

January 14, 2016

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 48 Pages

Report No.: 68009

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.
W07366	S16-010	B32RJ7	J5L300411-1	M73FF1AE	9M73FF10	5364027
		B32RJ7	J5L300411-1	M73FF1AF	9M73FF10	5364032
		B32RJ7	J5L300411-1	M73FF1AD	9M73FF10	5364034
		B32RJ7	J5L300411-1	M73FF1AC	9M73FF10	5364035
		B32RJ7	J5L300411-1	M73FF1AA	9M73FF10	5364036
		B32RJ7	J5L300411-1	M73FF1AH	9M73FF10	5364037
		B32RJ7	J5L300411-1	M73FF1AG	9M73FF10	5364038
		B32RK7	J5L300411-2	M73FG1AE	9M73FG10	5364027
		B32RK7	J5L300411-2	M73FG1AF	9M73FG10	5364032
		B32RK7	J5L300411-2	M73FG1AD	9M73FG10	5364034
		B32RK7	J5L300411-2	M73FG1AC	9M73FG10	5364035
		B32RK7	J5L300411-2	M73FG1AA	9M73FG10	5364036
		B32RK7	J5L300411-2	M73FG1AH	9M73FG10	5364037
		B32RK7	J5L300411-2	M73FG1AG	9M73FG10	5364038
		S16-012	S16-012	B33HT9	J5L300410-1	M73E91AE
B33HT9	J5L300410-1			M73E91AD	9M73E910	5364034
B33HT9	J5L300410-1			M73E91AC	9M73E910	5364035
B33HT9	J5L300410-1			M73E91AA	9M73E910	5364036
B33HT9	J5L300410-1			M73E91AG	9M73E910	5364037
B33HT9	J5L300410-1			M73E91AF	9M73E910	5364038
B33J03	J5L300410-2			M73FA1AC	9M73FA10	5364029
B33J03	J5L300410-2			M73FA1AE	9M73FA10	5364030
B33J03	J5L300410-2			M73FA1AG	9M73FA10	5364031
B33J03	J5L300410-2			M73FA1AH	9M73FA10	5364032
B33J03	J5L300410-2			M73FA1AJ	9M73FA10	5364033
B33J03	J5L300410-2			M73FA1AD	9M73FA10	5364036

January 14, 2016

Report No.: 68009

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SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
W07366	S16-012	B33J03	J5L300410-2	M73FA1AL	9M73FA10	5364037
		B33J03	J5L300410-2	M73FA1AK	9M73FA10	5364038
		B33J03	J5L300410-2	M73FA2AA	9M73FA20	6012050
		B33J03	J5L300410-2	M73FA2AF	9M73FA20	6013029
		B33J07	J5L300410-3	M73FC1AA	9M73FC10	5364036
		B33J07	J5L300410-3	M73FC1AC	9M73FC10	5364037
		B33J18	J5L300410-4	M73FD1AA	9M73FD10	5364037
		B33J20	J5L300410-5	M73FE1AA	9M73FE10	5364037



Certificate of Analysis

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

January 14, 2016

Attention: Scot Fitzgerald

SAF Number	:	S16-012
Date SDG Closed	:	December 29, 2015
Number of Samples	:	Seven (7)
Sample Type	:	Water
SDG Number	:	W07366
Data Deliverable	:	15-Day / Summary

CASE NARRATIVE

I. Introduction

On December 29, 2015, seven samples were received at TestAmerica (TARL). Upon receipt, the samples were assigned laboratory ID numbers to correspond with the CH2M specific IDs.

II. Sample Receipt

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

III. Analytical Results/Methodology

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

The requested analyses were:

Alpha Spectroscopy

Americium 241 by method RL-ALP-003
Neptunium-237 by method RL-ALP-013
Plutonium-238, -239/240 by method RL-ALP-002
Thorium-228,230,232 by method RL-ALP-005

Gas Proportional Counting

Gross Alpha by method RL-GPC-001
Gross Beta by method RL-GPC-001
Strontium-90 by method RL-GPC-010

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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

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

Americium 241 by method RL-ALP-003:

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

Neptunium-237 by method RL-ALP-013:

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

Plutonium-238, -239/240 by method RL-ALP-002:

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

Thorium-228,230,232 by method RL-ALP-005:

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

Gas Proportional Counting

Gross Alpha by method RL-GPC-001:

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

Gross Beta by method RL-GPC-001:

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

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Strontium-90 by method RL-GPC-010:

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

Gamma Spectroscopy

Gamma Spec (LL) by method RL-GAM-001:

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

Gamma Spec by method RL-GAM-001:

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

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

Carbon-14 by method RL-LSC-008:

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

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: 2016.01.14 17:02:05 -08'00'

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, $R = \text{constants} * f(x,y,z,\dots)$. The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1,2, or 3).

