Method SRISO_SEP_PRE	Alq Size 1.0004E+00	Unit L	Analy Date/Ti 07/26/2008		A
Lab Sample Id: 9KPE3X10	Client Id: B1TX74	Test User	Contract Nbr MW6-SBB-A1	SAF Nb	r Sdg Nbr: W05424	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:		1	llection Date: 2008 12:40		
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Ti	ime	Ac
3170562	H-3	10028-17-8	7.78E+01	pCi/L	1.1E+02	1.2E+02	U	2.49E+02	2 100.0	906.0_H3_LSC	5.00E-03	L	06/21/2008	06:21	- 1
3170560	ALPHA	12587-46-1	1.88E+00	pCi/L	1.3E+00	1.3E+00		1.50E+00	0.001	9310_ALPHABETA	1.725E-01	L	07/07/2008	14:14	. 1
170561	BETA	12587-47-2	7.86E+00	pCi/L	1.9E+00	2.1E+00		2.99E+00	0.001	9310_ALPHABETA	2.002E-01	L	07/07/2008	16:32	: 1
170552	I-129L	15046-84-1	-4.05E-01	pCi/L	1.0E+00	1.0E+00	U	1.80E+00	95.1	1129_SEP_LEPS_G	5.001E-01	L	07/14/2008	17:28	1
170559	TC-99	14133-76-7	5.24E+00	pCi/L	4.1E+00	5.8E+00	U	9.56E+00	0.001	TC99_ETVDSK_LS	1.253E-01	L	06/25/2008	22:34	1
3170558	Uranium	7440-61-1	2.92E+00	ug/L	3.0E-01	3.0E-01		8.35E-02	2	UTOT_KPA	2.51E-02	ML	07/21/2008	10:18	1
Lab Sample Id: 9KPE4X10	Client Id: B1V7H4	Test User	Contract Nbr MW6-SBB-A1	SAF Nb	r Sdg Nbr: W05424	QC Type		Moisture/ Solids%*:	Distilled Volume	The second secon		1	lection Date: 2008 10:33		
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Ti	me	Ac
3170550	I-129L	15046-84-1	1.70E-01	pCi/L	1.8E-01	1.8E-01	บ	3.15E-01	95.7	I129LL_SEP_LEPS	3.8892E+00	L	07/16/2008	21:50	) [
Lab Sample Id: 9KPE6D10	Client Id: B1V9T3	Test User	Contract Nbr MW6-SBB-A1	SAF No.	r Sdg Nbr: W05424	QC Type		Moisture/ Solids%*:	Distilled Volume			- 1	llection Date: 2008 12:49		
Batch 8170550	Analyte I-129L	CAS# 15046-84-1	<b>Result</b> 9.39E-01	Unit pCi/L	CntU 2S 2.9E-01	TotU 2S 2.9E-01	Qual	MDA 5.20E-01	TrcYield 93.5	Method I129LL_SEP_LEPS	Alq Size 3.9021E+00	Unit L	Analy Date/Ti 07/16/2008		Ac
Lab Sample Id: 9KPE6P10	Client Id: B1V658	Test User	Contract Nbr MW6-SBB-A1	SAF NE	or Sdg Nbr: W05424	QC Type		Moisture/ Solids%*:	Distilled Volume	•		1	llection Date: 2008 08:25		
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Ti	ime	A
170563	C-14	14762-75-5	-3.67E-01	pCi/L	3.5E+00	4.2E+00	U	8.49E+00	0.001	C14_LSC	2.00E-01	L	06/24/2008	04:40	1
3170553	BE-7	13966-02-4	-2.37E+00	pCi/L	1.3E+01	1.3E+01	U	2.28E+0	1	GAMMALL_GS	2.0001E+00	L	07/02/2008	13:36	1
170553	CO-60	10198-40-0	1.43E+00	pCi/L	1.7E+00	1.7E+00	U	3.54E+00	0	GAMMALL_GS	2.0001E+00	L	07/02/2008	13:36	1
3170553	CS-134	13967-70-9	5.27E-01	pCi/L	1.7E+00	1 7F+00	U	3.13E+00	n	GAMMALL GS	2.0001E+00	L	07/02/2008	13:36	. 1

TestAmerica

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rptFeadRadSummaryEdd v3.48

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

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

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF NE	or Sdg Nbr:	QC Type		Moisture/ Solids%*:	Distilled Volume				lection Date:		
8170555	U-238	U-238	1.13E+01	pCi/L	1.2E+00	2.2E+00		2.78E-01	103.5	UISO_PLATE_AEA	2.0002E-01	L	06/26/2008	19:44	ı
8170555	U-235	15117-96-1	5.45E-01	pCi/L	2.6E-01	2.8E-01		2.06E-01	103.5	UISO_PLATE_AEA	2.0002E-01	L	06/26/2008	19:44	I
3170555	U-234	13966-29-5	1.24E+01	pCi/L	1.2E+00	2.3E+00		2.68E-01	103.5	UISO_PLATE_AEA	2.0002E-01	L	06/26/2008	19:44	
3170550	I-129L	15046-84-1	4.96E-01	pCi/L	4.1E-01	4.1E-01	U	4.49E-01	94.6	I129LL_SEP_LEPS	3.8725E+00	L	07/17/2008	05:24	
3170553	SB-125	14234-35-6	3.66E-01	pCi/L	3.4E+00	3.4E+00	U	5.96E+00		GAMMALL_GS	2.0001E+00	L	07/02/2008	13:36	
170553	RU-106	13967-48-1	-6.98E+00	pCi/L	1.4E+01	1.4E+01	U	2.32E+01		GAMMALL_GS	2.0001E+00	L	07/02/2008	13:36	
3170553	K-40	13966-00-2	9.48E+00	pCi/L	2.0E+01	2.0E+01	U	2.22E+01		GAMMALL_GS	2.0001E+00	L	07/02/2008	13:36	
3170553	EU-155	14391-16-3	-1.76E-01	pCi/L	3.0E+00	3.0E+00	U	5.27E+00		GAMMALL_GS	2.0001E+00	L	07/02/2008	13:36	
3170553	EU-154	15585-10-1	1.52E+00	pCi/L	3.9E+00	3.9E+00	U	7.47E+00		GAMMALL_GS	2.0001E+00	L	07/02/2008	13:36	
8170553	EU-152	14683-23-9	-3.12E-01	pCi/L	3.5E+00	3.5E+00	U	6.04E+00		GAMMALL_GS	2.0001E+00	L	07/02/2008	13:36	,
8170553	CS-137	10045-97-3	-8.60E-01	pCi/L	1.3E+00	1.3E+00	U	2.22E+00		GAMMALL_GS	2.0001E+00	L	07/02/2008	13:36	
8170553	CS-134	13967-70-9	1.19E-01	pCi/L	1.3E+00	1.3E+00	U	2.43E+00		GAMMALL_GS	2.0001E+00	L	07/02/2008		
8170553	CO-60	10198-40-0	6.08E-01	pCi/L	1.3E+00	1.3E+00	U	2.54E+00		GAMMALL_GS	2.0001E+00	L	07/02/2008		
8170553	BE-7	13966-02-4	6.77E-01	pCi/L	1.3E+01	1.3E+01	U	2.29E+01		GAMMALL GS	2.0001E+00	L	07/02/2008	13:36	í
8170563	C-14	14762-75-5	-2.15E+00	pCi/L	3.4E+00	4.2E+00	U	8.49E+00		C14 LSC	2.00E-01	L	06/24/2008		
KPE7T10	B1V657 Analyte	CAS#	W6-SBB-A1	108-037 Unit	W05424 CntU 2S	TotU 2S	Qual	MDA 1	rcYield	Method	Alq Size	Unit	Analy Date/1	Time	,
Sample Id:			100.007	Nbr:		: S	Solids%*:	Volume	On Date:		Date: 06/04/2008 11:07				
Lab	Client	Test	Contract	SAF NE	- 0	QC	N	Moisture/	Distilled	Sample		Col	lection		
3170555	U-238	U-238	8.13E-02	pCi/L	1.1E-01	1.1E-01	U	1.77E-01	108.3	UISO_PLATE_AEA	2.00E-01	L	06/26/2008	19:44	
8170555	U-235	15117-96-1	3.13E-02	pCi/L	6.4E-02	6.4E-02	U	1.50E-01	108.3	UISO_PLATE_AEA	2.00E-01	L	06/26/2008	19:44	,
8170555	U-234	13966-29-5	1.44E-01	pCi/L	1.4E-01	1.4E-01	U	1.77E-01	108.3	UISO_PLATE_AEA	2.00E-01	L	06/26/2008	19:44	,
8170556	Se-79	15758-45-9	3.73E+00	pCi/L	5.1E+00	9.9E+00	U	1.21E+01	72.0	SE79_SEP_IE_LS	2.002E-01	L	07/04/2008	00:25	i
8170550	I-129L	15046-84-1	-7.41E-02	pCi/L	1.3E-01	1.3E-01	U	2.33E-01	96.5	I129LL_SEP_LEPS	3.9022E+00	L	07/17/2008	05:23	,
8170553	SB-125	14234-35-6	1.85E+00	pCi/L	3.3E+00	3.3E+00	U	6.19E+00		GAMMALL_GS	2.0001E+00	L	07/02/2008	13:36	į
8170553	RU-106	13967-48-1	-9.27E+00	pCi/L	1.3E+01	1.3E+01	U	2.15E+01		GAMMALL_GS	2.0001E+00	L	07/02/2008	13:36	j
8170553	K-40	13966-00-2	9.16E+00	pCi/L	2.1E+01	2.1E+01	U	4.32E+01		GAMMALL GS	2.0001E+00	L	07/02/2008		
8170553	EU-155	14391-16-3	3.51E-01	pCi/L	2.7E+00	2.7E+00	U	4.64E+00		GAMMALL_GS	2.0001E+00	L	07/02/2008	13:36	j
8170553	EU-154	15585-10-1	7.43E-01	pCi/L	4.0E+00		U	7.85E+00		GAMMALL GS	2.0001E+00	L	07/02/2008		
8170553	EU-152	14683-23-9	-7.91E-01	pCi/L	3.5E+00		U	6.21E+00		GAMMALL GS	2.0001E+00	L	07/02/2008		
3170553	CS-137	10045-97-3	-1.76E-02	pCi/L	1.3E+00	1.3F+00	U	2.40E+00		GAMMALL GS	2.0001E+00	L	07/02/2008	13:36	_
FormNb	r: R	FormatType: FEA	D Version	on: 05	Rpt N	br: 39591		File Name: h	:\Reportdb\	edd\FeadIV\Rad\W054	24.Edd, h:\Rep	ortdb\ed	ld\FeadIV\Rad\3	39591.E	Edd
								Report							

**TestAmerica** 

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7/28/200	8 2:55:59 PM				Т	estAm	erica	Repor	t				Lab Code: TARI	-	
FormNb	r: R	FormatType:	FEAD Versi	on: 05	Rpt N	<b>br</b> : 39591		File Name: I	h:\Reportdb	\edd\FeadIV\Rad\W054	24.Edd, h:\Rep	ortdb\ed	dd\FeadIV\Rad\3	9591.E	dd
KPE7T20	B1V657		MW6-SBB-A1	108-037	W05424	}						06/04/	2008 11:07		
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/T	ime	Ac
197274	Se-79	15758-45-9	-5.45E-01	pCi/L	5.7E+00	1.1E+01	U	1.37E+01	64.7	SE79_SEP_IE_LS	2.004E-01	L	07/25/2008	14:03	I
197204	SR-90	10098-97-2	6.75E-02	pCi/L	2.2E-01	2.2E-01	U	4.80E-01	75.7	SRISO_SEP_PRE	1.0003E+00	L	07/26/2008	07:00	1
Lab sample id: KPF2X10	Client Id: B1V7V9	Test User	Contract Nbr MW6-SBB-A1	<b>SAF NI</b> S08-005	or Sdg Nbr: W05424	QC Тур		Moisture/ Solids%*:	Volume				llection Date: 2008 07:50		
Batch	Analyte	CAS#	Result		CntU 2S	TotU 2S	Quai	MDA	TrcYleId	Method	Alq Size	Unit	Analy Date/Ti	ime	Ac
170553	BE-7	13966-02-4	-4.36E+00	pCi/L	1.7E+01	1.7E+01	U	3.00E+01		GAMMALL_GS	2.0002E+00	L	07/02/2008		
170553	CO-60	10198-40-0	-1.99E+00	pCi/L	1.9E+00	1.9E+00	U	2.80E+00	)	GAMMALL_GS	2.0002E+00	L	07/02/2008	13:37	1
170553	CS-134	13967-70-9	-1.02E+00	pCi/L	1.7E+00	1.7E+00	U	2.79E+00	)	GAMMALL_GS	2.0002E+00	L	07/02/2008	13:37	1
170553	CS-137	10045-97-3	-8.74E-01	pCi/L	1.6E+00	1.6E+00	U	2.79E+00	)	GAMMALL_GS	2.0002E+00	L	07/02/2008	13:37	- 1
170553	EU-152	14683-23-9	-9.81E-01	pCi/L	4.2E+00	4.2E+00	U	7.25E+00	)	GAMMALL_GS	2.0002E+00	L	07/02/2008	13:37	1
170553	EU-154	15585-10-1	-3.92E+00	pCi/L	4.9E+00	4.9E+00	U	7.86E+00	)	GAMMALL_GS	2.0002E+00	L	07/02/2008	13:37	ı
170553	EU-155	14391-16-3	1.43E+00	pCi/L	3.1E+00	3.1E+00	U	5.50E+00	)	GAMMALL_GS	2.0002E+00	L	07/02/2008	13:37	1
170553	K-40	13966-00-2	-7.98E+01	pCi/L	3.7E+01	3.7E+01	U	6.57E+01	1	GAMMALL_GS	2.0002E+00	L	07/02/2008	13:37	1
170553	RU-106	13967-48-1	8.49E+00	pCi/L	1.5E+01	1.5E+01	U	2.81E+01		GAMMALL_GS	2.0002E+00	L	07/02/2008	13:37	f
170553	SB-125	14234-35-6	2.53E+00	pCi/L	4.0E+00	4.0E+00	U	7.50E+00	)	GAMMALL_GS	2.0002E+00	L	07/02/2008	13:37	- 1
170550	I-129L	15046-84-1	7.99E-02	pCi/L	1.6E-01	1.6E-01	U	3.21E-01	75.7	I129LL_SEP_LEPS	3.8768E+00	L	07/17/2008	05:24	1
Lab ample Id: KPF3F10	Client id: B1V7V8	Test User	Contract Nbr MW6-SBB-A1	SAF NE S08-005	or Sdg Nbr: W05424	QC Тур		Moisture/ Solids%*:	Distilled				llection Date: 2008 11:14		
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Ti	me	Ac
170553	BE-7	13966-02-4	8.89E+00	pCi/L	2.3E+01	2.3E+01	U	4.06E+01		GAMMALL_GS	2.0002E+00	L	07/02/2008	13:37	F
170553	CO-60	10198-40-0	2.80E+00	pCi/L	2.6E+00	2.6E+00	U	5.11E+00	)	GAMMALL_GS	2.0002E+00	L	07/02/2008	13:37	- 1
170553	CS-134	13967-70-9	4.42E-01	pCi/L	2.3E+00	2.3E+00	U	4.09E+00	)	GAMMALL_GS	2.0002E+00	L	07/02/2008	13:37	- 1
170553	CS-137	10045-97-3	1.07E+00	pCi/L	2.2E+00	2.2E+00	U	4.00E+00	)	GAMMALL_GS	2.0002E+00	L	07/02/2008	13:37	1
170553	EU-152	14683-23-9	5.42E+00	pCi/L	5.6E+00	5.6E+00	U	1.01E+01	1	GAMMALL_GS	2.0002E+00	L	07/02/2008	13:37	1
170553	EU-154	15585-10-1	-1.29E+00	pCi/L	6.1E+00	6.1E+00	U	1.08E+01		GAMMALL_GS	2.0002E+00	L	07/02/2008	13:37	1
170553	EU-155	14391-16-3	-4.02E-01	pCi/L	4.0E+00	4.0E+00	U	6.82E+00	)	GAMMALL_GS	2.0002E+00	L	07/02/2008	13:37	1
170553	K-40	13966-00-2	-3.94E+01	pCi/L	5.1E+01	5.1E+01	U	1.02E+02	2	GAMMALL_GS	2.0002E+00	L	07/02/2008	13:37	1
170553	RU-106	13967-48-1	1.46E+01	pCi/L	1.9E+01	1.9E+01	U	3.50E+01	1	GAMMALL_GS	2.0002E+00	L	07/02/2008	13:37	1
170553	SB-125	14234-35-6	8.87E-01	pCi/L	5.3E+00	5.3E+00	U	9.35E+00	)	GAMMALL_GS	2.0002E+00	L	07/02/2008	13:37	1

**TestAmerica** 

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rptFeadRadSummaryEdd v3.48

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.

7/28/200	8 2:56:00 PM	М			T	estAme	erica	a Repor	t				Lab Code: TARL	
FormNb	r: R	FormatType: I	FEAD Versi	on: 05	Rpt N	br: 39591		File Name:	h:\Reportdb\	edd\FeadIV\Rad\W054	24.Edd, h:\Rep	ortdb\e	dd\FeadIV\Rad\39591.I	Edd
3170550	I-129L	15046-84-1	3.99E+00	pCi/L	6.2E-01	6.2E-01		3.40E-01	90.3	I129LL_SEP_LEPS	3.8702E+00	L	07/17/2008 07:07	7
Lab Sample Id: 9KPF4610	Client Id: B1V691	Test User	Contract Nbr MW6-SBB-A1	SAF NI 108-037	or Sdg Nbr: W05424	QC Type		Moisture/ Solids%*:	Distilled Volume	•			llection Date: 2008 09:44	
Batch 3170550	Analyte I-129L	<b>CAS#</b> 15046-84-1	Result 7.78E-01	Unit pCi/L	CntU 2S 2.4E-01	TotU 2S 2.4E-01	<b>Qual</b> U	MDA 5.09E-01	TrcYield 94.9	Method I129LL_SEP_LEPS	Alq Size 3.882E+00	Unit L	Analy Date/Time 07/17/2008 07:08	8
Lab Sample Id: 9KPF4V10	Client Id: B1V695	Test User	Contract Nbr MW6-SBB-A1	<b>SAF NI</b> 108-037	or Sdg Nbr: W05424	QC Type		Moisture/ Solids%*:	Distilled Volume				llection Date: 2008 10:29	
Batch 8170550	Analyte I-129L	CAS# 15046-84-1	Result 2.33E-01	Unit pCi/L	CntU 2S 2.1E-01	TotU 2S 2.1E-01	Qual U	MDA 3.58E-01	TrcYield 95.7	Method I129LL_SEP_LEPS	Alq Size 3.895E+00	Unit L	Analy Date/Time 07/17/2008 07:08	8
Lab Sample Id: EKPLVT10	Client Id: B1V7X5	Test User	Contract Nbr MW6-SBB-A1	<b>SAF NI</b> S08-005	Nbr:	QC Type		Maisture/ Solids%*:	Distilled Volume	The second secon			llection Date: 2008 10:56	
Batch 3170550	Analyte I-129L	CAS# 15046-84-1	Result 5.96E-02	Unit pCi/L	CntU 2S 1.6E-01	TotU 2S 1.6E-01	Qual	MDA 3.04E-01	TrcYield 89.2	Method I129LL_SEP_LEPS	Alq Size 3.8508E+00	Unit L	Analy Date/Time 07/17/2008 08:54	4
Lab Sample Id: 9KPLWM10	Client Id: B1VKT9	Test User	Contract Nbr MW6-SBB-A1	SAF NI 108-043	or Sdg Nbr: W05424	QC Type		Moisture/ Solids%*:	Distilled Volume				lfection Date: 2008 10:18	
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2\$	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	A
3170563	C-14	14762-75-5	1.67E+00	pCi/L	3.6E+00	4.3E+00	U	8.49E+00	100.0	C14_LSC	2.00E-01	L	06/24/2008 06:48	8 1
3170553	BE-7	13966-02-4	5.52E-01	pCi/L	9.4E+00	9.4E+00	U	1.69E+01	I	GAMMALL_GS	2.0004E+00	L	07/02/2008 13:38	8 1
3170553	CO-60	10198-40-0	-2.49E-01	pCi/L	1.2E+00	1.2E+00	U	2.25E+00	)	GAMMALL_GS	2.0004E+00	L	07/02/2008 13:38	8 I
3170553	CS-134	13967-70-9	9.42E-02	pCi/L	1.1E+00	1.1E+00	U	2.03E+00	)	GAMMALL_GS	2.0004E+00	L	07/02/2008 13:38	8 I
8170553	CS-137	10045-97-3	1.83E+00	pCi/L	1.1E+00	1.1E+00	U	2.30E+00	)	GAMMALL_GS	2.0004E+00	L	07/02/2008 13:38	8 1
8170553	EU-152	14683-23-9	2.87E+00	pCi/L	2.7E+00	2.7E+00	U	5.11E+00	)	GAMMALL_GS	2.0004E+00	L	07/02/2008 13:38	B I
8170553	EU-154	15585-10-1	-2.51E+00	pCi/L	3.3E+00	3.3E+00	U	5.39E+00	)	GAMMALL_GS	2.0004E+00	L	07/02/2008 13:38	B I
8170553	EU-155	14391-16-3	-6.28E-01	pCi/L	2.3E+00	2.3E+00	U	3.98E+00	)	GAMMALL_GS	2.0004E+00	.L	07/02/2008 13:38	3 1
8170553	K-40	13966-00-2	8.14E-01	pCi/L	2.3E+01	2.3E+01	U	4.85E+01	I	GAMMALL_GS	2.0004E+00	L	07/02/2008 13:38	8 1
8170553	RU-106	13967-48-1	-8.76E-01	pCi/L	8.7E+00	8.7E+00	U	1.56E+01	I	GAMMALL_GS	2.0004E+00	L	07/02/2008 13:38	3 1
3170553	SB-125	14234-35-6	-1.84E+00	pCi/L	2.4E+00	2.4E+00	U	4.03E+00	)	GAMMALL_GS	2.0004E+00	L	07/02/2008 13:38	3 1
3170550	I-129L	15046-84-1	1.27E-01	pCi/L	1.5E-01	1.5E-01	U	3.06E-01	88.9	I129LL_SEP_LEPS	3.8995E+00	L	07/17/2008 08:55	5 [
3170557	NP-237	13994-20-2	-1.66E-02	pCi/L	8.6E-02	8.6E-02	U	2.34E-01	92.6	NP237_LLE_PLAT	2.002E-01	L	06/26/2008 20:09	9 1

rptFeadRadSummaryEdd v3.48

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

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

7/28/200	8 2:56:00 PM				T	estAme	rica	Repor	t			1	Lab Code: TAR	L	
FormNbi	r: R	FormatType:	FEAD Vers	ion: 05	Rpt N	br: 39591		File Name:	h:\Reportdb\	edd\FeadIV\Rad\W054	24.Edd, h:\Rep	ortdb\ed	dd\FeadIV\Rad\3	9591.E	dd
3170555	U-235	15117-96-1	0.00E+00	pCi/L	6.6E-02	6.6E-02	U	1.54E-01	89.9	UISO_PLATE_AEA	2.0004E-01	L	06/26/2008	19:44	. 1
3170555	U-238	U-238	3.87E-01	pCi/L	2.2E-01	2.3E-01		1.54E-01	89.9	UISO_PLATE_AEA	2.0004E-01	L	06/26/2008	19:44	- 1
Lab Sample Id: 9KPLWM20	Client ld: B1VKT9	Test User	Contract Nbr MW6-SBB-A1	SAF No.	or Sdg Nbr: W05424	QC Type		Moisture/ Sollds%*:	Distilled Volume				llection Date: 2008 10:18		
Batch 3197274	Analyte Se-79	CAS# 15758-45-9	Result 1.07E+00	Unit pCi/L	CntU 2S 3.9E+00	TotU 2S 7.7E+00	Qual	MDA 9.47E+00	TrcYield ) 94.1	Method SE79_SEP_IE_LS	Alq Size 2.001E-01	Unit L	Analy Date/T 07/25/2008		Act
Lab Sample Id: 9KPLWR10	Client Id: B1VKV0	Test User	Contract Nbr MW6-SBB-A1	SAF Nt 108-043	or Sdg Nbr: W05424	QC Type		Moisture/ Bolids%*:	Distilled Volume				llection Date: 2008 10:18		
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/T	ime	Act
3170563	C-14	14762-75-5	1.11E+00	pCi/L	3.5E+00	4.3E+00	U	8.49E+00	100.0	C14_LSC	2.00E-01	L	06/24/2008	07:30	1
170553	BE-7	13966-02-4	-6.64E+00	pCi/L	1.5E+01	1.5E+01	U	2.47E+01	1	GAMMALL_GS	2.0003E+00	L	07/02/2008	13:39	1
170553	CO-60	10198-40-0	7.92E-01	pCi/L	1.5E+00	1.5E+00	U	3.15E+00	)	GAMMALL_GS	2.0003E+00	L	07/02/2008	13:39	1
170553	CS-134	13967-70-9	1.93E-02	pCi/L	1.7E+00	1.7E+00	U	3.14E+00	)	GAMMALL_GS	2.0003E+00	L	07/02/2008	13:39	1
170553	CS-137	10045-97-3	-4.15E-02	pCi/L	1.6E+00	1.6E+00	U	2.87E+00	)	GAMMALL_GS	2.0003E+00	L	07/02/2008	13:39	1
170553	EU-152	14683-23-9	-6.74E-01	pCi/L	4.3E+00	4.3E+00	U	7.55E+00	)	GAMMALL_GS	2.0003E+00	L	07/02/2008	13:39	1
170553	EU-154	15585-10-1	1.15E+00	pCi/L	4.7E+00	4.7E+00	U	9.08E+00	)	GAMMALL_GS	2.0003E+00	L	07/02/2008	13:39	1
170553	EU-155	14391-16-3	9.85E-01	pCi/L	3.1E+00	3.1E+00	U	5.48E+00	)	GAMMALL_GS	2.0003E+00	L	07/02/2008	13:39	1
170553	K-40	13966-00-2	-5.84E+00	pCi/L	3.4E+01	3.4E+01	U	7.00E+01	1	GAMMALL_GS	2.0003E+00	L	07/02/2008	13:39	- 1
170553	RU-106	13967-48-1	-2.29E+01	pCi/L	1.6E+01	1.6E+01	U	2.36E+01	1	GAMMALL_GS	2.0003E+00	L	07/02/2008	13:39	1
170553	SB-125	14234-35-6	2.45E+00	pCi/L	3.8E+00	3.8E+00	U	7.06E+00	)	GAMMALL_GS	2.0003E+00	L	07/02/2008	13:39	1
170550	I-129L	15046-84-1	-2.97E-03	pCi/L	1.2E-01	1.2E-01	U	2.28E-01	96.2	1129LL_SEP_LEPS	3.8915E+00	L	07/17/2008	08:56	1
170557	NP-237	13994-20-2	-7.45E-03	pCi/L	7.6E-02	7.6E-02	U	1.78E-01	87.1	NP237_LLE_PLAT	2.00E-01	L	06/26/2008	20:09	1
170556	Se-79	15758-45-9	4.26E+00	pCi/L	1.3E+01	2.5E+01	U	3.07E+01	28.4	SE79_SEP_IE_LS	2.003E-01	L	07/04/2008	03:57	1
170555	U-234	13966-29-5	4.69E-01	pCi/L	2.6E-01	2.8E-01		1.75E-01	81.6	UISO_PLATE_AEA	2.0002E-01	L	06/26/2008	19:44	1
170555	U-235	15117-96-1	3.66E-02	pCi/L	7.5E-02	7.5E-02	U	1.75E-01	81.6	UISO_PLATE_AEA	2.0002E-01	L	06/26/2008	19:44	- 1
170555	U-238	U-238	3.96E-01	pCi/L	2.4E-01	2.5E-01		1.75E-01	81.6	UISO_PLATE_AEA	2.0002E-01	L	06/26/2008	19:44	1
Lab ample id: KPND310					or Sdg Nbr: W05424	QC Type		Moisture/ Solids%*:	Distilled Volume			- 1	llection Date: 2008 10:24		
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/T	ime	Act
3170550	I-129L	15046-84-1	1.47E+00	pCi/L	3.7E-01	3.7E-01	U	6.71E-01	82.7	I129LL_SEP_LEPS	3.8437E+00	L	07/17/2008	10:41	1

**TestAmerica** 

rptFeadRadSummaryEdd v3.48

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

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

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

7/28/2008	2:56:00 PM				T	estAmer	ica	Repor	t			1	Lab Code: TARL	
FormNbr:	R	FormatType:	FEAD Vers	lon: 05	Rpt Ni	or: 39591	F	ile Name:	h:\Reportdb\e	edd\FeadIV\Rad\W0542	4.Edd, h:\Rep	ortdb\ed	ld\FeadIV\Rad\39591.E	dd
Lab Sample Id: 9KPND610	Client Id: 31V6C0	Test User	Contract Nbr MW6-SBB-A1	SAF Nbr	Sdg Nbr: W05424	QC Type:		oisture/ lids%*:	Distilled Volume	Sample On Date:		-	llection Date: 2008 12:26	
	Analyte -129L	CAS# 15046-84-1	<b>Result</b> 2.93E-01	12102	1.8E-01		ual U	MDA 3.68E-01	TrcYield 93.5	Method I129LL_SEP_LEPS	Alq Size 3.8712E+00	Unit L	Analy Date/Time 07/17/2008 12:26	Act
Lab Sample Id: 9KPNDQ10 E	Client Id: 31V6C8	Test User	Contract Nbr MW6-SBB-A1	<b>SAF Nor</b>	Sdg Nbr: W05424	QC Type:		isture/ lids%*:	Distilled Volume	Sample On Date:		- 1	llection Date: 2008 10:24	
Batch	Analyte	CAS#	Result	Unit (	CntU 2S	TotU 2S Q	ual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual- Analyte was found in the associated laboratory blank above the MDC.

Monday, July 28, 2008

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W05424.Edd, h:\Reportdb\edd\FeadIV\Rad\W05424.Edd, h:\Reportdb\edd\FeadIV\Rad\S9591.Edd

Lab Sample Id: KP6501AB Sdg/Rept Nbr: W05424 39591 Collection Date: 06/04/2008 11:07
Client Id: NA Matrix: WATER WATER Sample On Date:

Moisture/Solids%\*: QC Type: BLK Received Date: 06/04/2008

SAF		ontract Nbr 6-SBB-A19981	1	est User	Case	Nbr S	AS Nbr	Suffix	Decant	Distilled Volume	File	ld		FSuffix R	Т <b>ур</b> Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8170555	U-234	-1.26E-02	pCi/L	6.6E-02	U	1.78E-01	99.3		UISO_PLATE	_ 2.0001E-01	06/26/2008				D
BLK	13966-29-5			6.6E-02						L	19:45				
8170555	U-235	-6.31E-03	pCi/L	6.4E-02	U	1.51E-01	99.3		UISO_PLATE	2.0001E-01	06/26/2008				D
BLK	15117-96-1			6.4E-02						L	19:45				
8170555	U-238	0.00E+00	pCi/L	6.4E-02	U	1.51E-01	99.3		UISO_PLATE	2.0001E-01	06/26/2008				D
BLK	U-238		-	6.4E-02						L	19:45				

BLK

Se-79

15758-45-9

Lab Code: TARL TestAmerica QC Blank Report Monday, July 28, 2008 File Name: h:\Reportdb\edd\FeadIV\Rad\W05424.Edd, h:\Reportdb\edd\FeadIV\Rad\39591.Edd FormatType: FEAD VersionNbr: 05 FormNbr: R Sdg/Rept Nbr: W05424 Collection Date: 06/09/2008 10:18 **KP6511AB** 39591 Lab Sample Id: WATER WATER Sample On Date: Client Id: NA Matrix: Received Date: 06/09/2008 BLK Moisture/Solids%\*: QC Type: File Id **Contract Nbr Test User** SAS Nbr Suffix Decant **Distilled Volume** SAF Nbr Case Nbr MW6-SBB-A19981 RER/ Spk Conc/ Analy Aliq Date/Time RPD/ Batch #/ Analyt/ **Result/** Tot/Cnt Qu-Tracer Method Size/ Analyzed UCL UCL **Orig Rst** MDC Yield %Rec Qc Type CAS# Unit Uncert 2S

1.13E+01 77.4

1.00E+01

pCi/L

9.8E+00

5.0E+00

FSuffix RTyp

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04:50

2.001E-01

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Monday,	July 28, 2008				,	TestA	meric	a QC	Blank	Report			Lab	Code:	TARL	
_	FormNbr: R	F	ormatT	ype: FEAD		Version	Nbr: 05		File Name	e: h:\Reportdb\edd\	FeadIV\Rad\W0542	24.Edd, h:\Repo	ortdb\edd\F	eadIV	\Rad\3959	1.Edd
Clie	Sample Id: nt Id: sture/Solids%	KP6531AB NA			1	Sdg/Re Matrix: QC Typ		W0542 WATER		39591 WATER	Samp	ction Date: le On Date: ved Date:	06/04/2		12:40	
SAF		ntract Nbr S-SBB-A19981	1	Test User	Case	Nbr	SAS Nbr		Suffix	Decant	Distilled Volume	Fik	e ld		FSuffix AZ	RTyp H
Batch #/ Qc Type 8170558 BLK	Analyt/ CAS# Uranium 7440-61-1	Result/ Orig Rst 0.00E+00	Unit ug/L	Tot/Cnt Uncert 2S 0.0E+00 0.0E+00	Qu- al U	MDC 8.25E-	Yi Yi	acer eld	Spk Conc %Rec	Analy Method UTOT_KPA	Aliq Size/ 2.54E-02 ML	Date/Time Analyzed 07/21/2008 10:11	RPD/ UCL	RER		R CL Typ D

	July 28, 2008 FormNbr: R		FormatT	ype: FEAD		TestAme		a QC BI		Report h:\Reportdb\edd\F	eadIV\Rad\W0542	24.Edd, h:\Repo		b Code: FeadIV		Edd
Clier	Sample Id: nt Id: sture/Solids%	KP6541AE NA *:	3		N	Sdg/Rept N Matrix: QC Type:	Nbr:	W05424 WATER BLK		9591 /ATER	Samp	tion Date: le On Date: ved Date:	06/04/		2:40	
SAF		ntract Nbr -SBB-A19981	Т	est User	Case	Nbr SA	S Nbr	Suff	×	Decant	Distilled Volume	File	e Id		FSuffix F	Р Н
Batch #/ Qc Type 8170559 BLK	Analyt/ CAS# TC-99 14133-76-7	Result/ Orig Rst 3.63E+00		Tot/Cnt Uncert 2S 5.8E+00 4.1E+00	Qu- al U	MDC 9.57E+00		eld %	Conc/ Rec	Analy Method TC99_ETVDS	Aliq Size/ K 1.253E-01 L	Date/Time Analyzed 06/25/2008 22:34	RPD/ UCL	RER/ UCL	LC1/UC	R L Tyj D

TestAmerica QC Blank Report Lab Code: TARL Monday, July 28, 2008 File Name: h:\Reportdb\edd\FeadIV\Rad\W05424.Edd, h:\Reportdb\edd\FeadIV\Rad\39591.Edd VersionNbr: 05 FormatType: FEAD FormNbr: R Sdg/Rept Nbr: W05424 39591 Collection Date: 06/04/2008 12:40 KP6551AB Lab Sample Id: WATER Client Id: NA Matrix: WATER Sample On Date: Moisture/Solids%\*: Received Date: 06/04/2008 QC Type: BLK File Id FSuffix RTyp **Contract Nbr Test User** Case Nbr SAS Nbr Suffix Decant **Distilled Volume** SAF Nbr BE H MW6-SBB-A19981 Spk Conc/ Analy Aliq Date/Time RPD/ RER/ LCS Analyt/ Result Tot/Cnt Qu-Tracer Batch #/ LCL/UCL Typ MDC Yield %Rec Method Size Analyzed UCL UCL Qc Type CAS# **Orig Rst** Uncert 2S al pCi/L 6.22E-01 100.0 9310 ALPHAB 2.003E-01 07/07/2008 D 8170560 ALPHA -5.18E-02 2.1E-01 U 14:14 BLK 12587-46-1 2.1E-01

Lab Code: TARL Monday, July 28, 2008 TestAmerica QC Blank Report VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W05424.Edd, h:\Reportdb\edd\FeadIV\Rad\39591.Edd FormNbr: R FormatType: FEAD **KP6561AB** Sdg/Rept Nbr: W05424 39591 Collection Date: 06/04/2008 12:40 Lab Sample Id: NA WATER Client Id: Matrix: WATER Sample On Date: Moisture/Solids%\*: QC Type: BLK Received Date: 06/04/2008 FSuffix RTyp Test User **Distilled Volume** File Id SAF Nbr **Contract Nbr** Case Nbr SAS Nbr Suffix Decant BG MW6-SBB-A19981 H Result/ Spk Conc/ Aliq RPD/ RER/ LCS R Batch #/ Analyt/ Tot/Cnt Qu-Tracer Analy Date/Time LCL/UCL Typ CAS# Orig Rst MDC Yield %Rec Method Size/ Analyzed UCL UCL Qc Type Unit Uncert 2S pCi/L 1.5E+00 2.003E-01 D 8170561 BETA 1.06E+00 3.23E+00 100.0 9310\_ALPHAB 07/07/2008 BLK 12587-47-2 1.5E+00 16:32

	July 28, 2008			TEAD				a QC Blank	•	-N E	10 0D - 10 MOE 40	4 E 44 E 48 E		b Code:		4 = 44	
	FormNbr: R	·	ormati	ype: FEAD		VersionNbr:		File Nar	ne: h:\Reportdb\edd	o\rea	div (Rad (WU542	4.Edd, n:\Rep	ougp/egg,	r-eagiv\	Kad/3959	1.E00	
Lab	Sample Id:	KP6571AB			\$	Sdg/Rept I	Nbr:	W05424	39591		Collec	tion Date:	06/04/	2008 1	2:40		
Clier	nt ld:	NA			N	latrix:		WATER	WATER		Samp	e On Date	:				
Mois	sture/Solids%	*:			(	QC Type:		BLK			Receiv	ed Date:	06/04/	2008			
SAF		tract Nbr -SBB-A19981	ī	est User	Case	Nbr SA	S Nbr	Suffix	Decant	Dis	stilled Volume	Fil	e Id		FSuffix BI	RTyp H	
Batch #/ Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-	MDC	Tra Yie				Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/U		R 「y
8170562 BLK	H-3 10028-17-8	1.58E+01	pCi/L	1.2E+02 1.0E+02	U	2.53E+02	100.0	0	906.0_H3_L	.sc	5.00E-03 L	06/21/2008 00:53				D	

Monday,	July 28, 2008				7	<b>TestAm</b>	erica	QC Blan	k Report				La	b Code:	TARL	
	FormNbr: R	F	ormatT	ype: FEAD		VersionNbr:	05	File Na	me: h:\Reportdb\ed	ld\Feadi\	V\Rad\W0542	24.Edd, h:\Repo	ortdb\edd\	FeadIV	Rad\39591.l	dd
Lab :	Sample Id:	KP6571DX			5	Sdg/Rept N	Nbr:	W05424	39591		Collec	tion Date:	06/04/	2008 12	2:40	
Clier	nt ld:	NA			N	Matrix;		WATER	WATER		Samp	le On Date:				
Mois	sture/Solids%	6*:			C	QC Type:		BLK			Recei	ved Date:	06/04/	2008		
SAF		ntract Nbr S-SBB-A19981	1	est User	Case	Nbr SA	S Nbr	Suffix	Decant	Disti	lled Volume	File	e ld		FSuffix R BK	Тур Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-	MDC	Tra	cer Spk Co			Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCI	R . Typ
8170562 BLK	H-3 10028-17-8	3.84E+01	pCi/L	1.2E+02 1.1E+02	U	2.63E+02	100.0	0	906.0_H3_i	LSC 5	i.00E-03 L	06/21/2008 03:37				D

TestAmerica

Lab Code: TARL Monday, July 28, 2008 TestAmerica OC Blank Report FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W05424.Edd, h:\Reportdb\edd\FeadIV\Rad\39591.Edd 39591 **KP6581AB** Sda/Rept Nbr: W05424 Collection Date: 06/04/2008 08:25 Lab Sample Id: NA WATER WATER Client Id: Matrix: Sample On Date: QC Type: Moisture/Solids%\*: BLK **Received Date:** 06/04/2008 SAF Nbr **Contract Nbr Test User** Case Nbr SAS Nbr Suffix Decant **Distilled Volume** File Id FSuffix RTyp MW6-SBB-A19981 BM Н Result/ RPD/ Batch #/ Analyt/ Tot/Cnt Qu-Tracer Spk Conc/ Analy Aliq Date/Time RER/ LCS R CAS# **Orig Rst** MDC Yield Method UCL UCL LCL/UCL Typ Qc Type Unit **Uncert 2S** al %Rec Size/ Analyzed 8170563 C-14 -3.08E+00 pCi/L 4.1E+00 8.49E+00 100.0 C14 LSC 2.00E-01 06/24/2008 D 14762-75-5 BLK 3.4E+00 02:32 L

