

JULY 28, 2015

Analytical Data Package Prepared For  
**CH2M Hill Plateau Remediation**

Radiochemical Analysis By  
**TestAmerica Inc**

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

Assigned Laboratory Code: TARL

Data Package Contains 14 Pages

Report No.: 66712

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

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
W07168	F14-003	B31D61	J5G010411-1	M66CW1AA	9M66CW10	5187032
		B31D61	J5G010411-1	M66CW1AC	9M66CW10	5188018
		B31D61	J5G010411-1	M66CW1AD	9M66CW10	5188020

JULY 28, 2015



## Certificate of Analysis

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

July 28, 2015

Attention: Scot Fitzgerald

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SAF Number	:	F14-003
Date SDG Closed	:	June 30, 2015
Number of Samples	:	One (1)
Sample Type	:	Water
SDG Number	:	W07168
Data Deliverable	:	30-Day / Summary

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### CASE NARRATIVE

#### I. Introduction

On June 30, 2015, one sample was received at TestAmerica (TARL). Upon receipt, the sample was assigned laboratory ID numbers to correspond with the CH2M specific IDs.

#### II. Sample Receipt

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

#### III. Analytical Results/Methodology

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

The requested analyses were:

- Gamma Spectroscopy**  
Iodine-129 (LL) by method RL-GAM-002
- Liquid Scintillation Counting**  
Technetium-99 by TEVA method RL-LSC-014
- Tritium by method RL-LSC-005

#### 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

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in the "Comments" section.

QC and sample results are reported in the same units.

**V. Comments**

**Gamma Spectroscopy**

Iodine-129 (LL) by method RL-GAM-002

No analytical or quality issues were noted. The sample results and associated batch QC results are within contractual requirements.

**Liquid Scintillation Counting**

Technetium-99 by TEVA method RL-LSC-014:

No analytical or quality issues were noted. The sample results and associated batch QC results are within contractual requirements.

Tritium by method RL-LSC-005:

No analytical or quality issues were noted. The sample results and associated batch QC results are within contractual requirements.

We certify that this data package is in compliance with the SOW, both technically and for completeness, including a full description of, explanation of, and corrective actions for, any and all deviations, from either the analyses requested or the case narrative requested. Release of the data contained in this hard copy data package has been authorized by the Laboratory Analytical Manager (or designee) and the laboratory's client services representative as verified by their signatures on this report.

Reviewed and approved:



Digitally signed by  
Whitney Ritari  
Date: 2015.07.28 17:17:09  
-07'00'

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Whitney Ritari  
Project Manager

### Drinking Water Method Cross References

DRINKING WATER ASTM METHOD CROSS REFERENCES		
Referenced Method	Isotope(s)	TestAmerica Richland's SOP No.
EPA 901.1	Cs-134, I-131	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,  $R = \text{constants} * f(x,y,z,...)$ . The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties ( $u_i$ ) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty ( $u_c$ ) multiplied by the coverage factor (1,2, or 3).

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

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

## Report Definitions

<b>Action Lev</b>	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.
<b>Batch</b>	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
<b>Bias</b>	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
<b>COC No</b>	Chain of Custody Number assigned by the Client or TestAmerica.
<b>Count Error (#s)</b>	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.
<b>CSU (#s) <i>u<sub>c</sub> Combined Standard Uncert.</i></b>	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, <i>u<sub>c</sub> the combined standard uncertainty</i> . The uncertainty is absolute and in the same units as the result.
<b>(#s), Coverage Factor</b>	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
<b>CRDL (RL)</b>	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)
<b>Lc</b>	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.
<b>Lot-Sample No</b>	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.
<b>MDC MDA</b>	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.
<b>Primary Detector</b>	The instrument identifier associated with the analysis of the sample aliquot.
<b>Ratio U-234/U-238</b>	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.
<b>Rst/MDC</b>	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.
<b>Rst/TotUcert</b>	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.
<b>Report DB No</b>	Sample Identifier used by the report system. The number is based upon the first five digits of the <b>Work Order</b> Number.
<b>RER</b>	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.
<b>SDG</b>	Sample Delivery Group Number assigned by the Client or assigned by TestAmerica upon sample receipt.
<b>Sum Rpt Alpha Spec Rst(s)</b>	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.
<b>Work Order</b>	The LIMS software assign test specific identifier.
<b>Yield</b>	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

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J5G010411  
W07168

mb6cw

200,  
6/30/15

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F14-003-591	PAGE 1 OF 1
COLLECTOR E.L. Kauer/CHPRC	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 7H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C8719, I-002	PROJECT DESIGNATION FY2014 200-ZP-1 Remedial Action Wells Sampling and Analysis - Water	ACTUAL SAMPLE DEPTH 354.92	SAF NO. F14-003	AIR QUALITY	ORIGINAL
ICE CHEST NO. N/A	FIELD LOGBOOK NO. HNF-N-50729 Pg 90	OFFSITE PROPERTY NO. N/A	COA 302938	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica Incorporated, Richland	BILL OF LADING/AIR BILL NO. N/A				



MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HOLDING TIME	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS	SAMPLE DATE	SAMPLE TIME	DATE/TIME
A=Air DL=Drum L=Liquid S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	*Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	None	6 Months	P	1	1L	TRITIUM_DIST LSC: COMMON;	6-30-15	08 28	✓
		None	6 Months	G/P	2	4L	IL291L_SEP_LE PS_GS: COMMON;			✓
		HCl to pH <2	6 Months	P	1	500mL	TC99_ETVDSK LSC: COMMON;			✓

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CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM E.L. Kauer/CHPRC	DATE/TIME JUN 30 2015 1130	RECEIVED BY/STORED IN LAWAN, D	DATE/TIME JUN 30 2015 1150	TRVL-15-081 The laboratory is to report all TICs for Method 8260.	
RELINQUISHED BY/REMOVED FROM WOWAN, D	DATE/TIME 6/30/15 1430	RECEIVED BY/STORED IN J. Friesz, TARR	DATE/TIME 6/30/15 1430	TRVL-15-081	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME		

THE LEADER IN ENVIRONMENTAL TESTING  
Date/Time Received: 6/30/15 1430 Container GM Screen Result: (Airlock) 20 cpm Initials [ F ]  
Sample GM Screen Result (Sample Receiving) 20 cpm Initials [ F ]

Client: FLH SDG #: W07168 SAF #: F14-003 NA [ ]

Lot Number: J5G010411

Chain of Custody # F14-003-591

Shipping Container ID or Air Bill Number : \_\_\_\_\_ NA [ F ]

Samples received inside shipping container/cooler/box Yes [ J ] 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 [ F ]
- 2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ F ]
- 3. Cooler temperature: 8.2 on ICE NA [ ]
- 4. Vermiculite/packing materials is NA [ J ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

- 5. Chain of Custody record present? Yes [ F ] No [ ]
- 6. Number of samples received (Each sample may contain multiple bottles): 1
- 7. Containers received: 1x500mlpi, 1x1pi, 2x41p

- 8. Sample holding times exceeded? NA [ ] Yes [ ] No [ F ]
- 9. Samples have: \_\_\_\_\_ tape \_\_\_\_\_ hazard labels F custody seals F appropriate sample labels
- 10. Matrix: \_\_\_\_\_ A (FLT, Wipe, Solid, Soil) J T (Water) \_\_\_\_\_ S (Air, Niosh 7400) \_\_\_\_\_ T (Biological, Ni-63)

11. Samples:  
J are in good condition \_\_\_\_\_ are leaking \_\_\_\_\_ are broken  
\_\_\_\_\_ have air bubbles (Only for samples requiring no head space) \_\_\_\_\_ Other \_\_\_\_\_

12. Sample pH appropriate for analysis requested Yes [ F ] No [ ] NA [ ]  
(If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO<sub>3</sub> added and pH after addition on table)

13. Were any anomalies identified in sample receipt? Yes [ ] No [ J ]

14. Description of anomalies (include sample numbers): NA [ F ] \_\_\_\_\_

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

16. Additional Information: N/A

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

Sample Check-in List completed by Sample Custodian:  
Signature: [Signature] Date: 6/30/15

Client Notification needed? Yes [ ] No [ X ] Date: \_\_\_\_\_  
By: \_\_\_\_\_  
Person contacted: \_\_\_\_\_

[ X ] No action necessary; process as is  
Project Manager [Signature] Date 7-2-15

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Sample Results Summary

Date: 28-Jul-15

TestAmerica Inc TARL

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

Report No. : 66712

SDG No: W07165

Batch	Client Id Work Order	Parameter	Result +- CSU ( 2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
5188018	I129LL_SEP_LEPS_GS								
	<b>B31D56 DUP</b>								
	M652J1AF I129		-4.29E-02 +- 2.5E-01	U	pCi/L	90%	4.53E-01	1.00E+00	-39.4
	<b>B31D61</b>								
	M66CW1AC I129		-1.40E-01 +- 2.4E-01	U	pCi/L	92%	4.07E-01	1.00E+00	
5187032	TRITIUM_DIST_LSC								
	<b>B31D56 DUP</b>								
	M652J1AE H-3		-7.64E+01 +- 1.4E+02	U	pCi/L	100%	2.98E+02	4.00E+02	-110.1
	<b>B31D61</b>								
	M66CW1AA H-3		2.82E+01 +- 1.4E+02	U	pCi/L	100%	2.90E+02	4.00E+02	
5188020	TC99_ETVDSK_LSC								
	<b>B31D56 DUP</b>								
	M652J1AG Tc-99		1.35E+00 +- 4.5E+00	U	pCi/L	100%	9.66E+00	1.50E+01	-2129.2
	<b>B31D61</b>								
	M66CW1AD Tc-99		-2.59E-01 +- 4.5E+00	U	pCi/L	100%	9.67E+00	1.50E+01	
No. of Results: 6									

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QC Results Summary  
TestAmerica Inc TARL  
Ordered by Method, Batch No, QC Type,.

