

Analytical Data Package Prepared For
CH2M Hill Plateau Remediation

Radiochemical Analysis By

TestAmerica TARL

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

Data Package Contains _____ Pages

Report Nbr: 40111

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W05526	X08-048	B1W520	J8J020306-1	KX3QC1AA	9KX3QC10	8289518
		B1W520	J8J020306-1	KX3QC1AE	9KX3QC10	8289516
		B1W520	J8J020306-1	KX3QC1AF	9KX3QC10	8289520
		B1W520	J8J020306-1	KX3QC2AD	9KX3QC20	8298352
		B1W4Y0	J8J020306-2	KX3QQ1AA	9KX3QQ10	8289518
		B1W4Y0	J8J020306-2	KX3QQ1AE	9KX3QQ10	8289516
		B1W4Y0	J8J020306-2	KX3QQ1AF	9KX3QQ10	8289520
		B1W4Y0	J8J020306-2	KX3QQ2AD	9KX3QQ20	8298352

RECEIVED NOVEMBER 3, 2008

0082349

RECEIVED
 JAN 21 2009
EDMC

Comments:

Certificate of Analysis

CH2M Hill Plateau Remediation Company
P.O. Box 1600
Mail Stop - B6-06
Richland, WA 99352

November 3, 2008

Attention: Mike Neely

SAF Number	:	X08-048
Date SDG Closed	:	October 14, 2008
Number of Samples	:	Two (2)
Sample Type	:	Water
SDG Number	:	W05526
Data Deliverable	:	21-Day / Summary

CASE NARRATIVE

I. Introduction

September 30, 2008 two water samples were received at TestAmerica (TARL) 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>TARL ID#</u>	<u>DATE OF RECEIPT</u>	<u>MATRIX</u>
B1W520	KX3QC	9/30/08	WATER
B1W4Y0	KX3QQ	9/30/08	WATER

II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in. The client has requested that the turn around time be adjusted to October 31, 2008 (Email dated 10/22/08).

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 RL-ALP-015 (RICH-RC-5039)*

Neptunium-237 by method RL-ALP-013 (RICH-RC-5009)*

Gamma Spectroscopy

Iodine-129 by method RL-GAM-002 (RICH-RC-5025)*

Liquid Scintillation Counting

Selenium-79 by method RL-LSC-012 (RICH-RC-5043)*

*SOP ID's changed effective 7-01-2008. Attached is a cross reference until SOP ID's are changed in all systems.

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 RL-ALP-015 (RICH-RC-5039):

The LCS, batch blank, sample and sample duplicate (B1W520) results are within contractual requirements.

Neptunium-237 by method RL-ALP-013 (RICH-RC-5009):

The LCS, batch blank, sample and sample duplicate (B1W520) results are within contractual requirements.

Gamma Spectroscopy

Iodine-129 by method RL-GAM-002 (RICH-RC-5025):

The LCS, batch blank, samples and sample duplicate (B1W4Y0) results are within contractual requirements.

Liquid Scintillation Counting

Selenium-79 by method RL-LSC-012 (RICH-RC-5043):

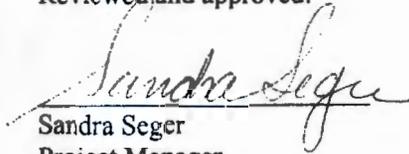
The duplicate failed due to a low tracer recovery. The sample (B1W4Y0) result was below the CRDL. TestAmerica notified the client on 11/3/08. TestAmerica proposed to report W05526 without the Se79 duplicate or reanalyze the samples. The client requested W05526 be reported without the Se79 duplicate and submit an IRF. TestAmerica submitted the IRF on 11/3/08. The draft IRF was included in the report as instructed by the client on 11/3/08 (see email date 11/3/08).

There is no LCS for selenium-79. Except as noted, the batch blank and samples results are within contractual requirements.

CH2M Hill Plateau Remediation Company
November 3, 2008

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 (Cocprecipitation)	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, $R = \text{constants} * f(x,y,z, \dots)$. 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) μ_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, μ_c the combined uncertainty. The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or 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.

**TAL RICHLAND ISSUE RESOLUTION FORM
FOR CONTRACT 615 WITH BHI/FH**

<p>SAF No.: X08-048 Date: November 3, 2008 SDG: W05526 Sample No.(s) B1W4Y0 Submitted By: <u>Sandra Seger</u></p>	<p>Submitted To: <u>Steve Trent (FH)</u></p>
<p>Phone No. <u>509-375-3131 x158</u> Fax No. <u>509-375-5590</u></p>	<p>Phone No. <u>509-373-5869</u> Fax No. <u>866-252-5816</u></p>

<u>ISSUE</u>	<u>PROPOSED RESOLUTION</u>
<p>The Se-79 duplicate failed due to low tracer recovery. The sample result was below the CRDL.</p>	<p>Notified the client on 11/3/08. TestAmerica proposed to reanalyze the sample and its duplicate or report W05526 without a Se79 duplicate. The client requested that W05526 be reported without the Se79 duplicate. The client also requested a IRF be submitted.</p>

BHI/FH COMMENTS -

Signature and date

Seger, Sandra

From: Neely, Michael [Michael_Neely@RL.gov]
Sent: Monday, November 03, 2008 10:59 AM
To: Seger, Sandra
Cc: Hampt, Heidi
Subject: RE: TARL Data Packages

Sandra:

Yes, Heidi is out today. So, please go ahead and report W05526, and just include the draft IRF. Thanks for your help with this.

Thanks,
Mike Neely, Manager
Analytical Support Group
CH2M HILL Plateau Remediation Company (CHPRC)
Soil & Groundwater Remediation Project (S&GRP)
Phone: 509-373-0654
Cell: 509-531-5316
Pager: 509-373-PAGE, Extension 6730
FAX: 866-252-5816

From: Seger, Sandra [mailto:Sandra.Seger@testamericainc.com]
Sent: Monday, November 03, 2008 10:46 AM
To: Neely, Michael
Cc: Hampt, Heidi
Subject: RE: TARL Data Packages

Mike,

Is Heidi out today? I'm ready to report W05526 but I need the signed IRF.

