

Analytical Data Package Prepared For
Washington Closure Hanford



Radiochemical Analysis By

TestAmerica

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

Assigned Laboratory Code: TARLIH

Data Package Contains 31 Pages

Report No.: 38805

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

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
J00167	RC-012	J16J96	J8D030329-1	KKPA31AC	9KKPA310	8098183
		J16J96	J8D030329-1	KKPA32AA	9KKPA320	8107333
		J16J97	J8D030329-2	KKPA41AC	9KKPA410	8098183
		J16J97	J8D030329-2	KKPA42AA	9KKPA420	8107333

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING
Certificate of Analysis

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

April 18, 2008

Attention: Joan Kessner

SAF Number	:	RC-032
Date SDG Closed	:	April 3, 2008
Number of Samples	:	Two (2)
Sample Type	:	Other Liquid
SDG Number	:	J00167
Data Deliverable	:	15 - Day / Summary

CASE NARRATIVE

I. Introduction

On April 3, 2008 two other liquid samples were received at TestAmerica Richland (TALR) for radiochemical analysis. Upon receipt, the sample was assigned the following laboratory ID number to correspond with the Washington Closure Hanford (WCH) specific ID:

<u>WCH ID#</u>	<u>TALR ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
J16J96	KKPA3	Other Liquid	4/3/08
J16J97	KKPA4	Other Liquid	4/3/08

I. Sample Receipt

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

III. Analytical Results/Methodology

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

The requested analyses were:

Gas Proportional Counting
Gross Alpha by method RICH-RC-5014
Gross Beta by method RICH-RC-5014

Washington Closure Hanford
April 18, 2008

IV. Quality Control

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

QC and sample results are reported in the same units.

V. Comments

Gas Proportional Counting

Gross Alpha by method RICH-RC-5014:

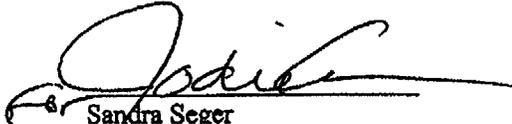
The batch was reanalyzed due to a low LCS recovery. The reanalysis data is acceptable. The LCS, batch blank, samples and sample duplicate (J16J96) results are within contractual requirements.

Gross Beta by method RICH-RC-5014:

Sample J16J97 dup and blank were recounted to confirm activity. The LCS, batch blank, samples and sample duplicate (J16J97) results are within contractual requirements.

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

Reviewed and approved:


Sandra Seger
Project Manager

Drinking Water Method Cross References

DRINKING WATER ASTM METHOD CROSS REFERENCES		
Referenced Method	Isotope(s)	TestAmerica Richland's SOP No.
EPA 901.1	Cs-134, I-131	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 00-02	Gross Alpha (Coprecipitation)	RICH-RC-5021
EPA 903.0	Total Alpha Radium (Ra-226)	RICH-RC-5027
EPA 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr-89/90	RICH-RC-5006
ASTM D5174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007

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

Uncertainty Estimation

TestAmerica Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, $R = \text{constants} * f(x,y,z,...)$. 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 TestAmerica.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) <i>u_c - Combined Uncertainty.</i>	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, <i>u_c</i> , 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 TestAmerica "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%. $Lc = (1.645 * \text{Sqrt}(2 * (\text{BkgndCnt}/\text{BkgndCntMin})/\text{SCntMin})) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol}) * \text{IngrFct})$. 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%. $MDC = (4.65 * \text{Sqrt}((\text{BkgndCnt}/\text{BkgndCntMin})/\text{SCntMin}) + 2.71/\text{SCntMin}) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol}) * \text{IngrFct})$. 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 TestAmerica upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

Sample Results Summary

Date: 18-Apr-08

TestAmerica TARLIH

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

Report No. : 38805

SDG No: J00167

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
8098183	RICHRC5013								
	J16J96								
	KKPA31AC	BETA	2.6 +- 1.47		pCi/g	100%	2.59	15.0	
	J16J97								
	KKPA41AC	BETA	8.5 +- 2.53		pCi/g	100%	2.61	15.0	
	J16J97 DUP								
	KKPA41AD	BETA	1.7 +- 1.37	U	pCi/g	100%	2.66	15.0	134.8
8107333	RICHRC5013								
	J16J96								
	KKPA32AA	ALPHA	1.3 +- 1.56	U	pCi/g	100%	2.49	10.0	
	J16J96 DUP								
	KKPA32AD	ALPHA	0.43 +- 1.11	U	pCi/g	100%	2.45	10.0	99.1
	J16J97								
	KKPA42AA	ALPHA	-1.200 +- 1.41	U	pCi/g	100%	3.85	10.0	
	No. of Results: 6								

TestAmerica

RPD - Relative Percent Difference.

rptSTLRchSaSummary2 V5.1.6
A2002

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

QC Results Summary

Date: 18-Apr-08

TestAmerica TARLIH

Ordered by Method, Batch No, QC Type,.

