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 174 *Pages*

Report Nbr: 53970

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W06493	A13-010	B2M337	J2J300416-1	MW6JQ1AA	9MW6JQ10	2318065
	W13-010	B2M1R1	J2J300428-1	MW6N31AA	9MW6N310	2304121
		B2M1R7	J2J300428-2	MW6N41AA	9MW6N410	2304121
	S13-010	B2M531	J2J300441-1	MW6T51AA	9MW6T510	2318065
		B2M5B0	J2J300441-2	MW6T61AA	9MW6T610	2318065
		B2M5P2	J2J300441-3	MW6T71AA	9MW6T710	2318065
		B2M5L7	J2J300441-4	MW6T81AC	9MW6T810	2318068
		B2MDJ0	J2K010437-1	MW7H31AA	9MW7H310	2306092
		B2M5J0	J2K010446-1	MW7LL2AA	9MW7LL20	2318064
		B2MDJ8	J2K020408-1	MW7P71AA	9MW7P710	2318060
		B2MDJ8	J2K020408-1	MW7P71AC	9MW7P710	2318061
		B2MDJ8	J2K020408-1	MW7P71AE	9MW7P710	2318065
		B2MDJ8	J2K020408-1	MW7P71AF	9MW7P710	2318058
		B2MDJ8	J2K020408-1	MW7P71AG	9MW7P710	2318062
		B2MDJ8	J2K020408-1	MW7P71AH	9MW7P710	2318066

Comments:

DECEMBER 12, 2012

Report Nbr: 53970

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W06493	S13-010	B2MDJ8	J2K020408-1	MW7P71AJ	9MW7P710	2318069
	X13-001	B2M744	J2K050431-1	MW8CT1AA	9MW8CT10	2318065
	I13-005	B2MNX4	J2K060433-1	MW8QX1AA	9MW8QX10	2318065
		B2MNX5	J2K060433-2	MW8Q01AA	9MW8Q010	2318065
	I13-007	B2MXL6	J2K070446-1	MW87H1AA	9MW87H10	2312086
		B2MXL6	J2K070446-1	MW87H1AC	9MW87H10	2318067
		B2MXL6	J2K070446-1	MW87H1AD	9MW87H10	2318060
		B2MXL6	J2K070446-1	MW87H1AE	9MW87H10	2318061
		B2MXL6	J2K070446-1	MW87H1AH	9MW87H10	2318062
		B2MXL6	J2K070446-1	MW87H1AJ	9MW87H10	2318066
		B2MXL6	J2K070446-1	MW87H1AK	9MW87H10	2318059
		B2MXL6	J2K070446-1	MW87H2AF	9MW87H20	2334061
	I13-005	B2MP14	J2K080419-1	MW9F41AA	9MW9F410	2318065
		B2MP39	J2K080445-1	MW9MQ1A	9MW9MQ10	2318065

Comments:

DECEMBER 12, 2012

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

TestAmerica Laboratories, Inc.

CH2M Hill Plateau Remediation Company
P.O. Box 1600
Mail Stop – R3-60
Richland, WA 99352

December 12, 2012

Attention: Scot Fitzgerald

SAF Number	:	A13-010, I13-005, I13-007, S13-010, W13-010, X13-001
Date SDG Closed	:	November 12, 2012
Number of Samples	:	Sixteen (16)
Sample Type	:	Water
SDG Number	:	W06493
Data Deliverable	:	30-Day / Summary

CASE NARRATIVE

I. Introduction

Between October 29, 2012 and November 8, 2012 sixteen water samples were received at TestAmerica (TARL). Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the CH2M specific IDs:

CH2M ID#	TARL ID#	DATE OF RECEIPT	MATRIX
B2M337	MW6JQ	10/29/12	WATER
B2M1R1	MW6N3	10/30/12	WATER
B2M1R7	MW6N4	10/30/12	WATER
B2M531	MW6T5	10/30/12	WATER
B2M5B0	MW6T6	10/30/12	WATER
B2M5P2	MW6T7	10/30/12	WATER
B2M5L7	MW6T8	10/30/12	WATER
B2MDJ0	MW7H3	11/01/12	WATER
B2M5J0	MW7LL	10/31/12	WATER
B2MDJ8	MW7P7	11/01/12	WATER
B2M744	MW8CT	11/05/12	WATER
B2MNX4	MW8QX	11/06/12	WATER
B2MNX5	MW8Q0	11/06/12	WATER
B2MXL6	MW87H	11/07/12	WATER

B2MP14	MW9F4	11/07/12	WATER
B2MP39	MW9MQ	11/08/12	WATER

II. Sample Receipt

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

During the bi-weekly phone call on September 5, 2012 TARL was notified that all groundwater samples received between October 1, 2012 – December 31, 2012 will have a 30 day turnaround time regardless if the chain of custodies have a turn around time that is greater than 30 days.

III. Analytical Results/Methodology

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

The requested analyses were:

Alpha Spectroscopy
Plutonium-238, -239/240 by method RL-ALP-002
Uranium 234, 235 and 238 by method RL-ALP-015
Gas Proportional Counting
Gross Alpha by method RL-GPC-001
Gross Beta by method RL-GPC-001
Strontium-90 by method RL-GPC-003
Gamma Spectroscopy
Gamma Spec (LL) by method RL-GAM-001
Gamma Spec by method RL-GAM-001
Iodine-129 (LL) by method RL-GAM-002
Liquid Scintillation Counting
Carbon-14 by method RL-LSC-008
Technetium-99 by TEVA method RL-LSC-014
Tritium by method RL-LSC-005
Mid Level Tritium by method RL-LSC-005
Laser Induced Phosphorimetry
Total Uranium by method RL-KPA-003
Chemical Analysis
Hexavalent Chromium by EPA method 7196A
Total Coliform by method 9223

IV. Quality Control

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

QC and sample results are reported in the same units.

V. Comments

Alpha Spectroscopy

Plutonium-238, -239/240 by method RL-ALP-002:
Sample B2MXL6 was inadvertently not analyzed. The sample will be analyzed and reported under W06493I. For more details refer to the SIR (CHPRC Tracking Number: SDR13-063) that is included in this report. Except as noted; the LCS, batch blank, sample and sample duplicate (B2MDJ8) results are within contractual requirements.

Uranium 234, 235 and 238 by method RL-ALP-015:
The LCS, batch blank, sample and sample duplicate (B2MXL6) results are within contractual requirements.

Gas Proportional Counting

Gross Alpha by method RL-GPC-001:
Sample B2MXL6 was analyzed with a reduced aliquot based on weight screen result. Except as noted, the LCS, batch blank, samples and sample duplicate (B2MDJ8) results are within contractual requirements.

Gross Beta by method RL-GPC-001:
Sample B2MDJ8, B2MXL6 and B2MXL6 DUP were analyzed with reduced aliquots based on weight screen results. Except as noted, the LCS, batch blank, samples and sample duplicate (B2MXL6) results are within contractual requirements.

Strontium-90 by method RL-GPC-003:
The LCS, batch blank, samples and sample duplicate (B2MDJ8) results are within contractual requirements.

Gamma Spectroscopy

Gamma Spec (LL) by method RL-GAM-001:
There was insufficient volume for a duplicate. Sample B2M5J0 was recounted on a different detector for the duplicate (B2M5J0 DUP). The sample/sample duplicate were recounted to verify activity. The recounts were acceptable. Except as noted, the LCS, batch blank, samples and sample duplicate (B2M5J0) results are within contractual requirements.

Gamma Spec by method RL-GAM-001:
There was insufficient volume for a duplicate. Sample B2MXL6 was recounted on a different detector for the duplicate (B2MXL6 DUP). The batch was reanalyzed since the LCS recoveries were low. The reanalysis is acceptable. Except as noted, the LCS, batch blank, samples and sample duplicate (B2MXL6) results are within contractual requirements.

Iodine-129 (LL) by method RL-GAM-002:
The LCS, batch blank, samples and sample duplicate (B2M337) results are within contractual requirements.

Liquid Scintillation Counting

Carbon-14 by method RL-LSC-008:
TARL was given permission to send the C14 fractions to TestAmerica St. Louis. For more details refer to the SIR (CHPRC Tracking Number: SDR13-039) that is included in this report.

Technetium-99 by TEVA method RL-LSC-014:
The LCS, batch blank, samples, sample duplicate (B2MDJ8) and sample matrix spike (B2MXL6) results are within contractual requirements.

Tritium by method RL-LSC-005:
The LCS, batch blank, samples and sample duplicate (B2MXL6) results are within contractual requirements.

Mid Level Tritium by method RL-LSC-005:
The LCS was recounted due to a low recovery value. The recount is acceptable. Except as noted, the LCS, batch blank, samples and sample duplicate (B2M5L7) results are within contractual requirements.

Total Uranium

Total Uranium by method RL-KPA-003:
The LCS, batch blank, samples, sample duplicate (B2MDJ8), and sample matrix spike (B2MDJ8) results are within contractual requirements.

Chemical Analysis

Hexavalent Chromium by EPA method 7196A
BATCH 2306092
The LCS, batch blank, samples, sample duplicate (B2MDJ0) sample matrix spike (B2MDJ0) and matrix spike duplicate (B2MDJ0) results are within contractual requirements.

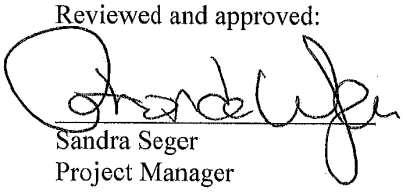
BATCH 2312086
The LCS, batch blank, samples, sample duplicate (B2MXL6) sample matrix spike (B2MXL6) and matrix spike duplicate (B2MXL6) results are within contractual requirements.

Total Coliform by method 9223
The LCS, batch blank, samples and sample duplicate (B2M1R1) 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.

CH2M Hill Plateau Remediation Company
December 12, 2012

Reviewed and approved:



Sandra Seger
Project Manager

SAMPLE ISSUE RESOLUTION

SIR NUM	SDR13-039
REV NUM	0
DATE INITIATED	11/13/2012

SAMPLE EVENT INFORMATION

SAF NUM(S)	S13-010
OPERABLE UNIT(S)	NONE
PROJECT(S)	SURV13
SAMPLE EVENT TITLE(S)	SURV13
LABORATORY	TestAmerica Incorporated, Richland

SAMPLING INFORMATION

NUMBER OF SAMPLES	1
SAMPLE NUMBERS	B2MDJ8
SAMPLE MATRIX	WATER
COLLECTION DATE	11/1/2012 - 11/1/2012
SDG NUM	W06493

ISSUE BACKGROUND

CLASS	Laboratory Issue
TYPE	Sample Diversion Initiated by Laboratory
DESCRIPTION	TARL is currently investigating the C14_LSC: C-14 (1) method due to the low results reported for the CY2011 blind samples. TARL would like permission to send the C14 fractions to TASL. TASL will analyze the C14 sample and submit the final report & EDD for the SDG included on this SIR.

DISPOSITION

DESCRIPTION	PROPOSED DISPOSITION: TARL will initiate SIR and ship the sample to TASL. TASL will report the sample discussed above as W06493I and include comments in the case narrative.
JUSTIFICATION	ACCEPTED DISPOSITION: Accept proposed resolution. SUBMITTED BY: Sandra Seger/TARL DATE: 11/13/12 ACCEPTED BY: Karen Waters-Husted/CHPRC DATE: 11/13/12

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SAMPLE ISSUE RESOLUTION

SIR NUM	SDR13-063
REV NUM	0
DATE INITIATED	12/12/2012

SAMPLE EVENT INFORMATION

SAF NUM(S)	I13-007
OPERABLE UNIT(S)	100-NR-2
PROJECT(S)	CERC13
SAMPLE EVENT TITLE(S)	CERC13
LABORATORY	TestAmerica Incorporated, Richland

SAMPLING INFORMATION

NUMBER OF SAMPLES	1
SAMPLE NUMBERS	B2MXL6
SAMPLE MATRIX	WATER
COLLECTION DATE	11/7/2012 - 11/7/2012
SDG NUM	W06493

ISSUE BACKGROUND

CLASS	Laboratory Issue
TYPE	Other Laboratory Issue (Specify)
DESCRIPTION	Sample B2MXL6 was inadvertently missed during batching and was not analyzed for Isotopic Plutonium as requested.

DISPOSITION

DESCRIPTION	PROPOSED DISPOSITION: Analyze sample B2MXL6 for Isotopic Plutonium and report under SDG W06493I. Report SDG W06493 and note in narrative that sample B2MXL6 for Plutonium will be reported when the analysis is completed. Initiate SIR and include comments in the case narratives.
JUSTIFICATION	ACCEPTED DISPOSITION: Accept proposed resolution. SUBMITTED BY: Rhonda Wager/TARL DATE: 12/12/12 ACCEPTED BY: Karen Waters-Husted/CHPRC DATE: 12/12/12

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	RL-GAM-001
EPA 900.0	Alpha & Beta	RL-GPC-001
EPA 00-02	Gross Alpha (Coprecipitation)	RL-GPC-002
EPA 903.0	Total Alpha Radium (Ra-226)	RL-RA-002
EPA 903.1	Ra-226	RL-RA-001
EPA 904.0	Ra-228	RL-RA-001
EPA 905.0	Sr-89/90	RL-GPC-003
ASTM D5174	Uranium	RL-KPA-003
EPA 906.0	Tritium	RL-LSC-005

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

Uncertainty Estimation

TestAmerica Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, R = constants * f(x,y,z,...). The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_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/?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 (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or TestAmerica.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) ***u_c - Combined Uncertainty.***	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, *u_c the combined uncertainty.* The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or 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 * Sqrt(2*(BkgrndCnt/BkgrndCntMin)/SCntMin)) * (ConvFct/(Eff*Yld*Abn*Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC|MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. MDC = (4.65 * Sqrt((BkgrndCnt/BkgrndCntMin)/SCntMin) + 2.71/SCntMin) * (ConvFct/(Eff * Yld * Abn * Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the **Work Order** Number.
RER	The equation Replicate Error Ratio = (S-D)/[sqrt($TPUs^2$ + $TPUd^2$)] as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by 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.

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 53970 File Name: h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MW6JQ10	B2M337		MW6-SBB-A1	A13-010	W06493					10/26/2012 14:33

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
2318065	I-129	15046-84-1	5.03E-02	pCi/L	1.2E-01	1.2E-01	U	2.25E-01	88.6	I129LL_SEP_LEPS	3.8739E+00	L	11/20/2012 14:58	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:
9MW6T510	B2M531		MW6-SBB-A1	S13-010	W06493					10/30/2012 10:30

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
2318065	I-129	15046-84-1	3.42E-02	pCi/L	1.3E-01	1.3E-01	U	2.35E-01	91.1	I129LL_SEP_LEPS	3.865E+00	L	11/20/2012 18:24	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:
9MW6T610	B2M5B0		MW6-SBB-A1	S13-010	W06493					10/29/2012 13:36

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
2318065	I-129	15046-84-1	9.71E-02	pCi/L	8.8E-02	8.8E-02	U	1.77E-01	97.3	I129LL_SEP_LEPS	3.7068E+00	L	11/20/2012 18:25	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:
9MW6T710	B2M5P2		MW6-SBB-A1	S13-010	W06493					10/29/2012 15:13

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
2318065	I-129	15046-84-1	4.44E-02	pCi/L	1.3E-01	1.3E-01	U	2.33E-01	92.2	I129LL_SEP_LEPS	3.7075E+00	L	11/20/2012 21:50	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:
9MW6T810	B2M5L7		MW6-SBB-A1	S13-010	W06493					10/29/2012 15:13

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
2318068	H-3	10028-17-8	-1.01E+00	pCi/L	1.1E+01	2.2E+01	U	2.34E+01	100.0	906.0ML_H3_LSC	1.001E-02	L	11/15/2012 09:32	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:
9MW7LL20	B2M5J0		MW6-SBB-A1	S13-010	W06493					10/30/2012 14:39

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
2318064	BE-7	13966-02-4	3.55E+00	pCi/L	8.9E+00	8.9E+00	U	1.68E+01		GAMMALL_GS	2.0003E+00	L	11/27/2012 13:22	I
2318064	CO-60	10198-40-0	-2.25E-01	pCi/L	1.0E+00	1.0E+00	U	1.83E+00		GAMMALL_GS	2.0003E+00	L	11/27/2012 13:22	I
2318064	CS-134	13967-70-9	6.37E-01	pCi/L	1.1E+00	1.1E+00	U	2.18E+00		GAMMALL_GS	2.0003E+00	L	11/27/2012 13:22	I
2318064	CS-137	10045-97-3	4.38E-01	pCi/L	1.0E+00	1.0E+00	U	1.90E+00		GAMMALL_GS	2.0003E+00	L	11/27/2012 13:22	I
2318064	EU-152	14683-23-9	1.57E+00	pCi/L	2.2E+00	2.2E+00	U	4.11E+00		GAMMALL_GS	2.0003E+00	L	11/27/2012 13:22	I
2318064	EU-154	15585-10-1	6.34E-02	pCi/L	3.2E+00	3.2E+00	U	6.00E+00		GAMMALL_GS	2.0003E+00	L	11/27/2012 13:22	I

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.

TestAmerica Laboratories, Inc.

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DECEMBER 12, 2012

2318064	EU-155	14391-16-3	-8.16E-01	pCi/L	1.4E+00	1.4E+00	U	2.30E+00	GAMMALL_GS	2.0003E+00	L	11/27/2012	13:22 I
2318064	K-40	13966-00-2	-1.91E+01	pCi/L	3.0E+01	3.0E+01	U	6.32E+01	GAMMALL_GS	2.0003E+00	L	11/27/2012	13:22 I
2318064	RU-106	13967-48-1	-7.71E-01	pCi/L	8.0E+00	8.0E+00	U	1.42E+01	GAMMALL_GS	2.0003E+00	L	11/27/2012	13:22 I
2318064	SB-125	14234-35-6	2.18E+00	pCi/L	2.6E+00	2.6E+00	U	4.76E+00	GAMMALL_GS	2.0003E+00	L	11/27/2012	13:22 I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MW7P710	B2MDJ8		MW6-SBB-A1	S13-010	W06493					11/01/2012 09:30

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
2318060	ALPHA	12587-46-1	9.07E-01	pCi/L	9.8E-01	1.0E+00	U	1.65E+00	100.0	9310_ALPHABETA	2.004E-01	L	11/20/2012 15:37	I
2318061	BETA	12587-47-2	7.35E+00	pCi/L	1.5E+00	1.8E+00		2.17E+00	100.0	9310_ALPHABETA	1.92E-01	L	11/20/2012 15:24	I
2318065	I-129	15046-84-1	5.41E-02	pCi/L	1.0E-01	1.0E-01	U	1.96E-01	79.2	I129LL_SEP_LEPS	3.8581E+00	L	11/20/2012 21:51	I
2318058	PU-238	13981-16-3	-2.36E-02	pCi/L	7.6E-02	7.6E-02	U	2.37E-01	92.0	PUISO_PLATE_AE	2.021E-01	L	11/20/2012 19:59	I
2318058	PU-239	PU-239/240	1.43E-03	pCi/L	7.7E-02	7.7E-02	U	2.68E-01	92.0	PUISO_PLATE_AE	2.021E-01	L	11/20/2012 19:59	I
2318062	SR-90	10098-97-2	1.35E-01	pCi/L	3.4E-01	3.4E-01	U	6.99E-01	71.0	SRISO_SEP_PRE	1.0005E+00	L	11/29/2012 10:34	I
2318066	TC-99	14133-76-7	-1.12E+00	pCi/L	4.2E+00	5.8E+00	U	1.02E+01	100.0	TC99_ETVDSK_LS	1.253E-01	L	11/17/2012 01:40	I
2318069	Uranium	7440-61-1	2.10E+00	ug/L	2.1E-01	2.1E-01		8.38E-02		UTOT_KPA	2.50E-02	ML	11/26/2012 21:14	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:
9MW87H10	B2MXL6		MW6-SBB-A1	I13-007	W06493					11/07/2012 10:21

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
2318067	H-3	10028-17-8	3.10E+04	pCi/L	6.4E+02	1.2E+03		3.68E+02	100.0	906.0_H3_LSC	5.008E-03	L	11/16/2012 13:30	I
2318060	ALPHA	12587-46-1	2.34E+00	pCi/L	1.5E+00	1.6E+00		2.33E+00	100.0	9310_ALPHABETA	1.215E-01	L	11/20/2012 15:37	I
2318061	BETA	12587-47-2	1.27E+03	pCi/L	1.3E+01	1.6E+02		2.28E+00	100.0	9310_ALPHABETA	1.886E-01	L	11/20/2012 15:24	I
2318062	SR-90	10098-97-2	6.95E+02	pCi/L	5.7E+00	1.0E+02		6.92E-01	72.5	SRISO_SEP_PRE	1.001E+00	L	11/29/2012 10:34	I
2318066	TC-99	14133-76-7	3.12E+01	pCi/L	5.2E+00	7.5E+00		1.02E+01	100.0	TC99_ETVDSK_LS	1.251E-01	L	11/17/2012 03:46	I
2318059	U-234	13966-29-5	1.35E+00	pCi/L	1.9E-01	2.7E-01		4.67E-02	86.5	UISO_PLATE_AEA	2.006E-01	L	11/21/2012 01:08	I
2318059	U-235	15117-96-1	2.45E-02	pCi/L	2.8E-02	2.8E-02	U	3.84E-02	86.5	UISO_PLATE_AEA	2.006E-01	L	11/21/2012 01:08	I
2318059	U-238	U-238	1.10E+00	pCi/L	1.7E-01	2.3E-01		3.84E-02	86.5	UISO_PLATE_AEA	2.006E-01	L	11/21/2012 01:08	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:
9MW87H20	B2MXL6		MW6-SBB-A1	I13-007	W06493					11/07/2012 10:21

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
2334061	BE-7	13966-02-4	-1.89E+00	pCi/L	1.2E+01	1.2E+01	U	2.16E+01		GAMMA_GS	2.5046E+00	L	12/07/2012 12:24	I

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.