Sandra

From: Seger, Sandra
Sent: Monday, November 03, 2008 9:10 AM
To: 'Hampt, Heidi'
Cc: Neely, Michael
Subject: FW: TARL Data Packages

Heidi,

The IRF for the Se79 duplicate is attached.

Thanks,
Sandra

From: Neely, Michael [mailto:Michael_Neely@RL.gov]
Sent: Monday, November 03, 2008 8:35 AM
To: Seger, Sandra
Cc: Felmy, Diana; Sumner, Laine C; Trent, Stephen J; Hampt, Heidi; Anastos, Heather L
Subject: RE: TARL Data Packages

Sandra:

Please go ahead and report it without the duplicate. But, also prepare an issue resolution form (IRF) so that we can "officially" document this. Thanks for your help with this.

Thanks,
Mike Neely, Manager
Analytical Support Group
CH2M HILL Plateau Remediation Company (CHPRC)
Soil & Groundwater Remediation Project (S&GRP)
Phone: 509-373-0654
Cell: 509-531-5316
Pager: 509-373-PAGE, Extension 6730
FAX: 866-252-5816

From: Seger, Sandra [mailto:Sandra.Seger@testamericainc.com]
Sent: Monday, November 03, 2008 8:24 AM
To: Neely, Michael
Subject: RE: TARL Data Packages

Mike,

The Se79 duplicate failed on W05526 however the sample result was below the DL. Would you like us to report the Se79 without a duplicate or reanalyze ?

Sandra

From: Neely, Michael [mailto:Michael_Neely@RL.gov]
Sent: Monday, November 03, 2008 8:15 AM
To: Seger, Sandra
Subject: RE: TARL Data Packages

Thanks :-)

Thanks,
Mike Neely, Manager
Analytical Support Group
CH2M HILL Plateau Remediation Company (CHPRC)
Soil & Groundwater Remediation Project (S&GRP)
Phone: 509-373-0654
Cell: 509-531-5316

Pager: 509-373-PAGE, Extension 6730
FAX: 866-252-5816

From: Seger, Sandra [mailto:Sandra.Seger@testamericainc.com]
Sent: Monday, November 03, 2008 8:08 AM
To: Neely, Michael
Subject: RE: TARL Data Packages

Mike,

Some of the samples are yours.

I checked the status this morning for W05526 & 27. The data is in data review. I will be able to report both SDG today unless we have a problem with one of the batches that will require a recount or something. I'll keep you posted if there are any problems, otherwise I will send the reports as soon as possible.

Sandra

From: Neely, Michael [mailto:Michael_Neely@RL.gov]
Sent: Monday, November 03, 2008 7:55 AM
To: Seger, Sandra
Cc: Wagar, Rhonda
Subject: RE: TARL Data Packages

Sandra:

Just curious.....are the other "priority samples" ours?

Thanks,
Mike Neely, Manager
Analytical Support Group
CH2M HILL Plateau Remediation Company (CHPRC)
Soil & Groundwater Remediation Project (S&GRP)
Phone: 509-373-0654
Cell: 509-531-5316
Pager: 509-373-PAGE, Extension 6730
FAX: 866-252-5816

From: Seger, Sandra [mailto:Sandra.Seger@testamericainc.com]
Sent: Friday, October 31, 2008 10:13 AM
To: Neely, Michael; Wagar, Rhonda
Cc: Anastos, Heather L; Felmy, Diana; Sumner, Laine C; Trent, Stephen J
Subject: RE: TARL Data Packages

Mike,

Unfortunately both SDGs have batches that are not going to be counted in time to report today. If there are no problems with the samples that still need to be counted, then I can report both SDGs on Monday. I will get them to you as soon as I can.

We have been overwhelmed with priority samples. The detectors are full and have been counting samples 24/7.

Please accept our apologies,
Sandra

From: Neely, Michael [mailto:Michael_Neely@RL.gov]
Sent: Friday, October 31, 2008 8:26 AM
To: Seger, Sandra; Wagar, Rhonda
Cc: Anastos, Heather L; Felmy, Diana; Sumner, Laine C; Trent, Stephen J
Subject: TARL Data Packages

Sandra:

Our records show that we are still missing two TestAmerica Richland (TARL) data packages that are required for the completion of the Groundwater annual report. Therefore, can you please tell me if you have transmitted the following reports, and if not, then when we can expect to receive them, since they are due today for inclusion in the annual report?

1. W05526
2. W05527

Thanks for your help with this.

Thanks,
Mike Neely, Manager
Analytical Support Group
CH2M HILL Plateau Remediation Company (CHPRC)
Soil & Groundwater Remediation Project (S&GRP)
Phone: 509-373-0654
Cell: 509-531-5316
Pager: 509-373-PAGE, Extension 6730
FAX: 866-252-5816

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Seger, Sandra

From: Neely, Michael [Michael_Neely@RL.gov]
Sent: Thursday, October 23, 2008 8:54 AM
To: Seger, Sandra
Subject: RE: Request - Annual Report Information

Sandra:

Thanks, that is all we can ask – you don't have to be the best, just try your best :-)

Thanks,
Mike Neely, Manager
Analytical Support Group
CH2M HILL Plateau Remediation Company (CHPRC)
Soil & Groundwater Remediation Project (S&GRP)
Phone: 509-373-0654
Cell: 509-531-5316
Pager: 509-373-PAGE, Extension 6730
FAX: 866-252-5816

From: Seger, Sandra [mailto:Sandra.Seger@testamericainc.com]
Sent: Thursday, October 23, 2008 8:49 AM
To: Neely, Michael
Cc: Anastos, Heather L; Felmy, Diana; Trent, Stephen J
Subject: RE: Request - Annual Report Information

Mike,

We will do our best to report W05526 & W05527 by 10/31/08.

Thanks,
Sandra

From: Neely, Michael [mailto:Michael_Neely@RL.gov]
Sent: Wednesday, October 22, 2008 8:38 AM
To: Seger, Sandra
Cc: Anastos, Heather L; Felmy, Diana; Trent, Stephen J
Subject: Request - Annual Report Information
Importance: High

Sandra:

Heather is working on the Hanford Site Annual Groundwater Monitoring Report, which is being accelerated by one month this year. The below two (2) sample delivery groups (SDGs) have a 30 day turn around time (TAT). Therefore, can you please make every effort to have the lab results submitted by 10-31-08?