Report No. : 38805

SDG No.: J00167

Batch	Work Order	Parameter	Result +/- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC MDA
RICHRC5013									
	8098183	BLANK QC,							
	KKTMN1AA	BETA	6.1 +- 2.04		pCi/g	100%			2.27
	8098183	LCS,							
	KKTMN1AC	BETA	70.0 +- 15.4		pCi/g	100%	104%	0.0	2.77
RICHRC5013									
	8107333	BLANK QC,							
	KLENH1AA	ALPHA	0.68 +- 1.82	U	pCi/g	100%			3.93
	8107333	LCS,							
	KLENH1AC	Alpha	75.0 +- 54.7		pCi/g	100%	81%	-0.2	2.91
No. of Results: 4									

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

rptSTLRchQcSummary V5.1.6 A2002 U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

Date: 18-Apr-08

SAMPLE RESULTS

Lab Name: TestAmerica
 Lot-Sample No.: J8D030329-1
 Client Sample ID: J16J96

SDG: J00167
 Report No.: 38805
 CQC No.: RC-012-016

Collection Date: 3/3/2008 1:00:00 PM
 Received Date: 4/3/2008 3:40:00 PM

Matrix: OIL
 Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotalCert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 8098183	RICHRC5013		1.4	1.5	2.59	pCi/g	100%	(1.)	4/15/08 07:00 p		0.2	GPC28C
	BETA	2.6					15.0	(3.5)			G	
Work Order: KKP31AC Report DB ID: 9KKPA310												
Batch: 8107333	RICHRC5013		1.4	1.6	2.49	pCi/g	100%	0.51	4/17/08 06:30 p		0.06	GPC11A
	ALPHA	1.3					10.0	(1.6)			G	
Work Order: KKP32AA Report DB ID: 9KKPA320												

No. of Results: 2 Comments:

TestAmerica MDC|MDA, Lc - Detection, Decision Level based on Instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rpt|STLRchSample U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

Date: 18-Apr-08

SAMPLE RESULTS

Lab Name: TestAmerica
 Lot-Sample No.: J8D030329-2
 Client Sample ID: J16J97
 SDG: J00167
 Report No.: 38805
 COC No.: RC-012-016
 Matrix: OIL
 Collection Date: 3/3/2008 1:00:00 PM
 Received Date: 4/3/2008 3:40:00 PM
 Matrix: OIL
 Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Kpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 8098183	RICHRC5013		1.8	2.5	2.61	pCl/g	100%	(3.2)	4/15/08 07:00 p		0.2	GPC26D
	BETA	8.5				1.24	15.0	(6.7)			G	
Batch: 8107333	RICHRC5013		1.1	1.4	3.85	pCl/g	100%	-0.32	4/17/08 06:30 p		0.05	GPC11B
	ALPHA	-1.200	U			1.62	10.0	(-1.7)			G	

No. of Results: 2
 Comments:

TestAmerica
 rptSTLRchSample
 V5.1.6 A2002
 MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II

Date: 18-Apr-08

DUPLICATE RESULTS

Lab Name: TestAmerica
 Lot-Sample No.: J8D030329-1
 Client Sample ID: J16J96 DUP
 SDG: J00167
 Report No.: 38805
 COC No.: RC-012-016
 Matrix: OIL
 Collection Date: 3/3/2008 1:00:00 PM
 Received Date: 4/3/2008 3:40:00 PM

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC(MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 8107333	RICHR5013				Work Order: KXPA32AD	Report DB ID: KXPA32DR			Orig Sa DB ID: 9KKPA320			
ALPHA	0.43	U	1.1	1.1	2.45	pCl/g	100%	0.18	4/17/08 06:30 p		0.06	GPC11D
	1.27	U	RPD 99.1			10.0		0.77			G	

No. of Results: 1 Comments:

TestAmerica RPD - Relative Percent Difference.
 rptSTLRchDupV5.1 MDC(MDA, Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 5/3/2002 U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the MDC/Mda or Total Uncert or not identified by gamma scan software.