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2334061	CO-60	10198-40-0	1.11E+00	pCi/L	1.6E+00	1.6E+00	U	3.44E+00	GAMMA_GS	2.5046E+00	L	12/07/2012 12:24	I
2334061	CS-134	13967-70-9	1.97E-01	pCi/L	1.3E+00	1.3E+00	U	2.47E+00	GAMMA_GS	2.5046E+00	L	12/07/2012 12:24	I
2334061	CS-137	10045-97-3	-9.86E-01	pCi/L	1.1E+00	1.1E+00	U	1.80E+00	GAMMA_GS	2.5046E+00	L	12/07/2012 12:24	I
2334061	EU-152	14683-23-9	4.60E-01	pCi/L	2.5E+00	2.5E+00	U	4.63E+00	GAMMA_GS	2.5046E+00	L	12/07/2012 12:24	I
2334061	EU-154	15585-10-1	1.68E-02	pCi/L	3.2E+00	3.2E+00	U	6.44E+00	GAMMA_GS	2.5046E+00	L	12/07/2012 12:24	I
2334061	EU-155	14391-16-3	2.10E+00	pCi/L	1.8E+00	1.8E+00	U	3.48E+00	GAMMA_GS	2.5046E+00	L	12/07/2012 12:24	I
2334061	K-40	13966-00-2	-6.14E+00	pCi/L	1.7E+01	1.7E+01	U	3.27E+01	GAMMA_GS	2.5046E+00	L	12/07/2012 12:24	I
2334061	RU-106	13967-48-1	2.26E+00	pCi/L	1.0E+01	1.0E+01	U	1.94E+01	GAMMA_GS	2.5046E+00	L	12/07/2012 12:24	I
2334061	SB-125	14234-35-6	5.55E-02	pCi/L	2.4E+00	2.4E+00	U	4.47E+00	GAMMA_GS	2.5046E+00	L	12/07/2012 12:24	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:
9MW8CT10	B2M744		MW6-SBB-A1	X13-001	W06493					11/05/2012 11:30

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
2318065	I-129	15046-84-1	1.12E-02	pCi/L	1.3E-01	1.3E-01	U	2.26E-01	90.0	I129LL_SEP_LEPS	3.5165E+00	L	11/21/2012 07:24	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:
9MW8Q010	B2MNX5		MW6-SBB-A1	I13-005	W06493					11/05/2012 10:24

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
2318065	I-129	15046-84-1	1.04E+00	pCi/L	3.0E-01	3.0E-01		2.20E-01	89.7	I129LL_SEP_LEPS	3.8847E+00	L	11/21/2012 10:50	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:
9MW8QX10	B2MNX4		MW6-SBB-A1	I13-005	W06493					11/05/2012 10:24

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
2318065	I-129	15046-84-1	1.35E+00	pCi/L	2.6E-01	2.6E-01		8.36E-02	90.0	I129LL_SEP_LEPS	3.9037E+00	L	11/21/2012 07:24	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:
9MW9F410	B2MP14		MW6-SBB-A1	I13-005	W06493					11/06/2012 09:05

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
2318065	I-129	15046-84-1	8.83E-01	pCi/L	2.4E-01	2.4E-01		1.77E-01	90.8	I129LL_SEP_LEPS	3.8693E+00	L	11/21/2012 10:51	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MW9MQ1	B2MP39		MW6-SBB-A1	I13-005	W06493					11/07/2012 09:40

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
2318065	I-129	15046-84-1	-1.45E-02	pCi/L	1.0E-01	1.0E-01	U	1.77E-01	92.2	I129LL_SEP_LEPS	3.9073E+00	L	11/21/2012 14:27	I

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.

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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.

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TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXAR01AB	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 10/26/2012 14:33
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 10/29/2012

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

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
2318065	I-129	9.49E-03	pCi/L	8.5E-02	U	1.58E-01	91.1		I129LL_SEP_L	3.7813E+00	11/21/2012				D
BLK	15046-84-1			8.5E-02						L	14:28				

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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.

Wednesday, December 12, 2012

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXAR11AB	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/01/2012 09:30
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 11/01/2012

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

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
2318066	TC-99	1.17E-01	pCi/L	5.9E+00	U	1.02E+01	100.0		TC99_ETVDSK	1.251E-01	11/17/2012				D
BLK	14133-76-7			4.2E+00						L	05:52				

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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.

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXAR21AB	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/07/2012 10:21
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 11/07/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BG	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
2318067	H-3	-8.13E+01	pCi/L	1.7E+02	U	3.74E+02	100.0		906.0_H3_LSC	5.017E-03	11/16/2012				D
BLK	10028-17-8			1.5E+02						L	16:16				

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.

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TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXAR31AB	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 10/29/2012 15:13
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 10/30/2012

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

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
2318068	H-3	-2.84E+01	pCi/L	2.1E+01	U	2.10E+01	100.0		906.0ML_H3_L	1.0034E-02	11/15/2012				D
BLK	10028-17-8			1.0E+01						L	09:32				

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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.

Wednesday, December 12, 2012

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXAR41AB	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/01/2012 09:30
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 11/01/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BJ	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
2318069	Uranium	1.09E-02	ug/L	1.2E-03	U	8.35E-02			UTOT_KPA	2.51E-02	11/26/2012				D
BLK	7440-61-1			1.2E-03						ML	21:22				

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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.

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXARP1AB	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/01/2012 09:30
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 11/01/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BM	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
2318058	PU-238	-1.20E-02	pCi/L	7.6E-02	U	2.00E-01	95.2		PUISO_PLATE	2.002E-01	11/20/2012				D
BLK	13981-16-3			7.6E-02						L	19:59				
2318058	PU-239	-2.10E-02	pCi/L	7.6E-02	U	2.31E-01	95.2		PUISO_PLATE	2.002E-01	11/20/2012				D
BLK	PU-239/240			7.6E-02						L	19:59				

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.

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TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXARQ1AB	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/07/2012 10:21
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 11/07/2012

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

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
2318059	U-234	4.87E-02	pCi/L	4.4E-02	U	4.92E-02	70.2		UISO_PLATE_	2.001E-01	11/21/2012				D
BLK	13966-29-5			4.3E-02						L	01:08				
2318059	U-235	1.74E-02	pCi/L	2.6E-02	U	4.92E-02	70.2		UISO_PLATE_	2.001E-01	11/21/2012				D
BLK	15117-96-1			2.6E-02						L	01:08				
2318059	U-238	-1.39E-02	pCi/L	2.2E-02	U	7.48E-02	70.2		UISO_PLATE_	2.001E-01	11/21/2012				D
BLK	U-238			2.2E-02						L	01:08				

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.

DECEMBER 12, 2012

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXARR1AB	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/01/2012 09:30
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 11/01/2012

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

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
2318060	ALPHA	-2.24E-01	pCi/L	4.1E-01	U	8.42E-01	100.0		9310_ALPHAB	2.005E-01	11/20/2012				D
BLK	12587-46-1			4.1E-01						L	15:37				

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.

TestAmerica Laboratories, Inc.

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DECEMBER 12, 2012

Wednesday, December 12, 2012

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXART1AB	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/01/2012 09:30
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 11/01/2012

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

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
2318061	BETA	4.20E-01	pCi/L	1.1E+00	U	2.02E+00	100.0		9310_ALPHAB	2.013E-01	11/20/2012				D
BLK	12587-47-2			1.1E+00						L	15:24				

DECEMBER 12, 2012

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.

Wednesday, December 12, 2012

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXARV1AB	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/01/2012 09:30
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 11/01/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BU	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
2318062	SR-90	4.80E-01	pCi/L	3.4E-01	U	6.36E-01	73.7		SRISO_SEP_P	1.0012E+00	11/29/2012				D
BLK	10098-97-2			3.4E-01						L	10:34				

DECEMBER 12, 2012

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.

Wednesday, December 12, 2012

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXARX1AB	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 10/30/2012 14:39
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 10/31/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BW	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
2318064	BE-7	1.78E+00	pCi/L	8.6E+00	U	1.55E+01			GAMMALL_GS	2.001E+00	11/16/2012				D
BLK	13966-02-4			8.6E+00						L	21:07				
2318064	CO-60	-2.26E-01	pCi/L	1.2E+00	U	2.24E+00			GAMMALL_GS	2.001E+00	11/16/2012				D
BLK	10198-40-0			1.2E+00						L	21:07				
2318064	CS-134	3.87E-01	pCi/L	1.2E+00	U	2.17E+00			GAMMALL_GS	2.001E+00	11/16/2012				D
BLK	13967-70-9			1.2E+00						L	21:07				
2318064	CS-137	1.87E-01	pCi/L	1.1E+00	U	1.96E+00			GAMMALL_GS	2.001E+00	11/16/2012				D
BLK	10045-97-3			1.1E+00						L	21:07				
2318064	EU-152	-1.07E+00	pCi/L	3.0E+00	U	5.05E+00			GAMMALL_GS	2.001E+00	11/16/2012				D
BLK	14683-23-9			3.0E+00						L	21:07				
2318064	EU-154	2.76E+00	pCi/L	3.5E+00	U	7.03E+00			GAMMALL_GS	2.001E+00	11/16/2012				D
BLK	15585-10-1			3.5E+00						L	21:07				
2318064	EU-155	-6.02E-02	pCi/L	2.4E+00	U	4.13E+00			GAMMALL_GS	2.001E+00	11/16/2012				D
BLK	14391-16-3			2.4E+00						L	21:07				
2318064	K-40	3.07E+00	pCi/L	1.8E+01	U	3.57E+01			GAMMALL_GS	2.001E+00	11/16/2012				D
BLK	13966-00-2			1.8E+01						L	21:07				
2318064	RU-106	-6.21E+00	pCi/L	1.1E+01	U	1.79E+01			GAMMALL_GS	2.001E+00	11/16/2012				D
BLK	13967-48-1			1.1E+01						L	21:07				
2318064	SB-125	-3.44E-01	pCi/L	2.7E+00	U	4.85E+00			GAMMALL_GS	2.001E+00	11/16/2012				D
BLK	14234-35-6			2.7E+00						L	21:07				

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.

DECEMBER 12, 2012

Wednesday, December 12, 2012

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXF5L1AB	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/07/2012 10:21
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 11/07/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BY	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
2334061	BE-7	-8.20E+00	pCi/L	8.2E+00	U	1.27E+01			GAMMA_GS	2.5001E+00	12/07/2012				D
BLK	13966-02-4			8.2E+00						L	12:25				
2334061	CO-60	5.34E-02	pCi/L	1.2E+00	U	2.41E+00			GAMMA_GS	2.5001E+00	12/07/2012				D
BLK	10198-40-0			1.2E+00						L	12:25				
2334061	CS-134	-6.21E-01	pCi/L	1.2E+00	U	2.14E+00			GAMMA_GS	2.5001E+00	12/07/2012				D
BLK	13967-70-9			1.2E+00						L	12:25				
2334061	CS-137	9.35E-04	pCi/L	1.0E+00	U	1.92E+00			GAMMA_GS	2.5001E+00	12/07/2012				D
BLK	10045-97-3			1.0E+00						L	12:25				
2334061	EU-152	-6.34E-02	pCi/L	2.5E+00	U	4.48E+00			GAMMA_GS	2.5001E+00	12/07/2012				D
BLK	14683-23-9			2.5E+00						L	12:25				
2334061	EU-154	1.32E+00	pCi/L	3.3E+00	U	7.14E+00			GAMMA_GS	2.5001E+00	12/07/2012				D
BLK	15585-10-1			3.3E+00						L	12:25				
2334061	EU-155	-3.72E-01	pCi/L	1.6E+00	U	2.92E+00			GAMMA_GS	2.5001E+00	12/07/2012				D
BLK	14391-16-3			1.6E+00						L	12:25				
2334061	K-40	2.48E+00	pCi/L	3.4E+01	U	2.60E+01			GAMMA_GS	2.5001E+00	12/07/2012				D
BLK	13966-00-2			3.4E+01						L	12:25				
2334061	RU-106	-3.97E+00	pCi/L	9.0E+00	U	1.58E+01			GAMMA_GS	2.5001E+00	12/07/2012				D
BLK	13967-48-1			9.0E+00						L	12:25				
2334061	SB-125	4.69E-02	pCi/L	2.3E+00	U	4.29E+00			GAMMA_GS	2.5001E+00	12/07/2012				D
BLK	14234-35-6			2.3E+00						L	12:25				

DECEMBER 12, 2012

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.

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXAR01CS	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 10/26/2012 14:33
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BS		**Received Date:** 10/29/2012

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

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
2318065	I-129	1.13E+01	pCi/L	1.3E+00		3.25E-01	90.2	1.05E+01	I129LL_SEP_L	3.7464E+00	11/21/2012			70	D
BS	15046-84-1			1.3E+00				107.7		L	17:53			130	

DECEMBER 12, 2012

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.

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXAR11CS	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/01/2012 09:30
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BS		**Received Date:** 11/01/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BF	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
2318066	TC-99	5.01E+02	pCi/L	3.3E+01		1.01E+01	100.0	5.42E+02	TC99_ETVDSK	1.256E-01	11/17/2012			70	D
BS	14133-76-7			1.3E+01				92.5		L	06:55			130	

DECEMBER 12, 2012

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.

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXAR21CS	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/07/2012 10:21
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BS		**Received Date:** 11/07/2012

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

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
2318067	H-3	2.72E+03	pCi/L	2.8E+02		3.77E+02	100.0	2.69E+03	906.0_H3_LSC	5.031E-03	11/16/2012			70	D
BS	10028-17-8			2.4E+02				101.2		L	17:39			130	

TestAmerica Laboratories, Inc.

DECEMBER 12, 2012

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.

TestAmerica QC Control Sample Report

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id: MXAR41CS **Sdg/Rept Nbr:** W06493 53970 **Collection Date:** 11/01/2012 09:30
Client Id: NA **Matrix:** WATER WATER **Sample On Date:**
Moisture/Solids%*: **QC Type:** BS **Received Date:** 11/01/2012

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

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
2318069	Uranium	3.74E+01	ug/L	4.4E+00		8.38E-02		3.64E+01	UTOT_KPA	2.50E-02	11/26/2012			70	D
BS	7440-61-1			4.4E+00				102.8		ML	21:24			130	

DECEMBER 12, 2012

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.

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id: MXAR41DS **Sdg/Rept Nbr:** W06493 53970 **Collection Date:** 11/01/2012 09:30

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BS **Received Date:** 11/01/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BL	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
2318069	Uranium	3.49E+00	ug/L	4.2E-01		8.35E-02		3.62E+00	UTOT_KPA	2.51E-02	11/26/2012			70	D
BS	7440-61-1			4.2E-01				96.5		ML	21:26			130	

TestAmerica Laboratories, Inc.

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DECEMBER 12, 2012

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.

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXARP1CS	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/01/2012 09:30
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BS		**Received Date:** 11/01/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BN	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
2318058	PU-239	4.04E+00	pCi/L	1.0E+00		1.73E-01	97.4	4.50E+00	PUISO_PLATE	2.012E-01	11/20/2012			70	D
BS	PU-239/240			8.3E-01				89.8		L	20:00			130	

TestAmerica Laboratories, Inc.

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DECEMBER 12, 2012

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.

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXARQ1CS	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/07/2012 10:21
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BS		**Received Date:** 11/07/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BP	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
2318059	U-234	7.68E+00	pCi/L	1.1E+00		4.75E-02	91.2	8.66E+00	UISO_PLATE_	2.005E-01	11/21/2012			70	D
BS	13966-29-5			4.3E-01				88.7		L	01:08			130	
2318059	U-238	8.30E+00	pCi/L	1.2E+00		5.23E-02	91.2	9.07E+00	UISO_PLATE_	2.005E-01	11/21/2012			70	D
BS	U-238			4.5E-01				91.6		L	01:08			130	

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.

TestAmerica Laboratories, Inc.
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DECEMBER 12, 2012

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXARR1CS	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/01/2012 09:30
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BS		**Received Date:** 11/01/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BR	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
2318060	ALPHA	2.18E+01	pCi/L	5.8E+00		8.49E-01	100.0	2.26E+01	9310_ALPHAB	2.011E-01	11/20/2012			70	D
BS	12587-46-1			1.7E+00				96.7		L	15:37			130	

DECEMBER 12, 2012

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.

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXART1CS	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/01/2012 09:30
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BS		**Received Date:** 11/01/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BT	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
2318061	BETA	3.38E+01	pCi/L	4.7E+00		1.85E+00	100.0	4.03E+01	9310_ALPHAB	2.009E-01	11/20/2012			70	D
BS	12587-47-2			2.1E+00				83.7		L	15:24			130	

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.

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Wednesday, December 12, 2012

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXARV1CS	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/01/2012 09:30
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BS		**Received Date:** 11/01/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BV	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
2318062	SR-90	1.42E+01	pCi/L	2.3E+00		5.07E-01	74.5	1.35E+01	SRISO_SEP_P	1.0019E+00	11/29/2012			70	D
BS	10098-97-2			8.5E-01				105.3		L	10:29			130	

DECEMBER 12, 2012

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

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXARX1CS	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 10/30/2012 14:39
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BS		**Received Date:** 10/31/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BX	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
2318064	CO-60	3.47E+01	pCi/L	6.6E+00		3.23E+00		3.55E+01	GAMMALL_GS	2.0023E+00	11/16/2012			70	D
BS	10198-40-0			6.6E+00				97.9		L	21:08			130	
2318064	CS-137	4.90E+01	pCi/L	7.9E+00		3.64E+00		4.90E+01	GAMMALL_GS	2.0023E+00	11/16/2012			70	D
BS	10045-97-3			7.9E+00				100.0		L	21:08			130	
2318064	EU-152	6.84E+01	pCi/L	1.4E+01		8.56E+00		7.47E+01	GAMMALL_GS	2.0023E+00	11/16/2012			70	D
BS	14683-23-9			1.4E+01				91.7		L	21:08			130	

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Wednesday, December 12, 2012

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MXF5L1CS	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/07/2012 10:21
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BS		**Received Date:** 11/07/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BZ	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
2334061	CO-60	3.38E+01	pCi/L	6.6E+00		2.67E+00		2.83E+01	GAMMA_GS	2.5002E+00	12/07/2012			70	D
BS	10198-40-0			6.6E+00				119.6		L	12:26			130	
2334061	CS-137	4.42E+01	pCi/L	8.0E+00		2.65E+00		3.93E+01	GAMMA_GS	2.5002E+00	12/07/2012			70	D
BS	10045-97-3			8.0E+00				112.3		L	12:26			130	
2334061	EU-152	5.69E+01	pCi/L	1.1E+01		6.96E+00		5.95E+01	GAMMA_GS	2.5002E+00	12/07/2012			70	D
BS	14683-23-9			1.1E+01				95.7		L	12:26			130	

DECEMBER 12, 2012

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
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B Qual- Analyte was found in the associated laboratory blank above the MDC.

Wednesday, December 12, 2012

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MW6JQ1CR	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 10/26/2012 14:33
Client Id:	B2M337	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 10/29/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
A13-010	MW6-SBB-A19981								AO	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
2318065	I-129	1.57E-01	pCi/L	1.0E-01	U	2.11E-01	90.0		I129LL_SEP_L	3.8687E+00	11/20/2012	102.8	1.4		D
DUP	15046-84-1	5.03E-02		1.0E-01						L	14:59	20.0	3		

DECEMBER 12, 2012

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.

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MW6T81DR	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 10/29/2012 15:13
Client Id:	B2M5L7	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 10/30/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S13-010	MW6-SBB-A19981								AP	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
2318068	H-3	-1.05E+01	pCi/L	2.1E+01	U	2.31E+01	100.0		906.0ML_H3_L	1.0007E-02	11/15/2012	0.0	0.6		D
DUP	10028-17-8	-1.01E+00		1.0E+01						L	09:32	20.0	3		

TestAmerica Laboratories, Inc.

DECEMBER 12, 2012

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

Wednesday, December 12, 2012

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id: MW7LL2CR **Sdg/Rept Nbr:** W06493 53970 **Collection Date:** 10/30/2012 14:39

Client Id: B2M5J0 **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** DUP **Received Date:** 10/31/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S13-010	MW6-SBB-A19981								AQ	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
2318064	BE-7	3.00E+00	pCi/L	7.6E+00	U	1.44E+01			GAMMALL_GS	2.0003E+00	11/27/2012	16.9	0.1		D
DUP	13966-02-4	3.55E+00		7.6E+00						L	17:28	20.0	3		
2318064	CO-60	3.87E-01	pCi/L	9.1E-01	U	1.89E+00			GAMMALL_GS	2.0003E+00	11/27/2012	757.8	1.		D
DUP	10198-40-0	-2.25E-01		9.1E-01						L	17:28	20.0	3		
2318064	CS-134	4.98E-01	pCi/L	1.0E+00	U	1.77E+00			GAMMALL_GS	2.0003E+00	11/27/2012	24.4	0.2		D
DUP	13967-70-9	6.37E-01		1.0E+00						L	17:28	20.0	3		
2318064	CS-137	1.64E-01	pCi/L	7.8E-01	U	1.49E+00			GAMMALL_GS	2.0003E+00	11/27/2012	91.2	0.5		D
DUP	10045-97-3	4.38E-01		7.8E-01						L	17:28	20.0	3		
2318064	EU-152	-3.59E-01	pCi/L	1.8E+00	U	3.16E+00			GAMMALL_GS	2.0003E+00	11/27/2012	318.7	1.5		D
DUP	14683-23-9	1.57E+00		1.8E+00						L	17:28	20.0	3		
2318064	EU-154	5.59E-01	pCi/L	3.0E+00	U	5.86E+00			GAMMALL_GS	2.0003E+00	11/27/2012	159.3	0.2		D
DUP	15585-10-1	6.34E-02		3.0E+00						L	17:28	20.0	3		
2318064	EU-155	1.59E-01	pCi/L	1.3E+00	U	2.10E+00			GAMMALL_GS	2.0003E+00	11/27/2012	0.0	1.		D
DUP	14391-16-3	-8.16E-01		1.3E+00						L	17:28	20.0	3		
2318064	K-40	1.20E+01	pCi/L	2.1E+01	U	1.68E+01			GAMMALL_GS	2.0003E+00	11/27/2012	0.0	2.1		D
DUP	13966-00-2	-1.91E+01		2.1E+01						L	17:28	20.0	3		
2318064	RU-106	-4.82E+00	pCi/L	6.8E+00	U	1.15E+01			GAMMALL_GS	2.0003E+00	11/27/2012	0.0	0.8		D
DUP	13967-48-1	-7.71E-01		6.8E+00						L	17:28	20.0	3		
2318064	SB-125	-9.30E-01	pCi/L	1.7E+00	U	2.92E+00			GAMMALL_GS	2.0003E+00	11/27/2012	498.5	2.6		D
DUP	14234-35-6	2.18E+00		1.7E+00						L	17:28	20.0	3		

DECEMBER 12, 2012

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.