W05526
W05527

Thanks for your help with this.

Thanks,
Mike Neely, Manager
Analytical Support Group
CH2M HILL Plateau Remediation Company (CHPRC)
Soil & Groundwater Remediation Project (S&GRP)
Phone: 509-373-0654
Cell: 509-531-5316
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11/3/2008 10:56:44 AM

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 40111 File Name: h:\Reportdb\edd\Fead\VRad\W05526.Edd, h:\Reportdb\edd\Fead\VRad\40111.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:				
9KX3QC10	B1W520		MW6-SBB-A1	X08-048	W05526					09/29/2008 13:18				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8289520	I-129L	15046-84-1	2.84E+00	pCi/L	1.4E+00	1.4E+00	U	2.91E+00	102.4	I129_SEP_LEPS_G	5.00E-01	L	10/27/2008 14:23	I
8289518	NP-237	13994-20-2	0.00E+00	pCi/L	1.3E-01	1.3E-01	U	3.06E-01	64.5	NP237_LLE_PLAT	2.00E-01	L	10/29/2008 18:10	I
8289516	U-234	13966-29-5	2.69E+00	pCi/L	5.8E-01	7.3E-01		1.50E-01	108.9	UIISO_PLATE_AEA	1.999E-01	L	10/28/2008 20:28	I
8289516	U-235	15117-96-1	9.39E-02	pCi/L	1.1E-01	1.1E-01	U	1.50E-01	108.9	UIISO_PLATE_AEA	1.999E-01	L	10/28/2008 20:28	I
8289516	U-238	U-238	2.03E+00	pCi/L	5.1E-01	6.0E-01		1.50E-01	108.9	UIISO_PLATE_AEA	1.999E-01	L	10/28/2008 20:28	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:				
9KX3QC20	B1W520		MW6-SBB-A1	X08-048	W05526					09/29/2008 13:18				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8298352	Se-79	15758-45-9	3.07E+00	pCi/L	2.3E+00	8.6E+00	U	5.31E+00	66.1	SE79_SEP_IE_LS	2.001E-01	L	11/01/2008 01:38	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:				
9KX3QQ10	B1W4Y0		MW6-SBB-A1	X08-048	W05526					09/29/2008 09:53				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8289520	I-129L	15046-84-1	9.45E+00	pCi/L	2.5E+00	2.5E+00		2.06E+00	104.1	I129_SEP_LEPS_G	4.999E-01	L	10/27/2008 16:33	I
8289518	NP-237	13994-20-2	-1.21E-02	pCi/L	1.2E-01	1.2E-01	U	2.91E-01	64.6	NP237_LLE_PLAT	2.00E-01	L	10/29/2008 18:11	I
8289516	U-234	13966-29-5	8.38E+00	pCi/L	1.0E+00	1.7E+00		1.43E-01	102.6	UIISO_PLATE_AEA	2.001E-01	L	10/28/2008 20:28	I
8289516	U-235	15117-96-1	4.48E-01	pCi/L	2.3E-01	2.4E-01		1.43E-01	102.6	UIISO_PLATE_AEA	2.001E-01	L	10/28/2008 20:28	I
8289516	U-238	U-238	8.24E+00	pCi/L	9.9E-01	1.7E+00		1.43E-01	102.6	UIISO_PLATE_AEA	2.001E-01	L	10/28/2008 20:28	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:				
9KX3QQ20	B1W4Y0		MW6-SBB-A1	X08-048	W05526					09/29/2008 09:53				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8298352	Se-79	15758-45-9	5.26E+00	pCi/L	2.6E+00	9.8E+00	U	5.96E+00	58.9	SE79_SEP_IE_LS	2.00E-01	L	11/01/2008 05:02	I

TestAmerica

rptFeadRadSummaryEdd v3.48

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

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

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

/

Monday, November 03, 2008

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05526.Edd, h:\Reportdb\edd\Fead\VRad\40111.Edd

Lab Sample Id: K0X091AB

Sdg/Rept Nbr: W05526

40111

Collection Date: 09/29/2008 13:18

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 09/30/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AE	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	To/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
8289516 BLK	U-234 13966-29-5	2.20E-02	pCi/L	6.6E-02 6.6E-02	U	1.73E-01	88.1		UIISO_PLATE_	2.00E-01 L	10/28/2008 20:28				D
8289516 BLK	U-235 15117-96-1	5.70E-02	pCi/L	9.3E-02 9.2E-02	U	1.62E-01	88.1		UIISO_PLATE_	2.00E-01 L	10/28/2008 20:28				D
8289516 BLK	U-238 U-238	8.68E-02	pCi/L	1.1E-01 1.1E-01	U	1.73E-01	88.1		UIISO_PLATE_	2.00E-01 L	10/28/2008 20:28				D

Monday, November 03, 2008

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05526.Edd, h:\Reportdb\edd\Fead\VRad\40111.Edd

Lab Sample Id: K0X1D1AB

Sdg/Rept Nbr: W05526

40111

Collection Date: 09/29/2008 13:18

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 09/30/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AG	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/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8289518 BLK	NP-237 13994-20-2	0.00E+00	pCi/L	1.7E-01 1.7E-01	U	4.00E-01	47.4		NP237_LLE_P	1.999E-01	10/29/2008 18:12				D

Monday, November 03, 2008

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\VRad\W05526.Edd, h:\Reportdb\ledd\Fead\VRad\40111.Edd

Lab Sample Id: K0X1H1AB

Sdg/Rept Nbr: W05526 40111

Collection Date: 09/29/2008 09:53

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 09/30/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AI	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
8289520	I-129L	5.84E-03	pCi/L	9.6E-01	U	1.78E+00	102.7		I129_SEP_LEP	5.00E-01	10/27/2008				D
BLK	15046-84-1			9.6E-01						L	20:13				

Monday, November 03, 2008

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05526.Edd, h:\Reportdb\edd\Fead\VRad\40111.Edd