TestAmerica QC Blank	Repor
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Lab Sample Id:

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05424.Edd, h:\Reportdb\edd\FeadIV\Rad\39591.Edd

KP65R1AB

Sdg/Rept Nbr: W05424

39591

Collection Date: 06/09/2008 10:24

Lab Code: TARL

NA

Matrix: QC Type: WATER BLK

WATER

Sample On Date: Received Date:

06/10/2008

**Contract Nbr** MW6-SBB-A19981 **Test User** Case Nbr SAS Nbr

Tracer

Yield

94.3

Suffix

Decant

Distilled Volume

File Id

FSuffix RTyp BO H

Batch #/ Qc Type CAS# I-129L 8170550

BLK

Result/ Orig Rst -3.09E-02 15046-84-1

Tot/Cnt Uncert 2S DCI/L 1.2E-01 1.2E-01

FormatType: FEAD

Qu-MDC 2.16E-01 Spk Concl %Rec

Analy Method 1129LL SEP L

Aliq Size/ 3.9911E+00 07/17/2008

Date/Time Analyzed

RPD/ RER/ UCL UCL

LCS R LCL/UCL Typ D

12:27

7.70E+00

9.08E+00

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8170553 EU-155

8170553 SB-125

8170553 K-40

10045-97-3

14683-23-9

15585-10-1

14391-16-3

13966-00-2

13967-48-1

14234-35-6

**RU-106** 

-3.80E-01

-6.92E-01

-2.02E+00

-8.48E+01

-3.86E+00

2.43E+00

EU-152

1.8E+00

4.4E+00

5.0E+00

3.0E+00

3.8E+01

1.3E+01

4.6E+00

pCi/L 4.4E+00

pCi/L 5.0E+00

pCi/L 3.0E+00

pCi/L 3.8E+01

pCi/L 1.3E+01

pCi/L 4.6E+00

FSuffix RTyp

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GAMMALL GS 2.0001E+00 07/02/2008

LCL/UCL Typ

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

Moi	nday, July	28, 2008				,	<b>TestAm</b>	eric	a QC	Blank	Report			La	b Code:	TARL	
	Form	mNbr: R	F	ormatT	ype: FEAD		VersionNbr	05		File Name	e: h:\Reportdb\edd\i	FeadIV\Rad\W0542	4.Edd, h:\Repo	ortdb\edd\	FeadiVV	Rad\39591	.Edd
	Lab San Client Id		KRH8V1AI NA *:	В		1	Sdg/Rept   Matrix: QC Type:	Nbr:	W054 WATE		39591 WATER	Samp	tion Date: le On Date: ved Date:	06/04/2		1:07	
	SAF Nbr		ntract Nbr -SBB-A19981	1	Test User	Case	Nbr S/	AS Nbr		Suffix	Decant	Distilled Volume	File	e Id		FSuffix CJ	RTyp H
Batch Qc Ty 8197	ype 274 Se	Analyt/ CAS# -79 758-45-9	Result/ Orig Rst -4.92E+00	Unit pCi/L	Tot/Cnt Uncert 2S 7.6E+00 4.0E+00	Qu- al U	MDC 1.00E+01	Yi	acer eld	Spk Conc. %Rec	/ Analy Method SE79_SEP_I	Aliq Size/ E 2.002E-01 L	Date/Time Analyzed 07/25/2008 16:42	RPD/ UCL	RER/ UCL	LCS LCL/U	R CL Typ D

14

Lab Code: TARL Monday, July 28, 2008 TestAmerica QC Blank Report FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadiV\Rad\W05424.Edd, h:\Reportdb\edd\FeadiV\Rad\39591.Edd FormNbr: R Sdg/Rept Nbr: W05424 39591 Collection Date: 06/04/2008 12:40 Lab Sample Id: KRHXT1AB WATER WATER Client Id: NA Matrix: Sample On Date: QC Type: BLK Received Date: 06/04/2008 Moisture/Solids%\*: **Test User** SAS Nbr Suffix **Distilled Volume** File Id SAF Nbr **Contract Nbr** Case Nbr Decant FSuffix RTyp MW6-SBB-A19981 CK H Alig Date/Time RPD/ RER/ LCS Result Tot/Cnt Qu-Tracer Spk Conc/ Analy Batch #/ Analyt/ MDC Yield Method Size/ Analyzed UCL UCL LCL/UCL Typ Qc Type CAS# **Orig Rst** Uncert 2S %Rec SRISO SEP P 1.0002E+00 07/26/2008 D 8197204 SR-90 -1.78E-01 pCi/L 2.6E-01 6.12E-01 66.1 07:00 BLK 10098-97-2 2.3E-01

Lab Code: TARL Monday, July 28, 2008 TestAmerica QC Control Sample Report File Name: h:\Reportdb\edd\Fead\V\Rad\W05424.Edd, h:\Reportdb\edd\Fead\V\Rad\X9591.Edd FormNbr: R FormatType: FEAD VersionNbr: 05 **KP6501CS** Sdg/Rept Nbr: W05424 39591 Collection Date: 06/04/2008 11:07 Lab Sample Id: NA WATER WATER Sample On Date: Client Id: Matrix: BS Received Date: 06/04/2008 Moisture/Solids%\*: QC Type: SAS Nbr File Id FSuffix RTyp SAF Nbr Contract Nbr Test User Case Nbr Suffix Decant **Distilled Volume** AV H MW6-SBB-A19981 Qu-Aliq Date/Time RPD/ RER/ LCS R Result/ Tot/Cnt Tracer Spk Conc/ Analy Batch #/ Analyt/ UCL UCL LCL/UCL Typ Size/ **Uncert 2S** Method Analyzed Qc Type CAS# **Orig Rst** Unit MDC Yield %Rec 75 D 96.4 8.66E+00 UISO PLATE 2.0002E-01 06/26/2008 8170555 U-234 8.79E+00 pCi/L 1.7E+00 1.64E-01 125 1.0E+00 101.5 19:45 BS 13966-29-5 D 3.95E-01 2.0002E-01 06/26/2008 75 8170555 U-235 3.30E-01 pCi/L 2.1E-01 1.83E-01 96.4 UISO PLATE 19:45 125 BS 15117-96-1 2.0E-01 83.5

9.07E+00

88.6

UISO PLATE

2.0002E-01 06/26/2008

19:45

8170555 U-238

BS

**U-238** 

8.04E+00

pCi/L 1.6E+00

9.7E-01

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Monday	FormNbr: R		ormatType: FEAD	TestAmeric VersionN		Control San	_	rt  \Fead V\Rad\W054	24.Edd, h;\Rep		ib Code:		.Edd
Clie	Sample Id: nt Id: sture/Solids	KP6531CS NA 6*:		Sdg/Rep Matrix: QC Type			9591 VATER	Samp	ction Date: le On Date: ved Date:		2008 1	2:40	
SAF		ntract Nbr 6-SBB-A19981	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	Fil	e Id		FSuffix I	RTyp H
Batch #/ Qc Type 8170558 BS	Analyt/ CAS# Uranium 7440-61-1	Result/ Orig Rst 3.65E+01	Unit Uncert 2S ug/L 4.3E+00 4.3E+00	Qu- al MDC 8.42E-0		- opn cond	Analy Method UTOT_KPA	Aliq Size/ 2.49E-02 ML	Date/Time Analyzed 07/21/2008 10:15	RPD/ UCL	RER/ UCL	LCS LCL/UC 75 125	L Ty

Lab Code: TARL TestAmerica QC Control Sample Report Monday, July 28, 2008 FormatType: FEAD File Name: h:\Reportdb\edd\FeadIV\Rad\W05424.Edd, h:\Reportdb\edd\FeadIV\Rad\39591.Edd VersionNbr: 05 FormNbr: R Sdg/Rept Nbr: W05424 39591 Collection Date: 06/04/2008 12:40 **KP6531DS** Lab Sample id: WATER WATER Sample On Date: Client Id: NA Matrix: QC Type: BS Received Date: 06/04/2008 Moisture/Solids%\*: File Id FSuffix RTyp **Test User** Case Nbr SAS Nbr Suffix Decant **Distilled Volume** SAF Nbr **Contract Nbr** BB H MW6-SBB-A19981 RER/ LCS R Result/ Spk Conc/ Analy Alia Date/Time RPD/ Analyt/ Tot/Cnt Qu-Tracer Batch #/ LCL/UCL Typ CAS# **Orig Rst** Uncert 2S MDC Yield %Rec Method Size/ Analyzed UCL UCL Qc Type 3.29E+00 3.4E-01 8.32E-02 3.58E+00 UTOT KPA 2.52E-02 07/21/2008 75 D 8170558 Uranium ug/L 3.4E-01 91.9 ML 10:16 125 BS 7440-61-1

Monday,	F	Te FormatType: FEAD				estAmerica QC  VersionNbr: 05			Control Sample Report  File Name: h:\Reportdb\edd\FeadIV\Rad\W05424.Edd, h:\Reportdb\edd\FeadIV\Rad\39591.Ed							
Clier	Sample Id: nt Id: sture/Solids%	KP6541CS NA 6*:				Sdg/Rept Nbr: Matrix: QC Type:				39591 WATER	Collec Samp Receiv	06/04/2008 12:40 06/04/2008				
		ntract Nbr S-SBB-A19981			Case Nbr SAS		S Nbr		Suffix	Decant	Distilled Volume	File Id		FSuffix RTyp BD H		
Batch #/ Qc Type 8170559 BS	Analyt/ CAS# TC-99 14133-76-7	Result/ Orig Rst 5.08E+02	Unit pCi/L	Tot/Cnt Uncert 2S 3.5E+01 1.3E+01	Qu- al	MDC 9.57E+00		acer ield .0	Spk Conc %Rec 5.45E+02 93.3	/ Analy Method TC99_ETVDS	Aliq Size/ K 1.253E-01 L	Date/Time Analyzed 06/25/2008 22:34	RPD/ UCL	RER/ UCL	LCS LCL/UC 75 125	R L Tyj D

BS

Lab Code: TARL TestAmerica QC Control Sample Report Monday, July 28, 2008 VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W05424.Edd, h:\Reportdb\edd\FeadIV\Rad\39591.Edd FormatType: FEAD FormNbr: R **KP6551CS** Sdg/Rept Nbr: W05424 39591 Collection Date: 06/04/2008 12:40 Lab Sample Id: WATER NA Matrix: WATER Sample On Date: Client Id: 06/04/2008 QC Type: BS Received Date: Moisture/Solids%\*: **Distilled Volume** File Id FSuffix RTyp Test User Case Nbr SAS Nbr Suffix Decant SAF Nbr **Contract Nbr** BF H MW6-SBB-A19981 Spk Conc/ Analy Aliq Date/Time RPD/ RER/ LCS Batch #/ Analyt/ Result Tot/Cnt Tracer UCL UCL LCL/UCL Typ MDC Yield %Rec Method Size/ Analyzed CAS# **Orig Rst** Unit Uncert 2S Qc Type 2.25E+01 2.003E-01 70 100.0 9310 ALPHAB 07/07/2008 D 8170560 1.86E+01 4.8E+00 8.63E-01 **ALPHA** 

82.5

12587-46-1

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18:09

38

Lab Code: TARL TestAmerica QC Control Sample Report Monday, July 28, 2008 File Name: h:\Reportdb\edd\FeadIV\Rad\W05424.Edd, h:\Reportdb\edd\FeadIV\Rad\39591.Edd FormatType: FEAD VersionNbr: 05 FormNbr: R **KP6561CS** Sdg/Rept Nbr: W05424 39591 Collection Date: 06/04/2008 12:40 Lab Sample Id: WATER WATER Client Id: NA Matrix: Sample On Date: Moisture/Solids%\*: QC Type: BS Received Date: 06/04/2008 **Test User** SAS Nbr Suffix **Distilled Volume** File Id FSuffix RTyp SAF Nbr **Contract Nbr** Case Nbr Decant MW6-SBB-A19981 BH H Batch #/ Analyt/ Result/ Tot/Cnt Spk Conc/ Analy Aliq Date/Time RPD/ RER/ LCS Qu-Tracer LCL/UCL Typ Qc Type CAS# **Orig Rst** Unit Uncert 2S al MDC **Yield** %Rec Method Size/ Analyzed UCL UCL 70 D 2.42E+01 pCi/L 4.1E+00 2.65E+00 100.0 2.28E+01 9310 ALPHAB 1.998E-01 07/07/2008 8170561 BETA 130 BS 12587-47-2 2.5E+00 106.1 16:32

Lab Code: TARL **TestAmerica QC Control Sample Report** Monday, July 28, 2008 FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W05424.Edd, h:\Reportdb\edd\FeadIV\Rad\39591.Edd FormNbr: R Sdg/Rept Nbr: W05424 39591 Collection Date: 06/04/2008 12:40 Lab Sample Id: **KP6571CS** WATER WATER Client Id: NA Matrix: Sample On Date: Moisture/Solids%\*: QC Type: BS Received Date: 06/04/2008 SAF Nbr **Test User** Case Nbr SAS Nbr Suffix Decant **Distilled Volume** File Id FSuffix RTyp **Contract Nbr** MW6-SBB-A19981 BJ H Result Tot/Cnt Spk Conc/ Analy Aliq Date/Time RPD/ RER/ LCS Qu-Tracer Batch #/ Analyt/ UCL Qc Type CAS# **Orig Rst** Unit Uncert 2S al MDC Yield %Rec Method Size/ Analyzed UCL LCL/UCL Typ 75 8170562 H-3 2.26E+03 pCi/L 2.1E+02 2.51E+02 100.0 2.71E+03 906.0 H3 LSC 5.00E-03 06/21/2008 02:15 125 BS 10028-17-8 1.7E+02 83.5

	July 28, 2008 FormNbr: R	F	ormat	ype: FEAD		America VersionNbr:		Co		nple Report		24.Edd, h:\Rep		b Code:	, , , , , ,	I.Edd
Clier	ture/Solids%	KP6571EN NA *:	ń	PER BANGS I SELECT	ı	Sdg/Rept I Matrix: QC Type:	Nbr:	W05 WAT BS		39591 WATER	Samp	ction Date: le On Date: ved Date:	06/04/		2:40	
SAF		tract Nbr -SBB-A19981	1	Test User	Case	Nbr SA	S Nbr		Suffix	Decant	Distilled Volume	File	e Id	71	FSuffix BL	RTyp H
Batch # / Qc Type B170562 BS	Analyt/ CAS# H-3 10028-17-8	Result/ Orig Rst 2.24E+03	Unit pCi/L	Tot/Cnt Uncert 2S 2.1E+02 1.8E+02	Qu- al	MDC 2.62E+02		cer eld	Spk Conc/ %Rec 2.71E+03 82.7	Analy Method 906.0_H3_LS	Aliq Size/ C 5.00E-03 L	Date/Time Analyzed 06/21/2008 04:59	RPD/ UCL	RER/ UCL	LCS LCL/UC 75 125	R CL Typ D

	July 28, 2008 FormNbr: R	F	ormatT	ype: FEAD		merica VersionNbr:			mple Repo	rt d\FeadIV\Rad\W0542	4.Edd, h:\Repo		b Code: FeadIV\I		.Edd
Clier	Sample Id: nt Id: sture/Solids%	KP6581CS NA			N	Sdg/Rept N Matrix: QC Type:		W05424 WATER BS	39591 WATER	Samp	tion Date: le On Date: red Date:	06/04/		8:25	
SAF		ntract Nbr -SBB-A19981	1	Test User	Case	Nbr SA	S Nbr	Suffix	Decant	Distilled Volume	Fik	e ld		FSuffix I	RTyp H
Batch #/ Qc Type 8170563 BS	Analyt/ CAS# C-14 14762-75-5	Result/ Orig Rst 4.12E+01	Unit pCi/L	Tot/Cnt Uncert 2S 5.8E+00 4.7E+00	Qu- al	MDC 8.49E+00		Spk Con %Rec 0 4.50E+0* 91.4	Method	Aliq Size/ 2.00E-01 L	Date/Time Analyzed 06/24/2008 03:15	RPD/ UCL	RER/ UCL	130	R L Tyj D

Monday,	July 28, 2008			T	estA	meric	a QC	Cor	itrol Sai	mple Repo	rt		Lat	Code:	TARL	
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Lab	Sample Id:	KP65R1C9	3		S	dg/Rep	t Nbr:	W05	424	39591	Collec	tion Date:	06/09/2	2008 1	0:24	
Clier	nt ld:	NA			٨	Matrix:		WAT	ER	WATER	Samp	le On Date:				
Mois	sture/Solids%	*:			C	C Type	:	BS			Recei	ved Date:	06/10/2	8002		
SAF		tract Nbr -SBB-A19981	Т	est User	Case	Nbr	SAS Nbi	•	Suffix	Decant	Distilled Volume	File	e Id		FSuffix i	RТур Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-	MDC		eld	Spk Conc %Rec	/ Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R L Typ
8170550 BS	I-129L 15046-84-1	1.02E+01	pCi/L	1.3E+00 1.3E+00		4.31E-0	1 94.7		9.89E+00 103.4	I129LL_SEF	2_L 3.9366E+00 L	07/17/2008 12:27			70 130	D

	July 28, 2008 FormNbr: R	F	ormatT	ype: FEAD		merica VersionNbr	_	Con		nple Reportabledd	rt \FeadIV\Rad\W054	24.Edd, h:\Rep		b Code:		1.Edd
Clier	Sample Id: nt Id: sture/Solids%	KP65V1CS NA	3		N	idg/Rept l latrix: QC Type:		W054 WATI		39591 WATER	Samı	ction Date: ole On Date: ved Date:	06/04/		2:40	
SAF		tract Nbr SBB-A19981	1	Test User	Case	Nbr SA	AS Nbr		Suffix	Decant	Distilled Volume	Fil	e ld		FSuffix BR	<b>RТур</b> Н
Batch #/ Qc Type 8170552 BS	Analyt/ CAS# I-129L 15046-84-1	Result/ Orig Rst 4.87E+01	Unit pCi/L	Tot/Cnt Uncert 2S 7.0E+00 7.0E+00	Qu- al	MDC 2.70E+00	Yie	cer eld	Spk Conc/ %Rec 4.60E+01 105.9	Analy Method I129_SEP_L	Aliq Size/ .EP 5.00E-01 L	Date/Time Analyzed 07/14/2008 19:14	RPD/ UCL	RER/ UCL	LCS LCL/U 70 130	R CL Typ

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Lab Code: TARL Monday, July 28, 2008 TestAmerica QC Control Sample Report File Name: h:\Reportdb\edd\FeadIV\Rad\W05424.Edd, h:\Reportdb\edd\FeadIV\Rad\39591.Edd FormatType: FEAD VersionNbr: 05 FormNbr: R 39591 Collection Date: 06/05/2008 07:50 KP65W1CS Sdg/Rept Nbr: W05424 Lab Sample Id: Client Id: NA Matrix: WATER WATER Sample On Date: QC Type: 06/05/2008 BS Received Date: Moisture/Solids%\*:

SAF		ontract Nbr 6-SBB-A19981	7	est User	Case	Nbr S	AS Nbr	Suffix	Decant	Distilled Volume	File	e ld		FSuffix F	RТур Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R L Typ
8170553	CO-60	4.77E+01	pCi/L	7.9E+00		3.16E+00	)	3.90E+01	GAMMALL_G	S 2.0003E+00	07/02/2008			75	D
BS	10198-40-0			7.9E+00				122.3		L	17:05			125	
8170553	CS-137	5.65E+01	pCi/L	8.6E+00		3.59E+00	)	5.24E+01	GAMMALL_G	S 2.0003E+00	07/02/2008			70	D
BS	10045-97-3			8.6E+00				107.8	_	L	17:05			130	
8170553	EU-152	8.40E+01	pCi/L	1.5E+01		9.15E+00	)	7.79E+01	GAMMALL G	S 2.0003E+00	07/02/2008			70	D
BS	14683-23-9			1.5E+01				107.8		L	17:05			130	

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

	July 28, 2008 FormNbr: R	F	ormatT	ype: FEAD		merica VersionNbr		Con		nple Reportabledd		V\Rad\W0542	4.Edd, h:\Repo		Code:		Edd
Clien	Sample Id: nt Id: sture/Solids%	KRHXT1C NA *:	s		N	Sdg/Rept Matrix: QC Type:		W054 WATI		39591 WATER	100 ada	Samp	tion Date: le On Date: red Date:	06/04/2		2:40	
SAF	100	tract Nbr -SBB-A19981	1	Fest User	Case	Nbr S	AS Nbr	•	Suffix	Decant	Dist	illed Volume	File	e ld	de de la companya de	FSuffix F	Тур Н
Batch #/ Qc Type 8197204 BS	Analyt/ CAS# SR-90 10098-97-2	Result/ Orig Rst 1.56E+01	Unit pCi/L	Tot/Cnt Uncert 2S 2.4E+00 9.2E-01	Qu- al	MDC 7.69E-01		icer eld	Spk Conc/ %Rec 1.41E+01 110.8	Analy Method SRISO_SEP	_P 1	Aliq Size/ 1.0005E+00 L	Date/Time Analyzed 07/26/2008 07:00	RPD/ UCL	RER/ UCL	LCS LCL/UC 70 130	R L Tyj D

Mond		ly 28, 2008	F	ormatT	ype: FEAD		estAmer VersionNbr:		QC Duplica	ate Report me: h:\Reportdb\e		adIV\Rad\W0542	24.Edd, h:\Repo			TARL Rad\39591	.Edd
C	lient l	mple ld: ld: re/Solids%	KPE3X1JF B1TX74	₹		N	Sdg/Rept I Matrix: QC Type:		W05424 WATER DUP	39591 WATER		Samp	tion Date: le On Date: ved Date:	06/04/2		2:40	
_	AF Nbi		ntract Nbr -SBB-A19981	٦	Test User	Case	Nbr SA	AS Nbr	Suffix	Decant	D	istilled Volume	File	e id		FSuffix BU	RТур Н
Batch Qc Tyr 81705	pe	Analyt/ CAS# 129L	Result/ Orig Rst 4.12E-01	Unit pCi/L		Qu- al U	MDC 2.07E+00	Yi	acer Spk Cor eld %Rec		LEP	Aliq Size/ 5.005E-01	Date/Time Analyzed 07/14/2008	RPD/ UCL 23689.	RER/ UCL 1.1	LCS LCL/UC	R CL Typ
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Monday, July 28, 2008

TestAmerica QC Duplicate Report

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05424.Edd, h:\Reportdb\edd\W05424.Edd, h:\Reportdb\e

 Lab Sample id:
 KPE3X1LR
 Sdg/Rept Nbr:
 W05424
 39591
 Collection Date:
 06/04/2008 12:40

 Client Id:
 B1TX74
 Matrix:
 WATER
 WATER
 Sample On Date:

 Moisture/Solids%\*:
 QC Type:
 DUP
 Received Date:
 06/04/2008

Moisture/Solids%\*: QC Type: DUP Received Date: 06/04/2008

S08-0		ontract Nbr 6-SBB-A19981	1	est User	Case	Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File	e Id		FSuffix R	Тур Н
Batch #/ Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R . Typ
8170558 DUP	Uranium 7440-61-1	3.06E+00 2.92E+00	ug/L	3.1E-01 3.1E-01		8.35E-0	2		UTOT_KPA	2.51E-02 ML	07/21/2008 10:24	4.8 20.0	0.6 3		D

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

	July 28, 2008 FormNbr: R		FormatT	ype: FEAD		versionNbi		QC 1	-	te Report e: h:\Reportdb\edd\l	FeadIV\Rad\W0542	24.Edd, h:\Rep		b Code:		1.Edd
Clien	Sample Id: nt Id: sture/Solids%	KPE3X1N B1TX74	R		٨	Sdg/Rept Matrix: QC Type:	Nbr:	W05 WAT		39591 WATER	Samp	tion Date: le On Date: /ed Date:	06/04/		12:40	
SAF N S08-00		ntract Nbr i-SBB-A19981	1	lest User	Case	Nbr S	AS Nbr		Suffix	Decant	Distilled Volume	Fil	e ld		FSuffix BY	RТур Н
Batch #/ Qc Type 8170559 DUP	Analyt/ CAS# TC-99 14133-76-7	Result/ Orig Rst 2.88E+00 5.24E+00	Unit pCi/L	Tot/Cnt Uncert 2S 5.7E+00 4.1E+00	Qu- al U	MDC 9.58E+00	Y	acer eid 0	Spk Conc %Rec	Method TC99_ETVDS	Aliq Size/ SK 1.25E-01 L	Date/Time Analyzed 06/25/2008 22:34	RPD/ UCL 58.4 20.0	RER/ UCL 0.6 3	LCS LCL/U	

	July 28, 20		ormatT	ype: FEAD		estAmer VersionNbr:			•	e Report : h:\Reportdb\edd\l	FeadIV\Rad\W0542	24.Edd, h:\Rep		b Code: FeadIV\F		.Edd
Clie	Sample Id nt Id: sture/Solid	B1TX74	R		1	Sdg/Rept N Matrix: QC Type:		W05424 WATER DUP		39591 WATER	Samp	ction Date: le On Date: ved Date:	06/04/2		2:40	
SAF S08-0		Contract Nbr IW6-SBB-A19981		Test User	Case	Nbr SA	S Nbr	Su	iffix	Decant	Distilled Volume	Fil	e Id		FSuffix I	RТур Н
Batch #/ Qc Type 8170560	Analyt/ CAS# ALPHA	Result/ Orig Rst 1.16E+00	Unit pCi/L		Qu- al U	MDC 1.55E+00	Trac Yie 100.0	eld	pk Conc/ %Rec	Analy Method 9310_ALPHA	Aliq Size/ AB 1.723E-01	Date/Time Analyzed 07/07/2008	RPD/ UCL 47.8	RER/ UCL 0.9	LCS LCL/UC	L Ty

	July 28, 2008 FormNbr: R	F	ormatT	ype: FEAD		stAmer VersionNbr:		QC D	-	e Report : h:\Reportdb\edd\F	eadIV\Rad\W0542	4.Edd, h:\Repo		b Code: FeadIV\I		.Edd
Clier	Sample id: nt id: sture/Solids%	KPE3X1QF B1TX74 *:	2		M	idg/Rept N latrix: IC Type:	ibr:	W0542 WATE		39591 WATER	Samp	tion Date: le On Date: red Date:		2008 1:	2:40	
SAF I		ntract Nbr -SBB-A19981		Test User	Case	Nbr SA	S Nbr		Suffix	Decant	Distilled Volume	File	e Id	. 3000	FSuffix F	RТур Н
Batch #/ Qc Type 8170561 DUP	Analyt/ CAS# BETA 12587-47-2	Result/ Orig Rst 7.04E+00 7.86E+00	Unit pCi/L	Tot/Cnt Uncert 2S 2.0E+00 1.8E+00	Qu- al	MDC 2.97E+00		acer ield .0	Spk Conc. %Rec	Analy Method 9310_ALPHAI	Aliq Size/ B 2.00E-01 L	Date/Time Analyzed 07/07/2008 16:32	RPD/ UCL 11.1 20.0	RER/ UCL 0.6 3	LCS LCL/UC	R L Typ D

Monda	y, July 28, 2008				Te	estAmer	ica Q	C Duplicat	e Report			La	b Code:	TARL	
	FormNbr: R		FormatT	ype: FEAD		VersionNbr:	05	File Name	: h:\Reportdb\edd	d\FeadIV\Rad\W0542	24.Edd, h:\Repo	ortdb\edd\	FeadIV\f	Rad\39591.	Edd
Lab	Sample Id:	KPE6P1G	R		5	Sdg/Rept N	Nbr: \	N05424 3	39591	Coiled	tion Date:	06/04/2	2008 08	8:25	
Clie	ent ld:	B1V658			N	Matrix:	٧	WATER \	WATER	Samp	le On Date:				
Мо	isture/Solids%	ó*:			(	QC Type:	C	OUP		Receiv	ved Date:	06/04/2	2008		
SAI	F Nbr Co	ntract Nbr	1	Test User	Case	Nbr SA	S Nbr	Suffix	Decant	Distilled Volume	File	ld		FSuffix R	Тур
108-0	037 MW6	S-SBB-A19981												CC	Н
Batch # /		Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-	MDC	Trac		Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCI	R Typ
8170563 DUP	3 C-14 14762-75-5	-1.66E+00 -3.67E-01	pCi/L	4.2E+00 3.4E+00	U	8.49E+00	100.0		C14_LSC	2.00E-01	06/24/2008 05:23	0.0 20.0	0.4		D

Client Id:

B1V657

Monday, July 28, 2008 Lab Code: TARL TestAmerica QC Duplicate Report

FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W05424.Edd, h:\Reportdb\edd\FeadIV\Rad\39591.Edd FormNbr: R

WATER

Sample On Date:

Sdg/Rept Nbr: W05424 Lab Sample Id: KPE7T1HR 39591 Collection Date: 06/04/2008 11:07 WATER

Matrix:

QC Type: Moisture/Solids%\*: DUP Received Date: 06/04/2008

SAF 1		ontract Nbr 6-SBB-A19981	7	Test User	Case	Nbr \$	SAS Nbr	Suffix	Decant	Distilled Volume	File	e Id		FSuffix R	Тур Н
Batch #/ Qc Type	Analyti CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCI	R Typ
8170555	U-234	1.26E+01	pCi/L	2.4E+00		2.79E-01	99.7		UISO_PLATE	2.0003E-01	06/26/2008	2.1	0.2		D
DUP	13966-29-5	1.24E+01		1.2E+00						L	19:44	20.0	3		
8170555	U-235	5.04E-01	pCi/L	2.6E-01		1.44E-01	99.7		UISO_PLATE	2.0003E-01	06/26/2008	7.8	0.2		D
DUP	15117-96-1	5.45E-01		2.5E-01						L	19:44	20.0	3		
8170555	U-238	1.28E+01	pCi/L	2.4E+00		2.06E-01	99.7		UISO_PLATE	2.0003E-01	06/26/2008	12.2	0.9		D
DUP	U-238	1.13E+01		1.2E+00						L	19:44	20.0	3		

Monday, July 28, 2008 **TestAmerica QC Duplicate Report**  Lab Code: TARL

VersionNbr: 05 File Name: h:\Reportdb\edd\Fead\V\Rad\W05424.Edd, h:\Reportdb\edd\Fead\V\Rad\39591.Edd FormNbr: R FormatType: FEAD

Lab Sample Id:

KPE7T1JR B1V657

Sdg/Rept Nbr: W05424

39591

Collection Date:

06/04/2008 11:07

Moisture/Solids%\*:

Matrix: QC Type: WATER DUP

WATER

Sample On Date: Received Date:

06/04/2008

<b>SAF</b> (108-03		-SBB-A19981	Т	est User	Case	Nbr S.	AS Nbr	Suffix	Decant D	istilled Volume	File	e ld		FSuffix RT	<b>Гур</b> Н
Batch #/ Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8197204 <b>DUP</b>	SR-90 10098-97-2	-1.90E-01 6.75E-02	pCi/L	4.0E-01 4.0E-01	U	8.93E-01	72.7		SRISO_SEP_P	1.0001E+00 L	07/26/2008 07:00	0.0 20.0	0.9		D

Lab Code: TARL Monday, July 28, 2008 **TestAmerica QC Duplicate Report** File Name: h:\Reportdb\edd\FeadIV\Rad\W05424.Edd, h:\Reportdb\edd\FeadIV\Rad\39591.Edd FormNbr: R FormatType: FEAD VersionNbr: 05 Sdg/Rept Nbr: W05424 KPF2X1DR 39591 Collection Date: 06/05/2008 07:50 Lab Sample Id: **B1V7V9** WATER WATER Client Id: Matrix: Sample On Date: DUP 06/05/2008 Moisture/Solids%\*: QC Type: Received Date: **Test User Distilled Volume** File Id FSuffix RTvp SAF Nbr Contract Nbr Case Nbr SAS Nbr Suffix Decant S08-005 MW6-SBB-A19981 RPD/ RER/ Batch #/ Analyt/ Result/ Tot/Cnt Qu-Tracer Spk Conc/ Analy Aliq Date/Time CAS# **Orig Rst** Unit **Uncert 2S** al MDC Yield %Rec Method Size/ Analyzed UCL UCL Qc Type GAMMA GS 0.0 8170553 EU-154 1.66E+00 pCi/L 4.5E+00 U 8.92E+00 2.0002E+00 07/02/2008 1.8 20.0 3 DUP 15585-10-1 -3.92E+00 4.5E+00 17:03 3697.1 1.2 8170553 EU-155 -1.28E+00 pCVL 3.2E+00 U 5.41E+00 GAMMA GS 2.0002E+00 07/02/2008 DUP 14391-16-3 1.43E+00 3.2E+00 17:03 20.0 3 8170553 K-40 -8.91E+00 pCi/L 3.4E+01 U 6.96E+01 GAMMA GS 2.0002E+00 07/02/2008 0.0 2.9 3 DUP 13966-00-2 -7.98E+01 3.4E+01 17:03 20.0 8170553 **RU-106** 1.37E+01 pCi/L 1.4E+01 U 2.74E+01 GAMMA GS 2.0002E+00 07/02/2008 47.1 0.5 20.0 3 DUP 13967-48-1 8.49E+00 1.4E+01 17:03 6.56E+00 2.2 8170553 SB-125 -3.94E+00 pCi/L 4.1E+00 U GAMMA GS 2.0002E+00 07/02/2008 0.0 3 DUP 14234-35-6 2.53E+00 4.1E+00 17:03 20.0 0.6 8170553 BE-7 2.43E+00 pCi/L 1.7E+01 U 3.04E+01 GAMMALL GS 2.0002E+00 07/02/2008 0.0

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13966-02-4

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13967-70-9

10045-97-3

14683-23-9

CO-60

CS-134

CS-137

EU-152

-4.36E+00

1.10E+00

-1.99E+00

-1.01E+00

-1.02E+00

-2.08E-01

-8.74E-01

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

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

Lab Code: TARL Monday, July 28, 2008 **TestAmerica QC Duplicate Report** File Name: h:\Reportdb\edd\FeadIV\Rad\W05424.Edd, h:\Reportdb\edd\FeadIV\Rad\39591.Edd FormatType: FEAD VersionNbr: 05 FormNbr: R Sdg/Rept Nbr: W05424 KPLWM2HR 39591 Collection Date: 06/09/2008 10:18 Lab Sample Id: Client Id: B<sub>1</sub>VKT9 Matrix: WATER WATER Sample On Date: 06/09/2008 Moisture/Solids%\*: QC Type: DUP Received Date: Contract Nbr **Test User Distilled Volume** File Id FSuffix RTyp SAF Nbr Case Nbr SAS Nbr Suffix Decant CG 108-043 MW6-SBB-A19981 H Result/ Tot/Cnt Spk Conc/ Analy Aliq Date/Time RPD/ RER/ LCS R Batch #/ Analyt/ Qu-Tracer Size/ UCL UCL LCL/UCL Typ MDC Yield Method Orig Rst Uncert 2S al %Rec Analyzed Qc Type CAS# D 2.00E-01 07/25/2008 143.3 0.9 8197274 Se-79 6.45E+00 pCi/L 8.3E+00 9.65E+00 92.4 SE79 SEP IE 20.0 3 15:49 DUP 15758-45-9 1.07E+00 4.2E+00

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Monday,	July 28, 2008				Te	estAme	rica	QC I	Duplicat	e Report			Lai	b Code:	TARL	
	FormNbr: R	F	FormatT	ype: FEAD		VersionNb	r: 05		File Name	: h:\Reportdb\edd\i	FeadIV\Rad\W0542	24.Edd, h:\Repo	ortdb\edd\	FeadIV\	Rad\39591.	Edd
Lab	Sample id:	KPLWR1F	<b>I</b> R			Sdg/Rept	Nbr:	W054	24 3	39591	Collec	tion Date:	06/09/2	2008 1	0:18	
Clier	nt ld:	B1VKV0			- 1	Matrix:		WATE	ER I	WATER	Samp	le On Date:				
Mois	sture/Solids%	<b>*</b> :			(	QC Type:		DUP			Receiv	ved Date:	06/09/2	2008		
SAF	Nbr Co	ntract Nbr	7	est User	Case	Nbr S	AS Nb		Suffix	Decant	Distilled Volume	File	e ld		FSuffix R	Тур
108-04	13 MW6	-SBB-A19981													CH	Н
Batch #/ Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC		ecer ield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R L Tyj
8170557	NP-237	0.00E+00	pCi/L	1.0E-01	U	2.39E-01	76.4	1		NP237_LLE_	P 2.004E-01	06/26/2008	0.0	0.1		D
DUP	13994-20-2	-7.45E-03		1.0E-01							L	20:10	20.0	3		

Monday,	July 28, 2008				Te	stAmer	rica (	QC Di	iplicat	e Report			La	b Code:	TARL	
	FormNbr: R	F	ormatT	ype: FEAD		VersionNbr	: 05		File Name	: h:\Reportdb\edd\F	eadIV\Rad\W0542	24.Edd, h:\Repo	ortdb\edd\	FeadIV	Rad\39591	.Edd
Clie	Sample ld: nt ld: sture/Solids%	KPNDQ10 B1V6C8	R		P	Sdg/Rept Matrix: QC Type:		W0542 WATER DUP		9591 WATER	Samp	tion Date: le On Date: ved Date:	06/09/		0:24	
SAF 108-03		ntract Nbr S-SBB-A19981	1	Test User	Case	Nbr S	AS Nbr	S	Suffix	Decant	Distilled Volume	File	e ld		FSuffix F	RТур Н
Batch # / Qc Type 8170550 DUP	Analyt/ CAS# I-129L 15046-84-1	Result/ Orig Rst 1.22E+00 1.44E+00	Unit pCi/L	Tot/Cnt Uncert 2S 3.9E-01 3.9E-01	Qu- al U	MDC 5,91E-01	Yie	eld	Spk Conc/ %Rec	Analy Method I129LL_SEP_	Aliq Size/ L 3.877E+00 L	Date/Time Analyzed 07/17/2008 10:41	RPD/ UCL 16.3 20.0	RER/ UCL 0.8 3	LCL/UC	R L Typ D

Monday,	July 28, 2	008			Test	Ame	rica Q	c Ma	trix Spi	ke Report			La	b Code:	TARL	
	FormNbr:	R F	FormatT	ype: FEAD	\	Version	Nbr: 05		File Name	: h:\Reportdb\edd	\FeadiV\Rad\W0542	24.Edd, h:\Repo	ortdb\edd\	FeadIVI	Rad\39591	.Edd
Lab	Sample k	d: KPE3X1K	W		S	idg/Re	pt Nbr:	W054	24 3	9591	Collec	tion Date:	06/04/	2008 1	2:40	
Clier	nt ld:	B1TX74			M	fatrix:		WATE	ER I	VATER	Samp	le On Date:				
Mois	sture/Solid	ds%*:			Q	С Тур	e:	MS			Receiv	ved Date:	06/04/	2008		
SAF	Nbr	Contract Nbr		Test User	Case	Nbr	SAS Nor		Suffix	Decant	Distilled Volume	File	e ld		FSuffix	RTyp
S08-0	04 N	MW6-SBB-A19981													BV	H
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-	MDO		eld	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R CL Typ
8170558 <b>MS</b>	Uranium 7440-61-1	3.73E+01	ug/L	4.8E+00 4.8E+00		8.35E-	-02		3.59E+01 103.9	UTOT_KPA	2.51E-02 ML	07/21/2008 10:23			60 140	D

	, July 28, 2008 FormNbr: R	F	FormatType: FEAD	TestAmeric:  VersionNbr:		c Matrix Spil	ke Report h:\Reportdb\edd\F	eadIV\Rad\W0542	4.Edd, h:\Rep			TARL Rad\39591	I.Edd
Clie	Sample Id: int Id: sture/Solids%	KPE3X1M B1TX74 *:	w	Sdg/Rept N Matrix: QC Type:	br:		9591 VATER	Samp	tion Date: le On Date: /ed Date:	06/04/2		2:40	
<b>SAF</b> S08-0		ntract Nbr -SBB-A19981	Test User	Case Nbr SAS	S Nbr	Suffix	Decant	Distilled Volume	Fil	e Id		FSuffix BX	<b>RТур</b> Н
Batch #/ Qc Type 8170559 MS	Analyt/ CAS# TC-99 14133-76-7	Result/ Orig Rst 3.42E+03	Unit Uncert 2S pCi/L 2.1E+02 3.2E+01	Qu- al MDC 9.58E+00		Spk Conc/ %Rec 0 3.60E+03 95.1	Analy Method TC99_ETVDS	Aliq Size/ K 1.251E-01	Date/Time Analyzed 06/25/2008 22:34	RPD/ UCL	RER/ UCL	LCS LCL/UC 60 140	R CL Typ D

RQC050

### TestAmerica Laboratories, Inc. WET CHEM BATCHSHEET

Run Date: 7/08/08 Time: 14:50:38

### TestAmerica Richland

### PRODUCTION FIGURES - WET CHEM

(0-0)

	AMPLE UMBER QC	RE-RUN RE-RUN MATRIX OTHER	MISC NUMBER	TOTAL EXPANDED HOURS DELIVERABL	E
METHOD: QC BATCH # PREP DATE: COMP DATE: USER:	6/18/08	METHOD 9223 INITIALS PREF ANAL	n pm	DATA ENTRY: INITIALS DATE	_
Work Order KPF3R-1-AA KPF3R-1-AC KP659-1-AA KP659-1-AC	Lab Number  J-8F050322-001  J-8F050322-001  J-8F180000-564  J-8F180000-564	Analysis I  XX I 88 IZ 51  X XX I 88 IZ 51  B XX I 88 IZ 51	E G/G/C	Sample ID:	<1 COL/100mL 14.8 1
		Control Limits			_

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RQC050

### TestAmerica Laboratories, Inc. WET CHEM BATCHSHEET

Run Date: 7/08/08 Time: 14:49:31

### TestAmerica Richland

### PRODUCTION FIGURES - WET CHEM

	AMPLE JMBER QC			MISC NUMBER	TOTAL EXPANDED DELIVERABLE	
METHOD: QC BATCH #: PREP DATE: COMP DATE: USER:	IZ COLIFORM BY 8190389 7/08/08 6/18/08 WAGARR	METHOD 9223	INITIALS: [ PREP ANAL	) m	DATA ENTRY: INITIALS DATE	
Work Order	Lab Number	Structu Analys			is Sample ID:	
KPNCT-1-AA	J-8F100263-001	XX I 88 I	IZ 5I E	6/11/08	B1VR34 </td <td>COL/100mL</td>	COL/100mL
KPNCT-1-AC	J-8F100263-001-X	XX I 88 I	Z 5I E		B1VR34 DUP	1
KQ7F9-1-AA	J-8G080000-389-B	XX I 88 I	Z 51		INTRA-LAB BLANK	
KQ7F9-1-AC	J-8G080000-389-C	XX I 88 I	Z 51		INTRA-LAB CHECK 18.7	4
		Control I	imits			

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RQC050

### TestAmerica Laboratories, Inc. WET CHEM BATCHSHEET

Run Date: 7/08/08 Time: 14:50:01

### TestAmerica Richland

### PRODUCTION FIGURES - WET CHEM

	MPLE MBER QC	RE-RUN RE-RUN MATRIX OTHER	MISC NUMBER	TOTAL EXPANDED DELIVERABLE	<u>B</u>	
METHOD: OC BATCH #: PREP DATE: COMP DATE: USER:			LS:	DATA ENTRY: INITIALS DATE		
Work Order	Lab Number	Structured Analysis	Exp. Analyst Del. Date	Sample ID:		0 . 1
KPQWR-1-AA	J-8F110338-001	XX I 88 IZ 51	E 6/12/01	B1VR96	< )	(UL/100ml
KPQWR-1-AC	J-8F110338-001-X	XX I 88 IZ 51	E	B1VR96 DUP		1
KQ7GE-1-AA	J-8G080000-391-B	XX I 88 IZ 5I		INTRA-LAB BLANK		
KQ7GE-1-AC	J-8G080000-391-C	XX I 88 IZ 5I		INTRA-LAB CHECK	13.5	$\downarrow$
		Control Limits			_	

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### Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

6/27/2008 10:35:19 AM

Lot No., Due Date:

J8F050181,J8F050195,J8F090197; 07/28/2008

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8170555; RUISO Ulso by ALP

SD	G, Matrix:	W05424; WATER			
1.0 1.1	COC Is the ICOC page com	plete; includes all applicable analysis, dates. SOP numbers, and revisions?	Yes	No	N/A
2.0 2.1	QC Batch Do the Summary/Deta	siled Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
2.2	Are the QC appropriat	e 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 3.1	QC & Samples is the blank results, yie	eld, and MDA within contract limits?	Yes	No	N/A
3.2	Is the LCS result, yield	d, and MDA within contract limits?	Yes	No	N/A
3.3	Are the MS/MSD resu	Its, yields, and MDA within contract limits?	Yes	No	N/A
3.4	Are the dup icate resu	olt, 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
	Raw Data Were results calculate	ed in the correct units?	Yes	No	N/A
4.2	Were analysis volume	es entered correctly?	Yes	No	N/A
4.3	Were Yields entered of	correctly?	Yes	No	N/A
4.4	Were spectra reviewe	d/meet contractual requirements?	Yes	No	N/A
4.5	Were raw counts revie	ewed for anomalies?	Yes	No	N/A
	Other Are all nonconformance	ces included and noted?	Yes	No	N/A
5.2	Are all required forms	filled out?	Yea	No	N/A
5.3	Was the correct method	odology used?	Yes	No	N/A
5.4	Was transcription che	cked?	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

First Level Review

6.0 Comments on any No response:

QAS\_RADCALCv4.8.33 TESTAMERICA

TAL Richland



# Data Review Checklist RADIOCHEMISTRY Second Level Review

Duten I dinber. " 10()()	Batch Number:	970555
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LS-038B, Rev. 10, 9/07

### Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

6/27/2008 4:01:34 PM

Lot No., Due Date:

J8F050181, J8F090197; 07/28/2008

Client, Site:

384868: PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8170557; RNP237 Np-237 w/tracer

SDG, Matrix:

W05424: WATER

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	CO	

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?