Wednesday, December 12, 2012

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MW7P71KR	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/01/2012 09:30
Client Id:	B2MDJ8	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 11/01/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S13-010	MW6-SBB-A19981								AR	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
2318058	PU-238	-3.49E-03	pCi/L	8.7E-02	U	1.76E-01	94.5		PUISO_PLATE	2.009E-01	11/20/2012	0.0	0.3		D
DUP	13981-16-3	-2.36E-02		8.7E-02						L	19:59	20.0	3		
2318058	PU-239	2.96E-02	pCi/L	8.8E-02	U	2.33E-01	94.5		PUISO_PLATE	2.009E-01	11/20/2012	181.6	0.5		D
DUP	PU-239/240	1.43E-03		8.8E-02						L	19:59	20.0	3		

DECEMBER 12, 2012

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

Wednesday, December 12, 2012

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MW7P71LR	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/01/2012 09:30
Client Id:	B2MDJ8	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 11/01/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S13-010	MW6-SBB-A19981								AS	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
2318060	ALPHA	1.74E+00	pCi/L	1.1E+00		1.58E+00	100.0		9310_ALPHAB	2.017E-01	11/20/2012	63.1	1.		D
DUP	12587-46-1	9.07E-01		1.1E+00						L	15:37	20.0	3		

DECEMBER 12, 2012

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TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MW7P71MR	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/01/2012 09:30
Client Id:	B2MDJ8	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 11/01/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S13-010	MW6-SBB-A19981								AT	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
2318062	SR-90	-9.57E-02	pCi/L	3.1E-01	U	6.75E-01	71.2		SRISO_SEP_P	1.0007E+00	11/29/2012	1177.5	1.1		D
DUP	10098-97-2	1.35E-01		2.8E-01						L	10:34	20.0	3		

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TestAmerica Laboratories, Inc.
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Wednesday, December 12, 2012

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MW7P71NR	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/01/2012 09:30
Client Id:	B2MDJ8	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 11/01/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S13-010	MW6-SBB-A19981								AU	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
2318066	TC-99	-2.61E+00	pCi/L	5.7E+00	U	1.02E+01	100.0		TC99_ETVDSK	1.257E-01	11/17/2012	0.0	0.4		D
DUP	14133-76-7	-1.12E+00		4.1E+00						L	02:43	20.0	3		

DECEMBER 12, 2012

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Wednesday, December 12, 2012

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MW7P71QR	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/01/2012 09:30
Client Id:	B2MDJ8	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 11/01/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S13-010	MW6-SBB-A19981								AW	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
2318069	Uranium	2.21E+00	ug/L	2.3E-01		8.15E-02			UTOT_KPA	2.57E-02	11/26/2012	5.5	0.7		D
DUP	7440-61-1	2.10E+00		2.3E-01						ML	21:20	20.0	3		

DECEMBER 12, 2012

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Wednesday, December 12, 2012

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MW87H1PR	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/07/2012 10:21
Client Id:	B2MXL6	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 11/07/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
I13-007	MW6-SBB-A19981								AX	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
2318059	U-234	1.43E+00	pCi/L	2.8E-01		6.29E-02	85.6		UISO_PLATE_	2.015E-01	11/21/2012	5.8	0.4		D
DUP	13966-29-5	1.35E+00		2.0E-01						L	01:08	20.0	3		
2318059	U-235	3.79E-02	pCi/L	3.4E-02	U	3.83E-02	85.6		UISO_PLATE_	2.015E-01	11/21/2012	43.1	0.6		D
DUP	15117-96-1	2.45E-02		3.4E-02						L	01:08	20.0	3		
2318059	U-238	1.10E+00	pCi/L	2.3E-01		5.28E-02	85.6		UISO_PLATE_	2.015E-01	11/21/2012	.3	0.		D
DUP	U-238	1.10E+00		1.7E-01						L	01:08	20.0	3		

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.

DECEMBER 12, 2012

Wednesday, December 12, 2012

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MW87H1QR	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/07/2012 10:21
Client Id:	B2MXL6	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 11/07/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
I13-007	MW6-SBB-A19981								AY	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
2318061	BETA	1.24E+03	pCi/L	1.6E+02		2.26E+00	100.0		9310_ALPHAB	1.883E-01	11/20/2012	2.1	0.2		D
DUP	12587-47-2	1.27E+03		1.2E+01						L	15:24	20.0	3		

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.

DECEMBER 12, 2012

Wednesday, December 12, 2012

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MW87H1UR	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/07/2012 10:21
Client Id:	B2MXL6	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 11/07/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
I13-007	MW6-SBB-A19981								BA	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
2318067	H-3	3.08E+04	pCi/L	1.2E+03		3.66E+02	100.0		906.0_H3_LSC	5.015E-03	11/16/2012	.7	0.3		D
DUP	10028-17-8	3.10E+04		6.3E+02						L	14:53	20.0	3		

DECEMBER 12, 2012

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.

Wednesday, December 12, 2012

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MW87H1VR	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/07/2012 10:21
Client Id:	B2MXL6	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 11/07/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
I13-007	MW6-SBB-A19981								BB	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
2334061	BE-7	7.62E+00	pCi/L	1.2E+01	U	2.33E+01			GAMMA_GS	2.5046E+00	12/07/2012	332.1	1.1		D
DUP	13966-02-4	-1.89E+00		1.2E+01						L	14:10	20.0	3		
2334061	CO-60	1.16E+00	pCi/L	1.4E+00	U	3.16E+00			GAMMA_GS	2.5046E+00	12/07/2012	4.6	0.1		D
DUP	10198-40-0	1.11E+00		1.4E+00						L	14:10	20.0	3		
2334061	CS-134	6.99E-01	pCi/L	1.4E+00	U	2.80E+00			GAMMA_GS	2.5046E+00	12/07/2012	112.2	0.5		D
DUP	13967-70-9	1.97E-01		1.4E+00						L	14:10	20.0	3		
2334061	CS-137	-1.07E+00	pCi/L	1.5E+00	U	2.39E+00			GAMMA_GS	2.5046E+00	12/07/2012	0.0	0.1		D
DUP	10045-97-3	-9.86E-01		1.5E+00						L	14:10	20.0	3		
2334061	EU-152	8.45E-03	pCi/L	2.8E+00	U	5.07E+00			GAMMA_GS	2.5046E+00	12/07/2012	192.8	0.2		D
DUP	14683-23-9	4.60E-01		2.8E+00						L	14:10	20.0	3		
2334061	EU-154	1.97E+00	pCi/L	4.3E+00	U	8.90E+00			GAMMA_GS	2.5046E+00	12/07/2012	196.6	0.6		D
DUP	15585-10-1	1.68E-02		4.3E+00						L	14:10	20.0	3		
2334061	EU-155	1.10E+00	pCi/L	2.4E+00	U	4.23E+00			GAMMA_GS	2.5046E+00	12/07/2012	63.0	0.6		D
DUP	14391-16-3	2.10E+00		2.4E+00						L	14:10	20.0	3		
2334061	K-40	-4.49E+00	pCi/L	3.5E+01	U	7.94E+01			GAMMA_GS	2.5046E+00	12/07/2012	0.0	0.1		D
DUP	13966-00-2	-6.14E+00		3.5E+01						L	14:10	20.0	3		
2334061	RU-106	-1.28E+01	pCi/L	1.2E+01	U	1.80E+01			GAMMA_GS	2.5046E+00	12/07/2012	0.0	1.8		D
DUP	13967-48-1	2.26E+00		1.2E+01						L	14:10	20.0	3		
2334061	SB-125	1.44E+00	pCi/L	2.9E+00	U	5.51E+00			GAMMA_GS	2.5046E+00	12/07/2012	185.2	0.7		D
DUP	14234-35-6	5.55E-02		2.9E+00						L	14:10	20.0	3		

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.

DECEMBER 12, 2012

Wednesday, December 12, 2012

TestAmerica Qc Matrix Spike Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MW7P71PW	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/01/2012 09:30
Client Id:	B2MDJ8	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	MS		**Received Date:** 11/01/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S13-010	MW6-SBB-A19981								AV	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
2318069	Uranium	3.61E+01	ug/L	4.5E+00		8.25E-02		3.55E+01	UTOT_KPA	2.54E-02	11/26/2012			60	D
MS	7440-61-1			4.5E+00				101.6		ML	21:16			140	

DECEMBER 12, 2012

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.

Wednesday, December 12, 2012

TestAmerica Qc Matrix Spike Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06493.Edd, h:\Reportdb\edd\FeadIV\Rad\53970.Ed

Lab Sample Id:	MW87H1TW	**Sdg/Rept Nbr:**	W06493	53970	**Collection Date:** 11/07/2012 10:21
Client Id:	B2MXL6	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	**MS**		**Received Date:** 11/07/2012

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
I13-007	MW6-SBB-A19981								AZ	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
2318066	TC-99	3.15E+03	pCi/L	1.8E+02		1.02E+01	100.0	3.59E+03	TC99_ETVDSK	1.257E-01	11/17/2012			60	D
MS	14133-76-7			3.1E+01				87.6		L	04:49			140	

DECEMBER 12, 2012

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.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

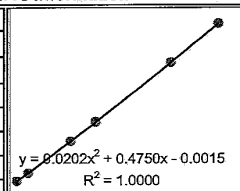
TestAmerica Inc.

Hexavalent Chromium - Water

Analyst:	H.Rahavi
Start Date:	11/1/2012
Start Time:	18:15
End Date:	11/1/2012
End Time	19:00
Analyst Signature:	HR
Date:	11/01/12

Calibration Curve Information

	Amount (mL)	Conc.(mg/L)	ABS.
Blank	0.000	0.000	0.000
Std. 1	0.100	0.048	0.106
Std. 2	0.500	0.238	0.496
Std. 3	0.750	0.356	0.726
Std. 4	1.500	0.713	1.419
Std 5	2.000	0.950	1.856
Standard Volume (mL):			95.000
Date of Curve:			11/1/2012



R Squared	1.0000
2nd°Coeff (a)	0.0202
1st°Coeff (b)	0.4750
Constant (c)	-0.0015
Intercept	0.0032
MDL (mg/L)	0.008

BATCH #	2306092
SDG #	W06493
Matrix	Water
SOP Information	
RL-WC-003	
Revision 3	
Instrument Information	
Instrument:	Hach DR2010
Wavelength:	540

	Calibration Information:	ICV/CCV Information:	LCS Information:	Matrix Spike Information:
Dilution ID #	Cr-12-00377	Cr-12-00378	Cr-12-00377	Cr-12-00377
Prep Date:	11/01/12	11/01/12	11/01/12	11/01/12
Concentration (mg/L)	50	50	50	50
Expiration Date:	11/02/12	11/02/12	11/02/12	11/02/12
Pipettor(s)	70,190	190	190	190
Volume Used (mL)		1.000	1.00	1.50
Final Volume (mL)		100.000	100.00	100.00
Expected Value (mg/L)		0.475	0.475	0.713

Sample ID	Client ID	Type	Sample Volume (mL)	Final Volume (mL)	Sample ABS.	Color Blank ABS.	Corrected ABS.	Dilution Factor	Curve Conc. (mg/L)	Expected (mg/L)	% Rec. / RPD	Final Reported Conc. (mg/L)
n/a	n/a	ICV	95.000	100.000	0.959		0.959	1	0.4726	0.4750	99.50%	0.473
n/a	n/a	ICB	95.000	100.000	0.000		0.000	1	-0.0015			<MDL
n/a	n/a	CCV	95.000	100.000	0.950		0.950	1	0.4680	0.4750	98.52%	0.468
n/a	n/a	CCB	95.000	100.000	0.001		0.001	1	-0.0010			<MDL
MW7H51AA	n/a	BLK	95.000	100.000	0.005		0.005	1	0.0009			<MDL**
MW7H51AC	n/a	LCS	95.000	100.000	0.962		0.962	1	0.4741	0.4750	99.82%	0.474
MW7H31AA	B2MDJ0'	Sample	95.000	100.000	0.003		0.003	1	-0.0001			<MDL**
MW7H31AC-S	B2MDJ0'-MS	MS*	95.000	100.000	1.502		1.502	1	0.7575	0.7499	101.01%	0.758
MW7H31AD-D	B2MDJ0'-MSD	MSD*	95.000	100.000	1.495		1.495	1	0.7538	0.7499	100.51%	0.754
MW7H31AE-X	B2MDJ0'-DUP	Duplicate	95.000	100.000	0.002		0.002	1	-0.0005			<MDL**
			95.000	100.000				1				
			95.000	100.000				1				
			95.000	100.000				1				
			95.000	100.000				1				
n/a	n/a	CCV	95.000	100.000	0.948		0.948	1	0.4670	0.4750	98.31%	0.467
n/a	n/a	CCB	95.000	100.000	0.000		0.000	1	-0.0015			<MDL

** U Qualifier SKS 11-16-12

*If the parent sample is above the MDL, the Final Reported Conc. (mg/L) for the MS and MSD is corrected for the parent sample.

DECEMBER 12, 2012

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

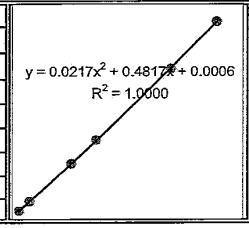
TestAmerica Inc.

Hexavalent Chromium - Water

Analyst:	H.Rahavi
Start Date:	11/7/2012
Start Time:	15:45
End Date:	11/7/2012
End Time	16:30
Analyst Signature:	H R
Date:	11/07/12

Calibration Curve Information

	Amount (mL)	Conc.(mg/L)	ABS.
Blank	0.000	0.000	0.000
Std. 1	0.100	0.048	0.097
Std. 2	0.500	0.238	0.482
Std. 3	0.750	0.356	0.710
Std. 4	1.500	0.713	1.397
Std 5	2.000	0.950	1.819
Standard Volume (mL):			95.000
Date of Curve:			11/7/2012



R Squared	1.0000
2nd°Coeff (a)	0.0217
1st°Coeff (b)	0.4817
Constant (c)	0.0006
Intercept	-0.0012
MDL (mg/L)	0.008

BATCH #	2312086
SDG #	W06493
Matrix	Water
SOP Information	
RL-WC-003	
Revision 3	
Instrument Information	
Instrument:	Hach DR2010
Wavelength:	540

	Calibration Information:	ICV/CCV Information:	LCS Information:	Matrix Spike Information:
Dilution ID #	Cr-12-00385	Cr-12-00386	Cr-12-00385	Cr-12-00385
Prep Date:	11/07/12	11/07/12	11/07/12	11/07/12
Concentration (mg/L)	50	50	50	50
Expiration Date:	11/08/12	11/08/12	11/08/12	11/08/12
Pipettor(s)	70,190	190	190	190
Volume Used (mL)		1.000	1.00	1.50
Final Volume (mL)		100.000	100.00	100.00
Expected Value (mg/L)		0.475	0.475	0.713

Sample ID	Client ID	Type	Sample Volume (mL)	Final Volume (mL)	Sample ABS.	Color Blank ABS.	Corrected ABS.	Dilution Factor	Curve Conc. (mg/L)	Expected (mg/L)	% Rec. / RPD	Final Reported Conc. (mg/L)
n/a	n/a	ICV	95.000	100.000	0.944		0.944	1	0.4747	0.4750	99.93%	0.475
n/a	n/a	ICB	95.000	100.000	0.001		0.001	1	0.0011			<MDL
n/a	n/a	CCV	95.000	100.000	0.939		0.939	1	0.4720	0.4750	99.38%	0.472
n/a	n/a	CCB	95.000	100.000	0.001		0.001	1	0.0011			<MDL
MW87J1AA	n/a	BLK	95.000	100.000	0.000		0.000	1	0.0006			<MDL**
MW87J1AC	n/a	LCS	95.000	100.000	0.961		0.961	1	0.4836	0.4750	101.80%	0.484
MW87H1AA	B2MXL6'	Sample	95.000	100.000	0.008		0.008	1	0.0045			<MDL**
MW87H1AL	B2MXL6'-MS	MS*	95.000	100.000	1.495		1.495	1	0.7692	0.7545	101.96%	0.769
MW87H1AM	B2MXL6'-MSD	MSD*	95.000	100.000	1.498		1.498	1	0.7709	0.7545	102.18%	0.771
MW87H1AN	B2MXL6'-DUP	Duplicate	95.000	100.000	0.008		0.008	1	0.0045			<MDL**
			95.000	100.000				1				
			95.000	100.000				1				
			95.000	100.000				1				
			95.000	100.000				1				
n/a	n/a	CCV	95.000	100.000	0.938		0.938	1	0.4715	0.4750	99.27%	0.472
n/a	n/a	CCB	95.000	100.000	0.002		0.002	1	0.0016			<MDL

**U Qualifier SKS 11-16-12

*If the parent sample is above the MDL, the Final Reported Conc. (mg/L) for the MS and MSD is corrected for the parent sample.

DECEMBER 12, 2012

RQC050 TestAmerica Laboratories, Inc. Run Date: 11/01/12
WET CHEM BATCHSHEET Time: 14:12:10

TestAmerica Richland

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE

METHOD: IZ COLIFORM BY METHOD 9223
QC BATCH #: 2304121
PREP DATE: 10/30/12
COMP DATE: 10/30/12
USER: WAGARR

INITIALS: PREP BC
ANAL BC

DATA ENTRY: INITIALS SKS
DATE 11-16-12

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:	
MW6Q7-1-AA	J-2J300000-121-B	XX I 88 IZ 5I		10-30-12	INTRA-LAB BLANK *	Col/100ml
MW6Q7-1-AC	J-2J300000-121-C	XX I 88 IZ 5I			INTRA-LAB CHECK	17.4
MW6N3-1-AA	J-2J300428-001	XX I 88 IZ 5I	E		B2M1R1 *	
MW6N3-1-AC	J-2J300428-001-X	XX I 88 IZ 5I	E		B2M1R1 DUP *	
MW6N4-1-AA	J-2J300428-002	XX I 88 IZ 5I	E		B2M1R7 *	

Control Limits

(0-0)

*<1, U Qualifier

DECEMBER 12, 2012

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

11/21/2012 10:54:30 AM

Lot No., Due Date:	J2K020408; 12/13/2012
Client, Site:	384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test:	2318058; RPUISO Pulso by ALP
SDG, Matrix:	W06493; WATER

1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?	✓		
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?	✓		
3.5 Are the sample yields and MDAs within contract limits?	✓		
4.0 Raw Data			
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?			✓
4.4 Were spectra reviewed/meet contractual requirements?	✓		
4.5 Were raw counts reviewed for anomalies?	✓		
5.0 Other			
5.1 Are all nonconformances included and noted?			✓
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?			✓
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

First Level Lisa Jackson Date 11/21/12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 2318058

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: Sandra Seger Date: 11-27-12

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

11/27/2012 11:24:40 AM

Lot No., Due Date:	J2K070446; 12/13/2012
Client, Site:	384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test:	2318059; RUISO Uiso by ALP
SDG, Matrix:	W06493; 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 Lisa Anderson Date 11/27/12

TestAmerica Richland
QAS_RADCALCv4.8.44

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 2318059

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: Sandra Segre Date: 11-28-12

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

11/26/2012 10:36:30 AM

Lot No., Due Date: J2K020408,J2K070446; 12/13/2012
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 2318060; RALPHA-A Alpha by GPC-Am
SDG, Matrix: W06493; 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 _____ **Date** 11/26/12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 2318060

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: Sandra Segree Date: 11-27-12

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

11/21/2012 9:23:13 AM

Lot No., Due Date: J2K020408,J2K070446; 12/13/2012
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 2318061; RBETA-SR Beta by GPC-Sr/Y
SDG, Matrix: W06493; WATER

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

6.0 Comments on any No response:

First Level _____ **Date** 11/21/12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 2318061

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: Sandra Leggett Date: 11-27-12

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

11/29/2012 1:51:08 PM

Lot No., Due Date:	J2K020408,J2K070446; 12/13/2012
Client, Site:	384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test:	2318062; RSR85907 Sr-85/90 by GPC-7
SDG, Matrix:	W06493; 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 Tracy Winston Date 11/29/12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 2318062

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: Samantha Seguin Date: 11-30-12

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

11/30/2012 9:50:39 AM

Lot No., Due Date: J2K010446; 12/13/2012
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 2318064; RGAMMA Gamma by GER
SDG, Matrix: W06493; WATER

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

6.0 Comments on any No response:
NCM 10-22355

First Level Tina Johnson Date 11/30/12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 23180G4

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: 12/10/12

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

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: 10-22355
NCM Initiated By: Lisa Antonson
Date Opened: 11/30/2012
Date Closed:

Classification: **Anomaly**
Status: **PMREVIEW**
Production Area: Counting
Tests: Gamma by GER
Lot #'s (Sample #'s): J2K010446 (1), J2K130000 (64),
QC Batches: 2318064,

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

Problem Description / Root Cause

Name	Date	Description
Lisa Antonson	11/30/2012	The duplicates did not agree in the original count. They were recounted on more efficient detectors.

Corrective Action

Name	Date	Corrective Action
Lisa Antonson	11/30/2012	The dups 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

Date Printed: 11/30/2012

TestAmerica

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/10/2012 12:26:55 PM

Lot No., Due Date: J2K070446; 12/13/2012
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 2334061; RGAMMA Gamma by GER
SDG, Matrix: W06493; WATER

1.0 COC

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

2.0 QC Batch

	Yes	No	N/A
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?			✓

3.0 QC & Samples

	Yes	No	N/A
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?	✓		
3.5 Are the sample yields and MDAs within contract limits?	✓		

4.0 Raw Data

	Yes	No	N/A
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?			✓
4.4 Were spectra reviewed/meet contractual requirements?	✓		
4.5 Were raw counts reviewed for anomalies?	✓		

5.0 Other

	Yes	No	N/A
5.1 Are all nonconformances included and noted?	✓		
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?			✓
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:
NCM 10-22405

First Level Lia Gustafson **Date** 12/10/12

TestAmerica Richland
QAS_RADCALCv4.8.44

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 2334061

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: 12/10/12

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

DECEMBER 12, 2012

Clouseau
Nonconformance Memo

TestAmerica
THE GAUGE IN ENVIRONMENTAL TESTING

NCM #: 10-22405
NCM Initiated By: Lisa Antonson
Date Opened: 12/10/2012
Date Closed:

Classification: **Anomaly**
Status: **PMREVIEW**
Production Area: Environmental - Prep
Tests: Gamma by GER
Lot #'s (Sample #'s): J2K070446 (1), J2K290000 (61),
QC Batches: 2334061,

Nonconformance: LCS result out of limits
Subcategory: Analyte was recovered low in the LCS

Problem Description / Root Cause

Name	Date	Description
Lisa Antonson	12/10/2012	This batch is a rerun of 2318063 due to failed LCS.