Lab Sample Id: K1JLR1AB

Sdg/Rept Nbr: W05526

40111

Collection Date: 09/29/2008 13:18

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 09/30/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AK	H					
Batch # / Qc Type	Analy/ 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
8298352 BLK	Se-79 15758-45-9	2.32E+00	pCi/L	1.2E+01 3.3E+00	U	7.62E+00	46.1		SE79_SEP_IE_	2.00E-01 L	11/01/2008 11:47				D

Monday, November 03, 2008

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05526.Edd, h:\Reportdb\edd\Fead\VRad\40111.Edd

Lab Sample Id: K0X091CS

Sdg/Rept Nbr: W05526

40111

Collection Date: 09/29/2008 13:18

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 09/30/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AF	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
8289516 BS	U-234 13966-29-5	9.20E+00	pCi/L	1.8E+00 1.1E+00		2.29E-01	98.5	8.90E+00 103.4	UIISO_PLATE_	2.001E-01 L	10/28/2008 20:28			75 125	D
8289516 BS	U-238 U-238	8.46E+00	pCi/L	1.7E+00 1.0E+00		1.95E-01	98.5	9.32E+00 90.7	UIISO_PLATE_	2.001E-01 L	10/28/2008 20:28			75 125	D

Monday, November 03, 2008

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\ledd\Fead\VRad\W05526.Edd, h:\Reportdb\ledd\Fead\VRad\40111.Edd

Lab Sample Id: K0X1D1CS **Sdg/Rept Nbr:** W05526 40111 **Collection Date:** 09/29/2008 13:18
Client Id: NA **Matrix:** WATER WATER **Sample On Date:**
Moisture/Solids%*: **QC Type:** BS **Received Date:** 09/30/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AH	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/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8289518 BS	NP-237 13994-20-2	8.76E+00	pCi/L	2.2E+00 1.6E+00		4.17E-01	49.1	9.24E+00 94.7	NP237_LLE_P	1.999E-01 L	10/29/2008 18:13			75 125	D

Monday, November 03, 2008

TestAmerica QC Control Sample Report

Lab Code: TARK

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\Rad\W05526.Edd, h:\Reportdb\edd\Fead\Rad\40111.Edd

Lab Sample Id: K0X1H1CS

Sdg/Rept Nbr: W05526

40111

Collection Date: 09/29/2008 09:53

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 09/30/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AJ	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
8289520 BS	I-129L 15046-84-1	4.92E+01	pCi/L	8.0E+00 8.0E+00		2.85E+00	100.6	5.04E+01 97.6	I129_SEP_LEP	5.00E-01 L	10/27/2008 22:22			70 130	D

Monday, November 03, 2008

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\VRad\W05526.Edd, h:\Reportdb\ledd\Fead\VRad\W40111.Edd

Lab Sample Id: KX3QC1GR

Sdg/Rept Nbr: W05526

40111

Collection Date: 09/29/2008 13:18

Client Id: B1W520

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 09/30/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
X08-048	MW6-SBB-A19981								AL	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
8289516	U-234	2.82E+00	pCi/L	7.4E-01		2.01E-01	95.2		UIISO_PLATE_	2.00E-01	10/28/2008	4.6	0.2		D
DUP	13966-29-5	2.69E+00		5.8E-01						L	20:28	20.0	3		
8289516	U-235	5.86E-02	pCi/L	8.4E-02	U	1.40E-01	95.2		UIISO_PLATE_	2.00E-01	10/28/2008	46.3	0.6		D
DUP	15117-96-1	9.39E-02		8.4E-02						L	20:28	20.0	3		
8289516	U-238	1.96E+00	pCi/L	5.8E-01		1.40E-01	95.2		UIISO_PLATE_	2.00E-01	10/28/2008	3.2	0.2		D
DUP	U-238	2.03E+00		4.8E-01						L	20:28	20.0	3		

Monday, November 03, 2008

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\FeadIV\Rad\W05526.Edd, h:\Reportdb\ledd\FeadIV\Rad\40111.Edd

Lab Sample Id: KX3QC1HR **Sdg/Rept Nbr:** W05526 40111 **Collection Date:** 09/29/2008 13:18
Client Id: B1W520 **Matrix:** WATER WATER **Sample On Date:**
Moisture/Solids%*: **QC Type:** DUP **Received Date:** 09/30/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
X08-048	MW6-SBB-A19981								AM	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
8289518 DUP	NP-237 13994-20-2	-9.59E-03 0.00E+00	pCi/L	9.8E-02 9.8E-02	U	2.29E-01	73.1		NP237_LLE_P	2.00E-01 L	10/29/2008 18:11	0.0 20.0	0.1 3		D

Monday, November 03, 2008

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05526.Edd, h:\Reportdb\edd\Fead\VRad\40111.Edd

Lab Sample Id: KX3QQ1GR

Sdg/Rept Nbr: W05526

40111

Collection Date: 09/29/2008 09:53

Client Id: B1W4Y0

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 09/30/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
X08-048	MW6-SBB-A19981								AN	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
8289520	I-129L	8.45E+00	pCi/L	2.8E+00	U	4.15E+00	101.9		I129_SEP_LEP	5.00E-01	10/27/2008	11.1	0.5		D
DUP	15046-84-1	9.45E+00		2.8E+00						L	18:27	20.0	3		

Lot No., Due Date: J8J020306; 10/31/2008
 Client, Site: 384868; PGW 615HANFORD HANFORD
 QC Batch No., Method Test: 8289516; RUI SO Ulso by ALP
 SDG, Matrix: W05526; WATER

1.0 COC

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

✓ Yes No N/A

2.0 QC Batch

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

3.0 QC & Samples

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

4.0 Raw Data

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

✓ Yes No N/A

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

✓ Yes No N/A

4.3 Were Yields entered correctly? Yes No N/A

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

5.0 Other

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

5.4 Was transcription checked? Yes No N/A

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

6.0 Comments on any No response:

First Level Review

John Hester

Date

10-29-08



Data Review Checklist
RADIOCHEMISTRY
 Second Level Review

Batch Number: 8289516

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: 10/30/08

Lot No., Due Date: J8J020306; 10/31/2008
 Client, Site: 384868; PGW 615HANFORD HANFORD
 QC Batch No., Method Test: 8289518; RNP237 Np-237 w/tracer
 SDG, Matrix: W05526; 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 [Signature]*