FORM II

Date: 18-Apr-08

DUPLICATE RESULTS

Lab Name: TestAmerica
 Lot-Sample No.: J8D030329-2
 Client Sample ID: J16J97 DUP
 SDG: J00167
 Report No.: 38805
 COC No.: RC-012-016
 Matrix: OIL
 Collection Date: 3/3/2008 1:00:00 PM
 Received Date: 4/3/2008 3:40:00 PM

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC/MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/TotUcert	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 8098183	RICHRCS013									Orig Sa DB ID: 9KKPA410			
BETA	1.7	U	1.3	1.4	2.66	pCi/g	100%	0.62	0.62	4/15/08 07:00 P		0.2	GPC28A
	8.48		RPD	134.8		15.0		(2.4)				G	

No. of Results: 1 Comments:

TestAmerica RPD - Relative Percent Difference.
 rptSTLRchDupV5.1 MDC/MDA, Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 .6-42002 U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II

Date: 18-Apr-08

BLANK RESULTS

Lab Name: TestAmerica
Matrix: OIL

SDG: J00167
Report No.: 38805

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC(MDA)	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Work Order: KLENH1AA Report DB ID: KLENH1AB												
Batch: 8107333	RICHRC5013		1.7	1.8	3.93	pCi/g	100%	0.17	4/17/08 06:30 p		0.05	GPC11C
ALPHA	0.68	U			1.66	10.0		0.75			G	
Work Order: KKTMM1AA Report DB ID: KKTMM1AB												
Batch: 8098183	RICHRC5013		1.5	2.0	2.27	pCi/g	100%	(2.7)	4/15/08 07:00 p		0.2	GPC28B
BETA	6.1				1.07	15.0		(6.)			G	

No. of Results: 2 Comments:

TestAmerica MDC(MDA),Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rp(STLRchBlank U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II

Date: 18-Apr-08

LCS RESULTS

SDG: J00167
Report No.: 38805

Lab Name: TestAmerica
Matrix: OIL

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC/MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Work Order: KLENH1AC Report DB ID: KLENH1CS													
Batch: 8107333	RICHRC5013		8.2	55.0	2.91	pCi/g	100%	92.0	2.9	81%	4/17/08 08:23 p	0.05	GPC11A
Alpha	75.0						Rec Limits:	70	130	-0.2		G	
Work Order: KKTMN1AC Report DB ID: KKTMN1CS													
Batch: 8096183	RICHRC5013		4.0	15.0	2.77	pCi/g	100%	67.0	0.77	104%	4/15/08 07:00 p	0.2	GPC28C
BETA	70.0						Rec Limits:	70	130	0.0		G	

No. of Results: 2 Comments:

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

TLRchLcs
V5.1.6 A2002

Lot No., Due Date: J8D030329; 04/18/2008
 Client, Site: 127642; S00N063A00 HANFORD
 QC Batch No., Method Test: 8107333; RALPHA-A Alpha by GPC-Am
 SDG, Matrix: J00167; OTHER LIQUID

	Yes	No	N/A
1.0. QC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	<input checked="" type="checkbox"/>		
2.0. QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	<input checked="" type="checkbox"/>		
2.2 Are the QC appropriate for the analysis included in the batch?	<input checked="" type="checkbox"/>		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	<input checked="" type="checkbox"/>		
2.4 Does the Worksheets include a Tracer Vial label for each sample?	<input checked="" type="checkbox"/>		
3.0. QC Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	<input checked="" type="checkbox"/>		
3.2 Is the LCS result, yield, and MDA within contract limits?	<input checked="" type="checkbox"/>		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?	<input checked="" type="checkbox"/>		
3.4 Are the duplicate result, yields, and MDAs within contract limits?	<input checked="" type="checkbox"/>		
3.5 Are the sample yields and MDAs within contract limits?	<input checked="" type="checkbox"/>		
4.0. Raw Data			
4.1 Were results calculated in the correct units?	<input checked="" type="checkbox"/>		
4.2 Were analysis volumes entered correctly?	<input checked="" type="checkbox"/>		
4.3 Were Yields entered correctly?	<input checked="" type="checkbox"/>		
4.4 Were spectra reviewed/meet contractual requirements?	<input checked="" type="checkbox"/>		
4.5 Were raw counts reviewed for anomalies?	<input checked="" type="checkbox"/>		
5.0. Other			
5.1 Are all nonconformances included and noted?	<input checked="" type="checkbox"/>		
5.2 Are all required forms filled out?	<input checked="" type="checkbox"/>		
5.3 Was the correct methodology used?	<input checked="" type="checkbox"/>		
5.4 Was transcription checked?	<input checked="" type="checkbox"/>		
5.5 Were all calculations checked at a minimum frequency?	<input checked="" type="checkbox"/>		
5.6 Are worksheet entries complete and correct?	<input checked="" type="checkbox"/>		
6.0 Comments on any No response: NCM 10-12150			

First Level Review

Paul Anderson

Date

4/18/08

Data Review Checklist RADIOCHEMISTRY Second Level Review

Batch Number: 8107333

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 G

Date: 4/18/08

Clouseau Nonconformance Memo



NCM #: 10-12150 NCM Initiated By: Lisa Antonson Date Opened: 04/18/2008 Date Closed:	Classification: Anomaly Status: QAREVIEW Production Area: Environmental - Prep Tests: Alpha by GPC-Am Lot #'s (Sample #'s): J8D030329 (1,2), J8D070000 (179), QC Batches: 8098179,
Nonconformance: LCS result out of limits Subcategory: Analyte was recovered low in the LCS	

Problem Description / Root Cause

<u>Name</u>	<u>Date</u>	<u>Description</u>
Lisa Antonson	04/18/2008	This is a rerun of batch 8098179 due to low recovery on the LCS.