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

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

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (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.
CSU (#s) <i>u_c Combined Standard Uncert.</i>	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, <i>u_c the combined standard uncertainty</i> . 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.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: Will Wise / CHPRC
 SAF No.: S16-010
 Project Title: SURV, OCTOBER 2015
 Shipped To (Lab): TestAmerica Incorporated, Richland
 Protocol: SURV

Contact/Requester: Karen Waters-Husted
 Sampling Origin: Hanford Site
 Logbook No.: HNF-N-506 33 / 14
 Method of Shipment: GOVERNMENT VEHICLE
 Priority: 30 Days
PRIORITY

Telephone No.: 509-376-4650
 Purchase Order/Charge Code: 300071
 Ice Chest No.: N/A
 Bill of Lading/Air Bill No.: N/A
 Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
 *** 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

SPECIAL INSTRUCTIONS: Hold Time: N/A
 Total Activity Exemption: Yes No

Sample No.	Filter	*	Date	Time	No./Type Container	Sample Analysis	Holding Time	Preservative
B32RJ7	N	W	12/29/15	1017	1x1-L P	906_0_TRITIUM_LSC: COMMON M73FF	6 Months	None
B32RJ7	N	W			1x1-L P	9310_ALPHABETA_GPC: COMMON	6 Months	HNO3 to pH <2
B32RJ7	N	W			3x1-L G/P	GAMMA_GS: COMMON	6 Months	HNO3 to pH <2
B32RJ7	N	W			2x4-L G/P	1129LL_SEP_LEPS_GS_LL: COMMON	6 Months	None
B32RJ7	N	W			3x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON	6 Months	HNO3 to pH <2
B32RJ7	N	W	12/29/15	1017	1x500-mL P	TC99_ETVDSK_LSC: COMMON	6 Months	HCl to pH <2

J5L300411
 W07366



Relinquished By: Will Wise / CHPRC Date/Time: DEC 29 2015 12:00 Sign: [Signature]	Received By: E.L. Kauer / CHPRC Date/Time: DEC 29 2015 12:00 Sign: [Signature]	Matrix * S = Soil, SE = Sediment, SO = Solid, SL = Sludge, W = Water, O = Oil, A = Air, DS = Drum Solids, DL = Drum Liquids, T = Tissue, WI = Wipe, L = Liquid, V = Vegetation, X = Other
Relinquished By: Will Wise / CHPRC Date/Time: DEC 29 2015 1330 Sign: [Signature]	Received By: J. Friesz, FARL Date/Time: DEC 29 2015 1330 Sign: [Signature]	
Relinquished By: [Signature]	Received By: [Signature]	
Relinquished By: [Signature]	Received By: [Signature]	
FINAL SAMPLE DISPOSITION		Date/Time
Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Date/Time

January 14, 2016

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **S16-010-474**
Page 1 of 1

Collector: **Will Wise** / **CHPRC** / S16-010
 Telephone No. 509-376-4650
 Project Title: **SURV, OCTOBER 2015**
 Shipped To (Lab): **TestAmerica Incorporated, Richland**
 Protocol: **SURV**
 Contact/Requester: **Karen Waters-Husted**
 Sampling Origin: **Hanford Site**
 Logbook No.: **HNF-N-506 83 / 14**
 Method of Shipment: **GOVERNMENT VEHICLE**
 Priority: **30 Days PRIORITY**
 Bill of Lading/Air Bill No.: **N/A**
 Offsite Property No.: **N/A**

POSSIBLE SAMPLE HAZARDS/REMARKS
 ** ** 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

SPECIAL INSTRUCTIONS: **N/A**
 Hold Time: _____
 Total Activity Exemption: Yes No