Date 10-31-8

Data Review Checklist RADIOCHEMISTRY Second Level Review

Batch Number: 8289518

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: 11/3/08

Lot No., Due Date: J8J020306; 10/31/2008
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 8289520; RGAMLEPS Gamma by LEPS
SDG, Matrix: W05526; WATER

1.0 COC

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

Yes No N/A

2.0 QC Batch

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

Yes No N/A

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

Yes No N/A

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

Yes No N/A

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

Yes No N/A

3.0 QC & Samples

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

Yes No N/A

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

Yes No N/A

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

Yes No N/A

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

Yes No N/A

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

Yes No N/A

4.0 Raw Data

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

Yes No N/A

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

Yes No N/A

4.3 Were Yields entered correctly? Yes No N/A

Yes No N/A

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

Yes No N/A

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

Yes No N/A

5.0 Other

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

Yes No N/A

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

Yes No N/A

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

Yes No N/A

5.4 Was transcription checked? Yes No N/A

Yes No N/A

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

Yes No N/A

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

Yes No N/A

6.0 Comments on any No response:

First Level Review

John Horton

Date

10-29-08

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 8289520

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 Co* Date: 10/30/08

Lot No., Due Date: J8J020306; 10/31/2008
 Client, Site: 384868; PGW 615HANFORD HANFORD
 QC Batch No., Method Test: 8298352; RSE79 Se-79 by LSC
 SDG, Matrix: W05526; WATER

1.0 COC

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

✓ Yes No N/A

2.0 QC Batch

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

3.0 QC & Samples

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

4.0 Raw Data

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

✓ Yes No N/A

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

✓ Yes No N/A

4.3 Were Yields entered correctly? Yes No N/A

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

5.0 Other

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

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

5.4 Was transcription checked? Yes No N/A

✓ Yes No N/A

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

✓ Yes No N/A

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

✓ Yes No N/A

6.0 Comments on any No response:

Please see NCM # 10-13241

First Level Review

[Signature]

Date

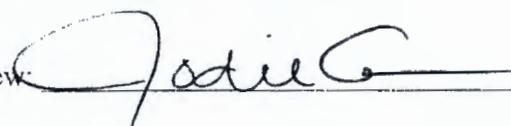
11-3-8

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 8298357

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 Nom

Second Level Review:  Date: 11/3/08

Clouseau Nonconformance Memo



NCM #: 10-13241 NCM Initiated By: John Norton Date Opened: 11/03/2008 Date Closed:	Classification: Anomaly Status: GLREVIEW Production Area: Environmental - Sep Tests: None Lot #'s (Sample #'s): J8J020306 (2), QC Batches: None.,
Nonconformance: Tracer yield out of limits Subcategory: Unknown	

Problem Description / Root Cause

<u>Name</u>	<u>Date</u>	<u>Description</u>
John Norton	11/03/2008	The batch duplicate failed due to a low tracer yield.

Corrective Action

<u>Name</u>	<u>Date</u>	<u>Corrective Action</u>
John Norton	11/03/2008	On consultation with the client the data will be submitted.

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>
----------------------	--------------------	-----------------

TEST AMERICA LABORATORIES, INC.

FLUOR HANFORD		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			C.O.C. # X08-048-58
					Page 1 of 1
Collector Roy Sickle		Contact/Requester Steve Trent		Telephone No. MSIN FAX 509-373-5869	
SAF No. X08-048		Sampling Origin Hanford Site		Purchase Order/Charge Code	
Project Title 2PO1 CHARACTERIZATION		HNF-N-506-18		Ice Chest No. 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Do not combine X SAF samples with other sets. Need SDG to be stand alone. Site-Wide Generator Knowledge Information Form applies.		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1W4Y0		W	9-29-08	0953	2x4000-mL G/P	I129_SEP_LEPS_GS: I-129 (1)	None
B1W4Y0		W	↓	↓	1x1000-mL G/P	NP237_LLE_PLATE_AEA:Np-237(1)	HNO3 to pH <2
B1W4Y0		W	↓	↓	2x1000-mL G/P	Selenium-79	HNO3 to pH <2
B1W4Y0		W	↓	↓	1x1000-mL G/P	UI50_PLATE_AEA: List-1 (3)	HNO3 to pH <2
KX300							
							J85020306
							W05526
							Due 11-14-08

Relinquished By Roy Sickle Date/Time: SEP 30 2008	Received By R. D. Julian Date/Time: SEP 30 2008	Matrix * S = Soil DS = Drum Solid SE = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By R. D. Julian Date/Time: SEP 30 2008	Received By S. Smith Date/Time: SEP 30 2008	
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

Date/Time Received: 093008 1310 GM Screen Result .01
Client: P6W SDG #: W05526 NA [] SAF #: X08-048 NA []
Work Order Number: J8J020306 Chain of Custody # X08-048-83,58
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 [] 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: S. Sm. Va Date: 093008

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[] No action necessary, process as is.

Project Manager _____ Date _____

TestAmerica Laboratories, Inc.

10/24/2008 6:41:40 AM	Sample Preparation/Analysis	Balance Id:1120482733
384868, Pacific Northwest National Laboratory Pacific Northwest National Lab	7Y Uiso PrpRC5016/5086, SepRC5067(5039) SR Uranium-234,235,238 by Alpha Spec SI CLIENT: HANFORD	Pipet #: _____
AnalyDueDate: 10/30/2008 <i>W05526</i>		Sep1 DT/Tm Tech: _____
Batch: 8289516 WATER pCi/L	PM, Quote: SS , 57671	Sep2 DT/Tm Tech: _____
SEQ Batch, Test: None		Prep Tech: ,LaneL

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 KX3QC-1-AE J8J020306-1-SAMP 09/29/2008 13:18			199.90g,in	199.90g	UITS20362 10/08/08,pd 01/20/04,r					
						<i>200</i>				
AmtRec: 4XLP,2X4LP #Containers: 6							Scr:	Alpha: -5.65E-04 uCi/Sa	Beta: 4.83E-04 uCi/Sa	
2 KX3QC-1-AG-X J8J020306-1-DUP 09/29/2008 13:18			200.00g,in	200.00g	UITS20363 10/08/08,pd 01/20/04,r					
										
