

Analytical Data Package Prepared For

Fluor Hanford

Radiochemical Analysis By

TAL Richland TARL*2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.**Data Package Contains _____ Pages***Report Nbr: 38525**

RECEIVED
JUN 26 2008
EDMC

RECEIVED MARCH 13, 2008

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
<u>W05315</u>	I08-016	B1RRB6	J8A110323-1	KFFRT1AA	9KFFRT10	8018283
	S08-012	B1RCX9	J8A140154-1	KFHXE1AA	9KFHXE10	8023482
		B1RCX9	J8A140154-1	KFHXE1AC	9KFHXE10	8023495
		B1RDD3	J8A140154-2	KFHGX1AA	9KFHGX10	8023482
		B1RDD3	J8A140154-2	KFHGX1AC	9KFHGX10	8023495
	A08-012	B1R9C9	J8A140171-1	KFH601AA	9KFH6010	8023498
	G08-001	B1RR19	J8A150246-1	KFKKV1AA	9KFKKV10	8023495
		B1RR21	J8A150246-2	KFKLC1AA	9KFKLC10	8023495
		B1RR23	J8A150246-3	KFKLN1AA	9KFKLN10	8023495
		B1RR25	J8A150246-4	KFKL21AA	9KFKL210	8023495
	W08-001	B1RVM0	J8A160296-1	KFM131AA	9KFM1310	8023482
		B1RVM0	J8A160296-1	KFM131AC	9KFM1310	8023495
		B1RVM0	J8A160296-1	KFM131AD	9KFM1310	8023498
		B1RVM4	J8A160296-2	KFM181AA	9KFM1810	8023482
		B1RVM4	J8A160296-2	KFM181AC	9KFM1810	8023495

Comments:

0078219

Report Nbr: 38525**Comments:**

Certificate of Analysis

Fluor Hanford
1200 Jadwin Ave.
Richland, WA 99352

March 13, 2008

Attention: Steve Trent

SAF Number	:	I08-016, S08-012, A08-012, G08-001, W08-001, I08-012, W08-012
Date SDG Closed	:	January 17, 2008
Number of Samples	:	Twenty (20)
Sample Type	:	Water
SDG Number	:	W05315
Data Deliverable	:	45-Day / Summary

CASE NARRATIVE

I. Introduction

Between January 11, 2008 and January 17, 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:

<u>PGW ID#</u>	<u>STLR ID#</u>	<u>DATE OF RECEIPT</u>	<u>MATRIX</u>
B1RRB6	KFFRT	1/11/08	WATER
B1RCX9	KFHXE	1/14/08	WATER
B1RDD3	KFHGX	1/14/08	WATER
B1R9C9	KFH60	1/14/08	WATER
B1RR19	KFKKV	1/15/08	WATER
B1RR21	KFKLC	1/15/08	WATER
B1RR23	KFKLN	1/15/08	WATER
B1RR25	KFKL2	1/15/08	WATER
B1RVM0	KFM13	1/16/08	WATER
B1RVM4	KFM18	1/16/08	WATER
B1R9F3	KFM2N	1/16/08	WATER
B1R9F7	KFM2V	1/16/08	WATER
B1R9F8	KFM22	1/16/08	WATER

Fluor Hanford
March 13, 2008

B1RBK6	KFQM3	1/17/08	WATER
B1RDF8	KFQPF	1/17/08	WATER
B1RDF1	KFQPG	1/17/08	WATER
B1RCV6	KFQQ5	1/17/08	WATER
B1RCW0	KFQRJ	1/17/08	WATER
B1RBJ4	KFQTF	1/17/08	WATER
B1RHC5	KFQTV	1/17/08	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

Gas Proportional Counting

Gross Alpha by method RICH-RC-5014

Gross Beta by method RICH-RC-5014

Strontium-90 by method RICH-RC-5006

Gamma Spectroscopy

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

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

Liquid Scintillation Counting

Selenium-79 by method RICH-RC-5043

Carbon-14 by method RICH-RC-5022

Chemical Analysis

Hexavalent Chromium by EPA method 7196A

IV. Quality Control

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

QC and sample results are reported in the same units.

V. **Comments**

Alpha Spectroscopy

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

The LCS, batch blank, sample and sample duplicate (B1RBK6) results are within contractual requirements.

Gas Proportional Counting

Gross Alpha by method RICH-RC-5014:

Reduced volumes were analyzed due to weight screens for the following samples: B1RCX9, B1RVM0, B1RVM4, B1RDF8, B1RDF1, B1RCV6, B1RCW0, B1RHC5, B1RCV6(DUP). Except as noted, the LCS, batch blank, samples and sample duplicate (B1RCV6) results are within contractual requirements.

Gross Beta by method RICH-RC-5014:

The LCS, batch blank, samples and sample duplicate (B1RDF1) results are within contractual requirements.

Strontium-90 by method RICH-RC-5006

The LCS, batch blank, samples and sample duplicate (B1RBJ4) results are within contractual requirements.

Gamma Spectroscopy

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

There was insufficient volume for a duplicate. Sample B1RBJ4 was recounted on a different detector for a duplicate. Except as noted, the LCS, batch blank, samples and sample duplicate (B1RBJ4) results are within contractual requirements.

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

Sample B1R9C9 was accidentally tipped over prior to step 11.9 of procedure RICH-RC-5025 (add 5 ml of 0.1M AgNO₃ reagent to the beaker). The tracer recovery is acceptable therefore the result will be reported. Except as noted, the LCS, batch blank, samples and sample duplicate (B1R9F3) results are within contractual requirements.

Liquid Scintillation Counting

Selenium-79 by method RICH-RC-5043:

There was a calculation error in the original batch that wasn't caught, so a reanalysis was initiated. The error was corrected, but the original batch did not have a duplicate sample, therefore the reanalysis data is being reported. There is no LCS for selenium-79. Except as noted, the batch blank, samples and sample duplicate (B1RBK6) results are within contractual requirements.

Carbon-14 by method RICH-RC-5022:

The LCS, batch blank, samples and sample duplicate (B1RBJ4) results are within contractual requirements.

Fluor Hanford
March 13, 2008

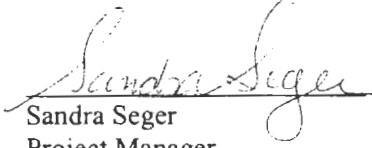
Chemical Analysis

Hexavalent Chromium by EPA method 7196A

The LCS, batch blank, samples, sample duplicate (B1RRB6), sample matrix spike (B1RRB6), and matrix spike duplicate (B1RRB6) results are within contractual requirements.

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

Reviewed and approved:


Sandra Seger
Project Manager

Drinking Water Method Cross References

DRINKING WATER ASTM METHOD CROSS REFERENCES		
Referenced Method	Isotope(s)	STL Richland's SOP number
EPA 901.1	Cs-134, I-131	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 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

Uncertainty Estimation

Test America Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, $R = \text{constants} * f(x,y,z,...)$. The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value ($S/\sqrt{n}$), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

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

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation $(\text{Result}/\text{Expected}) - 1$ as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or STL Richland.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) u_c - Combined Uncertainty.	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, u_c the combined uncertainty. The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor CRDL (RL)	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations. Contractual Required Detection Limit as defined in the Client's Statement Of Work or STL Richland "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. $Lc = (1.645 * \text{Sqrt}(2 * (\text{BkgmdCnt}/\text{BkgmdCntMin}) / \text{SCntMin})) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$. For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. $MDC = (4.65 * \text{Sqrt}((\text{BkgmdCnt}/\text{BkgmdCntMin}) / \text{SCntMin}) + 2.71 / \text{SCntMin}) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$. For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the Work Order Number.
RER	The equation Replicate Error Ratio = $(S - D) / [\text{sqrt}(\text{TPUs}^2 + \text{TPUd}^2)]$ as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by STL Richland upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

3/13/2008 10:39:42 AM

TAL Richland Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 38525 File Name: h:\Reportdb\edd\Fead\VRad\W05315.Edd, h:\Reportdb\edd\Fead\VRad\38525.Edd

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9KFH6010	B1R9C9		MW6-SBB-A1	A08-012	W05315					01/14/2008 12:54				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8023498	I-129L	15046-84-1	-9.83E-02	pCi/L	1.8E-01	1.8E-01	U	3.00E-01	77.3	I129LL_SEP_LEPS	4.0001E+00	L	02/28/2008 13:01	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9KFHXE10	B1RCX9		MW6-SBB-A1	S08-012	W05315					01/14/2008 10:42				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8023482	ALPHA	12587-46-1	4.77E+00	pCi/L	1.4E+00	1.7E+00		1.19E+00	100.0	9310_ALPHABETA	1.724E-01	L	02/07/2008 21:35	I
8023495	BETA	12587-47-2	1.82E+01	pCi/L	2.4E+00	3.3E+00		2.88E+00	100.0	9310_ALPHABETA	2.00E-01	L	02/07/2008 16:53	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9KFHXG10	B1RDD3		MW6-SBB-A1	S08-012	W05315					01/14/2008 11:57				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8023482	ALPHA	12587-46-1	2.22E+01	pCi/L	2.8E+00	5.3E+00		9.79E-01	100.0	9310_ALPHABETA	2.001E-01	L	02/07/2008 21:35	I
8023495	BETA	12587-47-2	1.72E+01	pCi/L	2.3E+00	3.2E+00		2.91E+00	100.0	9310_ALPHABETA	2.001E-01	L	02/07/2008 16:53	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9KFKKV10	B1RR19		MW6-SBB-A1	G08-001	W05315					01/15/2008 08:15				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8023495	BETA	12587-47-2	1.23E+03	pCi/L	1.6E+01	1.7E+02		2.77E+00	100.0	9310_ALPHABETA	2.003E-01	L	02/07/2008 16:53	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9KFKL210	B1RR25		MW6-SBB-A1	G08-001	W05315					01/15/2008 10:20				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8023495	BETA	12587-47-2	3.16E+03	pCi/L	2.6E+01	3.9E+02		2.84E+00	100.0	9310_ALPHABETA	2.003E-01	L	02/07/2008 18:36	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9KFKLC10	B1RR21		MW6-SBB-A1	G08-001	W05315					01/15/2008 08:40				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8023495	BETA	12587-47-2	2.16E+00	pCi/L	1.5E+00	1.5E+00	U	3.01E+00	100.0	9310_ALPHABETA	2.00E-01	L	02/07/2008 16:53	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9KFKLN10	B1RR23		MW6-SBB-A1	G08-001	W05315					01/15/2008 09:00				

TAL Richland

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

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.

3/13/2008 10:39:42 AM

TAL Richland Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

Version: 05

Rpt Nbr: 38525

File Name: h:\Reportdb\edd\FeadIV\Rad\W05315.Edd, h:\Reportdb\edd\FeadIV\Rad\38525.Edd

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8023495	BETA	12587-47-2	8.08E+02	pCi/L	1.3E+01	1.0E+02		2.78E+00	100.0	9310_ALPHABETA	2.001E-01	L	02/07/2008 18:36	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*	Distilled Volume	Sample On Date:	Collection Date:
9KFM1310	B1RVM0		MW6-SBB-A1	W08-001	W05315					01/16/2008 09:13

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8023482	ALPHA	12587-46-1	1.57E+00	pCi/L	9.1E-01	9.7E-01		1.17E+00	100.0	9310_ALPHABETA	1.47E-01	L	02/07/2008 16:32	I
8023495	BETA	12587-47-2	7.46E+00	pCi/L	1.8E+00	2.0E+00		2.75E+00	100.0	9310_ALPHABETA	2.004E-01	L	02/07/2008 18:36	I
8023498	I-129L	15046-84-1	6.20E-02	pCi/L	1.5E-01	1.5E-01	U	2.82E-01	95.4	I129LL_SEP_LEPS	3.9969E+00	L	02/28/2008 13:02	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*	Distilled Volume	Sample On Date:	Collection Date:
9KFM1810	B1RVM4		MW6-SBB-A1	W08-001	W05315					01/16/2008 09:55

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8023482	ALPHA	12587-46-1	6.45E+00	pCi/L	1.8E+00	2.2E+00		1.41E+00	100.0	9310_ALPHABETA	1.387E-01	L	02/07/2008 18:35	I
8023495	BETA	12587-47-2	1.16E+01	pCi/L	2.0E+00	2.7E+00		2.94E+00	100.0	9310_ALPHABETA	2.002E-01	L	02/07/2008 18:36	I
8023498	I-129L	15046-84-1	4.96E-01	pCi/L	2.6E-01	2.6E-01	U	3.98E-01	98.9	I129LL_SEP_LEPS	4.0004E+00	L	02/28/2008 13:03	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*	Distilled Volume	Sample On Date:	Collection Date:
9KFM2210	B1R9F8		MW6-SBB-A1	A08-012	W05315					01/16/2008 11:48

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8023498	I-129L	15046-84-1	3.74E+00	pCi/L	5.9E-01	5.9E-01		3.48E-01	95.1	I129LL_SEP_LEPS	3.9843E+00	L	02/28/2008 17:11	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*	Distilled Volume	Sample On Date:	Collection Date:
9KFM2N10	B1R9F3		MW6-SBB-A1	A08-012	W05315					01/16/2008 10:44

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8023498	I-129L	15046-84-1	4.13E+00	pCi/L	6.6E-01	6.6E-01		2.72E-01	97.3	I129LL_SEP_LEPS	3.8168E+00	L	02/28/2008 14:49	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*	Distilled Volume	Sample On Date:	Collection Date:
9KFM2V10	B1R9F7		MW6-SBB-A1	A08-012	W05315					01/16/2008 11:48

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8023498	I-129L	15046-84-1	3.18E+00	pCi/L	6.1E-01	6.1E-01		3.54E-01	95.1	I129LL_SEP_LEPS	4.0004E+00	L	02/28/2008 14:51	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*	Distilled Volume	Sample On Date:	Collection Date:
9KFQM310	B1RBK6		MW6-SBB-A1	I08-012	W05315					01/16/2008 13:52

TAL Richland

rptFeadRadSummaryEdd v3.48

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

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

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

3/13/2008 10:39:42 AM

TAL Richland Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

Version: 05

Rpt Nbr: 38525

File Name: h:\Reportdb\edd\FeadIV\Rad\W05315.Edd, h:\Reportdb\edd\FeadIV\Rad\38525.Edd

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8023504	C-14	14762-75-5	9.31E-01	pCi/L	3.6E+00	4.3E+00	U	8.53E+00	100.0	C14_LSC	2.00E-01	L	01/31/2008 04:00	I
8023497	BE-7	13966-02-4	-7.34E+00	pCi/L	1.6E+01	1.6E+01	U	2.69E+01		GAMMALL_GS	2.0002E+00	L	02/13/2008 14:24	I
8023497	CO-60	10198-40-0	5.33E-01	pCi/L	1.8E+00	1.8E+00	U	3.41E+00		GAMMALL_GS	2.0002E+00	L	02/13/2008 14:24	I
8023497	CS-134	13967-70-9	3.06E-01	pCi/L	1.5E+00	1.5E+00	U	2.87E+00		GAMMALL_GS	2.0002E+00	L	02/13/2008 14:24	I
8023497	CS-137	10045-97-3	-3.44E-01	pCi/L	1.5E+00	1.5E+00	U	2.70E+00		GAMMALL_GS	2.0002E+00	L	02/13/2008 14:24	I
8023497	EU-152	14683-23-9	2.86E+00	pCi/L	3.9E+00	3.9E+00	U	7.12E+00		GAMMALL_GS	2.0002E+00	L	02/13/2008 14:24	I
8023497	EU-154	15585-10-1	-1.75E+00	pCi/L	5.1E+00	5.1E+00	U	9.00E+00		GAMMALL_GS	2.0002E+00	L	02/13/2008 14:24	I
8023497	EU-155	14391-16-3	2.29E+00	pCi/L	2.6E+00	2.6E+00	U	4.83E+00		GAMMALL_GS	2.0002E+00	L	02/13/2008 14:24	I
8023497	K-40	13966-00-2	-2.52E+01	pCi/L	3.7E+01	3.7E+01	U	7.24E+01		GAMMALL_GS	2.0002E+00	L	02/13/2008 14:24	I
8023497	RU-106	13967-48-1	8.95E+00	pCi/L	1.3E+01	1.3E+01	U	2.58E+01		GAMMALL_GS	2.0002E+00	L	02/13/2008 14:24	I
8023497	SB-125	14234-35-6	-9.57E-01	pCi/L	3.9E+00	3.9E+00	U	6.75E+00		GAMMALL_GS	2.0002E+00	L	02/13/2008 14:24	I
8023498	I-129L	15046-84-1	1.24E-01	pCi/L	1.3E-01	1.3E-01	U	2.73E-01	98.4	I129LL_SEP_LEPS	3.9893E+00	L	02/28/2008 17:12	I
8023500	SR-90	10098-97-2	1.82E-01	pCi/L	1.8E-01	1.9E-01	U	3.78E-01	82.6	SRISO_SEP_PRE	1.0003E+00	L	02/28/2008 05:48	I
8023501	U-234	13966-29-5	1.36E+00	pCi/L	4.4E-01	5.0E-01		1.80E-01	79.1	UIISO_PLATE_AEA	2.002E-01	L	02/28/2008 16:22	I
8023501	U-235	15117-96-1	3.03E-02	pCi/L	7.3E-02	7.3E-02	U	1.65E-01	79.1	UIISO_PLATE_AEA	2.002E-01	L	02/28/2008 16:22	I
8023501	U-238	U-238	1.25E+00	pCi/L	4.3E-01	4.7E-01		1.80E-01	79.1	UIISO_PLATE_AEA	2.002E-01	L	02/28/2008 16:22	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*	Distilled Volume	Sample On Date:	Collection Date:
9KFQM320	B1RBK6		MW6-SBB-A1	I08-012	W05315					01/16/2008 13:52

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8056434	Se-79	15758-45-9	2.17E+01	pCi/L	5.9E+00	1.2E+01		1.27E+01	71.4	SE79_SEP_IE_LS	2.033E-01	L	02/29/2008 19:41	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*	Distilled Volume	Sample On Date:	Collection Date:
9KFQPF10	B1RDF8		MW6-SBB-A1	S08-012	W05315					01/17/2008 11:55

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8023482	ALPHA	12587-46-1	3.44E+01	pCi/L	3.5E+00	7.8E+00		1.10E+00	100.0	9310_ALPHABETA	1.852E-01	L	02/07/2008 21:35	I
8023495	BETA	12587-47-2	5.76E+01	pCi/L	3.7E+00	8.3E+00		2.91E+00	100.0	9310_ALPHABETA	2.001E-01	L	02/07/2008 18:53	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*	Distilled Volume	Sample On Date:	Collection Date:
9KFQPG10	B1RDF1		MW6-SBB-A1	S08-012	W05315					01/17/2008 10:23

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8023482	ALPHA	12587-46-1	3.97E+01	pCi/L	4.0E+00	9.1E+00		1.17E+00	100.0	9310_ALPHABETA	1.471E-01	L	02/07/2008 18:35	I
8023495	BETA	12587-47-2	2.10E+01	pCi/L	2.5E+00	3.7E+00		2.77E+00	100.0	9310_ALPHABETA	2.00E-01	L	02/07/2008 18:53	I

TAL Richland

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

3

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.