Corrective Action

Name	Date	Corrective Action
Lisa Antonson	12/10/2012	The batch was rerun

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note
	Response	Response Note			

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position

Date Printed: 12/10/2012

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

11/27/2012 1:06:46 PM

Lot No., Due Date: J2J300416,J2J300441,J2K020408,J2K050431,J2K060433,J2K080419,J2K080445; 12/13/2012
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 2318065; RGAMLEPS Gamma by LEPS
SDG, Matrix: W06493; 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 Date 11/27/12

TestAmerica Richland
QAS_RADCALCv4.8.44

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 2318065

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: Sandra Seger Date: 11-28-12

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

11/21/2012 3:30:18 PM

Lot No., Due Date: J2K020408,J2K070446; 12/13/2012
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 2318066; RTC99 Tc-99 by LSC
SDG, Matrix: W06493; 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 Lisa Anderson Date 11/21/12

TestAmerica Richland
QAS_RADCALCv4.8.44

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 2318066

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: Sandra Segre Date: 11-27-12

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

11/27/2012 9:07:49 AM

Lot No., Due Date: J2K070446; 12/13/2012
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 2318067; RTRITIUM H-3 by LSC
SDG, Matrix: W06493; 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 Lisa Anderson Date 11/27/12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 2318067

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: Sandra Segers Date: 11-27-12

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/5/2012 9:55:29 AM

Lot No., Due Date: J2J300441; 12/13/2012
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 2318068; RTRITIUM Midlevel Tritium
SDG, Matrix: W06493; WATER

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

6.0 Comments on any No response:
Please see NCM #10-22383

First Level John Hoover **Date** 12-5-12

TestAmerica Richland
QAS_RADCALCv4.8.44

Page 1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/5/2012 10:00:00 AM

Lot No., Due Date: ; J2J300441
Client, Site: PGW
QC Batch No., Method Test: 2332038;
SDG, Matrix: ; WQ0493 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:
Please see NCM #10-22383

First Level John Norton **Date** 12-5-12

TestAmerica Richland
QAS_RADCALCv4.8.44

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 2318068 & 2332038

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: 12/10/12

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

Clouseau Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-22383**
NCM Initiated By: John Norton
Date Opened: 12/05/2012
Date Closed:

Classification: **Anomaly**
Status: **PMREVIEW**
Production Area: Counting
Tests: Midlevel Tritium
Lot #'s (Sample #'s): J2J300441 (4), J2K130000 (68),
QC Batches: 2318068,

Nonconformance: LCS result out of limits
Subcategory: Analyte was recovered low in the LCS

Problem Description / Root Cause

Name	Date	Description
John Norton	12/05/2012	The LCS yield was below the acceptable limit.

Corrective Action

Name	Date	Corrective Action
John Norton	12/05/2012	The LCS was recounted in batch #2332038 for acceptable results.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note
	Response	Response Note			

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position

Date Printed: 12/5/2012

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

11/28/2012 2:24:39 PM

Lot No., Due Date: J2K020408; 12/13/2012
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 2318069; RUNAT UNat by KPA
SDG, Matrix: W06493; WATER

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

6.0 Comments on any No response:

First Level _____ **Date** 11/28/12

TestAmerica Richland
QAS_RADCALCv4.8.44

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 2318069

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: Sandra Segee Date: 11-29-12

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Richland Laboratory
Data Review Check List
Hexavalent Chromium

Batch Number(s):	2306092	Lab Sample Numbers or SDG:	W06493

Method/Test/Parameter: Cr+6 ☒ RL-WC-003(Aqueous) ☐ RL-WC-004(Solid)

Review Item	Yes (✓)	No (✓)	N/A (✓)	2nd Level Review (✓)
A. Initial Calibration 1. Performed at required frequency with required number of levels?	✓			✓
2. Correlation coefficient greater than 0.97?	✓			✓
3. Initial calibration verification (ICV) analyzed immediately after calibration and results within 10% of expected?	✓			✓
4. Initial calibration blank (ICB) analyzed immediately after ICV and concentrations of all parameters ≤ reporting limit?	✓			✓
B. Continuing Calibration 1. CCV analyzed at required frequency and all parameters within 10% of expected?	✓			✓
2. CCB analyzed at required frequency and all results ≤ reporting limit?	✓			✓
C. Sample Analysis 1. Were any samples with concentrations above the linear range diluted and reanalyzed?			✓	✓
2. Were all sample holding times met?	✓			✓
D. QC Samples 1. All results for the preparation blank below limits?	✓			✓
2. LCS percent recovery within 85-115%	✓			✓
3. $PbCrO_4$ percent recovery within 75-125%?			✓	✓
4. Sample and Duplicate within 20% (aqueous) or 35% (solid) RPD?	✓			✓
5. MS or MS/MSD recoveries within 85-115% (aqueous) or 75-125% (solid)?	✓			✓
6. On MS failure, PDMS within 85-115%?			✓	✓
E. Other 1. Are all nonconformances included and noted?			✓	✓
2. Is the correct date and time of analysis shown?	✓			✓
3. Did the analyst sign and date the front page of the analytical run?	✓			✓
4. Correct methodology used?	✓			✓
5. Transcriptions checked?	✓			✓
6. Calculations checked at minimum frequency?	✓			✓
7. Units checked?	✓			✓

Comments on any "No" response or list NCM number: ~~10-22178~~ SKS 11-2-12

Analyst H. Rahavi Date 11/01/12 2nd Review [signature] Date 11/1/12

CG-231 Rev 1, 5/12

DECEMBER 12, 2012

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Richland Laboratory
Data Review Check List
Hexavalent Chromium

Batch Number(s): 2312086	Lab Sample Numbers or SDG: ~~J01614~~ WQ6493
Method/Test/Parameter: Cr+6 ☒ RL-WC-003(Aqueous) ☐ RL-WC-004(Solid)	SKS 11-9-12

Review Item	Yes (✓)	No (✓)	N/A (✓)	2nd Level Review (✓)
A. Initial Calibration 1. Performed at required frequency with required number of levels?	✓			✓
2. Correlation coefficient greater than 0.97?	✓			✓
3. Initial calibration verification (ICV) analyzed immediately after calibration and results within 10% of expected?	✓			✓
4. Initial calibration blank (ICB) analyzed immediately after ICV and concentrations of all parameters ≤ reporting limit?	✓			✓
B. Continuing Calibration 1. CCV analyzed at required frequency and all parameters within 10% of expected?	✓			✓
2. CCB analyzed at required frequency and all results ≤ reporting limit?	✓			✓
C. Sample Analysis 1. Were any samples with concentrations above the linear range diluted and reanalyzed?			✓	✓
2. Were all sample holding times met?	✓			✓
D. QC Samples 1. All results for the preparation blank below limits?	✓			✓
2. LCS percent recovery within 85-115%	✓			✓
3. $PbCrO_4$ percent recovery within 75-125%?			✓	✓
4. Sample and Duplicate within 20% (aqueous) or 35% (solid) RPD?	✓			✓
5. MS or MS/MSD recoveries within 85-115% (aqueous) or 75-125% (solid)?	✓			✓
6. On MS failure, PDMS within 85-115%?			✓	✓
E. Other 1. Are all nonconformances included and noted?			✓	✓
2. Is the correct date and time of analysis shown?	✓			✓
3. Did the analyst sign and date the front page of the analytical run?	✓			✓
4. Correct methodology used?	✓			✓
5. Transcriptions checked?	✓			✓
6. Calculations checked at minimum frequency?	✓			✓
7. Units checked?	✓			✓

Comments on any "No" response or list NCM number:

Analyst M. Rahavi Date 11/8/12 2nd Review [signature] Date 11/8/12

CG-231 Rev 1, 5/12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

11/20/2012 7:17:41 AM

Lot No., Due Date: J2J300428; 12/13/2012
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 2304121; Coliform
SDG, Matrix: W06493; WATER

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

6.0 Comments on any No response:

First Level [signature] **Date** 11-20-12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 2304121

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: Samantha Segre Date: 11-20-12

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

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # A13-010-009
		Page 1 of 1

Collector	F. M. Hall	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	A13-010	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	LLWMA(2)-PA, OCTOBER 2012	**Logbook No.**	HNF-N-506 51 / 32	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	SURV	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.
FY12 and FY13 samples cannot be in the same SDG.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2M337	N	W	10/26/12	1433	1x20-mL P	Activity Scan	6 Months	None
B2M337	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1) MW6JQ	6 Months	None

J2J300416

W06493

J2J300416

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
F. M. Hall	F. M. Hall	OCT 2 6 2012 1530	SSU #1		OCT 2 6 2012 1530
SSU #1		10 29 12 1220			10 29 12 1220
		10 29 12 1315			10/29/12 1315

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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A-6004-842 (REV 2)

TestAmerica Laboratories, Inc.

DECEMBER 12, 2012

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Sample Check-in List

Date/Time Received: 10-29-12 / 1315 Container GM Screen Result: (Airlock) .05 Initials [ ]
Sample GM Screen Result (Sample Receiving) .03 Initials [ ]

Client: PBW SDG #: W06493 NA [ ] SAF #: A13-010 NA [ ]

Lot Number: J253004116

Chain of Custody # A13-010-009

Shipping Container ID: hand delv. NA [ ] Air Bill Number: _____ NA [ ]

Samples received inside shipping container/cooler/box Yes [ ] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ ]
3. Cooler temperature: _____ °C NA [ ]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [ ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 1 x Vial 20, 2 x 4Lp
8. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
9. Samples have:
   - ____ tape
   - ____ custody seals
   - ____ hazard labels
   - ____ appropriate sample labels
10. Matrix:
    - ____ A (FLT, Wipe, Solid, Soil)
    - ____ S (Air, Niosh 7400)
    - ____ I (Water)
    - ____ T (Biological, Ni-63)
11. Samples:
    - ____ are in good condition
    - ____ are broken
    - ____ Other
    - ____ are leaking
    - ____ have air bubbles (Only for samples requiring no head space)
12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [ ]
    (If acidification is necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition on table overleaf)
    RPL ID # of preservative used : NA
13. Were any anomalies identified in sample receipt? Yes [ ] No [ ]
14. Description of anomalies (include sample numbers): NA [ ]

LS-023, Rev. 15, 07/11

See over for additional information.

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15. Sample Location, Sample Collector Listed on COC? * Yes [✓] No [ ]
*For documentation only. No corrective action needed.

16. Additional Information: NA

[ ] Client/Courier denied temperature check. [✓] Client/Courier unpack cooler.

Sample Custodian: [signature] Date: 10-29-12

Client Informed on NA by NA Person contacted NA

[✓] No action necessary; process as is

Project Manager [signature] Date 11-6-12

SAMPLE ID	Initial pH	Acid Amt	Final pH	SAMPLE ID	Initial pH	Acid Amt	Final pH

J2J300416 SKS 11-6-12

LS-023, Rev. 15, 07/11

See over for additional information.

DECEMBER 12, 2012

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W13-010-084
		Page 1 of 1

Collector	F. M. Hall	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	W13-010	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	RCRA, OCTOBER 2012	Logbook No.	HNF-N-506 51 / 37	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	RCRA	Priority: 30 Days	PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

FY12 and FY13 samples cannot be in the same SDG.
Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis MW6N3	Holding Time	Preservative
B2M1R1	N	W	10/30/12	1117	1x500-mL P	9223_COLIFORM: Coliform (1)	6 Hours	Na2S2O3/Cool~4C
B2M1R1	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None

SDG # W06493
LOT # J2J300428
Report: 12-14-12

J2J300428

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
F. M. Hall	[signature]		OCT 30 2012 1125	ARMcIntyre	[signature]		OCT 30 2012 1125
ARMcIntyre	[signature]		10/30/12 1240	LVGrey Lucas Velazquez	TALP		10-30-12 1240

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W13-010-085 Page 1 of 1

Collector	F. M. Hall	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	W13-010	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	RCRA, OCTOBER 2012	**Logbook No.**	HNF-N-506 51 / 37	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	RCRA	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

FY12 and FY13 samples cannot be in the same SDG.
Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis MWGW	Holding Time	Preservative
B2M1R7	N	W	10/30/12	1030	1x500-mL P	9223_COLIFORM: Coliform (1)	6 Hours	Na2S2O3/Cool~4C
B2M1R7	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
F. M. Hall		OCT 30 2012 1125	ARMENTA/TYE		OCT 30 2012 1125
ARMENTA/TYE		10/30/12 1240	Lucas Velazquez LOPEZ	TALK	10-30-12 1240
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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A-6004-842 (REV 2)

TestAmerica Laboratories, Inc.

DECEMBER 12, 2012

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Sample Check-in List

Date/Time Received: 10-30-12 @1240 Container GM Screen Result: (Airlock) .06 Initials[LV]
Sample GM Screen Result (Sample Receiving) .04 Initials[LV]

Client: P(W) SDG #: L06493 NA [ ] SAF #: 413-010 NA [ ]

Lot Number: J25300428

Chain of Custody # 413-010-084

Shipping Container ID: Hand Delivery NA[LV] Air Bill Number: _____ NA[LV]

Samples received inside shipping container/cooler/box Yes [LV] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [LV]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [LV]
3. Cooler temperature: 9.9 °C on ice NA [ ]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [LV]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [LV] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 2
7. Containers received: 2xVial; 2x500mlp
8. Sample holding times exceeded? NA [ ] Yes [ ] No [LV]
9. Samples have:
   _____tape
   LV custody seals
   LV hazard labels
   LV appropriate sample labels
10. Matrix:
    _____A (FLT, Wipe, Solid, Soil)
    _____S (Air, Niosh 7400)
    LV I (Water)
    _____T (Biological, Ni-63)
11. Samples:
    LV are in good condition
    _____are broken
    _____Other N/A
    _____are leaking
    _____have air bubbles (Only for samples requiring no head space)
12. Sample pH appropriate for analysis requested Yes [LV] No [ ] NA [ ]
    (If acidification is necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition on table overleaf)
    RPL ID # of preservative used : N/A
13. Were any anomalies identified in sample receipt? Yes [ ] No [LV]
14. Description of anomalies (include sample numbers): NA[LV]

LS-023, Rev. 15, 07/11

See over for additional information.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

15. Sample Location, Sample Collector Listed on COC? * Yes [✓✓] No [ ]
*For documentation only. No corrective action needed.

16. Additional Information: N/A

[ ] Client/Courier denied temperature check. [LV] Client/Courier unpack cooler.

Sample Custodian: LVgez Date: 10-30-12

Client Informed on NA by NA Person contacted NA

[✓] No action necessary, process as is

Project Manager Sandra Segen Date 11-6-12

SAMPLE ID	Initial pH	Acid Amt	Final pH	SAMPLE ID	Initial pH	Acid Amt	Final pH

DAR LVgez 10-30-12 LVgez

J2J300428 SKS 11-6-12

LS-023, Rev. 15, 07/11

See over for additional information.

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S13-010-168
		Page 1 of 1

Collector	F. M. Hall	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	S13-010	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	SURV, OCTOBER 2012	**Logbook No.**	HNF-N-506 51 /37	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	SURV	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

FY12 and FY13 samples cannot be in the same SDG. Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2M531	N	W	10/30/12	1030	1x20-mL P	Activity Scan	6 Months	None
B2M531	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1) MWOTS	6 Months	None

J2J300441
W016493

J2J300441

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
F. M. Hall			OCT 30 2012 1125	A.M. McIntyre			OCT 30 2012 1125
Relinquished By			Date/Time	Received By			Date/Time
A.M. McIntyre			10/30/12 1240	Lucas Velazquez			10-30-12 1240
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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A-6004-842 (REV 2)

TestAmerica Laboratories, Inc.

DECEMBER 12, 2012

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S13-010-174
		Page 1 of 1

Collector	FM Hall CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	S13-010	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	SURV, OCTOBER 2012	**Logbook No.**	HNF-N-506 51 /36	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	SURV	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

FY12 and FY13 samples cannot be in the same SDG. Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2M5B0	N	W	10/29/12	1336	1x20-mL P	Activity Scan	6 Months	None
B2M5B0	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1) mule T4	6 Months	None

J2J300441

W06493

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
FM Hall CHPRC		OCT 29 2012 1547	SSU #1		OCT 29 2012 1547
SSU #1		10/30/12 0930	ARMcIntyre		10/30/12 0930
ARMcIntyre		10/30/12 1240	Lucas Velazquez	TMH	10/30/12 1240

Matrix *

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

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) | Disposed By | Date/Time

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A-6004-842 (REV 2)

TestAmerica Laboratories, Inc.

DECEMBER 12, 2012

DECEMBER 12, 2012

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S13-010-585
		Page 1 of 1

Collector	FM Hall CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	S13-010	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	SURV, OCTOBER 2012	Logbook No.	HNF-N-506 51 /36	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	SURV	Priority: 30 Days	PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

FY12 and FY13 samples cannot be in the same SDG. Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2M5P2	N	W	10/29/12	1513	1x20-mL P	Activity Scan	6 Months	None
B2M5P2	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1) MW6T7	6 Months	None
B2M5L7	N	W	↓	↓	1x1-L P	906.0ML_H3_LSC: Mid-level Tritium (1) MW6T8	6 Months	None

J25300441
W06493

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
FM Hall CHPRC	[signature]	OCT 29 2012	1547	SSU #1		OCT 29 2012	1547
SSU #1		10/30/12	0930	ARMcIntyre	[signature]	10/30/12	0930
ARMcIntyre	[signature]	10/30/12	1240	Lucas Velazquez	[signature]	TAR 10/30/12	1240

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

PRINTED O 10/12/2012

A-6004-842 (REV 2)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 10-30-12 @ 1240 Container GM Screen Result: (Airlock) .06 Initials[LV]
Sample GM Screen Result (Sample Receiving) .04 Initials[LV]

Client: PGW SDG #: W06493 NA [ ] SAF #: 513-010 NA [ ]

Lot Number: 320300441

Chain of Custody # 513-010-168, 174, 585

Shipping Container ID: Hand Delivery NA [LV] Air Bill Number: _____ NA [LV]

Samples received inside shipping container/cooler/box Yes [LV] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [LV]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [LV]
3. Cooler temperature: _____ °C NA [LV]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [LV]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [LV] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 4
7. Containers received: 3x vial 20, 1x 4p; 6x 4 4p
8. Sample holding times exceeded? NA [ ] Yes [ ] No [LV]
9. Samples have:
   - ____ tape
   - LV custody seals
   - ____ hazard labels
   - LV appropriate sample labels
10. Matrix:
    - ____ A (FLT, Wipe, Solid, Soil)
    - ____ S (Air, Niosh 7400)
    - LV I (Water)
    - ____ T (Biological, Ni-63)
11. Samples:
    - LV are in good condition
    - ____ are broken
    - ____ Other N/A
    - ____ are leaking
    - ____ have air bubbles (Only for samples requiring no head space)
12. Sample pH appropriate for analysis requested Yes [LV] No [ ] NA [ ]
    (If acidification is necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition on table overleaf)
    RPL ID # of preservative used : NA
13. Were any anomalies identified in sample receipt? Yes [ ] No [LV]
14. Description of anomalies (include sample numbers): NA [LV]

LS-023, Rev. 15, 07/11

See over for additional information.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

15. Sample Location, Sample Collector Listed on COC? * Yes [ ] No [ ]
*For documentation only. No corrective action needed.

16. Additional Information: NA

[ ] Client/Courier denied temperature check. [ ] Client/Courier unpack cooler.

Sample Custodian: _____ Date: 10-30-12

Client Informed on NA by NA Person contacted NA

[ ] No action necessary; process as is

Project Manager _____ Date 11-6-12

SAMPLE ID	Initial pH	Acid Amt	Final pH	SAMPLE ID	Initial pH	Acid Amt	Final pH

10-30-12

10-30-12

J2J 300 441 SKS 11-6-12

See over for additional information.

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S13-010-730
		Page 1 of 1

Collector	F. M. Hall	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	S13-010	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	SURV, OCTOBER 2012	**Logbook No.**	HNF-N-506 48 /86	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	SURV	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

FY12 and FY13 samples cannot be in the same SDG. Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MDJ0	N	W	11/1/12	1208	1x20-mL P	Activity Scan	6 Months	None
B2MDJ0	N	W	↓	↓	1x500-mL aG	7196_CR6: Hexavalent Chromium (1) MW7H3	24 Hours	Cool~4C

J2K010437
W06493

J2K010437

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
F. M. Hall		NOV 0 1 2012 1240	B.E. Briggs CHPRC	BeBriggs	NOV 0 1 2012 1240
B.E. Briggs CHPRC	BeBriggs	NOV 0 1 2012 1435	J. Bock	J Bock TALK	NOV 0 1 2012 1435
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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A-6004-842 (REV 2)

TestAmerica Laboratories, Inc.

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DECEMBER 12, 2012

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 11-1-12 | 1435 Container GM Screen Result: (Airlock) .06 Initials [ ]
Sample GM Screen Result (Sample Receiving) .02 Initials [ ]

Client: PLW SDG #: W06493 NA [ ] SAF #: 513-010 NA [ ]

Lot Number: J2K010437

Chain of Custody # 513-010-7730

Shipping Container ID: hand deliv. NA Air Bill Number: NA

Samples received inside shipping container/cooler/box Yes [ ] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ ]
3. Cooler temperature: 8.1 °C on Ice NA [ ]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [ ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 1 x vial 20; 1 x 500 mL Ab
8. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
9. Samples have:
   ____ tape
   ____ custody seals
   ____ hazard labels
   ____ appropriate sample labels
10. Matrix:
    ____ A (FLT, Wipe, Solid, Soil)
    ____ S (Air, Niosh 7400)
    ____ I (Water)
    ____ T (Biological, Ni-63)
11. Samples:
    ____ are in good condition
    ____ are broken
    ____ Other N/A
    ____ are leaking
    ____ have air bubbles (Only for samples requiring no head space)
12. Sample pH appropriate for analysis requested Yes [SKS] No [ ] NA [ ] SKS 11-6-12
    (If acidification is necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition on table overleaf)
    RPL ID # of preservative used : NA
13. Were any anomalies identified in sample receipt? Yes [ ] No [ ]
14. Description of anomalies (include sample numbers): NA

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See over for additional information.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

15. Sample Location, Sample Collector Listed on COC? * Yes [ ] No [ ]
*For documentation only. No corrective action needed.

16. Additional Information: NA

[ ] Client/Courier denied temperature check. [ ] Client/Courier unpack cooler.

Sample Custodian: _____ Date: 11-1-12

Client Informed on NA by NA Person contacted NA

[ ] No action necessary; process as is

Project Manager _____ Date 11-6-12

SAMPLE ID	Initial pH	Acid Amt	Final pH	SAMPLE ID	Initial pH	Acid Amt	Final pH

11-1-12 11-1-12

J2K 010 437 SKS 11-6-12

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See over for additional information.

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S13-010-175 Page 1 of 1

Collector	F. M. Hall	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	S13-010	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	SURV, OCTOBER 2012	**Logbook No.**	HNF-N-506 51/37	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	SURV	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

FY12 and FY13 samples cannot be in the same SDG. Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2M5J0	N	W	10/30/12	1439	1x20-mL P	Activity Scan	6 Months	None
B2M5J0	N	W	↓	↓	1x4-L G/P	GAMMALL_GS: List-1 (9) MW7LL	6 Months	HNO3 to pH <2

J2K010446
400493

J2K010446

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
F. M. Hall			OCT 30 2012 1540	SSU #1			OCT 30 2012 1540
Relinquished By			Date/Time	Received By			Date/Time
SSU #1			10-31-12 1000	MA White MA White			10-31-12 1000
Relinquished By			Date/Time	Received By			Date/Time
MA White MA White			10-31-12 1130	Julie Fox TALK			10-31-12 1130
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

PRINTED O 8/30/2012

A-6004-842 (REV 2)

TestAmerica Laboratories, Inc.