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B32RK7	N	W	12/29/15	1129	1x1-L P	906.0_TRITIUM_LSC: COMMON	6 Months	None
B32RK7	N	W	/	/	1x1-L P	9310_ALPHABETA_GPC: COMMON	6 Months	HNO3 to pH <2
B32RK7	N	W	/	/	3x1-L G/P	GAMMA_GS: COMMON	6 Months	HNO3 to pH <2
B32RK7	N	W	/	/	2x4-L G/P	1129LL_SEP_LEPS_GS_LL: COMMON	6 Months	None
B32RK7	N	W	/	/	3x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON	6 Months	HNO3 to pH <2
B32RK7	N	W	12/29/15	1129	1x500-mL P	TC99_ETVDSK_LSC: COMMON	6 Months	HCl to pH <2



J5L2230411
W07366

Relinquished By	Print	Signature	Date/Time	Received By	Print	Signature	Date/Time	Matrix *
Will Wise / CHPRC		<i>Will Wise</i>	DEC 29 2015 1200	E.L. Kauer / CHPRC		<i>E.L. Kauer</i>	DEC 29 2015 1200	S = Soil, SE = Sediment, SO = Solid, SL = Sludge, W = Water, O = Oil, A = Air, DS = Drum Solids, DL = Drum Liquids, T = Tissue, WI = Wipe, L = Liquid, V = Vegetation, X = Other
E.L. Kauer / CHPRC		<i>E.L. Kauer</i>	DEC 29 2015 1330	J. Friesz, TARC		<i>J. Friesz</i>	DEC 29 2015 1330	
Relinquished By			Date/Time	Received By			Date/Time	
Relinquished By			Date/Time	Received By			Date/Time	

Date/Time Received: 12/29/15 1330 Container GM Screen Result: (Airlock) 0 cpm Initials [J]
Sample GM Screen Result (Sample Receiving) 0 cpm Initials [J]

Client: PGW SDG #: W07366 SAF #: 516-010 NA []

Lot Number: J5L300411

Chain of Custody # 516-010-473;474

Shipping Container ID or Air Bill Number : _____ NA [J]

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 [J]
- 2. Custody Seals dated and signed? Yes [] No [] No Custody Seal [J]
- 3. Cooler temperature: _____ 12.0 air 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 [J] No []
- 6. Number of samples received (Each sample may contain multiple bottles): 2
- 7. Containers received: 2x500mlp; 4x4lp; 16xlp

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

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

12. Sample pH appropriate for analysis requested Yes [J] No [] NA []
(If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO₃ 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 [J] _____

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

16. Additional Information: MA

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

Sample Check-in List completed by Sample Custodian:
Signature: _____ Date: 12/29/15

Client Notification needed? Yes [] No [] Date: _____
By: _____
Person contacted: _____

[J] No action necessary; process as is
Project Manager Susan Jills Date 12-30-15

CH2M Hill Plateau Remediation Company

C.O.C.# **S16-012-381**
Page 1 of 1

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Contact/Requester: Karen Waters-Husted
 Telephone No. 509-376-4650

Sampling Origin: Hanford Site
 Purchase Order/Charge Code: 300071

Logbook No. HNF-N-506 83/14
 Ice Chest No. N/A

Method of Shipment: GOVERNMENT VEHICLE
 Bill of Lading/Air Bill No. N/A

Priority: 15 Days
 Offsite Property No. N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

*** 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

SPECIAL INSTRUCTIONS: N/A
 Hold Time: _____
 Total Activity Exemption: Yes No

Sample No.	Filter	* W	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B33HT9	N	W	12/29/15	0836	1x1-L P	906.0 TRITIUM_LSC: COMMON	6 Months	None
B33HT9	N	W	/	/	1x1-L P	9310_ALPHABETA_GPC: COMMON	6 Months	HNO3 to pH <2
B33HT9	N	W	/	/	2x4-L G/P	1129LL_SEP_LEPS_GS_LL: COMMON	6 Months	None
B33HT9	N	W	/	/	3x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON	6 Months	HNO3 to pH <2
B33HT9	N	W	/	/	1x500-mL P	TC99_ETVDSK_LSC: COMMON	6 Months	HCl to pH <2