No N/A

No N/A

- 2.0 QC Batch2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?
- No N/A

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?

Yeş No N/A

2.4 Does the Worksheets include a Tracer Vial label for each sample?

## No N/A

### 3.0 QC & Samples

3.1 Is the blank results, yield, and MDA within contract timits?

Yes No N/A

3.2 Is the LCS result, yield, and MDA within contract limits?

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?

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?

No N/A

4.2 Were analysis volumes entered correctly?

No N/A

4.3 Were Yields entered correctly?

Yes No N/A

4.4 Were spectra reviewed/meet contractu i requirements?

No N/A Yes No N/A

4.5 Were raw counts reviewed for anomalia:?

### 5.0 Other

5.1 Are all nonconformances included and soted?

Yes No N/A

5.2 Are all required forms filled out?

No N/A

5.3 Was the correct methodology used?

Yeş No N/A

5.4 Was transcription checked?

Yes No N/A

5.5 Were all calculations checked at a minimum frequency?

No N/A

No N/A

5.6 Are worksheet entries complete and correct?

6.0 Comments on any No response:

First Level Review

TAL Richland QAS\_RADCALCv4.8.33 TESTAMERICA

**Date** 

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6/27/00

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## Data Review Checklist RADIOCHEMISTRY

Second Level Review

Review Item	Yes (x)	No (√)	NA (
A. Sample Analysis			
Are the sample yields within acceptance criteria?	1		
2. Is the sample Minimum Detectable Activity < the Contract			
Detection Limit?	V/		
3. Are the correct isotopes reported?	J,		
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?	7		
3. Is the blank result < the Contract Detection Limit?	1		
4. Is the blank result > the Contract Detection Limit but the			
sample result < the Contract Detection Limit?			1
5. Is the LCS recovery within contract acceptance criteria?	1		
<ol> <li>Is the LCS Minimum Detectable Activity ≤the Contract</li> </ol>			/
Detection Limit?	7		
7. Do the MS/MSD results and yields meet acceptance criteria?			
8. Do the duplicate sample results and yields meet acceptance			
criteria?	/		-
C. Other			
1. Are all Non-conformances included and noted?			
2. Are all required forms filled out?	<del></del>		
3. Was the correct methodology used?	V/		
4. Was transcription checked?	1,		
5. Were all calculations checked at a minimum frequency?	1		
6. Were units checked?	J		

LS-038B, Rev. 10, 9/07

### Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

7/8/2008 3:29:40 PM

Lot No., Due Date:

J8F050186: 07/28/2008

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8170560; RALPHA-A Alpha by GPC-Am

SDG, Matrix:

W05424; WATER

4	0	COC
		Lat H.

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?

No N/A

No N/A

2.2 Are the QC appropriate for the analysis included in the batch?

No N/A

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?

Yes No N/A

### 3.0 QC & Samples

3.1 Is the blank results, yield, and MDA within contract limits?

Yeş No N/A

3.2 Is the LCS result, yield, and MDA within contract limits?

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?

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 Yes No N/A

4.4 Were spectra reviewed/meet contractual requirements?

Yeş 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

5.4 Was transcription checked?

Yeş No N/A

5.3 Was the correct methodology used?

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?

6.0 Comments on any No response:

First Level Review

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Date 7-8-8

TAL Richland QAS\_RADCALCV4.8.33



# Data Review Checklist RADIOCHEMISTRY Second Level Review

Batch Number: 8170560

. Sample Analysis	Review Item Yes (√)		NA (√)	
Are the sample yields within acceptance criteria?			-	
Is the sample Minimum Detectable Activity < the Contract Detection Limit?				
Are the correct isotopes reported?				
. QC Samples		-		
. Is the Minimum Detectable Activity for the blank result ≤ the contract Detection Limit?				
Does the blank result meet the Contract criteria?				
. Is the blank result < the Contract Detection Limit?				
. Is the blank result > the Contract Detection Limit but the ample result < the Contract Detection Limit?			-	
. Is the LCS recovery within contract acceptance criteria?	-			
. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	/			
. Do the MS/MSD results and yields meet acceptance criteria?				
. Do the duplicate sample results and yields meet acceptance riteria?	w			
C. Other . Are all Non-conformances included and noted?				
Are all required forms filled out?				
. Was the correct methodology used?				
. Was transcription checked?				
. Were all calculations checked at a minimum frequency?				
Were units checked?				
. Were units checked?				

LS-038B, Rev. 10, 9/07

### Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

7/8/2008 3:31:05 PM

Lot No., Due Date:

J8F050186; 07/28/2008

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8170561; RBETA-SR Beta by GPC-Sr/Y

SDG, Matrix:

W05424; WATER

1.0	COC Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A
<b>2.0</b> 2.1	QC Batch 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	NA
<b>3.0</b> 3.1	QC & Samples Is the blank results, yield, and MDA within contract limits?	Yes	No	N/A
3.2	Is the LCS result, yield, and MDA within contract limits?	Yes	No	N/A
3.3	Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	N/A
3.4	Are the duplicate result, yields, and MDAs within contract limits?	Yes	No	N/A
3.5	Are the sample yields and MDAs within contract limits?	Yes	No	N/A
<b>4.0</b> 4.1	Raw Data Were results calculated in the correct units?	Yes	No	N/A
4.2	Were analysis volumes entered correctly?	Yes	No	N/A
4.3	Were Yields entered correctly?	Yes	No	N/A
4.4	Were spectra reviewed/meet contractual requirements?	Yes	No	N/A
4.5	Were raw counts reviewed for anomalies?	Yes	No	N/A
<b>5.0</b> 5.1	Other 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 Office Horton

QAS\_RADCALCV4.8.38 TESTAMERICA

TAL Richland

Date 7-8-8



## Data Review Checklist RADIOCHEMISTRY

Second Level Review

	Yes (√)	No (√)	NA (√)
A. Sample Analysis			
. 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 within contract acceptance criteria?			
5. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?			
7. Do the MS/MSD results and yields meet acceptance criteria?			
8. Do the duplicate sample results and yields meet acceptance criteria?			
C. Other  1. Are all Non-conformances 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?			

7/28/2008 8:45:39 AM

Lot No., Due Date:

J8F050186.J8F050195: 07/28/2008

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8197204; RSR85907 Sr-85/90 by GPC-7

SDG, Matrix:

W05424; WATER

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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 Yes No N/A

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?

Yes No N/A

2.4 Does the Worksheets include a Tracer Vial label for each sample?

### 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 resu ts calculated in the correct units?

Yeş 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?

No N/A Yes

5.4 Was transcription checked?

No N/A Yes

5.5 Were all calculations checked at a minimum frequency?

No N/A Yes

5.6 Are worksheet entries complete and correct?

Yes No N/A

6.0 Comments on any No response:

Please see NCM # 10-12736

John Worts

Date 7-28-8

TAL Richland

QAS RADCALCV4.8.33

**First Level Review** 

TESTAMERICA

Page 1



### Data Review Checklist RADIOCHEMISTRY

Second Level Review

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

LS-038B, Rev. 10, 9/07

### Clouseau Nonconformance Memo



NCM #: 10-12736

NCM Initiated By: John Norton

Date Opened: 07/28/2008

Date Closed:

Classification: Anomaly

Status: GLREVIEW

Production Area: Environmental - Prep

Tests: Sr-85/90 by GPC-7

Lot #'s (Sample #'s): J8F050186 (1), J8F050195

(3), J8F180000 (554),

QC Batches: 8170554.

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

### Problem Description / Root Cause

Name John Norton Date

Description

07/28/2008 Originally analyzed as batch # 8170554, these samples were traced with an incorrect

tracer.

### Corrective Action

Name John Norton Date

**Corrective Action** 

07/28/2008 The samples were re-analyzed.

### 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: 7/28/2008

# Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

7/15/2008 9:58:54 AM

Lot No., Due Date:

J8F050181,J8F050186,J8F050195,J8F050319,J8F090197; 07/28/2008

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8170553; RGAMMA Gamma by GER

SDG, Matrix:

W05424; WATER

00	G, Matrix. 1003-27, WATER			
	COC Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A
	QC Batch Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
2.2	Are the QC appropriate for the analysis included in the batch?	Yes	No	N/A
2.3	Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
2.4	Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A
<b>3.0</b> 3.1	QC & Samples 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	NA
3.4	Are the duplicate result, yields, and MDAs within contract limits?	Yes	Ng	N/A
3.5	Are the sample yields and MDAs within contract limits?	Yes	No	N/A
<b>4.0</b> 4.1	Raw Data 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
	Other 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

First Level Review 20

6.0 Comments on any No response: Please see NCM # 10-12669

Joh. North

Date 7-15-8

TAL Richland

QAS\_RADCALCV4.8.33



### Data Review Checklist RADIOCHEMISTRY

Second Level Review

	Yes (√)	No $(\checkmark)$	NA (V)
A. Sample Analysis			
. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?			
B. 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 within contract acceptance criteria?			
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?			
7. Do the MS/MSD results and yields meet acceptance criteria?			سا
3. Do the duplicate sample results and yields meet acceptance critéria?			
C. Other			
Are all Non-conformances included and noted?	1		
2. Are all required forms filled out?			
B. Was the correct methodology used?			
4. Was transcription checked?			
5. Were all calculations checked at a minimum frequency?			
5. Were units checked?			

LS-C38B, Rev. 10, 9/07

### Clouseau Nonconformance Memo



NCM #: 10-12669

NCM Initiated By: John Norton Date Opened: 07/15/2008

Date Closed:

Classification: Anomaly

Status: GLREVIEW

Production Area: Environmental - Prep

Tests: Gamma by GER

Lot #'s (Sample #'s): J8F050181 (1), J8F050186

(1), J8F050195 (2,3),

J8F050319 (1,2), J8F090197

(1,2), J8F180000 (553),

QC Batches: 8170553.

Nonconformance: Dups not within acceptance limits

Subcategory: Insufficient Volume for sample analysis

### Problem Description / Root Cause

Name John Norton Date

Description

07/15/2008 The volume of sample provided was not sufficient for the creation of a duplicate

gamma sample.

### Corrective Action

Name John Norton Date

<u>Corrective Action</u>
The sample was re-counted on a different detector in order to provide a duplicate. 07/15/2008

### Client Notification Summary

Client

**Project Manager** 

Notified

Response How Notified

Note

Response

**Response Note** 

### Quality Assurance Verification

Verified By

**Due Date** 

Status

This section not yet completed by QA.

Notes

### Approval History

**Date Approved** 

Approved By

**Position** 

Date Printed: 7/15/2008

### Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

7/18/2008 11:52:37 AM

Lot No., Due Date:

J8F050181,J8F050191,J8F050195,J8F050319,J8F050327,J8F090190,J8F090197,J8F100266;

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8170550; RGAMLEPS Gamma by LEPS

SDG, Matrix:

W05424; WATER

1	COL	

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?

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?

No N/A

2.2 Are the QC appropriate for the analysis included in the batch?

No N/A Yeş

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?

No N/A Yeş

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?

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?

Yeş 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 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

### 5.1 Are all nonconformances included and noted?

Yes No N/A

5.3 Was the correct methodology used?

5.2 Are all required forms filled out?

Yes No N/A

5.4 Was transcription checked?

Yeş 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?

6.0 Comments on any No response:

No N/A

First Level Review

Date 7-18-8

TAL Richland QAS RADCALCV4.8483 TESTAMERICA



### Data Review Checklist RADIOCHEMISTRY Second Level Review

	8170552	
Batch Number:	011033()	

Yes (√)	No (v)	NA (V)
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LS-038B, Rev. 10, 9/07

7/16/2008 7:49:15 AM

Lot No., Due Date:

J8F050186: 07/28/2008

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8170552; RGAMLEPS Gamma by LEPS

SDG, Matrix:

W05424; WATER

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1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?

Yes No N/A

No N/A

No N/A

No N/A

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?
- 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:

Date 7-16-8

TAL Richland

QAS\_RADCALCV4.8.33 TESTAMERICA

First Level Review

Page 1

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Yes No N/A No N/A Yes No N/A

Yes

No N/A

No N/A

No N/A Yes No N/A

Yes No N/A No N/A

No N/A

Yes No N/A

Yes No N/A Yes No N/A

Yes No N/A

Yes No N/A

No N/A



# Data Review Checklist RADIOCHEMISTRY Second Level Review

Review Item	Yes (√)	No (√)	NA (√)
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?			V
5. Is the LCS recovery within contract acceptance criteria?			
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?			
7. Do the MS/MSD results and yields meet acceptance criteria?			V
8. Do the duplicate sample results and yields meet acceptance criteria?			
C. Other  1. Are all Non-conformances 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?			

7/28/2008 2:13:38 PM

Lot No., Due Date:

J8F050195,J8F090197; 07/28/2008

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8197274; RSE79 Se-79 by LSC \$ 8170556 SICS 7 28 08 SDG. Matrix: W05424; WATER

OG, Matrix:	W05424; WATER			
COC			_	
Is the ICOC page co	implete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A
		•		
Do the Surnmary/De	tailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
Are the QC appropri	ate for the analysis included in the batch?	Yes	No	N/A
Is the Analytical Bate	ch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
Does the Worksheel	ts include a Tracer Vial label for each sample?	Yes	No	N/A
QC & Samples		•		
	yield, and MDA within contract limits?	Yes	No	N/A
Is the LCS result, yie	ald, and MDA within contract limits?	Yes	No	N/A
Are the MS/MSD res	sults, yields, and MDA within contract limits?	Yes	No	N/A
Are the duplicate res	sult, yields, and MDAs within contract limits?	Yeş	No	N/A
Are the sample yield	s and MDAs within contract limits?	Yeş	No	N/A
		~		
	ited in the correct units?	Yes	No	N/A
Were analysis volum	nes entered correctly?	Yes	No	N/A
Were Yields entered	correctly?	Yes	No	N/A
Were spectra review	red/meet contractual requirements?	Yes	No	N/A
Were raw counts rev	riewed for anomalies?	Yes	No	N/A
Other		•		
	nces included and noted?	Yes	No	N/A
Are all required form	s filled out?	Yes	No	N/A
Was the correct met	hodology used?	Yes	No	N/A
Was transcription ch	ecked?	Yes	No	N/A
Were all calculations	checked at a minimum frequency?	Yes	No	N/4
Are worksheet entrie	s complete and correct?	Yeş	No	N/A
		~		
Comments on any N	o response:			
	Is the ICOC page color of the ICOC page color	Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?  OC Batch Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?  Are the QC appropriate for the analysis included in the batch?  Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?  Does the Worksheets include a Tracer Vial label for each sample?  QC & Samples Is the blank results, yield, and MDA within contract limits?  Is the LCS result, yield, and MDA within contract limits?  Are the MS/MSD results, yields, and MDA within contract limits?  Are the duplicate result, yields, and MDAs within contract limits?  Are the sample yields and MDAs within contract limits?  Raw Data Were results calculated in the correct units?  Were analysis volumes entered correctly?  Were Spectra reviewed/meet contractual requirements?  Were raw counts reviewed for anomalies?	CCC Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?  CC Batch Do the Surmany/Detailed Reports include a calculated result for each sample listed on the OC Batch Sheet?  Are the OC appropriate for the analysis included in the batch?  Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?  Yes  Does the Worksheets include a Tracer Vial label for each sample?  OC & Samples Is the blank results, yield, and MDA within contract limits?  Is the LCS result, yield, and MDA within contract limits?  Are the MS/MSD results, yields, and MDA within contract limits?  Are the duplicate result, yields, and MDAs within contract limits?  Are the sample yields and MDAs within contract limits?  Raw Data  Were results calculated in the correct units?  Were analysis volumes entered correctly?  Were yields entered correctly?  Were spectra reviewed/meet contractual requirements?  Were analysis volumes entered correctly?  Were an counts reviewed for anomalies?  Other  Are all required forms filled out?  Was the correct methodology used?  Was transcription checked?  Were all calculations checked at a minimum frequency?  Are worksheet entries complete and correct?  Yes  Are worksheet entries complete and correct?	COC Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?  Yes No OC Batch Do the Surmany/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?  Are the QC appropriate for the analysis included in the batch?  Yes No Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?  Yes No Does the Worksheets include a Tracer Vial label for each sample?  Yes No Does the Worksheets include a Tracer Vial label for each sample?  Yes No Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?  Yes No Does the Worksheets include a Tracer Vial label for each sample?  Yes No Is the LCS result, yield, and MDA within contract limits?  Yes No Are the MS/MSD results, yield, and MDA within contract limits?  Yes No Are the Ms/MSD results, yields, and MDA within contract limits?  Yes No Are the sample yields and MDAs within contract limits?  Yes No Raw Data Were results calculated in the correct units?  Yes No Were analysis volumes entered correctly?  Were Vialds entered correctly?  Were vialds entered correctly?  Yes No Were spectra reviewed/meet contractual requirements?  Yes No Other  Are all required forms filled out?  Yes No Other  Are all required forms filled out?  Yes No Was transcription checked?  Yes No Were all calculations checked at a minimum frequency?  Were worksheet entries complete and correct?

First Level Review

Please see NCM # 10-12743

TAL Richland QAS\_RADCALCv4.8.33 TESTAMERICA Date 7-28-8



### Data Review Checklist RADIOCHEMISTRY

Second Level Review

Batch Number: 8197274 8170556

Review Item	Yes (√)	No (V)	NA (V)
A. Sample Analysis			
Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?			
3. Are the correct isotopes reported?			
<ul> <li>B. QC Samples</li> <li>1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?</li> </ul>			
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 within contract acceptance criteria?			-
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?			
7. Do the MS/MSD results and yields meet acceptance criteria?			-
8. Do the duplicate sample results and yields meet acceptance criteria?	-		
C. Other 1. Are all Non-conformances 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: Oolie Co	Date:	7/28/08

### Clouseau Nonconformance Memo



NCM #: 10-12743

NCM Initiated By: John Norton Date Opened: 07/28/2008

Date Closed:

Classification: Anomaly

Status: GLREVIEW

Production Area: Environmental - Sep

Tests: None

Lot #'s (Sample #'s): J8F050195 (3), J8F090197

(1),

QC Batches: None.,

Nonconformance: Tracer yield out of limits

Subcategory: Unknown

Problem Description / Root Cause

Name John Norton Date

Description

07/28/2008 Originally analyzed in batch # 8170556, these samples failed due to low tracer yields.

Corrective Action

Name John Norton Date

07/28/2008

<u>Corrective Action</u>
The samples were re-analyzed in batch #8197274 for acceptable results.

Client Notification Summary

Client

**Project Manager** 

Notified

Response How Notified

Note

Response

**Response Note** 

**Quality Assurance Verification** 

Verified By

**Due Date** 

This section not yet completed by QA.

Notes

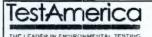
Approval History

**Date Approved** 

Approved By

Position

Date Printed: 7/28/2008



# Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

6/26/2008 4:02:58 PM

Lot No., Due Date:

J8F050186; 07/28/2008

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8170559; RTC99 Tc-99 by LSC

SDG, Matrix:	W05424; WATER			
	Calculation Protocol Used.	Yes	No	N/A
OK R 01 The Appre	priate Methods Were Used To Analyze the Samples	Yes	No	N/A
OK	printe Wellieds Trail Ocean to Analyze the earlines	7	110	14/
3.02 Final Res	ults Are in the Appropriate Activity Units	Yes	No	N/A
OK		V		
	ntains the Required QC Appropriate for the Method	Yes	No	N/A
OK 3.04 The Corre	ct Tracer and QC Vials Where Used in the Samples	Yes	No	N/A
OK		V		
	as Appropriately Traced Before or After Fractionating the Sample	Yes	No	N/A
OK OF Atlanti	oo Minimum Comple Volume Was Liced	You	No	\$1//
OK	ne Minimum Sample Volume Was Used	Yes	NO	IN/
	ct Count Geometry was Used.	Yes	No	N/A
OK				
	ole was Counted for the Minimum Count Time or CRDL was Achieved.	Yes	No	N/A
OK ON Mathad B	ank is within Control Limits.	Yes	No	NI//
OK	Mark is within Control Limits.	7	IAO	14/
3.1 Comments		•		
	nk is within Control Limits.	Yes	No	N/
	lanks (MBlks) found in Batch!	Von	No	NV
OK	lank(s) < QAS Limit Value (No S Flag Necessary).	7	NO	EW/
	cified Duplicate Equation Value within Control Limits.	Yes	Ng	N/A
	: 20.0=> KPE3X1AN TC-99 58.0 (RPD)		V	
	Control Limits.	Yes	No	N/A
OK	sin Control Limite	Yes	No	M/
	hin Control Limits. pikes (MLCS) found in Batch!	100	140	V
	Control Limits.	Yeş	No	N/A
OK		. •		
	nin Control Limits.	Yes	No	N//
No Tracers	found in Batch! are above Minimum Tracer Yield (No Failed Samples)	Yes	No	N/
	found in Batch!	100	140	V
	pecific MDC <= CRDL.	Yeş	No	N/A
, OK		<b>Y</b>		
2 Comments				
21 Besult	c, Activity Not Detected, U Flag.	Yes	No	N/A
No Limit Sp		,		V
	Adc, Activity Not Detected, U Flag.	Yes	No	N/A
No Positive	Results	~		
	DL Not Calculated Action Level, when Defined.	Yes	No	N/A
	tion Level Found => TC-99	V		
OK; No C	allin Level Found => TC-99			
3.24 Result + 3	3s >=0, Not Too Negative.	Yes	No	N/A
OK	On the state of th	Voc	No	M
	Spectrum are within FWHM Limits.	res	140	
NO FWHM	Quild in Daton Data:			*

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OAS\_RADCALCV4.8.33

3.26 Instruments have Current Calibrations.	Yes	No	N/A
3.27 Correct Count Library Used.  No Count Library found in Batch Data!			NA
3.28 Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later version	rMes	No	N/A
8.29 Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in later	v <b>Vées</b> io	onto).	N/A
8.3 Comments:			
8.31 Results Blank Subtracted as Appropriate. OK	Yes	No	N/A

First Level Review

TAL Richland
QAS\_RADCALCv4.8.33
TESTAMERICA

Date (0/2/0/08)



# Data Review Checklist RADIOCHEMISTRY Second Level Review

Batch Number:	8170559

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

LS-038B, Rev. 10, 9/07

Second Level Review:

Date: 6/30/8

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# Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

6/30/2008 8:59:28 AM

Page 1

Lot No., Due Date:

J8F050186; 07/28/2008

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8170562; RTRITIUM H-3 by LSC

SDG. Matrix:

TAL Richland

W05424; WATER

SDG, Matrix:	W05424; WATER			
8.0 Correction Calcula	tion Protocol Used.	Yes N	lo	N/A
	Methods Were Used To Analyze the Samples	Yes N	lo	N/A
	in the Appropriate Activity Units	Yes N	lo	N/A
OK 8.03 Batch Contains t	ne Required QC Appropriate for the Method	Yes N	lo	N/A
OK	er and QC Vials Where Used in the Samples	Yeş N	lo	N/A
ОК		<b>V</b>		
8.05 Sample was App OK	ropriately Traced Before or After Fractionating the Sample	Yes N	10	N/A
	mum Sample Volume Was Used	Yes M	19	N/A
Analysis Volume =>	KPE3X1AA 5.00<10.00 Q:VB		~	
Count Geometry => KP657*AG SVP18 KP657*AA SVP18 KP657*AC SVP18 KP657*AD SVP18 KP657*AE SVP18 KPE3X1AA SVP18	//5<>SVP10/10 5/5<>SVP10/10 5/5<>SVP10/10 5/5<>SVP10/10	Yes	7	N/A
8.08 The Sample was	Counted for the Minimum Count Time or CRDL was Achieved.	Yes	O	N/A
OK 8.09 Method Blank is	within Control Limits.	Yes 1	No	N/A
OK 8.1 Comments.		•		
		Yea	No	N/A
8.11 Matrix Blank is w OK	ithin Control Limits.	<b>V</b>		
8.12 Method Blank(s) OK	< QAS Limit Value (No B Flag Necessary).	Yes 1	Vo	N/A
3.13 QAS Specified D	uplicate Equation Value within Control Limits.	Yes	19	N/A
	> KPE3X1AR H-3 40.0 (RPD)	Yeş	Vo.	N/A
3.14 LCS within Contr OK	of Limits.	V		
8.15 MLCS within Cor	ntrol Limits.	Year 1	Vo	N/A
OK	Al Limite	Yes I	No	N/A
8.16 MS within Contro	mples (MS) found in Batch!			V
8.17 Tracer within Co	ntrol Limits.	Yes 1	No	N/A
No Tracers found in	Batch! ove Minimum Tracer Yield (No Failed Samples)	Yes I	No	N/A
No Tracers found in				V
8.19 Sample Specific OK		Yes	No	N/A
8.2 Comments:				
	vity Not Detected, U Flag.	Yes !	No	N/A
No Limit Specified!	ctivity Not Detected, U Flag.	Yea !	No	N/A
No Positive Results		<b>~</b>		
OK Calc_IDL Not 3.23 Result <= Action	Level, when Defined.	Yea	No	N/A
OK; No Action Lev		<b>V</b>		

OK; No Callin Level Found => H-3 8.24 Result + 3s >=0, Not Too Negative. Yes No N/A 8.25 Counting Spectrum are within FWHM Limits. Yes No N/A No FWHM found in Batch Data! 8.26 Instruments have Current Calibrations. Yes No N/A 8.27 Correct Count Library Used. Yes No N/A No Count Library found in Batch Data! 8.28 Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later versions No N/A 3.29 Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in later version N/A 18.3 Comments: 8.31 Results Brank Subtracted as Appropriate. No N/A

First Level Review

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TESTAMERICA

Date (130) 0



### Data Review Checklist RADIOCHEMISTRY Second Level Review

Batch Number: 8170862

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

LS-038B, Rev. 10, 9/07

6/25/2008 11:04:38 AM

Lot No., Due Date:

J8F050181,J8F050195,J8F090197; 07/28/2008

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8170563; RC14 C-14 by LSC

SDG. Matrix:

1.0 COC

W05424: WATER

1.	Is the ICOC	page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	

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?

No N/A

2.2 Are the QC appropriate for the analysis included in the batch?

No N/A

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?

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

13.2 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

4.1 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 Yes No N/A

4.4 Were spectra reviewed/meet contractual requirements?

5 Were raw counts reviewed for anomalies?

Yes No N/A

### 成。O Others And And The Salab State State

i.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?

No N/A Yes No N/A

5.4 Was transcription checked?

Yes No N/A

5.5 Were all calculations checked at a minimum frequency?

No N/A

5.6 Are worksheet entries complete and correct?

6.0 Comments on any No response:

First Level Review

TAL Richtand OAS RADCALCV4.8.33 TESTAMERICA



# Data Review Checklist RADIOCHEMISTRY Second Level Review

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

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Second Level Review:

Date: 6/25/8

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# Data Review/Verification Checklist RADIOCHEMISTRY. First Level Review

7/21/2008 2:23:49 PM

Lot No., Due Date:

J8F050186: 07/28/2008

Client. Site:

384868: PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8170558; RUNAT UNat by KPA

SDG, Matrix:

W05424; 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?

eg 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 NA

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 Yes No N/A

5.6 Are worksheet entries complete and correct?

5.5 Were all calculations checked at a minimum frequency?

No N/A

6.0 Comments on any No response:

First Level Review

Date

7-21-8

TAL Richland

QAS RADCALCV4.8.53



### **Data Review Checklist** RADIOCHEMISTRY

Second Level Review

Batch Number:	8176558

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LS-038B, Rev. 10, 9/07

7/22/2008 2:12:04 PM

Lot No., Due Date:

J8F050322; 07/28/2008

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8170564;

SDG, Matrix:	W05424; WATER			
1.0 COC 1.1 Is the ICOC page of	omplete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	NIA
2.0 QC Batch 2.1 Do the Summary/Do	etailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
2.2 Are the QC appropr	iate for the analysis included in the batch?	Yes	No	N/A
2.3 Is the Analytical Bat	ch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
2.4 Does the Workshee	its include a Tracer Vial label for each sample?	Yes	No	NA
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, yi	eld, and MDA within contract limits?	Yes	No	N/A
3.3 Are the MS/MSD re	sults, yields, and MDA within contract limits?	Yes	No	NIA
3.4 Are the duplicate re	sult, yields, and MDAs within contract limits?	Yes	No	N/A
3.5 Are the sample yield	ds and MDAs within contract limits?	Yes	No	N/A
O Raw Data  O Were results calculated a control of the control of	ated in the correct units?	Yes	No	N/A
1.2 Were analysis volur	nes entered correctly?	Yes	No	N/A
4.3 Were Yields entered	d correctly?	Yes	No	NA
4.4 Were spectra review	wed/meet contractual requirements?	Yes	No	N/A
4.5 Were raw counts re	viewed for anomalies?	Yes	No	N/A
5.0 Other 5.1 Are all nonconforma	inces included and noted?	Yes	No	N/A
5.2 Are all required form	ns filled out?	Yes	No	N/A
5.3 Was the correct me	thodology used?	Yes	No	N/A
5.4 Was transcription of	necked?	Yes	No	N/A
	s checked at a minimum frequency?	Yes	No	N/A

First Level Review

5 6 Are worksheet entries complete and correct?

to.0 Comments on any No response:

TAL Richland

QAS\_RADCALCv4.8.33 TESTAMERICA



# Data Review Checklist RADIOCHEMISTRY Second Level Review

Review Item	Yes (√)	No (√)	NA (V)
A. Sample Analysis			/
Are the sample yields within acceptance criteria?	/		V
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	$\int_{i}$		
3. Are the correct isotopes reported?			
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤the Contract Detection Limit?	1		
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 within contract acceptance criteria?	1		
5. Is the LCS Minimum Detectable Activity ≤the Contract Detection Limit?			/
7. Do the MS/MSD results and yields meet acceptance criteria?			
8. Do the duplicate sample results and yields meet acceptance criteria?			,
C. Other  1. Are all Non-conformances included and noted?	/		<b>/</b>
2. Are all required forms filled out?	V/		
3. Was the correct methodology used?	/		
4. Was transcription checked?	1		
5. Were all calculations checked at a minimum frequency?	1		
6. Were units checked?			

LS-038B, Rev. 10, 9/07

7/22/2008 2:09:59 PM

Lot No., Due Date:

J8F100263: 07/28/2008

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?

Client, Site:

384868: PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8190389;

SDG, Matrix:

1.0 COC

W05424: WATER

2.0 QC Batch
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?

Yes No N/A

Yes No N/A

2.2 Are the QC appropriate for the analysis included in the batch?

Yes No N/A

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

.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?