AmtRec: 4XLP,2X4LP #Containers: 6							Scr:	Alpha: -5.65E-04 uCi/Sa	Beta: 4.83E-04 uCi/Sa	
3 KX3QC-1-AE J8J020306-2-SAMP 09/29/2008 09:53			200.10g,in	200.10g	UITS20364 10/08/08,pd 01/20/04,r					
										
AmtRec: 4XLP,2X4LP #Containers: 6							Scr:	Alpha: 5.14E-04 uCi/Sa	Beta: 7.42E-04 uCi/Sa	
4 KOX09-1-AA-B J8J150000-516-BLK 09/29/2008 13:18			200.00g,in	200.00g	UITS20365 10/08/08,pd 01/20/04,r					
										
AmtRec: #Containers: 1							Scr:	Alpha:	Beta:	
5 KOX09-1-AC-C J8J150000-516-LCS 09/29/2008 13:18			200.10g,in	200.10g	UISG1681 08/21/08,pd 06/15/01,r					
										
AmtRec: #Containers: 1							Scr:	Alpha:	Beta:	

Comments: *PH < 2.0. JJK 102408*

All Clients for Batch: 384868, Pacific Northwest National Laboratory Pacific Northwest National Lab, SS , 57671

KX3QC1AE-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:

TestAmerica Laboratories, Inc.

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10/24/2008 6:41.41 AM

Sample Preparation/Analysis

Balance Id:1120482733

7Y Uiso PrpRC5016/5086, SepRC5067(5039)
 SR Uranium-234,235,238 by Alpha Spec
 5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 10/30/2008

Sep1 DT/Tm Tech: _____

Batch: 8289516

pCi/L

Sep2 DT/Tm Tech: _____

SEQ Batch, Test: None

Prep Tech: ,LaneL



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:
K0X091AA-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:
K0X091AC-LCS:											
U-232	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Uranium	RDL:	pCi/L	LCL:70	UCL:130	RPD:20
KX3QC1AE-SAMP Calc Info:											
Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B											
K0X091AA-BLK:											
Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B											
K0X091AC-LCS:											
Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B											

Approved By _____ Date: _____

10/29/2008 1:44:52 PM

ICOC Fraction Transfer/Status Report

ByDate: 10/30/2007, 11/3/2008, Batch: '8289516', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting	Comments
8289516					
AC		Rev1C	LaneL	10/24/2008 6:30:08	
SC			wagarr	IsBatched 10/15/2008 4:16:55 PM	ICOC_RADCALC v4.8.34
SC			LaneL	InPrep 10/24/2008 6:30:08 AM	RL-PRP-004 REVISION 0
SC			LaneL	Prep1C 10/24/2008 6:42:05 AM	RL-PRP-004 REVISION 0
SC			AshworthA	Prep2C 10/24/2008 7:22:27 PM	PRP-010 REVISION 0
SC			AshworthA	Sep2C 10/28/2008 1:34:26 PM	ALP-015 REVISION 0
SC			ClarkR	InCnt1 10/28/2008 1:43:21 PM	RL-CI-008 REVISION 0
SC			ClarkR	InCnt1 10/28/2008 1:56:44 PM	RL-CI-008 REVISION 0
SC			ClarkR	CalcC 10/29/2008 11:19:16 AM	RL-CI-008 REVISION 0
SC			rortonj	Rev1C 10/29/2008 1:44:42 PM	RL-DR-001 REV 0
AC			LaneL	10/24/2008 6:42:05	
AC			AshworthA	10/24/2008 7:22:27	
AC			AshworthA	10/28/2008 1:34:26	
AC			ClarkR	10/28/2008 1:43:21	
AC			ClarkR	10/28/2008 1:56:44	
AC			ClarkR	10/29/2008 11:19:16	
AC			rortonj	10/29/2008 1:44:42	

AC: Accepting Entry; SC: Status Change

TestAmerica Richland
Richland Wa.

TestAmerica Laboratories, Inc.

10/24/2008 6:56:51 AM **Sample Preparation/Analysis** Balance Id:1120482733
 384868, Pacific Northwest National Laboratory , KO Np-237 PrpRC5086, SepRC5064(5003) Pipet #: 10-28-08 12:13:27pm
 Pacific Northwest National Lab XW Neptunium-237 with tracer by alpha spec
AnalyDueDate: 10/30/2008 W05526 5I CLIENT: HANFORD Sep1 DT/Tm Tech:
Batch: 8289518 WATER pCi/L PM, Quote: SS , 57671 Sep2 DT/Tm Tech:
 SEQ Batch, Test: None Prep Tech: ,Lanel



Work Ord, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	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 KX3QC-1-AA J8J020306-1-SAMP 09/29/2008 13:18	200.00g		200.00g	200.00g	NPTA7210 10/10/08,pd 09/17/08,r							200 Scr: Alpha: -5.65E-04 uCi/Sa Beta: 4.83E-04 uCi/Sa
2 KX3QC-1-AH-X J8J020306-1-DUP 09/29/2008 13:18	200.00g		200.00g	200.00g	NPTA7211 10/10/08,pd 09/17/08,r							Scr: Alpha: -5.65E-04 uCi/Sa Beta: 4.83E-04 uCi/Sa
3 KX3QQ-1-AA J8J020306-2-SAMP 09/29/2008 09:53	200.00g		200.00g	200.00g	NPTA7212 10/10/08,pd 09/17/08,r							Scr: Alpha: 5.14E-04 uCi/Sa Beta: 7.42E-04 uCi/Sa
4 KOX1D-1-AA-B J8J150000-518-BLK 09/29/2008 13:18	199.90g		199.90g	199.90g	NPTA7213 10/10/08,pd 09/17/08,r							Scr: Alpha: Beta:
5 KOX1D-1-AC-C J8J150000-518-LCS 09/29/2008 13:18	199.90g		199.90g	199.90g	NPSE0491 08/25/08,pd 06/01/01,r							Scr: Alpha: Beta:

Comments: PH < 2.0, PR 102408

All Clients for Batch:
 384868, Pacific Northwest National Laboratory Pacific Northwest National Lab, SS , 57671

KX3QC1AA-SAMP Constituent List:
 Np-237 RDL:0.6 pCi/L LCL: UCL: RPD:

TestAmerica Laboratories, Inc.