DECEMBER 12, 2012

DECEMBER 12, 2012

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 10-31-12 / 1130 Container GM Screen Result: (Airlock) .06 Initials [ ]
Sample GM Screen Result (Sample Receiving) .04 Initials [ ]

Client: PBW SDG #: WO6493 NA [ ] SAF #: 513-010 NA [ ]

Lot Number: 320L010446

Chain of Custody # 513-010-175

Shipping Container ID: hand deliv. NA [ ] Air Bill Number: _____ NA [ ]

Samples received inside shipping container/cooler/box Yes [ ] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ ]
3. Cooler temperature: _____ °C NA [ ]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [ ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 1x Vial 20, 1x4oz
8. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
9. Samples have:
   - ____ tape
   - [ ] custody seals
   - ____ hazard labels
   - [ ] appropriate sample labels
10. Matrix:
    - ____ A (FLT, Wipe, Solid, Soil)
    - ____ S (Air, Niosh 7400)
    - [ ] I (Water)
    - ____ T (Biological, Ni-63)
11. Samples:
    - [ ] are in good condition
    - ____ are broken
    - ____ Other
    - ____ are leaking
    - ____ have air bubbles (Only for samples requiring no head space)
12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [ ]
    (If acidification is necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition on table overleaf)
    RPL ID # of preservative used : NA
13. Were any anomalies identified in sample receipt? Yes [ ] No [ ]
14. Description of anomalies (include sample numbers): NA [ ]

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See over for additional information.

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THE LEADER IN ENVIRONMENTAL TESTING

15. Sample Location, Sample Collector Listed on COC? * Yes [✓] No [ ]
*For documentation only. No corrective action needed.

16. Additional Information: NA

[ ] Client/Courier denied temperature check. [✓] Client/Courier unpack cooler.

Sample Custodian: [signature] Date: 10-31-12

Client Informed on NA by NA Person contacted NA

[✓] No action necessary; process as is

Project Manager [signature] Date 11-6-12

SAMPLE ID	Initial pH	Acid Amt	Final pH	SAMPLE ID	Initial pH	Acid Amt	Final pH

[signature] 10-31-12

[signature] 10-31-12

J2K010446 SKS 11-6-12

LS-023, Rev. 15, 07/11

See over for additional information.

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S13-010-738
		Page 1 of 1

Collector	F. M. Hall	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	S13-010	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	SURV, OCTOBER 2012	**Logbook No.**	HNF-N-506 48/86	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	SURV	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

FY12 and FY13 samples cannot be in the same SDG. Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis MW7 P7	Holding Time	Preservative
B2MDJ8	N	W	11/1/12	0930	1x20-mL P	Activity Scan	6 Months	None
B2MDJ8	N	W			2x4-L G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	6 Months	None
B2MDJ8	N	W			1x1-L P	9310_ALPHABETA_GPC: Alpha + Beta (2)	6 Months	HNO3 to pH <2
B2MDJ8	N	W			2x1-L G/P	C14_LSC: C-14 (1)	6 Months	None
B2MDJ8	N	W			1x1-L G/P	PUISO_PLATE_AEA: Pu-238 + 239/240 (2)	6 Months	HNO3 to pH <2
B2MDJ8	N	W			3x1-L G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)	6 Months	HNO3 to pH <2
B2MDJ8	N	W			1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B2MDJ8	N	W			1x500-mL G/P	UTOT_KPA: Uranium (1)	6 Months	HNO3 to pH <2

SDG # 406493
LOT # J2K020408 J2K020408 LV 11-7-12
Report: 12-7-12

J2K020408

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
F. M. Hall			NOV 0 1 2012 1240	B.E. Briggs CHPRC			NOV 0 1 2012 1240
B.E. Briggs CHPRC			NOV 0 1 2012 1435	J. Beck			NOV 0 1 2012 1435

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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A-6004-842 (REV 2)

TestAmerica Laboratories, Inc.
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DECEMBER 12, 2012

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 11-1-12 | 1435 Container GM Screen Result: (Airlock) .04 Initials [ ]
Sample GM Screen Result (Sample Receiving) .04 Initials [ ]

Client: PLW SDG #: 460493 NA [ ] SAF #: 513-010 NA [ ]

Lot Number: J2K020408

Chain of Custody # 513-010-738

Shipping Container ID: hand deliv NA [ ] Air Bill Number: _____ NA [ ]

Samples received inside shipping container/cooler/box Yes [ ] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ ]
3. Cooler temperature: _____ °C NA [ ]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [ ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 1 x vial 20; 2 x 500 mLp; 7 x Lp; 2 x 4Lp
8. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
9. Samples have:
   _____tape
   [ ] custody seals
   _____hazard labels
   [ ] appropriate sample labels
10. Matrix:
    _____A (FLT, Wipe, Solid, Soil)
    _____S (Air, Niosh 7400)
    [ ] I (Water)
    _____T (Biological, Ni-63)
11. Samples:
    [ ] are in good condition
    _____are broken
    _____Other N/A
    _____are leaking
    _____have air bubbles (Only for samples requiring no head space)
12. Sample pH appropriate for analysis requested Yes [W] No [ ] NA [ ]
    (If acidification is necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition on table overleaf)
    RPL ID # of preservative used : N/A
13. Were any anomalies identified in sample receipt? Yes [ ] No [ ]
14. Description of anomalies (include sample numbers): NA [ ]

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See over for additional information.

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THE LEADER IN ENVIRONMENTAL TESTING

15. Sample Location, Sample Collector Listed on COC? * Yes [JB] No [ ]
*For documentation only. No corrective action needed.

16. Additional Information: NA

[ ] Client/Courier denied temperature check. [JB] Client/Courier unpack cooler.

Sample Custodian: Juan Beck Date: 11-1-12

Client Informed on NA by NA Person contacted NA

[ ] No action necessary; process as is

Project Manager Sandra Seger Date 11-6-12

SAMPLE ID	Initial pH	Acid Amt	Final pH	SAMPLE ID	Initial pH	Acid Amt	Final pH

J2K020408 SKS 11-6-12

LS-023, Rev. 15, 07/11

See over for additional information.

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X13-001-136
		Page 1 of 1

Collector	J. Aguilar	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	X13-001	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	303064ES20
Project Title	AQUIFER TUBES, OCTOBER 2012	**Logbook No.**	HNF-N-506 46/86	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	SURV	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is TBD.
FY12 and FY13 samples cannot be in the same SDG.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2M744	N	W	11-5-12	1130	1x20-mL P	Activity Scan	6 Months	None
B2M744	N	W	11-5-12	1130	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1) MW8CT	6 Months	None

J2K050431
W06493

J2K050431

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J. Aguilar			11-5-12 1300	Lucas Velazquez			11-5-12 1300
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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A-6004-842 (REV 2)

TestAmerica Laboratories, Inc.
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DECEMBER 12, 2012

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 11-5-12@ 1300 Container GM Screen Result: (Airlock) .03 Initials[LW]
Sample GM Screen Result (Sample Receiving) .03 Initials[LW]

Client: PGL SDG #: 320649B3 NA [ ] SAF #: X13-001 NA [ ]

Lot Number: J2K050431

Chain of Custody # X13-001-134

Shipping Container ID: Hand Delivery NA[LW] Air Bill Number: NA[LW]

Samples received inside shipping container/cooler/box Yes [ ] Continue with 1 through 4. Initial appropriate response.
No [LW] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ ]
3. Cooler temperature: _____°C NA [ ]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [LW] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 1X Vial; 2x4LP
8. Sample holding times exceeded? NA [ ] Yes [ ] No [LW]
9. Samples have:
   _____tape
   LW custody seals
   _____hazard labels
   LW appropriate sample labels
10. Matrix:
    _____A (FLT, Wipe, Solid, Soil)
    _____S (Air, Niosh 7400)
    LW I (Water)
    _____T (Biological, Ni-63)
11. Samples:
    LW are in good condition
    _____are broken
    _____Other N/A
    _____are leaking
    _____have air bubbles (Only for samples requiring no head space)
12. Sample pH appropriate for analysis requested Yes [LW] No [ ] NA [ ]
    (If acidification is necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition on table overleaf)
    RPL ID # of preservative used : NA
13. Were any anomalies identified in sample receipt? Yes [ ] No [LW]
14. Description of anomalies (include sample numbers): NA[LW]

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See over for additional information.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

15. Sample Location, Sample Collector Listed on COC? * Yes [ ] No [ ]
*For documentation only. No corrective action needed.

16. Additional Information: Client brought in the samples by hand. There was no shipping container SKS 11-6-12

SKS 11-6-12

[ ] Client/Courier denied temperature check. [ ] Client/Courier unpack cooler.

Sample Custodian: Date: 11-5-12

Client Informed on NA by NA Person contacted NA

[ ] No action necessary, process as is

Project Manager Sandra Seger Date 11-6-12

SAMPLE ID	Initial pH	Acid Amt	Final pH	SAMPLE ID	Initial pH	Acid Amt	Final pH

J2K050431 SKS 11-6-12

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See over for additional information.

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I13-005-011
		Page 1 of 1

Collector	D.J. Woehle CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	I13-005	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	2ZP1, NOVEMBER 2012	**Logbook No.**	HNF-N-506 36 / 34	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	CERCLA	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

200 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MNX4	N	W	11-5-12	1024	1x20-mL P	Activity Scan	6 Months	None
B2MNX4	N	W	11-5-12	1024	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1) mw8QX	6 Months	None

W064493
J2K060433

J2K060433

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
D.J. Woehle CHPRC		NOV 05 2012 1536	SSU-1		NOV 05 2012 1536
SSU-1		NOV 06 2012 0800	MA White CHPRC		NOV 06 2012 0800
MA White CHPRC		NOV 06 2012 1730	Lucas Velazquez		NOV 06 2012 1730
		11-6-12			

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I13-005-012
		Page 1 of 1

Collector	~~D.J. Woehle~~ CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	I13-005	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	2ZP1, NOVEMBER 2012	**Logbook No.**	HNF-N-506 36134	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	CERCLA	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

200 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MNX5	N	W	11-5-12	1024	1x20-mL P	Activity Scan	6 Months	None
B2MNX5	N	W	11-5-12	1024	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1) MW8QD	6 Months	None

W06493
J2K0e0433

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
~~D.J. Woehle~~ CHPRC	D.J. Woehle		NOV 05 2012 1536	SSU41			NOV 05 2012 1536
~~SSU-1~~			NOV 06 2012 0800	~~MA White~~ CHPRC	MA White		NOV 06 2012 0800
~~MA White~~ CHPRC	MA White		NOV 06 2012 1230				
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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A-6004-842 (REV 2)

DECEMBER 12, 2012

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 11-06-12 | 1230 Container GM Screen Result: (Airlock) .06 Initials [ ]
Sample GM Screen Result (Sample Receiving) .03 Initials [ ]

Client: PGW SDG #: 480-36493 NA [ ] SAF #: I13-005 NA [ ]

Lot Number: 320K060433

Chain of Custody # I13-005-011012

Shipping Container ID: Hand Deliv. NA [ ] Air Bill Number: NA [ ]

Samples received inside shipping container/cooler/box Yes [ ] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ ]
3. Cooler temperature: _____ °C NA [ ]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [ ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 2
7. Containers received: 2 x Vial 20; 4 x 4oz
8. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
9. Samples have:
   - ____ tape
   - ____ custody seals
   - ____ hazard labels
   - ____ appropriate sample labels
10. Matrix:
    - ____ A (FLT, Wipe, Solid, Soil)
    - ____ S (Air, Niosh 7400)
    - ____ I (Water)
    - ____ T (Biological, Ni-63)
11. Samples:
    - ____ are in good condition
    - ____ are broken
    - ____ Other N/A
    - ____ are leaking
    - ____ have air bubbles (Only for samples requiring no head space)
12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [ ]
    (If acidification is necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition on table overleaf)
    RPL ID # of preservative used : NA
13. Were any anomalies identified in sample receipt? Yes [ ] No [ ]
14. Description of anomalies (include sample numbers): NA

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See over for additional information.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

15. Sample Location, Sample Collector Listed on COC? * Yes [ ] No [ ]
*For documentation only. No corrective action needed.

16. Additional Information: NA

[ ] Client/Courier denied temperature check. [ ] Client/Courier unpack cooler.

Sample Custodian: _____ Date: 11-6-12

Client Informed on NA by NA Person contacted NA

[~~No~~ action necessary; process as is

Project Manager _____ Date 11-6-12

SAMPLE ID	Initial pH	Acid Amt	Final pH	SAMPLE ID	Initial pH	Acid Amt	Final pH

11-6-12

11-6-12

JAK060433 SKS 11-6-12

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See over for additional information.

DECEMBER 12, 2012

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I13-007-005
		Page 1 of 1

Collector	Robert Crow	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	I13-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	100NR2, DECEMBER 2012	Logbook No.	HNF-N-506 36/36	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.
FY12 and FY13 samples cannot be in the same SD

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MXL6	N	W	11-7-12	1021	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C
B2MXL6	N	W			1x1-L P	906.0_H3_LSC: Tritium (1)	6 Months	None
B2MXL6	N	W			1x1-L P	9310_ALPHABETA_GPC: Alpha + Beta (2)	6 Months	HNO3 to pH <2
B2MXL6	N	W			1x20-mL P	Activity Scan	6 Months	None
B2MXL6	N	W			3x1-L G/P	GAMMA_GS: List-1 (10)	6 Months	HNO3 to pH <2
B2MXL6	N	W			1x1-L G/P	PUISO_PLATE_AEA: Pu-238 + 239/240 (2)	6 Months	HNO3 to pH <2
B2MXL6	N	W			3x1-L G/P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)	6 Months	HNO3 to pH <2
B2MXL6	N	W			1x500-mL P	TC99_ETVDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B2MXL6	N	W	11-7-12	1021	1x1-L G/P	UISO_PLATE_AEA: List-1 (3) MW87H	6 Months	HNO3 to pH <2

J2K070446
W06493

J2K070446

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Robert Crow	R Crow		NOV 07 2012 1105	ARMcIntyre			NOV 07 2012 1105
ARMcIntyre			11-7-12 1410	J. Bock	J Bock	TALR	11-7-12 1410

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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A-6004-842 (REV 2)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

SKS 11/8/12

Date/Time Received: PBW 11-7-12/1410 Container GM Screen Result: (Airlock) .04 Initials [ ]
Sample GM Screen Result (Sample Receiving) .04 Initials [ ]

Client: PBW SDG #: W06493 NA [ ] SAF #: I13-007 NA [ ]

Lot Number: J3K010446

Chain of Custody # I13-007-005

Shipping Container ID: hand deliv. NA [ ] Air Bill Number: NA [ ]

Samples received inside shipping container/cooler/box Yes [ ] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ ]
3. Cooler temperature: 5.9 °C on Ice NA [ ]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [ ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 1x vial 20; 1x 500 mLP; 1x 500 mLAG; 10 x LP
8. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
9. Samples have:
   - ____ tape
   - [ ] custody seals
   - ____ hazard labels
   - [ ] appropriate sample labels
10. Matrix:
    - ____ A (FLT, Wipe, Solid, Soil)
    - ____ S (Air, Niosh 7400)
    - [ ] I (Water)
    - ____ T (Biological, Ni-63)
11. Samples:
    - [ ] are in good condition
    - ____ are broken
    - ____ Other N/A
    - ____ are leaking
    - ____ have air bubbles (Only for samples requiring no head space)
12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [ ]
    (If acidification is necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition on table overleaf)
    RPL ID # of preservative used : NA
13. Were any anomalies identified in sample receipt? Yes [ ] No [ ]
14. Description of anomalies (include sample numbers): NA [ ]

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See over for additional information.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

15. Sample Location, Sample Collector Listed on COC? * Yes [ ] No [ ]
*For documentation only. No corrective action needed.

16. Additional Information: NA

[ ] Client/Courier denied temperature check. [ ] Client/Courier unpack cooler.

Sample Custodian: _____ Date: 11-7-12

Client Informed on NA by NA Person contacted NA

[ ] No action necessary; process as is

Project Manager _____ Date 11-8-12

SAMPLE ID	Initial pH	Acid Amt	Final pH	SAMPLE ID	Initial pH	Acid Amt	Final pH

11-7-12

11-7-12

320K070446 SKS 11-8-12

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See over for additional information.

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I13-005-016
		Page 1 of 1

Collector	D.J. Woehle CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	I13-005	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	2ZP1, NOVEMBER 2012	**Logbook No.**	HNF-N-506 36 / 35	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	CERCLA	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

200 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis MW9FL1	Holding Time	Preservative
B2MP14	N	W	11-6-12	0905	1x20-mL P	Activity Scan	6 Months	None
B2MP14	N	W	11-6-12	0905	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	6 Months	None

SDG # W0G493
LOT# J2K080419
~~Report, 12-21-12~~ SKS 11-8-12

J2K080419

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
D.J. Woehle CHPRC			NOV 0 6 2012 1415	SSU-1			NOV 0 6 2012 1415
SSU #1			Nov. 7, 2012 0735	RA SHEPARD			Nov. 7, 2012 0735
RA SHEPARD		11/7/12	1410	J. Bock	Bock	TALX	11-7-12 1410
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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A-6004-842 (REV 2)

TestAmerica Laboratories, Inc.
120
DECEMBER 12, 2012

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 11-7-12 / 1410 Container GM Screen Result: (Airlock) .04 Initials [ ]
Sample GM Screen Result (Sample Receiving) .04 Initials [ ]

Client: PBW SDG #: WO64193 NA [ ] SAF #: I13-005 NA [ ]

Lot Number: JJK0804119

Chain of Custody # I13-005-016

Shipping Container ID: hand deliv. NA [ ] Air Bill Number: NA [ ]

Samples received inside shipping container/cooler/box Yes [ ] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ ]
3. Cooler temperature: _____ °C NA [ ]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [ ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 1 x Vial 20; 2 x 4 Lp
8. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
9. Samples have:
   _____tape
   [ ] custody seals
   _____hazard labels
   [ ] appropriate sample labels
10. Matrix:
    _____A (FLT, Wipe, Solid, Soil)
    _____S (Air, Niosh 7400)
    [ ] I (Water)
    _____T (Biological, Ni-63)
11. Samples:
    [ ] are in good condition
    _____are broken
    _____Other N/A
    _____are leaking
    _____have air bubbles (Only for samples requiring no head space)
12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [ ]
    (If acidification is necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition on table overleaf)
    RPL ID # of preservative used : N/A
13. Were any anomalies identified in sample receipt? Yes [ ] No [ ]
14. Description of anomalies (include sample numbers): NA [ ]

LS-023, Rev. 15, 07/11 See over for additional information.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

15. Sample Location, Sample Collector Listed on COC? * Yes [B] No [ ]
*For documentation only. No corrective action needed.

16. Additional Information: NA

[ ] Client/Courier denied temperature check. [B] Client/Courier unpack cooler.

Sample Custodian: Jamie Bock Date: 11-7-12

Client Informed on NA by NA Person contacted NA

[ ] No action necessary; process as is

Project Manager Sandra Segura Date 11-8-12

SAMPLE ID	Initial pH	Acid Amt	Final pH	SAMPLE ID	Initial pH	Acid Amt	Final pH

B 11-7-12

B 11-7-12

J2K080419 SKS 11-8-12

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See over for additional information.

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I13-005-021
		Page 1 of 1

Collector	F. M. Hall	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	I13-005	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	2ZP1, NOVEMBER 2012	**Logbook No.**	HNF-N-506 479 / 704	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	CERCLA	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

200 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MP39	N	W	11-7-12	0940	1x20-mL P	Activity Scan	6 Months	None
B2MP39	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1) mw9mQ	6 Months	None

J2K080445
W06493

J2K080445

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	F. M. Hall		NOV 07 2012 1505		SSC #1		NOV 07 2012 1505
Relinquished By	SSC #1		11/8/12 0800	Received By	R A SHEPARD		11/8/12 0800
Relinquished By	R A SHEPARD		11/8/12 1300	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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A-6004-842 (REV 2)

TestAmerica Laboratories, Inc.

DECEMBER 12, 2012

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 11-8-12 1300 Container GM Screen Result: (Airlock) .108 Initials[LV]
Sample GM Screen Result (Sample Receiving) .105 Initials[LV]

Client: PGV SDG #: W06493 NA [ ] SAF #: I13-005 NA [ ]

Lot Number: 320806445

Chain of Custody # I13-005-021

Shipping Container ID: Hand Delivery NA [SKS] Air Bill Number: _____ NA [LV]

Samples received inside shipping container/cooler/box Yes [LV] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [LV]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [LV]
3. Cooler temperature: _____ °C NA [LV]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [LV]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [LV] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 1x Vial, 2x4LP
8. Sample holding times exceeded? NA [ ] Yes [ ] No [LV]
9. Samples have:
   _____ tape
   LV custody seals
   _____ hazard labels
   LV appropriate sample labels
10. Matrix:
    _____ A (FLT, Wipe, Solid, Soil)
    _____ S (Air, Niosh 7400)
    LV I (Water)
    _____ T (Biological, Ni-63)
11. Samples:
    LV are in good condition
    _____ are broken
    _____ Other N/A
    _____ are leaking
    _____ have air bubbles (Only for samples requiring no head space)
12. Sample pH appropriate for analysis requested Yes [SKS] No [ ] NA [LV] SKS 11-9-12
    (If acidification is necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition on table overleaf)
    RPL ID # of preservative used : N/A
13. Were any anomalies identified in sample receipt? Yes [ ] No [LV]
14. Description of anomalies (include sample numbers): NA LV

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See over for additional information.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

15. Sample Location, Sample Collector Listed on COC? * Yes [W] No [ ]
*For documentation only. No corrective action needed.

16. Additional Information: N/A

[ ] Client/Courier denied temperature check. [W] Client/Courier unpack cooler.

Sample Custodian: [illegible] Date: 11-8-12

Client Informed on NA by NA Person contacted NA

[✓] No action necessary; process as is

Project Manager Sandra Lee Date 11-9-12

SAMPLE ID	Initial pH	Acid Amt	Final pH	SAMPLE ID	Initial pH	Acid Amt	Final pH

TALK

11-8-12

J2K080445 SKS 11-9-12

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See over for additional information.