Date: 28-Jul-15

Report No. : 66712

SDG No.: W07165

Batch	Work Order	Parameter	Result +- CSU ( 2 s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDL
<b>I129LL_SEP_LEPS_GS</b>									
5188018	BLANK QC,								
	M67HM1AA	I129	-3.78E-02 +- 2.6E-01	U	pCi/L	83%			4.76E-01
5188018	LCS,								
	M67HM1AC	I129	1.79E+01 +- 2.4E+00		pCi/L	93%	93%	-0.1	9.41E-01
<b>TRITIUM_DIST_LSC</b>									
5187032	MATRIX SPIKE, B31F60								
	M66CK1AF	H-3	1.39E+03 +- 1.2E+03		pCi/L	100%	100%	0.0	3.36E+02
5187032	BLANK QC,								
	M67GG1AA	H-3	-9.96E+01 +- 1.4E+02	U	pCi/L	100%			3.14E+02
5187032	LCS,								
	M67GG1AC	H-3	2.68E+03 +- 2.4E+02		pCi/L	100%	96%	0.0	3.01E+02
<b>TC99_ETVDSK_LSC</b>									
5188020	MATRIX SPIKE, B31F60								
	M66CK1AE	Tc-99	5.03E+02 +- 1.8E+01		pCi/L	100%	93%	-0.1	9.72E+00
5188020	BLANK QC,								
	M67HQ1AA	Tc-99	-2.27E-01 +- 2.8E+00	U	pCi/L	100%			6.10E+00
<b>No. of Results: 7</b>									

TestAmerica Inc Bias - (Result/Expected)-1 as defined by ANSI N13.30.  
 rptSTLRchQcSummary V5.3.8 A2002 U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.

**FORM I**

Date: 28-Jul-15

**SAMPLE RESULTS**

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J5G010411-1  
 Client Sample ID: B31D61

SDG: W07168  
 Report No.: 66712  
 COC No.: F14-003-591

Collection Date: 6/30/2015 8:28:00 AM  
 Received Date: 6/30/2015 2:30:00 PM  
 Matrix: WATER

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error ( 2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
<b>Batch: 5187032</b> TRITIUM_DIST_LSC												
H-3	2.82E+01	U	1.2E+02	1.4E+02	2.90E+02	pCi/L	100%	0.1	7/13/15 10:45 p		0.00502	LSC8
							1.38E+02	4.00E+02			L	
<b>Work Order: M66CW1AA</b> Report DB ID: 9M66CW10												
<b>Batch: 5188018</b> I129LL_SEP_LEPS_GS												
I129	-1.40E-01	U	2.4E-01	2.4E-01	4.07E-01	pCi/L	92%	-0.34	7/9/15 01:54 p		2.0206	LEPS1
							1.90E-01	1.00E+00			L	
<b>Work Order: M66CW1AC</b> Report DB ID: 9M66CW10												
<b>Batch: 5188020</b> TC99_ETVDSK_LSC												
Tc-99	-2.59E-01	U	4.0E+00	4.5E+00	9.67E+00	pCi/L	100%	-0.03	7/10/15 03:29 p		0.1273	LSC8
							4.64E+00	1.50E+01			L	
<b>Work Order: M66CW1AD</b> Report DB ID: 9M66CW10												

No. of Results: 3      Comments:

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FORM II

Date: 28-Jul-15

DUPLICATE RESULTS

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J5F300403-1  
 Client Sample ID: B31D56 DUP

SDG: W07165  
 Report No.: 66712  
 COC No.: F14-0033-586  
 Matrix: WATER

Collection Date: 6/29/2015 11:28:00 AM

Received Date: 6/29/2015 2:30:00 PM

JULY 28, 2015

Parameter	Result, Orig Rst	Qual	Count Error ( 2 s)	CSU ( 2 s)	MDL, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5187032	TRITIUM_DIST_LSC											
H-3	-7.64E+01	U	1.2E+02	1.4E+02	2.98E+02	pCi/L	100%	M652J1AE	Report DB ID: M652J1ER	9M652J10	0.00502	LSC8
	-2.21E+01	U	RPD	-110.1		4.00E+02			7/13/15 06:39 p		L	
Batch: 5188018	1129LL_SEP_LEPS_GS											
1129	-4.29E-02	U	2.5E-01	2.5E-01	4.53E-01	pCi/L	90%	M652J1AF	Report DB ID: M652J1FR	9M652J10	2.024	LEP5\$1
	-2.88E-02	U	RPD	-39.4		1.00E+00			7/9/15 12:07 p		L	
Batch: 5188020	TC99_ETVDSK_LSC											
Tc-99	1.35E+00	U	4.0E+00	4.5E+00	9.66E+00	pCi/L	100%	M652J1AG	Report DB ID: M652J1GR	9M652J10	0.128	LSC9
	-1.63E+00	U	RPD	-2129.2		1.50E+01			7/10/15 12:24 p		L	