Corrective Action

<u>Name</u>	<u>Date</u>	<u>Corrective Action</u>
Lisa Antonson	04/18/2008	Sample was rerun with good results.

Client Notification Summary

<u>Client</u>	<u>Project Manager</u>	<u>Notified</u>	<u>Response</u>	<u>How Notified</u>	<u>Note</u>
		<u>Response</u>	<u>Response Note</u>		

Quality Assurance Verification

<u>Verified By</u>	<u>Due Date</u>	<u>Status</u>	<u>Notes</u>
		This section not yet completed by QA.	

Approval History

<u>Date Approved</u>	<u>Approved By</u>	<u>Position</u>

Lot No., Due Date: J8D030329; 04/18/2008
 Client, Site: 127642; S00N063A00 HANFORD
 QC Batch No., Method Test: 8098183; RBETA-SR Beta by GPC-Sr/Y
 SDG, Matrix: J00167; OTHER LIQUID

1.0 ICOC	Yes	No	N/A
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	<input checked="" type="checkbox"/>		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	<input checked="" type="checkbox"/>		
2.2 Are the QC appropriate for the analysis included in the batch?	<input checked="" type="checkbox"/>		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	<input checked="" type="checkbox"/>		
2.4 Does the Worksheets include a Tracer Vial label for each sample?	<input checked="" type="checkbox"/>		
3.0 QC Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	<input checked="" type="checkbox"/>		
3.2 Is the LCS result, yield, and MDA within contract limits?	<input checked="" type="checkbox"/>		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?	<input checked="" type="checkbox"/>		
3.4 Are the duplicate result, yields, and MDAs within contract limits?	<input checked="" type="checkbox"/>		
3.5 Are the sample yields and MDAs within contract limits?	<input checked="" type="checkbox"/>		
4.0 Raw Data			
4.1 Were results calculated in the correct units?	<input checked="" type="checkbox"/>		
4.2 Were analysis volumes entered correctly?	<input checked="" type="checkbox"/>		
4.3 Were Yields entered correctly?	<input checked="" type="checkbox"/>		
4.4 Were spectra reviewed/meet contractual requirements?	<input checked="" type="checkbox"/>		
4.5 Were raw counts reviewed for anomalies?	<input checked="" type="checkbox"/>		
5.0 Other			
5.1 Are all nonconformances included and noted?	<input checked="" type="checkbox"/>		
5.2 Are all required forms filled out?	<input checked="" type="checkbox"/>		
5.3 Was the correct methodology used?	<input checked="" type="checkbox"/>		
5.4 Was transcription checked?	<input checked="" type="checkbox"/>		
5.5 Were all calculations checked at a minimum frequency?	<input checked="" type="checkbox"/>		
5.6 Are worksheet entries complete and correct?	<input checked="" type="checkbox"/>		
6.0 Comments on any No response: NCM 10-12151			

First Level Review *Lee Anderson*

Date 4/18/08



Data Review Checklist
RADIOCHEMISTRY
 Second Level Review

Batch Number: 8098183

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: 4/18/08

Clouseau Nonconformance Memo



NCM #: 10-12151 NCM Initiated By: Lisa Antonson Date Opened: 04/18/2008 Date Closed:	Classification: Anomaly Status: QAREVIEW Production Area: Environmental - Prep Tests: Beta by GPC-Sr/Y Lot #'s (Sample #'s): J8D030329 (1,2), J8D070000 (183), QC Batches: 8098183,
Nonconformance: Other (describe in detail) Subcategory: Other (explanation required)	

Problem Description / Root Cause

Name	Date	Description
Lisa Antonson	04/18/2008	Samples KKPA4 and KKTMN were recounted due to a suspected switch. The recount verified the sample result. All results below CRDL.

Corrective Action

Name	Date	Corrective Action
Lisa Antonson	04/18/2008	Samples were recounted.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note
			Response		Response Note

Quality Assurance Verification

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

Approval History

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

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Project Coordinator
 KESSNER, JH

Price Code

SAF No.
 RC-012

Method of Shipment
 Govt Vehicle

Bill of Lading/Air Bill No.
 13128

Company Contact
 Tom Edmundson
 Telephone No.
 373-9394

Sampling Location
 100-N Heavy Equipment

Field Logbook No.
 EL-1516-12

COA
 RDMX0330

Offsite Property No.
 N/A

Shipped To
 TestAmerica Incorporated, Richland

POSSIBLE SAMPLE HAZARDS/REMARKS
 Potential Rad & D.O.T. Limits (NO)