10/24/2008 5:56:52 AM

Sample Preparation/Analysis

Balance Id:1120482733

KO Np-237 PrpRC5086, SepRC5064(5003)
 XW Neptunium-237 with tracer by alpha spec
 5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 10/30/2008

Sep1 DT/Tm Tech: _____

Batch: 8289518

pCi/L

Sep2 DT/Tm Tech: _____

SEQ Batch, Test: None

Prep Tech: ,LaneL



Work Ord, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
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K0X1D1AA-BLK:
 Np-237 RDL:0.6 pCi/L LCL: UCL: RPD:

K0X1D1AC-LCS:

KX3QC1AA-SAMP Calc Info:
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

K0X1D1AA-BLK:
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

K0X1D1AC-LCS:
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

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10/31/2008 11:57:12 AM

ICOC Fraction Transfer/Status Report

ByDate: 11/1/2007, 11/5/2008, Batch: '8289518', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
8289518				
AC	Rev1C	LaneL	10/24/2008 6:46:13	
SC		wagarr	IsBatched 10/15/2008 4:16:55 PM	ICOC_RADCALC v4.8.34
SC		LaneL	InPrep 10/24/2008 6:46:13 AM	RL-PRP-004 REVISION 0
SC		LaneL	Prep1C 10/24/2008 6:57:48 AM	RL-PRP-004 REVISION 0
SC		Barcotl	InSep1 10/29/2008 1:57:07 PM	RL-ALP-006 REVISION 0
SC		Barcotl	Sep1C 10/29/2008 1:57:16 PM	RL-ALP-006 REVISION 0
SC		Barcotl	InSep2 10/29/2008 1:57:25 PM	ALP-016 REV SION 0
SC		Barcotl	Sep2C 10/29/2008 1:57:36 PM	ALP-016 REV SION 0
SC		DAWKINSO	InCnt1 10/29/2008 7:57:55 PM	RL-CI-008 REV SION 0
SC		DAWKINSO	CalcC 10/31/2008 12:22:24 AM	RL-CI-008 REV SION 0
SC		nortonj	Rev1C 10/31/2008 11:57:06 AM	RL-DR-001 REV 0
AC		LaneL	10/24/2008 6:57:48	
AC		Barcotl	10/29/2008 1:57:07	
AC		Barcotl	10/29/2008 1:57:16	
AC		Barcotl	10/29/2008 1:57:25	
AC		Barcotl	10/29/2008 1:57:36	
AC		DAWKINSO	10/29/2008 7:57:55	
AC		DAWKINSO	10/31/2008 12:22:24	
AC		nortonj	10/31/2008 11:57:06	

AC: Accepting Entry; SC: Status Change

TestAmerica Richland
Richland Wa.

TestAmerica Laboratories, Inc.

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10/24/2008 9:40:31 AM		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: 10/30/2008 <i>W05526</i>				Sep1 DT/Tm Tech: _____			
Batch: 8289520 WATER pCi/L		PM, Quote: SS , 57671		Sep2 DT/Tm Tech: _____			
SEQ Batch, Test: None				Prep Tech: ,Lanel			

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 KX3QC-1-AF J8J020306-1-SAMP 09/29/2008 13:18 AmtRec: 4XLP,2X4LP #Containers: 6	500.00g,in	500.00g,in	ITA7663 09/15/08				L2	1603	10/27/08 m	
						37.9 100				
								Scr: Alpha: -5.65E-04 uCi/Sa	Beta: 4.83E-04 uCi/Sa	
2 KX3QC-1-AF J8J020306-2-SAMP 09/29/2008 09:53 AmtRec: 4XLP,2X4LP #Containers: 6	499.90g,in	499.90g,in	ITA7664 09/15/08				L2	18153	10/27/08 m	
						38.5				
								Scr: Alpha: 5.14E-04 uCi/Sa	Beta: 7.42E-04 uCi/Sa	
3 KX3QC-1-AG-X J8J020306-2-DUP 09/29/2008 09:53 AmtRec: 4XLP,2X4LP #Containers: 6	500.00g,in	500.00g,in	ITA7665 09/15/08				L2	2007	10/27/08 m	
						37.7				
								Scr: Alpha: 5.14E-04 uCi/Sa	Beta: 7.42E-04 uCi/Sa	
4 K0X1H-1-AA-B J8J150000-520-BLK 09/29/2008 09:53 AmtRec: #Containers: 1	500.00g,in	500.00g,in	ITA7666 09/15/08				L2	2153	10/27/08 m	
						38.0				
								Scr: Alpha:	Beta:	
5 K0X1H-1-AC-C J8J150000-520-LCS 09/29/2008 09:53 AmtRec: #Containers: 1	500.00g,in	500.00g,in	ISB0293 06/16/08				L2	0002	10/27/08 m	
						37.8				
								Scr: Alpha:	Beta:	

Comments: *PH 2/10/2008*

All Clients for Batch:
384868, Pacific Northwest National Laboratory Pacific Northwest National Lab, SS , 57671

KX3QC1AF-SAMP Constituent List:
I-129 RDL:5.00E+00 pCi/L LCL:70 UCL:130 RPD:20

TestAmerica 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-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: 5
Prep_SamplePrep v4.8.34

TestAmerica Laboratories, Inc.