11/14/2012 10:29:53 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

6D Pu Prp PRP004, Sep ALP002(ALP015)
SO Plutonium-238,239/40 by Alpha Spec
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 12/13/2012

Sep1 DT/Tm Tech:

Batch: 2318058 WATER pCi/L PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,HoganH

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comment
1 MW7P7-1-AF			202.10g,in	202.10g	PUTC13210								
J2K020408-1-SAMP					08/28/12,pd								
					01/01/10,r								
11/01/2012 09:30			AmtRec: 1XVIAL;7XLP;2X500;2X4LP #Containers: 12							Scr:	Alpha: -4.86E-03 uCi/Sa		Beta: 6.73E-03 uCi/Sa
2 MW7P7-1-AK-X			200.90g,in	200.90g	PUTC13209								
J2K020408-1-DUP					08/28/12,pd								
					01/01/10,r								
11/01/2012 09:30			AmtRec: 1XVIAL;7XLP;2X500;2X4LP #Containers: 12							Scr:	Alpha: -4.86E-03 uCi/Sa		Beta: 6.73E-03 uCi/Sa
3 MXARP-1-AA-B			200.20g,in	200.20g	PUTC13208								
J2K130000-58-BLK					08/28/12,pd								
					01/01/10,r								
11/13/2012 15:16 pd			AmtRec:	#Containers: 1						Scr:	Alpha:		Beta:
4 MXARP-1-AC-C			201.20g,in	201.20g	PUSG1136								
J2K130000-58-LCS					08/17/12,pd								
					01/01/10,r								
11/13/2012 15:16 pd			AmtRec:	#Containers: 1						Scr:	Alpha:		Beta:

Comments: MXARP-BLK P-12-00579,P-12-00228,"HH 11/14/12" pH<20 HH 11/14/12

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

MW7P71AF-SAMP Constituent List:

PU-238	RDL:1	pCi/L	LCL:	UCL:	RPD:	PU-239	RDL:1	pCi/L	LCL:70	UCL:130	RPD:20
Pu-242	RDL:	pCi/L	LCL:20	UCL:105	RPD:20						

MXARP1AA-BLK:

PU-238	RDL:1	pCi/L	LCL:	UCL:	RPD:	PU-239	RDL:1	pCi/L	LCL:	UCL:	RPD:
Pu-242	RDL:	pCi/L	LCL:20	UCL:105	RPD:20						

MXARP1AC-LCS:

DECEMBER 12, 2012

Sample Preparation/Analysis

6D Pu Prp PRP004, Sep ALP002(ALP015)
SO Plutonium-238,239/40 by Alpha Spec
5I CLIENT: HANFORD

Balance Id:1120482733

Pipet #: _____

AnalyDueDate: 12/13/2012

Sep1 DT/Tm Tech:

Batch: 2318058 **pCi/L**
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: HoganH

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments

PU-239 RDL:1 pCi/L LCL:70 UCL:130 RPD:20 Pu-242 RDL: pCi/L LCL:20 UCL:105 RPD:20

MW7P71AF-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXARP1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXARP1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.
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DECEMBER 12, 2012

11/21/2012 10:53:44 AM

ICOC Fraction Transfer/Status Report

ByDate: 11/22/2011, 11/26/2012, Batch: '2318058', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
2318058						
AC		Rev1C	HoganH	11/14/2012 9:42:00		
SC			davilan	IsBatched	11/13/2012 3:18:30 PM	ICOC_RADCALC v4.8.49
SC			HoganH	InPrep	11/14/2012 9:42:00 AM	RL-PRP-004 REVISION 2
SC			HoganH	Prep1C	11/14/2012 11:05:38 AM	RL-PRP-004 REVISION 2
SC			HayesA	Prep2C	11/16/2012 11:06:00 AM	RL-PRP-010 REVISION 3
SC			HayesA	Sep1C	11/20/2012 12:03:12 PM	RL-ALP-001 REVISION 3
SC			HayesA	Sep2C	11/20/2012 5:36:25 PM	RL-ALP-016 REVISION 2
SC			DawkinsO	InCnt1	11/20/2012 6:13:07 PM	RL-CI-008 REV. 2
SC			DawkinsO	CalcC	11/20/2012 10:43:05 PM	RL-CI-008 REV. 2
SC			antonsonl	Rev1C	11/21/2012 10:53:37 AM	RL-DR-001 Rev 2
AC			HoganH	11/14/2012 11:05:38		
AC			HayesA	11/16/2012 11:06:00		
AC			HayesA	11/20/2012 12:03:12		
AC			HayesA	11/20/2012 5:36:25		
AC			DawkinsO	11/20/2012 6:13:07		
AC			DawkinsO	11/20/2012 10:43:05		
AC			antonsonl	11/21/2012 10:53:37		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

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Grp Rec Cnt: 8

ICOCFractions v4.8.44

11/14/2012 9:30:41 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

7Y Ulso Prp PRP004/PRP010, Sep ALP004(ALP015)
SR Uranium-234,235,238 by Alpha Spec

Pipet #: _____

AnalyDueDate: 12/13/2012

5I CLIENT: HANFORD

Sep1 DT/Tm Tech:

Batch: 2318059 WATER pCi/L

PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,HoganH

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments
1 MW87H-1-AK			200.60g,in	200.60g	UITC29338				1000				
J2K070446-1-SAMP					07/30/12,pd 06/15/01,r								
11/07/2012 10:21			AmtRec: 1XVIAL20,2X500,10XLP		#Containers: 13				Scr:	Alpha: 2.98E-03 uCi/Sa		Beta: 2.95E-03 uCi/Sa	
2 MW87H-1-AP-X			201.50g,in	201.50g	UITC29339								
J2K070446-1-DUP					07/30/12,pd 06/15/01,r								
11/07/2012 10:21			AmtRec: 1XVIAL20,2X500,10XLP		#Containers: 13				Scr:	Alpha: 2.98E-03 uCi/Sa		Beta: 2.95E-03 uCi/Sa	
3 MXARQ-1-AA-B			200.10g,in	200.10g	UITC29340								
J2K130000-59-BLK					07/30/12,pd 06/15/01,r								
11/13/2012 15:16 pd			AmtRec:		#Containers: 1				Scr:	Alpha:		Beta:	
4 MXARQ-1-AC-C			200.50g,in	200.50g	UISG2603								
J2K130000-59-LCS					10/02/12,pd 06/15/01,r								
11/13/2012 15:16 pd			AmtRec:		#Containers: 1				Scr:	Alpha:		Beta:	

Comments: MXARQ-BLK P-12-00228,P-12-00579," HH 11/14/12" pH<2.0 HH 11/14/12

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

MW87H1AK-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:
U-235	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:	U-238	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:

MXARQ1AA-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:

DECEMBER 12, 2012

Sample Preparation/Analysis

7Y Ulso Prp PRP004/PRP010, Sep ALP004(ALP015)
SR Uranium-234,235,238 by Alpha Spec
5I CLIENT: HANFORD

Balance Id:1120482733

Pipet #: _____

AnalyDueDate: 12/13/2012

Sep1 DT/Tm Tech:

Batch: 2318059 **pCi/L**

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: HoganH

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments

MXARQ1AC-LCS:
U-232 RDL: pCi/L LCL:20 UCL:105 RPD:20 Uranium RDL: pCi/L LCL:70 UCL:130 RPD:20

MW87H1AK-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXARQ1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXARQ1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.
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DECEMBER 12, 2012

11/27/2012 11:23:41 AM

ICOC Fraction Transfer/Status Report

ByDate: 11/28/2011, 12/2/2012, Batch: '2318059', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
2318059						
AC		Rev1C	HoganH	11/14/2012 9:25:01		
SC			davilan	IsBatched	11/13/2012 3:18:37 PM	ICOC_RADCALC v4.8.49
SC			HoganH	InPrep	11/14/2012 9:25:01 AM	RL-PRP-004 REVISION 2
SC			HoganH	Prep1C	11/14/2012 11:05:15 AM	RL-PRP-004 REVISION 2
SC			HayesA	Prep2C	11/16/2012 11:06:20 AM	RL-PRP-010 REVISION 3
SC			HayesA	Sep1C	11/20/2012 12:02:53 PM	RL-ALP-003 REVISION 3
SC			HayesA	Sep2C	11/20/2012 2:09:54 PM	RL-ALP-015 REVISION 5
SC			HayesA	Sep2C	11/20/2012 2:09:54 PM	RL-ALP-015 REVISION 5
SC			ClarkR	InCnt1	11/20/2012 3:49:08 PM	RL-CI-008 REV. 2
SC			DawkinsO	CalcC	11/21/2012 6:04:21 PM	RL-CI-008 REV. 2
SC			antonsonl	Rev1C	11/27/2012 11:23:14 AM	RL-DR-001 Rev 2
AC			HoganH	11/14/2012 11:05:15		
AC			HayesA	11/16/2012 11:06:20		
AC			HayesA	11/20/2012 12:02:53		
AC			HayesA	11/20/2012 2:09:54		
AC			HayesA	11/20/2012 2:09:54		EMPTY
AC			ClarkR	11/20/2012 3:49:08		
AC			DawkinsO	11/21/2012 6:04:21		
AC			antonsonl	11/27/2012 11:23:14		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

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Grp Rec Cnt:9

ICOCFractions v4.8.44

DECEMBER 12, 2012

11/20/2012 12:51:02 PM

Sample Preparation/Analysis

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

AZ Gross Alpha Prp GPC001
S7 Gross Alpha by GPC using Am-241 curve
5I CLIENT: HANFORD

AnalyDueDate: 12/13/2012

Batch: 2318060 WATER pCi/L PM, Quote: SS , 57671
SEQ Batch, Test: None

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: ,HoganH

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 **MW7P7-1-AA** J2K020408-1-SAMP 11/01/2012 09:30			200.40g,in	200.40g			1.5	45.9mg	240	21A	~~1777~~ 1737	11/20/12	
			AmtRec: 1XVIAL;7XLP;2X500;2X4LP #Containers: 12						Scr:	Alpha: -4.86E-03 uCi/Sa		Beta: 6.73E-03 uCi/Sa	
2 **MW7P7-1-AL-X** J2K020408-1-DUP 11/01/2012 09:30			201.70g,in	201.70g				48.2mg		21B			
			AmtRec: 1XVIAL;7XLP;2X500;2X4LP #Containers: 12						Scr:	Alpha: -4.86E-03 uCi/Sa		Beta: 6.73E-03 uCi/Sa	
3 **MW87H-1-AD** J2K070446-1-SAMP 11/07/2012 10:21			121.50g,in	121.50g				33.9mg		21C			
			AmtRec: 1XVIAL20,2X500,10XLP #Containers: 13						Scr:	Alpha: 2.98E-03 uCi/Sa		Beta: 2.95E-03 uCi/Sa	
4 **MXARR-1-AA-B** J2K130000-60-BLK 11/13/2012 15:16 pd			200.50g,in	200.50g				0.4mg		22A			
			AmtRec:	#Containers: 1					Scr:	Alpha:		Beta:	
5 **MXARR-1-AC-C** J2K130000-60-LCS 11/13/2012 15:16 pd			201.10g,in	201.10g	ASD5431 07/26/12,pd 04/04/05,r			1.3mg		22B			
			AmtRec:	#Containers: 1					Scr:	Alpha:		Beta:	

Comments: MXARR-BLK P-12-00579P-12-00452,,P-12-00228," HH 11/14/12" PHL 2.0 11/20/12 [illegible]

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

MW7P71AA-SAMP Constituent List:

TestAmerica Richland Wa. Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1 ISV - Insufficient Volume for Analysis
pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

WO Cnt: 5
Prep_SamplePrep v4.8.60

Sample Preparation/Analysis

AZ Gross Alpha Prp GPC001
S7 Gross Alpha by GPC using Am-241 curve
5l CLIENT: HANFORD

AnalyDueDate: 12/13/2012

Batch: 2318060 **pCi/L**
SEQ Batch, Test: None

Balance Id:
Pipet #: _____
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: WattN,HoganH

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

```
  ALPHA        RDL:3          pCi/L     LCL:        UCL:        RPD:
MXARR1AA-BLK:
  ALPHA        RDL:3          pCi/L     LCL:        UCL:        RPD:
MXARR1AC-LCS:
  Am-241       RDL:           pCi/L     LCL:70      UCL:130     RPD:20
MW7P71AA-SAMP Calc Info:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MXARR1AA-BLK:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MXARR1AC-LCS:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```


TestAmerica Laboratories, Inc.
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DECEMBER 12, 2012

11/26/2012 10:35:06 AM

ICOC Fraction Transfer/Status Report

ByDate: 11/27/2011, 12/1/2012, Batch: '2318060', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			Comments
2318060							
AC			**Rev1C**	**HoganH**	11/14/2012 1:13:44		
SC				davilan	IsBatched	11/13/2012 3:18:43 PM	ICOC_RADCALC v4.8.49
SC				HoganH	InPrep	11/14/2012 1:13:44 PM	RL-PRP-004 REVISION 2
SC				HoganH	Prep1C	11/14/2012 1:18:30 PM	RL-PRP-004 REVISION 2
SC				ClarkR	InCnt1	11/20/2012 1:09:14 PM	RL-CI-006 REVISION 3
SC				DawkinsO	CalcC	11/20/2012 10:37:10 PM	RL-CI-006 REVISION 3
SC				mcginnist	Rev1C	11/26/2012 10:34:51 AM	RL-DR-001 Rev 2
AC				**HoganH**	11/14/2012 1:18:30		
AC				**ClarkR**	11/20/2012 1:09:14		
AC				**DawkinsO**	11/20/2012 10:37:10		
AC				**mcginnist**	11/26/2012 10:34:51		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

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Grp Rec Cnt: 5

ICOCFractions v4.8.44

11/20/2012 12:46:35 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

BC Gross Beta Prp GPC001
S8 Gross Beta by GPC using Sr/Y-90 curve
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 12/13/2012

Sep1 DT/Tm Tech:

Batch: 2318061 WATER pCi/L
SEQ Batch, Test: None

PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

Prep Tech: ,HoganH

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MW7P7-1-AC J2K020408-1-SAMP 11/01/2012 09:30			192.00g,in AmtRec: 1XVIAL;7XLP;2X500;2X4LP	192.00g #Containers: 12			1.5	91.4mg	200	21B Scr:	17 DC Alpha: -4.86E-03 uCi/Sa	11/20/12 cm Beta: 6.73E-03 uCi/Sa	
2 MW87H-1-AE J2K070446-1-SAMP 11/07/2012 10:21			188.60g,in AmtRec: 1XVIAL20,2X500,10XLP	188.60g #Containers: 13				104.0mg		21C Scr:	Alpha: 2.98E-03 uCi/Sa	Beta: 2.95E-03 uCi/Sa	
3 MW87H-1-AQ-X J2K070446-1-DUP 11/07/2012 10:21			188.30g,in AmtRec: 1XVIAL20,2X500,10XLP	188.30g #Containers: 13				93.7mg		21D Scr:	Alpha: 2.98E-03 uCi/Sa	Beta: 2.95E-03 uCi/Sa	
4 MXART-1-AA-B J2K130000-61-BLK 11/13/2012 15:16 pd			201.30g,in AmtRec:	201.30g #Containers: 1				6.1mg		22A Scr:	Alpha:	Beta:	
5 MXART-1-AC-C J2K130000-61-LCS 11/13/2012 15:16 pd			200.90g,in AmtRec:	200.90g #Containers: 1	BESC2183 10/16/12,pd 10/01/01,r			4.6mg		22B Scr:	Alpha:	Beta:	

Comments: MXART-BLK P-12-00579P-12-00452,,P-12-00228,"HH 11/14/12" Sample #1-3 reduced due to w/s results 11/20/12 MC

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

MW7P71AC-SAMP Constituent List:

DECEMBER 12, 2012

Sample Preparation/Analysis

BC Gross Beta Prp GPC001
S8 Gross Beta by GPC using Sr/Y-90 curve
5I CLIENT: HANFORD

Balance Id:1120482733

Pipet #: _____

AnalyDueDate: 12/13/2012

Sep1 DT/Tm Tech:

Batch: 2318061 pCi/L

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: WattN,HoganH

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

```
  BETA          RDL:4            pCi/L     LCL:          UCL:          RPD:
MXART1AA-BLK:
  BETA          RDL:4            pCi/L     LCL:          UCL:          RPD:
MXART1AC-LCS:
  Sr-90         RDL:             pCi/L     LCL:70        UCL:130       RPD:20
MW7P71AC-SAMP Calc Info:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MXART1AA-BLK:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MXART1AC-LCS:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```


TestAmerica Laboratories, Inc.

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DECEMBER 12, 2012

11/21/2012 9:21:53 AM

ICOC Fraction Transfer/Status Report

ByDate: 11/22/2011, 11/26/2012, Batch: '2318061', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			Comments
2318061							
AC			**Rev1C**	**HoganH**	11/14/2012 1:18:50		
SC				davilan	IsBatched	11/13/2012 3:18:47 PM	ICOC_RADCALC v4.8.49
SC				HoganH	Prep1C	11/14/2012 1:18:50 PM	RL-PRP-004 REVISION 2
SC				HoganH	InPrep	11/14/2012 1:19:04 PM	RL-PRP-004 REVISION 2
SC				WattN	Prep1C	11/20/2012 12:56:33 PM	RL-GPC-001 REVISION 3
SC				ClarkR	InCnt1	11/20/2012 1:09:05 PM	RL-CI-006 REVISION 3
SC				DawkinsO	CalcC	11/20/2012 10:37:24 PM	RL-CI-006 REVISION 3
SC				mcginnist	Rev1C	11/21/2012 9:21:43 AM	RL-DR-001 Rev 2
AC				**HoganH**	11/14/2012 1:19:04		
AC				**WattN**	11/20/2012 12:56:33		
AC				**ClarkR**	11/20/2012 1:09:05		
AC				**DawkinsO**	11/20/2012 10:37:24		
AC				**mcginnist**	11/21/2012 9:21:43		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

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Grp Rec Cnt: 6

ICOCFractions v4.8.44

11/14/2012 9:58:41 AM

Sample Preparation/Analysis

384868, CH2M Hill Plateau Remediation Company , Pacific Northwest National Lab

CL Sr-90 Prp/Sep GPC003(GPC004)
TL Sr-85 by NaI and Sr-90 by GPC 7 day ingrowth
5I CLIENT: HANFORD

Balance Id:1120482733

Pipet #: _____

AnalyDueDate: 12/13/2012

Sep1 DT/Tm Tech: 1905 11/20/12 APA

Sep2 DT/Tm Tech: 1005 11/27/12 APA

Batch: 2318062 **WATER** **pCi/L** **PM, Quote: SS , 57671**

SEQ Batch, Test: None

Prep Tech: ,HoganH

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comment
1 MW7P7-1-AG			1000.50g,in	1000.50g	SRTB18153								
J2K020408-1-SAMP					10/02/12	75.43%	1.0"	0.7635g -0.7396g 23.9mg	100	3"	0816	11/21/12 cm	
										1A	1842	11/28/12 DP	
1.507/1.9979 = 0.7543										2A	1129	11/29/12 CJH	
11/01/2012 09:30	AmtRec: 1XVIAL;7XLP;2X500;2X4LP #Containers: 12									Scr:	Alpha: -4.86E-03 uCi/Sa		Beta: 6.73E-03 uCi/Sa
2 MW7P7-1-AM-X			1000.70g,in	1000.70g	SRTB18154								
J2K020408-1-DUP					10/02/12	76.00%		0.7581g -0.7343g 23.8mg		3"	0856	11/21/12 cm	
										1B	1842	11/28/12 DP	
1.520/1.9999 = 0.7600										2B	1129	11/29/12 CJH	
11/01/2012 09:30	AmtRec: 1XVIAL;7XLP;2X500;2X4LP #Containers: 12									Scr:	Alpha: -4.86E-03 uCi/Sa		Beta: 6.73E-03 uCi/Sa
3 MW87H-1-AH			1001.00g,in	1001.00g	SRTB18155								
J2K070446-1-SAMP					10/02/12	81.89%		0.7555g -0.7330g 22.5mg		3"	0950	11/21/12 cm	
										1C	1842	11/28/12 DP	
1.631/1.9918 = 0.8189										2C	1129	11/29/12 CJH	
11/07/2012 10:21	AmtRec: 1XVIAL20,2X500,10XLP #Containers: 13									Scr:	Alpha: 2.98E-03 uCi/Sa		Beta: 2.95E-03 uCi/Sa
4 MXARV-1-AA-B			1001.20g,in	1001.20g	SRTB18156								
J2K130000-62-BLK					10/02/12	77.63%		0.7723g -0.7482g 24.1mg		3"	1023	11/21/12 cm	
										1D	1842	11/28/12 DP	
1.551/1.9979 = 0.7763										2D	1129	11/29/12 CJH	
11/13/2012 15:16 pd	AmtRec:	#Containers: 1								Scr:	Alpha:		Beta:

DECEMBER 12, 2012

DECEMBER 12, 2012

11/14/2012 9:58:42 AM

Sample Preparation/Analysis

CL Sr-90 Prp/Sep GPC003(GPC004)
TL Sr-85 by NaI and Sr-90 by GPC 7 day ingrowth
5I CLIENT: HANFORD

Balance Id:1120482733

Pipet #: _____

AnalyDueDate: 12/13/2012

Sep1 DT/Tm Tech:

Batch: 2318062 pCi/L
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: HoganH

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments
5 MXARV-1-AC-C			1001.90g,in	1001.90g	SRSG1778								
J2K130000-62-LCS					10/02/12	78.87%	1.0"	0.7713g - 0.7473g	100	~~3"~~ 3"	1057	11/21/12 m	
										2B	1842	11/28/12 OD	
								24.0mg		3A	1129	11/29/12 CJH	

11/23/12 APA
1.577 / ~~1.9998~~ 1.9996 = 0.7887

11/13/2012 15:16 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

Comments: MXARV-BLK P-12-00228,P-12-00579,"HH 11/14/12"

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

MW7P71AG-SAMP Constituent List:

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

MXARV1AA-BLK:

Sr-85	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Sr-90	RDL:2	pCi/L	LCL:	UCL:	RPD:

MXARV1AC-LCS:

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

MW7P71AG-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXARV1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXARV1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

11/29/2012 1:49:45 PM

ICOC Fraction Transfer/Status Report

ByDate: 11/30/2011, 12/4/2012, Batch: '2318062', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			Comments
	2318062						
AC			Rev1C	HoganH	11/14/2012 9:44:22		
SC				davilan	IsBatched	11/13/2012 3:18:51 PM	ICOC_RADCALC v4.8.49
SC				HoganH	InPrep	11/14/2012 9:44:22 AM	RL-PRP-004 REVISION 2
SC				HoganH	Prep1C	11/14/2012 11:05:52 AM	RL-PRP-004 REVISION 2
SC				AshworthA	Sep1C	11/20/2012 7:40:31 PM	RL-GPC-003 REV. 2
SC				ClarkR	InCnt1	11/20/2012 8:00:52 PM	RL-CI-007 REV. 2
SC				ClarkR	Cnt1C	11/21/2012 11:02:19 AM	RL-CI-007 REV. 2
SC				AshworthA	Sep2C	11/27/2012 1:18:17 PM	RL-GPC-004 REV. 2
SC				ClarkR	InCnt2	11/27/2012 2:26:27 PM	RL-CI-006 REVISION 3
SC				HiattC	CalcC	11/29/2012 12:54:58 PM	RL-CI-006 REVISION 3
SC				antonsonl	Rev1C	11/29/2012 1:49:09 PM	RL-DR-001 Rev 2
AC				HoganH	11/14/2012 11:05:52		
AC				AshworthA	11/20/2012 7:40:31		
AC				ClarkR	11/20/2012 8:00:52		
AC				ClarkR	11/21/2012 11:02:19		
AC				AshworthA	11/27/2012 1:18:17		
AC				ClarkR	11/27/2012 2:26:27		
AC				HiattC	11/29/2012 12:54:58		
AC				antonsonl	11/29/2012 1:49:09		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 9