3/13/2008 10:39:42 AM

TAL Richland Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

Version: 05

Rpt Nbr: 38525

File Name: h:\Reportdb\edd\Fead\Rad\W05315.Edd, h:\Reportdb\edd\Fead\Rad\38525.Edd

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9KFQQ510	B1RCV6		MW6-SBB-A1	S08-012	W05315					01/17/2008 11:17				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8023482	ALPHA	12587-46-1	3.54E+00	pCi/L	1.3E+00	1.5E+00		1.30E+00	100.0	9310_ALPHABETA	1.315E-01	L	02/07/2008 18:35	I
8023495	BETA	12587-47-2	9.83E+00	pCi/L	1.9E+00	2.3E+00		2.85E+00	100.0	9310_ALPHABETA	1.999E-01	L	02/07/2008 18:52	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9KFQRJ10	B1RCW0		MW6-SBB-A1	S08-012	W05315					01/17/2008 10:03				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8023482	ALPHA	12587-46-1	4.57E+00	pCi/L	1.4E+00	1.7E+00		1.01E+00	100.0	9310_ALPHABETA	1.428E-01	L	02/07/2008 18:35	I
8023495	BETA	12587-47-2	2.02E+01	pCi/L	2.4E+00	3.5E+00		2.86E+00	100.0	9310_ALPHABETA	2.001E-01	L	02/07/2008 18:52	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9KFQTF10	B1RBJ4		MW6-SBB-A1	I08-012	W05315					01/17/2008 10:03				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8023504	C-14	14762-75-5	1.38E+01	pCi/L	4.0E+00	4.8E+00		8.53E+00	100.0	C14_LSC	2.00E-01	L	01/31/2008 04:43	I
8023497	BE-7	13966-02-4	-1.13E+01	pCi/L	1.4E+01	1.4E+01	U	2.26E+01		GAMMALL_GS	2.0001E+00	L	02/13/2008 14:24	I
8023497	CO-60	10198-40-0	-8.86E-01	pCi/L	1.2E+00	1.2E+00	U	1.99E+00		GAMMALL_GS	2.0001E+00	L	02/13/2008 14:24	I
8023497	CS-134	13967-70-9	-2.13E-01	pCi/L	1.5E+00	1.5E+00	U	2.72E+00		GAMMALL_GS	2.0001E+00	L	02/13/2008 14:24	I
8023497	CS-137	10045-97-3	1.17E+00	pCi/L	1.5E+00	1.5E+00	U	2.84E+00		GAMMALL_GS	2.0001E+00	L	02/13/2008 14:24	I
8023497	EU-152	14683-23-9	1.38E+00	pCi/L	3.5E+00	3.5E+00	U	6.36E+00		GAMMALL_GS	2.0001E+00	L	02/13/2008 14:24	I
8023497	EU-154	15585-10-1	1.40E+00	pCi/L	3.7E+00	3.7E+00	U	7.59E+00		GAMMALL_GS	2.0001E+00	L	02/13/2008 14:24	I
8023497	EU-155	14391-16-3	-1.02E+00	pCi/L	2.6E+00	2.6E+00	U	4.42E+00		GAMMALL_GS	2.0001E+00	L	02/13/2008 14:24	I
8023497	K-40	13966-00-2	5.99E+00	pCi/L	2.3E+01	2.3E+01	U	4.37E+01		GAMMALL_GS	2.0001E+00	L	02/13/2008 14:24	I
8023497	RU-106	13967-48-1	1.56E+00	pCi/L	1.3E+01	1.3E+01	U	2.29E+01		GAMMALL_GS	2.0001E+00	L	02/13/2008 14:24	I
8023497	SB-125	14234-35-6	1.35E-01	pCi/L	3.5E+00	3.5E+00	U	6.18E+00		GAMMALL_GS	2.0001E+00	L	02/13/2008 14:24	I
8023498	I-129L	15046-84-1	1.53E+00	pCi/L	2.9E-01	2.9E-01		1.66E-01	130.5	I129LL_SEP_LEPS	3.9765E+00	L	02/28/2008 17:13	I
8023500	SR-90	10098-97-2	1.10E-01	pCi/L	2.2E-01	2.3E-01	U	4.86E-01	76.3	SRISO_SEP_PRE	1.0004E+00	L	02/28/2008 05:48	I
8023501	U-234	13966-29-5	4.82E-01	pCi/L	2.7E-01	2.8E-01		1.50E-01	91.1	UIISO_PLATE_AEA	2.001E-01	L	02/28/2008 16:22	I
8023501	U-235	15117-96-1	0.00E+00	pCi/L	7.5E-02	7.5E-02	U	1.50E-01	91.1	UIISO_PLATE_AEA	2.001E-01	L	02/28/2008 16:22	I
8023501	U-238	U-238	2.21E-01	pCi/L	1.8E-01	1.9E-01		1.50E-01	91.1	UIISO_PLATE_AEA	2.001E-01	L	02/28/2008 16:22	I

TAL Richland

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

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.

3/13/2008 10:39:42 AM

TAL Richland Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 38525 File Name: h:\Reportdb\edd\Fead\Rad\W05315.Edd, h:\Reportdb\edd\Fead\Rad\38525.Edd

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9KFQTF20	B1RBJ4		MW6-SBB-A1	I08-012	W05315					01/17/2008 10:03				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8056434	Se-79	15758-45-9	2.51E+00	pCi/L	5.8E+00	1.2E+01	U	1.38E+01	66.9	SE79_SEP_IE_LS	1.986E-01	L	02/29/2008 20:34	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9KFQTV10	B1RHC5		MW6-SBB-A1	W08-012	W05315					01/17/2008 13:03				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8023482	ALPHA	12587-46-1	1.55E+00	pCi/L	1.1E+00	1.1E+00		1.41E+00	100.0	9310_ALPHABETA	1.666E-01	L	02/07/2008 20:07	I

Thursday, March 13, 2008

TAL Richland QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W05315.Edd, h:\Reportdb\edd\Fead\Rad\38525.Edd

Lab Sample Id: KF1K21AB

Sdg/Rept Nbr: W05315 38525

Collection Date: 01/17/2008 10:23

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 01/17/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
MW6-SBB-A19981									AV	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8023495 BLK	BETA 12587-47-2	1.13E+00	pCi/L	1.2E+00 1.2E+00	U	2.48E+00	100.0		9310_ALPHAB	2.00E-01 L	02/07/2008 18:52				D

Thursday, March 13, 2008

TAL Richland QC Blank Report

Lab Code: IAKL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W05315.Edd, h:\Reportdb\edd\Fead\I\Rad\38525.Edd

Lab Sample Id: KF1KE1AB

Sdg/Rept Nbr: W05315 38525

Collection Date: 01/17/2008 11:17

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 01/17/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp				
Batch #/ Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qual MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8023482	ALPHA	-1.14E-01	pCi/L	1.3E-01	U	5.70E-01	100.0	9310_ALPHAB	2.001E-01	02/07/2008				D
BLK	12587-46-1			1.3E-01					L	18:35				

Thursday, March 13, 2008

TAL Richland QC Blank Report

Lab Code: IARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W05315.Edd, h:\Reportdb\edd\Fead\I\Rad\38525.Edd

Lab Sample Id: KF1LD1AB

Sdg/Rept Nbr: W05315 38525

Collection Date: 01/17/2008 10:03

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 01/17/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AZ	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8023497 BLK	BE-7 13966-02-4	1.11E+01	pCi/L	1.7E+01 1.7E+01	U	3.07E+01			GAMMALL_GS	2.0001E+00 L	02/13/2008 14:25				D
8023497 BLK	CO-60 10198-40-0	7.78E-01	pCi/L	1.7E+00 1.7E+00	U	3.20E+00			GAMMALL_GS	2.0001E+00 L	02/13/2008 14:25				D
8023497 BLK	CS-134 13967-70-9	-2.10E-01	pCi/L	1.7E+00 1.7E+00	U	3.06E+00			GAMMALL_GS	2.0001E+00 L	02/13/2008 14:25				D
8023497 BLK	CS-137 10045-97-3	1.51E-01	pCi/L	1.7E+00 1.7E+00	U	2.99E+00			GAMMALL_GS	2.0001E+00 L	02/13/2008 14:25				D
8023497 BLK	EU-152 14683-23-9	1.87E+00	pCi/L	4.4E+00 4.4E+00	U	7.57E+00			GAMMALL_GS	2.0001E+00 L	02/13/2008 14:25				D
8023497 BLK	EU-154 15585-10-1	-4.15E+00	pCi/L	5.3E+00 5.3E+00	U	8.54E+00			GAMMALL_GS	2.0001E+00 L	02/13/2008 14:25				D
8023497 BLK	EU-155 14391-16-3	3.26E+00	pCi/L	4.3E+00 4.3E+00	U	7.45E+00			GAMMALL_GS	2.0001E+00 L	02/13/2008 14:25				D
8023497 BLK	K-40 13966-00-2	-2.79E+01	pCi/L	5.1E+01 5.1E+01	U	1.01E+02			GAMMALL_GS	2.0001E+00 L	02/13/2008 14:25				D
8023497 BLK	RU-106 13967-48-1	1.05E+01	pCi/L	1.4E+01 1.4E+01	U	2.51E+01			GAMMALL_GS	2.0001E+00 L	02/13/2008 14:25				D
8023497 BLK	SB-125 14234-35-6	4.01E+00	pCi/L	4.1E+00 4.1E+00	U	7.46E+00			GAMMALL_GS	2.0001E+00 L	02/13/2008 14:25				D

Thursday, March 13, 2008

TAL Richland QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\FeadIV\Rad\W05315.Edd, h:\Reportdb\ledd\FeadIV\Rad\38525.Edd

Lab Sample Id: KF1LG1AB

Sdg/Rept Nbr: W05315

38525

Collection Date: 01/16/2008 10:44

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 01/16/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BB	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8023498	I-129L	-1.43E-02	pCi/L	1.4E-01	U	2.54E-01	88.9		I129LL_SEP_L	3.9999E+00	02/28/2008				D
BLK	15046-84-1			1.4E-01						L	18:59				

Thursday, March 13, 2008

TAL Richland QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W05315.Edd, h:\Reportdb\edd\Fead\I\Rad\38525.Edd

Lab Sample Id: KF1M11AB

Sdg/Rept Nbr: W05315 38525

Collection Date: 01/16/2008 13:52

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 01/17/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BD	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8023501 BLK	U-234 13966-29-5	-2.47E-02	pCi/L	1.1E-01 1.0E-01	U	3.05E-01	84.9		UIISO_PLATE_	2.003E-01 L	02/28/2008 16:22				D
8023501 BLK	U-235 15117-96-1	-4.12E-03	pCi/L	1.0E-01 1.0E-01	U	2.07E-01	84.9		UIISO_PLATE_	2.003E-01 L	02/28/2008 16:22				D
8023501 BLK	U-238 U-238	9.88E-02	pCi/L	1.5E-01 1.5E-01	U	2.07E-01	84.9		UIISO_PLATE_	2.003E-01 L	02/28/2008 16:22				D

Thursday, March 13, 2008

TAL Richland QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W05315.Edd, h:\Reportdb\edd\Fead\I\Rad\38525.Edd

Lab Sample Id: KF1M81DB

Sdg/Rept Nbr: W05315

38525

Collection Date: 01/17/2008 10:03

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 01/17/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qual	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8023504	C-14	-2.52E+00	pCi/L	4.2E+00	U	8.53E+00	100.0		C14_LSC	2.00E-01	01/31/2008				D
BLK	14762-75-5			3.4E+00							02:35				

TAL Richland

rptFeadRadEdd v3.68

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.

Thursday, March 13, 2008

TAL Richland QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W05315.Edd, h:\Reportdb\edd\Fead\Rad\38525.Edd

Lab Sample Id: KF1MT1AB

Sdg/Rept Nbr: W05315 38525

Collection Date: 01/17/2008 10:03

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 01/17/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BH	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8023500 BLK	SR-90 10098-97-2	1.29E-01	pCi/L	2.0E-01 2.0E-01	U	4.25E-01	78.1		SRISO_SEP_P	1.0003E+00 L	02/28/2008 05:48				D

Thursday, March 13, 2008

TAL Richland QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W05315.Edd, h:\Reportdb\edd\Fead\Rad\38525.Edd

Lab Sample Id: KHLGK1AB

Sdg/Rept Nbr: W05315 38525

Collection Date: 01/16/2008 13:52

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 01/17/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp				
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qual MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8056434	Se-79	-4.36E+00	pCi/L	1.2E+01	U	1.45E+01	63.0	SE79_SEP_IE	2.011E-01	02/29/2008				D
BLK	15758-45-9			5.9E+00						21:26				

Thursday, March 13, 2008

TAL Richland QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W05315.Edd, h:\Reportdb\edd\Fead\Rad\38525.Edd

Lab Sample Id: KHLGK1DB

Sdg/Rept Nbr: W05315 38525

Collection Date: 01/16/2008 13:52

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 01/17/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp				
	MW6-SBB-A19981								BS	H				
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qual MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8056434 BLK	Se-79 15758-45-9	-7.49E+00	pCi/L	1.3E+01 6.6E+00	U 1.65E+01	55.6		SE79_SEP_IE	2.002E-01 L	02/29/2008 22:20				D

Thursday, March 13, 2008

TAL Richland QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05315.Edd, h:\Reportdb\edd\FeadIV\Rad\38525.Edd

Lab Sample Id: KF1K21CS

Sdg/Rept Nbr: W05315

38525

Collection Date: 01/17/2008 10:23

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 01/17/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
MW6-SBB-A19981									AW	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8023495 BS	BETA 12587-47-2	2.09E+01	pCi/L	3.5E+00 2.3E+00		2.47E+00	100.0	2.26E+01 92.6	9310_ALPHAB	2.002E-01 L	02/07/2008 18:52			70 130	D

Thursday, March 13, 2008

TAL Richland QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W05315.Edd, h:\Reportdb\edd\Fead\Rad\38525.Edd

Lab Sample Id: KF1KE1CS

Sdg/Rept Nbr: W05315

38525

Collection Date: 01/17/2008 11:17

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 01/17/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert zS	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8023482	ALPHA	1.85E+01	pCi/L	4.3E+00		4.03E-01	100.0	2.27E+01	9310_ALPHAB	2.00E-01	02/07/2008			70	D
BS	12587-46-1			2.0E+00				81.7		L	21:35			130	

Thursday, March 13, 2008

TAL Richland QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W05315.Edd, h:\Reportdb\edd\Fead\Rad\38525.Edd

Lab Sample Id: KF1LD1CS

Sdg/Rept Nbr: W05315 38525

Collection Date: 01/17/2008 10:03

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 01/17/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BA	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8023497 BS	CO-60 10198-40-0	4.16E+01	pCi/L	7.9E+00 7.9E+00		3.43E+00		3.77E+01 110.2	GAMMALL_GS	2.0001E+00 L	02/13/2008 14:25			75 125	D
8023497 BS	CS-137 10045-97-3	4.93E+01	pCi/L	8.2E+00 8.2E+00		3.93E+00		4.97E+01 99.2	GAMMALL_GS	2.0001E+00 L	02/13/2008 14:25			70 130	D
8023497 BS	EU-152 14683-23-9	8.80E+01	pCi/L	1.7E+01 1.7E+01		8.95E+00		7.61E+01 115.6	GAMMALL_GS	2.0001E+00 L	02/13/2008 14:25			70 130	D

Thursday, March 13, 2008

TAL Richland QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05315.Edd, h:\Reportdb\edd\FeadIV\Rad\38525.Edd

Lab Sample Id: KF1LG1CS

Sdg/Rept Nbr: W05315 38525

Collection Date: 01/16/2008 10:44

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 01/16/2008

SAF Nbr		Contract Nbr		Test User		Case Nbr		SAS Nbr		Suffix		Decant		Distilled Volume		File Id		FSuffix		RTyp	
		MW6-SBB-A19981																BC		H	
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ						
8023498	I-129L	9.01E+00	pCi/L	1.2E+00		3.86E-01	99.8	9.47E+00	I129LL_SEP_L	4.0004E+00	02/28/2008			70	D						
BS	15046-84-1			1.2E+00				95.2		L	19:00			130							

Thursday, March 13, 2008

TAL Richland QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W05315.Edd, h:\Reportdb\edd\Fead\I\Rad\38525.Edd

Lab Sample Id: KF1M11CS

Sdg/Rept Nbr: W05315

38525

Collection Date: 01/16/2008 13:52

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 01/17/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BE	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8023501	U-234	9.74E+00	pCi/L	2.0E+00		1.72E-01	91.7	8.70E+00	UIISO_PLATE_	2.003E-01	02/28/2008			75	D
BS	13966-29-5			1.2E+00				111.9		L	16:23			125	
8023501	U-238	1.06E+01	pCi/L	2.1E+00		1.72E-01	91.7	9.11E+00	UIISO_PLATE_	2.003E-01	02/28/2008			75	D
BS	U-238			1.2E+00				115.8		L	16:23			125	

TAL Richland

rptFeadRadEdd v3.68

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.