Of 48



J5L300410
W07366

Requisitioned By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Will Wise CHPRC	<i>Will Wise</i>		DEC 29 2015	Troy Bacon CHPRC	<i>Troy Bacon</i>		DEC 29 2015	S = Soil, SE = Sediment, SO = Solid, SL = Sludge, W = Water, O = Oil, A = Air, DS = Drum Solids, DL = Drum Liquids, T = Tissue, WI = Wipe, L = Liquid, V = Vegetation, X = Other
Requisitioned By			DEC 29 2015	Received By			DEC 29 2015	
Requisitioned By			DEC 29 2015	Received By			DEC 29 2015	
Requisitioned By			DEC 29 2015	Received By			DEC 29 2015	

FINAL SAMPLE DISPOSITION

January 14, 2016

CH2M Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# **S16-012-392**
Page 1 of 1

Collector: Scott King CHPRC
 SAF No.: S16-012
 Project Title: SURV, DECEMBER 2015
 Shipped To (Lab): TestAmerica Incorporated, Richland
 Protocol: SURV

Contact/Requester: Karen Waters-Husted
 Sampling Origin: Hanford Site
 Logbook No.: HNF-N-50681 / 67
 Method of Shipment: GOVERNMENT VEHICLE
 Priority: 15 Days **PRIORITY**

Telephone No.: 509-376-4650
 Purchase Order/Charge Code: 300071
 Ice Chest No.: N/A
 Bill of Lading/Air Bill No.: N/A
 Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
 *** 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 438.1

SPECIAL INSTRUCTIONS: Hold Time: N/A
 Total Activity Exemption: Yes No

Sample No.	Filter	* Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B33J03	N	W DEC 29 2015	1055	1x1-L P	906.0_TRITIUM_LSC: COMMON	6 Months	None
B33J03	N	W		1x1-L G/P	AMCMISO_EIE_PLATE_AEA: COMMON	6 Months	HNO3 to pH <2
B33J03	N	W		2x1-L G/P	C14_LSC: COMMON	6 Months	None
B33J03	N	W		3x1-L G/P	GAMMA_GS: COMMON; GAMMA_GS: GW 01	6 Months	HNO3 to pH <2
B33J03	N	W		2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON	6 Months	None
B33J03	N	W		1x1-L G/P	NP237_LLE_PLATE_AEA: COMMON	6 Months	HNO3 to pH <2
B33J03	N	W		1x1-L G/P	PUISO_PLATE_AEA: COMMON	6 Months	HNO3 to pH <2
B33J03	N	W		3x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON	6 Months	HNO3 to pH <2
B33J03	N	W		1x500-ml P	TC99_ETVDSK_LSC: COMMON	6 Months	HCl to pH <2
B33J03	N	W DEC 29 2015	1055	1x1-L G/P	THISO_IE_PLATE_AEA: COMMON	6 Months	HNO3 to pH <2

J5L300410
W0736x



Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Scott King CHPRC			DEC 29 2015 12:00	E.L. Kauer CHPRC			DEC 29 2015 12:00
Relinquished By	E.L. Kauer CHPRC		DEC 29 2015 1330	3. Friesz, TARI			DEC 29 2015 1330
Relinquished By				Received By			
Relinquished By				Received By			

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

PRINTED ON 12/21/2015

FSR ID = FSR8545

A-6004-842 (REV 2)

C.O.C.#
S16-012-394
Page 1 of 1

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

CH2MHill Plateau Remediation Company

Collector: Scott King CHPRC
SAF No.: S16-012
Project Title: SURV, DECEMBER 2015
Shipped To (Lab): TestAmerica Incorporated, Richland
Protocol: SURV

Contact/Requester: Karen Waters-Husted
Sampling Origin: Hanford Site
Logbook No.: HNF-N-50681 / 67
Method of Shipment: GOVERNMENT VEHICLE
Priority: 15 Days **PRIORITY**
SPECIAL INSTRUCTIONS: N/A
Hold Time: _____
Offsite Property No.: N/A
Total Activity Exemption: Yes No

Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B33J07	N	DEC 29 2015	1145	1x1-L-P	906.0_TRITIUM_LSC: COMMON M73FC	6 Months	None
B33J07	N	DEC 29 2015	1145	1x500-mL P	TC99_ETVDSK_LSC: COMMON	6 Months	HCl to pH <2