Special Handling and/or Storage
 N/A

Sample No.	Matrix *	Sample Date	Sample Time	Notes
J16J96	OTHER LIQUID	3-3-08	1300	GP
J16J97	OTHER LIQUID	3-3-08	1300	1
				60mL
				Gross Alpha & Gross Beta

SAMPLE ANALYSIS

CHAIN OF POSSESSION		Sign/Print Names		Date/Time	
Relinquished By/Removed From	RCF	Received By/Stored In	4-1-08	1445	
D. M. Iverson	4-1-08 1445	Received By/Stored In	4-1-08	1445	
Relinquished By/Removed From	4-1-08 1600	Received By/Stored In	4-1-08	1600	
1060 BOTTLE # 1C	4-1-08 1200	Received By/Stored In	4-1-08	1200	
Relinquished By/Removed From	4-1-08 1540	Received By/Stored In	4-1-08	1540	
1060 BOTTLE # 1C	4-1-08 1540	Received By/Stored In	4-1-08	1540	

Relinquished By/Removed From

Received By

SPECIAL INSTRUCTIONS

J8D030329
 J00167
 DUE 4-10-08
 SHK

Matrix *

- S-Sediment
- SO-Soil
- SL-Sludge
- W-Water
- O-Oil
- A-Air
- DS-Dryness Solids
- DL-Dissolved Liquids
- T-Tissue
- W-Water
- L-Liquid
- V-Vegetation
- X-Other

Disposed By

Date/Time

Title

Disposal Method

Final Disposition

Date/Time

Radiological Counting Facility

Analysis Report for RCF19175

966 BLANK UNUSED CONOCO OIL HD FLEET SUPREME 15w-40

GAMMA SPECTRUM ANALYSIS

Sample Identification : RCF19175
 Sample Description : 966 BLANK UNUSED CONOCO OIL HD FLEET SUPREME 15w-40
 Sample Type : 125 ml poly bott
 Unit :
 Sample Point : **J16J96**
 Sample Size : 1.250E+02 mL
 Facility : Default
 Sample Taken On : 3/3/2008 1:00:10PM
 Acquisition Started : 3/4/2008 12:36:56PM
 Procedure : 125 ml poly bottle
 Operator : RCT
 Detector Name : LEGEINSP
 Geometry : 125 ml Poly Bott
 Live Time : 7200.0 seconds
 Real Time : 7207.4 seconds
 Dead Time : 0.10 %
 Peak Locate Threshold : 3.00
 Peak Locate Range (in channels) : 80 - 4096
 Peak Area Range (in channels) : 80 - 4096
 Identification Energy Tolerance : 1.300 keV
 Energy Calibration Used Done On : 11/28/2007
 Efficiency Calibration Used Done On : 12/6/2007
 Efficiency Calibration Description : 125ml Poly Bottle 12-6-2007

Sample Number : 17662

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/mL)	Wt mean Activity Uncertainty	Comments

Analysis Report for RCF19175

966 BLANK UNUSED CONOCO OIL HD FLEET SUPREME 15w-40

- ? = nuclide is part of an undetermined solution
 X = nuclide rejected by the interference analysis
 @ = nuclide contains energy lines not used in Weighted Mean Activity
 d = identified by daughter product energy lines assumed to be in secular equilibrium

Errors quoted at 2.000 sigma

No peak search results available for nuclide analysis.

NUCLIDE MDA REPORT

Nuclide Library Used : \IGOZERA\ApexRoot\Default\Library\RCF UNKNOWN.NLB

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/mL)	Nuclide MDA (pCi/mL)	Line MDA (pCi/mL)
K-40	1460.83	10.67	1.27E+00	1.64E+00	1.64E+00
CO-60	1173.24	99.90	5.81E-02	1.33E-01	1.45E-01
	1332.50	99.98	-3.50E-02		1.33E-01
NB-94	702.63	99.81	-1.38E-02	1.03E-01	1.03E-01
	871.10	99.89	4.92E-02		1.10E-01
AG-108m	433.94	90.50	-2.12E-02	8.23E-02	8.23E-02
	614.28	89.80	2.64E-02		1.02E-01
	722.94	90.80	7.16E-02		1.13E-01
CS-137	661.66	85.21	-7.59E-02	9.66E-02	9.66E-02
EU-152	40.12	38.40	-1.81E-02	1.03E-01	1.20E-01
	45.38	11.10	-2.24E-01		3.20E-01
	121.78	28.40	4.69E-02		1.03E-01
	244.69	7.51	-5.75E-01		7.81E-01
	344.29	26.60	-1.81E-01		2.34E-01
	411.12	2.23	-1.52E+00		2.86E+00
	443.89	2.80	-1.13E+00		2.53E+00
	778.92	12.98	-5.35E-03		6.86E-01
	867.38	4.21	-5.43E-01		2.51E+00
	964.11	14.50	-3.22E-01		8.91E-01
	1085.89	9.94	-3.58E-02		1.42E+00
	1089.71	1.71	2.23E+00		8.18E+00
	1112.07	13.60	6.68E-01		9.49E-01
	1212.93	1.40	-4.85E+00		6.95E+00
	1299.16	1.63	3.55E+00		8.39E+00
	1408.00	20.80	-2.05E-01		6.18E-01
EU-154	123.10	40.50	-1.74E-02	7.18E-02	7.18E-02
	723.36	19.70	3.16E-01		5.16E-01
	873.23	11.45	-1.04E-01		9.63E-01
	1004.78	17.90	-2.02E-01		5.72E-01
	1274.54	35.50	1.34E-02		3.36E-01
EU-155	86.54	34.00	-5.98E-02	7.43E-02	7.43E-02
	105.31	20.60	-2.09E-02		1.32E-01
PB-212	74.81	10.50	2.16E-02	1.50E-01	2.45E-01
	77.11	17.70	2.52E-02		1.50E-01