Thursday, March 13, 2008

TAL Richland QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\IVRad\W05315.Edd, h:\Reportdb\edd\Fead\IVRad\38525.Edd

Lab Sample Id: KF1M81CS

Sdg/Rept Nbr: W05315 38525

Collection Date: 01/17/2008 10:03

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 01/17/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp				
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qual MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8023504 BS	C-14 14762-75-5	4.30E+01	pCi/L	5.9E+00 4.8E+00	8.53E+00	100.0	4.52E+01 95.0	C14_LSC	2.00E-01 L	01/31/2008 03:17			70 130	D

TAL Richland

rptFeadRadEdd v3.68

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.

Thursday, March 13, 2008

TAL Richland QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\W05315.Edd, h:\Reportdb\edd\Fead\W038525.Edd

Lab Sample Id: KF1MT1CS

Sdg/Rept Nbr: W05315

38525

Collection Date: 01/17/2008 10:03

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 01/17/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BI	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8023500	SR-90	1.46E+01	pCi/L	2.3E+00		4.63E-01	77.5	1.35E+01	SRISO_SEP_P	1.0004E+00	02/28/2008			70	D
BS	10098-97-2			8.3E-01				108.4		L	05:54			130	

Thursday, March 13, 2008

TAL Richland QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05315.Edd, h:\Reportdb\edd\FeadIV\Rad\38525.Edd

Lab Sample Id: KFM2N1CR

Sdg/Rept Nbr: W05315

38525

Collection Date: 01/16/2008 10:44

Client Id: B1R9F3

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 01/16/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
A08-012	MW6-SBB-A19981								BJ	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qual	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8023498	I-129L	3.49E+00	pCi/L	7.1E-01	U	9.56E-01	99.2		I129LL_SEP_L	3.7627E+00	02/28/2008	16.9	1.3		D
DUP	15046-84-1	4.13E+00		7.1E-01						L	14:50	20.0	3		

Thursday, March 13, 2008

TAL Richland QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W05315.Edd, h:\Reportdb\edd\Fead\Rad\38525.Edd

Lab Sample Id: KFQM31HR

Sdg/Rept Nbr: W05315 38525

Collection Date: 01/16/2008 13:52

Client Id: B1RBK6

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 01/17/2008

SAF Nbr		Contract Nbr		Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume		File Id		FSuffix	RTyp	
I08-012		MW6-SBB-A19981											BK	H	
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Allq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8023501	U-234	1.20E+00	pCi/L	4.7E-01		2.01E-01	82.2		UIISO_PLATE_	2.002E-01	02/28/2008	13.0	0.5		D
DUP	13966-29-5	1.36E+00		4.3E-01						L	16:22	20.0	3		
8023501	U-235	1.48E-01	pCi/L	1.5E-01	U	1.52E-01	82.2		UIISO_PLATE_	2.002E-01	02/28/2008	132.0	1.1		D
DUP	15117-96-1	3.03E-02		1.5E-01						L	16:22	20.0	3		
8023501	U-238	1.01E+00	pCi/L	4.3E-01		2.01E-01	82.2		UIISO_PLATE_	2.002E-01	02/28/2008	21.8	0.8		D
DUP	U-238	1.25E+00		3.9E-01						L	16:22	20.0	3		

Thursday, March 13, 2008

TAL Richland QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W05315.Edd, h:\Reportdb\edd\Fead\Rad\38525.Edd

Lab Sample Id: KFQM31JR

Sdg/Rept Nbr: W05315

38525

Collection Date: 01/16/2008 13:52

Client Id: B1RBK6

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 01/17/2008

SAF Nbr		Contract Nbr		Test User		Case Nbr		SAS Nbr		Suffix		Decant		Distilled Volume		File Id		FSuffix		RTyp	
I08-012		MW6-SBB-A19981																BL		H	
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- ai	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ						
8056434	Se-79	1.94E+01	pCi/L	1.2E+01		1.24E+01	73.6		SE79_SEP_IE	2.015E-01	02/29/2008	11.6	0.3		D						
DUP	15758-45-9	2.17E+01		5.7E+00						L	18:48	20.0	3								

Thursday, March 13, 2008

TAL Richland QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\W05315.Edd, h:\Reportdb\edd\Fead\W05315.Edd

Lab Sample Id: KFQPG1DR

Sdg/Rept Nbr: W05315

38525

Collection Date: 01/17/2008 10:23

Client Id: B1RDF1

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 01/17/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp				
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qual MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
S08-012	MW6-SBB-A19981												BM	H
8023495	BETA	2.49E+01	pCi/L	4.1E+00	2.73E+00	100.0		9310_ALPHAB	2.004E-01	02/07/2008	17.1	1.4		D
DUP	12587-47-2	2.10E+01		2.6E+00					L	18:53	20.0	3		

Thursday, March 13, 2008

TAL Richland QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\WRad\W05315.Edd, h:\Reportdb\edd\Fead\WRad\38525.Edd

Lab Sample Id: KFQQ51DR

Sdg/Rept Nbr: W05315

38525

Collection Date: 01/17/2008 11:17

Client Id: B1RCV6

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 01/17/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
S08-012	MW6-SBB-A19981														
8023482	ALPHA	2.34E+00	pCi/L	1.1E+00		8.37E-01	100.0		9310_ALPHAB	1.316E-01	02/07/2008	40.8	1.5		D
DUP	12587-46-1	3.54E+00		1.0E+00						L	18:35	20.0	3		

TAL Richland

rptFeadRadEdd v3.68

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.

Thursday, March 13, 2008

TAL Richland QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\I\Rad\W05315.Edd, h:\Reportdb\ledd\Fead\I\Rad\38525.Edd

Lab Sample Id: KFQTF1HR

Sdg/Rept Nbr: W05315 38525

Collection Date: 01/17/2008 10:03

Client Id: B1RBJ4

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 01/17/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
I08-012	MW6-SBB-A19981								BO	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8023497 DUP	BE-7 13966-02-4	1.36E+01 -1.13E+01	pCi/L	1.7E+01 1.7E+01	U	3.17E+01			GAMMALL_GS	2.0001E+00 L	02/13/2008 18:12	2098.4 20.0	2.1 3		D
8023497 DUP	CO-60 10198-40-0	1.39E+00 -8.86E-01	pCi/L	2.1E+00 2.1E+00	U	4.10E+00			GAMMALL_GS	2.0001E+00 L	02/13/2008 18:12	901.7 20.0	1.5 3		D
8023497 DUP	CS-134 13967-70-9	-1.65E+00 -2.13E-01	pCi/L	1.9E+00 1.9E+00	U	3.02E+00			GAMMALL_GS	2.0001E+00 L	02/13/2008 18:12	0.0 20.0	1.1 3		D
8023497 DUP	CS-137 10045-97-3	3.86E-01 1.17E+00	pCi/L	1.6E+00 1.6E+00	U	2.90E+00			GAMMALL_GS	2.0001E+00 L	02/13/2008 18:12	100.6 20.0	0.7 3		D
8023497 DUP	EU-152 14683-23-9	3.05E+00 1.38E+00	pCi/L	3.7E+00 3.7E+00	U	6.86E+00			GAMMALL_GS	2.0001E+00 L	02/13/2008 18:12	75.7 20.0	0.6 3		D
8023497 DUP	EU-154 15585-10-1	1.41E+00 1.40E+00	pCi/L	5.4E+00 5.4E+00	U	1.03E+01			GAMMALL_GS	2.0001E+00 L	02/13/2008 18:12	.6 20.0	0. 3		D
8023497 DUP	EU-155 14391-16-3	4.96E-01 -1.02E+00	pCi/L	2.6E+00 2.6E+00	U	4.57E+00			GAMMALL_GS	2.0001E+00 L	02/13/2008 18:12	0.0 20.0	0.8 3		D
8023497 DUP	K-40 13966-00-2	-3.96E+01 5.99E+00	pCi/L	3.3E+01 3.3E+01	U	6.48E+01			GAMMALL_GS	2.0001E+00 L	02/13/2008 18:12	0.0 20.0	2. 3		D
8023497 DUP	RU-106 13967-48-1	-1.37E+01 1.56E+00	pCi/L	1.5E+01 1.5E+01	U	2.43E+01			GAMMALL_GS	2.0001E+00 L	02/13/2008 18:12	0.0 20.0	1.4 3		D
8023497 DUP	SB-125 14234-35-6	-1.78E+00 1.35E-01	pCi/L	3.7E+00 3.7E+00	U	6.31E+00			GAMMALL_GS	2.0001E+00 L	02/13/2008 18:12	0.0 20.0	0.7 3		D

Thursday, March 13, 2008

TAL Richland QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05315.Edd, h:\Reportdb\edd\FeadIV\Rad\38525.Edd

Lab Sample Id: KFQTF1JR

Sdg/Rept Nbr: W05315

38525

Collection Date: 01/17/2008 10:03

Client Id: B1RBJ4

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 01/17/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qual	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
108-012	MW6-SBB-A19981														
8023500	SR-90	4.87E-02	pCi/L	1.8E-01	U	4.01E-01	82.7		SRISO_SEP_P	1.0002E+00	02/28/2008	77.4	0.5		D
DUP	10098-97-2	1.10E-01		1.4E-01						L	05:48	20.0	3		

Thursday, March 13, 2008

TAL Richland QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\eddd\Fead\W05315.Edd, h:\Reportdb\eddd\Fead\W05315.Edd, h:\Reportdb\eddd\Fead\W05315.Edd

Lab Sample Id: KFQTF1KR

Sdg/Rept Nbr: W05315 38525

Collection Date: 01/17/2008 10:03

Client Id: B1RBJ4

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 01/17/2008

SAF Nbr		Contract Nbr		Test User		Case Nbr		SAS Nbr		Suffix		Decant		Distilled Volume		File Id		FSuffix		RTyp	
I08-012		MW6-SBB-A19981																BQ		H	
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ						
8023504	C-14	1.10E+01	pCi/L	4.7E+00		8.53E+00	100.0		C14_LSC	2.00E-01	01/31/2008	21.9	0.8		D						
DUP	14762-75-5	1.38E+01		3.9E+00						L	05:25	20.0	3								

TestAmerica

TA Richland
Hexavalent Chromium - Water

Analyst:	S. Wheland	Calibration Curve Information				SOP Information		BATCH #	8018283	
Start Date:	1/12/2008		Amount	Conc.(mg/L)	ABS.	RICH-WC-5003		SDG #	W05315	
Start Time:		Blank	0.000	0.000	0.000	Revision 7		Matrix	Water	
End Date:	1/12/2008	Std. 1	0.100	0.050	0.096					
End Time:		Std. 2	0.500	0.250	0.469					
Analyst Signature: <i>S. Wheland</i>		Std. 3	0.750	0.375	0.701	MDL (mg/L)	0.002	Instrument Information		
		Std. 4	1.500	0.750	1.383			Instrument: Hach DR2010		
		Std 5	2.000	1.000	1.829			Wavelength: 540		
		Standard Volume (mL): 100.000						R Squared 0.99992		
Date:	01/18/08	Date of Curve: 1/12/2008						Slope: 1.82903		
								Intercept: 0.00710		

	Calibration Information:	ICV Information:	LCS Information:	Matrix Spike Information:
Dilution ID #	Cr-08-00013	Cr-08-00014	Cr-08-00013	Cr-08-00013
Prep Date:	01/12/08	01/12/08	01/12/08	01/12/08
Concentration (mg/L)	50	50	50	50
Expiration Date:	01/13/08	01/13/08	01/13/08	01/13/08
Pipettor(s)	70,190	190	190	190
Volume Used	Expected Value	1.000	0.50000	1.00
			0.50000	0.50
				0.26316

Expected values are only amounts added in mg and not final concentrations

Sample ID	Client ID	Type	Sample Volume (mL)	Sample ABS.	Blank ABS.	Corrected ABS.	Dilution Factor	Curve Conc. (mg/L)	Final Conc. (mg/L)	% Rec.
n/a	n/a	ICV	100.000	0.947	0.000	0.947	1	0.5139	0.514	102.78%
n/a	n/a	ICB	100.000	0.000	0.000	0.000	1	<MDL	<MDL	
KFRA3-1AA-B	n/a	Prep Blank	100.000	0.000		0.000	1	<MDL	<MDL	
KFRA3-1AC-C	n/a	LCS	100.000	0.929		0.929	1	0.5040	0.504	100.81%
KFFRT-1AA	B1RRB6	Sample	100.000	0.058		0.058	1	0.0278	0.028	
KFFRT-1AC-S	B1RRB6-MS	MS	100.000	0.547		0.547	1	0.2952	0.295	101.59%
KFFRT-1AD-D	B1RRB6-MSD	MSD	100.000	0.549		0.549	1	0.2963	0.296	102.01%
KFFRT-1AE-X	B1RRB6-DUP	Duplicate	100.000	0.060		0.060	1	0.0289	0.029	102.31%
			100.000				1			
			100.000				1			
			100.000				1			
n/a	n/a	CCV	100.000	0.946		0.946	1	0.5133	0.513	102.67%
n/a	n/a	CCB	100.000	0.000		0.000	1	<MDL	<MDL	
			100.000				1			
			100.000				1			
			100.000				1			
			100.000				1			
			100.000				1			
			100.000				1			

Lot No., Due Date: J8A180129, J8A180145; 03/03/2008
Client, Site: 384868; PGW 615 HANFORD HANFORD
QC Batch No., Method Test: 8023501; RUIISO Also by ALP
SDG, Matrix: W05315; WATER

1.0 COC

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

Yes No N/A

✓

2.0 QC Batch

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

Yes No N/A

✓

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

Yes No N/A

✓

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

Yes No N/A

✓

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

Yes No N/A

✓

3.0 QC & Samples

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

Yes No N/A

✓

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

Yes No N/A

✓

3.3 Are the MS/MSD results, yields, and MDA within contract limits?

Yes No N/A

✓

3.4 Are the duplicate result, yields, and MDAs within contract limits?

Yes No N/A

✓

3.5 Are the sample yields and MDAs within contract limits?

Yes No N/A

✓

4.0 Raw Data

4.1 Were results calculated in the correct units?

Yes No N/A

✓

4.2 Were analysis volumes entered correctly?

Yes No N/A

✓

4.3 Were Yields entered correctly?

Yes No N/A

✓

4.4 Were spectra reviewed/meet contractual requirements?

Yes No N/A

✓

4.5 Were raw counts reviewed for anomalies?

Yes No N/A

✓

5.0 Other

5.1 Are all nonconformances included and noted?

Yes No N/A

✓

5.2 Are all required forms filled out?

Yes No N/A

✓

5.3 Was the correct methodology used?

Yes No N/A

✓

5.4 Was transcription checked?

Yes No N/A

✓

5.5 Were all calculations checked at a minimum frequency?

Yes No N/A

✓

5.6 Are worksheet entries complete and correct?

Yes No N/A

✓

6.0 Comments on any No response:

First Level Review

John Hooten

Date

3-5-8

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 802 3501

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?			✓
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: Erika Ford Date: 3/6/18

Lot No., Due Date: J8A140154,J8A160296,J8A180137,J8A180140,J8A180148; 03/03/2008

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8023482; RALPHA-A Alpha by GPC-Am

SDG, Matrix: W05315; WATER

1.0 COC

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

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

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

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

2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes ☐ No ☐ N/A ☒
3.0 QC & Samples

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

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

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

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

3.5 Are the sample yields and MDAs within contract limits? Yes ☒ No ☐ N/A ☐
4.0 Raw Data

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

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

4.3 Were Yields entered correctly? Yes ☒ No ☐ N/A ☐

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

4.5 Were raw counts reviewed for anomalies? Yes ☒ No ☐ N/A ☐
5.0 Other

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

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

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

5.4 Was transcription checked? Yes ☒ No ☐ N/A ☐

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

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

6.0 Comments on any No response:

First Level Review

Date 2-12-8

TAL Richland

QAS_RADCALCv4.8.32

STL RICHLAND

Data Review Checklist RADIOCHEMISTRY Second Level Review

Batch Number: 8023482

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?			✓
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: Jodie C Date: 2/20/08