ICOCFractions v4.8.44

PGW

11/14/2012 9:04:01 AM

Sample Preparation/Analysis

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

AnalyDueDate: 12/13/2012

AW Gamma Prp GAM001
TA Gamma by HPGE
5I CLIENT: HANFORD

Balance Id:1120482733

Pipet #: _____

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: ,HoganH

Batch: 2318064 **WATER** **pCi/L**
SEQ Batch, Test: None All Tests: 2318064 AWTA,

PM, Quote: SS , 57671

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MW7LL-1-AA J2K010446-1-SAMP 10/30/2012 14:39	2000.30g,in AmtRec: 1XVIAL20;1X4LP	2000.30g #Containers: 2							100	200	G7 Scr: Alpha: -1.41E-04 uCi/Sa	0026 Beta: 3.89E-04 uCi/Sa	11/16/12 DH
2 MW7LL-1-AC-X J2K010446-1-DUP 10/30/2012 14:39	ISV AmtRec: 1XVIAL20;1X4LP	#Containers: 2									G5 Scr: Alpha: -1.41E-04 uCi/Sa	1052 Beta: 3.89E-04 uCi/Sa	11/17/12 DH
3 MXARX-1-AA-B J2K130000-64-BLK 11/13/2012 15:16 pd	2001.00g,in AmtRec:	2001.00g #Containers: 1									G10 Scr: Alpha:	0027 Beta:	11/16/12 DH
4 MXARX-1-AC-C J2K130000-64-LCS 11/13/2012 15:16 pd	2002.30g,in AmtRec:	2002.30g #Containers: 1	QCAG1901 04/11/12,pd 11/07/03,r								G7 Scr: Alpha:	0028 Beta:	6

Comments: MXARX-BLK P-12-00228,P-12-00579,"HH 11/14/12" pH<20 HH 11/14/12 ISV dup

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

MW7LL1AA-SAMP Constituent List:

Co-60	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
Cs-137	RDL:6.00E+00	pCi/L	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:6.00E+00	pCi/L	LCL:70	UCL:130	RPD:20
Eu-154	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Eu-155	RDL:.00E+00	pCi/L	LCL:	UCL:	RPD:
K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Sb-125	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:

MXARX1AA-BLK:

TestAmerica Laboratories, Inc.
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DECEMBER 12, 2012

Sample Preparation/Analysis

AW Gamma Prp GAM001
TA Gamma by HPGE
5I CLIENT: HANFORD

Balance Id:1120482733

Pipet #: _____

AnalyDueDate: 12/13/2012

Batch: 2318064
SEQ Batch, Test: None

pCi/L

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: HoganH

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
Co-60	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:		
Cs-137	RDL:6.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-137DA	RDL:6.00E+00	pCi/L	LCL:	UCL:	RPD:		
Eu-154	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Eu-155	RDL:.00E+00	pCi/L	LCL:	UCL:	RPD:		
K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Sb-125	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:		
MXARX1AC-LCS:													
Cs-137	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20		
K-40	RDL:6	pCi/L	LCL:70	UCL:130	RPD:20	Ra-226	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20		
RA-228	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20	RA-228DA	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20		
U-238	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20								

MW7LL1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXARX1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXARX1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.
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DECEMBER 12, 2012

*** RE-COUNT REQUEST ***

DUE DATE 12/13/12

CUSTOMER CH2M

ANALYSIS Gamma

MATRIX Water

LOT NUMBER J2K010446

SAMPLE DELIVERY GROUP

OLD BATCH NUMBER 2318064

NEW BATCH NUMBER

LAB SAMPLE ID	CLIENT ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1) MW7LL1AA		inconsistent results 200 ct
2) MW7L4AC	X	please ct on Ger 17/18 100 ml GRO
3)		
4)		
5)		
6)		
7)		
8)		
9)		
10)		
11)		
12)		
13)		
14)		
15)		
16)		
17)		
18)		
19)		
20)		

RC-126 Rev 6, 9/10

11/27/2012 11:06:41 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

AW Gamma Prp GAM001
TA Gamma by HPGE
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 12/13/2012

Sep1 DT/Tm Tech:

Batch: 2318064 WATER pCi/L
SEQ Batch, Test: None All Tests: 2318064 AWTA,

PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

Prep Tech: ,HoganH

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MW7LL-1-AA			2000.30g,in	2000.30g									
J2K010446-1-SAMP													
10/30/2012 14:39			AmtRec: 1XVIAL20;1X4LP	#Containers: 2									
2 MW7LL-1-AC-X													
J2K010446-1-DUP													
10/30/2012 14:39			AmtRec: 1XVIAL20;1X4LP	#Containers: 2									
3 MW7LL-2-AA			2000.30g	2000.30g									
J2K010446-1-SAMP													
10/30/2012 14:39			AmtRec: 1XVIAL20;1X4LP	#Containers: 2									
4 MW7LL-2-AC-X			2000.30g	2000.30g									
J2K010446-1-DUP													
10/30/2012 14:39			AmtRec: 1XVIAL20;1X4LP	#Containers: 2									
5 MXARX-1-AA-B			2001.00g,in	2001.00g									
J2K130000-64-BLK													
11/13/2012 15:16 pd			AmtRec:	#Containers: 1									
6 MXARX-1-AC-C			2002.30g,in	2002.30g	QCAG1901								
J2K130000-64-LCS					04/11/12,pd 11/07/03,r								
11/13/2012 15:16 pd			AmtRec:	#Containers: 1									

100 ml 200 min G18 1642 11/27/12 RC

G17 2048 11/27/2012

Scr: Alpha: -1.41E-04 uCi/Sa Beta: 3.89E-04 uCi/Sa

Scr: Alpha: -1.41E-04 uCi/Sa Beta: 3.89E-04 uCi/Sa

Scr: Alpha: -1.41E-04 uCi/Sa Beta: 3.89E-04 uCi/Sa

Scr: Alpha: -1.41E-04 uCi/Sa Beta: 3.89E-04 uCi/Sa

Scr: Alpha: Beta:

Scr: Alpha: Beta:

please recount on diff detector for dup. thanks

DECEMBER 12, 2012

Sample Preparation/Analysis

AW Gamma Prp GAM001
TA Gamma by HPGE
5I CLIENT: HANFORD

Balance Id:1120482733
Pipet #: _____

AnalyDueDate: 12/13/2012

Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: HoganH

Batch: 2318064 pCi/L
SEQ Batch, Test: None

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Comments: MXARX-BLK P-12-00228,P-12-00579,"HH 11/14/12"

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

MW7LL1AA-SAMP Constituent List:

Co-60	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
Cs-137	RDL:6.00E+00	pCi/L	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:6.00E+00	pCi/L	LCL:70	UCL:130	RPD:20
Eu-154	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Eu-155	RDL:.00E+00	pCi/L	LCL:	UCL:	RPD:
K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Sb-125	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:

MXARX1AA-BLK:

Co-60	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
Cs-137	RDL:6.00E+00	pCi/L	LCL:	UCL:	RPD:	Cs-137DA	RDL:6.00E+00	pCi/L	LCL:	UCL:	RPD:
Eu-154	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Eu-155	RDL:.00E+00	pCi/L	LCL:	UCL:	RPD:
K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	Sb-125	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:

MXARX1AC-LCS:

Cs-137	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20
K-40	RDL:6	pCi/L	LCL:70	UCL:130	RPD:20	Ra-226	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20
RA-228	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20	RA-228DA	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20
U-238	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20						

MW7LL1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXARX1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXARX1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.
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DECEMBER 12, 2012

11/30/2012 9:46:58 AM

ICOC Fraction Transfer/Status Report

ByDate: 12/1/2011, 12/5/2012, Batch: '2318064', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			Comments
2318064							
AC			Rev1C	HoganH	11/14/2012 8:56:53		
SC				davilan	IsBatched	11/13/2012 3:18:59 PM	ICOC_RADCALC v4.8.49
SC				HoganH	InPrep	11/14/2012 8:56:53 AM	RL-PRP-004 REVISION 2
SC				HoganH	Prep1C	11/14/2012 11:04:28 AM	RL-PRP-004 REVISION 2
SC				SannohS	Prep1C	11/16/2012 3:54:21 PM	RL-PRP-004 REVISION 2
SC				ClarkR	InCnt1	11/16/2012 3:56:09 PM	RL-CI-007 REV. 2
SC				HiattC	CalcC	11/19/2012 11:30:17 AM	RL-CI-007 REV. 2
SC				ClarkR	InCnt1	11/27/2012 1:17:18 PM	RL-CI-007 REV. 2
SC				DawkinsO	CalcC	11/27/2012 8:57:29 PM	RL-CI-007 REV. 2
SC				antonsonl	Rev1C	11/30/2012 9:46:51 AM	RL-DR-001 Rev 2
AC				HoganH	11/14/2012 11:04:28		
AC				SannohS	11/16/2012 3:54:21		
AC				ClarkR	11/16/2012 3:56:09		
AC				HiattC	11/19/2012 11:30:17		
AC				ClarkR	11/27/2012 1:17:18		
AC				DawkinsO	11/27/2012 8:57:29		
AC				antonsonl	11/30/2012 9:46:51		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Grp Rec Cnt: 8

ICOCFractions v4.8.44

12/4/2012 1:57:37 PM

Sample Preparation/Analysis

384868, CH2M Hill Plateau Remediation Company , Pacific Northwest National Lab

AW Gamma Prp GAM001
TA Gamma by HPGE
5I CLIENT: HANFORD

Balance Id:
Pipet #:

AnalyDueDate: 12/13/2012

Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

Batch: 2334061 WATER pCi/L PM, Quote: SS , 57671

SEQ Batch, Test: None All Tests: 6DSO, 2312086 88EA, 2318059 7YSR, 2318060 AZS7, 2318061 BCS8, 2318062 CLTL, 2318063 AWTA, 2318066 FPS5, 2318067 ARS6, 2334061 AWTA,

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MW87H-1-AV-X									100ML 100Mins.	G19	1550	12/7/12 LM	
J2K070446-1-DUP													
11/07/2012 10:21			AmtRec: 1XVIAL20,2X500,10XLP		#Containers: 13				Scr:	Alpha: 2.98E-03 uCi/Sa		Beta: 2.95E-03 uCi/Sa	
2 MW87H-2-AF			2504.60g,in	2504.60g					100ml Glo	100min			
J2K070446-1-SAMP										G16	1404	12/7/12 CS it	
11/07/2012 10:21			AmtRec: 1XVIAL20,2X500,10XLP		#Containers: 13				Scr:	Alpha: 2.98E-03 uCi/Sa		Beta: 2.95E-03 uCi/Sa	
3 MXF5L-1-AA-B			2500.10g,in	2500.10g						G18	1405		
J2K290000-61-BLK													
11/30/2012 08:44 pd			AmtRec:		#Containers: 1				Scr:	Alpha:		Beta:	
4 MXF5L-1-AC-C			2500.20g,in	2500.20g	QCAG1908					G19	1406		
J2K290000-61-LCS					04/11/12,pd 11/07/03,r								
11/30/2012 08:44 pd			AmtRec:		#Containers: 1				Scr:	Alpha:		Beta:	

Comments:

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

MW87H1AV-DUP Constituent List:

Co-60	RDL:2.50E+01	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL:1.50E+01	pCi/L	LCL:	UCL:	RPD:
Cs-137	RDL:1.50E+01	pCi/L	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:1.50E+01	pCi/L	LCL:70	UCL:130	RPD:20
Eu-152	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:	Eu-154	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:
Eu-155	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:	K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
Sb-125	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:						

MXF5L1AA-BLK:

Co-60	RDL:2.50E+01	pCi/L	LCL:	UCL:	RPD:	Cs-134	RDL:1.50E+01	pCi/L	LCL:	UCL:	RPD:

DECEMBER 12, 2012

Sample Preparation/Analysis

AW Gamma Prp GAM001
TA Gamma by HPGE
5I CLIENT: HANFORD

Balance Id:1120403183

Pipet #: _____

AnalyDueDate: 12/13/2012

Sep1 DT/Tm Tech:

Batch: 2334061 pCi/L

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: RichardsonB

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
Cs-137	RDL:1.50E+01	pCi/L	LCL:	UCL:	RPD:		Cs-137DA	RDL:1.50E+01	pCi/L	LCL:	UCL:	RPD:	
Eu-152	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:		Eu-154	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:	
Eu-155	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:		K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:	
Sb-125	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:								
MXF5L1AC-LCS:													
Cs-137	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20		Cs-137DA	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20	
K-40	RDL:6	pCi/L	LCL:70	UCL:130	RPD:20		Ra-226	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20	
RA-228	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20		RA-228DA	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20	
U-238	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20								

MW87H1AV-DUP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXF5L1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXF5L1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.
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DECEMBER 12, 2012

12/10/2012 12:22:10 PM

ICOC Fraction Transfer/Status Report

ByDate: 12/11/2011, 12/15/2012, Batch: '2334061', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			Comments
	2334061						
AC			Rev1C	RichardsonB	12/4/2012 1:47:44 PM		
SC				richardsonb	IsBatched	12/4/2012 1:45:30 PM	ICOC_RADCALC v4.8.49
SC				RichardsonB	InPrep	12/4/2012 1:47:44 PM	RL-PRP-004 REVISION 2
SC				LoeberL	Prep2C	12/7/2012 9:48:38 AM	RL-GAM-001 REVISION 2
SC				ClarkR	InCnt1	12/7/2012 9:56:15 AM	RL-CI-007 REV. 2
SC				DawkinsO	CalcC	12/7/2012 8:36:08 PM	RL-CI-007 REV. 2
SC				antonsonl	Rev1C	12/10/2012 12:21:54 PM	RL-DR-001 Rev 2
AC				LoeberL	12/7/2012 9:48:38		
AC				ClarkR	12/7/2012 9:56:15		
AC				DawkinsO	12/7/2012 8:36:08 PM		
AC				antonsonl	12/10/2012 12:21:54		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

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Grp Rec Cnt: 5

ICOCFractions v4.8.44

PGW

11/20/2012 2:27:55 PM

Sample Preparation/Analysis

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

BN I-129 Prp/Sep GAM002
TB Gamma by LEPD
5I CLIENT: HANFORD

Balance Id:1120482733

Pipet #: _____

AnalyDueDate: 12/13/2012

Batch: 2318065 WATER pCi/L
SEQ Batch, Test: None All Tests: 2318065 BNTB,

PM, Quote: SS , 57671

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: ,HoganH

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MW6JQ-1-AA			3873.90g,in	3873.90g	ITA12410			32.8mg	200	L4	1818	11/20/12 cm	
J2J300416-1-SAMP					09/18/12								
10/26/2012 14:33			AmtRec: 1XVIAL20;2X4LP		#Containers: 3					Scr:	Alpha: 6.76E-05 uCi/Sa		Beta: 6.55E-04 uCi/Sa
2 MW6JQ-1-AC-X			3868.70g,in	3868.70g	ITA12411			33.3mg		L5	1819		
J2J300416-1-DUP					09/18/12								
10/26/2012 14:33			AmtRec: 1XVIAL20;2X4LP		#Containers: 3					Scr:	Alpha: 6.76E-05 uCi/Sa		Beta: 6.55E-04 uCi/Sa
3 MW6T5-1-AA			3865.00g,in	3865.00g	ITA12412			33.7mg	200	L4	2144	11/20/12 DD	
J2J300441-1-SAMP					09/18/12								
10/30/2012 10:30			AmtRec: 1XVIAL20;2X4LP		#Containers: 3					Scr:	Alpha: 1.14E-05 uCi/Sa		Beta: -5.84E-05 uCi/Sa
4 MW6T6-1-AA			3706.80g,in	3706.80g	ITA12413			36.0mg		L5	2145		
J2J300441-2-SAMP					09/18/12								
10/29/2012 13:36			AmtRec: 1XVIAL20;2X4LP		#Containers: 3					Scr:	Alpha: 9.33E-04 uCi/Sa		Beta: -1.27E-03 uCi/Sa
5 MW6T7-1-AA			3707.50g,in	3707.50g	ITA12414			34.1mg	200	L4	0110		
J2J300441-3-SAMP					09/18/12								
10/29/2012 15:13			AmtRec: 1XVIAL20;2X4LP		#Containers: 3					Scr:	Alpha: -8.81E-04 uCi/Sa		Beta: 1.15E-04 uCi/Sa
6 MW7P7-1-AE			3858.10g,in	3858.10g	ITA12415			29.3mg		L5	0111		
J2K020408-1-SAMP					09/18/12								
11/01/2012 09:30			AmtRec: 1XVIAL;7XLP;2X500;2X4LP		#Containers: 12					Scr:	Alpha: -4.86E-03 uCi/Sa		Beta: 6.73E-03 uCi/Sa
7 MW8CT-1-AA			3516.50g,in	3516.50g	ITA12416			33.3mg	200	L4	1043	11/21/12 cm	
J2K050431-1-SAMP					09/18/12								
11/05/2012 11:30			AmtRec: 1XVIAL20;2X4LP		#Containers: 3					Scr:	Alpha: 6.29E-04 uCi/Sa		Beta: -8.59E-04 uCi/Sa

TestAmerica Laboratories, Inc.

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DECEMBER 12, 2012

11/20/2012 2:27:57 PM

Sample Preparation/Analysis

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

AnalyDueDate: 12/13/2012

BN I-129 Prp/Sep GAM002
TB Gamma by LEPD
5I CLIENT: HANFORD

Batch: 2318065 WATER pCi/L
SEQ Batch, Test: None

PM, Quote: SS , 57671

Balance Id:1120482733
Pipet #: _____
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: ,HoganH

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 MW8QX-1-AA J2K060433-1-SAMP 11/05/2012 10:24			3903.70g,in AmtRec: 1XVIAL20;2X4LP	3903.70g #Containers: 3	ITA12417 09/18/12			33.3mg		L5 Scr:	1044 Alpha: 1.25E-04 uCi/Sa	11/21/12am Beta: 3.41E-04 uCi/Sa	
9 MW8Q0-1-AA J2K060433-2-SAMP 11/05/2012 10:24			3884.70g,in AmtRec: 1XVIAL20;2X4LP	3884.70g #Containers: 3	ITA12418 09/18/12			33.2mg	200	L4 Scr:	1416 Alpha: 2.19E-04 uCi/Sa	11/21/12am Beta: 5.97E-04 uCi/Sa	
10 MW9F4-1-AA J2K080419-1-SAMP 11/06/2012 09:05			3869.30g,in AmtRec: 1XVIAL;2X4LP	3869.30g #Containers: 3	ITA12419 09/18/12			33.6mg		L5 Scr:	1411 Alpha: 2.77E-04 uCi/Sa	 Beta: 1.46E-03 uCi/Sa	
11 MW9MQ-1-AA J2K080445-1-SAMP 11/07/2012 09:40			3907.30g,in AmtRec: 1XVIAL20;2X4LP	3907.30g #Containers: 3	ITA12420 09/18/12			34.1mg	200	L4 Scr:	1747 Alpha: -1.73E-03 uCi/Sa	11/21/12am Beta: 6.95E-03 uCi/Sa	1.0E-01L
12 MXAR0-1-AA-B J2K130000-65-BLK 11/13/2012 15:16 pd			3781.30g,in AmtRec:	3781.30g #Containers: 1	ITA12421 09/18/12			33.7mg		L5 Scr:	1748 Alpha:	 Beta:	
13 MXAR0-1-AC-C J2K130000-65-LCS 11/13/2012 15:16 pd			3746.40g,in AmtRec:	3746.40g #Containers: 1	ISD1486 10/08/12			34.4mg		L4 Scr:	2113 Alpha:	11/21/12am Beta:	

DECEMBER 12, 2012

Sample Preparation/Analysis

BN I-129 Prp/Sep GAM002
TB Gamma by LEPD
5I CLIENT: HANFORD

Balance Id:1120482733

Pipet #: _____

AnalyDueDate: 12/13/2012

Batch: 2318065 pCi/L
SEQ Batch, Test: None

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: HoganH

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Comments: MXAR0-BLK P-12-00228,"HH 11/14/12",S-12-00193,P-12-00237,P-12-00480,S-12-00139,S-12-00188,S-12-00141,P-12-00569,P-12-00540,S-12-00228,"HH 11/20/12"

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

MW6JQ1AA-SAMP Constituent List:
I-129 RDL:0.50E+00 pCi/L LCL: UCL: RPD:
MXAR01AA-BLK:
I-129 RDL:0.50E+00 pCi/L LCL: UCL: RPD:
MXAR01AC-LCS:
I-129 RDL:5 pCi/L LCL:70 UCL:130 RPD:20

MW6JQ1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXAR01AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXAR01AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.
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DECEMBER 12, 2012

11/27/2012 1:04:53 PM

ICOC Fraction Transfer/Status Report

ByDate: 11/28/2011, 12/2/2012, Batch: '2318065', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
2318065						
AC		Rev1C	HoganH	11/14/2012 10:01:48		
SC			davilan	IsBatched	11/13/2012 3:19:04 PM	ICOC_RADCALC v4.8.49
SC			HoganH	InPrep	11/14/2012 10:01:48 AM	RL-PRP-004 REVISION 2
SC			HoganH	Prep1C	11/14/2012 11:05:46 AM	RL-PRP-004 REVISION 2
SC			HoganH	Sep2C	11/20/2012 2:28:18 PM	RL-GAM-002 REVISION 3
SC			ClarkR	InCnt1	11/20/2012 2:53:54 PM	RL-CI-007 REV. 2
SC			ClarkR	CalcC	11/23/2012 1:58:45 PM	RL-CI-007 REV. 2
SC			antonsonl	Rev1C	11/27/2012 1:04:45 PM	RL-DR-001 Rev 2
AC			HoganH	11/14/2012 11:05:46		
AC			HoganH	11/20/2012 2:28:18		
AC			ClarkR	11/20/2012 2:53:54		
AC			ClarkR	11/23/2012 1:58:45		
AC			antonsonl	11/27/2012 1:04:45		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

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Grp Rec Cnt: 6

ICOCFractions v4.8.44

11/14/2012 9:39:36 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

FP Tc-99 Prp/Sep LSC014
S5 Technetium-99 by Liquid Scint
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 12/13/2012

Sep1 DT/Tm Tech:

Batch: 2318066 **WATER** **pCi/L** **PM, Quote: SS , 57671**

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,HoganH

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comment
1 **MW7P7-1-AH**			125.30g,in	125.30g									
J2K020408-1-SAMP													
11/01/2012 09:30			AmtRec: 1XVIAL;7XLP;2X500;2X4LP	#Containers: 12									
									Scr:	Alpha: -4.86E-03 uCi/Sa		Beta: 6.73E-03 uCi/Sa	
2 **MW7P7-1-AN-X**			125.70g,in	125.70g									
J2K020408-1-DUP													
11/01/2012 09:30			AmtRec: 1XVIAL;7XLP;2X500;2X4LP	#Containers: 12									
									Scr:	Alpha: -4.86E-03 uCi/Sa		Beta: 6.73E-03 uCi/Sa	
3 **MW87H-1-AJ**			125.10g,in	125.10g									
J2K070446-1-SAMP													
11/07/2012 10:21			AmtRec: 1XVIAL20,2X500,10XLP	#Containers: 13									
									Scr:	Alpha: 2.98E-03 uCi/Sa		Beta: 2.95E-03 uCi/Sa	
4 **MW87H-1-AT-S**			125.70g,in	125.70g	TCSG3341								
J2K070446-1-MS					11/12/12,pd								
11/07/2012 10:21			AmtRec: 1XVIAL20,2X500,10XLP	#Containers: 13	07/01/05,r								
									Scr:	Alpha: 2.98E-03 uCi/Sa		Beta: 2.95E-03 uCi/Sa	
5 **MXAR1-1-AA-B**			125.10g,in	125.10g									
J2K130000-66-BLK													
11/13/2012 15:16 pd			AmtRec:	#Containers: 1									
									Scr:	Alpha:		Beta:	
6 **MXAR1-1-AC-C**			125.60g,in	125.60g	TCSE2683								
J2K130000-66-LCS					11/01/12,pd								
11/13/2012 15:16 pd			AmtRec:	#Containers: 1	07/01/05,r								
									Scr:	Alpha:		Beta:	
7 **MXAR1-1-AD-BN**													
J2K130000-66-IBLK													
11/13/2012 15:16 pd			AmtRec:	#Containers: 1									
									Scr:	Alpha:		Beta:	

TestAmerica Laboratories, Inc.
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DECEMBER 12, 2012

Sample Preparation/Analysis

FP Tc-99 Prp/Sep LSC014
S5 Technetium-99 by Liquid Scint
5I CLIENT: HANFORD

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

AnalyDueDate: 12/13/2012

Batch: 2318066 **pCi/L**
SEQ Batch, Test: None

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments

Comments: MXAR1-BLK P-12-00228,P-12-00579," HH 11/14/12"

PH 220 HH 11/14/12

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

MW7P71AH-SAMP Constituent List:
Tc-99 RDL:15 pCi/L LCL:70 UCL:130 RPD:20
MW87H1AT-MS:

MXAR11AA-BLK:
Tc-99 RDL:15 pCi/L LCL: UCL: RPD:
MXAR11AC-LCS:
Tc-99 RDL:15 pCi/L LCL:70 UCL:130 RPD:20
MXAR11AD-IBLK:
Tc-99 RDL:15 pCi/L LCL: UCL: RPD:

MW7P71AH-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MW87H1AT-MS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXAR11AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXAR11AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXAR11AD-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.
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DECEMBER 12, 2012

11/21/2012 3:29:36 PM

ICOC Fraction Transfer/Status Report

ByDate: 11/22/2011, 11/26/2012, Batch: '2318066', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			Comments
2318066							
AC			Rev1C	HoganH	11/14/2012 9:34:51		
SC				davilan	IsBatched	11/13/2012 3:19:08 PM	ICOC_RADCALC v4.8.49
SC				HoganH	InPrep	11/14/2012 9:34:51 AM	RL-PRP-004 REVISION 2
SC				HoganH	Prep1C	11/14/2012 11:05:23 AM	RL-PRP-004 REVISION 2
SC				JorgensonD	Sep2C	11/16/2012 9:15:03 AM	RL-LSC-014 REVISION 2
SC				ClarkR	InCnt1	11/16/2012 9:27:56 AM	RL-CI-005 REV. 2
SC				HiattC	CalcC	11/19/2012 10:31:41 AM	RL-CI-005 REV. 2
SC				antonsonl	Rev1C	11/21/2012 3:29:26 PM	RL-DR-001 Rev 2
AC				HoganH	11/14/2012 11:05:23		
AC				JorgensonD	11/16/2012 9:15:03		
AC				ClarkR	11/16/2012 9:27:56		
AC				HiattC	11/19/2012 10:31:41		
AC				antonsonl	11/21/2012 3:29:26		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

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Grp Rec Cnt: 6

ICOCFractions v4.8.44

11/13/2012 3:16:59 PM

Sample Preparation/Analysis

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

AnalyDueDate: 12/13/2012

AR H-3 Prp/Sep LSC005
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Batch: 2318067 WATER pCi/L
SEQ Batch, Test: None

PM, Quote: SS , 57671

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

1 MW87H-1-AC

J2K070446-1-SAMP

11/07/2012 10:21 AmtRec: 1XVIAL20,2X500,10XLP #Containers: 13 Scr: Alpha: 2.98E-03 uCi/Sa Beta: 2.95E-03 uCi/Sa

2 MW87H-1-AU-X

J2K070446-1-DUP

11/07/2012 10:21 AmtRec: 1XVIAL20,2X500,10XLP #Containers: 13 Scr: Alpha: 2.98E-03 uCi/Sa Beta: 2.95E-03 uCi/Sa

3 MXAR2-1-AA-B

J2K130000-67-BLK

11/13/2012 15:16 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

4 MXAR2-1-AC-C

J2K130000-67-LCS

11/13/2012 15:16 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

5 MXAR2-1-AD-BN

J2K130000-67-IBLK

11/13/2012 15:16 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

Comments:

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

MW87H1AC-SAMP Constituent List:
H-3 RDL:400 pCi/L LCL:70 UCL:130 RPD:20

DECEMBER 12, 2012

Sample Preparation/Analysis

AR H-3 Prp/Sep LSC005
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

AnalyDueDate: 12/13/2012

Batch: 2318067 pCi/L
SEQ Batch, Test: None

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

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

MXAR21AA-BLK:

MXAR21AC-LCS:

MXAR21AD-IBLK:

MW87H1AC-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXAR21AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXAR21AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXAR21AD-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.
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DECEMBER 12, 2012

11/27/2012 9:05:02 AM

ICOC Fraction Transfer/Status Report

ByDate: 11/28/2011, 12/2/2012, Batch: '2318067', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			Comments
2318067							
AC			Rev1C	NyeM	11/15/2012 11:14:52		
SC				davilan	IsBatched	11/13/2012 3:19:12 PM	ICOC_RADCALC v4.8.49
SC				NyeM	InPrep	11/15/2012 11:14:52 AM	RL-LSC-001 REVISION 2
SC				NyeM	Sep1C	11/15/2012 2:48:30 PM	RL-LSC-005 REVISION 2
SC				HiattC	InCnt1	11/15/2012 3:28:46 PM	RL-CI-005 REV. 2
SC				HiattC	CalcC	11/19/2012 10:10:00 AM	RL-CI-005 REV. 2
SC				antonsonl	Rev1C	11/27/2012 9:04:38 AM	RL-DR-001 Rev 2
AC				NyeM	11/15/2012 2:48:30		
AC				HiattC	11/15/2012 3:28:46		
AC				HiattC	11/19/2012 10:10:00		
AC				antonsonl	11/27/2012 9:04:38		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Grp Rec Cnt: 5

ICOCFractions v4.8.44

11/13/2012 3:17:00 PM

Sample Preparation/Analysis

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

AnalyDueDate: 12/13/2012

AR H-3 Prp/Sep LSC005
T0 Tritium - Midlevel, by Liquid Scint
5I CLIENT: HANFORD

Batch: 2318068 WATER pCi/L
SEQ Batch, Test: None

PM, Quote: SS , 57671

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

1 MW6T8-1-AC

J2J300441-4-SAMP
10/29/2012 15:13 AmtRec: 1XLP #Containers: 1 Scr: Alpha: -1.83E-05 uCi/Sa Beta: -1.04E-04 uCi/Sa

2 MW6T8-1-AD-X

J2J300441-4-DUP
10/29/2012 15:13 AmtRec: 1XLP #Containers: 1 Scr: Alpha: -1.83E-05 uCi/Sa Beta: -1.04E-04 uCi/Sa

3 MXAR3-1-AA-B

J2K130000-68-BLK
11/13/2012 15:16 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

4 MXAR3-1-AC-C

J2K130000-68-LCS
11/13/2012 15:16 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

5 MXAR3-1-AD-BN

J2K130000-68-IBLK
11/13/2012 15:16 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

Comments:

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

MW6T81AC-SAMP Constituent List:

H-3	RDL:3.00E+01	pCi/L	LCL:	UCL:	RPD:

DECEMBER 12, 2012

Sample Preparation/Analysis

AR H-3 Prp/Sep LSC005
T0 Tritium - Midlevel, by Liquid Scint
5I CLIENT: HANFORD

AnalyDueDate: 12/13/2012

Batch: 2318068 **pCi/L**
SEQ Batch, Test: None

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

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

MXAR31AA-BLK:

MXAR31AC-LCS:

MXAR31AD-IBLK:

MW6T81AC-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXAR31AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXAR31AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXAR31AD-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.
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DECEMBER 12, 2012

12/5/2012 9:53:59 AM

ICOC Fraction Transfer/Status Report

ByDate: 12/6/2011, 12/10/2012, Batch: '2318068', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
2318068						
AC		Rev1C	NyeM	11/15/2012 11:14:37		
SC			davilan	IsBatched	11/13/2012 3:19:15 PM	ICOC_RADCALC v4.8.49
SC			NyeM	InPrep	11/15/2012 11:14:37 AM	RL-LSC-005 REVISION 2
SC			NyeM	Sep1C	11/15/2012 2:52:20 PM	RL-LSC-005 REVISION 2
SC			DawkinsO	InCnt1	11/15/2012 11:11:06 PM	RL-CI-005 REV. 2
SC			ClarkR	InCalc	11/24/2012 6:49:31 AM	RL-CI-005 REV. 2
SC			ClarkR	CalcC	11/26/2012 8:38:52 AM	RL-CI-005 REV. 2
SC			nortonj	Rev1C	12/5/2012 9:53:44 AM	RL-DR-001 Rev 2
AC			NyeM	11/15/2012 2:52:20		
AC			DawkinsO	11/15/2012 11:11:06		
AC			ClarkR	11/24/2012 6:49:31		
AC			ClarkR	11/26/2012 8:38:52		
AC			nortonj	12/5/2012 9:53:44		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

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Grp Rec Cnt: 6

ICOCFractions v4.8.44

*** RE-COUNT REQUEST ***

DUE DATE 12/13/12

CUSTOMER CH2M

ANALYSIS Midlevel H3

MATRIX Water

LOT NUMBER J2J3600441

SAMPLE DELIVERY GROUP

OLD BATCH NUMBER 2318068

NEW BATCH NUMBER 2330038

	LAB SAMPLE ID	CLIENT ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1)	MXAR31AC	C	Low LCS recovery.
2)	MXAR31AD	BN	
3)			
4)			
5)			
6)			
7)			
8)			
9)			
10)			
11)			
12)			
13)			
14)			
15)			
16)			
17)			
18)			
19)			
20)			

RC-126 Rev 6, 9/10

Sample Preparation/Analysis

AR H-3 Prp/Sep LSC005
T0 Tritium - Midlevel, by Liquid Scint
5I CLIENT: HANFORD

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

Batch: 2332038 pCi/L

SEQ Batch, Test: None All Tests: 2317222 AXUB, 2317228 CHTH, 2317230 7TSR, 2317231 6BSO, 2317250 46DQ, 2317274 AWTA, 2317275 9ZS2, 2317277 ASU3, 2317278 CLUD, 2317279 7YSR, 2317280 AWTA, 2317281 AZS7, 2317282 BCS8, 2317363 C0G5, 2317469

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MXAR3-2-AC-C J2K130000-68-LCS 11/27/2012 11:07 pd			AmtRec:	#Containers: 1					Scr:	Alpha:		Beta:	
2 MXAR3-2-AD-BN J2K130000-68-IBLK 11/27/2012 11:07 pd			AmtRec:	#Containers: 1					Scr:	Alpha:		Beta:	

Comments: MXAR3-LCS H303A198,P-12-00078,P-12-00605,S-12-00181

All Clients for Batch:

MXAR32AC-LCS Constituent List:

MXAR32AD-IBLK Constituent List:

MXAR32AC-LCS Calc Info:
Uncert Level (#s).: 4 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXAR32AD-IBLK Calc Info:
Uncert Level (#s).: 4 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.
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DECEMBER 12, 2012

12/5/2012 9:57:38 AM

ICOC Fraction Transfer/Status Report

ByDate: 12/6/2011, 12/10/2012, Batch: '2332038', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting		Comments
	2332038					
AC			Rev1C	ClarkR	12/4/2012 1:36:25 PM	
SC				ClarkR	CalcC 12/4/2012 1:36:25 PM	RL-CI-005 REV. 2
SC				nortonj	Rev1C 12/5/2012 9:57:26 AM	RL-DR-001 Rev 2
AC				nortonj	12/5/2012 9:57:26	

AC: Accepting Entry; SC: Status Change

11/14/2012 9:23:47 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

DH UNat_Laser Prp KPA001
SS Total Uranium by KPA
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 12/13/2012

Sep1 DT/Tm Tech:

Batch: 2318069 WATER ug/L PM, Quote: SS , 57671

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,HoganH

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comment
1 **MW7P7-1-AJ**			25.00g,in	25.00g									
J2K020408-1-SAMP													
11/01/2012 09:30			AmtRec: 1XVIAL;7XLP;2X500;2X4LP #Containers: 12						Scr:	Alpha: -4.86E-03 uCi/Sa		Beta: 6.73E-03 uCi/Sa	
2 **MW7P7-1-AP-S**			25.40g,in	25.40g	UNSF5622								
J2K020408-1-MS					11/12/12,pd 08/01/57,r								
11/01/2012 09:30			AmtRec: 1XVIAL;7XLP;2X500;2X4LP #Containers: 12						Scr:	Alpha: -4.86E-03 uCi/Sa		Beta: 6.73E-03 uCi/Sa	
3 **MW7P7-1-AQ-X**			25.70g,in	25.70g									
J2K020408-1-DUP													
11/01/2012 09:30			AmtRec: 1XVIAL;7XLP;2X500;2X4LP #Containers: 12						Scr:	Alpha: -4.86E-03 uCi/Sa		Beta: 6.73E-03 uCi/Sa	
4 **MXAR4-1-AA-B**			25.10g,in	25.10g									
J2K130000-69-BLK													
11/13/2012 15:16 pd			AmtRec:		#Containers: 1				Scr:	Alpha:		Beta:	
5 **MXAR4-1-AC-C**			25.00g,in	25.00g	UNSF5623								
J2K130000-69-LCS					11/12/12,pd 08/01/57,r								
11/13/2012 15:16 pd			AmtRec:		#Containers: 1				Scr:	Alpha:		Beta:	
6 **MXAR4-1-AD-C**			25.10g,in	25.10g	UNSC4892								
J2K130000-69-LCS					08/07/12,pd 02/01/86,r								
11/13/2012 15:16 pd			AmtRec:		#Containers: 1				Scr:	Alpha:		Beta:	

DECEMBER 12, 2012

Sample Preparation/Analysis

DH UNat_Laser Prp KPA001
SS Total Uranium by KPA
5I CLIENT: HANFORD

Balance Id:1120482733

Pipet #: _____

AnalyDueDate: 12/13/2012

Sep1 DT/Tm Tech:

Batch: 2318069 ug/L
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: HoganH

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comment

Comments: MXAR4-BLK CommentsP-12-00228,P-12-00579,"HH 11/14/12" pH<2.0 HH 11/14/12

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

MW7P71AJ-SAMP Constituent List:
Uranium RDL:1.44E-01 ug/L LCL: UCL: RPD:
MW7P71AP-MS Constituent List:

MXAR41AA-BLK:
Uranium RDL:1.44E-01 ug/L LCL: UCL: RPD:
MXAR41AC-LCS:
Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20
MXAR41AD-LCS:
Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20

MW7P71AJ-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MW7P71AP-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXAR41AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXAR41AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MXAR41AD-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.
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DECEMBER 12, 2012

11/28/2012 2:23:09 PM

ICOC Fraction Transfer/Status Report

ByDate: 11/29/2011, 12/3/2012, Batch: '2318069', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting		Comments
2318069					
AC		**Rev1C**	**HoganH**	11/14/2012 9:16:15	
SC			davilan	IsBatched 11/13/2012 3:19:19 PM	ICOC_RADCALC v4.8.49
SC			HoganH	InPrep 11/14/2012 9:16:15 AM	RL-PRP-004 REVISION 2
SC			HoganH	Prep1C 11/14/2012 11:04:56 AM	RL-PRP-004 REVISION 2
SC			HoganH	Prep1C 11/14/2012 11:05:07 AM	RL-PRP-004 REVISION 2
SC			LoeberL	Prep2C 11/26/2012 3:44:57 PM	RL-KPA-001 REVISION 2
SC			ClarkB	Cnt1C 11/26/2012 9:39:10 PM	RL-KPA-003 REVISION 2
SC			liebrechtt	Rev1C 11/28/2012 2:21:54 PM	RL-DR-001 Rev 4
AC			**HoganH**	11/14/2012 11:04:56	
AC			**HoganH**	11/14/2012 11:05:07	
AC			**LoeberL**	11/26/2012 3:44:57	
AC			**ClarkB**	11/26/2012 9:39:10	
AC			**liebrechtt**	11/28/2012 2:21:54	

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

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Grp Rec Cnt: 6

ICOCFractions v4.8.44

Sample Preparation/Analysis

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

AnalyDueDate: 11/30/2012

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

Batch: 2306092 **WATER** **mg/L**
SEQ Batch, Test: None

PM, Quote: SS , 57671

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

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 **MW7H3-1-AA** J2K010437-1-SAMP 11/01/2012 12:08	AmtRec: 1XVIAL20;1X500MLAG	#Containers: 2				Scr:	Alpha:	Beta:
2 **MW7H3-1-AC-S** J2K010437-1-MS 11/01/2012 12:08	AmtRec: 1XVIAL20;1X500MLAG	#Containers: 2				Scr:	Alpha:	Beta:
3 **MW7H3-1-AD-D** J2K010437-1-MSD 11/01/2012 12:08	AmtRec: 1XVIAL20;1X500MLAG	#Containers: 2				Scr:	Alpha:	Beta:
4 **MW7H3-1-AE-X** J2K010437-1-DUP 11/01/2012 12:08	AmtRec: 1XVIAL20;1X500MLAG	#Containers: 2				Scr:	Alpha:	Beta:
5 **MW7H5-1-AA-B** J2K010000-92-BLK 11/01/2012 15:47 pd	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:
6 **MW7H5-1-AC-C** J2K010000-92-LCS 11/01/2012 15:47 pd	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:

TestAmerica Laboratories, Inc.
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DECEMBER 12, 2012

Sample Preparation/Analysis

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

AnalyDueDate: 11/30/2012

Batch: 2306092
SEQ Batch, Test: None

mg/L

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

Comments:

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

MW7H31AA-SAMP Constituent List:

MW7H31AC-MS Constituent List:

MW7H31AD-MSD:

MW7H51AA-BLK:

MW7H51AC-LCS:

MW7H31AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MW7H31AC-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MW7H31AD-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MW7H51AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MW7H51AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.
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DECEMBER 12, 2012

11/7/2012 4:22:44 PM

Sample Preparation/Analysis

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

AnalyDueDate: 12/07/2012

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

Batch: 2312086 **WATER** **mg/L** **PM, Quote: SS , 57671**
SEQ Batch, Test: None All Tests: 6DSO, 7YSR, ARS6, AWTA, AZS7, BCS8, CLTL, FPS5, 2312086 88EA,

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

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

1 MW87H-1-AA

J2K070446-1-SAMP
11/07/2012 10:21 AmtRec: 1XVIAL20,2X500,10XLP #Containers: 13 Scr: Alpha: Beta:

2 MW87H-1-AL-S

J2K070446-1-MS
11/07/2012 10:21 AmtRec: 1XVIAL20,2X500,10XLP #Containers: 13 Scr: Alpha: Beta:

3 MW87H-1-AM-D

J2K070446-1-MSD
11/07/2012 10:21 AmtRec: 1XVIAL20,2X500,10XLP #Containers: 13 Scr: Alpha: Beta:

4 MW87H-1-AN-X

J2K070446-1-DUP
11/07/2012 10:21 AmtRec: 1XVIAL20,2X500,10XLP #Containers: 13 Scr: Alpha: Beta:

5 MW87J-1-AA-B

J2K070000-86-BLK
11/07/2012 16:22 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

6 MW87J-1-AC-C

J2K070000-86-LCS
11/07/2012 16:22 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

TestAmerica Laboratories, Inc.
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DECEMBER 12, 2012

Sample Preparation/Analysis

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

AnalyDueDate: 12/07/2012

Batch: 2312086 mg/L
SEQ Batch, Test: None

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

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

Comments:

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

MW87H1AA-SAMP Constituent List:

MW87H1AL-MS Constituent List:

MW87H1AM-MSD:

MW87J1AA-BLK:

MW87J1AC-LCS:

MW87H1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MW87H1AL-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MW87H1AM-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MW87J1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MW87J1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

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DECEMBER 12, 2012

10/31/2012 3:34:02 PM

Sample Preparation/Analysis

384868, CH2M Hill Plateau Remediation Company , Pacific Northwest National Lab

AnalyDueDate: 12/14/2012

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
IZ COLIFORM BY METHOD 9223
5I CLIENT: HANFORD

Batch: 2304121 WATER
SEQ Batch, Test: None All Tests: 2304121 88IZ,

PM, Quote: SS , 57671

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 **MW6N3-1-AA** J2J300428-1-SAMP 10/30/2012 11:17	AmtRec: 1XVIAL;1X500MLP	#Containers: 2				Scr:	Alpha:	Beta:
2 **MW6N3-1-AC-X** J2J300428-1-DUP 10/30/2012 11:17	AmtRec: 1XVIAL;1X500MLP	#Containers: 2				Scr:	Alpha:	Beta:
3 **MW6N4-1-AA** J2J300428-2-SAMP 10/30/2012 10:30	AmtRec: 1XVIAL;1X500MLP	#Containers: 2				Scr:	Alpha:	Beta:
4 **MW6Q7-1-AA-B** J2J300000-121-BLK 10/31/2012 15:33 pd	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:
5 **MW6Q7-1-AC-C** J2J300000-121-LCS 10/31/2012 15:33 pd	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:

Comments:

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

MW6N31AA-SAMP Constituent List:

DECEMBER 12, 2012

Sample Preparation/Analysis

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
IZ COLIFORM BY METHOD 9223
5I CLIENT: HANFORD

AnalyDueDate: 12/14/2012

Batch: 2304121
SEQ Batch, Test: None

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

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

MW6Q71AA-BLK:

MW6Q71AC-LCS:

MW6N31AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MW6Q71AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MW6Q71AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.
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