Analysis Report for RCF19175

866 BLANK UNUSED CONOCO OIL HD FLEET SUPREME 15w-40

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/mL)	Nuclide MDA (pCi/mL)	Line MDA (pCi/mL)
RA-226d	87.19	6.27	-9.65E-02		4.06E-01
	186.11	3.28	1.02E+00	1.79E-01	1.64E+00
	241.92	7.46	4.71E-01		8.28E-01
	295.09	19.20	-9.09E-02		3.24E-01
	351.87	37.10	-1.42E-02		1.79E-01
	609.31	46.10	3.66E-03		2.11E-01
	1120.27	15.00	2.62E-01		8.16E-01
TH-232d	1764.49	15.90	-2.06E-01		8.39E-01
	238.58	43.60	8.93E-02	1.43E-01	1.43E-01
	338.42	12.40	-3.51E-02		5.28E-01
	583.02	30.87	5.64E-02		2.84E-01
	911.16	29.00	-2.75E-02		3.78E-01
	968.97	17.40	-4.45E-03		7.62E-01
	143.79	10.50	1.78E-01	1.01E-01	3.54E-01
U-235	163.38	4.70	4.11E-01		9.35E-01
	185.74	53.00	6.31E-02		1.01E-01
	205.33	4.70	2.62E-01		1.12E+00
U-238d	63.29	3.80	-5.90E-02	5.11E-01	6.32E-01
	92.56	5.41	3.63E-01		5.11E-01
AM-241	59.54	35.70	1.17E-01	7.94E-02	7.94E-02
CM-243	99.52	14.40	5.36E-03	1.19E-01	1.87E-01
	103.73	23.00	-5.01E-02		1.19E-01
	116.93	8.32	-1.78E-01		3.24E-01
	228.19	10.56	-1.71E-02		5.20E-01
	277.60	14.00	-1.93E-01		4.22E-01
	99.52	21.10	3.66E-03	8.17E-02	1.27E-01
	103.73	33.60	-3.43E-02		8.17E-02
CM-245	116.93	12.20	-1.21E-01		2.21E-01
	174.94	9.50	-1.94E-01		4.89E-01

- + = Nuclide identified during the nuclide identification
 * = Energy line found in the spectrum
 > = MDA value not calculated
 @ = Half-life too short to be able to perform the decay correction

Reviewed and Approved:

Edward S. Wallace *Edward S. Wallace* 4-01-08
 (print-sign date)



Sample Check-in List

Date/Time Received: 4308 1540 GM Screen Result 0.1K

Client: WCH SDG #: J00167 NA [] SAF #: RC-012 NA []

Work Order Number: 18D030329 Chain of Custody # RC-012-016

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:

<input checked="" type="checkbox"/> Tape <input checked="" type="checkbox"/> Custody Seals	<input checked="" type="checkbox"/> Hazard Lables <input checked="" type="checkbox"/> Appropriate Sample Lables
---	--
9. Samples are:

<input checked="" type="checkbox"/> In Good Condition <input type="checkbox"/> Broken	<input type="checkbox"/> Leaking <input type="checkbox"/> Have Air Bubbles <small>(Only for samples requiring no head space.)</small>
--	---
10. Sample pH taken? NA pH < 2 [] pH > 2 [] pH > 9 [] Amount HNO₃ Added _____
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: *RJF* Date: 4308

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____

Balance Id: 1120373922
 Pipet #: _____

Sample Preparation/Analysis
 AY Gross Alpha PrpRC5013/5020
 S7 Gross Alpha by GPC using Am-241 curve
 51 CLIENT: HANFORD

4/17/2008 7:23:56 AM
 127642, Washington Closure Hanford
 Bechtel Hanford, Inc.