Lot No., Due Date: J8A140154,J8A150246,J8A160296,J8A180137,J8A180140; 03/03/2008

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8023495; RBETA-SR Beta by GPC-Sr/Y

SDG, Matrix: W05315; WATER

8.0	Correction Calculation Protocol Used.	Yes	No	N/A
	OK	✓		
8.01	The Appropriate Methods Were Used To Analyze the Samples	Yes	No	N/A
	OK	✓		
8.02	Final Results Are in the Appropriate Activity Units	Yes	No	N/A
	OK	✓		
8.03	Batch Contains the Required QC Appropriate for the Method	Yes	No	N/A
	OK	✓		
8.04	The Correct Tracer and QC Vials Where Used in the Samples	Yes	No	N/A
	OK	✓		
8.05	Sample was Appropriately Traced Before or After Fractionating the Sample	Yes	No	N/A
	OK	✓		
8.06	At Least the Minimum Sample Volume Was Used	Yes	No	N/A
	OK	✓		
8.07	The Correct Count Geometry was Used.	Yes	No	N/A
	OK	✓		
8.08	The Sample was Counted for the Minimum Count Time or CRDL was Achieved.	Yes	No	N/A
	OK	✓		
8.09	Method Blank is within Control Limits.	Yes	No	N/A
	OK	✓		
8.1	Comments:			
8.11	Matrix Blank is within Control Limits.	Yes	No	N/A
	No Matrix Blanks (MBIs) found in Batch!			✓
8.12	Method Blank(s) < QAS Limit Value (No B Flag Necessary).	Yes	No	N/A
	OK	✓		
8.13	QAS Specified Duplicate Equation Value within Control Limits.	Yes	No	N/A
	OK (RPD)	✓		
8.14	LCS within Control Limits.	Yes	No	N/A
	OK	✓		
8.15	MLCS within Control Limits.	Yes	No	N/A
	No Matrix Spikes (MLCS) found in Batch!			✓
8.16	MS within Control Limits.	Yes	No	N/A
	No Matrix Spike Samples (MS) found in Batch!			✓
8.17	Tracer within Control Limits.	Yes	No	N/A
	OK	✓		
8.18	Samples are above Minimum Tracer Yield (No Failed Samples)	Yes	No	N/A
	OK	✓		
8.19	Sample Specific MDC <= CRDL.	Yes	No	N/A
	OK	✓		
8.2	Comments:			
8.21	Result < Lc, Activity Not Detected, U Flag.	Yes	No	N/A
	No Limit Specified!			✓
8.22	Result < Mdc, Activity Not Detected, U Flag.	Yes	No	N/A
	Batch Positive Result =>			✓
	KFHXE1AC BETA 1.8E+01 L:2.9E+00			
	KFHGX1AC BETA 1.7E+01 L:2.9E+00			
	KFKKV1AA BETA 1.2E+03 L:2.8E+00			
	KFKLN1AA BETA 8.1E+02 L:2.8E+00			
	KFKL21AA BETA 3.2E+03 L:2.8E+00			
	KFM131AC BETA 7.5E+00 L:2.8E+00			
	KFM181AC BETA 1.2E+01 L:2.9E+00			
	KFQPF1AC BETA 5.8E+01 L:2.9E+00			
	KFQPG1AC BETA 2.1E+01 L:2.8E+00			
	KFQQ51AC BETA 9.8E+00 L:2.8E+00			
	KFQRJ1AC BETA 2.0E+01 L:2.9E+00			

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

First Level Review

Paula Quisenberry

Date

2/8/08

Data Review Checklist

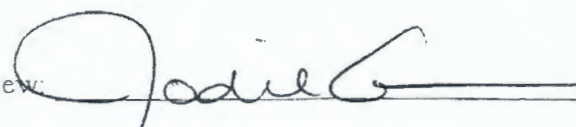
RADIOCHEMISTRY

Second Level Review

Batch Number: 8023495

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?			✓
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:  Date: 2/11/08

Lot No., Due Date: J8A180129, J8A180145; 03/03/2008
Client, Site: 384868; PGW 615 HANFORD HANFORD
QC Batch No., Method Test: 8023500; RSR85907 Sr-85/90 by GPC-7
SDG, Matrix: W05315; WATER

1.0 COC

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

2.0 QC Batch

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

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

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

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

3.0 QC & Samples

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

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

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

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

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

4.0 Raw Data

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

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

4.3 Were Yields entered correctly? Yes No N/A

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

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

5.0 Other

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

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

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

5.4 Was transcription checked? Yes No N/A

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

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

6.0 Comments on any No response:

First Level Review

Date

2-28-8

Data Review Checklist RADIOCHEMISTRY Second Level Review

Batch Number: 8023500

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?			✓
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: Ernie Jacob Date: 2/28/15

Lot No., Due Date: J8A180129, J8A180145; 03/03/2008
Client, Site: 384868; PGW 615 HANFORD HANFORD
QC Batch No., Method Test: 8023497; RGAMMA Gamma by GER
SDG, Matrix: W05315; WATER

1.0 COC

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

Yes No N/A

✓

2.0 QC Batch

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

Yes No N/A

✓

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

Yes No N/A

✓

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

Yes No N/A

✓

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

Yes No N/A

✓

3.0 QC & Samples

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

Yes No N/A

✓

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

Yes No N/A

✓

3.3 Are the MS/MSD results, yields, and MDA within contract limits?

Yes No N/A

✓

3.4 Are the duplicate result, yields, and MDAs within contract limits?

Yes No N/A

✓

3.5 Are the sample yields and MDAs within contract limits?

Yes No N/A

✓

4.0 Raw Data

4.1 Were results calculated in the correct units?

Yes No N/A

✓

4.2 Were analysis volumes entered correctly?

Yes No N/A

✓

4.3 Were Yields entered correctly?

Yes No N/A

✓

4.4 Were spectra reviewed/meet contractual requirements?

Yes No N/A

✓

4.5 Were raw counts reviewed for anomalies?

Yes No N/A

✓

5.0 Other

5.1 Are all nonconformances included and noted?

Yes No N/A

✓

5.2 Are all required forms filled out?

Yes No N/A

✓

5.3 Was the correct methodology used?

Yes No N/A

✓

5.4 Was transcription checked?

Yes No N/A

✓

5.5 Were all calculations checked at a minimum frequency?

Yes No N/A

✓

5.6 Are worksheet entries complete and correct?

Yes No N/A

✓

6.0 Comments on any No response:

First Level Review

Date

TAL Richland

OAS_RADCALCv4.8.32

STL RICHLAND

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 8023497

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?			✓
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: Jodie Date: 2/20/08

Lot No., Due Date: J8A140171, J8A160296, J8A160299, J8A180129, J8A180145; 03/03/2008
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 8023498; RGAMLEPS Gamma by LEPS
SDG, Matrix: W05315; WATER

1.0 COC

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

2.0 QC Batch

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

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

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

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

3.0 QC & Samples

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

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

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

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

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

4.0 Raw Data

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

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

4.3 Were Yields entered correctly? Yes ☒ No ☐ N/A ☐

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

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

5.0 Other

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

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

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

5.4 Was transcription checked? Yes ☒ No ☐ N/A ☐

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

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

6.0 Comments on any No response:

First Level Review *Gabe N. [Signature]*

Date 3-7-3

Data Review Checklist RADIOCHEMISTRY Second Level Review

Batch Number: 862 3498

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?			✓
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: Erich Jod Date: 3/10/8

Lot No., Due Date: J8A180129, J8A180145; 03/03/2008
Client, Site: 384868; PGW 615 HANFORD HANFORD
QC Batch No., Method Test: 8056434; RSE79 Se-79 by LSC
SDG, Matrix: W05315; WATER

1.0 COC

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

2.0 QC Batch

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

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

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

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

3.0 QC & Samples

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

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

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

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

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

4.0 Raw Data

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

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

4.3 Were Yields entered correctly? Yes No N/A

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

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

5.0 Other

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

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

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

5.4 Was transcription checked? Yes No N/A

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

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

6.0 Comments on any No response:

NCM 10-11964

First Level Review

Date

AL Richland

QAS_RADCALCv4.8.32

STL RICHLAND

Data Review Checklist RADIOCHEMISTRY Second Level Review

Batch Number: 80SL434

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?			✓
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: See num

Second Level Review: Erika Jod Date: 3/13/8

Clouseau Nonconformance Memo

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

NCM #: 10-11964	Classification: Deficiency
NCM Initiated By: Lisa Antonson	Status: QAREVIEW
Date Opened: 03/12/2008	Production Area: Environmental - Prep
Date Closed:	Tests: Se-79 by LSC
	Lot #'s (Sample #'s): J8A180129 (1), J8A180145 (1), J8B250000 (434),
	QC Batches: 8056434,
Nonconformance: Other (describe in detail)	
Subcategory: Other (explanation required)	

Problem Description / Root Cause

Name	Date	Description
Lisa Antonson	03/12/2008	This Se79 batch is a rerun of the original batch 8023505. There was a calculation error in the original batch that wasn't caught, so a rerun was initiated. The error was fixed, but the original batch didn't contain a duplicate sample, so the rerun data will be accepted.

Corrective Action

Name	Date	Corrective Action
Lisa Antonson	03/12/2008	The rerun data is accepted.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position

Lot No., Due Date: J8A180129, J8A180145; 03/03/2008
Client, Site: 384868; PGW 615 HANFORD HANFORD
QC Batch No., Method Test: 8023504; RC14 C-14 by LSC
SDG, Matrix: W05315; WATER

1.0 COC

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

2.0 QC Batch

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

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

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

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

3.0 QC & Samples

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

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

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

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

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

4.0 Raw Data

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

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

4.3 Were Yields entered correctly? Yes No N/A

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

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

5.0 Other

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

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

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

5.4 Was transcription checked? Yes No N/A

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

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

6.0 Comments on any No response:

First Level Review *John Norton*

Date 1-31-8

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 8023504

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?			✓
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: *[Signature]*

Date: 2/11/08

Richland Laboratory
 Data Review Check List
 Hexavalent Chromium

Batch Number(s): 8018283				
Lab Sample Numbers or: W05315				
Method/Test/Parameter: Cr+6 in Water / RICH-WC-5003				
Review Item	Yes (✓)	No (✓)	N/A (✓)	2 nd Level Review (✓)
A. Initial Calibration	✓			✓
1. Performed at required frequency with required number of levels?	✓			✓
2. Correlation coefficient within QC limits?	✓			✓
3. Initial calibration verification (ICV) analyzed immediately after calibration and results within QC limits?	✓			✓
4. Initial calibration blank (ICB) analyzed immediately after ICV and concentrations of all parameters $\leq$ reporting limit?	✓			✓
B. Continuing Calibration	✓			✓
1. CCV analyzed at required frequency and all parameters within QC limits?	✓			✓
2. CCB analyzed at required frequency and all results $\leq$ reporting limit?	✓			✓
C. Sample Analysis	✓			✓
1. Were any samples with concentrations above the linear range for any parameter diluted and reanalyzed?	✓			✓
2. Were all sample holding times met?	✓			✓
D. QC Samples	✓			✓
1. All results for the preparation blank below limits?	✓			✓
2. MS or MS/MSD recoveries within QC limits and %RPD (for MSD) acceptable?	✓			✓
3. LCS percent recovery within QC limits and %RPD (for LCSD) acceptable?	✓			✓
4. Analytical spikes within QC limits where applicable?			✓	✓
5. ICP only: One serial dilution performed per SDG?			✓	✓
6. ICP only: CRDL standard (CRI or CRA) analyzed at required frequency?			✓	✓
7. ICP only: Interference check samples (ICSA, ICSAB) and HICAL analyzed at the required frequencies and within QC limits?			✓	✓

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

Comments on any "No" response:

Analyst: It E. Meland
 Second-Level Review: E. E. Jones

Date: 1/18//2008
 Date: 3/13/8

FLUOR HANFORD		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST J8A180129 W05315 DUE 3-3-08 KFQM3		C.O.C. # 108-012-44	
Collector F.M. Hall		Contact/Requester Steve Trent		Telephone No. 509-373-5869 MSIN FAX 	
SAF No. 108-012		Sampling Origin Hanford Site		Purchase Order/Charge Code 	
Project Title 2UPL DECEMBER 2007		HNF-W-506-10 Method of Shipment Govt. Vehicle		Ice Chest No. 509-107 Temp. 	
Shipped To (Lab) TestAmerica Incorporated Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No. 	
Protocol SURV		Priority: 45 Days		Offsite Property No. 	
POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)			SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☒ No ☐ All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W 08 SAFs into one SDG, not to exceed SDG closure of 14 days. WSCF: Batch all GW samples submitted into one SDG, daily closure. FY07 and FY08 samples cannot be in the same SDG.		

[illegible]

Relinquished By F.M. Hall	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time 1-17-08 1200	Received By J. Herrick	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time 1-17-08 1230	Matrix *	
Relinquished By J. Herrick	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time 1-17-08 1230	Received By A. LANE	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time 1-17-08 1230	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air	DS = Drum Solid DL = Drum Liquid T = Tissue WL = Wine L = Liquid V = Vegetation X = Other
Relinquished By			Date/Time	Received By			Date/Time		
Relinquished By			Date/Time	Received By			Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)						Disposed By	Date/Time	

Sample Check-in List

DUE 3-3-08

Date/Time Received: 1-17-08 1230

Client: PAW SDG #: W05315 NA ☐ SAF #: I08-012 NA ☐

Work Order Number: J8A180129 Chain of Custody # I08-012-44

Shipping Container ID: _____ Air Bill # _____

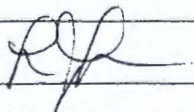
1. Custody Seals on shipping container intact? NA ☐ Yes ☒ No ☐
2. Custody Seals dated and signed? NA ☐ Yes ☒ No ☐
3. Chain of Custody record present? NA ☐ Yes ☒ No ☐
4. Cooler Temperature: _____ NA ☒ 5. Vermiculite/packing materials is NA ☒ Wet ☐ Dry ☐
6. Number of samples in shipping container: 1
7. Sample holding times exceeded? NA ☒ Yes ☐ No ☐
8. Samples have:

Tape
 Custody Seals

Hazard Labels
 Appropriate Sample Labels
9. Samples are:

In Good Condition
 Broken

Leaking
 Have Air Bubbles
 (Only for samples requiring no head space.)
10. Sample pH taken? NA ☐ pH < 2 ☒ pH > 2 ☒ pH > 9 ☐
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes ☐ No ☒
13. Description of anomalies (include sample numbers): _____

Sample Custodian:  Date: 1-17-08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

☐ No action necessary; process as is.

Project Manager _____ Date _____

Sample Check-in List

LUE 3-3-08

Date/Time Received: 1-17-08 1230

Client: PLW SDG #: W05315 NA [] SAF #: 508-012 NA []

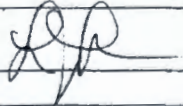
Work Order Number: J8A180137 Chain of Custody # 508-012-321,303

Shipping Container ID: _____ Air Bill # _____

1. Custody Seals on shipping container intact? NA [] Yes ☒ No []
2. Custody Seals dated and signed? NA [] Yes ☒ No []
3. Chain of Custody record present? NA [] Yes ☒ No []
4. Cooler Temperature: _____ NA ☒ 5. Vermiculite/packing materials is NA ☒ Wet [] Dry []
6. Number of samples in shipping container: 2
7. Sample holding times exceeded? NA ☒ Yes [] No []
8. Samples have:

<u> </u> Tape <u> / </u> Custody Seals	<u> </u> Hazard Labels <u> / </u> Appropriate Sample Labels
--	---
9. Samples are:

<u> / </u> In Good Condition <u> </u> Broken	<u> </u> Leaking <u> </u> Have Air Bubbles (Only for samples requiring no head space.)
--	--
10. Sample pH taken? NA [] pH < 2 ☒ pH > 2 [] pH > 9 []
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [] No ☒
13. Description of anomalies (include sample numbers): _____

Sample Custodian:  Date: 1-17-08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____

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

Sample Check-in List

DUE 3-3-08

Date/Time Received: 01.17.08 1400

Client: PGW SDG#: WDS315 NA [] SAF#: 508-012 NA []

Work Order Number: 18A180140 Chain of Custody # 508-012-349345

Shipping Container ID: _____ Air Bill # _____

1. Custody Seals on shipping container intact? NA [] Yes [☒] No []
2. Custody Seals dated and signed? NA [] Yes [☒] No []
3. Chain of Custody record present? NA [] Yes [☒] No []
4. Cooler Temperature: _____ NA [☒] 5. Vermiculite/packing materials is NA [☒] Wet [] Dry []
6. Number of samples in shipping container: 2
7. Sample holding times exceeded? NA [☒] Yes [] No []
8. Samples have:

_____ Tape	_____ Hazard Labels
_____ Custody Seals	_____ / _____ Appropriate Sample Labels
9. Samples are:

_____ / _____ In Good Condition	_____ Leaking
_____ Broken	_____ Have Air Bubbles

(Only for samples requiring no head space.)
10. Sample pH taken? NA [] pH < 2 [☒] pH > 2 [] pH > 9 []
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [] No [☒]
13. Description of anomalies (include sample numbers): _____

Sample Custodian: [Signature] Date: 01.17.08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____

Sample Check-in List

DUE 3-3-08

Date/Time Received: 1-17-08 1520

Client: PCW SDG #: W05315 NA ☐ SAF #: I08-012 NA ☐

Work Order Number: J8A 180145 Chain of Custody # I08-012-26

Shipping Container ID: _____ Air Bill # _____

1. Custody Seals on shipping container intact? NA ☐ Yes ☒ No ☐
2. Custody Seals dated and signed? NA ☐ Yes ☒ No ☐
3. Chain of Custody record present? NA ☐ Yes ☒ No ☐
4. Cooler Temperature: _____ NA ☒ 5. Vermiculite/packing materials is NA ☒ Wet ☐ Dry ☐
6. Number of samples in shipping container: 1
7. Sample holding times exceeded? NA ☒ Yes ☐ No ☐
8. Samples have:

☐ Tape
☒ Custody Seals

☐ Hazard Labels
☒ Appropriate Sample Labels
9. Samples are:

☒ In Good Condition
☐ Broken

☐ Leaking
☐ Have Air Bubbles
 (Only for samples requiring no head space.)
10. Sample pH taken? NA ☐ pH < 2 ☒ pH > 2 ☒ pH > 9 ☐
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes ☐ No ☒
13. Description of anomalies (include sample numbers): _____

Sample Custodian:  Date: 1-17-08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

☐ No action necessary; process as is.