No. of Results: 3      Comments:

TestAmerica Inc    RPD    - Relative Percent Difference.  
 rptSTLRchDupV5.    MDC(MDA)\_Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.  
 3.8 A2002            U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.

**FORM II  
BLANK RESULTS**

Date: 28-Jul-15

Lab Name: **TestAmerica Inc**      SDG: **W07165**  
 Matrix: **WATER**      Report No.: **66712**

Parameter	Result	Qual	Count Error ( 2 s)	CSU (2 s)	MDL, Lc	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
<b>Batch: 5187032</b> TRITIUM_DIST_LSC <b>Work Order: M67GG1AA</b> <b>Report DB ID: M67GG1AB</b>												
H-3	-9.96E+01	U	1.2E+02	1.4E+02	3.14E+02	pCi/L	100%	-0.32	7/14/15 02:50 a	0.00503	L	LSC8
					1.49E+02	4.00E+02		-(1.4)				
<b>Batch: 5188018</b> I129LL_SEP_LEPS_GS <b>Work Order: M67HM1AA</b> <b>Report DB ID: M67HM1AB</b>												
I129	-3.78E-02	U	2.6E-01	2.6E-01	4.76E-01	pCi/L	83%	-0.08	7/9/15 04:34 p	2.0038	L	LEP5\$1
					2.00E-01	1.00E+00		-0.29				
<b>Batch: 5188020</b> TC99_ETVDSK_LSC <b>Work Order: M67HQ1AA</b> <b>Report DB ID: M67HQ1AB</b>												
Tc-99	-2.27E-01	U	2.5E+00	2.8E+00	6.10E+00	pCi/L	100%	-0.04	7/10/15 06:35 p	0.2016	L	LSC9
					2.93E+00	1.50E+01		-0.16				

No. of Results: 3      Comments:

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**FORM II**  
**LCS RESULTS**

Date: 28-Jul-15

Lab Name: TestAmerica Inc

SDG: W07165

Matrix: WATER

Report No. : 66712

Parameter	Result	Qual	Count Error ( 2 s)	CSU ( 2 s)	MDL	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
<b>Batch: 5187032</b> TRITIUM_DIST_LSC													
H-3	2.68E+03		2.1E+02	2.4E+02	3.01E+02	pCi/L	100%	2.78E+03	8.34E+01	96%	7/14/15 04:12 a	0.00503	LSC8
							<b>Rec Limits:</b>	70	130	0.0			
<b>Batch: 5188018</b> I129LL_SEP_LEPS_GS													
I129	1.79E+01		2.4E+00	2.4E+00	9.41E-01	pCi/L	93%	1.92E+01	2.07E-01	93%	7/9/15 07:26 p	2.012	LEP4\$1
							<b>Rec Limits:</b>	70	130	-0.1			

No. of Results: 2      Comments:

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**FORM II**

Date: 28-Jul-15

**MATRIX SPIKE RESULTS**

Lab Name: TestAmerica Inc      SDG: W07166      Matrix: WATER  
 Lot-Sample No.: J5G010406-1, B31F60      Report No.: 66712

Parameter	SpikeResult, Orig Rst	Count Error (2 s)	CSU (2 s)	MDC MDA	Rpt Unit	Yield	Rec-covery	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
<b>Batch: 5187032</b>											
	Work Order: M66CK1AF		Report DB ID: M66CK1FW		Orig Sa DB ID: 9M66CK10						
H-3	1.39E+03	5.3E+02	1.2E+03	3.36E+02 pCi/L	100%	100.33%	1.39E+03	7/13/15 09:23 p	0.00434	L	TRITIUM_DIST_LSC
	2.06E+04						4.17E+01				LSC8
<b>Batch: 5188020</b>											
	Work Order: M66CK1AE		Report DB ID: M66CK1EW		Orig Sa DB ID: 9M66CK10						
Tc-99	5.03E+02	1.3E+01	1.8E+01	9.72E+00 pCi/L	100%	92.69%	5.42E+02	7/10/15 02:27 p	0.1257	L	TC99_ETVDSK_LSC
	3.37E+01						5.59E+00				LSC9

Number of Results: 2

Comments:

JULY 28, 2015