Yeş No N/A

5.3 Was the correct methodology used?

V. ′eş∕NoN/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?

es No N/A

6.0 Comments on any No response:

First Level Review

TAL Richland

OAS\_RADCALCV4.8.33 TESTAMERICA )

Page 1

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### Data Review Checklist RADIOCHEMISTRY

Second Level Review

Batch Number:	8190389
Daten Muniber.	0.10001

2. Is the sample Minimum Detectable Activity < the Contract		
Detection Limit?	1/	
3. Are the correct isotopes reported?		
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤the Contract Detection Limit?	1	
2. Does the blank result meet the Contract criteria?	<b>V</b> <sub>1</sub>	
3. Is the blank result < the Contract Detection Limit?		1
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?		/
5. Is the LCS recovery within contract acceptance criteria?	1	
6. Is the LCS Minimum Detectable Activity ≤the Contract Detection Limit?	7	/
7. Do the MS/MSD results and yields meet acceptance criteria?		
8. Do the duplicate sample results and yields meet acceptance criteria?	/	0
C. Other 1. Are all Non-conformances included and noted?		
2. Are all required forms filled out?	1/.	
3. Was the correct methodology used?	1/	
4. Was transcription checked?	9	
6. Were units checked?		
5. Were all calculations checked at a minimum frequency?	<u></u>	

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### Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

7/22/2008 2:08:37 PM

Lot No., Due Date:

J8F110338; 07/28/2008

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8190391;

SD	G, Matrix:	W05424	; WATER			
1.0	COC is the ICOC page co	mplete; includes a	all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	NA
<b>2.0</b> 2.1	QC Batch Do the Summary/De		lude a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
2.2	Are the QC appropri	ate for the analysi	s included in the batch?	Yes	No	N/A
2.3	Is the Analytical Bato	ch Worksheet com	plete; includes as appropriate, volumes, count times, etc?	Yes	No	NA
2.4	Does the Worksheet	s include a Tracer	r Vial label for each sample?	Yes	No	NA
<b>3.0</b> 3.1	QC & Samples is the blank results,	yield, and MDA wi	thin contract limits?	Yeş	No	N/A
3.2	Is the LCS result, yie	ld, and MDA withi	in contract limits?	Yes	No	N/A
3.3	Are the MS/MSD res	ults, yields, and M	IDA within contract limits?	Yes	No	NA
3.4	Are the duplicate res	ult, yields, and Mi	DAs within contract limits?	Yes	No	N/A
3.5	Are the sample yield	s and MDAs within	n contract limits?	Yes	No	N/A
<b>4.0</b> 4.1	Raw Data Were results calcula	ted in the correct	প্রায়েশিক্ষার্থিক বিশ্ববিধার প্রায়েশ কর্ম হার্মিক বিশ্ববিধার বিশ্ববিধার বিশ্ববিধার বিশ্ববিধার বিশ্ববিধার বিশ units?	Yes	No	N/A
4.2	Were analysis volum	nes entered correc	etly?	Yes	No	N/A
4.3	Were Yields entered	correctly?		Yes	No	NA
4.4	Were spectra review	ed/meet contractu	ual requirements?	Yes	No	N/A
4.5	Were raw counts rev	iewed for anomal	ies?	Yes	No	N/A
<b>5.0</b> 5.1	Other Are all nonconforma	nces included and	I noted?	Yes	No	NA
5.2	Are all required form	s filled out?		Yes	No	N/A
5.3	Was the correct met	hodology used?		Yes	No	N/A
5.4	Was transcription ch	ecked?		Yes	No	N/A
5.5	Were all calculations	s checked at a mir	nimum frequency?	Yes	No	N/A
5.6	Are worksheet entrie	es complete and c	correct?	Yes	No	N/A
6.0	Comments on any N	lo response:		•		

First Level Review

L Richland

AS\_RADCALCV4.8.33
TESTAMERICA



### Data Review Checklist RADIOCHEMISTRY

Second Level Review

Review Item	Yes (√)	No (√)	NA (V)
A. Sample Analysis			
Are the sample yields within acceptance criteria?	1		1
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	1		
3. Are the correct isotopes reported?			
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤the Contract Detection Limit?	1/		
2. Does the blank result meet the Contract criteria?	0,		
3. Is the blank result < the Contract Detection Limit?	J		1
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?	1		/
5. Is the LCS recovery within contract acceptance criteria?	1/1		
5. Is the LCS Minimum Detectable Activity ≤the Contract Detection Limit?	7		1
7. Do the MS/MSD results and yields meet acceptance criteria?			
3. Do the duplicate sample results and yields meet acceptance criteria?			,
C. Other	,		./
. Are all Non-conformances included and noted?			~
2. Are all required forms filled out?	1		
3. Was the correct methodology used?	4		
Was transcription checked?	1		
6. Were all calculations checked at a minimum frequency?	1		
6. Were units checked?	1		

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FLUOR HAN	NFORD				CHAIN C	OF CUSTODY	//SAMPLE ANA	ALYSIS REQ	UEST	C.O.C. # 108-037-70
			78	FOSO	181 h	PS450C	DUE 71808			Page <u>1</u> of <u>1</u>
Collector Scott E. H	lamaker				Conta	tact/Requester		Teleph	hone No.	MSIN FAX
SAF No.					Samp	pling Origin		Purch	ase Order/Charge	ze Code
Project Title						11.1= 11	.506-15	Ice Ch	est No. (1)	3-007 Temp.
Shipped To (Lah)	8				Meth	hod of Shipment	300-15		Lading/Air Bill !	
TestAmerica Inco		hiand				100 OI Shipment			n. At	110.
Protocol SURV	,					P	riority: 45 Days	Offsite	e Property No.	
POSSIBLE SAMP	T.E HAZAKU	)S/RE	MAKKS				SPECIAL INSTRUCTI	ONS Hold Time		Total Activity Exemption: Yes 🗹 No
Sample No.	Lab ID		Date	Time	No/Type Conta	tainer	San	nple Analysis		Preservative
B1V9R6		W	6.4.08	0200	1x20-mL P	Activity Scan				
B1V9R6		w	1	1	2x1000-mL G	G/P C14_LSC: C-14	4 (1) -	1		
B1V9R6		W			1x4000-mL G	G/P GAMMALL_GS	i: List-1 (9) /	3 to pH <2		
B1V9R6		w			2x4000-mL G	G/P I129LL_SEP_L	EPS_GS_LL: I-129 (1) -		None	
B1V9R6		W			2x1000-mL G	G/P Selenium-79 -	,	3 to pH <2		
B1V9R6		w			1x1000-mL G	G/P UISO_PLATE_	AEA: List-1 (3)	3 to pH <2		
B1V9R6		W	1	+	1x1000-mL G	G/P NP237_LLE_P	LATE_AEA:Np-237(1) /		HNO3	3 to pH <2
								4		
Relinquished By Scott E. Harnai	ker Print	11	Hamal	- 61	1/08 14	130 Received By	Print VLANE TA		Date/Time 408 (430	Matrix *  S = Soil DS = Drum S
Relinquished By		12		,,,	Date/Time	Received By			Date/Time	SF
Relinquished By					Date/Time	Received By			Date/Time	
FINAL SAMPL	E Dienosal	Metho	ed (e.g. Return t	o customer ne	lab procedure, used	d in process)	Dispose	ed By		Date/Time

DISPOSITION



## Sample Check-in List

Date	Time Received: 4	08 1430	GM Screen R	desult Or I C			
Clien	it: Paw	SDG#: WOS	424 NALI SAF	#: <u>IO8-037</u> NA[]			
Wor	k Order Number: <u>181</u>	-050181	Chain of Custody #	I08-037-70			
Ship	ping Container ID:		Air Bill #				
1.	Custody Seals on shipping	container intact?	NA[] Yes	No [ ]			
2.	Custody Seals dated and sig	gned?	NA[] Yes []	No[]			
3.	Chain of Custody record pr	esent?	NA[] Yes[]	No [ ]			
4.	Cooler Temperature:	NAIT	5. Vermiculite/packing mate	erials is NA [/ Wet [] Dry []			
6.	Number of samples in shipp	oing container:					
7.	Sample holding times exceed	eded?	NA [ Yes [ ]	No [ ]			
8	Samples have: Tape Custody Seals			l Lables oriate Sample Lables			
9.	Samples are: In Good Conditi Broken	on	Leaking  Have Air Bubbles  (Only for samples requiring no head space.)				
: O.	Sample pH taken? NA [ ]	pH<2/7 pH>2	pH>9[] Amount H	NO <sub>3</sub> Added			
. 11.	Sample Location, Sample C *For documentation only. 1		d.				
12.	Were any anomalies identif	ied in sample receipt?	Yes [ ]	No [T			
13.	Description of anomalies (in	nclude sample numbers): _					
Sam	ple Custodian:	RIP		Date: 6408			
	Client Sample ID	Analysis Requested	Condition	Comments/Action			
Clien	t Informed on	by	Person Conta	cted			
[]	lo action necessary; process a	us is.					
Proje	ct Manager		Date				

FLUOR HA	NFOR	D							SAMPLE ANAL				08-004-121	
Calleston				1.15	Fost	2186	Contact/Re		DUE 718 08		Mon		<u>1</u> of <u>1</u>	
Collecter Cott E. H	amaker						Steve Tre			Telephone No. 509-373-586		FA	X	
SAF No.							Sampling C			Purchase Orde	er/Charge Code			
S08-004 Project Title							Hanford	Site	131/ 1-	Ice Chest No./	3603-00	7 Temp.		
SURV. APRIL								1 X 1 N	506-15					
Test America In		Richl	and				Method of Govt. Ve			Bill of Lading/	Air Bill No.			
Protocol		- HARAMIAN	*****	- Willer III and a sold a					ority: 45 Days	Offsite Proper	ty No.			
SURV POSSIBLE SAM ** ** Contains Ri releasable per DOE C	dioactive Ma	aterial a	at con	centrations the	at are not regula	ated for transp	ortation per 49		SPECIAL INSTRUCTIONS Site-Wide Generator Knowledge		Total Act	ivity Exemption	on: Yes 🗸 No	
Sample No.	Lab I	D		Date	Time	No/Typ	Container		Sample	Analysis			Preservative	
B1TWR9	KPE:	3	W	6.4.08	1240	1x20-m		Activity Scan						
B1TWR9	111	-	W	1	1	3x1000	mL G/P	SRISO_SEP_PR	ECIP_GPC: Sr-90 (1) /		HNO3 to pH <2	None HNO3 to pH <2		
B1TWR9			W			1x4000-	mL G/P	GAMMALL_GS: L			HNO3 to pH <2			
B1TX74	KPE	х	W			1x500-r	nL P	TC99_ETVDSK_I			HCI to pH <2	-ICI to pH <2		
B1TX74	1		W			1x500-r	nL G/P	UTOT_KPA: Urar			HNO3 to pH <2	HNO3 to pH <2		
B1TX74		_	W			1x1000	mL P		A_GPC: Alpha + Beta (2)		HNO3 to pH <2			
B1TX74	1	_	W				mL G/P	I129_SEP_LEPS			None			
B1TX74	1		W	1		1x1000	mL P	906.0_H3_LSC: 1			None			
										tare a same takanana sa				
Relinquished By  Scott E. Harm  Relinquished By	aker /	Ca	th.	Ham	ah b	Date Date	/Time // 1430 /Time	Received By Regulived By	Print Sign	6/4/08 19 Date/Tim	8 SE SO SI. =	Soil Sediment Solid Sludge	DS = Drum Sol DL = Drum Lin T = Tissue WI = Wine	
Relinquished By						Date	/Time	Received By		Date/Time	e 0 =	Water Oil Air	I Liquid V - Venetatio X - Other	
Relinquished By						Date	Time	Received By		Date/Time	e			

FINAL SAMPLE DISPOSITION

Disposal Method (e.g., Return to customer, per lab procedure, used in process)

Disposed By

Date/Time



## Sample Check-in List

Date	Time Received: 4	08 1430	GM Sc	reen Result O. 1 K
Clien	nt: Paw	SDG#: WOS	NAI]	SAF #: 508-00 Y NA[]
Wor	k Order Number: <u>18</u> F	050186	Chain of Cust	ody# 508-004-121
Ship	ping Container ID:		Air Bill #	
1.	Custody Seals on shipping	container intact?	NA[] Y	es [ No [ ]
2.	Custody Seals dated and sig	ned?	NA[] Y	es/ No[]
3.	Chain of Custody record pre	esent?	NA[] Y	es [] No []
4.	Cooler Temperature:	NA []	5. Vermiculite/packi	ing materials is NA [ Wet [ ] Dry [ ]
6.	Number of samples in shipp	oing container: 2		
7.	Sample holding times excee	:ded?	NAITY	es[] No[]
8	Samples have: Tape Custody Seals			Hazard Lables Appropriate Sample Lables
9.	Samples are: In Good Conditi Broken	on		Leaking Have Air Bubbles amples requiring no head space.)
10.	Sample pH taken? NA [ ]	pH<2 // pH>2 //	pH>9[] Am	ount HNO3 Added
. 11.	Sample Location, Sample C *For documentation only. 1		d.	
12.	Were any anomalies identifi	ed in sample receipt?	Y	es[] No.
13.	Description of anomalies (in	nclude sample numbers): _		
Sam	ple Custodian:	R		Date: 6408
	Client Sample ID	Analysis Requested	Conditio	n Comments/Action
Clien	at Informed on	by	Person	n Contacted
	No action necessary; process a			
. , .	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Proje	ct Manager		D	ate

FLUOR HA	NFORD						/SAMPLE ANALY		С.о.с.	<sup>#</sup> S08-005-24	
			18	sfos			AUE 71808	KPE4X		Page <u>1</u> of <u>1</u>	
Collector Scott E. H	amaker					ct/Requester re Trent		Telephone No. 509-373-586	MSIN	FAX	
SAF No.					Sampli	ing Origin		Purchase Orde			
S08-005 Project Title					Han	ford Site		Ice Chest No. /	3603-007 Tem	D.	
SURV. MAY 20							J-506-15				
Shinned To (Lab)		hland				d of Shipment 1. Vehicle		Bill of Lading/	Air Bill No.		
Protocol							riority: 45 Days	Offsite Propert	ty No.		
SURV POSSIBLE SAMP Contains Rac releasable per DOE Or	lioactive Materia	al at con	centrations that	are not regula	ated for transportation p	per 49 CFR but are not	SPECIAL INSTRUCTIONS Site-Wide Generator Knowledge In	Hold Time formation Form applies.	Total Activity Ex	remption: Yes 🗹 No	
Sample No.	Lab ID		Date	Time	No/Type Contain	ner	Sample Ar	nalysis		Preservative	
B1V7H4		W	6.4.08	1033	1x20-mL P	Activity Scan		-	None		
B1V7H4		W	J	V	2x4000-mL G/	P I129LL_SEP_LI	EPS_GS_LL: I-129 (1)		None		
Retinquished By Scott E. Harnak Retinquished By	er // Cht	1-1	amal		/ Date/Time	Received By	Print Sign	bate/Time	1970   S	T = Tissue WI = Wine L = Liquid	
Relinquished By					Date/Time	Received By		Date/Time	O = Oil A = Air	V = Vegetation X = Other	
Relinquished By					Date/Time	Received By	<u> </u>	Date/Time			
FINAL SAMPL DISPOSITION		Method	(e.g., Return to	customer, pe	r lab procedure, used in	n process)	Disposed By		1	Date/Time	



## Sample Check-in List

Date	Time Received:	6408 1	430	GM Screen R	esult D. I IC
Clien	t: PGW	SDG #: W	05424	_NA[] SAF#	1: 508-005 NA[]
Wor	k Order Number: 🧘	8F050191	Chain	of Custody # _	508-005-24
Ship	ping Container ID: _		Air B	ui #	
1.	Custody Seals on shippi	ng container intact?	У	NA[] Yes [] ]	No[]
2.	Custody Seals dated and	signed?	7	A[] Yes	No [ ]
3.	Chain of Custody record	present?	У	IA[] Yes	No [ ]
4.	Cooler Temperature:	NA J	3. Vermici	alite/packing mate	rials is NA [/ Wet [] Dry []
6.	Number of samples in sl	nipping container:l			
7.	Sample holding times ex	(ceeded?	N	IA  Yes [ ] 1	No[]
8	Samples have: Tape Custody Sea	s	-	Hazard Approp	Lables riate Sample Lables
9.	Samples are: In Good Con Broken	dition	<del>-</del>		g ir Bubbles requiring no head space.)
10.	Sample pH taken? NA	[] pH<2[] pH>:	pH>9[	] Amount H	NO <sub>3</sub> Added
11.	Sample Location, Sample *For documentation only		needed.		
12.	Were any anomalies ide	ntified in sample receip	t?	Yes [ ] ?	Not
13.	Description of anomalie	s (include sample numb	ers):		
Samp	ple Custodian:	PY			Date: 6 4 08
	Client Sample ID	Analysis Reque	ested	Condition	Comments/Action
Clien	t Informed on	by		Person Contac	cted
	lo action necessary; proce				
Proje	ct Manager			Date	

FLUOR HANFORD  CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST								C.O.C. #	108-037-75		
			JX	F050	195 W	45450	DUE 71808	KPE6D	Pa	nge <u>1</u> of <u>1</u>	
Collector R.	Emngsworth				Contact/R Steve T	equester		Telephone No. 509-373-5869	MSIN	FAX	
SAF No.	<del></del>				Sampling	Origin		Purchase Order	Charge Code		
108-037				-	Hanford			Ice Chest No	Temp		
Project Title 2UP1, MAY 200	8				$\mathcal{H}$	NF-N-	56-16	Ice Chest No.	· cc7		
TestAmerica Inc	n l D:	Lland			Method o	Shipment		Bill of Lading/A	ir Bill No.		
Protocol	ornorated Ric	niand	***************************************	And office in which the same	GOVL V		riority: 45 Days	Offsite Property	No.		
SURV POSSIBLE SAMP ** ** Contains Rac elcasable per DOE On	lioactive Materia	al at concent		are not regulate	ed for transportation per 4		SPECIAL INSTRUCTION 200 Area Generator Knowledg		Total Activity Exe	mption Yes 🗸 No 🗌	
Sample No.	Lab ID		Date	Time	No/Type Container		Sampl	e Analysis		Preservative	
B1V9T3		W G	408	1249	1x20-mL P	Activity Scan			None		
B1V9T3		W	1	L	2x4000-mL G/P	I129LL_SEP_L	EPS_GS_LL: I-129 (1)		None		
Relinquished By R. Ellingswo	rth Fy	a ii	Sign		JUN 0 4 2008 Date/Time	Received By Date/Time SE SO SL			S — Soil SE — Sedimer SO — Solid SL — Sludge W — Water	Sediment DI Drum Linu Solid T - Tissue Sludge WI - Wine	
Relinquished By					Date/Time	Received By		Date/Time	O = Oil A = Air	V = Vegetation X = Other	
Relinquished By					Date/Time	Received By		Date/Time			
FINAL SAMPL		Method (e.g	, Return to	customer, per	lab procedure, used in pro	ocess)	Disposed I	Ву	D	ate/Timc	

FLUOR HANFORD CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 108-037-6										108-037-6	
				18	F050	195 W	05424	DUE 718 08	KPEGP_	P	age <u>1</u> of <u>1</u>
R. Ellingsv	vorth					Contact/R Steve Tr	equester		Telephone No. 509-373-5869	MSIN	FAX
AF No.	· Ortal		-			Sampling	Origin		Purchase Order	Charge Code	
108-037 roject Title						Hanford			Ice Chest No.	Temr	
2UP1. MAY 200	8						F-N-506	1-16	Ice Chest No.	007	
Test America Inco	rnorated Ric	hland				Method of Govt. V	Shipment ehicle		Bill of Lading/A	ir Bill No.	
rotocol SURV	MARIA MINISTERIO							ority: 45 Days	Offsite Property	No.	
OSSIBLE SAMP	ioactive Materia	al at con	centrati		are not regula	ted for transportation per 4	9 CFR but are not	SPECIAL INSTRUCTIONS H 200 Area Generator Knowledge Information	old Time Form applies.	Total Activity Exc	emption: Yes 🗹 No
Sample No.	Lab ID		D	ate	Time	No/Type Container		Sample Analysis			Preservative
B1V658		w	64	-68	0825	1x20-mL P	Activity Scan			None	
B1V658		w		1		2x1000-mL G/P	C14_LSC: C-14	(1)—		None	
B1V658		w				1x4000-mL G/P	GAMMALL_GS:	List-1 (9) /		HNO3 to pH <2	
B1V658		W				2x4000-mL G/P	I129LL_SEP_LE	PS_GS_LL: I-129 (1)~		None	
B1V658	-	W				2x1000-mL G/P	Selenium-79 ~			HNO3 to pH <2	
B1V658		W				1x1000-mL G/P	UISO_PLATE_A	EA: List-1 (3)		HNO3 to pH <2	
		+									
								-			
		1									
Reli <b>n. Elingswo</b> r	th Kyly	i il	164	Sign	1430	JUN 77°4"72008	Regerved By	Print Sign	JUN n 4 200	8 s = Soil	Matrix *  DS = Drum S
Relinquished By Date/Time							Received By Date/Time			SF = Serlime SO = Solid SI = Sludge W = Water	nt DI. — Drum I T — Tissue WI — Wine L — Liquid
Relinquished By					**	Date/Time	Received By		Date/Time	O = Oil A = Air	V = Veneta X - Other
Relinquished By						Date/Time	Received By		Date/Time		
FINAL SAMPL DISPOSITION		Method	d (e.g., 1	Return to	customer, per	lab procedure, used in pro	ocess)	Disposed By		[	ate/Time

FLUOR HAN	FORD		101	-050			//SAMPLE AN			C.O.C. /	108-037-5
-11	-		1701	-030	Contact/F		DUE 7180		elephone No.	MSIN	FAX
ollector R. E	ingsworth				Steve T				509-373-5869	MISIN	FAX
F No.					Sampling			P	urchase Order/Char	rge Code	
i08-037 oiect Title					Hanfor			Ie	a Chest No	7 Temp	
2UP1, MAY 2001					14.	NF-N-S	506-40		e Chest No	57 Tellin	•
inned To (Lah)					Method o	f Shipment		В	ill of Lading/Air Bil	II No.	
TestAmerica Inco	rnorated Ric	hland			Govt. V				ffsite Property No.		
otocol SURV						P	riority: 45 Days	0	lisite Froperty No.		
OSSIBLE SAMP  ** Contains Rad leasable per DOE Ord	oactive Materia	at concen		are not regulat	ed for transportation per	19 CFR but are not	SPECIAL INSTRUCT			Total Activity Day	emption: Yes 🗹 No
Sample No.	I.ab ID	*	Date	Time	No/Type Container		Sa	ample Analysis			Preservative
B1V657		W	400	1107	1x20-mL P	Activity Scan			Non	е	
B1V657		w	1	1101	2x1000-mL G/P	C14_LSC: C-14	4 (1) -		Non	e	
31V657		w	1		1x4000-mL G/P					03 to pH <2	
B1V657		w	1		2x4000-mL G/P	GAMMALL_GS: List-1 (9) — HNO3 to pH <:  1129LL_SEP_LEPS_GS_LL: I-129 (1) — None					
31V657		w	-		2x1000-mL G/P	Selenium-79		03 to pH <2			
31V657		W	-		3x1000-mL G/P		PRECIP_GPC: Sr-90 (1)	O3 to pH <2			
31V657		W			1x1000-mL G/P	UISO_PLATE_	AEA: LIST-1 (3)		ПИС	03 to pH <2	
Relinquished By R. En Relinquished By Relinquished By	Print Print	A.	9 Sign	JU JU	Date/Time	Received By  Received By  Received By	Print SLANE 7	Sign (	Date/Time	S = Soil SE = Sedimet SO = Solid SI = Studge W = Water O = Oil A = Air	Matrix *  DS - Drum Si  DI Drum I.  T - Tissue  WI - Wine  I Lionid  V - Vepetati  X - Other
Palinguish of D.						interceived BV					
Relinquished By					Daginic				Date Time		



Dzte	Time Received: 64	08 1430	GM Screen R	esult 0,1K
Clien	it: Paw	SDG #: WOS	424 NAI   SAF	#: ID8-037 NA[]
Wor	k Order Number: <u>18</u> F	050195	Chain of Custody #	IO8-037-5,-6,-75
Ship	ping Container ID:		Air Bill #	
1.	Custody Seals on shipping o	ontainer intact?	NA[] Yes[]	No [ ]
2.	Custody Seals dated and sign	ned?	NA[] Yes	No [ ]
3.	Chain of Custody record pre	sent?	NA[] Yes[]1	No [ ]
4.	Cooler Temperature:	NA [7 5	5. Vermiculite/packing mate	erials is NA [ Wet [ ] Dry [ ]
6.	Number of samples in shipp	ing container: 3		
7.	Sample holding times excee	ded?	NA [ Yes [ ] ]	No [ ]
8	Samples have: Tape Custody Seals		Hazard Approp	Lables oriate Sample Lables
9.	Samples are: In Good Condition Broken	on		g air Bubbles requiring no head space.)
10.	Sample pH taken? NA[]	pH<2 / pH>2	pH>9[] Amount H	NO <sub>3</sub> Added
11.	Sample Location, Sample C *For documentation only. N		d.	
12.	Were any anomalies identifi	ed in sample receipt?	Yes [ ] ]	Not
13.	Description of anomalies (in	clude sample numbers): _		
Sam	ple Custodian:	AR		Date: 6408
	Client Sample ID	Analysis Requested	Condition	Comments/Action
Clien	nt Informed on	by	Person Conta	cted
	No action necessary; process a			
. ,				
Proje	ect Manager		Date	

FLUOR HA	NFORD						CUSTODY	/SAMPLE A	NALYSIS I	REQUEST		S.O.C. #	08-005-167
				18	F050			05424	New 07 2	1.08		Page	<u>1</u> of <u>1</u>
Collector R. Emr	gsworth					ontact/Re				Telephone No. 509-373-5869	MSIN	FA	AX
SAF No.					Sa	ampling (	Origia			Purchase Order	Charge Code		
508-005						Hanford	Site			e di an		NP.	
Project Title SURY, MAY 20	08					HN	F-N-500	+-16		Ice Chest No.		Temp.	
Shinned To (Lah)	-					ethod of	Shipment			Bill of Lading/A	ir Bill No.		
TestAmerica Inc. Protocol	ornorated Ric	hland				Govt. Ve			ar turning Carlo	Offsite Property	No		
SURV							Pr	riority: 45 Days		Olisite Property	140.		
POSSIBLE SAMP  ** ** Contains Rac releasable per DOE Or	lioactive Materia	al at con	centrations that	are not regulat	ed for transports	ation per 49	OCFR but are not	SPECIAL INSTRU Site-Wide Generator K	CTIONS Hole nowledge Information F	d Time orm applies.	Total Acti	vitv Exempti	on: Yes ⊻ No L
Sample No.	Lab ID	+	Date	Time	No/Type C	ontainer			Sample Analysis				Preservative
B1V7V9		W	3.08	0750	1x20-mL F		Activity Scan				None	•	
B1V7V9		W		1	2x4000-ml	_ G/P	I129LL_SEP_LE	PS_GS_LL: I-129 (1)			None		
B1V7V9		W	1		1x4000-ml	G/P	GAMMALL_GS:	List-1 (9)			HNO3 to pH <2		
									KPF	2X			
								101(3)3	71				
								B.A.	5d ii				
								W-2					-
			-										
Relinquished By R. Elingswork Relinquished By	th Print	4	ay Sign		JUN 05 Date/Tin	2008 1305	Received By Received By	Print  LAVE 7,	Sign 4	Date/Time Date/Time Date/Time	SE = SO = SL =	Soil Sediment Solid Shidre	DS = Drum Solid DL = Drum Liani T = Tissue WI = Wine
Relinquished By					Date/Tin	nė	Received By	<u> </u>	· · · · · · · · · · · · · · · · · · ·	Date/Time	0	Water Oil Air	I Limid V - Veretation X - Other
Relinquished By					Date/Tin	ne	Received By			Date/Time			
FINAL SAMPL DISPOSITION		Method	(e.g., Return to	customer, per	lab procedure, u	ised in proc	ess)	Dis	sposed By			Date/Ti	me

ollector R. Ellings  AF No. S08-005 roject Title SURV MAY 2008 hinned To (1.2b).  TestAmerica Incornoral rotocol SURV OSSIBLE SAMPLE HA  ** Contains Radioactive leasable per DOE Order 5400	AZARDS/P	EMARK			Contact/Re Steve In Sampling ( Hanford  Method of Govt Ve	quester ent  Origin Site  - N - Se Shipment chicle		Telephone No. 509-373-5869 Purchase Order/ Ice Spest No. Bill of Lading/Ai	MSIN Charge Code Tem	Page 1 of 1  FAX  D.
ICRY. MAY 2008 hinned To (Lab) TestAmerica Incornoral rotocol SURV OSSIBLE SAMPLE II/ ** Contains Radioactive	AZARDS/P	EMARK		re not regulat	Steve In Sampling ( Hanford  Method of	ent Origin Site F - N - S Sbipment thicle		Telephone No. 509-373-5869 Purchase Order/	Charge Code Tem	
ICRY. MAY 2008 hinned To (Lab) TestAmerica Incornoral rotocol SURV OSSIBLE SAMPLE II/ ** Contains Radioactive	AZARDS/R	EMARK		re not regulat	Sampling ( Hanford  Hanford  Method of	Origin Site 	oc. Ho	Purchase Order/	Tem	p.
tinned To (Lab) TestAmerica Incornoral rotocol SURV OSSIBLE SAMPLE II/ * ** Contains Radioactive	AZARDS/R	EMARK		are not regulat	Method of	F-N-5 Shipment	ic. Ho			D.
INLINY MAY 2008 Intend To (Lab) TestAmerica Incornoral rotocol SURV OSSIBLE SAMPLE II/ ** Contains Radioactive	AZARDS/R	EMARK		re not regulat	Method of	Shipment hicle	c. Ho			g.
TestAmerica Incornoral rotocol SURV OSSIBLE SAMPLE II/ ** Contains Radioactive	AZARDS/R	EMARK		re not regulat	Method of	Shipment hicle		Bill of Lading/Ai	r Bill No.	
SURV OSSIBLE SAMPLE IIA ** Contains Radioactive	AZARDS/R	EMARK		re not regulat	Gove					
SURV OSSIBLE SAMPLE II/ * ** Contains Radioactive	ve Material at o	oncentration		re not regulat			1 - 1t - 45 Davis	Offsite Property	No.	
** Contains Radioactive	ve Material at o	oncentration		re not regulat		Г	riority: 45 Days SPECIAL INSTRUCTIONS	lold Time		cemption: Yes 🗹 No
					ed for transportation per 49	CFR but are not	Site-Wide Generator Knowledge Informat	on Form applies.		
Sample No. La	ab ID	Da	ate	Time	No/Type Container		Sample Analysis			Preservative
B1V7V8	V	16-	509	1114	1x20-mL P	Activity Scan			None	
B1V7V8	V			1	2x4000-mL G/P	I129LL_SEP_LE	PS_GS_LL: I-129 (1)		None	
31V7V8	V	/	_	-	1x4000-mL G/P	GAMMALL_GS:	: List-1 (9)		HNO3 to pH <2	
							KPF	3=		
Relinquished By Relinquished By Relinquished By	Private	M	Sign		JUN Date/Time Date/Time	Received By  Received By	Print Sign	JN 0 5 2008  Date/Time	SS Soil SF - Sedim SO - Solid SI - Sludge W - Water O - Oil A = Air	T - Tissue WI - Wine
Relinquished By					Date/Time	Received By		Date/Time	1	



Date/Time Received:	16-05-08 13	05 GM Screen R	esult
Date Time Received:	SDG #: WOS	5424 NALL SAF	4: 508 005 NALL
Work Order Number: 72	3F050319	Chain of Custody # _	508-005-167, 16
Shipping Container ID:		Air Bill#	
Custody Scals on shipping	container intact?	NA[] Yes[ <b>]</b> /!	No [ ]
Custody Seals dated and s	igned?	NA[] Yes[]! NA[] Yes[]!	No [ ]
3 Chain of Custody record p	oresent?	NA[] Yes[]!	No [ ]
4. Cooler Temperature:	NA [/	5. Vermiculite/packing mate	erials is NA [ Wet [ ] Dry [ ]
6. Number of samples in ship	pping container		
7. Sample holding times exce	seded?	NA [] Yes [] I	No[]
8 Samples have: Tape Custody Seals		Hazard	Lables oriate Sample Lables
9. Samples are: In Good Condi Broken	tion		g ur Bubbles requiring no head space )
It Sample pH taken? NA [	] pH<2]/	pH>9 [ ] Amount H	NO3 Added None
11. Sample Location, Sample	(		
12. Were any anomalies identi	fied in sample receipt?	Yes[] 1	No [ ]
(3) Description of anomalies (	include sample numbers): _		
Sample Custodian:	0		_
Chent Sample ID	Analysis Requested	Condition	Comments/Action
Client Informed on	by	Person Conta	cted
1 No action necessary: process	as is.		
Project Manager		Date	

FLUOR HAI	NFORD				CHAIN OF		1/SAMPLE ANAI	_	C.o.	W08-005-434
Collector R. E.	ngsworth					Requester	Jist Nacce	Telephone No.	MSIN	FAX
					Steve			509-373-5869		
AF No. W08-005					Sampling Hanfo			Purchase Order	/Charge Code	
roiect Title								Ice Chest No.	Te	mp.
RCRA MAY 200	08					HNF. N - So of Shipment	of lie			
inned Tn (Lab) TestAmerica Inc.	Dia	la la mal				of Shipment Vehicle		Bill of Lading/A	Air Bill No.	
rotocol	ornorated Ric	пізли			Clovi.			Offsite Property	v No.	
RCRA	******					P	riority: 45 Days SPECIAL INSTRUCTION			Exemption: Yes V No
eleasable per DOE Or	der 5400.5 (199	0/1993)	)		ted for transportation per		Site-Wide Generator Knowledg			
Sample No.	Lab ID	*	Date	Time	No/Type Containe		Sample	e Analysis	I	Preservative
31V8C6		W	6/5/08	1210	1x20-mL P	Activity Scan			None	
B1V8C6		W	1	1	1x500-mL P	9223_COLIFOR	RM: Coliform (1)		Na2S2O3 Cool~4C	
							KPI	F3R,		
		+	-							
		1			- Commence of the Commence of		414-0			
					<del> </del>	-				
		+			-	-				
			L	1	<u> </u>		· · · · · · · · · · · · · · · · · · ·			
Relinquished By  R. Ellingsworth  Relinquished By	Prin	g m	Sign	J	UN 0 5 2008	S Received By Received By	Print Sign	JUN (***5 <sup>T</sup> <b>20</b>	S = Soil SF = Sedi	ment DL Drum Lic
1						, , , , ,			SO = Solid SL = Shid W = Wate	ge WI - Wine

R. Ellingsworth	KN 9 may	0011 11 3 2000	KIKLILANE TAC	1305	S = Soil DS = Drum Solid
Relinquished By	M	Date/Fime	Received By	Date/Time	SF         Sediment         DL         Drum Liqui           SO         Solid         T         - Tissue           SL         S Shudge         WI         Wine           W         - Water         L         - Liquid
Relinquished By		Date/Time	Received By	Date/Time	O = Oil V - Venetation A = Air X - Other
Relinquished By		Date/Time	Received By	Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to	customer, per lab procedure, used in pro	ocess) Dispos	ed By	Date/Time



Date	e/Time Received: 06	05.08 1305	GM Screen	Result . of
			424 NA[] SAI	F#: WOS.005 NA   ]
Wor	rk Order Number:	F050322	Chain of Custody	# W08-005-434
Ship	oping Container ID:		Air Bill#	
1.	Custody Seals on shipping of	container intact?	NA[] Yes[/	No [ ]
2.	Custody Seals dated and sig	ned?	NA[] Yes [/]	No [ ]
3.	Chain of Custody record pre	esent?	NA[] Yes i	No [ ]
4.	Cooler Temperature:	NA [/] 5.	Vermiculite/packing m	aterials is NA [] Wet [] Dry []
6.	Number of samples in shipp	ing container:		
7.	Sample holding times excee	ded?	NA[] Yes[]	No[]
8	Samples have: Tape Custody Seals		Haza	rd Lables opriate Sample Lables
9.	Samples are: In Good Condition Broken	on	Leak Have (Only for sample	ing Air Bubbles es requiring no head space.)
10	Sample pH taken? NA [ ]	pH<2[] pH>2]	pH>9 [ ] Amount	HNO3 Added NOVE
li.	Sample Location, Sample C *For documentation only. N			
12.	Were any anomalies identifi	ed in sample receipt?	Yes [ ]	Nol
13.	Description of anomalies (in	iclude sample numbers):		
	DI	2		
Sam	ple Custodian:	)		Date: 06 05.08
	Client Sample ID	Analysis Requested	Condition	Comments/Action
Clien	it Informed on	by	Person Con	tacted
: ! 1	No action necessary; process a	s is.		
Proje	ect Manager		Date	

FLUOR HA	NFORD								IS REQUEST		C.O.C.#	108-0	
				18	F0503.		105424	Nue	07.21.08		Page		1
Collector A.	Ellingsworth					ct/Requester			Telephone No. 509-373-5869	MSI	F	AX	
SAF No. 108-037					Sampli	ling Origin			Purchase Order				
Project Title 2UP1, MAY 200	18					HNE N-	50C-11	_	Ice Chest No.		Temp.		
hinned To (Lab)						od of Shipment			Bill of Lading/A	ir Bill No.			
TestAmerica Inc	ornorated Ric	hland.			Goyt	rt. Vehicle							
rotocol SURV						Pr	riority: 45 Days		Offsite Property	No.			
** Contains Ra eleasable per DOE O	dioactive Materia	al at con	centrations that	are not regula	ted for transportation p	per 49 CFR but are not		TRUCTIONS ator Knowledge Information	Hold Time ation Form applies.	Total Act	ivitv Exemp	tion: Yes	Z No L
Sample No.	Lab ID	*	Date	Time	No/Type Contain	iner		Sample Analy	sis			Preservativ	ve .
B1V695		W	6-508	1029	1x20-mL P	Activity Scan				None			
B1V695		w		1	2x4000-mL G/F	P I129LL_SEP_LE	EPS_GS_LL: I-12	9 (1)		None			
								k	PF4V				
							*****						
3													
		2											-
Relinquished By R. Ellingswe Relinquished By	orth Prior	19	ny		JUN 0 5 Z008	Received By	Print JLANE	Sign TA •	JUN 0 5 2008  Date/Time	SE = SO = SI. 4	Soil Sediment Solid Shidre	DI - T - WI -	- Drum Solid Drum Liqui Tissue Wine
Relinquished By Date/Tri						Received By			Date/Time	0 =	Water Oil Air	v -	<ul><li>Limid</li><li>Veretation</li><li>Other</li></ul>

FINAL SAMPLE DISPOSITION

Relinquished By

Disposal Method (e.g., Return to customer, per lab procedure, used in process)

Date/Time

Received By

Disposed By

Date/Time

Date/Time

FLUOR HAI	NFORD								E ANALYSI		UEST		C.C			37-53
				T8FO	50327			5424	Due 07						<u>l</u> of	1
Collector R. EM	ngsworth					act/Req				Telepho 509-	one No. 373-5869		MSIN	FAX	k .	
SAF No.					Samp	oling Or	rigin				se Order/	Charge C	ode			
108-037						nford S				Ina Che	et No			Temp.	-	
Project Title 2UPL MAY 200	8				+	the	-N-506	14		Ice Che	الإنت			entp.		
Shinned To (Lah)	en a company de la company						hipment			Bill of	Lading/Ai	r Bill No.				
TestAmerica Inco	omorated Ric	hland			Go	vt. Veh				Offsite	Property	No				
SURV							Р	riority: 45 Days		Olisite	Tiopetti					
POSSIBLE SAMP  ** ** Contains Rad releasable per DOE Or	ioactive Materia	at concent	ARKS trations that a	re not regulate	ed for transportation	n per 49 (	CFR but are not		STRUCTIONS rator Knowledge Informa	Hold Time tion Form applies	5.	To	tal Activit	v Exemption	: Yes	No !
Sample No.	Lab ID		Date	Time	No/Type Conta	ainer			Sample Analys	is				Р	reservativ	/e
B1V691		WL	28	844	1x20-mL P		Activity Scan					None				
B1V691		WI	11		2x4000-mL G	S/P	I129LL_SEP_L	EPS_GS_LL: I-1	29 (1)			None				
										7F46						
Relinquished By Relinquished By Relinquished By	sworth (Print	9-	Sign		JUN Date/Time 13 Date/Time Date/Time	05	Received By Received By	Print LJ LANE	Sign TAL	JUN (	Date/Time  7 5 200  Date/Time	1305	S = Si SE = Si SO = Si SI. = Si W - W O - O A = A	ediment olid udge /ater il	DS - DI - T - WI - I, -	Drum Soli Drum Lim Tissue Wine Limid Veretation Other
Relinquished By					Date/Time		Received By				Date/Time	•				
FINAL SAMPL DISPOSITION		Method (e.	g., Return to	customer, per	lab procedure, used	in proce	ss)	300,500	Disposed By					Date/Tim	С	



Date	Time Received: _ O 6 ·	05.08 1305	GM Screen R	tesult07
Clien	1: Pow	SDG #: W059	124 NAL SAF	#: IO8-037 NALL
Wor	k Order Number: J8F	= 050327	Chain of Custody#	IU8-037-61,53
Ship	ping Container ID:		Air Bill#	
1.	Custody Seals on shipping o	ontainer intact?	NA[] Yes[	No[]
2	Custody Seals dated and sign	ned?	NA[] Yes[/]	
3	Chain of Custody record pre	sent?	NA[] Yes[]	
4	Cooler Temperature:	NA [/]	5. Vermiculite/packing mate	erials is NA / Wet [ ] Dry [ ]
6	Number of samples in shippi	ng container: 2		
7.	Sample holding times exceed	ded?	NA [/] Yes [ ]	No[]
8	Samples have: Tape Custody Seals		Hazard Approp	Lables oriate Sample Lables
9.	Samples are: In Good Condition Broken	in		g vir Bubbles requiring no head space.)
10.	Sample pH taken? NA[]	pH<2[] pH>2[/	pH>9[] Amount H	NO3 Added Love
11.	Sample Location, Sample Co *For documentation only. N		d.	
12.	Were any anomalies identified	ed in sample receipt?	Yes [ ]	Noll
13.	Description of anomalies (in	clude sample numbers):		
Samp	ple Custodian:	)		Date: 4 5 08
	Client Sample ID	Analysis Requested	Condition	Comments/Action
1				
	Informed on		Person Conta	cted
	to action necessary; process as	s is.		
Proie	ct Manager		Date	

FLUOR HA	NFORD				CHAIN OF	CUSTODY	/SAMPLE ANALYSIS	REQUEST	C.o.c. #	S08-005-182
			781	F090	190 W	205424	DUE 72408 K	PLVT	Pt	age 1 of 1
Collector	R.D	). Julian			Contact/ Steve	/Requester		Telephone No. 509-373-5869	MSIN	FAX
SAF No.		· Ounce i				g Origin		Purchase Order		
S08-005					Hanfo	ord Site				
roiect Title SURV. MAY 200	0.8					HNF-N-	506-12	Ice Chest No.	this Temp	
hinned To (Lah)					Method	of Shipment		Bill of Lading/A	Air Bill No.	
TestAmerica Inco	ornorated Ric	hland	NAME AND ADDRESS OF THE OWNER, WHEN	Masses originable sinterme	Govt.	Vehicle		Offsite Propert	y No.	
SURV						Pr	riority: 45 Days	Olisite Tropert		
POSSIBLE SAMP  ** Contains Rad releasable per DOE Ore	lioactive Materia	al at conce		are not regula	ated for transportation per	r 49 CFR but are not	SPECIAL INSTRUCTIONS Site-Wide Generator Knowledge Information	Hold Time on Form applies.	Total Activity Exe	mption: Yes 🗹 No 🗔
Sample No.	Lab ID		Date	Time	No/Type Containe	er	Sample Analysis			Preservative
B1V7X5		W	06/05/08	1056	1x20-mL P	Activity Scan			None	
B1V7X5		W	16	1	2x4000-mL G/P	1129LL_SEP_LE	EPS_GS_LL: I-129 (1)		None	
							4			
Relinquished By Relinquished By	EPAG	6/1	Sign	7///	Date/Time	Received By  Received By  Received By	EPARD Sign	Date/Time Date/Time Date/Time	S = Soil   SF = Sedimen   SO = Solid   SI. = Shidge   W - Water   O - Oil   A - Air	Matrix *  DS = Drum Solid t DL = Drum Limi T = Tissue WI = Wine L = Limid V = Veretation X = Other
FINAL SAMPL		Method (	e.g., Return to	customer, pe	r lab procedure, used in p		Disposed By			ate/Time



Date	Time Received: 60	108 1430	GM Screen R	tesult_OilK						
Clier	nt: PGW	SDG #: WOS	424 NAL) SAF	#: 508-005 NA[]						
Wor	k Order Number: <u>18</u> f	-090190	Chain of Custody #	508-205-182						
Ship	ping Container ID:		Air Bill #							
1.	Custody Seals on shipping	container intact?	NA[] Yes	No[]						
2.	Custody Seals dated and s	igned?	NA[] Yes[]	No[]						
3.	Chain of Custody record p	resent?	NA[] Yes	No[]						
4.	Cooler Temperature:	NA [7	5. Vermiculite/packing mate	erials is NA [ Wet [ ] Dry [ ]						
5.	Number of samples in ship	oping container:								
7.	Sample holding times exceeded? NA [ Yes [ ] No [ ]									
8	Samples have:  Tape  Custody Seals  Hazard Lables  Appropriate Samp									
9.	Samples are: In Good Condig Broken	tion		g ir Bubbles requiring no head space.)						
10.	Sample pH taken? NA [	] pH<2[] pH>2[]	pH>9[] Amount H	NO <sub>3</sub> Added						
11.	Sample Location, Sample *For documentation only.	Collector Listed? * No corrective action neede	d.							
12.	Were any anomalies identi	fied in sample receipt?	Yes[ ] ]	Noit						
13.	Description of anomalies (	include sample numbers): _								
Sam	ple Custodian:	AR		Date: 6908						
	Client Sample ID	Analysis Requested	Condition	Comments/Action						
Clien	t Informed on	by	Person Conta	cted						
[]	lo action necessary; process	as is.								
Dunis	et Manager		Data							
Liols	ct Manager		Date							