Project Manager _____ Date _____

FLUOR HANFORD		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST J8A180148 W05315 DUE 3-3-08 KFQTV		C.O.C. # W08-012-285	
Collector D. J. Sparks		Contact/Requester Steve Trent		Telephone No. 509-373-5869 MSIN FAX	
SAF No. W08-012		Sampling Origin Hanford Site		Purchase Order/Charge Code	
Project Title RCRA DECEMBER 2007		HNF-W-506-10		Ice Chest No. G.P.03-027 Temp.	
Shipped To (Lab) TestAmerica Incorporated, Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.	
Protocol RCRA		Priority: 45 Days		Offsite Property No.	
POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)			SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☒ No ☐ All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W 08 SAFs into one SDG, not to exceed SDG closure of 14 days. WSCF: Batch all GW samples submitted into one SDG, daily closure. FY07 and FY08 samples cannot be in the same SDG		

[illegible]

Relinquished By D. J. Sparks	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time JAN 17 2008	Received By <i>[Signature]</i>	Print WLANE TAL-R	Sign <i>[Signature]</i>	Date/Time JAN 17 2008	Matrix *	
Relinquished By			Date/Time	Received By			Date/Time	S = Soil SF = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air	DS = Drum Solid DL = Drum Liquid T = Tissue WL = Wine L = Liquid V = Vegetation X = Other
Relinquished By			Date/Time	Received By			Date/Time		
Relinquished By			Date/Time	Received By			Date/Time		
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)						Disposed By	Date/Time

Sample Check-in List

DUE 3-3-08

Date/Time Received: 1-17-08 1520

Client: PCW SDG#: W05315 NA ☐ SAF#: W08-012 NA ☐

Work Order Number: J8A180148 Chain of Custody # W08-012-285

Shipping Container ID: _____ Air Bill # _____

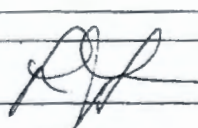
1. Custody Seals on shipping container intact? NA ☐ Yes ☒ No ☐
2. Custody Seals dated and signed? NA ☐ Yes ☒ No ☐
3. Chain of Custody record present? NA ☐ Yes ☒ No ☐
4. Cooler Temperature: _____ NA ☒ 5. Vermiculite/packing materials is NA ☒ Wet ☐ Dry ☐
6. Number of samples in shipping container: 1
7. Sample holding times exceeded? NA ☒ Yes ☐ No ☐
8. Samples have:

Tape
 / Custody Seals

Hazard Labels
 / Appropriate Sample Labels
9. Samples are:

/ In Good Condition
 Broken

Leaking
 Have Air Bubbles
 (Only for samples requiring no head space.)
10. Sample pH taken? NA ☐ pH < 2 ☒ pH > 2 ☐ pH > 9 ☐
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes ☐ No ☒
13. Description of anomalies (include sample numbers): _____

Sample Custodian:  Date: 1-17-08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

☐ No action necessary; process as is.

Project Manager _____ Date _____

FLUOR HANFORD		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C. # 108-016-82	
J8A110323 W05315 DUE 2-25-08 KFFRT				Page 1 of 1	
Collector FLUOR HANFORD R.F. CARRIGAN	Contact/Requester Steve Trent	Telephone No. 509-373-5869	MSIN	FAX	
SAF No. 108-016	Sampling Origin Hanford Site	Purchase Order/Charge Code			
Project Title 100KR4IAM(1/2). JANUARY 2008	HUF-N-506 14	Ice Chest No. 102	Temp.		
Shipped To (Lab) TestAmerica Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.			
Protocol CERCLA	Priority: 45 Days	Offsite Property No.			
POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)		SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☒ No ☐ All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W 08 SAFs into one SDG, not to exceed SDG closure of 14 days. 100 Area Generator Knowledge Information Form applies.			

[illegible]

Relinquished By FLUOR HANFORD R.F. CARRIGAN	Print <i>R.F. Carrigan</i>	Sign	Date/Time 1/355 JAN 11 2000	Received By <i>K. R. WILANE TALK</i>	Print	Sign	Date/Time 1/355 JAN 11 2000	Matrix *	
Relinquished By			Date/Time	Received By			Date/Time	S - Soil SF - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air	DS - Drum Solid DL - Drum Liquid T - Tissue WL - Wine LI - Liquid V - Vegetation X - Other
Relinquished By			Date/Time	Received By			Date/Time		
Relinquished By			Date/Time	Received By			Date/Time		
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)					Disposed By		Date/Time

Sample Check-in List

DUE 2-25-08

Date/Time Received: 1-11-08 1355

Client: PGW SDG #: W05315 NA ☐ SAF #: I08-016 NA ☐

Work Order Number: J8A110323 Chain of Custody # I08-016-82

Shipping Container ID: _____ Air Bill # _____

1. Custody Seals on shipping container intact? NA ☐ Yes ☒ No ☐
2. Custody Seals dated and signed? NA ☐ Yes ☒ No ☐
3. Chain of Custody record present? NA ☐ Yes ☒ No ☐
4. Cooler Temperature: _____ NA ☒ 5. Vermiculite/packing materials is NA ☒ Wet ☐ Dry ☐
6. Number of samples in shipping container: 1
7. Sample holding times exceeded? NA ☒ Yes ☐ No ☐
8. Samples have:

Tape
 / Custody Seals

Hazard Labels
 / Appropriate Sample Labels
9. Samples are:

/ In Good Condition
 Broken

Leaking
 Have Air Bubbles
 (Only for samples requiring no head space.)
10. Sample pH taken? NA ☐ pH < 2 ☐ pH > 2 ☒ pH > 9 ☐
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes ☐ No ☒
13. Description of anomalies (include sample numbers): _____

Sample Custodian: *RJP* Date: 1-11-08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

☐ No action necessary; process as is.

Project Manager _____ Date _____

Sample Check-in List

DUE 2-28-08

Date/Time Received: 1-14-08 1230

Client: PAW SDG#: W05315 NA ☐ SAF#: 508-012 NA ☐

Work Order Number: JSA140154 Chain of Custody # 508-012-93, -291

Shipping Container ID: _____ Air Bill # _____

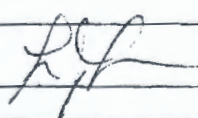
1. Custody Seals on shipping container intact? NA ☐ Yes ☒ No ☐
2. Custody Seals dated and signed? NA ☐ Yes ☒ No ☐
3. Chain of Custody record present? NA ☐ Yes ☒ No ☐
4. Cooler Temperature: _____ NA ☒ 5. Vermiculite/packing materials is NA ☒ Wet ☐ Dry ☐
6. Number of samples in shipping container: 2
7. Sample holding times exceeded? NA ☒ Yes ☐ No ☐
8. Samples have:

☐ Tape
☒ Custody Seals

☐ Hazard Labels
☒ Appropriate Sample Labels
9. Samples are:

☒ In Good Condition
☐ Broken

☐ Leaking
☐ Have Air Bubbles
 (Only for samples requiring no head space.)
10. Sample pH taken? NA ☐ pH < 2 ☒ pH > 2 ☐ pH > 9 ☐
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes ☐ No ☒
13. Description of anomalies (include sample numbers): _____

Sample Custodian:  Date: 1-14-08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

☐ No action necessary; process as is.

Project Manager _____ Date _____

FLUOR HANFORD		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C. # A08-012-19	
		JSA140171 W05315 DUE 2-28-08 KFH60		Page 1 of 1	
Collector R. A. Shepard		Contact/Requester Steve Trent		Telephone No. MSIN FAX 509-373-5869	
SAF No. A08-012		Sampling Origin Hanford Site		Purchase Order/Charge Code	
Project Title LLWMA(1)-PA DECEMBER 2007		Ice Chest No. HWF-N-506 14		Temp. SAFES 102	
Shipped To (Lab) TestAmerica Incorporated, Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.	
Protocol Other		Priority: 45 Days		Offsite Property No.	
POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)			SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☒ No ☐ All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W 08 SAFs into one SDG, not to exceed SDG closure of 14 days. WSCF: Batch all GW samples submitted into one SDG, daily closure. FY07 and FY08 samples cannot be in the same SDG.		

[illegible]

Relinquished By R.A. Shepard	Print R.A. Shepard	Signature <i>[Signature]</i>	Date/Time JAN 14 2000 1515	Received By LILANE TALLER	Print LILANE TALLER	Signature <i>[Signature]</i>	Date/Time JAN 14 2000 1515	Matrix *	
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air	DS = Drum Solid DL = Drum Liquid T = Tissue WL = Wine L = Liquid V = Vegetation X = Other
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time		
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time		
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed By		Date/Time	

Sample Check-in List

DUE 2-25-08

Date/Time Received: 1-14-08 1515

Client: PGW SDG#: W05315 NA ☐ SAF#: A08-012 NA ☐

Work Order Number: J8A140171 Chain of Custody # A08-012-19

Shipping Container ID: _____ Air Bill # _____

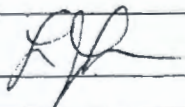
1. Custody Seals on shipping container intact? NA ☐ Yes ☒ No ☐
2. Custody Seals dated and signed? NA ☐ Yes ☒ No ☐
3. Chain of Custody record present? NA ☐ Yes ☒ No ☐
4. Cooler Temperature: _____ NA ☒ 5. Vermiculite/packing materials is NA ☒ Wet ☐ Dry ☐
6. Number of samples in shipping container: 1
7. Sample holding times exceeded? NA ☒ Yes ☐ No ☐
8. Samples have:

Tape
 Custody Seals

Hazard Labels
 Appropriate Sample Labels
9. Samples are:

In Good Condition
 Broken

Leaking
 Have Air Bubbles
 (Only for samples requiring no head space.)
10. Sample pH taken? NA ☐ pH<2 ☐ pH>2 ☒ pH>9 ☐
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes ☐ No ☒
13. Description of anomalies (include sample numbers): _____

Sample Custodian:  Date: 1-14-08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

☐ No action necessary; process as is.

Project Manager _____ Date _____

Sample Check-in List

DUE 2-29-08

Date/Time Received: 1-15-08 1230

Client: PAW SDG#: W05315 NA ☐ SAF#: G05-001 NA ☐

Work Order Number: JS8150246 Chain of Custody # GDS-001-381-421-461-50

Shipping Container ID: _____ Air Bill # _____

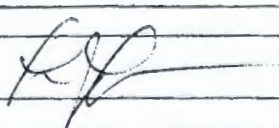
1. Custody Seals on shipping container intact? NA ☐ Yes ☒ No ☐
2. Custody Seals dated and signed? NA ☐ Yes ☒ No ☐
3. Chain of Custody record present? NA ☐ Yes ☒ No ☐
4. Cooler Temperature: _____ NA ☒ 5. Vermiculite/packing materials is NA ☒ Wet ☐ Dry ☐
6. Number of samples in shipping container: 4
7. Sample holding times exceeded? NA ☒ Yes ☐ No ☐
8. Samples have:

☐ Tape
☒ Custody Seals

☐ Hazard Labels
☒ Appropriate Sample Labels
9. Samples are:

☒ In Good Condition
☐ Broken

☐ Leaking
☐ Have Air Bubbles
(Only for samples requiring no head space.)
10. Sample pH taken? NA ☐ pH < 2 ☒ pH > 2 ☐ pH > 9 ☐
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes ☐ No ☒
13. Description of anomalies (include sample numbers): _____

Sample Custodian:  Date: 1-15-08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

☐ No action necessary; process as is.

Project Manager _____ Date _____

FLUOR HANFORD		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C. # W08-001-30	
J8A160296 WDS315 DUE 2-29-08 KFM13				Page 1 of 1	
Collector Roy Sickle	Contact/Requester Steve Trent	Telephone No. 509-373-5869	MSIN FAX		
SAF No. W08-001	Sampling Origin Hanford Site	Purchase Order/Charge Code			
Project Title RCRA JANUARY 2008	HNF-N-506-11	Ice Chest No. 3ML-125	Temp. 46.1		
Shipped To (Lab) TestAmerica Incorporated Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.			
Protocol RCRA	Priority: 45 Days	Offsite Property No.			
POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)		SPECIAL INSTRUCTIONS Site-Wide Generator Knowledge Information Form applies.		Hold Time Total Activity Exemption: Yes ☒ No ☐	

[illegible]

Relinquished By Roy Sickle	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time 1500 JAN 16 2000	Received By <i>[Signature]</i>	Print LVLANE TAL-R	Sign <i>[Signature]</i>	Date/Time 1500 JAN 16 2000	Matrix *	
Relinquished By	Date/Time	Received By	Date/Time					S = Soil SF = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air	DS = Drum Solid DL = Drum Liquid T = Tissue WL = Wine L = Liquid V = Vegetation X = Other
Relinquished By	Date/Time	Received By	Date/Time						
Relinquished By	Date/Time	Received By	Date/Time						
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed By		Date/Time		

Sample Check-in List

DUE 2-29-08

Date/Time Received: 1-16-08 1500

Client: PAW SDG#: W05315 NA [] SAF#: W08-001 NA []

Work Order Number: J8A160296 Chain of Custody # W08-001-30-40

Shipping Container ID: _____ Air Bill # _____

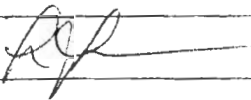
1. Custody Seals on shipping container intact? NA [] Yes ☒ No []
2. Custody Seals dated and signed? NA [] Yes ☒ No []
3. Chain of Custody record present? NA [] Yes ☒ No []
4. Cooler Temperature: _____ NA ☒ 5. Vermiculite/packing materials is NA ☒ Wet [] Dry []
6. Number of samples in shipping container: 2
7. Sample holding times exceeded? NA ☒ Yes [] No []
8. Samples have:

☐ Tape
☒ Custody Seals

☒ Hazard Labels
☒ Appropriate Sample Labels
9. Samples are:

☒ In Good Condition
☐ Broken

☐ Leaking
☐ Have Air Bubbles
 (Only for samples requiring no head space.)
10. Sample pH taken? NA [] pH < 2 ☒ pH > 2 ☒ pH > 9 []
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [] No ☒
13. Description of anomalies (include sample numbers): _____

Sample Custodian:  Date: 1-16-08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____

FLUOR HANFORD		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST J9A160299 W05315 DUE 2-29-08 KFM2N		C.O.C. # A08-012-47
Collector Roy Sickle		Contact/Requester Steve Trent		Telephone No. 509-373-5869
SAF No. A08-012		Sampling Origin Hanford Site		MSIN FAX
Project Title LLWMA(1)-PA, DECEMBER 2007		Purchase Order/Charge Code		Page 1 of 1
Shipped To (Lab) TestAmerica Incorporated, Richland		Ice Chest No. SMT 461		Temp.
Protocol Other		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.
Priority: 45 Days		Offsite Property No.		
POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)		SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☒ No ☐ All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W 08 SAFs into one SDG, not to exceed SDG closure of 14 days. WSCF: Batch all GW samples submitted into one SDG, daily closure. FY07 and FY08 samples cannot be in the same SDG.		