PM, Quote: SS, 27038
 Prep Tech: WoodT / Beck

Batch: 8107333 OTHER LIQUID pCi/g
 SEQ Batch, Test: None All Tests: 8098179 AYS7, 8098183 BBS8, 8107333 AYS7,
 Analy/Due Date: 04/18/2008

Prep Tech: WoodT / Beck

Count On / Off (24hr) Circle
 Detector Id
 Count Time Min
 Ppt or Geometry
 Dish Size
 QC Tracer Prep Date
 Initial Aliquot Amt/Unit
 Total Amt/Unit
 Work Order, Lot, Sample Date Time

1 KKP3-2-AA
 J8D030320-1.SAMP
 03/03/2008 13:00
 2 KKP3-2-AD-X
 J8D030320-1.DUP
 03/03/2008 13:00
 3 KKP4-2-AA
 J8D030320-2.SAMP
 03/03/2008 13:00
 4 KLENH-1-AA-B
 J8D160000-333-BLK
 03/03/2008 13:00
 5 KLENH-1-ACC
 J8D160000-333-LCS
 03/03/2008 13:00

1.5
 3.7
 2.8
 3.7
 1.4
 1.4

11A 1921 4/17/0800
 11D
 11B
 11C
 11A 2114

Scr: Alpha: Beta:
 Scr: Alpha: Beta:
 Scr: Alpha: Beta:
 Scr: Alpha: Beta:
 Scr: Alpha: Beta:

AmiRec: 50G #Containers: 1
 AmiRec: 50G #Containers: 1
 AmiRec: 50G #Containers: 1
 AmiRec: 50G #Containers: 1
 AmiRec: ASD447 03/13/08.pd #Containers: 1

0.06g, in
 0.06g, in
 0.05g, in
 0.05g, in
 0.05g, in

Bechtel Hanford, Inc. SS, 27038

Bechtel Hanford, Inc. SS, 27038

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

ISV - Insufficient Volume for Analysis
 WO Cnt: 5
 Prep_SamplePrep v4.8.32

Comments:

Comments:

4/17/2008 7:23:56 AM Balance Id:120373922

Sample Preparation/Analysis

AY Gross Alpha PrpRC5013/5020 Pipet #:
 S7 Gross Alpha by GPC using Am-241 curve
 51 CLIENT: HANFORD

AnalysDueDate: 04/18/2008 **PRIORITY** Prep Tech: , WoodT
 Batch: 8107333

SEQ Batch, Test: None

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Pot or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Invl/Date	Comments:
KLENH1AA-BLK: ALPHA RDL:1.00E+01	pCi/g	LCL:	UCL:	RPD:						
KLENH1AC-LCS: AM-241 RDL:	pCi/g	LCL:70	UCL:130	RPD:35						
KKPA32AA-SAMP Calc Info: Uncert Level (#s): 2	Decay to Sadt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B						
KLENH1AA-BLK: Uncert Level (#s): 2	Decay to Sadt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B						
KLENH1AC-LCS: Uncert Level (#s): 2	Decay to Sadt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B						

Approved By _____ Date: _____



RE-ANALYSIS REQUEST

DUE DATE 4-18

CUSTOMER WCH

ANALYSIS α

MATRIX OIL

LOT NUMBER J8D030329

SAMPLE DELIVERY GROUP _____

OLD BATCH NUMBER 8098179

NEW BATCH NUMBER 8107333

LAB SAMPLE ID	CLIENT ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1)		
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.

4/18/2008 3:49:28 PM

ICOC Fraction Transfer/Status Report

ByDate: 4/19/2007, 4/23/2008, Batch: '8107333', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
8107333				
AC	Rev1C	WoodT	4/17/2008 5:57:25	
SC		nortonj	IsBatched	4/16/2008 12:04:27 PM
SC		WoodT	InPrep	4/17/2008 5:57:25 AM
SC		BockJ	InPrep2	4/17/2008 8:31:52 AM
SC		BockJ	Prep2C	4/17/2008 5:13:42 PM
SC		DAWKINSO	InCnt1	4/17/2008 5:25:26 PM
SC		DAWKINSO	CalcC	4/17/2008 10:34:14 PM
SC		antonsonl	Rev1C	4/18/2008 3:49:16 PM
AC		BockJ	4/17/2008 8:31:52	ICOC_RADCALC v4.8.32
AC		BockJ	4/17/2008 5:13:42 PM	RICH-RC-5016 Revision 6
AC		DAWKINSO	4/17/2008 5:25:26 PM	RICH-RC-5014 REVISION 7
AC		DAWKINSO	4/17/2008 10:34:14	RICH-RC-5014 REVISION 7
AC		antonsonl	4/18/2008 3:49:16 PM	RICH-RD-0008 REVISION 4
				RICH-RD-0003 REVISION 5
				RICH-RC-0002 REV 8

AC: Accepting Entry; SC: Status Change

TAL Richland
Richland Wa.