FLUOR HAN	NFORD				CHAIN OF		SAMPLE ANALYS		Γ	I08-043-11	
				8F096	197 WI		Due 72408			Page <u>1</u> of <u>1</u>	
ellector Hamilton	n				Contact/Re Steve Tre			Telephone No. 509-373-5869	MSIN	FAX	
AF No.					Sampling C	Sampling Origin Purchase Order					
roject Title					Hanford	Hanford Site  HNF-N. 506-15  Ice Chest No.			C. K. man Temp.		
2UP1, JUNE 200	8						506-15		SWSTOCK		
TestAmerica Inco	rnorated Ric	hland			Method of Govt. Ve			Bill of Lading/A	Air Bill No.		
rotocol	minumen		·		NAT. 10		Priority: 45 Days  Offsite Property No.				
SURV POSSIBLE SAMPI ** ** Contains Radi eleasable per DOE Ord	ioactive Materia	l at con	centrations the	it are not regulat	ed for transportation per 49	CFR but are not	SPECIAL INSTRUCTIONS 200 Area Generator Knowledge Infor	Hold Time rmation Form applies.	Total Activity	Exemption: Yes No .	
Sample No.	Lab ID		Date	Time	No/Type Container		Sample Ana	ılysis		Preservative	
B1VKT9		w	6908	1018	1x20-mL P	Activity Scan		None			
B1VKT9		w	1	1	2x4000-mL G/P	I129LL_SEP_LER	PS_GS_LL: I-129 (1)	None			
B1VKT9		w			2x1000-mL G/P	C14_LSC: C-14 (		None			
B1VKT9		w			1x4000-mL G/P	GAMMALL_GS: I		HNO3 to pH <2			
B1VKT9		W			1x1000-mL G/P		TE_AEA:Np-237(1)	HNO3 to pH <2			
B1VKT9		W			2x1000-mL G/P	Selenium-79 -		HNO3 to pH <2			
B1VKT9	-	w	1		1x1000-mL G/P	UISO_PLATE_A	EA: List-1 (3) —	HNO3 to pH <2			
Relinquished By	Print	2 11	Stign	7	Date/Time	Recomed By	Print Sign	Date/Time	1420	Matrix *	
Relinquished By KE Hamilton Keum E Hamilton 1 9 2009 / Date/Time						Received By	SLANE TAL	6908 Date/Time	S = Sni SE = Ser SO = Sol SI = Slu W = Wa	firment DI. = Drum Lin lid T = Tissue udge WI = Wine	
Relinquished By Date/Time						Received By		Date/Time		V - Vegetation	
Relinquished By Date/Time						Received By Date/Time					
FINAL SAMPL	Disposal	Method	d /a a Datum	to customer ner	lab procedure, used in proc	rege\	Disposed By			Date/Time	

Disposal Method (e.g., Return to customer, per lab procedure, used in process)

FINAL SAMPLE DISPOSITION

FLUOR HANFORD  CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST  J8F090197 W05424 Due 724 08 KPLWR  C.O.C.#  108-043-12											12	
			18	1F09	0197 h	105424	DUE 724 08	KPLWR		Page <u>1</u> of <u>1</u>		
CollectRE Hamilto	ก				Contact/Re Steve Tre	quester		Telephone No. 509-373-5869	MSIN	FAX		
AF No.				-	Sampling (	Prigin		/Charge Code				
J08-043 roject Title					Hanford		~	Ice Chest No.	Close To	mp.	-	
2UP1, JUNE 200		,					506.15		worde	imp.		
TestAmerica Inc		hland			Method of Govt. Ve			Bill of Lading/A	ir Bill No.			
rotocol	mioraen Ka	шалы			COTE VI		lority: 45 Days	Offsite Property No.				
OSSIBLE SAME  ** Contains Ra  eleasable per DOE O	dioactive Materia	al at conce		are not regulat	ed for transportation per 49	CFR but are not	SPECIAL INSTRUCTIONS 200 Area Generator Knowledge Info	Hold Time ormation Form applies.	Total Activity	Exemption: Yes 🗹 No	0	
Sample No.	Lab ID		Date	Time	No/Type Container		Sample An	alysis		Preservative		
31VKV0		W	6.9.08	1018	1x20-mL P	Activity Scan	1704-14	None	1			
B1VKV0		w	1	1	2x4000-mL G/P	1129LL_SEP_LE	PS_GS_LL: I-129 (1)	None				
31VKV0		W			2x1000-mL G/P	C14_LSC: C-14	(1)	None				
B1VKV0		W			1x4000-mL G/P	GAMMALL_GS:	List-1 (9)	HNO3 to pH <2				
31VKV0		W			1x1000-mL G/P	NP237_LLE_PL	ATE_AEA:Np-237(1)	HNO3 to pH <2		_		
B1VKV0		w			2x1000-mL G/P	Selenium-79		HNO3 to pH <2				
31VKV0		w			1x1000-mL G/P	UISO_PLATE_A	EA: List-1 (3)		HNO3 to pH <2			
											_	
Relinquished By KE Hamilton	Kum	EAS	Sign	JUN 0	9 2008 /480	Received by	Print Sign	Date/Time		Matrix *		
celinquished By					Date/Time	Received By		Date/Time	SO = Soli St = Slud W = Wat	d T = Tiss  lpe WI = Win  er 1. = Lim	ne mid	
Relinquished By					Date/Time	Received By		Date/Time	O = Oil A = Air	V - Ver X - Othe		
Relinquished By					Date/Time	Received By		Date/Time				
FINAL SAMPI	F. Disposal	Method (	e.g., Return to	customer, per	lab procedure, used in proc	eess)	Disposed By			Date/Time		

DISPOSITION



Date	Time Received: 69	08 1420	GM S	creen Result Ocl K					
Clien	t: PGW	SDG #: WO5	424 NA[]	SAF #: 108-043 NA[]					
Wor	k Order Number: <u>J8</u>	F090197	Chain of Cus	tody # 108-043-11,-12					
Ship	ping Container ID:	744	Air Bill #						
	Custody Seals on shipping	container intact?	NA[] Yes [ No[]						
2.	Custody Seals dated and si	gned?	NA[] Yes [] No[]						
3.	Chain of Custody record pr	resent?	NA[] Y	'es [ No [ ]					
4.	Cooler Temperature:	NA [X S	5. Vermiculite/pack	ting materials is NA [  Wet[] Dry[]					
6.	Number of samples in ship	ping container:							
7.	Sample holding times exce	eded?	NA []	/es[] No[]					
8	Samples have: Tape Custody Seals		Hazard Lables Appropriate Sample Lables						
9.	Samples are: In Good Condit Broken	ion		Leaking Have Air Bubbles samples requiring no head space.)					
10.	Sample pH taken? NA [ ]	pH<2 [ ] pH>2 [ ]	pH>9[] An	nount HNO3 Added					
. 11.	Sample Location, Sample ( *For documentation only.	Collector Listed? * No corrective action needer	d.						
12.	Were any anomalies identify	fied in sample receipt?	Yes[] No [						
13.	Description of anomalies (i	nclude sample numbers): _							
Samı	ole Custodian:	DIR		Date: _ 6 9 0 8					
[	Client Sample ID	Analysis Requested	Condition	on Comments/Action					
Clien	t Informed on	by	Perso	on Contacted					
[] N	lo action necessary; process	as is.							
Projec	ct Manager		I	Date					

FLUOR HAN	FORD					CUSTODY		W08-006-36				
			78E	=100:			DUE 7 2508 K	KPNCT		Page 1 of 1		
ollector Roy She	pard				Contact/l Steve T	Requester		Telephone No. 509-373-5869	Telephone No. MSIN FAX			
AF No.	mrord				Sampling				Purchase Order/Charge Code			
W08-006					Hanfor	d Site		CI IN				
oiect Title RCRA, JUNE 200	98					HNF-N	506.15	Ice Chest No.	(w-1	Temp.		
inned To (Lab)	-11912141FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF					f Shipment		Bill of Lading/A	ir Bill No.			
TestAmerica Inco	rnorated Ric	hland			Govt. \	/ehicle		Official Description	. No.			
rotocol RCRA						Pr	riority: 45 Days	Offsite Property No.				
OSSIBLE SAMPI  * ** Contains Radi leasable per DOE Ord	oactive Materia	at conc		ire not regulate	ed for transportation per	49 CFR but are not	SPECIAL INSTRUCTIONS Site-Wide Generator Knowledge Informa	Hold Time ation Form applies.	Total Acti	vity Exemption: Yes 🗹 No		
Sample No.	Lab ID		Date	Time	No/Type Container		Sample Analys	is		Prescrvative		
B1VR34		W	6-10-08	1015	1x500-mL P	9223_COLIFOR	9223_COLIFORM: Coliform (1) Na2S2O3 Cool~4C					
B1VR34		W	7	1	1x20-mL P	Activity Scan		None				
										4		
	7		A									
Relianushid By	19	11		TUN 15	2008 Fime 101	Received D.	Print Base	N 1 0 2008	S -	Matrix *  Soil DS = Drum Sc		
Relinquished By	V Z	5	018		Date/Time 13	Received By	1	Date/Time	SO =	Solid T - Tissue Shidge WI - Wine		
	JA Z	5	JSn.		Date/Time 132	Received By	LANE TAL	Date/Time  4 10 08 13  Date/Time	SO = SL = W = O =	Solid T - Tissue Shudge WI - Wine		
Relinquistred By	A.Z	5.	JSp.		-6/10/08	RU	1	61008 13	SO = SI W = O = A =	Solid   T   Tissue		



Date	Time Received: 6 1	008 1320	GM Screen I	Result OIIK						
Clien	i: Paw	SDG #: WOS	YZY NA[] SAF	#: W08-006 NA[]						
Wor	k Order Number: <u>J</u> &	F100263	Chain of Custody #	W08-006.36						
Ship	ping Container ID:		Air Bill #							
1.	Custody Seals on shipping	container intact?	NA[] Yes	No [ ]						
2.	Custody Seals dated and si	gned?	NA[] Yes	No [ ]						
3.	Chain of Custody record p	resent?	NA[] Yes	No [ ]						
4.	Cooler Temperature:	NA IT	5. Vermiculite/packing ma	terials is NA [ Wet [ ] Dry [ ]						
6.	Number of samples in ship	pping container:								
7.	Sample holding times exceeded?  NA [ Yes [ ] No [ ]									
60	Samples have: Tape Custody Seals	d Lables priate Sample Lables								
9.	Samples are: In Good Condi Broken	tion	Leakin Have  (Only for samples	ng Air Bubbles s requiring no head space.)						
∶0.	Sample pH taken? NA [	] pH<2[] pH>2.	pH>9[] Amount F	HNO3 Added						
11.	Sample Location, Sample *For documentation only.	Collector Listed? * No corrective action neede	d.							
12.	Were any anomalies identif	fied in sample receipt?	Yes[]	No IT						
13.	Description of anomalies (	include sample numbers): _								
		100								
Sam	ple Custodian:			Date: 61008						
	Client Sample ID	Analysis Requested	Condition	Comments/Action						
Clien	it Informed on	by	Person Cont	acted						
	No action necessary; process									
[] [	NO ACTION NECESSALY, PROCESS	из 13.								
Pro:e	ct Manager		Date							

FLUOR HAI	NFORD				CHAIN	OF CUSTODY	//SAMPLE ANAI	LYSIS R	EQUEST	C.O.C	I08-038-16
			78E	-100	266	W05424	DUE 7 25 08	KPN	DQ		Page <u>1</u> of <u>1</u>
Hector	uor Hariford	310%			Con	ntact/Requester		Т	'elephone No. 509-373-5869	MSIN	FAX
F No.	A Sixt and				San	npling Origin		P	urchase Order/Char	ge Code	
ios-038 oject Title						HNFASO6-17	30.0	1	ce Chest No. 5-02	Mar Glan	yp.
inned To (Lab)	8				Met	thod of Shipment			Bill of Lading/Air Bill		38
TestAmerica Inc	omorated Ric	hland				Govt. Vehicle				140.	
otocol CERCLA						P	Priority: 45 Days  Offsite Property No.				
OSSIBLE SAMP  * ** Contains Rad easable per DOE Or	lioactive Materia	at concentr	RKS rations that a	re not regulat	ed for transportation	ion per 49 CFR but are not	SPECIAL INSTRUCTION 200 Area Generator Knowledge			Total Activity E	xemption: Yes 🗹 No
Sample No.	Lab ID	*	Date	Time	No/Type Cor	ntainer	Sample	e Analysis			Preservative
31V6C8		W G-	9-08	100,4	1x20-mL P		None				
31V6C8		W	1	1	2x4000-mL	G/P I129LL_SEP_L	P_LEPS_GS_LL: I-129 (1) None				
Relinquished By	valuation &	D.R. (2)	Sign	\_ 3	Date/Time  Lible 8  Date/Time	Den Spa 1320 Racival By 8 RRU	lane TAL	1g	Date/Time Date/Time Date/Time	S Soil SF Sedim SO Solid SL Sludøv W Water O Oil	T = Tissue WI = Wine
Relinquished By										A Air	X = Other

									S REQUEST	L	108-038-17	
		138	F100	266	wa	45424	DUE 71	1508	KPN D3	ı	age <u>l</u> of <u>l</u>	
inford			- No.	Co	ntact/Requ	uester			Telephone No. MSIN FAX			
TARKITTI T	ig.				Steve Trent Sampling Origin				509-373-5869 Purchase Order			
					Hanford Site							
					HNF-N-506-12			ice Chest No.	-621 Tem	D.		
					ethod of Sh	nipment						
orated Rich	land	***************************************			Govt. Vehi				Officia Property	u No		
						F			Olisite Property			
ctive Material	at conc		are not regula	ted for transporta	ition per 49 C	FR but are not				Total Activity Ex	emption: Yes 🗹 No 🗓	
Lab ID		Date	Time	No/Type Co	ontainer			Sample Analysis			Preservative	
	W	69-08	1004			Activity Scan None						
V6C9 W 2x4000-mL G/P   1129LL_SEP_LEPS_GS_LL:  -129						EPS_GS_LL:  -129	(1)		None			
GTON I'M	0/7	Fringly	Pearl D	Date/Tim	ne   320 F	Ph.	Print JLANE	Soils The	Date/Time	S = Soil   SE = Sedime   SO = Solid   SI = Sludge   W = Water	Matrix *  DS = Drim Si  DI = Drim I i  T = l'issue  WI = Wine  I, = Liquid  V = Vepetati  X = Other	
Relinquished By Date/					ne F	Received By			Date/Time	1		
	CARACTER AND CITY MATERIAL SALES ID	HAZARDS/REActive Material at conc 5400.5 (1990/1993)  Lab ID * W  W  GTON	Tint Sign	HAZARDS/REMARKS ctive Material at concentrations that are not regular \$400.5 (1990/1993)  Lab ID	San Date/Tin Date/Tin	Sampling Or Hanford Si HWF  Method of SI Goyl, Vehi  HAZARDS/REMARKS  ctive Material at concentrations that are not regulated for transportation per 49 C 5400.5 (1990/1993)  Lab ID    Date    Time    No/Type Container    W    4     2x4000-mL    P    W    Date/Time    Date/Time	Sampling Origin Hanford Site  #WF - N - 506  Method of Shioment Govt, Vehicle  P HAZARDS/REMARKS cive Material at concentrations that are not regulated for transportation per 49 CFR but are not 5400.5 (1990/1993)  Lab ID    Date	Sampling Origin    Handrad Site	Sampling Origin  Hanford Sile  #WF - N - 506 - 17  Wethod of Shioment Govt. Vehicle  Priority: 45 Days  SPECIAL INSTRUCTIONS 200 Area Generator Knowledge Informatis 5400.5 (1990/1993)  Lab ID  Date  Time  No/Type Container  No/Type Container  VV	Sampling Origin  Hamiltond Site  Priority: 45 Days  Offsite Propert  Hamiltond Site  Priority: 45 Days  SPECIAL INSTRUCTIONS  Hold Time  200 Area Generator Knowledge Information Form applies.  SEMINION Hold Time  200 Area Generator Knowledge Information Form applies.  Sample Analysis  Date Time  Received By  Date Time  Date Time  Date Time  Date Time  Received By  Date Time  D	Sempling Origin    Harfund Size	

FLUOR HA	NFORD						/SAMPLE ANALYS		C.O.C. #	108-038-10
- Llonford			18	F100	266 W	05424	DUE 72508	KPND4	P	age <u>1</u> of <u>1</u>
Collecter BREWIN	GTON:				Contact/R Steve T	lequester		Telephone No. 509-373-5869	MSIN	FAX
SAF No.					Sampling	Origin		Purchase Order		
108-038 Project Title	-				Llanford			Ice Cheet No.	Temp	
2ZP1, MAY 200	8				1	WF-N-5	66-12	Ice Chest No.	5-01	•
Test America Inc.	- Pareted Die	bland			Method of Govt. V	Shipment		Bill of Lading/A	ir Bill No.	
Protocol	amorated A.	manu			Glove y		dadha AE Dave	Offsite Property	v No.	
CERCLA POSSIBLE SAMP	T D ITA ZADI	DC/DF	MADKS				lority: 45 Days SPECIAL INSTRUCTIONS	Hold Time	Total Activity Eve	emption: Yes 🗹 No
** ** Contains Rad releasable per DOE Or	lioactive Materia	al at con	centrations that	are not regulat	sted for transportation per 4	9 CFR but are not	200 Area Generator Knowledge Inform		Mar (Marine See	mprior.
Sample No.	Lab ID	*	Date	Time	No/Type Container		Sample Anal	ysis		Preservative
B1V6C0		W	06/03/08	1226	1x20-mL P	Activity Scan	Scan None			
B1V6C0		W	1	L	2x4000-mL G/P	I129LL_SEP_LE	I129LL_SEP_LEPS_GS_LL: I-129 (1) None			
							and the second s			
	-		1.	1				11100		
Relinquished By	, Prince	R	Jun	le	Cholo8	Pen Spale	3 In James	Date/Time	S - Soil SF = Sedimer	Matrix *  DS - Drum Solid  DL - Drum Liqui
Relinquished By	Sparks	1/	lang	relog	Date/Time 1320 Clidas Date/Time		LANE TAL	Date/Time	SO = Solid	T - Tissue WI - Wine L - Limit V - Vepetation X - Other
Relinquished By					Date/Time	Received By		Date/Time		
FINAL SAMPL DISPOSITION		Method	(e.g., Return to	customer, per	lab procedure, used in pro	ocess)	Disposed By		D	ate/Time



Date	/Time Received: 610	08 1320		GM Screen R	esult O.IK		
Clier	nt: PGW	SDG #: WOS	424	_NA[] SAF#	1: IO8-038 NA[]		
Wor	k Order Number: <u>18f</u>	100266	Chain	of Custody # 3	IO8-038-10,-16,-1		
Ship	pping Container ID:		Air Bil	1#			
١.	Custody Seals on shipping of	ontainer intact?	N	A[] Yes[]	No[]		
2.	Custody Seals dated and sig	ned?	N	A[] Yes[]	No[]		
3.	Chain of Custody record pre	esent?	N.	A[] Yes[/]	No[]		
4.	Cooler Temperature:	NA[] 5	. Vermicul	ite/packing mate	erials is NA [] Wet[] Dry[]		
6.	Number of samples in shipp	ing container: 3					
7.	Sample holding times excee	ded?	N.	A [ Yes [ ] ]	No[]		
8	Samples have: Tape Custody Seals		Hazard Lables Appropriate Sample Lables				
9.	Samples are: In Good Condition Broken	on	(0		g .ir Bubbles requiring no head space.)		
10.	Sample pH taken? NA[]	pH<2[] pH>2[/	pH>9[	Amount H	NO <sub>3</sub> Added		
. 11.	Sample Location, Sample C *For documentation only. N		ł.				
12.	Were any anomalies identifi	ed in sample receipt?	Yes [ ] No [ ]				
13.	Description of anomalies (in	clude sample numbers):					
Sam	ple Custodian:	LIL			Date: 6/008		
	Client Sample ID	Analysis Requested		Condition	Comments/Action		
Clier	t informed on	by		Person Conta	cted		
	No action necessary, process a			_ 70.0011 001112			
[ ] 1	to renon necessary, process b						
Pro	cı Manager			Date			

FLUOR HA	NFORD				CHAIN OF	CUSTODY	/SAMPLE ANALYS	SIS REQUEST	C,o.c. /	W08-006-64		
			181	F110	338 W	05424	Due 72508	KPQWR	Р	age <u>1</u> of <u>1</u>		
Collector	Roy Si	CKIL			Contact/R	lequester		Telephone No. 509-373-5869	MSIN	FAX		
AF No.					Steve T Sampling			Purchase Order				
W08-006					Hanford	Site			T			
roiect Title RCRA, JUNE 20	200				H	NE-N-G	506-15	Ice Chest No.	Temp			
hinned To (Lab)						f Shipment		Bill of Lading/A	ir Bill No.			
TestAmerica Inc	ornorated Ric	hland			Govt. V			Offsite Property	No.			
RCRA						Pr	riority: 45 Days					
** ** Contains Raccleasable per DOE On	dioactive Materia	al at concents		re not regulate	ed for transportation per 4	9 CFR but are not	SPECIAL INSTRUCTIONS Site-Wide Generator Knowledge Infor	Hold Time mation Form applies.	Total Activity Exe	emption: Yes 🗹 No		
Sample No.	Lab ID	*	Date	Time	No/Type Container		Sample Anal	ysis		Preservative		
B1VR96		W 6	11108	11.58	1x500-mL P	9223_COLIFOR	23_COLIFORM: Coliform (1) Na2S2O3 Cool~4C					
B1VR96		W	1	1.	1x20-mL P	Activity Scan			None			
-								· · · · · · · · · · · · · · · · · · ·				
				1								
			11/2									
Relinquished By Roy	Sickle	3//			Date Time Nos	Recorred By	Print Sign	Date/Time	125	Matrix *		
Reinquished By	oche	S.	a s	att	Date/Time /250	Received By	VLANE TAL	Date/Time	S = Soil SE = Sedime SO = Solid SI = Sludre W = Water O = Oil A = Air	DS		
Relinquished By		w.			Date/Time	Received By		Date/Time				
									<u></u>			
FINAL SAMPL DISPOSITION		Method (e.g	Return to	customer, per	lab procedure, used in pro	ocess)	Disposed By		1	Pate/Time		



Date	/Time Received: 61	108 1250	GM Screen F	Result OrlK						
	2 4 1		424 NAI SAF	#: WOR-OOL NA[]						
Wor	k Order Number: <u>18</u> F	=110338	Chain of Custody #	W08-006-64						
Ship	ping Container ID:		Air Bill #							
1.	Custody Seals on shipping of	container intact?	NA[] Yes	No[]						
2.	Custody Seals dated and sig	ned?	NA[] Yes	No[]						
3.	Chain of Custody record pro	esent?	NA[] Yes	No [ ]						
4.	Cooler Temperature:	NA NA S	. Vermiculite/packing mat	erials is NA [ Wet [ ] Dry [ ]						
6.	Number of samples in shipp	ing container:								
7.	Sample holding times exceeded? NA [ Yes [ ] No [ ]									
3	Samples have: Tape Custody Seals	l Lables priate Sample Lables								
9.	Samples are: In Good Condition Broken	on	Leakin Have A	ng Air Bubbles requiring no head space.)						
10.	Sample pH taken? NA [ ]	pH<2[] pH>2[]	pH>9[] Amount H	INO3 Added						
11.	Sample Location, Sample C *For documentation only. N		l.							
12.	Were any anomalies identifi	ed in sample receipt?	Yes[]	Noll						
13.	Description of anomalies (in	nclude sample numbers): _								
Sam	ple Custodian:	AL		Date: 6 11 08						
	Client Sample ID	Analysis Requested	Condition	Comments/Action						
Clien	t Informed on	by	Person Conta	acted						
[]	lo action necessary; process a	s is.								
Proje	ct Manager		Date							

6/24/2008 6:36:20 AM		Sample Preparation/Analysis			Balance Id:1120373922					
884868, Pacific Northwest National Pacific Northwest National Lab	Laboratory ,	SR Uranius	rpRC5016/5086, Se m-234,235,238 by A T: HANFORD		39)		Pipet #:Sep1 DT/Tm Tech:			
AnalyDueDate: 07/28/2008 Batch: 8170555 WATER	pCi/L	JI OLILIN		ote: SS , 570	571		Sep2 DT/Tm Tech:			
SEQ Batch, Test: None			LABORET		1 86181 81181		Prep Tech	n: ,WoodT		
Work Order, Lot, Sample Date /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, Comment		
I KPE1L-1-AG 8F050181-1-SAMP		200.05g,in	200.05g	UITC19751 04/17/08,pd	300					
06/04/2008 09:00		VIAL20,6XLP,3X4	LP #Containers: 10	06/15/01,r		Scr:	Alpha: 8.40E-04 uCi/Sa	Beta: -4.47E-04 uCi/Sa		
KPE6P-1-AF		200.00g,in	200.00g	UITC19752						
8F050195-2-SAMP				04/17/08,pd 06/15/01,r						
06/04/2008 08:25	AmtRec:	: VIAL20,5XLP,3X4	LP #Containers: 9			Scr:	Alpha: 2.19E-03 uCi/Sa	Beta: -2.49E-03 uCi/Sa		
3 KPE7T-1-AG		200.02g,in	200.02g	UITC19870						
8F050195-3-SAMP	#11 11 11 11 1 <b>1 11 11</b> 11		11 111 811	05/20/08,pd 06/15/01,r						
06/04/2008 11:07		: VIAL20,8XLP,3X4		LUTO40000		Scr:	Alpha: -7.63E-04 uCi/Sa	Beta: 1.71E-03 uCi/Sa		
4 KPE7T-1-AH-X 18F050195-3-DUP		200.03g,in	200.03g	05/20/08,pd 06/15/01,r						
<b>                                      </b>		: VIAL20,8XLP,3X4	LP #Containers: 12	33 10 01,		Scr:	Alpha: -7.63E-04 uCi/Sa	Beta: 1.71E-03 uCi/Sa		
5 KPLWM-1-AG		200.04g,in	200.04g	UITC19883						
J8F090197-1-SAMP				05/20/08,pd 06/15/01,r	1					
<b></b>	AmtRec	: VIAL20,6XLP,3X4	LP #Containers: 10			Scr:	Alpha: 3.31E-03 uCi/Sa	Beta: 7.47E-04 uCi/Sa		
6 KPLWR-1-AG		200.02g,in	200.02g	UITC19884						
J8F090197-2-SAMP	40 11 11 11 1 <b>1 11 11</b>	18 <b>48</b> 10 (#111		05/20/08,pd 06/15/01,r						
06/09/2008 10:18		: VIAL20,6XLP,3X4	LP #Containers: 10			Scr:	Alpha: 8.26E-04 uCi/Sa	Beta: 3.47E-04 uCi/Sa		
7 KP650-1-AA-B		200.01g,in	200.01g	UITC19885						
J8F180000-555-BLK 	- <b>4</b>			05/20/08,pd 06/15/01,r						
			Containers: 1			Scr:	Alpha:	Beta:		

	36:22 AM			S	ample Prepa	aration/Ana	lysis		Balance	e ld:1120373922	2			
					RC5016/5086, Se 234,235,238 by		9)		Pipet #:					
nalyDueDa	ite: 07/28/2008			51 CLIENT:		Alpha opeo			Sep1 DT/Tm T	ech:				
Batch: 8170		pC	i/L					-	Sep2 DT/Tm T	ech:				
SEQ Batch, Tes	st: None				£1881811	# 1 <b>#</b> 1			Prep T	ech: ,WoodT				
Work Order, Lo	ot,    Total Amt	1 Total	In	itial Aliquot	Adj Aliq Amt	QC Tracer	Count	Detector	Count On   Off	CR Analyst,	Comments			
Sample Date		Acidified/		Amt/Unit	(Un-Acidified)	Prep Date	Time Min	ld	(24hr) Circle	Init/Date				
KP650-1-AC-0			20	0.02g,in 2	00.02g	UISG1653	200							
8F180000-555	-LCS				EI) (1 <b>81 C AI)</b>	04/23/08,pd 06/15/01,r					***************************************			
06/04/2008 11:	07		AmtRec:	#Con	tainers: 1		1	Scr:	Alpha:		Beta:			
Comments	: pH 2.0	Inland 1	821											
1 Clients										-				
384868,	Pacific Northwes	t National	Laborator	y Pacif:	ic Northwest N	ational Lab,	SS , 57671							
	P Constituent Li		T.CT. • 20	nc105	PPD-20	п-234	PDL-11.00F+0	nci/I	ICI.	HCI.,	RPD.			
PE1L1AG-SAM U-232 U-235	P Constituent Li RDL: RDL:1.00E+00	pCi/L pCi/L	LCL:20 LCL:	UCL:105	RPD: 20	U-234 U-238	RDL:1.00E+0	_		UCL:	RPD:			
U-232	RDL: RDL:1.00E+00	pCi/L						_		,				
U-232 U-235 P6501AA-BLK U-232	RDL: RDL:1.00E+00	pCi/L pCi/L	LCL:	UCL: 105	RPD:			pci/L	LCL:	,				
U-232 U-235 P6501AA-BLK U-232 U-235	RDL: RDL:1.00E+00	pCi/L pCi/L	LCL:	UCL:	RPD:	U-238	RDL:1.00E+0	pci/L	LCL:	UCL:	RPD:			
U-232 U-235 P6501AA-BLK U-232 U-235	RDL: RDL:1.00E+00	pCi/L pCi/L	LCL:	UCL: 105	RPD:	U-238	RDL:1.00E+0	pci/L	LCL: LCL:	UCL:	RPD:			
U-232 U-235 P6501AA-BLK U-232 U-235 P6501AC-LCS U-232 PE1L1AG-SAM	RDL: RDL:1.00E+00  RDL: RDL:1.00E+00	pCi/L pCi/L pCi/L pCi/L	LCL: 20 LCL: 20 LCL: 20	UCL: 105 UCL: 105	RPD: 20 RPD: RPD: 20	U-238 U-234 U-238 Uranium	RDL: 1.00E+0 RDL: 1.00E+0 RDL: 1.00E+0	pci/L	LCL: LCL:	UCL:	RPD: RPD: RPD:			
U-232 U-235 P6501AA-BLK U-232 U-235 P6501AC-LCS U-232 PE1L1AG-SAM Uncert P6501AA-BLK	RDL: RDL:1.00E+00  RDL: RDL:1.00E+00  RDL: RDL: Level (#s):: 2	pCi/L pCi/L pCi/L pCi/L pCi/L	LCL:20 LCL:20 LCL:20	UCL: 105 UCL: 105 UCL: 105	RPD: RPD:20 RPD: RPD:20	U-238 U-234 U-238 Uranium	RDL:1.00E+0 RDL:1.00E+0 RDL:1.00E+0 RDL:	pci/L	LCL: LCL:	UCL:	RPD: RPD: RPD:			
U-232 U-235 P6501AA-BLK U-232 U-235 P6501AC-LCS U-232 PE1L1AG-SAM Uncert P6501AA-BLK Uncert	RDL: RDL:1.00E+00 :: RDL: RDL:1.00E+00 :: RDL: IP Calc Info: Level (#s):: 2 :: Level (#s):: 2	pCi/L pCi/L pCi/L pCi/L pCi/L	LCL: 20 LCL: 20 LCL: 20	UCL: 105 UCL: 105 UCL: 105 Blk Subt	RPD:  RPD:20 RPD:  RPD:20  .: N Sci.N	U-238 U-234 U-238 Uranium Ot.: Y OD	RDL:1.00E+0 RDL:1.00E+0 RDL:1.00E+0 RDL:	pci/L	LCL: LCL:	UCL:	RPD: RPD: RPD:			
U-232 U-235 P6501AA-BLK U-232 U-235 P6501AC-LCS U-232 PE1L1AG-SAM Uncert P6501AA-BLK Uncert	RDL: RDL:1.00E+00	pCi/L pCi/L pCi/L pCi/L pCi/L Decay to	LCL:20 LCL:20 LCL:20	UCL: 105 UCL: 105 UCL: 105	RPD:  RPD:20 RPD:  RPD:20  .: N Sci.N	U-238 U-234 U-238 Uranium Ot.: Y OD	RDL:1.00E+0 RDL:1.00E+0 RDL:1.00E+0 RDL:	pci/L	LCL: LCL:	UCL:	RPD: RPD: RPD:			
U-232 U-235 P6501AA-BLK U-232 U-235 P6501AC-LCS U-232 PE1L1AG-SAM Uncert P6501AA-BLK Uncert	RDL: RDL:1.00E+00 :: RDL: RDL:1.00E+00 :: RDL: IP Calc Info: Level (#s):: 2 :: Level (#s):: 2	pCi/L pCi/L pCi/L pCi/L pCi/L Decay to	LCL:20 LCL:20 LCL:20 SaDt: Y	UCL: 105 UCL: 105 UCL: 105 Blk Subt	RPD:  RPD:20 RPD:  RPD:20  .: N Sci.N	U-238  U-234  U-238  Uranium  Ot.: Y OD	RDL:1.00E+0 RDL:1.00E+0 RDL:1.00E+0 RDL:	pci/L pci/L pci/L	LCL: LCL: LCL:70	UCL:	RPD: RPD: RPD: RPD:20			
U-232 U-235 P6501AA-BLK U-232 U-235 P6501AC-LCS U-232 PE1L1AG-SAM Uncert P6501AA-BLK Uncert	RDL: RDL:1.00E+00 :: RDL: RDL:1.00E+00 :: RDL: IP Calc Info: Level (#s):: 2 :: Level (#s):: 2	pCi/L pCi/L pCi/L pCi/L pCi/L Decay to	LCL:20 LCL:20 LCL:20 SaDt: Y	UCL: 105 UCL: 105 UCL: 105 Blk Subt	RPD:  RPD:20 RPD:  RPD:20  .: N Sci.N	U-238  U-234  U-238  Uranium  Ot.: Y OD	RDL:1.00E+0 RDL:1.00E+0 RDL:1.00E+0 RDL: RS: B RS: B RS: B	pci/L pci/L pci/L	LCL: LCL: LCL:70	UCL: UCL: UCL:	RPD: RPD: RPD: RPD:20			
U-232 U-235 P6501AA-BLK U-232 U-235 P6501AC-LCS U-232 PE1L1AG-SAM Uncert P6501AA-BLK Uncert	RDL: RDL:1.00E+00 :: RDL: RDL:1.00E+00 :: RDL: IP Calc Info: Level (#s):: 2 :: Level (#s):: 2	pCi/L pCi/L pCi/L pCi/L pCi/L Decay to	LCL:20 LCL:20 LCL:20 SaDt: Y	UCL: 105 UCL: 105 UCL: 105 Blk Subt	RPD:  RPD:20 RPD:  RPD:20  .: N Sci.N	U-238  U-234  U-238  Uranium  Ot.: Y OD	RDL:1.00E+0 RDL:1.00E+0 RDL:1.00E+0 RDL: RS: B RS: B RS: B	pci/L pci/L pci/L	LCL: LCL: LCL:70	UCL: UCL: UCL:	RPD: RPD: RPD: RPD:20			
U-232 U-235 P6501AA-BLK U-232 U-235 P6501AC-LCS U-232 PE1L1AG-SAM Uncert P6501AA-BLK Uncert	RDL: RDL:1.00E+00 :: RDL: RDL:1.00E+00 :: RDL: IP Calc Info: Level (#s):: 2 :: Level (#s):: 2	pCi/L pCi/L pCi/L pCi/L pCi/L Decay to	LCL:20 LCL:20 LCL:20 SaDt: Y	UCL: 105 UCL: 105 UCL: 105 Blk Subt	RPD:  RPD:20 RPD:  RPD:20  .: N Sci.N	U-238  U-234  U-238  Uranium  Ot.: Y OD	RDL:1.00E+0 RDL:1.00E+0 RDL:1.00E+0 RDL: RS: B RS: B RS: B	pci/L pci/L pci/L	LCL: LCL: LCL:70	UCL: UCL: UCL:	RPD: RPD: RPD: RPD:20			
U-232 U-235 P6501AA-BLK U-232 U-235 P6501AC-LCS U-232 PE1L1AG-SAM Uncert P6501AA-BLK Uncert	RDL: RDL:1.00E+00 :: RDL: RDL:1.00E+00 :: RDL: IP Calc Info: Level (#s):: 2 :: Level (#s):: 2	pCi/L pCi/L pCi/L pCi/L pCi/L Decay to	LCL:20 LCL:20 LCL:20 SaDt: Y	UCL: 105 UCL: 105 UCL: 105 Blk Subt	RPD:  RPD:20 RPD:  RPD:20  .: N Sci.N	U-238  U-234  U-238  Uranium  Ot.: Y OD	RDL:1.00E+0 RDL:1.00E+0 RDL:1.00E+0 RDL: RS: B RS: B RS: B	pci/L pci/L pci/L	LCL: LCL: LCL:70	UCL: UCL: UCL:	RPD: RPD: RPD: RPD:20			

6/27/2008 10:34:47 AM

## ICOC Fraction Transfer/Status Report ByDate: 6/28/2007, 7/2/2008, Batch: '8170555', User: 'ALL Order By DateTimeAccepting

Batch Wor	k Ord CurStat	us A	ccepting		Comments
170555					
IC	Rev1C	WoodT	6/24/2008 6:20	:25	
C		wagarr	IsBatched	6/19/2008 8:30:57 AM	ICOC_RADCALC v4.8.32
C		WoodT	InPrep	6/24/2008 6:20:25 AM	RICH-RC-5016 Revision 7
C		WoodT	Prep1C	6/24/2008 6:36:34 AM	RICH-RC-5016 REVISION 7
C		AshworthA	Prep2C	6/24/2008 2:48:18 PM	PRP-010 REVISION 0
C		AshworthA	Sep1C	6/25/2008 5:11:18 PM	ALP-004 REVISION 0
C		AshworthA	Sep2C	6/26/2008 4:59:50 PM	ALP-015 REVISION 0
C		DAWKINSO	InCnt1	6/26/2008 5:39:09 PM	RL-CI-008 REVISION 0
C		BlackCL	CalcC	6/27/2008 6:14:35 AM	RL-CI-008 REVISION 0
C		whelands	Rev1C	6/27/2008 10:34:35 AM	RICH-RC-0002 REV 8
C		WoodT	6/24/2008 6:36	:34	
C		AshworthA	6/24/2008 2:48	:18 PM	
IC		AshworthA	6/25/2008 5:11	:18 PM	
C		AshworthA	6/26/2008 4:59	:50 PM	
C		DAWKINSO	6/26/2008 5:39	:09 PM	
C		BlackCL	6/27/2008 6:14	:35	
C		whelands	6/27/2008 10:3	4:35	

AC: Accepting Entry: SC: Status Change

TAL Richland Richland Wa.

TESTAMERICA

Grp Rec Cnt: 8 ICOCFractions v4.8.33

Page 1

SEI	6/24/2008 4:20:14 PM		Sam	ple Prepa	ration/A	nalysis			Balance Id:	1120482733	
TAME	384868, Pacific Northwest National Laboratory Pacific Northwest National Lab		(O Np-237 PrpR (W Neptunium-2 51 CLIENT: HAI	237 with trace					Pipet #: Sep1 DT/Tm Tech:	11.1	DRM 10:45 AM
IC	AnalyDueDate: 07/28/2008 DO GOTO	_	JI OLILITI. HAI		ote: SS, 5	7671			Sep2 DT/Tm Tech:	-100/00	(0 (0 ))
A	SEQ Batch, Test: None								Prep Tech:	,HarrisD	
		tial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detec		CR Analyst, Init/Date	Comments:
nú	1 KPE1L-1-AA	200.10g,in	200.10g	NPTA7084	)		CLUS			<u> </u>	
28	J8F050181-1-SAMP			06/24/08,pd							
	06/04/2008 09:00	AmtRec: VIA	L20,6XLP,3X4LP	#Containers: 10		****************	1	Scr:	Alpha: 8.40E-04 uCi/Sa	Beta: -4.4	7E-04 uCi/Sa
h	2 KPLWM-1-AA	200.20g,in	200.20g	NPTA7085							
Ċ	J8F090197-1-SAMP			06/24/08.pd 06/01/01,r							
	06/09/2008 10:18	AmtRec: VIA	L20,6XLP,3X4LP	#Containers: 10				Scr:	Alpha: 3.31E-03 uCi/Sa	Beta: 7.4	7E-04 uCi/Sa
3	3 KPLWR-1-AA	200.00g,in	200.00g	NPTA7086							
	J8F090197-2-SAMP			06/24/08,pd							
ע	<b></b>	AmtRec: VIA	L20,6XLP,3X4LP	#Containers: 10				Scr:	Alpha: 8.26E-04 uCi/Sa	Beta: 3.4	7E-04 uCi/Sa
4	4 KPLWR-1-AH-X	200.40g,in	200.40g	NPTA7087							
,	J8F090197-2-DUP			06/24/08,pd							
	<b>                                      </b>	AmtRec: VIA	L20,6XLP,3X4LP	#Containers: 10				Scr:	Alpha: 8.26E-04 uCi/Sa	Beta: 3.4	7E-04 uCl/Sa
_	5 KP652-1-AA-B	200.00g,in	200.00g	NPTA7088							
31	J8F180000-557-BLK			06/24/08,pd		1					
	06/09/2008 10:18	AmtRec:	#Containe	rs: 1				Scr:	Alpha:	LCAL-P	Beta:
	6 KP652-1-AC-C	200.10g,in	200.10g	NPSE0473			-				
32	J8F180000-557-LCS			05/15/08,pd							
		AmtRec:	#Containe	WI W.	************			Scr:	Alpha:		Beta:
	TAL Richland Key: In - Initial Amt, fi - Final Ar Richland Wa. pd - Prep Dt, r - Reference I				Page 1	IS	SV - Insufficie	ent Volum	e for Analysis		O Cnt: 6 SamplePrep v4.8.32

6/24/2008 4:20:16 PM			San	iple F	reparation	n/Analysis	3		Balance Id:	1120482733	
AnalyDueDate: 07/28/2008		X	(O Np-237 Prpl (W Neptunium- 5l CLIENT: HA	237 wit	th tracer by al			Se	Pipet #: Sep1 DT/Tm Tech:		
Batch: 8170557 SEQ Batch, Test: None	рС	i/L	,				511b1 b1141 18		ep2 DT/Tm Tech:		
Work Ord, Lot, Total Amt		Initial Aliquot	Adj Aliq Amt	QCT		Ppt or	Count	Detector	Count On Off	CR Analyst,	Comments:
Sample Date /Unit /	Acidified/Unit	Amt/Unit	(Un-Acidified)	Prep	Date Size	Geometr	y Time Min	ld	(24hr) Circle	Init/Date	
Comments:	attu	2/24/	08								
ll Clients for Batch: 384868, Pacific Northwes		Laboratory	Pacific	Northw	rest National	Lab, SS,	57671				
Np-237 RDL:0.6 P6521AA-BLK:	pCi/L	LCL:	UCL:	RPD:							
Np-237 RDL:0.6 P6521AC-LCS:	pCi/L	LCL:	UCL:	RPD:							
PE1L1AA-SAMP Calc Info: Uncert Level (#s).: 2 P6521AA-BLK:	Decay to	SaDt: Y	Blk Subt.:	N	Sci.Not.: Y	ODRs: B					
Uncert Level (#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N	Sci.Not.: Y	ODRs: B					
P6521AC-LCS: Uncert Level (#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N	Sci.Not.: Y	ODRs: B					
					Ar	proved By _				Date:	
			•								

pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

Richland Wa.