[illegible]

Relinquished By	Print Roy Sickle	Sign <i>[Signature]</i>	Date/Time 1500	Received By <i>[Signature]</i>	Print LILANE TAL-R	Sign	Date/Time 1500	Matrix * S = Soil DS = Drum Solid SE = Sediment DL = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other	
Relinquished By			Date/Time 1 JAN 16 2000	Received By			Date/Time		
Relinquished By			Date/Time	Received By			Date/Time		
Relinquished By			Date/Time	Received By			Date/Time		
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)						Disposed By	Date/Time

FLUOR HANFORD		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C. # A08-012-56	
J8A160299 W05315 Due 2-29-08 KFM22				Page 1 of 1	
Collector Roy Sickle	Contact/Requester Steve Trent	Telephone No. 509-373-5869	MSIN	FAX	
SAF No. A08-012	Sampling Origin Hanford Site	Purchase Order/Charge Code			
Project Title LLWMA(1)-PA, DECEMBER 2007	HNF-N-506-11	Ice Chest No.	Temp.		
Shipped To (Lab) TestAmerica Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.			
Protocol Other	Priority: 45 Days	Offsite Property No.			
POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)		SPECIAL INSTRUCTIONS Hold Time All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W 08 SAFs into one SDG, not to exceed SDG closure of 14 days. WSCF: Batch all GW samples submitted into one SDG, daily closure. FY07 and FY08 samples cannot be in the same SDG.			
		Total Activity Exemption: Yes ☒ No ☐			

[illegible]

Relinquished By	Print	Signature	Date/Time	Received By	Print	Signature	Date/Time	Matrix * S = Soil DS = Drum Solid SE = Sediment DI = Drum Lioni SO = Solid T = Tissue SL = Sludge WL = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other	
Relinquished By			1-16-08 1500	Received By			1-16-08 1500		
Relinquished By				Received By					
Relinquished By				Received By					
Relinquished By				Received By					
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)						Disposed By	Date/Time

Sample Check-in List

DUE 2-29-08

Date/Time Received: 1-16-08 1500

Client: PGW SDG #: W05315 NA [] SAF #: A08-012 NA []

Work Order Number: JSA160299 Chain of Custody # A08-012-47-55-56

Shipping Container ID: _____ Air Bill # _____

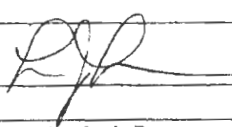
1. Custody Seals on shipping container intact? NA [] Yes ☒ No []
2. Custody Seals dated and signed? NA [] Yes ☒ No []
3. Chain of Custody record present? NA [] Yes ☒ No []
4. Cooler Temperature: _____ NA ☒ 5. Vermiculite/packing materials is NA ☒ Wet [] Dry []
6. Number of samples in shipping container: 3
7. Sample holding times exceeded? NA ☒ Yes [] No []
8. Samples have:

_____ Tape
☒ Custody Seals

_____ Hazard Labels
☒ Appropriate Sample Labels
9. Samples are:

☒ In Good Condition
 _____ Broken

_____ Leaking
 _____ Have Air Bubbles
 (Only for samples requiring no head space.)
10. Sample pH taken? NA [] pH < 2 [] pH > 2 ☒ pH > 9 []
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [] No ☒
13. Description of anomalies (include sample numbers): _____

Sample Custodian:  Date: 1-16-08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____

2/4/2008 2:00:38 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National Lab7Y Uiso PrpRC5016/5086, SepRC5067(5039)
SR Uranium-234,235,238 by Alpha Spec

Pipet #:

AnalyDueDate: 03/03/2008 **W0535**

5I CLIENT: HANFORD

Sep1 DT/Tm Tech:

Batch: 8023501 WATER pCi/L

PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: HarrisD

Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 KFQM3-1-AG			200.20g.in	200.20g	UITS19473	200				
J8A180129-1-SAMP					02 04 08.pd 06 15 01.r					
01/16/2008 13:52			AmtRec: VIAL20.8XLP.3X4LP	#Containers: 12				Scr: Alpha: 9.79E-04 uCi Sa	Beta: 1.38E-03 uCi Sa	
2 KFQM3-1-AH-X			200.20g.in	200.20g	UITS19474					
J8A180129-1-DUP					02 04 08.pd 06 15 01.r					
01/16/2008 13:52			AmtRec: VIAL20.8XLP.3X4LP	#Containers: 12				Scr: Alpha: 9.79E-04 uCi Sa	Beta: 1.38E-03 uCi Sa	
3 KFQTF-1-AG			200.10g.in	200.10g	UITS19475					
J8A180145-1-SAMP					02 04 08.pd 06 15 01.r					
01/17/2008 10:03			AmtRec: VIAL20.8XLP.3X4LP	#Containers: 12				Scr: Alpha: 3.42E-03 uCi Sa	Beta: 1.16E-03 uCi Sa	
4 KFIM1-1-AA-B			200.30g.in	200.30g	UITS19476					
J8A230000-501-BLK					02 04 08.pd 06 15 01.r					
01/16/2008 13:52			AmtRec:	#Containers: 1				Scr: Alpha	Beta:	
5 KFIM1-1-AC-C			200.30g.in	200.30g	UISG1565					
J8A230000-501-LCS					12 11 07.pd 05 05 87.r					
01/16/2008 13:52			AmtRec:	#Containers: 1				Scr: Alpha	Beta:	

Comments:

PHL20. RDL 2/4/08

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, SS , 57671

KFQM31AG-SAMP Constituent List:

U-232 RDL: pCi/L LCL:20 UCL:105 RPD:20 U-234 RDL:1.00E+00 pCi/L LCL: UCL: RPD:

TAL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1

ISV - Insufficient Volume for Analysis

WO Cnt: 5

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

Prep, SamplePrep v4 8.32

2/4/2008 2:00:40 PM

Sample Preparation/Analysis

Balance Id:1120482733

7Y Uiso PrpRC5016/5086, SepRC5067(5039)

Pipet #:

SR Uranium-234,235,238 by Alpha Spec

5I CLIENT: HANFORD

AnalyDueDate: 03/03/2008

Sep1 DT/Tm Tech:

Batch: 8023501

pCi/L

Sep2 DT/Tm Tech:

SEO Batch, Test: None

Prep Tech: ,HarrisD



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:	
U-235	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:	U-238	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:
KF1M11AA-BLK:											
U-232	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	U-234	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:
U-235	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:	U-238	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:
KF1M11AC-LCS:											
U-232	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Uranium	RDL:	pCi/L	LCL:70	UCL:130	RPD:20
KFQM31AG-SAMP Calc Info:											
Uncert Level (#s): 2		Decay to SaDt: Y		Blk Subt.: N	Sci.Not.: Y	ODRs: B					
KF1M11AA-BLK:											
Uncert Level (#s): 2		Decay to SaDt: Y		Blk Subt.: N	Sci.Not.: Y	ODRs: B					
KF1M11AC-LCS:											
Uncert Level (#s): 2		Decay to SaDt: Y		Blk Subt.: N	Sci.Not.: Y	ODRs: B					

Approved By

Date:

3/5/2008 11:10:51 AM

ICOC Fraction Transfer/Status Report

ByDate: 3/6/2007, 3/10/2008, Batch: '8023501', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
8023501				
AC	Rev1C	HarrisD	2/4/2008 1:54:52 PM	
SC		wagarr	IsBatched	1/23/2008 3:31:20 PM
SC		HarrisD	InPrep	2/4/2008 1:54:52 PM
SC		HarrisD	Prep1C	2/4/2008 2:00:44 PM
SC		AshworthA	Prep2C	2/25/2008 12:55:40 PM
SC		AshworthA	Sep1C	2/27/2008 2:22:44 PM
SC		AshworthA	Sep2C	2/28/2008 1:10:20 PM
SC		ClarkR	InCnt1	2/28/2008 1:51:20 PM
SC		DAWKINSO	CalcC	2/28/2008 9:12:26 PM
SC		nortonj	Rev1C	3/5/2008 11:10:39 AM
AC		HarrisD	2/4/2008 2:00:44 PM	
AC		AshworthA	2/25/2008 12:55:40	
AC		AshworthA	2/27/2008 2:22:44 PM	
AC		AshworthA	2/28/2008 1:10:20 PM	
AC		ClarkR	2/28/2008 1:51:20 PM	
AC		DAWKINSO	2/28/2008 9:12:26 PM	
AC		nortonj	3/5/2008 11:10:39	

AC: Accepting Entry; SC: Status Change

TAL Richland

Richland Wa.

Page 1

Grp Rec Cnt: 8

ICOCFractions v4.8.32

STL RICHLAND

2/5/2008 9:24:42 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National Lab

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

Pipet #: 245

AnalyDueDate: 03/03/2008 '1005315

Sep1 DT/Tm Tech:

Batch: 8023482 WATER pCi/L

PM, Quote: SA, 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: HarrisD Bocky.

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 KFXE-1-AA J8A140154-1-SAMP 01/14/2008 10:42 AmtRec: VIAL20.LP #Containers: 2	172.40g.in			1.5	4.5	100	10A	2226	2/7/08	
2 KFXG-1-AA J8A140154-2-SAMP 01/14/2008 11:57 AmtRec: VIAL20.LP #Containers: 2	200.10g.in			39.5			10B			
3 KFM13-1-AA J8A160296-1-SAMP 01/16/2008 09:13 AmtRec: VIAL20.LP, 2X4LP #Containers: 4	147.00g.in			33.5		100	10F	1723	2/7/08	
4 KFM18-1-AA J8A160296-2-SAMP 01/16/2008 09:55 AmtRec: VIAL20.LP, 2X4LP #Containers: 4	138.70g.in			35.0			10A	1925	2/7/08	
5 KFQPF-1-AA J8A180137-1-SAMP 01/17/2008 11:55 AmtRec: VIAL20.LP #Containers: 2	185.20g.in			35.0		100	10C	2226		
6 KFQPG-1-AA J8A180137-2-SAMP 01/17/2008 10:23 AmtRec: VIAL20.LP #Containers: 2	147.10g.in			30.6		100		1925		
7 KFQQ5-1-AA J8A180140-1-SAMP 01/17/2008 11:17 AmtRec: VIAL20.LP #Containers: 2	131.50g.in			26.2			10C			

2/5/2008 9:24.44 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National LabAZ Gross Alpha PrpRC5014
S7 Gross Alpha by GPC using Am-241 curve
SI CLIENT: HANFORD

Pipet #:

AnalyDueDate: 03/03/2008

Sep1 DT/Tm Tech:

Batch: 8023482 WATER pCi/L
SEQ Batch, Test: None

PM, Quote: SS, 57671

Sep2 DT/Tm Tech:

Prep 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:
8 KFQQ5-1-AD-X	131.60g.in			1.5		100	10D	1025		2/7/0800
J8A180140-1-DUP				27.5						
01/17/2008 11:17		AmtRec: VIAL20.LP	#Containers: 2				Scr:	Alpha: 1.05E-04 uCi/Sa	Beta: 5.80E-05 uCi/Sa	
9 KFQRJ-1-AA	142.80g.in			32.6			10E			
J8A180140-2-SAMP										
01/17/2008 10:03		AmtRec: VIAL20.LP	#Containers: 2				Scr:	Alpha: -3.80E-05 uCi/Sa	Beta: 6.86E-05 uCi/Sa	
10 KFQTV-1-AA	166.60g.in			24.7	50		10F	2033		2/7/0800
J8A180148-1-SAMP										
01/17/2008 13:03		AmtRec: VIAL20.LP	#Containers: 2				Scr:	Alpha: -1.79E-04 uCi/Sa	Beta: 1.23E-04 uCi/Sa	
11 KF1KE-1-AA-B	200.10g.in			0.5		100	10F	1025		
J8A230000-482-BLK										
01/17/2008 11:17		AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:	
12 KF1KE-1-AC-C	200.00g.in		ASD4402	0.9			10D	2220		
J8A230000-482-LCS			01.09.08.pd							
01/17/2008 11:17		AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:	

Comments:

PH L.O. Aliquot reduced due to weight screens. Mth 2/5/08

KFHXE1AA, KFHXG1AA/KFQPF1AA were counted for 100 minutes to fill QUAD10. 2/7/0800

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, SA, 57671

KFHXE1AA-SAMP Constituent List:

ALPHA RDL:3 pCi/L LCL: UCL: RPD:

TAL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt. s1 - Sep1, s2 - Sep2 Page 2

ISV - Insufficient Volume for Analysis

WO Cnt: 12

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

Prep_SamplePrep v4.8.32

STL RICHLAND

2/5/2008 9:24:45 AM

Sample Preparation/Analysis

Balance Id:1120482733

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

Pipet #:

AnalyDueDate: 03/03/2008

Sep1 DT/Tm Tech:

Batch: 8023482

pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: HarrisD

Work Order, Lot, Sample Date/Time	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:
--------------------------------------	-------------------	-----------------------------	------------------------	--------------	--------------------	-------------------	----------------	---------------------------------	--------------------------	-----------

KF1KE1AA-BLK:

ALPHA RDL:3

pCi/L

LCL:

UCL:

RPD:

KF1KE1AC-LCS:

Am-241 RDL:

pCi/L

LCL:70

UCL:130

RPD:20

KFHXE1AA-SAMP Calc Info:

Uncert Level (#s): 2

Decay to SaDt: Y

Blk Subt.: N

Sci.Not.: Y

ODRs: B

KF1KE1AA-BLK:

Uncert Level (#s): 2

Decay to SaDt: Y

Blk Subt.: N

Sci.Not.: Y

ODRs: B

KF1KE1AC-LCS:

Uncert Level (#s): 2

Decay to SaDt: Y

Blk Subt.: N

Sci.Not.: Y

ODRs: B

Approved By

Date:

95

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

Page 3

ISV - Insufficient Volume for Analysis

WO Cnt: 12

Prep. SamplePrep v4 8 32

2/12/2008 11:23:11 AM

ICOC Fraction Transfer/Status Report

ByDate: 2/12/2007, 2/17/2008, Batch: '8023482', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
8023482				
AC	Rev1C	HarrisD	2/5/2008 9:14:18 AM	
SC		wagarr	IsBatched 1/23/2008 3:31:20 PM	ICOC_RADCALC v4.8.32
SC		HarrisD	InPrep 2/5/2008 9:14:18 AM	RICH-RC-5014 Revision 7
SC		HarrisD	Prep1C 2/5/2008 9:24:46 AM	RICH-RC-5014 REVISION 7
SC		BockJ	InPrep2 2/7/2008 7:38:22 AM	RICH-RC-5014 REVISION 7
SC		BockJ	Prep2C 2/7/2008 3:18:41 PM	RICH-RC-5014 REVISION 7
SC		ClarkR	InCnt1 2/7/2008 3:29:08 PM	RICH-RD-0003 REVISION 5
SC		BlackCL	CalcC 2/8/2008 7:26:02 AM	RICH-RD-0003 REVISION 5
SC		BlackCL	InCnt1 2/11/2008 8:06:41 AM	RICH-RD-0003 REVISION 5
SC		ClarkR	CalcC 2/11/2008 1:12:22 PM	RICH-RD-0003 REVISION 5
SC		nortonj	Rev1C 2/12/2008 11:22:57 AM	RICH-RC-0002 REV 8
AC		HarrisD	2/5/2008 9:24:46 AM	
AC		BockJ	2/7/2008 7:38:22 AM	
AC		BockJ	2/7/2008 3:18:41 PM	
AC		ClarkR	2/7/2008 3:29:08 PM	
AC		BlackCL	2/8/2008 7:26:02 AM	
AC		BlackCL	2/11/2008 8:06:41	
AC		ClarkR	2/11/2008 1:12:22 PM	
AC		nortonj	2/12/2008 11:22:57	

AC: Accepting Entry; SC: Status Change

TAL Richland

Richland Wa.

Page 1

Grp Rec Cnt: 9

ICOCFractions v4.8.32

STL RICHLAND

2/5/2008 9:51:50 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National LabBC Gross Beta PrpRC5014
S8 Gross Beta by GPC using Sr/Y-90 curve
5I CLIENT: HANFORD

Pipet #: 245

AnalyDueDate: 03/03/2008 00535

Sep1 DT/Tm Tech:

Batch: 8023495 WATER pCi/L

PM, Quote: SA, 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: HarrisD / Doc 3.