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10/24/2008 9:40:32 AM

Sample Preparation/Analysis

Balance Id:1120482733

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

Pipet #:

AnalyDueDate: 10/30/2008

Sep1 DT/Tm Tech:

Batch: 8289520
 SEQ Batch, Test: None

pCi/L

Sep2 DT/Tm Tech:

Prep Tech: ,LaneL



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:
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K0X1H1AA-BLK:

I-129 RDL:5.00E+00 pCi/L LCL: UCL: RPD:

K0X1H1AC-LCS:

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

KX3QC1AF-SAMP Calc Info:

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

K0X1H1AA-BLK:

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

K0X1H1AC-LCS:

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

Approved By _____ Date: _____

10/29/2008 1:18:08 PM

ICOC Fraction Transfer/Status Report

ByDate: 10/30/2007, 11/3/2008, Batch: '8289520', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting	Comments
8289520					
AC		Rev1C	LaneL	10/24/2008 9:32:39	
SC		wagarr	IsBatched	10/15/2008 4:16:55 PM	ICOC_RADCALC v4.8.34
SC		LaneL	InPrep	10/24/2008 9:32:39 AM	RL-PRP-004 REVISION 0
SC		LaneL	Prep1C	10/24/2008 9:41:19 AM	RL-PRP-004 REVISION 0
SC		EostedD	Prep2C	10/27/2008 2:20:58 PM	RL-GAM-002 REVISION 0
SC		ClarkR	InCnt1	10/27/2008 2:25:35 PM	RL-CI-007 REVISION 0
SC		DAWKINSO	CalcC	10/29/2008 12:41:46 AM	RL-CI-007 REVISION 0
SC		nortonj	Rev1C	10/29/2008 1:18:02 PM	RL-DR-001 REV 0
AC		LaneL		10/24/2008 9:41:19	
AC		BostedD		10/27/2008 2:20:58	
AC		ClarkR		10/27/2008 2:25:35	
AC		DAWKINSO		10/29/2008 12:41:46	
AC		nortonj		10/29/2008 1:18:02	

AC: Accepting Entry; SC: Status Change

TestAmerica Richland
Richland Wa.



RE-ANALYSIS REQUEST

DUE DATE 10-30

CUSTOMER PGW

ANALYSIS se-79

MATRIX H₂O

LOT NUMBER +8J020306

SAMPLE DELIVERY GROUP WO 5526

OLD BATCH NUMBER 8289547

NEW BATCH NUMBER 8298352

LAB SAMPLE ID	CLIENT ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1) ALL		INCORRECT REAGENTS USED
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.

TestAmerica Laboratories, Inc.

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10/24/2008 12:18:35 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National Lab

CY Se-79 PrpRC5016, SepRC5043
TM Selenium-79 by Liquid Scint
5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 10/30/2008

Sep1 DT/Tm Tech:

Batch: 8298352 WATER pCi/L PM, Quote: SS , 57671
SEQ Batch, Test: None All Tests: 8289516 7YSR, 8289518 KOXW, 8289520 BNTB, 8289547 CYTM, 8298352 CYTM,

Sep2 DT/Tm Tech:

Prep Tech: ,Barcott

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 KX3QC-2-AD J8J020306-1-SAMP 09/29/2008 13:18		200.10g,in	SETA0370 10/23/08		200				
									
		AmtRec: 4XLP,2X4LP	#Containers: 6				Scr: Alpha: -5.65E-04 uCi/Sa	Beta: 4.83E-04 uCi/Sa	
2 KX3QQ-2-AD J8J020306-2-SAMP 09/29/2008 09:53		200.00g,in	SETA0371 10/23/08						
									
		AmtRec: 4XLP,2X4LP	#Containers: 6				Scr: Alpha: 5.14E-04 uCi/Sa	Beta: 7.42E-04 uCi/Sa	
3 KX3QQ-2-AH-X J8J020306-2-DUP 09/29/2008 09:53		200.00g,in	SETA0372 10/23/08						
									
		AmtRec: 4XLP,2X4LP	#Containers: 6				Scr: Alpha: 5.14E-04 uCi/Sa	Beta: 7.42E-04 uCi/Sa	
4 K1JLR-1-AA-B J8J240000-352-BLK 09/29/2008 13:18		200.00g,in	SETA0373 10/23/08						
									
		AmtRec:	#Containers: 1				Scr: Alpha:	Beta:	
5 K1JLR-1-AC-C J8J240000-352-LCS 09/29/2008 13:18			SETA0369						
									
		AmtRec:	#Containers: 1				Scr: Alpha:	Beta:	

Comments: LB 10-24-08

All Clients for Batch:
384868, Pacific Northwest National Laboratory Pacific Northwest National Lab, SS , 57671

KX3QC2AD-SAMP Constituent List:

TestAmerica Laboratories, Inc.

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10/24/2008 12:18:36 PM

Sample Preparation/Analysis

CY Se-79 PrpRC5016, SepRC5043
 TM Selenium-79 by Liquid Scint
 5I CLIENT: HANFORD

Balance Id:

Pipet #:

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech:

AnalyDueDate: 10/30/2008

Batch: 8298352
 SEQ Batch, Test: None

pCi/L



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:
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K1JLR1AA-BLK:

K1JLR1AC-LCS:

KX3QC2AD-SAMP Calc Info:

Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
K1JLR1AA-BLK: Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
K1JLR1AC-LCS: Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

Approved By _____ Date: _____

11/3/2008 9:56:09 AM

ICOC Fraction Transfer/Status Report

ByDate: 11/4/2007, 11/8/2008, Batch: '8298352', User: 'ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting	Comments
8298352					
AC		Rev1C	Barcotl	10/24/2008 12:18:56	
SC			nortonj	IsBatched 10/24/2008 11:01:23 AM	ICOC_RADCALC v4.8.34
SC			Barcotl	InPrep 10/24/2008 12:18:56 PM	RL-PRP-004 REV SION 0
SC			Barcotl	Prep1C 10/24/2008 12:19:11 PM	RL-PRP-004 REV SION 0
SC			Barcotl	InSep1 10/29/2008 8:28:58 AM	RL-LSC-012 REV SION 0
SC			Barcotl	Sep1C 10/29/2008 8:29:18 AM	RL-LSC-012 REV SION 0
SC			ClarkR	InCnt1 10/29/2008 9:12:35 AM	RL-CI-005 REV SION 0
SC			BlackCL	CalcC 11/2/2008 12:28:43 PM	RL-CI-005 REV SION 0
SC			nortonj	Rev1C 11/3/2008 9:55:50 AM	RL-DR-001 REV 0
AC			Barcotl	10/24/2008 12:19:11	
AC			Barcotl	10/29/2008 8:28:58	
AC			Barcotl	10/29/2008 8:29:18	
AC			ClarkR	10/29/2008 9:12:35	
AC			BlackCL	11/2/2008 12:28:43	
AC			nortonj	11/3/2008 9:55:50	

AC: Accepting Entry; SC: Status Change

TestAmerica Richland
Richland Wa.