Prep\_SamplePrep v4.8.32

6/27/2008 4:01:10 PM

## ICOC Fraction Transfer/Status Report ByDate: 6/28/2007, 7/2/2008, Batch: '8170557', User: \*ALL Order By DateTimeAccepting

Q Batch Work O	rd CurStat	us A	ccepting		Comments
8170557					
AC	Rev1C	HarrisD	6/24/2008 4:14:	:56 PM	
SC		wagarr	IsBatched	6/19/2008 8:30:57 AM	ICOC_RADCALC v4.8.32
SC		HarrisD	InPrep	6/24/2008 4:14:56 PM	RL-PRP-004 REVISION 0
SC		HarrisD	f`rep1C	6/24/2008 4:20:17 PM	RL-PRP-004 REVISION 0
SC		ManisD	Sep2C	6/26/2008 5:36:29 PM	RL-ALP-016 REV 0
SC		DAWKINSO	InCnt*	6/26/2008 6:33:36 PM	RL-CI-008 REVISION 0
SC .		ClarkR	CalcC	6/27/2008 12:11:00 PM	RL-CI-008 REVISION 0
SC .		whelands	Rev1C	6/27/2008 4:01:06 PM	RICH-RC-0002 REV 8
C		HarrisD	6/24/2008 4:20:	:17 PM	
IC		ManisD	6/26/2008 5:56	29 PM	
IC		DAWKINSO	C/26/2008 6:33:	36 PM	
AC		ClarkR	6/27/2008 12:1	1:00	
4C		whelands	6/27/2008 4:01:	06 PM	

AC: Accepting Entry; SC: Status Change

TAL Richland Richland Wa.

Page 1

Grp Rec Cnt: 6
ICOCFractions v4.8.33

acific Northwest National nalyDueDate: 07/28/	st National Laboratory , al Lab 2008 STATER pCi/L	AZ Gross Alpha S7 Gross Alpha 5I CLIENT: HA	PM, Quote: SS , 5767  Dish Ppt or Size Geometry	Count Detector Time Min Id	Pipe Sep1 DT/Tm Tec Sep2 DT/Tm Tec	
BF050186-2-SAMP		"'   118	1.5	50 1011		
6/04/2008 12:40 KPE3X-1-AP-X	172.30g,	AmtRec: 2X500MLP,2XLP,2X4LP	#Containers: 6	Scr: 16 =	Alpha: -2 14E-03 uCi/Sa	Beta: 2.40E-03 uCi/Sa
BF050186-2-DUP		1 <b>0</b> (1 <b>0) 10:</b>   <b>10:</b>   <b>10:  </b>	39.1			
6/04/2008 12:40 KP655-1-AA-B	200.30g,	AmtRec: 2X500MLP,2XLP,2X4LP	#Containers: 6	Scr.	Alpha: -2.14E-03 uCi/Sa	Beta: 2.40E-03 uCi/Sa
BF180000-560-BLK	- 	#Contain		Scr:	Alpha:	Beta:
KP655-1-AC-C	200.30g,		ois. I			2//
8F180000-560-LCS <b>-</b>     <b>   111                            </b>	81 1 8 1 8 11 N. I 10 10 1 10 10 10 10 10 10	05/27/08,pd \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		) 12A scr:	/835 Alpha:	// 7/0 8 0 Beta:
Comments: OH	,	wt reduce	dul to w	- Schens	att 4/2	7/08
11 Clients for Batch 384868, Pacific N	: Orthwest National Lab	coratory Pacific	Northwest National Lab,	SS , 57671		
PE3X1AC-SAMP Constit		CL: UCL:	RPD:			
ALPHA RDL:3 P6551AA-BLK:			ann.			
ALPHA RDL:3		CL: UCL:	RPD: RPD:20			

6/27/2008 10:49:07 AM  AnalyDueDate: 07/28/2008	\$7 0	Sample Preparation/Analy Gross Alpha PrpRC5014 Gross Alpha by GPC using Am-241 curve CLIENT: HANFORD			ld:1120482733 et #: ech:	
Batch: 8170560 SEQ Batch, Test: None	pCi/L			Sep2 DT/Tm Te	ech: ech: ,HarrisD	
Work Order, Lot, Sample DateTime Total Amt/Uni	Initial Aliquot t Amt/Unit	QC Tracer Dish Ppt or	Count Detector Time Min Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
Uncert Level (#s).: 2 KP6551AA-BLK: Uncert Level (#s).: 2 KP6551AC-LCS: Uncert Level (#s).: 2	Decay to SaDt: Y B	lk Subt.: N Sci.Not.: Y ODR	Rs: B Rs: B		Date:	

7/8/2008 2:37:30 PM

## ICOC Fraction Transfer/Status Report ByDate: 7/9/2007, 7/13/2008, Batch: '8170560', User: "ALL Order By DateTimeAccepting

Batch Wor	k Ord CurStat	us A	ccepting		Comments
8170560					
4C	Rev1C	HarrisD	6/27/2008 10:4	6:23	
SC		wagarr	IsBatched	6/19/2008 8:30:57 AM	ICOC_RADCALC v4.8.32
SC		HarrisD	InPrep	6/27/2008 10:46:23 AM	RICH-RC-5014 REVISION 0
SC		HarrisD	Prep1C	6/27/2008 10:49:08 AM	RL-PRP-004 REVISION 0
SC		BockJ	InPrep2	7/1/2008 11:13:10 AM	RL-GPC-001 REVISION 0
SC .		BockJ	Prep2C	7/7/2008 1:16:18 PM	RL-GPC-001 REVISION 0
C		ClarkR	InCnt1	7/7/2008 1:19:01 PM	RL-CI-006 REVISION 0
C		DAWKINSO	CalcC	7/7/2008 9:35:55 PM	RL-CI-006 REVISION 0
C		nortonj	Rev1C	7/8/2008 2:37:26 PM	RICH-RC-0002 REV 8
C		HarrisD	6/27/2008 10:4	9:08	
C		BockJ	7/1/2008 11:13	10	
C		BockJ	7/7/2008 1:16:1	8 PM	
AC		ClarkR	7/7/2008 1:19:0	1 PM	
AC		DAWKINSO	7/7/2008 9:35:5	5 PM	
IC		nortoni	7/8/2008 2:37:2	26 PM	

AC: Accepting Entry: SC: Status Change

TAL Richland Richland Wa.

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Grp Rec Cnt:7 ICOCFractions v4.8.33

acific Northwe	Northwest National Lab	NON	24	Sample Preparation/Analysis BC Gross Beta PrpRC5014 S8 Gross Beta by GPC using Sr/Y-90 curve 51 CLIENT: HANFORD  PM, Quote: SS, 57671				Balance Id:1120482733  Pipet #: 2				
Batch: 817056 EQ Batch, Test:		рС	CI/L '		PM, Q	uote: SS , 57	671		Sep2 DT/T		,HarrisD Box	
	. 11		Maria Allanda	II 00.T								
Work Order, Le Sample DateTir			itial 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
KPE3X-1-AD		200.	20g,in		1.5	· · · · · · · · · · · · · · · · · · ·	VOV	32	A 1.	121	7/7/08	op?
F050186-2-SAM						100.6					<i>i I</i>	
			AmtRec: 2)	(500MLP.2XLP.2X4LP	#Containers: 6			Scr:	Alpha: -2.14E-03	LICUSa	Bota: 2	40E-03 uCi/Sa
KPE3X-1-AQ-X		200	.00g,in						74pma: 8.14c 00	Joine	Dou. E.	-UL 00 00100
F050186-2-DUI						100.0		321	3			
	]	III II II II II II		(500MLP.2XLP.2X4LP					Alaba, 0.145.00	01/0-		40F 00 - 01/0-
KP656-1-AA-B		200	.30g,in	SOUNLP,ZALP,ZA4LP	#Containers: 6	)		Scr:	Alpha: -2.14E-03	uCi/Sa	Beta: 2.	40E-03 uCi/Sa
	1.12	200	.50g,iii			- 1		321	)			
F180000-561-B					II III	Ø						
04/2008 12:40			AmtRec:	#Containe	rs: 1			Scr:	Alpha			Beta:
KP656-1-AC-C		199	.80g,in	BESB3269				320	6		6	
3F180000-561-L		N 1 (0 (T ) N T N T	18 1811 S 200 1 1011 1	05/27/08,pd		0.3					V	
			AmtRec:	#Containe			1	Scr:	Alpha			Beta:
Comments:	Ato.C	DU DU	56/217	7/08								
	cific Northwes		Laborator	y Pacific 1	Northwest 1	National Lab,	ss , 57671	1				
BETA	Constituent Li RDL:4	st: pCi/L	LCL:	UCL:	RPD:							
6561AA-BLK: BETA	RDL: 4	pCi/L	LCL:	UCL:	RPD:							
6561AC-LCS: Sr-90	RDL:	pCi/L	LCL:70	UCL:130	RPD:20							
E3X1AD-SAMP		•										
TAL Richland Richland Wa.				luted Amt, s1 - Sep1		Page 1	ISV -	Insufficient Volu	me for Analysis			VO Cnt: 4 SamplePrep v4

6/27/2008 10:52:46	AM		Samp	ole Prep	Balance	ld:1120482733				
			BC Gross Beta Pr S8 Gross Beta by		Pip	et #:				
AnalyDueDate: 07/	28/2008		51 CLIENT: HAN					Sep1 DT/Tm T	ech:	
Batch: 8170561 SEQ Batch, Test: None		pCi/L			(5) 5) 1) 5) 1 (6)			Sep2 DT/Tm T	ech: ech: ,HarrisD	
			11 00 7			The same of the sa				
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.	Vot.: Y	DRs: B				

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

ODRs: B

ODRs: B

Sci.Not.: Y

Sci.Not.: Y

142

TESTAMERICA

Uncert Level (#s).: 2

Uncert Level (#s) .: 2

KP6561AC-LCS:

TAL 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

Decay to SaDt: Y

Decay to SaDt: Y

Blk Subt.: N

Blk Subt .: N

ISV - Insufficient Volume for Analysis

WO Cnt: 4

Prep\_SamplePrep v4.8.32

7/8/2008 3:30:23 PM

# ICOC Fraction Transfer/Status Report ByDate: 7/9/2007, 7/13/2008, Batch: '8170561', User: \*ALL Order By DateTimeAccepting

Batch Work	Ord CurStat	us A	ccepting		Comments
8170561					
4 <i>C</i>	Rev1C	HarrisD	6/27/2008 10:5	0:24	
SC		wagarr	IsBatched	6/19/2008 8:30:57 AM	ICOC_RADCALC v4.8.32
SC .		HarrisD	InPrep	6/27/2008 10:50:24 AM	RICH-RC-5014 REVISION 0
C		HarrisD	Prep1C	6/27/2008 10:52:47 AM	RL-PRP-004 REVISION 0
SC		BockJ	InPrep2	7/1/2008 11:13:17 AM	RL-GPC-001 REVISION 0
SC .		BockJ	Prep2C	7/7/2008 1:16:38 PM	RL-GPC-001 REVISION 0
C		ClarkR	InCnt1	7/7/2008 1:19:53 PM	RL-CI-006 REVISION 0
C		DAWKINSO	CalcC	7/7/2008 9:36:03 PM	RL-CI-006 REVISION 0
C		nortonj	Rev1C	7/8/2008 3:30:20 PM	RICH-RC-0002 REV 8
C		HarrisD	6/27/2008 10:5	2:47	
C		BockJ	7/1/2008 11:13	:17	
C		BockJ	7/7/2008 1:16:3	88 PM	
IC		ClarkR	7/7/2008 1:19:5	33 PM	
AC .		DAWKINSO	7/7/2008 9:36:0	3 PM	
C		nortonj	7/8/2008 3:30:2	20 PM	

AC: Accepting Entry; SC: Status Change

TAL Richland

Richland Wa.

Page 1

Grp Rec Cnt: 7 ICOCFractions v4.8.33



***RE-ANALY DUE DATE		EST*** 
CUSTOMER & GW		
ANALAYSIS	5r	
MATRIX Hz	)	
LOT NUMBER	18F05011	86,050195
SAMPLE DELIVE		
OLD BATCH NUMBER 8170554		
NEW BATCH NUMBER 8197204		
LAB SAMPLE ID	CLIENT ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1)ALL		INCORRECT TRACER USED
2) 3)		
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LAB QC ID		Assigned with new batch.

RC-048, 12/07, Rev 8

7/24/2008 1:19:29 PM		S	ample Pr	eparatio	on/Analysi	s	Balance Id:1120482733,E32905			
84868, Pacific Northwest Natio	onal Laboratory ,	CL Sr-90 Prp TL Sr-85 by 51 CLIENT:	Nal and Sr-9		7 day ingrow	th	e,	Pipet #:		07 ManisD
nalyDueDate: 07/28/2008		51 CLIENT:								
atch: 8197204 WATER EQ Batch, Test: None	pCi/L		PM	, Quote: S	SS , 57671		Se	ep2 DT/Tm Tech:	07/24/2008 09:	02,ManisD
			1111				HALIANI	Prep Tech:	ManisD	
Work Order, Lot, Sample DateTime Total Amt/Uni	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min		Count On Off (24hr) Circle	CR Analyst, Init/Date	Comment
KPE3V-2-AC	1000.40g,in	SRTB16261		1.0	22	100	SA	31/43	7/26/00	
BF050186-1-SAMP		05/21/08,pd					1 A	0750	7/26/6	MRC
	<b>-</b>		111111	*****			2	0 11		
					0 <del>7/17/2008-10:07;s</del>	1, 07/24/2008				
6/04/2008 12:40	AmtR	ec: VIAL20,3XLP,4LP	#Containers:	5			Scr: Alp	ha: 2.39E-04 uCVSa	Beta: 4.	45E-04 uCi/Sa
KPE7T-1-AJ-X	1000.10g,in	SRTB16262		1.0	21.8	100	33	07/43	7/2600	
BF050195-3-DUP	0.	05/21/08,pd						0756	7/26	
				*		***********	JB		77 00[	
					0 <del>7/17/2008-16:07;</del> s	1, 07/24/2008				
***************************************				***************************************						
6/04/2008 11:07	AmtF	lec: VIAL20,8XLP,3X4LP	#Container	s: 12				ha: -7.63E-04 uCi/Sa		71E-03 uCi/Sa
KPE7T-2-AF	1000.30g,in	SRTB16263		1.0	21.6	100	30	0443	1/2/100	
BF050195-3-SAMP		05/21/08,pd					76	0750	7/200	xm
				**************	*****************	************				
			***************************************		07/17/2008-16:07;s	1, 07/24/2008				
6/04/2008 11:07	AmtF	Rec: VIAL20,8XLP,3X4LP	#Container	s: 12			Scr: Alp	ha: -7.63E-04 uCi/Sa	Beta: 1	71E-03 uCi/Sa
KRHXT-1-AA-B	1000.20g,in	SRTB16264		1.0	21.6	100	30	8443	7/26/04	
8G150000-204-BLK		05/21/08,pd					10	0750	7126Cor	
				******					1/ 0001	
***************************************					-07/1-7/2008-1 <del>0:</del> 07;s	1, 07/24/2008	***************************************	*************************	***************************************	***************************************
06/04/2008 12:40	AmtF	Rec: #Cor	ntainers: 1				Scr:	Alpha:		Beta:
TAL Richland Key: In - Initia	I Amt, fi - Final Amt, d	i - Diluted Amt, s1 - S	Sep1, s2 - Sep	o2 Page	1	ISV - Insuffi	icient Volume for	Analysis		VO Cnt: 4
Richland Wa. pd - Prep	Dt, r - Reference Dt, ed	-Enrichment Cell, ct-	Cocktailed Ad	lded					Prep_	SamplePrep v

7/24/2008 1:19:29 PM			mple Prepara		alysis		Balance	ld:1120482733	1120482733,1120		
			SepRC5006(5071)  Val and Sr-90 by G		ngrowth		Pipe	Pipet #:			
AnalyDueDate: 07/28/2008		51 CLIENT: H		o r day ii	ngiowai		Sep1 DT/Tm Te	Sep1 DT/Tm Tech: 07/17/2008 16:07,ManisD			
Batch: 8197204	pCi/L					-	San2 DT/Tm Ta	ech: 07/24/2008	09:02 ManieD		
SEQ Batch, Test: None									09.02,MailisD		
							Prep Te	ech: ManisD			
Work Order, Lot, Sample DateTime Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Dish Yield Size			Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:		
5 KRHXT-1-AC-C	1000.50g,in	SRSG1484	1.0	21	.1 100	YA	0443	7/201	<		
J8G150000-204-LCS		06/18/08,pd				,	0756	7/200			
				***************************************	P-1 P-2 B-2 A-2 A-2 A-2 A-2 A-2 A-2 A-2 A-2 A-2 A	41	0 714	r/240	<i>k</i> //		
		8855		07/1-7/2000	3-10:07;s1;-07/24/2008						
06/04/2008 12:40	AmtRed	: #Cont	ainers: 1			Scr:	Alpha:		Beta:		
Comments:	***************************************										
all Clients for Batch: 384868, Pacific Northwes	t National Laborat	ory Pacifi	c Northwest Nati	onal Lab,	SS , 57671						
384868, Pacific Northwes	st:										
384868, Pacific Northwes			c Northwest Nati	onal Lab,	SS , 57671	pCi/L	LCL:70	UCL:130	RPD: 20		
384868, Pacific Northwes	st:	UCL:105				pCi/L	LCL:70	UCL:130	RPD:20 RPD:		
384868, Pacific Northwes  CPE3V2AC-SAMP Constituent Li Sr-85 RDL:  CRHXT1AA-BLK: SI-85 RDL:  CRHXT1AC-LCS:	pCi/L LCL:20	UCL:105	RPD:20	sr-90 sr-90	RDL: 2	pCi/L	LCL:	UCL:	RPD:		
384868, Pacific Northwes  RPE3V2AC-SAMP Constituent Li Sr-85 RDL:  RRHXT1AA-BLK: Sr-85 RDL:	st: pCi/L LCL:20	UCL:105	RPD:20	Sr-90	RDL:2						
384868, Pacific Northwes  CPE3V2AC-SAMP Constituent Li Sr-85 RDL:  CRHXT1AA-BLK: Sr-85 RDL:  CRHXT1AC-LCS: Sr-85 RDL:  CPE3V2AC-SAMP Calc Info: Uncert Level (#s).: 2	pCi/L LCL:20	UCL:105 UCL:105	RPD:20 RPD:20 RPD:20	Sr-90 Sr-90 Sr-90	RDL: 2	pCi/L	LCL:	UCL:	RPD:		
384868, Pacific Northwes  CPE3V2AC-SAMP Constituent Li Sr-85 RDL:  CRHXT1AA-BLK: Sr-85 RDL:  CRHXT1AC-LCS: Sr-85 RDL:  CPE3V2AC-SAMP Calc Info: Uncert Level (#s).: 2  CRHXT1AA-BLK: Uncert Level (#s).: 2	pCi/L LCL:20 pCi/L LCL:20 pCi/L LCL:20	UCL:105 UCL:105 UCL:105	RPD:20 RPD:20 RPD:20 : N Sci.Not.	Sr-90 Sr-90 Sr-90	RDL:2 RDL:2 RDL:2	pCi/L	LCL:	UCL:	RPD:		
384868, Pacific Northwes  CPE3V2AC-SAMP Constituent Li Sr-85 RDL:  CRHXT1AA-BLK: Sr-85 RDL:  CRHXT1AC-LCS: Sr-85 RDL:  CPE3V2AC-SAMP Calc Info: Uncert Level (#s).: 2  CRHXT1AA-BLK:	pCi/L LCL:20 pCi/L LCL:20 pCi/L LCL:20 Decay to SaDt:	UCL:105  UCL:105  UCL:105  Y Blk Subt.	RPD:20  RPD:20  RPD:20  : N Sci.Not.	Sr-90 Sr-90 Sr-90 : Y O	RDL:2 RDL:2 RDL:2	pCi/L	LCL:	UCL:	RPD:		
384868, Pacific Northwes  CPE3V2AC-SAMP Constituent Li Sr-85 RDL:  CRHXT1AA-BLK: Sr-85 RDL:  CRHXT1AC-LCS: Sr-85 RDL:  CPE3V2AC-SAMP Calc Info: Uncert Level (#s).: 2  CRHXT1AA-BLK: Uncert Level (#s).: 2  CRHXT1AC-LCS:	pCi/L LCL:20 pCi/L LCL:20 pCi/L LCL:20 pCi/L LCL:20 Decay to SaDt:	UCL:105  UCL:105  UCL:105  Y Blk Subt.	RPD:20  RPD:20  RPD:20  : N Sci.Not.	Sr-90 Sr-90 Sr-90 : Y O	RDL:2  RDL:2  RDL:2  DRs: B  DRs: B	pCi/L	LCL:	UCL:	RPD:		
384868, Pacific Northwes  CPE3V2AC-SAMP Constituent Li Sr-85 RDL:  CRHXT1AA-BLK: Sr-85 RDL:  CRHXT1AC-LCS: Sr-85 RDL:  CPE3V2AC-SAMP Calc Info: Uncert Level (#s).: 2  CRHXT1AA-BLK: Uncert Level (#s).: 2  CRHXT1AC-LCS:	pCi/L LCL:20 pCi/L LCL:20 pCi/L LCL:20 pCi/L LCL:20 Decay to SaDt:	UCL:105  UCL:105  UCL:105  Y Blk Subt.	RPD:20  RPD:20  RPD:20  : N Sci.Not.	Sr-90 Sr-90 Sr-90 : Y O	RDL:2  RDL:2  RDL:2  DRs: B  DRs: B	pCi/L	LCL:	UCL: UCL:130	RPD:		
384868, Pacific Northwes  CPE3V2AC-SAMP Constituent Li Sr-85 RDL:  CRHXT1AA-BLK: Sr-85 RDL:  CRHXT1AC-LCS: Sr-85 RDL:  CPE3V2AC-SAMP Calc Info: Uncert Level (#s).: 2  CRHXT1AA-BLK: Uncert Level (#s).: 2  CRHXT1AC-LCS:	pCi/L LCL:20 pCi/L LCL:20 pCi/L LCL:20 pCi/L LCL:20 Decay to SaDt:	UCL:105  UCL:105  UCL:105  Y Blk Subt.	RPD:20  RPD:20  RPD:20  : N Sci.Not.	Sr-90 Sr-90 Sr-90 : Y O	RDL:2  RDL:2  RDL:2  DRs: B  DRs: B	pCi/L	LCL:	UCL: UCL:130	RPD:		
384868, Pacific Northwes  CPE3V2AC-SAMP Constituent Li Sr-85 RDL:  CRHXT1AA-BLK: Sr-85 RDL:  CRHXT1AC-LCS: Sr-85 RDL:  CPE3V2AC-SAMP Calc Info:     Uncert Level (#s).: 2  CRHXT1AA-BLK:     Uncert Level (#s).: 2  CRHXT1AC-LCS:     Uncert Level (#s).: 2	pCi/L LCL:20 pCi/L LCL:20 pCi/L LCL:20 pCi/L LCL:20 Decay to SaDt:	UCL:105  UCL:105  UCL:105  Y Blk Subt.  Y Blk Subt.	RPD:20  RPD:20  RPD:20  : N Sci.Not. : N Sci.Not.	Sr-90 Sr-90 Sr-90 : Y O	RDL:2  RDL:2  RDL:2  DRS: B  DRS: B  DRS: B	pCi/L	LCL:	UCL: UCL:130  Date:	RPD:		

7/28/2008 8:43:00 AM

# ICOC Fraction Transfer/Status Report ByDate: 7/29/2007, 8/2/2008, Batch: '8197204', User: 'ALL Order By DateTimeAccepting

8197204         AC         Rev1C         HarrisD         7/15/2008 11:43:45           SC         nortonj         IsBatched         7/15/2008 9:28:47 AM         ICOC_RADCALC v4           SC         HarrisD         InPrep         7/15/2008 11:43:45 AM         RL-PRP-004 RE           SC         HarrisD         Prep1C         7/15/2008 11:49:55 AM         RL-PRP-004 RE           SC         ManisD         InSep1         7/16/2008 8:24:02 AM         RL-GPC-003 RE           SC         ManisD         Sep1C         7/17/2008 5:36:05 PM         RL-GPC-003 RE           SC         DAWKINSO         InCnt1         7/17/2008 5:52:13 PM         RL-CI-007 RE           SC         BlackCL         Cnt1C         7/18/2008 5:50:44 AM         RL-CI-007 RE           SC         ManisD         InSep2         7/22/2008 10:22:18 AM         RL-GPC-004 RE	ents
SC         nortonj         IsBatched         7/15/2008 9:28:47 AM         ICOC_RADCALC v4           SC         HarrisD         InPrep         7/15/2008 11:43:45 AM         RL-PRP-004 RE           SC         HarrisD         Prep1C         7/15/2008 11:49:55 AM         RL-PRP-004 RE           SC         ManisD         InSep1         7/16/2008 8:24:02 AM         RL-GPC-003 RE           SC         ManisD         Sep1C         7/17/2008 5:36:05 PM         RL-GPC-003 RE           SC         DAWKINSO         InCnt1         7/17/2008 5:52:13 PM         RL-CI-007 RE           SC         BlackCL         Cnt1C         7/18/2008 5:50:44 AM         RL-CI-007 RE	
SC         HarrisD         InPrep         7/15/2008 11:43:45 AM         RL-PRP-004 RE           SC         HarrisD         Prep1C         7/15/2008 11:49:55 AM         RL-PRP-004 RE           SC         ManisD         InSep1         7/16/2008 8:24:02 AM         RL-GPC-003 RE           SC         ManisD         Sep1C         7/17/2008 5:36:05 PM         RL-GPC-003 RE           SC         DAWKINSO         InCnt1         7/17/2008 5:52:13 PM         RL-CI-007 RE           SC         BlackCL         Cnt1C         7/18/2008 5:50:44 AM         RL-CI-007 RE	
SC         HarrisD         Prep1C         7/15/2008 11:49:55 AM         RL-PRP-004 RE           SC         ManisD         InSep1         7/16/2008 8:24:02 AM         RL-GPC-003 RE           SC         ManisD         Sep1C         7/17/2008 5:36:05 PM         RL-GPC-003 RE           SC         DAWKINSO         InCnt1         7/17/2008 5:52:13 PM         RL-CI-007 RE           SC         BlackCL         Cnt1C         7/18/2008 5:50:44 AM         RL-CI-007 RE	.8.32
SC         ManisD         InSep1         7/16/2008 8:24:02 AM         RL-GPC-003 RE           SC         ManisD         Sep1C         7/17/2008 5:36:05 PM         RL-GPC-003 RE           SC         DAWKINSO         InCnt1         7/17/2008 5:52:13 PM         RL-CI-007 RE           SC         BlackCL         Cnt1C         7/18/2008 5:50:44 AM         RL-CI-007 RE	EVISION 0
SC         ManisD         Sep1C         7/17/2008 5:36:05 PM         RL-GPC-003 RE           SC         DAWKINSO         InCnt1         7/17/2008 5:52:13 PM         RL-CI-007 RE           SC         BlackCL         Cnt1C         7/18/2008 5:50:44 AM         RL-CI-007 RE	EVISION 0
SC         DAWKINSO         InCnt1         7/17/2008 5:52:13 PM         RL-CI-007 RE           SC         BlackCL         Cnt1C         7/18/2008 5:50:44 AM         RL-CI-007 RE	EV 0
SC BlackCL Cnt1C 7/18/2008 5:50:44 AM RL-CI-007 RE	
Diamot The	
SC ManisD InSep2 7/22/2008 10:22:18 AM RL-GPC-004 RE	EVISION 0
SC ManisD Sep2C 7/24/2008 1:12:52 PM RL-GPC-004 RE	EV 0
SC DAWKINSO InCnt2 7/24/2008 3:09:44 PM RL-CI-006 RE	
SC ClarkR CalcC 7/26/2008 9:22:51 AM RL-CI-006 RE	
SC nortonj Rev1C 7/28/2008 8:42:54 AM RICH-RC-0002 RE	EV 8
AC HarrisD 7/15/2008 11:49:55	
AC ManisD 7/16/2008 8:24:02	
AC ManisD 7/17/2008 5:36:05 PM	
AC DAWKINSO 7/17/2008 5:52:13 PM	
AC BlackCL 7/18/2008 5:50:44	
AC ManisD 7/22/2008 10:22:18	
AC ManisD 7/24/2008 1:12:52 PM	
AC DAWKINSO 7/24/2008 3:09:44 PM	
AC ClarkR 7/26/2008 9:22:51	
AC nortonj 7/28/2008 8:42:54	

AC: Accepting Entry; SC: Status Change

TAL Richland

Richland Wa.

Page 1

Grp Rec Cnt: 11
ICOCFractions v4.8.33

6/27/2008 12:25:24 PM	Sample Preparat	ion/Analysis		Balance Id	1:1120482733
384868, Pacific Northwest National Laboratory ,	AW Gamma PrpRC5017			Pipet	#:
Pacific Northwest National Lab	TA Gamma by HPGE				
AnalyDueDate: 07/28/2008	51 CLIENT: HANFORD			Sep1 DT/Tm Tech	1:
Batch: 8170553 WATER pCi/L SEQ Batch, Test: None	PM, Quote	: SS , 57671		Sep2 DT/Tm Tech	a:
SEQ DAICH, 1651. None				Prep Teci	: HarrisD Bock
Work Order, Lot, Total Initial Aliq		Ppt or Count	Detector (	Count On   Off	CR Analyst, Comments
Sample DateTime   Amt/Unit   Amt/Unit		eometry Time Min	ld	(24hr) Circle	Init/Date
1 KPE1L-1-AD 2000.40g,in	34 30	200	-413	1654	7/2/0/m
J8F050181-1-SAMP	7.15-8 100	nd I do	97-15-8		1
	New Wild Control of the Control of t	1 100;	1-7-15 8scr.	Al-h 0.40E 04 -000-	D-1 4 (7F 04 0)/0-
The same of the sa	Rec: VIAL20,6XLP,3X4LP #Containers: 10	200		Alpha: 8.40E-04 uCi/Sa	Beta: -4.47E-04 uCi/Sa
2 KPE3V-1-AA 2000.20g,in			66	1655	
J8F050186-1-SAMP <b>-               </b>					
06/04/2008 12:40 Amth	Rec: VIAL20,3XLP,4LP #Containers: 5		Scr:	Alpha: 2.39E-04 uCi/Sa	Beta: 4.45E-04 uCVSa
3 KPE6P-1-AC 2000.10g,in			68	1656	
J8F050195-2-SAMP					
			Con	Al-h 0 105 000:/0-	D-1 0 405 00 -01/0-
06/04/2008 08:25 Amtl 4 KPE7T-1-AC 2000.10g,in	Rec: VIAL20,5XLP,3X4LP #Containers: 9	-	Scr:	Alpha: 2.19E-03 uCi/Sa	Beta: -2.49E-03 uCi/Sa
			610	116	
J8F050195-3-SAMP        <b>                           </b>					
	Rec: VIAL20,8XLP,3X4LP #Containers: 12		Scr:	Alpha: -7.63E-04 uCi/Sa	Beta: 1.71E-03 uCi/Sa
5 KPF2X-1-AA 2000.20g,in			67	1657	
J8F050319-1-SAMP					
	Rec: 20ML3X4LP #Containers: 4		Scr:	Alpha: 6.01E-04 uCi/Sa	Beta: -6.96E-04 uCi/Sa
6 KPF2X-1-AD-X	rec. 20ML,3A4LF #Containers. 4				961a0,90E-04 UOVSa
		1	619/1100	2023	
J8F050319-1-DUP 	I (   1   1   1   1   1   1   1   1   1		45		
	Rec: 20ML,3X4LP #Containers: 4		Scr:	Alpha: 6.01E-04 uCi/Sa	Beta: -6.96E-04 uCl/Sa
7 KPF3F-1-AA 2000.20g,in			614	1117	7/2/0h
J8F050319-2-SAMP			• •	,	
			Can	Alpha: 7.005.05070	Pate 4 005 00 - 016
06/05/2008 11:14 Amt	Rec: 20ML,3X4LP #Containers: 4		Scr:	Alpha: 7.29E-05 uCi/Sa	Beta: 1.03E-03 uCi/Sa
TAL Richland Key: In - Initial Amt, fi - Final Amt, of	di - Diluted Amt, s1 - Sep1, s2 - Sep2 Pag	e 1 ISV -	Insufficient Volum	ne for Analysis	WO Cnt: 7
	c-Enrichment Cell, ct-Cocktailed Added				Prep_SamplePrep v4.

/27/2008 12	25:26 PM			Sar	nple Prep	aration/An	alysis		Baland	ce Id:1120482	2733	
	c Northwest Nation	nal Laborato		W Gamma Pr					Pi	ipet #:		
acific Northw	est National Lab			TA Gamma by								
nalyDueDat	e: 07/28/2008			51 CLIENT: HA	ANFORD				Sep1 DT/Tm	Tech:		
atch: 81705		p	Ci/L		PM, Q	uote: SS, 57	671		Sep2 DT/Tm	Tech:		
EQ Batch, Tes	t: None				1122101	1610111011116			Prep	Tech: ,Harris	D	
Work Order, Sample Date			nitial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Anal	yst,	Comments
KPLWM-1-AD	Tr.	20	00.40g,in	,		2-0	~V)	611	1658	7/2/	y in	
F090197-1-SA	MD					200	200			1		
					1							
6/09/2008 10:1	8		AmtRec: VIAI	L20,6XLP,3X4LP	#Containers: 10	(		Scr:	Alpha: 3.31E-03 uC	Di/Sa	Beta: 7.47	E-04 uCi/Sa
KPLWR-1-AD		20	00.30g,in					65	16.59			
F090197-2-SA	MP											
6/09/2008 10:1			Amt Poor MA	L20.6XLP.3X4LP	#Containers: 10			Scr:	Alpha: 8.26E-04 uC	i/Sa	Roto: 2 470	E-04 uCi/Sa
	-	20		LZU, OALF, SA4LF	*Containers. To					7004	Deta. 3.471	2-04 UGF98
KP65W-1-AA-E		20	00.10g,in					415	1700			
3F180000-553-	BLK 							***************************************				
6/05/2008 07:5		HI II II II I	AmtRec:	#Contain				Scr:	Alpha:	1	В	Beta:
KP65W-1-AC-0	;	20	00.30g,in	QCAG1484				GB	5	1/2/	0800	
8F180000-553	LCS			06/20/08,pd			1	40	2025	17-7		
6/05/2008 07:5			AmtRec:	#Contail			1	Scr:	Alpha:	P. Indiana.	Е	Beta:
comments	KPF2X-SAMP "C			. Please recount	on a different d	etector, DLH 6/27	7/08"					
()+170		5101	) []()X									
12 ( 12		_ (	100									
1 Clients												
384868,	Pacific Northwes	t National	Laboratory	Pacific	Northwest	National Lab,	SS , 57671					
-1-1									. , . , ,	····		
Co-60	RDL: 0.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL: 0.00	E+00 pCi	/L LCL:	UCL:	RPD:	
Cs-137 Eu-154	RDL: 6.00E+00 RDL: 0.00E+00	pCi/L	LCL:70	UCL: 130	RPD:20	Cs-137D/ Eu-155	RDL: 6.00	_		UCL: 130	RPD:	
K-40	RDL: 0.00E+00	pCi/L	LCL:	UCL:	RPD:	Sb-125	RDL: 0.00			UCL:	RPD:	
65W1AA-BLK												
TAI Dioble-	Kour In Initial	Amt 6 Fin	al Amt di Di	ted Amt, s1 - Ser	n1 c2 - Con2	Page 2	ISV	Insufficient Vol	ume for Analysis		IMC	O Cnt: 11
TAL Richland	rey. III - IIIIIai	ant, II - Fill	a Ant, ur Dilu	100 Ami, 51 - 50	ocktailed Added	Page 2	100	madinolonit 40i	und for Allarysis		Prep_Sa	Ont. 11

H	6/27/2008 12:25:27 P
TEST	
MEI	AnalyDueDate: 07/28
RICA	Batch: 8170553 SEQ Batch, Test: None

#### Sample Preparation/Analysis

Balance !d:1120482733

AW	Gamma	PrpRC5017
TA	Gamma	by HPGE

Pipet #:

AnalyDueDate: 07/28/2008

51 CLIENT: HANFORD

Sep1 DT/Tm Tech:

pCi/L

Sep2 DT/Tm Tech:

1 180131 18181 11011 INDI ANIAI 81181 8118A 1111 1801

Prep Tech: ,HarrisD

		2.4					JI. R. W. L. B. L. B. L. B. L. L. B. L			
Work Orde Sample Date			Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry T	Count Detect	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments
Co-60	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL: 0.00E+00	pCi/L LCL:	UCL: RP	D:
Cs-137	RDL:6.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-137DA	RDL:6.00E+00	pCi/L LCL:	UCL: RP	D:
Eu-154	RDL: 0.00E+00	pCi/L	LCL:	UCL:	RPD:	Eu-155	RDL:.00E+00	pCi/L LCL:	UCL: RP	D:
K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Sb-125	RDL:0.00E+00	pCi/L LCL:	UCL: RP	D:
P65W1AC-LC	es:									
Cs-137	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:15	pCi/L LCL:70	UCL:130 RP	D:20
K-40	RDL:6	pCi/L	LCL:70	UCL:130	RPD:20	Ra-226	RDL:	pCi/L LCL:70	UCL:130 RP	D:20
RA-228	RDL:	pCi/L	LCL:70	UCL:130	RPD:20	RA-228DA	RDL:	pCi/L LCL:70	UCL:130 RP	D:20
U-238	RDL:	pCi/L	LCL:70	UCL:130	RPD:20					
PEILIAD-SA	MP Calc Info:									
Uncert	Level (#s).: 2	Decay t	to SaDt: Y	Blk Subt.:	N Sci.Not.	1 Y ODRS	: B			
P65W1AA-BI	K:									
Uncert	Level (#s).: 2	Decay t	to SaDt: Y	Blk Subt .:	N Sci.Not.	: Y ODRs	1: B			
P65W1AC-LC	S:									
Uncert	Level (#s).: 2	Decay 1	to SaDt: Y	Blk Subt.:	N Sci.Not.	: Y ODRs	: B			

Approved By

7/15/2008 9:57:25 AM

## ICOC Fraction Transfer/Status Report ByDate: 7/16/2007, 7/20/2008, Batch: '8170553', User: \*ALL Order By DateTimeAccepting

Batch Worl	k Ord CurStat	us A	ccepting		Comments
8170553					
4C	Rev1C	HarrisD	6/27/2008 12:1	1:32	
SC		wagarr	IsBatched	6/19/2008 8:30:57 AM	ICOC_RADCALC v4.8.32
C		HarrisD	InPrep	6/27/2008 12:11:32 PM	RL-PRP-004 REVISION 0
C		HarrisD	Prep1C	6/27/2008 12:25:29 PM	RL-PRP-004 REVISION 0
C		BockJ	InPrep2	6/30/2008 7:22:13 AM	RL-GAM-001 REVISION 0
C		BockJ	Prep2C	7/2/2008 1:27:08 PM	RL-GAM-001 REVISION 0
C		ClarkR	InCnt1	7/2/2008 1:29:58 PM	RL-CI-007 REVISION 0
C		DAWKINSO	CalcC	7/2/2008 10:09:02 PM	RL-CI-007 REVISION 0
C		nortonj	Rev1C	7/15/2008 9:57:00 AM	R1CH-RC-0002 REV 8
0		HarrisD	6/27/2008 12:2	5:29	
		BockJ	6/30/2008 7:22	:13	
C		BockJ	7/2/2008 1:27:0	08 PM	
C		ClarkR	7/2/2008 1:29:5	58 PM	
C		DAWKINSO	7/2/2008 10:09	:02 PM	
C		nortonj	7/15/2008 9:57	:00	

AC: Accepting Entry: SC: Status Change

TAL Richland Richland Wa.