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst Init/Date	Comments:
1 KFHXE-1-AC	200.00g.in			1.5	100	32A	1743	2/7/08 OK		
J8A140154-1-SAMP					80.6					
01/14/2008 10:42		AmtRec: VIAL20.LP	#Containers: 2				Scr:	Alpha: -3.86E-05 uCi/Sa	Beta: 4.96E-04 uCi/Sa	
2 KFHGX-1-AC	200.10g.in					32B				
J8A140154-2-SAMP					68.2					
01/14/2008 11:57		AmtRec: VIAL20.LP	#Containers: 2				Scr:	Alpha: 3.41E-05 uCi/Sa	Beta: 4.52E-04 uCi/Sa	
3 KFKKV-1-AA	200.30g.in					32C				
J8A150246-1-SAMP					65.4					
01/15/2008 08:15		AmtRec: VIAL20.LP	#Containers: 2				Scr:	Alpha: 6.80E-05 uCi/Sa	Beta: 4.09E-04 uCi/Sa	
4 KFKLC-1-AA	200.00g.in					32D				
J8A150246-2-SAMP					23.7					
01/15/2008 08:40		AmtRec: VIAL20.LP	#Containers: 2				Scr:	Alpha: 7.80E-05 uCi/Sa	Beta: -3.23E-05 uCi/Sa	
5 KFKLN-1-AA	200.10g.in					32A	1926			
J8A150246-3-SAMP					45.2					
01/15/2008 09:00		AmtRec: VIAL20.LP	#Containers: 2				Scr:	Alpha: 8.41E-05 uCi/Sa	Beta: 3.12E-04 uCi/Sa	
6 KFKL2-1-AA	200.30g.in					32B				
J8A150246-4-SAMP					27.2					
01/15/2008 10:20		AmtRec: VIAL20.LP	#Containers: 2				Scr:	Alpha: 2.94E-04 uCi/Sa	Beta: 4.63E-04 uCi/Sa	
7 KFM13-1-AC	200.40g.in					32C				
J8A160296-1-SAMP					56.4					
01/16/2008 09:13		AmtRec: VIAL20.LP, 2X4LP	#Containers: 4				Scr:	Alpha: -1.12E-03 uCi/Sa	Beta: 1.11E-03 uCi/Sa	

2/5/2008 9:51:52 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National LabBC Gross Beta PrpRC5014
S8 Gross Beta by GPC using Sr/Y-90 curve
5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 03/03/2008

Sep1 DT/Tm Tech:

Batch: 8023495 WATER pCi/L
SEQ Batch, Test: None

PM, Quote: SS, 57671

Sep2 DT/Tm Tech:

Prep Tech: HarrisD

Work Order, Lot, Sample Date/Time	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:
8 KFM18-1-AC J8A160296-2-SAMP 01/16/2008 09:55	200.20g.in			1.5		100	32D	1926	2/7/08 020	
AmtRec: VIAL20.LP.2X4LP #Containers: 4 Scr: Alpha: -4.33E-04 uCi/Sa Beta: 1.11E-03 uCi/Sa										
9 KFQPF-1-AC J8A180137-1-SAMP 01/17/2008 11:55	200.10g.in			79.3			26B	1943		
AmtRec: VIAL20.LP #Containers: 2 Scr: Alpha: -2.16E-04 uCi/Sa Beta: 3.30E-04 uCi/Sa										
10 KFQPG-1-AC J8A180137-2-SAMP 01/17/2008 10:23	200.00g.in			78.0			26B	2708		
AmtRec: VIAL20.LP #Containers: 2 Scr: Alpha: -2.00E-05 uCi/Sa Beta: -2.90E-05 uCi/Sa										
11 KFQPG-1-AD-X J8A180137-2-DUP 01/17/2008 10:23	200.40g.in			76.5			26D	6		
AmtRec: VIAL20.LP #Containers: 2 Scr: Alpha: -2.00E-05 uCi/Sa Beta: -2.90E-05 uCi/Sa										
12 KFQO5-1-AC J8A180140-1-SAMP 01/17/2008 11:17	199.90g.in			79.8			27D	1942		
AmtRec: VIAL20.LP #Containers: 2 Scr: Alpha: 1.05E-04 uCi/Sa Beta: 5.80E-05 uCi/Sa										
13 KFQRJ-1-AC J8A180140-2-SAMP 01/17/2008 10:03	200.10g.in			88.4			27C			
AmtRec: VIAL20.LP #Containers: 2 Scr: Alpha: -3.80E-05 uCi/Sa Beta: 6.88E-05 uCi/Sa										
14 KF1K2-1-AA-B J8A230000-495-BLK 01/17/2008 10:23	200.00g.in			0.1			27B			
AmtRec: #Containers: 1 Scr: Alpha: Beta:										

2/5/2008 9:51:53 AM

Sample Preparation/Analysis

Balance Id:1120482733

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

Pipet #:

AnalyDueDate: 03/03/2008

Sep1 DT/Tm Tech:

Batch: 8023495
SEQ Batch, Test: None

pCi/L

Sep2 DT/Tm Tech:

Prep Tech: ,HarrisD

Work Order, Lot, Sample Date/Time	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:
15KF1K2-1-AC-C		200.20g.in	BESB3209	1.5		100	27A	1942	2/7/08	
J8A230000-495-LCS			12/24/07.pd		0.6					
01/17/2008 10:23		AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:	

Comments:

PHLOD. Out 8/5/08

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, SA, 57671

KFHXE1AC-SAMP Constituent List:

BETA	RDL:4	pCi/L	LCL:	UCL:	RPD:
KF1K21AA-BLK:					
BETA	RDL:4	pCi/L	LCL:	UCL:	RPD:
KF1K21AC-LCS:					
Sr-90	RDL:	pCi/L	LCL:70	UCL:130	RPD:20

KFHXE1AC-SAMP Calc Info:

Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
KF1K21AA-BLK:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
KF1K21AC-LCS:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

Approved By

Date:

2/8/2008 1:18:54 PM

ICOC Fraction Transfer/Status Report

ByDate: 2/8/2007, 2/13/2008, Batch: '8023495', User: 'ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
8023495				
AC	Rev1C	HarrisD	2/5/2008 9:42:34 AM	
SC		wagarr	IsBatched 1/23/2008 3:31:20 PM	ICOC RADCALC v4.8.32
SC		HarrisD	InPrep 2/5/2008 9:42:34 AM	RICH-RC-5014 Revision 7
SC		HarrisD	Prep1C 2/5/2008 9:51:54 AM	RICH-RC-5014 REVISION 7
SC		BockJ	InPrep2 2/7/2008 7:38:28 AM	RICH-RC-5014 REVISION 7
SC		BockJ	Prep2C 2/7/2008 3:19:04 PM	RICH-RC-5014 REVISION 7
SC		ClarkR	InCnt: 2/7/2008 3:25:19 PM	RICH-RD-0003 REVISION 5
SC		DAWKINSO	CalcC 2/7/2008 9:16:25 PM	RICH-RD-0003 REVISION 5
SC		antonsonl	Rev1C 2/8/2008 1:18:45 PM	RICH-RC-0002 REV 8
AC		HarrisD	2/5/2008 9:51:54 AM	
AC		BockJ	2/7/2008 7:38:28 AM	
AC		BockJ	2/7/2008 3:19:04 PM	
AC		ClarkR	2/7/2008 3:25:19 PM	
AC		DAWKINSO	2/7/2008 9:16:25 PM	
AC		antonsonl	2/8/2008 1:18:45 PM	

AC: Accepting Entry; SC: Status Change

TAL Richland

Richland Wa.

Page 1

Grp Rec Cnt: 7

ICOCFractions v4.8.32

STL RICHLAND

2/26/2008 1:06:12 PM

Sample Preparation/Analysis

Balance Id:1120482733,1120482733,1120

384868, Pacific Northwest National Laboratory
Pacific Northwest National LabCL Sr-90 Prp/SepRC5006(5071)
TL Sr-85 by Nai and Sr-90 by GPC 7 day ingrowth
SI CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 03/03/2008

Sep1 DT/Tm Tech: 02/19/2008 16:44,ManisD

Batch: 8023500 WATER pCi/L PM, Quote: SS, 57671
SEQ Batch, Test: None All Tests: 8023497 AWTB, 8023498 BNTB, 8023500 CLTL, 8023501 7YSR, 8023504 5SS3, 8023505 CYTM,
8056434 CYTM,

Sep2 DT/Tm Tech:

Prep Tech: ManisD

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 KFQM3-1-AF J8A180129-1-SAMP 12/19/07.pd 05/22/07	1000.30g.in	SRTB15814	12/19/07.pd 05/22/07		1.0	23.5	100	3D	0742	ManisD	
02/19/2008 16:44:st											
01/16/2008 13:52	AmtRec: VIAL20.8XLP,3X4LP		#Containers: 12		Scr: Alpha: 9.79E-04 uCi/Sa		Beta: 1.38E-03 uCi/Sa				
2 KFQTF-1-AF J8A180145-1-SAMP 12/19/07.pd 05/22/07	1000.40g.in	SRTB15815	12/19/07.pd 05/22/07		1.0	23.1	100	4A	0742	ManisD	
02/19/2008 16:44:st											
01/17/2008 10:03	AmtRec: VIAL20.8XLP,3X4LP		#Containers: 12		Scr: Alpha: 3.42E-03 uCi/Sa		Beta: 1.16E-03 uCi/Sa				
3 KFQTF-1-AJ-X J8A180145-1-DUP 12/19/07.pd 05/22/07	1000.20g.in	SRTB15816	12/19/07.pd 05/22/07		1.0	22.7	100	43	0742	ManisD	
02/19/2008 16:44:st											
01/17/2008 10:03	AmtRec: VIAL20.8XLP,3X4LP		#Containers: 12		Scr: Alpha: 3.42E-03 uCi/Sa		Beta: 1.16E-03 uCi/Sa				
4 KF1MT-1-AA-B J8A230000-500-BLK 12/19/07.pd 05/22/07	1000.30g.in	SRTB15817	12/19/07.pd 05/22/07		1.0	23.2	100	4C	0742	ManisD	
02/19/2008 16:44:st											
01/17/2008 10:03	AmtRec:		#Containers: 1		Scr:		Alpha:		Beta:		

101

2/26/2008 1:06:13 PM

Sample Preparation/Analysis

Balance Id:1120482733,1120482733,1120

CL Sr-90 Prp/SepRC5006(5071)

TL Sr-85 by NaI and Sr-90 by GPC 7 day ingrowth

SI CLIENT: HANFORD

Pipet #:

AnalyDueDate: 03/03/2008

Sep1 DT/Tm Tech: 02/19/2008 16:44,ManisD

Batch: 8023500

pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ManisD

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
5 KF1MT-1-AC-C		1000.40g.in	SRS61446		1.0	21.6	100				
J8A230000-500-LCS			02/06/08.pd								
02/19/2008 16:44:51											
01/17/2008 10:03		AmtRec:	#Containers: 1					Scr:	Alpha:		Beta:

Comments:

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, SS, 57671

KFQM31AF-SAMP Constituent List:

Sr-85	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Sr-90	RDL:2	pCi/L	LCL:70	UCL:130	RPD:20
KF1MT1AA-BLK:											
Sr-85	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Sr-90	RDL:2	pCi/L	LCL:	UCL:	RPD:
KF1MT1AC-LCS:											
Sr-85	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Sr-90	RDL:2	pCi/L	LCL:70	UCL:130	RPD:20

KFQM31AF-SAMP Calc Info:

Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
KF1MT1AA-BLK:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
KF1MT1AC-LCS:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

Approved By

Date:

2/28/2008 2:20:52 PM

ICOC Fraction Transfer/Status Report

ByDate: 2/28/2007, 3/4/2008, Batch: '8023500', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
8023500				
AC	Rev1C	HarrisD	2/18/2008 8:57:34	
SC		wagarr	IsBatched	1/23/2008 3:31:20 PM
SC		HarrisD	InPrep	2/18/2008 8:57:34 AM
SC		HarrisD	Prep1C	2/18/2008 9:03:42 AM
SC		ManisD	InSep1	2/18/2008 9:56:02 AM
SC		ManisD	Sep1C	2/19/2008 4:10:20 PM
SC		ManisD	Sep1C	2/19/2008 5:06:50 PM
SC		BlackCL	InCnt1	2/20/2008 4:35:53 AM
SC		BlackCL	Cnt1C	2/20/2008 10:16:42 AM
SC		ManisD	InSep2	2/21/2008 2:31:49 PM
SC		ManisD	Sep2C	2/26/2008 1:10:30 PM
SC		DAWKINSO	InCnt2	2/26/2008 4:49:29 PM
SC		BlackCL	CalcC	2/28/2008 7:12:54 AM
SC		nortonj	Rev1C	2/28/2008 2:20:41 PM
AC		HarrisD	2/18/2008 9:03:42	
AC		ManisD	2/18/2008 9:56:02	
AC		ManisD	2/19/2008 4:10:20 PM	
AC		ManisD	2/19/2008 5:06:50 PM	
AC		BlackCL	2/20/2008 4:35:53	
AC		BlackCL	2/20/2008 10:16:42	
AC		ManisD	2/21/2008 2:31:49 PM	
AC		ManisD	2/26/2008 1:10:30 PM	
AC		DAWKINSO	2/26/2008 4:49:29 PM	REVISION 5
AC		BlackCL	2/28/2008 7:12:54	
AC		nortonj	2/28/2008 2:20:41 PM	

AC: Accepting Entry; SC: Status Change

TAL Richland

Richland Wa.

Page 1

Grp Rec Cnt: 12

ICOCFractions v4.8.32

STL RICHLAND

2/5/2008 9:11:57 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National Lab

AW Gamma PrpRC5017

TA Gamma by HPGE

SI CLIENT: HANFORD

Pipet #:

AnalyDueDate: 03/03/2008 W05315

Sep1 DT/Tm Tech:

Batch: 8023497 WATER pCi/L

PM, Quote: SS, 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: 8023497 AWTa, 8023498 BNTB, 8023500 CLTL, 8023501 7YSR, 8023504 5SS3, 8023505 CYTM,

Prep Tech: HarrisD/Bar 8

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst Init/Date	Comments:
1 KFQM3-1-AC	2000.20g.in									
J8A180129-1-SAMP										
01/16/2008 13:52		AmtRec: VIAL20.8XLP,3X4LP	#Containers: 12					Scr: Alpha: 9.79E-04 uCi Sa	Beta: 1.38E-03 uCi Sa	
2 KFQTF-1-AC	2000.10g.in									
J8A180145-1-SAMP										
01/17/2008 10:03		AmtRec: VIAL20.8XLP,3X4LP	#Containers: 12					Scr: Alpha: 3.42E-03 uCi Sa	Beta: 1.16E-03 uCi Sa	
3 KFQTF-1-AH-X										
J8A180145-1-DUP										
01/17/2008 10:03		AmtRec: VIAL20.8XLP,3X4LP	#Containers: 12					Scr: Alpha: 3.42E-03 uCi Sa	Beta: 1.16E-03 uCi Sa	
4 KF1LD-1-AA-B	2000.10g.in									
J8A230000-497-BLK										
01/17/2008 10:03		AmtRec:	#Containers: 1					Scr: Alpha:	Beta:	
5 KF1LD-1-AC-C	2000.10g.in									
J8A230000-497-LCS										
01/17/2008 10:03		AmtRec:	#Containers: 1					Scr: Alpha:	Beta:	

Comments:

PH 20. ISV for dup please recount on different detector. RAH 2/5/08

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, SS, 57671

KFQM31AC-SAMP Constituent List:

Co-60 RDL:0.00E+00 pCi/L LCL: UCL: RPD: Cs-134 RDL:0.00E+00 pCi/L LCL: UCL: RPD:

TAL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1

ISV - Insufficient Volume for Analysis

WO Cnt: 5

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

Prep, SamplePrep v4.8.32

104

2/5/2008 9:12:00 AM

Sample Preparation/Analysis

Balance Id:1120482733

AW Gamma PrpRC5017

Pipet #:

TA Gamma by HPGE

5I CLIENT: HANFORD

AnalyDueDate: 03/03/2008

Sep1 DT/Tm Tech:

Batch: 8023497

pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: HarrisD

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst. Init/Date	Comments:	
Cs-137	RDL:6.00E+00	pCi/L	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:6.00E+00	pCi/L	LCL:70	UCL:130	RPD:20
Eu-154	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Eu-155	RDL:.00E+00	pCi/L	LCL:	UCL:	RPD:
K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Sb-125	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
KFILD1AA-BLK:											
Co-60	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
Cs-137	RDL:6.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-137DA	RDL:6.00E+00	pCi/L	LCL:	UCL:	RPD:
Eu-154	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Eu-155	RDL:.00E+00	pCi/L	LCL:	UCL:	RPD:
K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Sb-125	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
KFILD1AC-LCS:											
Cs-137	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20
K-40	RDL:6	pCi/L	LCL:70	UCL:130	RPD:20	Ra-226	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20
RA-228	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20	RA-228DA	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20
U-238	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20						
KFQM31AC-SAMP Calc Info:											
Uncert Level (#s): 2		Decay to SaDt: Y		Blk Subt.: N		Sci.Not.: Y		ODRs: B			
KFILD1AA-BLK:											
Uncert Level (#s): 2		Decay to SaDt: Y		Blk Subt.: N		Sci.Not.: Y		ODRs: B			
KFILD1AC-LCS:											
Uncert Level (#s): 2		Decay to SaDt: Y		Blk Subt.: N		Sci.Not.: Y		ODRs: B			

Approved By

Date:

2/18/2008 2:14:44 PM

ICOC Fraction Transfer/Status Report

ByDate: 2/18/2007, 2/23/2008, Batch: '8023497', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
---------	----------	-----------	-----------	----------

8023497

AC	Rev1C	HarrisD	2/5/2008 9:03:35 AM	
SC		wagarr	IsBatched	1/23/2008 3:31:20 PM
SC		HarrisD	InPrep	2/5/2008 9:03:35 AM
SC		HarrisD	Prep1C	2/5/2008 9:12:04 AM
SC		BockJ	InPrep2	2/12/2008 11:19:25 AM
SC		BlackCL	InCnt1	2/13/2008 2:23:09 PM
SC		BockJ	Prep2C	2/13/2008 2:23:12 PM
SC		DAWKINSO	CalcC	2/13/2008 10:07:35 PM
SC		antonsonl	Rev1C	2/18/2008 2:12:47 PM
AC		HarrisD		2/5/2008 9:12:04 AM
AC		BockJ		2/12/2008 11:19:25
AC		BlackCL		2/13/2008 2:23:09 PM
AC		BockJ		2/13/2008 2:23:12 PM
AC		DAWKINSO		2/13/2008 10:07:35
AC		antonsonl		2/18/2008 2:12:47 PM

ICOC_RADCALC v4.8.32

RICH-RC-5017 Revision 6

RICH-RC-5017 REVISION 6

RICH-RC-5017 REVISION 6

RICH-RD-0007 REVISION 6

RICH-RC-5017 REVISION 6

RICH-RD-0007 REVISION 6

RICH-RC-0002 REV 8

AC: Accepting Entry; SC: Status Change

TAL Richland

Richland Wa.