4/15/2008 10:15:47 AM Balance Id: 1120373922
 Sample Preparation/Analysis. Pipet #:
 BB Gross Beta PpRC5013/5020
 S8 Gross Beta by GPC using Sr/Y-90 curve
 Bechtel Hanford, Inc. **PRIORITY**
 51 CLIENT: HANFORD
 Analyze Date: 04/18/2008
 P.M. Quote: SS, 27038
 Prep Tech: Barcoll **Box 9**

OTHER LIQUID pCi/g
 Batch: 8098183
 SEQ Batch, Test: None
 Count On/Off (24hr) Circle
 CR Analyst Init/Date
 Comments:

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	Scr	Alpha	Beta
1 KKPA3-1-AC		0.20g/in		1.5	16.5	100	26C		1950	41570800
J8D030329-1-SAMP										
03/03/2008 13:00			AmtRec: 60G	#Containers: 1						
2 KKPA4-1-AC		0.20g/in			21.5		26D			
J8D030329-2-SAMP										
03/03/2008 13:00			AmtRec: 60G	#Containers: 1						
3 KKPA4-1-AD-X		0.20g/in			17.9		28A			
J8D030329-2-DUP										
03/03/2008 13:00			AmtRec: 60G	#Containers: 1						
4 KKTMM-1-AA-B		0.20g/in			0.1		28B			
J8D070000-183-BLK										
03/03/2008 13:00			AmtRec	#Containers: 1						
5 KKTMM-1-AC-C		0.20g/in			0.3		28C			
J8D070000-183-LGS										
03/03/2008 13:00			AmtRec	#Containers: 1						

Comments: Because they are oil, never completely dried down. Caught on GPC while filtering. 4-15-08

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

KKPA3IAC-SAMP Constituent List: REP:
 BETA RDL: 1.50E+01 pCi/g UCL: 10/17/07 pd

CO TAL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1
 Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktalled Added

ISV - Insufficient Volume for Analysis
 WO Cnt: 5
 Prep_SamplePrep v4.8.32



RE-COUNT REQUEST

DUE DATE 4/18/08

CUSTOMER WCH

ANALYSIS Beta

MATRIX Other Liquid

LOT NUMBER J810050329

SAMPLE DELIVERY GROUP _____

OLD BATCH NUMBER 8098183

NEW BATCH NUMBER _____

LAB SAMPLE ID	CLIENT ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1) <u>VKPAUIAD</u>		<u>please verify planchets & re-count.</u>
2) <u>KXIMNIAA</u>		
3)		
4)		
5)		
6)		
7)		
8)		
9)		
10)		
11)		
12)		
13)		
14)		
15)		
16)		
17)		
18)		
19)		
20)		

4/18/2008 4:13:18 PM

ICOC Fraction Transfer/Status Report

ByDate: 4/18/2007, 4/23/2008, Batch: '8098183', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
8098183				
AC	Rev1C	WoodT	4/15/2008 10:15:12	
SC		wagar	IsBatched 4/7/2008 9:20:39 AM	ICOC_RADCALC v4.8.32
SC		WoodT	InPrep 4/15/2008 10:15:12 AM	RICH-RC-5013 Revision 7
SC		WoodT	InPrep 4/15/2008 10:16:07 AM	RICH-RC-5016 REVISION 7
SC		WoodT	Prep1C 4/15/2008 10:16:26 AM	RICH-RC-5016 REVISION 7
SC		BockJ	InPrep2 4/15/2008 11:03:31 AM	RICH-RC-5014 REVISION 7
SC		BockJ	Prep2C 4/15/2008 6:01:38 PM	RICH-RC-5014 REVISION 7
SC		DAWKINSO	InCnt1 4/15/2008 6:13:25 PM	RICH-RD-0003 REVISION 5
SC		DAWKINSO	CalcC 4/15/2008 9:04:15 PM	RICH-RD-0003 REVISION 5
SC		ClarkR	InCnt1 4/18/2008 11:47:22 AM	RICH-RD-0003 REVISION 5
SC		ClarkR	CalcC 4/18/2008 3:26:58 PM	RICH-RD-0003 REVISION 5
SC		antonsonl	Rev1C 4/18/2008 4:12:54 PM	RICH-RC-0002 REV 8
AC		WoodT	4/15/2008 10:16:07	
AC		WoodT	4/15/2008 10:16:26	
AC		BockJ	4/15/2008 11:03:31	
AC		BockJ	4/15/2008 6:01:38 PM	
AC		DAWKINSO	4/15/2008 6:13:25 PM	
AC		DAWKINSO	4/15/2008 9:04:15 PM	REVISION 5
AC		ClarkR	4/18/2008 11:47:22	
AC		ClarkR	4/18/2008 3:26:58 PM	
AC		antonsonl	4/18/2008 4:12:54 PM	

AC: Accepting Entry, SC: Status Change

TAL Richland
Richland Wa.