Grp Rec Cnt:7 ICOCFractions v4.8.33

Page 1

	6/30/2008 11:00:21 AM	Sample Prepa	ration/Analysi	is	Balance Id	:1120482733
1	384868, Pacific Northwest National Laboratory ,	BN I-129 Prp/SepRC5025			Pipet #	<b>#</b> :
K	Pacific Northwest National Lab	TB Gamma by LEPD 51 CLIENT: HANFORD			Sep1 DT/Tm Tech	•
미	AnalyDueDate: 07/28/2008					
77	Batch: 8170550 WATER pCi/L SEQ Batch, Test: None All Tests: 8170550 BNTB, 817055	<b>PM, Qu</b> 33 AWTA, 8170555 7YSR. 8170556	ote: SS, 57671 CYTM, 8170557 KO	XW, 8170563 5SS3,	Sep2 DT/Tm Tech	:
		4 - 0.24 - 2.2			Prep Tech	: ,HarrisD
	Work Order, Lot, Total Initial Aliquot Sample DateTime Amt/Unit Amt/Unit	QC Tracer Dish Prep Date Size	Ppt or Co		Count On Off (24hr) Circle	CR Analyst, Comments: Init/Date
4	1 <b>KPE1L-1-AE</b> 3881.30g,in J8F050181-1-SAMP	ITA7371 06/16/08	36.3 1C	W 12	2328	7/16/0 8000
	06/04/2008 09:00 AmtRec:	VIAL20,6XLP,3X4LP #Containers: 10		Scr:	Alpha: 8.40E-04 uCi/Sa	Beta: -4.47E-04 uCi/Sa
-	2 KPE4X-1-AA 3889.20g,in J8F050191-1-SAMP	ITA7372 06/16/08	35.4	L4	23 30	
		VIAL20,2X4LP #Containers: 3		Ser:	Alpha: -1.55E-04 uCi/Sa	Beta: 9.50E-04 uCi/Sa
-	3 KPE6D-1-AA 3902.10g,in	ITA7373 06/16/08	34.6	15	2331	
1	J8F050195-1-SAMP	VIAL20,2X4LP #Containers: 3	7.10	Scr:	Alpha: 1.46E-03 uCi/Sa	Beta: -4.64E-04 uCi/Sa
3	4 KPE6P-1-AD 3902.20g,in	ITA7374		10		
	J8F050195-2-SAMP	06/16/08	35.7	67	0703	7/17/00
		VIAL20,5XLP,3X4LP #Containers: 9		Scr:	Alpha: 2.19E-03 uCi/Sa	Beta: -2.49E-03 uCi/Sa
	<b>5 KPE7T-1-AD</b> 3872.50g,in J8F050195-3-SAMP	ITA7375 06/16/08	35,0	4	0704	
	06/04/2008 11:07 AmtRec:	VIAL20,6XLP,3X4LP #Containers: 12		Scr:	Alpha: -7.63E-04 uCi/Sa	Beta: 1.71E-03 uCi/Sa
-	<b>6 KPF2X-1-AC</b> 3876.80g,in J8F050319-1-SAMP	06/16/08	28.0	K	onom	
		20ML,3X4LP #Containers: 4		Scr:	Alpha: 6.01E-04 uCi/Sa	Beta: -6.96E-04 uCi/Sa
-	7 KPF3F-1-AC 3870.20g,in J8F050319-2-SAMP	ITA7377 06/16/08	33.4	12	6848	7/19/4
	06/05/2008 11:14 AmtRec	20ML,3X4LP #Containers: 4		Scr:	Alpha: 7.29E-05 uCi/Sa	Beta: 1.03E-03 uCi/Sa
	TAL Richland Key: In - Initial Amt, fi - Final Amt, di - I		Page 1	ISV - Insufficient Volur	ne for Analysis	WO Cnt: 7 Prep_SamplePrep v4.8.
	Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Er	richment Cell, ct-Cocktalled Added				Frep_SampleFrep V4.6.

30/2008 11:00:23 AM		Sample Prep	aration/Analysis		Balance Id:11	20482733
34868, Pacific Northwest National acific Northwest National Lab	Laboratory ,	BN I-129 Prp/SepRC5025			Pipet #:	
		TB Gamma by LEPD 51 CLIENT: HANFORD			Sep1 DT/Tm Tech:	
nalyDueDate: 07/28/2008	-0://					
atch: 8170550 WATER EQ Batch, Test: None	pCi/L	PM, Q	uote: SS , 57671		Sep2 DT/Tm Tech:	
. , ,		1188081	ININE LINE LENGT BRIDE	1121 EFFET BRICHER	Prep Tech: ,F	larrisD
Work Order, Lot, Sample DateTime Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Dish Prep Date Size	Ppt or Count Geometry Time M			R Analyst, Comments nit/Date
KPF4V-1-AA F050327-1-SAMP	3895.00g,in	ITA7378 06/16/08	35,4 100	) Ly	0548 7/	17/08
-	AmtRec: 2	#Containers: 3		Scr:	Alpha: -4.14E-04 uCi/Sa	Beta: 5.97E-04 uCi/Sa
KPF46-1-AA	3882.00g,in	ITA7379 06/16/08	35.1	K	0844	
F050327-2-SAMP 	AmtRec:	#Containers: 3		Scr:	Alpha: 1.41E-03 uCi/Sa	Beta: 6.62E-05 uCi/Sa
KPLVT-1-AA	3850.80g,in	ITA7380 06/16/08	33,0	L2	1034	7/17/0xuc
F090190-1-SAMP 	AmtRec:	VIAL20,2X4LP #Containers: 3		Scr:	Alpha: -2.43E-04 uCi/Sa	Beta: 9.50E-04 uCl/Sa
KPLWM-1-AE	3899.50g,in	ITA7381 06/16/08	32.9	L4	1075	
8F090197-1-SAMP 	AmtRec:	VIAL20,6XLP,3X4LP #Containers: 10		Scr:	Alpha: 3.31E-03 uCi/Sa	Beta: 7.47E-04 uCi/Sa
KPLWR-1-AE	3891.50g,in	ITA7382 06/16/08	35.6	L5	1076	
F090197-2-SAMP   <b>-                                       </b>	AmtRec:	VIAL20,6XLP,3X4LP #Containers: 10		Scr:	Alpha: 8.26E-04 uCi/Sa	Beta: 3.47E-04 uCVSa
KPNDQ-1-AA 0F100266-1-SAMP	3911.60g,in	ITA7383 06/16/08	36.2	L2	1219	7/17/am
	AmtRec:	VIAL20,2X4LP #Containers: 3		Scr:	Alpha: 1.63E-03 uCi/Sa	Beta: -1.11E-04 uCi/Sa
KPNDQ-1-AC-X F100266-1-DUP	3877.00g,in	ITA7384 06/16/08	33,8	4	1221	
		VIAL20,2X4LP #Containers: 3		Scr:	Alpha: 1.63E-03 uCi/Sa	Beta: -1.11E-04 uCi/Sa

6/30/2008 11:00:25 AM		Samp	ole Prep	aration/An	alysis		Balance I	d:1120482733	
384868, Pacific Northwest National Pacific Northwest National Lab	al Laboratory ,	BN I-129 Prp/Sep TB Gamma by LE					Pipet	#:	
nalyDueDate: 07/28/2008		5 CLIENT: HAN					Sep1 DT/Tm Tec	h:	
Batch: 8170550 WATER	pCi/L		PM, O	uote: SS, 57	671		Sep2 DT/Tm Tec	h:	
SEQ Batch, Test: None							Prep Tec	h: ,HarrisD	
Work Order, Lot, Total	Initial Aliquot	QC Tracer	Dish	Ppt or	Count	Detector	Count On   Off	CR Analyst,	Comments
Sample DateTime Amt/Unit	Amt/Unit	Prep Date	Size	Geometry	Time Min	Id	(24hr) Circle	Init/Date	Comment
5 KPND3-1-AA 8F100266-2-SAMP	3843.70g,in	ITA7385 06/16/08		30.6	100	L5	1221	7/17/0	inc
<b>-                                       </b>		VIAL20,2X4LP #Co	ntainers: 3			Scr:	Alpha: 1.51E-03 uCi/Sa	Beta:	1.66E-03 uCi/Sa
6 KPND6-1-AA 8F100266-3-SAMP	3871.20g,in	ITA7386 06/16/08		34.6		LZ	1406	+/17/0	8 M
06/09/2008 12:26	AmtRec:	VIAL20,2X4LP #Co	ntainers: 3			Scr:	Alpha: -6.86E-04 uCi/Sa	Beta: 4.75	5E-03 uCi/Sa 1.5E-
7 KP65R-1-AA-B 8F180000-550-BLK	3991.10g,in	ITA7387 06/16/08		34.9		4	1407		
<b>-                                 </b>		#Container	<b>II II</b> s: 1			Scr:	Alpha:		Beta:
8 KP65R-1-AC-C 18F180000-550-LCS	3936.60g,in	ISD0856 04/22/08		35.9		45	1407		
06/09/2008 10:24	AmtRec	#Container			t	Scr:	Alpha:		Beta:
Comments: KPF2X-SAMP "Con	mments: isv for gamma	dup. Please recount on	a different d	letector, DLH 6/27	/08"				
80/0E/12/12/08	<i>,</i>								
11 Clients for Batch: 384868, Pacific Northwest	: National Laborato	ory Pacific N	Torthwest	National Lab,	SS , 5767	71			***
PE1L1AE-SAMP Constituent Lis I-129 RDL:1.00E+00 P65R1AA-BLK:	pCi/L LCL:	UCL:	RPD:						
PE1L1AE-SAMP Constituent Lis I-129 RDL:1.00E+00 P65R1AA-BLK: I-129 RDL:1.00E+00		UCL:	RPD:						
PE1L1AE-SAMP Constituent Lis I-129 RDL:1.00E+00 P65R1AA-BLK:	pCi/L LCL:								

6/30/2008 11:00:2	5 AM		Samp	le Prepar	ation/A	nalysis		Balanc	e ld:1120482733	
			BN I-129 Prp/SepR TB Gamma by LEF					Pi	pet #:	
AnalyDueDate: 07	7/28/2008		51 CLIENT: HANF	ORD				Sep1 DT/Tm 1	Tech:	
Batch: 8170550 SEQ Batch, Test: Nor	20	pCi/L						Sep2 DT/Tm 1	Tech:	
SEQ Batch, Test. Nor	ie			1 10 81 81 181				Prep 1	Tech: ,HarrisD	
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 KP65R1AA-BLK:	(#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not	.: Y	ODRs: B				
Uncert Level KP65R1AC-LCS:	(#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not	.: Y	ODRs: B				
Uncert Level	(#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not	. 2 Y	ODRs: B				

7/18/2008 11:49:05 AM

# ICOC Fraction Transfer/Status Report ByDate: 7/19/2007, 7/23/2008, Batch: '8170550', User: "ALL Order By DateTimeAccepting

Batch Work C	ord CurStat	us Ad	ccepting		Comments
8170550					
4 <i>C</i>	Rev1C	HarrisD	6/30/2008 10:20	0:48	
SC		wagarr	IsBatched	6/19/2008 8:30:57 AM	ICOC_RADCALC v4.8.32
SC		HarrisD	InPrep	6/30/2008 10:20:48 AM	RL-PRP-004 REVISION 0
SC		HarrisD	Prep1C	6/30/2008 10:55:31 AM	RL-PRP-004 REVISION 0
SC .		BostedD	Prep2C	7/16/2008 9:44:34 PM	RL-GAM-002 REVISION 0
C		DAWKINSO	InCnt1	7/16/2008 9:50:55 PM	RL-CI-007 REVISION 0
C		DAWKINSO	CalcC	7/17/2008 9:23:45 PM	RL-CI-007 REVISION 0
C		nortonj	Rev1C	7/18/2008 11:48:55 AM	RICH-RC-0002 REV B
C		HarrisD	6/30/2008 10:55	5:31	
C		BostedD	7/16/2008 9:44:	34 PM	
C		DAWKINSO	7/16/2008 9:50:	55 PM	
IC		DAWKINSO	7/17/2008 9:23:	45 PM	
4C		nortonj	7/18/2008 11:4	3:55	

AC: Accepting Entry; SC: Status Change

TAL Richland

Richland Wa.

Page 1

Grp Rec Cnt:6 ICOCFractions v4.8.33

7/9/2008 10:21:51 AM 384868, Pacific Northwest Natio Pacific Northwest National Lab AnalyDueDate: 07/28/2008	onal Laboratory ,	Sam BN I-129 Prp/Sej TB Gamma by L 5I CLIENT: HAI	PRC5025 EPD NFORD	aration/An			Pipet :	1:
Batch: 8170552 WATER SEQ Batch, Test: None	pCi/L			iote: SS , 57		# # # # # # # # # # # # # # # # # # #	Scp2 DT/Tm Tech Prep Tech	n: HarrisD
Work Order, Lot, Sample DateTime Total	Initial Aliqu nit Amt/Unit	ot QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Comments: Init/Date
1 KPE3X-1-AE J8F050186-2-SAMP	500.10g,in	1TA7389 06/16/08		35.2	100	24	1908	7/14/0800
06/04/2008 12:40	AmtRe	c: 2X500MLP,2XLP,2X4LP	#Containers: 6			Scr:	Alpha: -2.14E-03 uCi/Sa	Betal: 2.40E-03 uCi/Sa
2 KPE3X-1-AJ-X J8F050186-2-DUP	500.50g,in	1TA7390 06/16/08		24.8		15		
06/04/2008 12:40	AmtRe	ec: 2X500MLP,2XLP,2X4LP	#Containers: 6			Scr:	Alpha: -2.14E-03 uCi/Sa	Beta: 2.40E-03 uCi/Sa
3 KP65V-1-AA-B	500.20g,in	ITA7391 06/16/08		31.4		LZ	,	
J8F180000-552-BLK 	 AmtRe	#Containe				Scr:	Alpha:	Beta:
4 KP65V-1-AC-C J8F180000-552-LCS	500.00g,in	ISB0287 05/06/08		34.3		LH	2054	/
06/04/2008 12:40	AmtRo	ec: #Containe	rs: 1			Scr.	Alpha:	Beta:
Comments:	19108							
All Clients for Batch: 384868, Pacific Northwe	est National Labora	tory Pacific	Northwest N	Mational Lab,	ss , 5767	71		
KPE3X1AE-SAMP Constituent I I-129 RDL:5.00E+00 KP65V1AA-BLK:	pCi/L LCL:7	0 UCL:130	RPD:20					
I-129 RDL:5.00E+00 KP65V1AC-LCS: I-129 RDL:5 KPE3K1AE-SAMP Calc Info:	pCi/L LCL:	OCL: 0 UCL:130	RPD:					
TAL Richland Key: In - Initia	Il Amt, fi - Final Amt, di			Page 1	ISV	- Insufficient Volu	me for Analysis	WO Cnt: 4 Prep_SamplePrep v4.8

7/9/2008 10:21:52	AM			Samp	le Prep	aration/Ar	alysis		Balance	e ld:1120482733	
				BN I-129 Prp/SepR	PD					oet #:	
AnalyDueDate: 07/ Batch: 8170552 SEQ Batch, Test: None		pCi/		51 CLIENT: HANF					Sep1 DT/Tm T  Sep2 DT/Tm T  Prep T		
Work Order, Lot, Sample DateTime	Total Amt/Unit		Aliquot	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 P65V1AA-BLK: Uncert Level P65V1AC-LCS: Uncert Level	(#s).: 2	Decay to S Decay to S	aDt: Y	Blk Subt.: N Blk Subt.: N Blk Subt.: N	Sci.	Not.: Y	ODRs: B ODRs: B				
						Approv	ed By			Date:	

TAL Richland Richland Wa. Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: 4

Prep\_SamplePrep v4.8.32

7/15/2008 3:35 03 PM

# ICOC Fraction Transfer/Status Report ByDate: 7/16/2007, 7/20/2008, Batch: '8170552', User: \*ALL Order By DateTimeAccepting

Batch Worl	k Ord CurStat	us A	ccepting		Comments
8170552					
4 <i>C</i>	Rev1C	HarrisD	7/9/2008 10:10	:34	
SC		wagarr	IsBatched	6/19/2008 8:30:57 AM	ICOC_RADCALC v4.8.32
SC		HarrisD	InPrep	7/9/2008 10:10:34 AM	RL-PRP-004 REVISION 0
SC		HarrisD	Prep1C	7/9/2008 10:21:53 AM	RL-PRP-004 REVISION 0
SC		BostedD	Prep2C	7/14/2008 4:48:53 PM	RL-GAM-002 REVISION 0
SC .		AshworthA	Prep2C	7/14/2008 4:49:05 PM	RL-GAM-002 REVISION 0
SC .		DAWKINSO	InCnt1	7/14/2008 5:31:49 PM	RL-CI-007 REVISION 0
SC .		nortonj	Rev1C	7/15/2008 3:34:59 PM	RICH-RC-0002 REV 8
IC		HarrisD	7/9/2008 10:21	:53	
AC .		BostedD	7/14/2008 4:48	:53 PM	
AC		AshworthA	7/14/2008 4:49	:05 PM	
AC .		DAWKINSO	7/14/2008 5:31	49 PM	
AC .		nortonj	7/15/2008 3:34	:59 PM	

AC: Accepting Entry; SC: Status Change

TAL Richland

Richland Wa.

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Grp Rec Cnt: 6 ICOCFractions v4.8.33

6/25/2008 6:59:05 PM		Sample F	reparation	/Analysis		Bala	ance ld:1120482733	
384868, Pacific Northwest National Laboratory, Pacific Northwest National Lab  AnalyDueDate: 07/28/2008:	TM Sele	9 PrpRC5016, : nium-79 by Liq :NT: HANFORD	uid Scint			Sep1 DT/T	Pipet #:	
Batch: 8170556 WATER pCi/L SEQ Batch, Test: None All Tests: 8170550 BNTB,		P	M, Quote: SS		8170563 5 <b>S</b> S3,	Sep2 DT/T	m Tech:	
						Pre	ep Tech: ,HarrisD	
Work Order, Lot, Sample DateTime Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
	00.30g,in	SETA0272 06/24/08		50				
J8F050181-1-SAMP 	AmtRec: VIAL20,6XLP,	3X4LP #Contain	ers; 10		S		4 uCVSa Beta:	4.47E-04 uCi/Sa
2 KPE6P-1-AE 20	00.20g,in	SETA0273 06/24/08						-
J8F050195-2-SAMP <b>-                                </b>	AmtRec: VIAL20,5XLP,		ers: 9		S	cr: Alpha: 2.19E-03	3 uCi/Sa Beta:	2.49E-03 uCi/Sa
3 KPE7T-1-AE	99.90g,in	SETA0274						
JBF050195-3-SAMP 	AmtRec: VIAL20.8XLP.	06/24/08	ore: 19		9	cr: Alpha: -7.63E-0	MuCi/Sa Bota	1.71E-03 uCi/Sa
	00.00g,in	SETA0275	1613. 12		- C	or. Alpha, -7.00E-0	- uoroa deta.	1.7 1L-03 dO/O4
J8F090197-1-SAMP 	AmtRec: VIAL20,6XLP,	06/24/08	ners: 10		s	cr: Alpha: 3.31E-0	3 uCi/Sa Beta:	7.47E-04 uCi/Sa
	200.20g,in	SETA0276 06/24/08						
J8F090197-1-DUP <b>-                                       </b>	AmtRec: VIAL20,6XLP,	3X4LP #Contain	ners: 10		s	cr: Alpha: 3.31E-0	3 uCVSa Beta:	7.47E-04 uCi/Sa
	200.30g,in	SETA0277 06/24/08				· · · · · · · · · · · · · · · · · · ·		
J8F090197-2-SAMP 	AmtRec: VIAL20,6XLP,		ners: 10		S	cr: Alpha: 8.26E-0	4 uCVSa Beta:	3.47E-04 uCi/Sa
7 <b>KP651-1-AA-B</b> 2 J8F180000-556-BLK	200.10g,in	SETA0278 06/24/08						
<u></u>	AmtRec:	#Containers: 1			S	cr: Alpha	a:	Beta:
TAL Richland Key: In - Initial Amt, fi - Final Am Richland Wa. pd - Prep Dt, r - Reference Dt			,	IS	V - Insufficient	Volume for Analysis		WO Cnt: 7 _SamplePrep v4.8

	9:06 PM	1				Sam Y Se-79 PrpRO M Selenium-79	C5016,		/Analys	is		Baland	ce ld: ipet #:	
AnalyDueDat	e: 07/28	3/2008				CLIENT: HA	-	•				Sep1 DT/Tm	Tech:	
Batch: 81705	56		P	ci/L								Sep2 DT/Tm	Tech:	
SEQ Batch, Test	: None											Pren	Tech:	
Work Order,	Lat	ПТ	otal	1	Initial Aliqu	at II oc	Tracer	Tracer	Coun		etector	Count On Off		II Comments
Sample Date			t/Unit		Amt/Unit		Date	Yield	Time M		Id	(24hr) Circle	CR Analyst, Init/Date	Comments
8 KP651-1-AC-BN	1								4	)				
J8F180000-556-I				1811 6			- 115 818							
06/09/2008 10:1	g g			Ar Ar	mtRec:	#Containe					Scr:	Alpha:		Beta:
ll Clients f 384868, P PEILLAF-SAMP Se-79 P6511AA-BLK: Se-79	Consti RDL:3.	Northwest		1 Labo	.:	Pacific: UCL: UCL:	RPD:	west National	Lab, SS	, 57671				
Se-79 CPE1L1AF-SAMP Uncert L CP6511AA-BLK:	evel (#	s).: 2	Decay t			Blk Subt.:		Sci.Not.: Y	ODRs:					
Se-79 CPE1L1AF-SAMP Uncert L CP6511AA-BLK: Uncert L	evel (#	s).: 2	Decay t			Blk Subt.:		Sci.Not.: Y	ODRs:					
Se-79 CPE1L1AF-SAMP Uncert L CP6511AA-BLK: Uncert L	evel (# Level (#	(s).: 2 (s).: 2		to SaD	Ot: Y		N			В				
KPE1L1AF-SAMP Uncert L KP6511AA-BLK: Uncert L KP6511AC-IBLK	evel (# Level (#	(s).: 2 (s).: 2	Decay t	to SaD	Ot: Y	Blk Subt.:	N	Sci.Not.: Y	ODRs:	В			Date:	
Se-79  KPE1L1AF-SAMP  Uncert L  KP6511AA-BLK:  Uncert L  KP6511AC-IBLK	evel (# Level (#	(s).: 2 (s).: 2	Decay t	to SaD	Ot: Y	Blk Subt.:	N	Sci.Not.: Y	ODRs:	В			Date:	

7/28/2008 2:17:56 PM

## ICOC Fraction Transfer/Status Report ByDate: 7/29/2007, 8/2/2008, Batch: '8170556', User: \*ALL Order By DateTimeAccepting

Batch Wor	k Ord CurStat	us	Accepting		Comments
8170556					
4 <i>C</i>	Rev1C	HarrisD	6/25/2008 6:48	32 PM	
SC		wagarr	IsBatched	6/19/2008 8:30:57 AM	ICOC_RADCALC v4.8.32
C		HarrisD	InPrep	6/25/2008 6:48:32 PM	RL-PRP-004 REVISION 0
SC .		HarrisD	Prep1C	6/25/2008 6:56:45 PM	RL-PRP-004 REVISION 0
SC .		ManisD	InSep1	7/2/2008 8:04:52 AM	LSC-012 REV 0
C		BlackCL	InCnt1	7/3/2008 9:41:22 AM	RL-CI-005 REVISION 0
C		BlackCL	CalcC	7/8/2008 9:44:15 AM	RL-CI-005 REVISION 0
C		nortonj	Rev1C	7/28/2008 2:17:48 PM	RICH-RC-0002 REV 8
C		HarrisD	6/25/2008 6:56	45 PM	
C		ManisD	7/2/2008 8:04:5	52 AM	
C		BlackCL	7/3/2008 9:41:2	22 AM	
C		BlackCL	7/8/2008 9:44:1	5 AM	
C		nortonj	7/28/2008 2:17	48 PM	

AC: Accepting Entry; SC: Status Change

TAL Richland Richland Wa.

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Grp Rec Cnt:6 ICOCFractions v4.8.33



***RE-ANALYSIS REQ DUE DATE 7-28	UEST***
CUSTOMER FGW	
ANALAYSIS Se 79	
MATRIX H2O	
LOT NUMBER <u> </u>	,050195,090197
SAMPLE DELIVERY GROUP	wo 5424
OLD BATCH NUMBER 81	70556
NEW BATCH NUMBER	97274
LAB SAMPLE ID CLIENT ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1) KPEZTIAE	LOW TRACER YIELD
2) KPLWM	
3) KPLWM DUP	
4) BLK	
5) 165	
6) N BLK	
7)	
8)	
9)	
10)	
11)	
12)	
13)	
14)	
15)	
16)	
17)	
18)	
19)	
20)	
LAB QC ID	Assigned with new batch.

RC-048, 12/07, Rev 8

7/15/2008 1:19:10 PM 384868, Pacific Northwest National Labo		-79 PrpRC5016, Se		nalysis			ce Id:1120482733	
Pacific Northwest National Lab		elenium-79 by Liqui LIENT: HANFORD				Sep1 DT/Tm		
Batch: 8197274 WATER EQ Batch, Test: None	pCi/L		Quote: SS , 5			Sep2 DT/Tm Prep	Tech: Tech: ,HarrisD	
Work Order, Lot, Sample DateTime Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments
KPE7T-2-AE	200.40g,in	SETA0284 07/14/08	4	50				
BF050195-3-SAMP 	AmtRec: VIAL20,8X	LP,3X4LP #Containers	: 12		Scr	: Alpha: -7.63E-04 uC	Ci/Sa Beta:	1.71E-03 uCi/Sa
KPLWM-2-AF	200.10g,in	SETA0285 07/14/08						
8F090197-1-SAMP 	AmtRec: VIAL20,6X	LP,3X4LP #Containers	: 10		Sci	: Alpha: 3.31E-03 uC	CVSa Beta:	7.47E-04 uCi/Sa
KPLWM-2-AH-X	200.00g,in	SETA0286 07/14/08						
8F090197-1-DUP 	AmtRec: VIAL20,6X		: 10	-	Sci	: Alpha: 3.31E-03 uC	Ci/Sa Beta:	7.47E-04 uCi/Sa
KRH8V-1-AA-B	200.20g,in	SETA0287 07/14/08						
8G150000-274-BLK 	AmtRec:	#Containers: 1			Sc	r: Alpha:		Beta:
KRH8V-1-AC-C								
8G150000-274-LCS <b>                                       </b>	Amt/Rec:	#Containers: 1			Sc	r: Alpha:		Beta:
6 KRH8V-1-AD-BN	220	296			600			
J8G150000-274-IBLK 	AmtRec:	#Containers: 1			Sc	r: Alpha:		Beta:
-	- Final Amt, di - Diluted A			15	SV - Insufficient V	olume for Analysis		WO Cnt: 6 SamplePrep v4

7/15/2008 1:19:15 PM	** 4 *	Sample	Preparation	Analysis		Balan	ce ld:	
		CY Se-79 PrpRC501				F	ipet #:	
AnalyDueDate: 07/28/2008		TM Selenium-79 by I 5I CLIENT: HANFO	-			Sep1 DT/Tm	Tech:	
Batch: 8197274	pCi/L			-		Sep2 DT/Tm	Tech:	
SEQ Batch, Test: None							Tech:	
W 10 1 1 1 1	Total   Indianal Ali		<u> Tamin Tima Tima</u>					11 0
	Total Initial Ali nt/Unit Amt/U			Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments
41100	- 0001 171	. 9/00						
all Clients for Batch: 384868, Pacific Northwest PE7T2AE-SAMP Constituent Li		Pacific Nort	hwest National	Lab, SS , 5	7671			
RH8V1AA-BLK:								
RH8V1AC-LCS:								
RH8V1AD-IBLK:								
PE7T2AE-SAMP Calc Info:								
Uncert Level (#s) .: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B				
RH8V1AA-BLK: Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B				
RH8V1AC-LCS: Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B				
TH8V1AD-IBLK: Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B				
			App	roved By			Date:	

7/28/2008 2:12:C5 PM

## ICOC Fraction Transfer/Status Report ByDate: 7/29/2007, 8/2/2008, Batch: '8197274', User: \*ALL Order By DateTimeAccepting

Q Batch Work	Ord CurStat	us	Accepting		Comments
8197274	***************************************				
AC	Rev1C	HarrisO	7/15/2008 1:15	36 PM	
SC		nortonj	IsBatched	7/15/2008 10:46:39 AM	ICOC_RADCALC v4.8.32
SC		HarrisD	InPrep	7/15/2008 1:15:36 PM	RL-PRP-004 REVISION 0
SC		HarrisD	Prep1C	7/15/2008 1:19:16 PM	RL-PRP-004 REVISION 0
SC		BlackCL	InCnt1	7/25/2008 7:32:50 AM	RL-CI-005 REVISION 0
SC		ClarkR	CalcC	7/28/2008 1:05:58 PM	RL-CI-005 REVISION 0
SC		nortonj	Rev1C	7/28/2008 2:12:00 PM	RICH-RC-0002 REV 8
AC		HarrisD	7/15/2008 1:19:	16 PM	
4C		BlackCL	7/25/2008 7:32:	50	
4C		ClarkR	7/28/2008 1:05:	58 PM	
4C		nortonj	7/28/2008 2:12:	00 PM	

AC: Accepting Entry; SC: Status Change

TAL Richland

Richland Wa.

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Grp Rec Cnt: 5 ICOCFractions v4.8.33

	5 PM			Sample Prepa	aration/Ana	lysis		Balance lo	d:1120482733	
6/24/2008 4:05:46 384868, Pacific No Pacific Northwest NanalyDueDate: 0	orthwest Nation	al Laboratory ,		Prp/SepRC5065				Pipet	#:	
Pacific Northwest N	vational Lab	No.12.1		netium-99 by Liquid NT: HANFORD	Scint			Sep1 DT/Tm Tecl	h.	
AnalyDueDate: 0	7/28/2008	10000	of CLIEF							
Batch: 8170559 SEQ Batch, Test: No	WATER	pCi/L		PM, Qu	iote: SS , 576		Sep2 DT/Tm Tecl	h:		
old batch, rest. No	JII E			11001011		1112 1211 1221	Prep Tecl	h: ,HarrisD	risD	
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
KPE3X-1-AG			125.30g,in	125.30g		in				······································
8F050186-2-SAMP						W				
<b>              </b>		Amt	Rec: 2X500MLP,2XL	P,2X4LP #Containers: 6			Scr:	Alpha: -2.14E-03 uCi/Sa	Beta: 2.	40E-03 uCi/Sa
KPE3X-1-AM-S			125.10g,in	125.10g	TCSG2080					
J8F050186-2-MS				L POLICION .	06/24/08,pd 01/10/06,r					
06/04/2008 12:40		Amt	Rec: 2X500MLP,2XL	P,2X4LP #Containers: 6			Scr:	Alpha: -2.14E-03 uCi/Sa	Beta: 2.	40E-03 uCi/Sa
KPE3X-1-AN-X			125.00g,in	125.00g						
J8F050186-2-DUP										
<b>                    </b> 06/04/2008 12:40		Amt	Rec: 2X500MLP,2XL	P,2X4LP #Containers: 6			Scr:	Alpha: -2.14E-03 uCi/Sa	Beta: 2.	40E-03 uCi/Sa
4 KP654-1-AA-B			125.30g,in	125.30g						
J8F180000-559-BLK										
06/04/2008 12:40		Ami	Rec:	#Containers: 1			Scr:	Alpha:		Beta:
5 KP654-1-AC-C			125.30g,in	125.30g	TCSE2228					
J8F180000-559-LCS					04/11/08,pd 01/10/06,r					
06/04/2008 12:40		Ami	:Rec:	#Containers: 1			Scr:	Alpha:		Beta:
6 KP654-1-AD-BN							74-14			
J8F180000-559-1BLH	<					1				
MI II AMERICANIA 8 1 1	<b>     </b>		<b>[                                    </b>	#Containers: 1			Scr:	Alpha:		Beta:
06/04/2008 12:40		Am	Hec.	#Containers. 1			001.	Alpha,		

6/24/2008 4:05:48 PM			San	nple Prepa	aration/	Analysis			Balance	ld:	
AnalyDueDate: 07/28/2008		FP Tc-99 Prp/SepRC5065 S5 Technetium-99 by Liquid Scint 51 CLIENT: HANFORD							Pipe Sep1 DT/Tm Te		
Batch: 8170559 SEQ Batch, Test: None	pC	i/L							Sep2 DT/Tm Te		
	Total Unitial Aliquet U Adi Aliquet U OC Tracer Count U Detector							Prep Te	cn:		
Work Order, Lot, Sample Date /Unit	Total Acidified/			dj Aliq Amt Un-Acidified)	QC Trac Prep Da		ount e Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
Comments HCD.	out	epe	108								
All Clients for Batch:											
384868, Pacific Northwest	National	Laboratory	Pacific	Northwest N	ational I	Lab, SS,	57671				
KPE3X1AG-SAMP Constituent Li Tc-99 RDL:15 KPE3X1AM-MS Constituent List	pCi/L	LCL:70	UCL:130	RPD:20							
KP6541AA-BLK: Tc-99 RDL:15 KP6541AC-LCS:	pCi/L	LCL:	UCL:	RPD:							
Tc-99 RDL:15 KP6541AD-IBLK:	pCi/L	LCL:70	UCL:130	RPD:20							
Tc-99 RDL:15	pCi/L	LCL:	DCL:	RPD:							
Uncert Level (#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N Sci.N	Not.: Y	ODRs: B					
KPE3X1AM-MS Calc Info: Uncert Level (#s).: 2 KP6541AA-BLK:	Decay to	SaDt: Y	Blk Subt.:	N Sci.N	Not.: Y	ODRs: B					
Uncert Level (#s).: 2 KP6541AC-LCS:	Decay to	SaDt: Y	Blk Subt.:	N Sci.N	Not.: Y	ODRs: B					
Uncert Level (#s).: 2 KP6541AD-IBLK:	Decay to	SaDt: Y	Blk Subt.:	N Sci.N	Not.: Y	ODRs: B					
Uncert Level (#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N Sci.N	Not.: Y	ODRs: B					
					App:	roved By	-	**		Date:	
TAL Richland Key: In - Initial /	Amt. fi - Final	Amt. di - Dilu	ted Amt, s1 - Sep	1. s2 - Sep2	Page 2		ISV - I	nsufficient Volum	ne for Analysis	V	VO Cnt: 6
-			hment Cell, ct-Co								SamplePrep v4.8.3

P

6/26/2008 4:01:38 PM

# ICOC Fraction Transfer/Status Report ByDate: 6/27/2007, 7/1/2008, Satch: '8170559', User: \*ALL Order By DateTimeAccepting

Batch Work	Ord CurStat	us	Accepting		Comments
5170559					
4C	Rev1C	HarrisD	6/24/2008 4:02:	:49 PM	
SC		wagarr	IsBatchec	6/19/2008 8:30:57 AM	ICOC_RADCALC v4.8.32
GC .		HarrisD	InPrep	6/24/2008 4:02:49 PM	RL-PRP-004 REVISION 0
C		HarrisD	Prep1C	6/24/2008 4:05:47 PM	RL-PRP-004 REVISION 0
SC .		Barcoti	InPre;	6/25/2008 10:26:58 AM	RL-LSC-014 REVISION 0
C		Barcotl	Prep10	6/25/2008 10:27:34 AM	RL-LSC-014 REVISION 0
C		BlackCL	InCnt1	6/25/2008 10:29:14 AM	RL-CI-005 REVISION 0
C		BlackCL	CalcC	6/26/2008 7:17:22 AM	RL-CI-005 REVISION 0
C		antonsonl	Rev1C	6/26/2008 4:01:15 PM	RICH-RC-0002 REV 8
C		HarrisD	6/24/2008 4:05:	:47 PM	
С		Barcoti	6/25/2008 10:2	3: <b>58</b>	
C		Barcotl	6/25/2008 10:2	7:34	
IC		BlackCL	6/25/2008 10:2	9:14	
AC .		BlackCL	6/26/20:.8 7:17:	:22	
AC .		antonsonl	6/26/2018 4:01:	:15 PM	

AC: Accepting Entry; SC: Status Change

TAL Richland

Richland Wa.