Page 1

Grp Rec Cnt: 7

ICOCFractions v4.8.32

2/19/2008 12:00:45 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National Lab

BN I-129 Prp/SepRC5025

TB Gamma by LEPD

51 CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 03/03/2008 **005315**

Sep1 DT/Tm Tech:

Batch: 8023498 WATER pCi/L

PM, Quote: SA, 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep 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:
1 KFH60-1-AA		4000.10g.in	ITA6996							
J8A140171-1-SAMP			02/07/08							
01/14/2008 12:54		AmtRec: VIAL20.2X4LP	#Containers: 3							
2 KFM13-1-AD		3996.90g.in	ITA6997							
J8A160296-1-SAMP			02/07/08							
01/16/2008 09:13		AmtRec: VIAL20.LP.2X4LP	#Containers: 4							
3 KFM18-1-AD		4000.40g.in	ITA6998							
J8A160296-2-SAMP			02/07/08							
01/16/2008 09:55		AmtRec: VIAL20.LP.2X4LP	#Containers: 4							
4 KFM2N-1-AA		3816.80g.in	ITA6999							
J8A160299-1-SAMP			02/07/08							
01/16/2008 10:44		AmtRec: VIAL20.2X4LP	#Containers: 3							
5 KFM2N-1-AC-X		3762.70g.in	ITA7000							
J8A160299-1-DUP			02/07/08							
01/16/2008 10:44		AmtRec: VIAL20.2X4LP	#Containers: 3							
6 KFM2V-1-AA		4000.40g.in	ITA7001							
J8A160299-2-SAMP			02/07/08							
01/16/2008 11:48		AmtRec: VIAL20.2X4LP	#Containers: 3							
7 KFM22-1-AA		3984.30g.in	ITA7002							
J8A160299-3-SAMP			02/07/08							
01/16/2008 11:48		AmtRec: VIAL20.2X4LP	#Containers: 3							

2/19/2008 12:00:47 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National Lab

BN I-129 Prp/SepRC5025

TB Gamma by LEPD

5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 03/03/2008

Sep1 DT/Tm Tech: _____

Batch: 8023498 WATER pCi/L

PM, Quote: SS, 57671

Sep2 DT/Tm Tech: _____

SEQ Batch, Test: None

Prep Tech: HarrisD

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppl or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst Init/Date	Comments:
8 KFQM3-1-AD J8A180129-1-SAMP 01/16/2008 13:52	3989.30g.in	ITA7003 02/07/08								
AmtRec: VIAL20.8XLP.3X4LP #Containers: 12				36.4	100	L4	1852	2/28/08		
							Scr:	Alpha: 9.79E-04 uCi/Sa	Beta: 1.38E-03 uCi/Sa	
9 KFQTF-1-AD J8A180145-1-SAMP 01/17/2008 10:03	3976.50g.in	ITA7004 02/07/08								
AmtRec: VIAL20.8XLP.3X4LP #Containers: 12				48.3			L5	1853		
							Scr:	Alpha: 3.42E-03 uCi/Sa	Beta: 1.16E-03 uCi/Sa	
10 KF1LG-1-AA-B J8A230000-498-BLK 01/16/2008 10:44	3999.90g.in	ITA7005 02/07/08								
AmtRec: #Containers: 1				32.9			L2	2039		
							Scr:	Alpha:	Beta:	
11 KF1LG-1-AC-C J8A230000-498-LCS 01/16/2008 10:44	4000.40g.in	ISD0815 02/07/08								
AmtRec: #Containers: 1				37.8			L4	2040		
							Scr:	Alpha:	Beta:	

Comments:

DUH 2/19/08
~~KFQ~~ DB 2-28-08
 KF1H60 was knocked over, after being run, but before step 11.9 (add 5mL of 0.1M AgNO₃ reagent to the beaker). Continued to run sample. DB 2-28-08

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, SA, 57671

KFH601AA-SAMP Constituent List:

I-129	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:
KF1LG1AA-BLK:					
I-129	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:
KF1LG1AC-LCS:					
I-129	RDL:5	pCi/L	LCL:70	UCL:130	RPD:20

KFH601AA-SAMP Calc Info:

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

TAL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2

ISV - Insufficient Volume for Analysis

WO Cnt: 11

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

Prep SamplePrep v4.8.32

2/19/2008 12:00:48 PM

Sample Preparation/Analysis

Balance Id:1120482733

BN I-129 Prp/SepRC5025

Pipet #:

TB Gamma by LEPD

Sep1 DT/Tm Tech:

AnalyDueDate: 03/03/2008

5I CLIENT: HANFORD

Batch: 8023498

pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,HarrisD

Work Order, Lot, Sample Date/Time	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:
--------------------------------------	-------------------	-----------------------------	------------------------	--------------	--------------------	-------------------	----------------	---------------------------------	-------------------------	-----------

KFILG1AA-BLK:

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

KFILG1AC-LCS:

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

Approved By

Date:

3/7/2008 2:29:07 PM

ICOC Fraction Transfer/Status Report

ByDate: 3/8/2007, 3/12/2008, Batch: '8023498', User: 'ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
8023498				
AC	Rev1C	HarrisD	2/19/2008 12:00:38	
SC		wagarr	IsBatched 1/23/2008 3:31:20 PM	ICOC_RADCALC v4.8.32
SC		HarrisD	InPrep 2/19/2008 12:00:38 PM	RICH-RC-5017 REVISION 6
SC		BostedD	InPrep2 2/20/2008 9:19:06 AM	RICHRC5025 REVISION 4
SC		BostedD	Prep2C 2/28/2008 12:53:36 PM	RICHRC5025 REVISION 4
SC		ClarkR	InCnt1 2/28/2008 12:58:14 PM	RICH-RD-0007 REVISION 6
SC		DAWKINSO	CalcC 2/28/2008 9:53:09 PM	RICH-RD-0007 REVISION 6
SC		nortonj	Rev1C 3/7/2008 2:28:57 PM	RICH-RC-0002 REV 8
AC		BostedD	2/20/2008 9:19:06	
AC		BostedD	2/28/2008 12:53:36	
AC		ClarkR	2/28/2008 12:58:14	
AC		DAWKINSO	2/28/2008 9:53:09 PM	
AC		nortonj	3/7/2008 2:28:57 PM	

AC: Accepting Entry, SC: Status Change

TAL Richland

Richland Wa.

Page 1

Grp Rec Cnt: 6

ICOCFractions v4.8.32



RE-ANALYSIS REQUEST

DUE DATE 33

CUSTOMER PGW

ANALYSIS Se 79

MATRIX H₂O

LOT NUMBER 78A180129

SAMPLE DELIVERY GROUP _____

OLD BATCH NUMBER 8023505

NEW BATCH NUMBER 8056434

LAB SAMPLE ID	CLIENT ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1) <u>ALL</u>	<u>384868</u>	<u>HIGH CARRIER YIELD</u>
2)		
3)		
4)		
5)		
6)		
7)		
8)		
9)		
10)		
11)		
12)		
13)		
14)		
15)		
16)		
17)		
18)		
19)		
20)		
LAB QC ID		Assigned with new batch.

RC-048, 12/07, Rev 8

STL RICHLAND

2/26/2008 10:32:25 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National LabCY Se-79 PrpRC5016, SepRC5043
TM Selenium-79 by Liquid Scint
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 03/03/2008

Sep1 DT/Tm Tech:

Batch: 8056434 WATER pCi/L
SEQ Batch, Test: None

PM, Quote: SS, 57671

Sep2 DT/Tm Tech:

Prep Tech: ManisD,BockJ

Work Order, Lot, Sample Date/Time	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:
1 KQFM3-1-AJ-X J8A180129-1-DUP 01/16/2008 13:52	201.50g.in	SETA0243 02/01/08			50				
		AmtRec: VIAL20.8XLP.3X4LP	#Containers: 12				Scr: Alpha: 9.79E-04 uCi/Sa	Beta: 1.38E-03 uCi/Sa	
2 KQFM3-2-AE J8A180129-1-SAMP 01/16/2008 13:52	203.30g.in	SETA0244 02/06/08							
		AmtRec: VIAL20.8XLP.3X4LP	#Containers: 12				Scr: Alpha: 9.79E-04 uCi/Sa	Beta: 1.38E-03 uCi/Sa	
3 KFQTF-2-AE J8A180145-1-SAMP 01/17/2008 10:03	198.60g.in	SETA0245 02/06/08							
		AmtRec: VIAL20.8XLP.3X4LP	#Containers: 12				Scr: Alpha: 3.42E-03 uCi/Sa	Beta: 1.16E-03 uCi/Sa	
4 KHLGK-1-AA-B J8B250000-434-BLK 01/16/2008 13:52	201.10g.in	SETA0246 02/06/08							
		AmtRec:	#Containers: 1				Scr: Alpha:	Beta:	
5 KHLGK-1-AD-B J8B250000-434-BLK 01/16/2008 13:52	200.20g.in	SETA0247 02/06/08							
		AmtRec:	#Containers: 1				Scr: Alpha:	Beta:	
6 KHLGK-1-AE-B J8B250000-434-BLK 01/16/2008 13:52									
		AmtRec:	#Containers: 1				Scr: Alpha:	Beta:	

112

2/26/2008 10:32:27 AM

Sample Preparation/Analysis

Balance Id:

CY Se-79 PrpRC5016, SepRC5043

Pipet #:

TM Selenium-79 by Liquid Scint

51 CLIENT: HANFORD

AnalyDueDate: 03/03/2008

Sep1 DT/Tm Tech:

Batch: 8056434

pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:



Work Order, Lot, Sample Date/Time	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:
--------------------------------------	-------------------	-----------------------------	------------------------	-----------------	-------------------	----------------	---------------------------------	--------------------------	-----------

Comments: PH < 20 3 2-26-08

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, SS, 57671

KFQM31AJ-DUP Constituent List:

KHLGK1AA-BLK:

KHLGK1AD-BLK:

KHLGK1AE-BLK:

KFQM31AJ-DUP Calc Info:

Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
KHLGK1AA-BLK:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
KHLGK1AD-BLK:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
KHLGK1AE-BLK:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

Approved By

Date:

3/12/2008 2:39:07 PM

ICOC Fraction Transfer/Status Report

ByDate: 3/13/2007, 3/17/2008, Batch: '8056434', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
8056434				
AC	Rev1C	BockJ	2/26/2008 10:20:34	
SC		nortonj	IsBatched	2/26/2008 7:17:16 AM
SC		BockJ	InPrep	2/26/2008 10:20:34 AM
SC		BockJ	Prep1C	2/26/2008 10:32:29 AM
SC		ManisD	Sep1C	2/29/2008 7:23:29 AM
SC		BlackCL	InCnt1	2/29/2008 7:52:18 AM
SC		antonsonl	Rev1C	3/12/2008 2:38:59 PM
AC		BockJ		2/26/2008 10:32:29
AC		ManisD		2/29/2008 7:23:29
AC		BlackCL		2/29/2008 7:52:18
AC		antonsonl		3/12/2008 2:38:59 PM

AC: Accepting Entry; SC: Status Change

TAL Richland

Richland Wa.

Page 1

Grp Rec Cnt: 5

ICOCFractions v4.8.32

STL RICHLAND

1/23/2008 3:28:41 PM

Sample Preparation/Analysis

Balance Id: *N/A*384868, Pacific Northwest National Laboratory
Pacific Northwest National Lab5S C-14 Prp/SepRC5022
S3 Carbon-14 by Liquid Scint
5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 03/03/2008

W05315

Sep1 DT/Tm Tech:

1-30-08 dm

Batch: 8023504

WATER

pCi/L

PM, Quote: SS, 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 KFQM3-1-AA								
J8A180129-1-SAMP								
01/16/2008 13:52		AmtRec: VIAL20,8XLP,3X4LP		#Containers: 12		Scr: Alpha: 9.79E-04 uCi/Sa	Beta: 1.38E-03 uCi/Sa	
2 KFQTF-1-AA								
J8A180145-1-SAMP								
01/17/2008 10:03		AmtRec: VIAL20,8XLP,3X4LP		#Containers: 12		Scr: Alpha: 3.42E-03 uCi/Sa	Beta: 1.16E-03 uCi/Sa	
3 KFQTF-1-AK-X								
J8A180145-1-DUP								
01/17/2008 10:03		AmtRec: VIAL20,8XLP,3X4LP		#Containers: 12		Scr: Alpha: 3.42E-03 uCi/Sa	Beta: 1.16E-03 uCi/Sa	
4 KF1M8-1-AA-B								
J8A230000-504-BLK								
01/17/2008 10:03		AmtRec:		#Containers: 1		Scr: Alpha:	Beta:	
5 KF1M8-1-AC-C								
J8A230000-504-LCS								
01/17/2008 10:03		AmtRec:		#Containers: 1		Scr: Alpha:	Beta:	
6 KF1M8-1-AD-B								
J8A230000-504-BLK								
01/17/2008 10:03		AmtRec:		#Containers: 1		Scr: Alpha:	Beta:	

115

STL RICHLAND

1/23/2008 3:28:42 PM

Sample Preparation/Analysis

Balance Id: *N/A*

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

Pipet #:

AnalyDueDate: 03/03/2008

Sep1 DT/Tm Tech: *1-30-08 pm*

Batch: 8023504

pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:



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

Comments:

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, SS , 57671

KFQM31AA-SAMP Constituent List:

C-14 RDL:2.00E+02 pCi/L LCL:70 UCL:130 RPD:20

KF1M81AA-BLK:

KF1M81AC-LCS:

KF1M81AD-BLK:

KFQM31AA-SAMP Calc Info:

Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
KF1M81AA-BLK:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
KF1M81AC-LCS:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
KF1M81AD-BLK:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

Approved By

Date:

116

1/31/2008 2:41:20 PM

ICOC Fraction Transfer/Status Report

ByDate: 1/31/2007, 2/5/2008, Batch: '8023504', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
8023504				
AC	Rev1C	McDowellID	1/24/2008 1:46:35 PM	
SC		wagarr	IsBatched 1/23/2008 3:31:20 PM	ICOC_RADCALC v4.8.32
SC		McDowellID	InSep1 1/24/2008 1:46:35 PM	RICH-RC-5022 REVISION 3
SC		McDowellID	Sep1C 1/30/2008 3:57:34 PM	RICH-RC-5022 REVISION 3
SC		DAWKINSO	InCnt1 1/30/2008 4:01:34 PM	RICH-RD-0001 REVISION 4
SC		ClarkR	CalcC 1/31/2008 7:32:12 AM	RICH-RD-0001 REVISION 4
SC		nortonj	Rev1C 1/31/2008 2:41:13 PM	RICH-RC-0002 REV 8
AC		McDowellID	1/30/2008 3:57:34 PM	
AC		DAWKINSO	1/30/2008 4:01:34 PM	
AC		ClarkR	1/31/2008 7:32:12	
AC		nortonj	1/31/2008 2:41:13 PM	

AC: Accepting Entry; SC: Status Change

TAL Richland

Richland Wa.

Page 1

Grp Rec Cnt: 5

ICOCFractions v4.8.32

1/18/2008 1:28:01 PM

Sample Preparation/Analysis

Balance Id:

384868, Pacific Northwest National Laboratory
Pacific Northwest National Lab

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

Pipet #:

EA Chromium, Hexavalent (7196A)

AnalyteDueDate: 02/25/2008

5I CLIENT: HANFORD

Sep1 DT/Tm Tech:

Batch: 8018283 WATER mg/L

PM, Quote: SA , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: 8018283 88EA,

Prep Tech:

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

1 KFFRT-1-AA

J8A110323-1-SAMP

01/11/2008 10:49 AmtRec: VIAL20,500G #Containers: 2 Scr: Alpha: Beta:

2 KFFRT-1-AC-S

J8A110323-1-MS

01/11/2008 10:49 AmtRec: VIAL20,500G #Containers: 2 Scr: Alpha: Beta:

3 KFFRT-1-AD-D

J8A110323-1-MSD

01/11/2008 10:49 AmtRec: VIAL20,500G #Containers: 2 Scr: Alpha: Beta:

4 KFFRT-1-AE-X

J8A110323-1-DUP

01/11/2008 10:49 AmtRec: VIAL20,500G #Containers: 2 Scr: Alpha: Beta:

5 KFRA3-1-AA-B

J8A180000-283-BLK

01/11/2008 10:49 AmtRec: #Containers: 1 Scr: Alpha: Beta:

6 KFRA3-1-AC-C

J8A180000-283-LCS

01/11/2008 10:49 AmtRec: #Containers: 1 Scr: Alpha: Beta:

TAL Richland

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2

Page 1

ISV - Insufficient Volume for Analysis

WO Cnt: 6

Richland Wa.

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

ICOC v4.8.32

STL RICHLAND

1/18/2008 1:28:01 PM

Sample Preparation/Analysis

Balance Id:

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

Pipet #:

EA Chromium, Hexavalent (7196A)

51 CLIENT: HANFORD

Sep1 DT/Tm Tech:

AnalyDueDate: 02/25/2008

Sep2 DT/Tm Tech:

Batch: 8018283

mg/L

SEQ Batch, Test: None

Prep Tech:



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

Comments:

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, SA , 57671

KFFRT1AA-SAMP Constituent List:

HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20

KFFRT1AC-MS Constituent List:

KFFRT1AD-MSD:

KFRA31AA-BLK:

KFRA31AC-LCS:

KFFRT1AA-SAMP Calc Info:

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

KFFRT1AC-MS Calc Info:

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

KFFRT1AD-MSD:

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

KFRA31AA-BLK:

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

KFRA31AC-LCS:

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

Approved By

Date:

TAL Richland

Key: In - Initial Amt. fi - Final Amt. di - Diluted Amt. s1 - Sep1. s2 - Sep2

Page 2

ISV - Insufficient Volume for Analysis

WO Cnt: 6

Richland Wa.

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

ICOC v4 8 32