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Grp Rec Cnt:7 ICOCFractions v4.8.33

/19/2008 8:25:30 AM	Sample Pr	reparation/Ana	ysis		Balance Id:	2445
84868, Pacific Northwest National Laboratory ,	AR H-3 Prp/SepRC5007				Pipet #:	2445 20 08 pm
Pacific Northwest National Lab	S6 Tritium by Liquid Sci	int		041		2008.
nalyDueDate: 07/28/2008	51 CLIENT: HANFORD			Sep1 I	Di/im lecn: 6-	JO OCODNI
Batch: 8170562 WATER pCi/L SEQ Batch, Test: None	PM	I, Quote: SS , 5767	11	Sep2 I	OT/Tm Tech:	
ocq baidi, rest. None	1100				Prep Tech:	
Work Order, Lot, Total Initi	ial Aliquot QC Tracer	Count	Detector	Count On Off	CR Analyst,	Comments:
	mt/Unit Prep Date	Time Min	ld	(24hr) Circle	Init/Date	
KPE3X-1-AA						
8F050186-2-SAMP						
	Rec: 2X500MLP,2XLP,2X4LP #Contain	nérs; 6		Scr: Alpha: -2.	4E-03 uCVSa	Beta: 2.40E-03 uCVSa
KPE3X-1-AR-X						
8F050186-2-DUP {						
	Rec: 2X500MLP,2XLP,2X4LP #Contain	ners: 6		Scr: Alpha: -2.	4E-03 uCVSa	Beta: 2.40E-03 uCi/Sa
KP657-1-AA-B				- M		
8F180000-562-BLK						
	Rec: #Containers: 1			Scr.	Alpha:	Bela:
KP657-1-AC-C						
BF180000-562-LCS	0   100   1   10   11   11   11   11					
	Rec: #Containers: 1			Scr:	Alpha:	Beta:
KP657-1-AD-BX						
8F180000-562-MBLK						
	H 1 400 0 1 M 101 10 1 10 10 10 10 10 10 10 10 10 10					
	tRec: #Containers: 1			Scr:	Alpha:	Beta:
KP657-1-AE-CM						
8F180000-562-MLCS						
	Rec: #Containers: 1			Scr:	Alpha:	Beta:
KP657-1-AF-BN	wiec.		<u>-</u>		mprice.	204.
Action 100 and						
8F180000-562-IBLK 		************				
	tRec: #Containers: 1			Scr:	Alpha:	Beta:
TAL Distance - Kew les 1-77-1-4-1-5			101/	wiff alone Value - 5 - 5		WO Cnt: 7
TAL Richland Key: In - Initial Amt, fi - Final Amt, Richland Wa. pd - Prep Dt, r - Reference Dt, e	di - Diluted Amt, s1 - Sep1, s2 - Sep c-Enrichment Cell, ct-Cocktailed Ad	-	ISV - Ins	sufficient Volume for Anal	ysis	ICOC v4.8
TOTAL TEL	S Elimonitions Soil, St Sookianed Ad-					

5/19/2008 8:25:30 AM		Sample Preparation/Analysis					Balance Id:			
			AR H-3 Prp/Sep				Pipet #: _			
			S6 Tritium by L				Son4 DT/Tm Took			
nalyDueDate: 07/28/2008			51 CLIENT: HA	MFORD		Sep1 DT/Tm Tech:				
Batch: 8170562	p	CI/L			\$	Sep2 DT/Tm Tech:				
SEQ Batch, Test: None				* 100101 10101 11011	Prep Tech:					
Work Order, Lat,	Total I	Initial Aliqu	est II oc	Tracer Count	Detector					
	mt/Unit	Amt/Unit		Date Time Min	Id	(24hr) Circle	Init/Da			
KP657-1-AG-BN										
8F180000-562-IBLK	(O - 101   14   16   14   14   14   14   14   1	0 10 100 B 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		(						
<b>-                                  </b>	M	AmtRec:	#Contain			Scr:	Alpha:	Beta:		
Comments:										
Minients.										
384868, Pacific North PE3X1AA-SAMP Constituent H-3 RDL:400 P6571AA-BLK:	List: pCi/L	LCL:70	UCL:130	Northwest National :	ab, 88 , 5767	1				
384868, Pacific North PE3X1AA-SAMP Constituent H-3 RDL:400 P6571AA-BLK: H-3 RDL:400 P6571AC-LCS:	List: pCi/L pCi/L	LCL:70	UCL:130 UCL:	RPD: 20	ab, 88 , 5767	1				
384868, Pacific North PE3X1AA-SAMP Constituent H-3 RDL:400 P6571AA-BLK: H-3 RDL:400 P6571AC-LCS: H-3 RDL:400	List: pCi/L	LCL:70	UCL:130	RPD:20	.ab, 88 , 5767	1				
384868, Pacific North PE3X1AA-SAMP Constituent H-3 RDL:400 P6571AA-BLK: H-3 RDL:400 P6571AC-LCS: H-3 RDL:400 P6571AD-MBLK: E-3 RDL:400	List: pCi/L pCi/L	LCL:70	UCL:130 UCL:	RPD: 20	ab, 88 , 5767	1				
384868, Pacific North PE3X1AA-SAMP Constituent H-3 RDL:400 P6571AA-BLK: H-3 RDL:400 P6571AC-LCS: H-3 RDL:400 P6571AD-MBLK: H-3 RDL:400 P6571AE-MLCS: H-3 RDL:400	List: pCi/L pCi/L pCi/L	LCL:70 LCL:	UCL:130 UCL: UCL:130	RPD:20 RPD: RPD:20	ab, 88 , 5767	1				
384868, Pacific North PE3X1AA-SAMP Constituent H-3 RDL:400 P6571AA-BLK: H-3 RDL:400 P6571AC-LCS: H-3 RDL:400 P6571AD-MBLK: H-3 RDL:400 P6571AE-MLCS: H-3 RDL:400	List:  pCi/L  pCi/L  pCi/L  pCi/L  pCi/L	LCL:70 LCL: LCL:70 LCL:	UCL:130 UCL: UCL:130 UCL:	RPD:20 RPD: RPD:20 RPD:	.ab, 88 , 5767	1				
384868, Pacific North  PE3X1AA-SAMP Constituent H-3 RDL:400 P6571AA-BLK: H-3 RDL:400 P6571AC-LCS: H-3 RDL:400 P6571AD-MBLK: H-3 RDL:400 P6571AE-MLCS: H-3 RDL:400 P6571AF-IBLK: H-3 RDL:400 P6571AF-IBLK:	List:  pCi/L  pCi/L  pCi/L  pCi/L  pCi/L  pCi/L	LCL:70 LCL: LCL:70 LCL: LCL:70 LCL:	UCL:130 UCL: UCL:130 UCL: UCL:130	RPD:20 RPD: RPD:20 RPD: RPD:20 RPD:	Lab, 88 , 5767	1				
384868, Pacific North  PE3X1AA-SAMP Constituent H-3 RDL:400 P6571AA-BLK: H-3 RDL:400 P6571AC-LCS: H-3 RDL:400 P6571AD-MBLK: H-3 RDL:400 P6571AE-MLCS: H-3 RDL:400 P6571AF-IBLK: H-3 RDL:400 P6571AG-IBLK: H-3 RDL:400 P6571AG-IBLK: H-3 RDL:400	List:  pCi/L  pCi/L  pCi/L  pCi/L  pCi/L	LCL:70 LCL: LCL:70 LCL:	UCL:130 UCL: UCL:130 UCL:	RPD:20 RPD: RPD:20 RPD: RPD:20	.ab, 88 , 5767	1				
384868, Pacific North  PE3X1AA-SAMP Constituent H-3 RDL:400 P6571AC-LCS: H-3 RDL:400 P6571AC-MBLK: E-3 RDL:400 P6571AE-MLCS: H-3 RDL:400 P6571AF-IBLK: H-3 RDL:400 P6571AF-IBLK: H-3 RDL:400 P6571AF-IBLK: H-3 RDL:400 P6571AG-IBLK:	List:  pCi/L  pCi/L  pCi/L  pCi/L  pCi/L  pCi/L  pCi/L	LCL:70 LCL: LCL:70 LCL: LCL:70 LCL:	UCL:130 UCL: UCL:130 UCL: UCL:130	RPD:20 RPD: RPD:20 RPD: RPD:20 RPD: RPD:20 RPD:	ODRs: B	1				
384868, Pacific North  PE3X1AA-SAMP Constituent H-3 RDL:400 P6571AA-BLK: H-3 RDL:400 P6571AC-LCS: H-3 RDL:400 P6571AC-MLK: H-3 RDL:400 P6571AE-MLCS: H-3 RDL:400 P6571AF-IBLK: H-3 RDL:400 P6571AF-IBLK: H-3 RDL:400 P6571AG-IBLK: H-3 RDL:400 P6571AG-IBLK: H-3 RDL:400 P6571AG-IBLK: H-3 RDL:400 P6571AG-IBLK: H-3 RDL:400 P6571AA-BLK:	List:  pCi/L  pCi/L  pCi/L  pCi/L  pCi/L  pCi/L  pCi/L  pCi/L  pCi/L	LCL:70 LCL: LCL:70 LCL: LCL:70 LCL: LCL:70 LCL:	UCL:130 UCL: UCL:130 UCL: UCL:130 UCL:	RPD:20 RPD: RPD:20 RPD: RPD:20 RPD: RPD:		1				
384868, Pacific North PE3X1AA-SAMP Constituent H-3 RDL:400 P6571AA-BLK: H-3 RDL:400 P6571AC-LCS: H-3 RDL:400 P6571AE-MLCS: H-3 RDL:400 P6571AE-MLCS: H-3 RDL:400 P6571AF-IBLK: H-3 RDL:400 P6571AG-IBLK: H-3 RDL:400 P6571AC-IBLK: Uncert Level (#s):	List:  pCi/L	LCL:70 LCL: LCL:70 LCL: LCL:70 LCL: LCL:70 LCL: LCL:	UCL:130 UCL: UCL:130 UCL: UCL:130 UCL: UCL:130 UCL: Blk Subt.:	RPD:20 RPD: RPD:20 RPD: RPD:20 RPD: RPD: RPD: RPD: RPD:	ODRs: B	1				
384868, Pacific North  PE3X1AA-SAMP Constituent H-3 RDL:400 P6571AA-BLK: H-3 RDL:400 P6571AC-LCS: H-3 RDL:400 P6571AD-MBLK: H-3 RDL:400 P6571AE-MLCS: H-3 RDL:400 P6571AF-IBLK: H-3 RDL:400 P6571AG-IBLK: Uncert Level (#s):2 P6571AC-LCS: Uncert Level (#s):2	List:  pCi/L	LCL:70 LCL: LCL:70 LCL: LCL:70 LCL: LCL:70 LCL:	UCL:130 UCL: UCL:130 UCL: UCL:130 UCL:	RPD:20 RPD: RPD:20 RPD: RPD:20 RPD: RPD: RPD: RPD: RPD:	ODRs: B	1				
384868, Pacific North  PE3X1AA-SAMP Constituent H-3 RDL:400 P6571AA-BLK: H-3 RDL:400 P6571AC-LCS: H-3 RDL:400 P6571AE-MLCS: H-3 RDL:400 P6571AE-MLCS: H-3 RDL:400 P6571AF-IBLK: H-3 RDL:400 P6571AF-IBLK: H-3 RDL:400 P6571AG-IBLK: H-3 RDL:400 P6571AG-IBLK: H-3 RDL:400 P6571AG-IBLK: Uncert Level (#s): P6571AA-BLK: Uncert Level (#s): P6571AC-LCS: Uncert Level (#s): P6571AD-MBLK: Uncert Level (#s):	List:  pCi/L	LCL:70 LCL: LCL:70 LCL: LCL:70 LCL: LCL:70 LCL: LCL:	UCL:130 UCL: UCL:130 UCL: UCL:130 UCL: UCL:130 UCL: Blk Subt.:	RPD:20 RPD: RPD:20 RPD: RPD:20 RPD: RPD: RPD: N Sci.Not.: Y N Sci.Not.: Y	ODRs: B	1				
384868, Pacific North  PE3X1AA-SAMP Constituent H-3 RDL:400 P6571AA-BLK: H-3 RDL:400 P6571AC-LCS: H-3 RDL:400 P6571AE-MLCS: H-3 RDL:400 P6571AF-IBLK: H-3 RDL:400 P6571AF-IBLK: H-3 RDL:400 P6571AG-IBLK: H-3 RDL:400 P6571AG-IBLK: Uncert Level (#s): P6571AA-BLK: Uncert Level (#s): P6571AC-LCS: Uncert Level (#s): P6571AC-MBLK: Uncert Level (#s):	List:  pCi/L  pCi/L	LCL:70 LCL: LCL:70 LCL: LCL:70 LCL: LCL: V SaDt: Y SaDt: Y	UCL:130 UCL: UCL:130 UCL: UCL:130 UCL: Blk Subt.: Blk Subt.:	RPD:20 RPD: RPD:20 RPD: RPD:20 RPD: RPD: RPD: RPD: RPD: N Sci.Not.: Y N Sci.Not.: Y N Sci.Not.: Y	ODRs: B ODRs: B	1				
PE3X1AA-SAMP Constituent H-3 RDL:400 P6571AA-BLK: H-3 RDL:400 P6571AC-LCS: H-3 RDL:400 P6571AD-MBLK: H-3 RDL:400 P6571AE-MLCS: H-3 RDL:400 P6571AF-IBLK: H-3 RDL:400 P6571AF-IBLK: H-3 RDL:400 P6571AG-IBLK: Uncert Level (#s): P6571AA-BLK: Uncert Level (#s): P6571AD-MBLK: Uncert Level (#s): P6571AD-MBLK: Uncert Level (#s): P6571AD-MBLK: Uncert Level (#s):	List: pCi/L	LCL:70 LCL: LCL:70 LCL: LCL:70 LCL: LCL: V o SaDt: Y o SaDt: Y o SaDt: Y	UCL:130 UCL: UCL:130 UCL: UCL:130 UCL: Blk Subt.: Blk Subt.: Blk Subt.:	RPD:20 RPD: RPD:20 RPD: RPD:20 RPD: RPD: RPD: N Sci.Not.: Y N Sci.Not.: Y N Sci.Not.: Y N Sci.Not.: Y	ODRs: B ODRs: B ODRs: B	1				

19/2008 8:25:30	AM		Sample P	reparation/A		Balance Id:			
			3 Prp/SepRC5007			Pipet #:			
	10.000		tium by Liquid So IENT: HANFORD		San1 F	Sep1 DT/Tm Tech:			
nalyDueDate: 07			IENT. HANFORD						
atch: 8170562 EQ Batch, Test: Non-		pCi/L				Sep2 D	T/Tm Tech:		
			110			1118 1281 1881	Prep Tech:		
Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector 1d	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments	
6571AG-IBLK: Uncert Level			III		ODRs: B				
				Approv	ed By		Date:		

6/30/2008 8:58:32 AM

## ICOC Fraction Transfer/Status Report ByDate: 7/1/2007, 7/5/2008, Batch: '8170562', User: "ALL Order By DateTimeAccepting

Batch Wor	k Ord CurState	us A	ccepting		Comments
8170562					
C	Rev1C	McDowellD	6/20/2008 8:47	:42	
SC		wagarr	IsBatched	6/19/2008 8:30:57 AM	ICOC_RADCALC v4.8.32
C		McDowellD	Sep1C	6/20/2008 8:47:42 AM	RL-LSC-005 REVISION 0
SC .		BlackCL	CalcC	6/23/2008 6:10:32 AM	RL-CI-005 REVISION 0
SC .		antonsonl	Rev1C	6/30/2008 8:58:07 AM	RICH-RC-0002 REV 8
C		BlackCL	6/23/2008 6:10	:32	
4 <i>C</i>		antonsoni	6/30/2008 8:58	:07	

AC: Accepting Entry; SC: Status Change

TAL Richland

Richland Wa.

Page 1

Grp Rec Cnt: 3 ICOCFractions v4.8.33

6/19/2008 8:25:30 AM	Sample Prepara	ition/Analysis	Balance Id:	VIA
6/19/2008 8:25:30 AM 384868, Pacific Northwest National Laboratory, Pacific Northwest National Lab AnalyDueDate: 07/28/2008 Batch: 8170563 WATER pCi/L	5S C-14 Prp/SepRC5022		Pipet #:	
Pacific Northwest National Lab	S3 Carbon-14 by Liquid Scint  5I CLIENT: HANFORD		Sep1 DT/Tm Tech:	1. 32.28 A.
AnalyDueDate: 07/28/2008				6.45 CE PIL
Batch: 8170563 WATER pCi/L SEQ Batch, Test: None	PM, Quote	e: SS , 57671	Sep2 DT/Tm Tech:	
	110000000		Prep Tech:	
	al Aliquot   QC Tracer   Cou	ount Detector Count On e Min Id (24hr) Cir		
KPE1L-1-AC				
8F050181-1-SAMP 	14 E 10 E 10 E 10 E 11 E 11 E 11 E 11 E		······································	
06/04/2008 09:00 AmtR	Rec: VIAL20,6XLP,3X4LP #Containers: 10	Scr:	Alpha: 8.40E-04 uCi/Sa	Beta: -4.47E-04 uCi/Sa
2 KPE6P-1-AA				
	Rec: VIAL20,5XLP,3X4LP #Containers: 9	Scr:	Alpha: 2.19E-03 uCi/Sa	Beta: -2.49E-03 uCi/Sa
3 KPE6P-1-AG-X				
			Al-lan 0.105.00 vCi/O-	Date: 0.40E 00.0000
06/04/2008 08:25 AmtF 4 KPE7T-1-AA	Rec: VIAL20,5XLP,3X4LP #Containers: 9	Scr:	Alpha: 2.19E-03 uCi/Sa	Beta: -2.49E-03 uCi/Sa
8F050195-3-SAMP				
	Rec: VIAL20,8XLP,3X4LP #Containers: 12	Scr:	Alpha: -7.63E-04 uCi/Sa	Beta: 1.71E-03 uCi/Sa
KPLWM-1-AC				
I8F090197-1-SAMP				
<b>  }                                     </b>	Rec: VIAL20,6XLP,3X4LP #Containers: 10	Scr.	Alpha: 3.31E-03 uCi/Sa	Beta: 7.47E-04 uCi/Sa
KPLWR-1-AC				
J8F090197-2-SAMP 	IA (A BO)   BO   1   15   BI BI BI	846************************************		
06/09/2008 10:18 Amt	Rec: VIAL20,6XLP,3X4LP #Containers: 10	Scr:	Alpha: 8.26E-04 uCi/Sa	Beta: 3.47E-04 uCi/Sa
7 KP658-1-AA-B				
USF180000-563-BLK 		Scr:	Alpha:	Beta:
TAL Richland Key: In - Initial Amt, fi - Final Amt, d	ii - Diluted Amt, s1 - Sep1, s2 - Sep2 Pag	ge 1 ISV - Insufficient Volu	me for Analysis	WO Cnt: 7

		Sampi	e Preparation/	Anaiysis		Balance Id:	WIA
		5S C-14 Prp/SepRo				Pipet #:	, ,
		S3 Carbon-14 by L	iquid Scint				
nalyDueDate: 07/28/2008		51 CLIENT: HANFO	ORD		Se	ep1 DT/Tm Tech:	6-13-08 pm
	pCi/L					0 DT/T To ab.	0 9000
Batch: 8170563 EQ Batch, Test: None	PCI/L				30	ep2 DT/Tm Tech:	
Datai, rest. None						Prep Tech:	
				البداري والمستمل والبالي المستمل والمستمل			
Work Order, Lot, Sample DateTime Amt/U		ot QC Trac Prep Dat		Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
KP658-1-AC-C							
J8F180000-563-LCS							
06/04/2008 08:25	AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
KP658-1-AD-BN							
J8F180000-563-IBLK			<b>II</b>				**************************************
		#Containers: 1			Scr:	Alpha:	Beta:
Comments:							
Comments.							
ll Clients for Batch:						· · · · · ·	
ll Clients for Batch: 384868, Pacific Northwest	t National Laboratory	Pacific No.	thwest National 1	Lab, SS , 5767	71		
384868, Pacific Northwest				Lab, SS , 5767	71		
384868, Pacific Northwest PE1L1AC-SAMP Constituent Lis C-14 RDL:2.00E+02			thwest National 1	Lab, SS , 5767	71		
384868, Pacific Northwest PE1L1AC-SAMP Constituent Lis C-14 RDL:2.00E+02 P6581AA-BLK:	st: pCi/L LCL:70	UCL:130 RI	PD:20	Lab, SS , 5767	71		
384868, Pacific Northwest PE1L1AC-SAMP Constituent Lis C-14 RDL:2.00E+02 P6581AA-BLK: C-16 RDL:2.00E+02	st:	UCL:130 RI		Lab, SS , 5767	71		
384868, Pacific Northwest PElLIAC-SAMP Constituent Lia C-14 RDL:2.00E+02 P6581AA-BLK: C-14 RDL:2.00E+02 P6581AC-LCS: C-14 RDL:200	st: pCi/L LCL:70	UCL: 130 RI	PD:20	Lab, SS , 5767	71		
384868, Pacific Northwest PE1L1AC-SAMP Constituent Lis C-14 RDL:2.00E+02 P6581AA-BLK: C-14 RDL:2.00E+02 P6581AC-LCS: C-14 RDL:200 P6581AD-IBLK:	pCi/L LCL:70 pCi/L LCL: pCi/L LCL:	UCL: 130 RI	PD:20 PD: PD:20	Lab, SS , 5767	71		
PE1L1AC-SAMP Constituent Lis C-14 RDL:2.00E+02 P6581AA-BLK: C-14 RDL:2.00E+02 P6581AC-LCS: C-14 RDL:200 P6581AD-IBLK: C-14 RDL:2.00E+02	pCi/L LCL:70	UCL: 130 RI	PD:20	Lab, SS , 5767	71		
384868, Pacific Northwest  PElllaC-SAMP Constituent Lix C-14 RDL:2.00E+02 P6581AA-BLK: C-14 RDL:2.00E+02 P6581AC-LCS: C-14 RDL:200 P6581AD-IBLK: C-14 RDL:2.00E+02 PE1LlAC-SAMP Calc Info:	pCi/L LCL:70 pCi/L LCL: pCi/L LCL:70 pCi/L LCL:70	UCL: 130 RI UCL: RI UCL:130 RI UCL: RI	PD:20 PD: PD:20 PD:		71		
384868, Pacific Northwest PE1L1AC-SAMP Constituent Lix C-14 RDL:2.00E+02 P6581AA-BLK: C-14 RDL:2.00E+02 P6581AC-LCS: C-14 RDL:200 P6581AD-IBLK: C-14 RDL:2.00E+02 P6581AD-IBLK: C-14 RDL:2.00E+02 P6581AC-LCS RDL:2.00E+02	pCi/L LCL:70 pCi/L LCL: pCi/L LCL:	UCL: 130 RI	PD:20 PD: PD:20	Cab, SS , 5767	71		
384868, Pacific Northwest  PE1L1AC-SAMP Constituent Lis C-14	pCi/L LCL:70 pCi/L LCL: pCi/L LCL:70 pCi/L LCL:70	UCL: 130 RI UCL: RI UCL:130 RI UCL: RI	PD:20 PD: PD:20 PD:		71		
384868, Pacific Northwest  PE1L1AC-SAMP Constituent Lix C-14	pCi/L LCL:70 pCi/L LCL: pCi/L LCL:70 pCi/L LCL:70 pCi/L LCL:	UCL: 130 RI UCL: RI UCL: 130 RI UCL: 130 RI UCL: RI	PD:20 PD: PD:20 PD: Sci.Not.: Y	ODRs: B	71		
384868, Pacific Northwest  PE1L1AC-SAMP Constituent Lix C-14	pCi/L LCL:70 pCi/L LCL:70 pCi/L LCL:70 pCi/L LCL:70 pCi/L LCL: Decay to SaDt: Y Decay to SaDt: Y	UCL: 130 RI UCL: RI UCL:130 RI UCL: RI Blk Subt.: N Blk Subt.: N	PD:20 PD:20 PD:20 PD: Sci.Not.: Y Sci.Not.: Y	ODRs: B ODRs: B	71		
384868, Pacific Northwest  PE1L1AC-SAMP Constituent Lix C-14	pCi/L LCL:70 pCi/L LCL: pCi/L LCL:70 pCi/L LCL:70 pCi/L LCL: Decay to SaDt: Y Decay to SaDt: Y	UCL: 130 RI UCL: RI UCL: 130 RI UCL: RI Blk Subt.: N	PD:20 PD:20 PD:20 PD: Sci.Not.: Y Sci.Not.: Y	ODRs: B	71		
384868, Pacific Northwest  PE1L1AC-SAMP Constituent Lis C-14	pCi/L LCL:70 pCi/L LCL:70 pCi/L LCL:70 pCi/L LCL:70 pCi/L LCL: Decay to SaDt: Y Decay to SaDt: Y	UCL: 130 RI UCL: RI UCL:130 RI UCL: RI Blk Subt.: N Blk Subt.: N	PD:20 PD:20 PD:20 PD: Sci.Not.: Y Sci.Not.: Y Sci.Not.: Y	ODRs: B ODRs: B ODRs: B	71		
384868, Pacific Northwest  PE1L1AC-SAMP Constituent Lis C-14	pCi/L LCL:70 pCi/L LCL:70 pCi/L LCL:70 pCi/L LCL:70 pCi/L LCL: Decay to SaDt: Y Decay to SaDt: Y	UCL: 130 RI UCL: RI UCL:130 RI UCL: RI Blk Subt.: N Blk Subt.: N	PD:20 PD:20 PD:20 PD: Sci.Not.: Y Sci.Not.: Y Sci.Not.: Y	ODRs: B ODRs: B	71	D	ate:
384868, Pacific Northwest  PE1L1AC-SAMP Constituent Lix C-14	pCi/L LCL:70 pCi/L LCL:70 pCi/L LCL:70 pCi/L LCL:70 pCi/L LCL: Decay to SaDt: Y Decay to SaDt: Y	UCL: 130 RI UCL: RI UCL:130 RI UCL: RI Blk Subt.: N Blk Subt.: N	PD:20 PD:20 PD:20 PD: Sci.Not.: Y Sci.Not.: Y Sci.Not.: Y	ODRs: B ODRs: B ODRs: B	71	D	ate:
384868, Pacific Northwest  PE1L1AC-SAMP Constituent Lis C-14	pCi/L LCL:70 pCi/L LCL:70 pCi/L LCL:70 pCi/L LCL:70 pCi/L LCL: Decay to SaDt: Y Decay to SaDt: Y	UCL: 130 RI UCL: RI UCL:130 RI UCL: RI Blk Subt.: N Blk Subt.: N Blk Subt.: N	PD:20 PD:20 PD:20 PD: Sci.Not.: Y Sci.Not.: Y Sci.Not.: Y App:	ODRs: B ODRs: B ODRs: B	- Insufficient Volume for		wo Cnt: 9

6/25/2008 11:03 49 AM

## ICOC Fraction Transfer/Status Report ByDate: 6/26/2007, 6/30/2008, Batch: '8170563', User: \*ALL Order By DateTimeAccepting

Batch Work O	rd CurStat	us A	ccepting		Comments
170563					
C	Rev1C	McDowellD	6/23/2008 8:49	:54	
C		wagarr	IsBatched	6/19/2008 8:30:57 AM	ICOC_RADCALC v4.8.32
C		McDowellD	InSep1	6/23/2008 8:49:54 AM	RL-LSC-008 REVISION 0
C		McDowellD	Sep1C	6/23/2008 2:14:06 PM	RL-LSC-008 REVISION 0
C		ClarkR	InCnt1	6/23/2008 2:28:43 PM	RL-CI-005 REVISION 0
C		Cla:tkR	CalcC	6/24/2008 8:52:56 AM	RL-CI-005 REVISION 0
C		antonsonl	Rev1C	6/25/2008 11:03:40 AM	RICH-RC-0002 REV 8
C		McDowellD	6/23/2008 2:14	:06 PM	
C		ClarkR	6/23/2008 2:28	:43 PM	
C		ClarkR	6/24/2008 8:52	:56	
C		antonsoni	6/25/2008 11:0	3:40	

AC: Accepting Entry; SC: Status Change

TAL Richland

Richland Wa.

Page 1

Grp Rec Cnt:5 ICOCFractions v4.8.33

5/27/2008 11:00:03 AM		Sample	e Preparation/	Analysis		Balance Id:1120	0482733			
884868, Pacific Northwest Natio	onal Laboratory ,	DH UNat_Laser Prp				Pipet #:				
acific Northwest National Lab	incorni	SS Total Uranium b			Sep1 DT/Tm Tech:					
nalyDueDate: 07/28/2008	MD494	SI OLIENT. HAM C		F7074						
atch: 8170558 WATER EQ Batch, Test: None All Test	ug/L its: 8170552 BNTB, 817055	53 AWTA, 8170554 CLTI	PM, Quote: SS, L, 8170558 DHSS, 81		560 AZS7, 8170561	Sep2 DT/Tm Tech:				
BCS8, 8170562 ARS6,		,	I INDIAL TRIBLETORS		251210-15110-	Prep Tech: ,Ha	rrisD Books			
	otal Initial A		er Count	Detector Id	Count On   Off (24hr) Circle	CR Analysi Init/Date	. Comments:			
KPE3X-1-AH	25.10g,in									
BF050186-2-SAMP										
· <b>                                       </b>		2X500MLP,2XLP,2X4LP #0	Containers: 6		Scr: /	Npha: -2.14E-03 uCi/Sa	Beta: 2.40E-03 uCi/Sa			
KPE3X-1-AK-S	25.10g,in	UNSF4249								
3F050186-2-MS		05/22/08,pd								
	AmtRec:	2X500MLP,2XLP,2X4LP #0	Containers: 6		Scr: /	Alpha: -2.14E-03 uCi/Sa	Beta: 2.40E-03 uCi/Sa			
KPE3X-1-AL-X	25.10g,in									
8F050186-2-DUP		2X500MLP.2XLP.2X4LP #	Containers: 6		Scr:	Alpha: -2.14E-03 uCi/Sa	Beta: 2.40E-03 uCi/Sa			
6/04/2008 12:40 KP653-1-AA-B	25.40g,in	2A5001VILF,2ALF,2A4LF #1	Containers, 6		GCI.	ърна2.1412-00 вогоа	Deta. 2.40E-03 00/3a			
	23.409,111									
BF180000-558-BLK <b>-                                  </b>		#Containers: 1	***************************************	************************	Scr:	Alpha:	Beta:			
KP653-1-AC-C	24.90g,in	UNSF4250				rapid.	550.			
	24.30g,iii	05/22/08.pd								
8F180000-558-LCS <b>-                                  </b>					***************************************					
6/04/2008 12:40	AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:			
KP653-1-AD-C	25.20g,in	UNSC2528								
8F180000-558-LCS		05/22/08,pd								
	AmtRec:	#Containers: 1	H		Ser:	Alpha:	Beta:			
06/04/2008 12:40	AntiNec	#Containers. I			301.	ripita.	Dota.			
TAL Richland Key: In - Initia	al Amt, fi - Final Amt, di -	Diluted Amt, s1 - Sep1, s2	2 - Sep2 Page 1	ISV	- Insufficient Volume	for Analysis	WO Cnt: 6			
Richland Wa pd - Prep	Dt. r - Reference Dt. ec-Er	nrichment Cell, ct-Cocktail	led Added				Prep_SamplePrep v4.			

6/27/2008 11:00:04 AM  AnalyDueDate: 07/28/2008	SS	Sample UNat_Laser PrpR Total Uranium by CLIENT: HANFOR	KPA	Analysis	Sep1	Pipet #:  DT/Tm Tech:	3
Batch: 8170558 SEQ Batch, Test: None	ug/L				and waren	DT/Tm Tech: Prep Tech: ,HarrisD	
Work Order, Lot, Sample DateTime Total Arnt/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: PH200	120 (12)	08 08 (19)/09	(				
All Clients for Batch: 384868, Pacific Northwest N	tional Laboratory	Pacific Nort	hwest National I	Lab, SS , 5767:	1		
PE3X1AH-SAMP Constituent List: Uranium RDL:1.44E-01 u PE3X1AK-MS Constituent List:	g/L LCL:	UCL: RPD	•				
P6531AC-LCS:		UCL: RPD					
P6531AD-LCS: Uranium RDL:0.144343 u	g/L LCL:70	UCL:130 RPD	:20				
	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B			
	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B			
P6531AA-BLK: Uncert Level (#s).: 2 P6531AC-LCS:	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B			
	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B			
	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B			
			App	roved By		Date:	
	fi - Final Amt, di - Diluted - Reference Dt, ec-Enrichme			ISV -	Insufficient Volume for Ana		WO Cnt: 6

7/21/2008 2:22:55 PM

## ICOC Fraction Transfer/Status Report ByDate: 7/22/2007, 7/26/2008, Batch: '8170558', User: \*ALL Order By DateTimeAccepting

ork Ord	CurState	ıs	Accepting		Comments
		-			A Vincentin
F	Rev1C	HarrisD	6/27/2008 10:54	4:13	
		wagarr	IsBatched	6/19/2008 8:30:57 AM	ICOC_RADCALC v4.8.32
		HarrisD	InPrep	6/27/2008 10:54:13 AM	RICH-RC-5014 REVISION 0
		HarrisD	Prep1C	6/27/2008 10:57:24 AM	RL-PRP-004 REVISION 0
		BockJ	InPrep2	7/15/2008 12:45:20 PM	RL-KPA-001 REVISION 0
		BockJ	Prep2C	7/18/2008 8:35:14 AM	RL-KPA-001 REVISION 0
		NelsonT	Cnt1C	7/21/2008 10:11:21 AM	RL-KPA-003 REVISION 0
		nortonj	Rev1C	7/21/2008 2:22:06 PM	RICH-RC-0002 REV 8
		HarrisD	6/27/2008 10:5	7:24	
		BockJ	7/15/2008 12:4	5:20	
		BockJ	7/18/2008 8:35	:14	
		NelsonT	7/21/2008 10:1	1:21	
		nortonj	7/21/2008 2:22	:06 PM	
		Rev1C	Rev1C HarrisD wagarr HarrisD HarrisD BockJ NelsonT nortonj HarrisD BockJ NelsonT	Rev1C         HarrisD         6/27/2008 10:50           wagarr         IsBatched           HarrisD         InPrep           HarrisD         Prep1C           BockJ         InPrep2           BockJ         Prep2C           NelsonT         Cnt1C           nortonj         Rev1C           HarrisD         6/27/2008 10:5           BockJ         7/15/2008 12:4           BockJ         7/18/2008 8:35           NelsonT         7/21/2008 10:1	Rev1C         HarrisD         6/27/2008 10:54:13           wagarr         IsBatched         6/19/2008 8:30:57 AM           HarrisD         InPrep         6/27/2008 10:54:13 AM           HarrisD         Prep1C         6/27/2008 10:57:24 AM           BockJ         InPrep2         7/15/2008 12:45:20 PM           BockJ         Prep2C         7/18/2008 8:35:14 AM           NelsonT         Cnt1C         7/21/2008 10:11:21 AM           nortonj         Rev1C         7/21/2008 2:22:06 PM           HarrisD         6/27/2008 10:57:24           BockJ         7/15/2008 12:45:20           BockJ         7/18/2008 8:35:14           NelsonT         7/21/2008 10:11:21

AC: Accepting Entry; SC: Status Change

TAL Richland Richland Wa.

Page 1

Grp Rec Cnt: 6
ICOCFractions v4.8.33

							ENTERE	0.5	(57/16/
/8/2008 3:07:47 PM		Sample Pre	eparation/A	nalysis		Bal	ance Id:		
84868, Pacific Northwest National Labo acific Northwest National Lab		O SAMPLE PREPAR		RMED / DIRECT	INJECTION		Pipet #:		
	1 /	OLIFORM BY METH LIENT: HANFORD	OD 9223			Sep1 DT/1	m Tech:		
	CHAT SIG		Oueter CC	7674		•			
atch: 8170564 WATER EQ Batch, Test: None All Tests: 8170564	88IZ,	PIVI,	Quote: SS,	2/0/1		Sep2 DT/1	m lech:		
		11881		RILLER BULLE		Pr	ep Tech:		
Work Order, Lot, Sample DateTirne Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   (24hr) Circ		CR Analyst, Init/Date		Comments
KPF3R-1-AA									
		WILL IN 112 G10							
5/05/2008 12:10	AmtRec: 20ML,500N	MLP #Containers: 2			Scr:	Alpha: -8.40E-0	5 uCi/Sa	Beta: 4.	83E-05 uCi/Sa
KPF3R-1-AC-X									
8F050322-1-DUP									
	AmtRec: 20ML,500N	ALP #Containers: 2			Scr:	Alpha: -8.40E-0	5 uCi/Sa	Beta: 4.	83E-05 uCi/Sa
KP659-1-AA-B					***				
3F180000-564-BLK									
			***************************************						
6/11/2008 11:58	AmtRec:	#Containers: 1			Scr:	Alpha	1:	-	Beta:
KP659-1-AC-C									
3F180000-564-LCS 					***************************************	***************************************	***************************************		
6/11/2008 11:58	AmtRec:	#Containers: 1			Scr:	Alpha	a:		Beta:
Comments:									
1 Clients for Batch:								-	
384868, Pacific Northwest Natio	nal Laboratory	Pacific Northwest	t National La	b, SS , 57671					
F3R1AA-SAMP Constituent List:	100								~
6591AA-BLK:									
6591AC-LCS:									
03716-163;									
PF3R1AA-SAMP Calc Info:									
TAL Richland Key: In - Initial Amt, fi-	Final Amt di Diluted A	mt of Sont of Son	Page 1	16// 1	Insufficient Volun	e for Analysis		V	VO Cnt: 4
	erence Dt, ec-Enrichment		-	134 - 1	madificatif Animi	to for Allatysis		٧	ICOC v4

7/8/2008 3:07:49 P	7/8/2008 3:07:49 PM  AnalyDueDate: 07/28/2008  Batch: 8170564					Preparation/	T IN IECTION	Balance Id:		
					SAMPLE PRE LIFORM BY MI	PARATION PERF ETHOD 9223	ORMED / DIREC	INJECTION	Pipet #:	
AnalyDueDate: 07	/28/2008			5I CLI	ENT: HANFOR	RD		Se	p1 DT/Tm Tech:	
Batch: 8170564 SEQ Batch, Test: Non								Se	p2 DT/Tm Tech:	
SEQ Batch, Test: Non	е				1				Prep Tech:	
Work Order, Lot, Sample DateTime	Total Amt/Ur		Initial Aliq Amt/Uni		QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
Uncert Level	(#8).: 2	Decay	to SaDt: Y	Blk	Subt.: N	Sci.Not.: Y	ODRs: B			
Uncert Level	(#s).: 2	Decay	to SaDt: Y	Blk	Subt.: N	Sci.Not.: Y	ODRs: B			
Uncert Level	(#s) .: 2	Decay	to SaDt: Y	Blk	Subt.: N	Sci.Not.: Y	ODRs: B			
						Appr	coved By		Date:	

Page 2

						Entred	5155	7/16/08
7/8/2008 3:07:49 PM		Sample Pre	paration/A	nalysis		Balance Id:		
384868, Pacific Northwest National Lab Pacific Northwest National Lab	IZ COL	SAMPLE PREPARA IFORM BY METHO		RMED / DIRECT	INJECTION	Pipet #:		
AnalyDueDate: 07/28/2008	SURU SI CLIE	ENT: HANFORD				Sep1 DT/Tm Tech:		
Batch: 8190389 WATER	7 1011	PM,	Quote: SS,	7671		Sep2 DT/Tm Toch:		
SEQ Batch, Test: None		110010				Prep Tech:		
Work Order, Lot, Total Sample DateTime Arnt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   C (24hr) Circle			Comments:
1 KPNCT-1-AA								
J8F100263-1-SAMP 	AmtRec: VIAL20,500Ml		***************************************		Sor:	Alpha: 3.64E-05 uCi/Sa	Bela: 1.86	6E-04 uCi/Sa
2 KPNCT-1-AC-X				***************************************				
J8F100263-1-DUP 	AmtRec: VIAL20,500MI	LP #Containers; 2			Scr:	Alpha: 3.64E-05 uCi/Sa	Beta: 1.80	6E-04 uCi/Sa
3 KQ7F9-1-AA-B								
J8G080000-389-BLK	1					**************************************		
06/10/2008 10:15	AmtRec:	#Containers: 1			Scr:	Alpha:		Beta:
4 KQ7F9-1-AC-C								
J8G080000-389-LCS [][								
06/10/2008 10:15	AmtRec:	#Containers: 1		· · · · · · · · · · · · · · · · · · ·	Sor:	Alpha:		Beta:
Comments:								
All Clients for Batch: 384868, Pacific Northwest Nati	onal Laboratory F	Pacific Northwest	National La	b, ss , 57671				
KPNCT1AA-SAMP Constituent List:								
KQ7F91AA-BLK:								
KQ7F91AC-LCS:								
KPNCT1AA-SAMP Calc Info:								
	- Final Amt, di - Diluted Amt, eference Dt, ec-Enrichment Ce		_	ISV - II	nsufficient Volume	e for Analysis	W	O Cnt: 4 ICOC v4.8.3

7/8/2008 3:07:50 PM						Sample	Preparation	В	alance Id:				
						SAMPLE PRE		FORMED / DIREC	TINJECTION	Pipet #:			
AnalyDueDate: 07/28/2008 5I CLIENT: HANFORD							Sep1 D1	/Tm Tech:					
atch: 8190389										Sep2 D1	/Tm Tech:		
EQ Batch, Test: Non	e					1					Prep Tech:		
Work Order, Lot, Sample DateTime	Tota Amt/U			al Aliquo nt/Unit	ot	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   C (24hr) Circl		CR Analyst, Init/Date	Comments	
Uncert Level 17F91AA-BLK: Uncert Level		_	to SaDt:			Subt.: N	Sci.Not.: Y	ODRs: B					
7F91AC-LCS: Uncert Level	(#s).: 2	Decay	to SaDt	Y	Blk	Subt.: N	Sci.Not.: Y	ODRs: B					
							App	roved By			Date:		

TAL Richland Richland Wa.

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: 4 ICOC v4.8.32

			ENTERED SK	57/16/08
7/8/2008 3:07:50 PM	Sample Preparation/Analy	ysis	Balance Id:	
Pacific Northwest National Lab IZ COL	SAMPLE PREPARATION PERFORME IFORM BY METHOD 9223	D / DIRECT INJECTION	Pipet #:	
AnalyDueDate: 07/28/2008 W55124 51 CLIE	NT: HANFORD		Sep1 DT/Tm Tech:	
Batch: 8190391 WATER SEQ Batch, Test: None	PM, Quote: SS, 5767	1	Scp2 DT/Tm Tech:	
	T 18 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Prep Tech:	
Work Order, Lot, Sample DateTime Armt/Unit Initial Aliquot Armt/Unit		Detector Count On   Co		Comments:
1 KPQWR-1-AA				
J8F110338-1-SAMP	P #Containers: 2	Sor:	Alpha: 5.94E-05 uCl/Sa	Beta: 6.14E-05 uCi/Sa
2 KPQWR-1-AC-X				
J8F110338-1-DUP	P #Containers: 2	Scr:	Alpha: 5.94E-05 uCl/Sa	Beta: 6.14E-05 uC//Sa
3 KQ7GE-1-AA-B	T TOURINGS, E	-	Арна, 0.042-00 согод	DG. 0.142-00 00100
J8G080000-391-BLK				
06/11/2008 11:58 ArmRec:	#Containers: 1	Sa:	Alpha:	Beta:
4 KQ7GE-1-AC-C				
J8G080000-391-LCS				
06/11/2008 11:58 AmtRec:	#Containers: 1	Scr:	Alpha:	Beta:
Comments:				
				W
All Clients for Batch: 384868, Pacific Northwest National Laboratory P	acific Northwest National Lab,	88 , 57671		
KPQWR1AA-SAMP Constituent List:				
KQ7GE1AA-BLK:				
KQ7GELAC-LCS:				
KPQWRlAA-SAMP Calc Info:				
TAL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Ce		ISV - Insufficient Volume	for Analysis	WO Cnt: 4 ICOC v4.8.3.

7/8/2008 3:07:50 PI	М					Sample	Preparation	/Analysis		Bala	nce ld:	
							EPARATION PER METHOD 9223	FORMED / DIREC	T INJECTION		Pipet #:	
nalyDueDate: 07/	/28/2008				5I CLI	ENT: HANFO	RD			Sep1 DT/Tr	n Tech:	
Batch: 8190391										Sep2 DT/Tr	n Tech:	
EQ Batch, Test: None	8								18161 1181 1881	Pre	p Tech:	
Work Order, Lot, Sample DateTime	Tota Amt/U	al Jnit		nitial Aliqu Amt/Unit		QC Trace Prep Date	r Count	Detector Id	Count On   C (24hr) Circle	off	CR Analyst, Init/Date	Comment
Uncert Level	(#s) . z 2	Decay	to Sal	t: T	Blk	Subt.: N	Sci.Not.: Y	ODRs: B				
Uncert Level	(#s).: 2	Decay	to Sal	ot: Y	Blk	Subt.: N	Sci.Not.: Y	ODRs: B				
Uncert Level	(#s).: 2	Decay	to Sal	t: Y	Blk	Subt.: N	Sci.Not.: Y	ODRs: B				
							App	roved By			Date:	

ICOC v4.8.32

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