J5L300410
W07366

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Scott King CHPRC			DEC 29 2015 1200	E.L. Kauer CHPRC			DEC 29 2015 1200	S = Soil, SE = Sediment, SO = Solid, SL = Sludge, W = Water, O = Oil, A = Air, DS = Drum Solids, DL = Drum Liquids, T = Tissue, WL = Wipe, L = Liquid, V = Vegetation, X = Other
E.L. Kauer CHPRC			DEC 29 2015 1330	J. Friesz, TARI			DEC 29 2015 1330	
Relinquished By				Received By				
Relinquished By				Received By				

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

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C. # S16-012-399	
Page 1 of 1		Telephone No. 509-376-4650		Purchase Order/Charge Code 300071	
Contact/Requester Karen Waters-Husted		Sampling Origin Hanford Site		Ice Chest No. N/A	
SAF No. S16-012		Logbook No. HNF-N-506 81 / 67		Bill of Lading/Air Bill No. N/A	
Project Title SURV, DECEMBER 2015		Method of Shipment GOVERNMENT VEHICLE		Offsite Property No. N/A	
Shipped To (Lab) TestAmerica Incorporated, Richland		Priority: 15 Days PRIORITY		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Protocol SURV		SPECIAL INSTRUCTIONS Hold Time		Preservative	
POSSIBLE SAMPLE HAZARDS/REMARKS		SPECIAL INSTRUCTIONS N/A		HCl to pH <2	
*** ** 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		Sample Analysis		Holding Time	
Sample No. Filter * Date Time No/Type Container		TC99_ETVDSK_LSC: COMMON M73FD		6 Months	
B33J18 N W/DEC 29 2015 0910		1x500-mL P		6 Months	

J5L300410

W07366

Relinquished By Scott King CHPRC	Signature <i>[Signature]</i>	Date/Time DEC 29 2015 10:30	Received By CHPRC	Signature <i>[Signature]</i>	Date/Time DEC 29 2015 10:30
Relinquished By E.L. Kauer CHPRC	Signature <i>[Signature]</i>	Date/Time DEC 29 2015 1330	Received By J. Friesz, TARL	Signature <i>[Signature]</i>	Date/Time 12/29/15 1330
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time

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



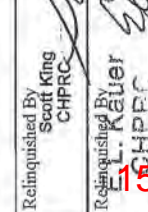
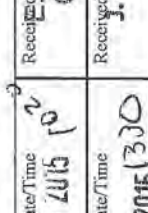
FINAL SAMPLE DISPOSITION

January 14, 2016

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C. # S16-012-400
						Page 1 of 1
Collector	Scott King CHPRC	Contact/Requester	Karen Waters-Husted		Telephone No.	509-376-4650
SAF No.	S16-012	Sampling Origin	Hanford Site		Purchase Order/Charge Code	300071
Project Title	SURV, DECEMBER 2015	Logbook No.	HNF-N-506 <u>81/67</u>		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:	15 Days		Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS		SPECIAL INSTRUCTIONS		Hold Time	Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
** ** 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		N/A				
Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Holding Time
B33J20	N	DEC 29 2015	0940	1x500-ml P	TC99_ETVDSK_LSC: COMMON M73FE	6 Months
						Preservative
						HCl to pH <2

15 of 48

J5L300410
W07366

Relinquished By Scott King CHPRC	Print 	Sign	Date/Time DEC 29 2015 1020	Received By Kauer CHPRC	Print 	Sign	Date/Time DEC 29 2015 1020	Matrix *
Relinquished By EL Kauer CHPRC	Print 	Sign	Date/Time DEC 29 2015 1330	Received By J. Fiesz, TARE	Print 	Sign	Date/Time 12/29/15 1330	S = Soil DS = Drum Solids SE = Sediment DL = Drum Liquids SO = Solid T = Tissue SL = Sludge WT = Wipe W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By			Date/Time	Received By			Date/Time	
Relinquished By			Date/Time	Received By			Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By		Date/Time		

Date/Time Received: 12/29/15 1330 Container GM Screen Result: (Airlock) 0 cpm Initials [J]
Sample GM Screen Result (Sample Receiving) 0 cpm Initials [J]

Client: PGW SDG #: W07366 SAE #: S16-012 NA []

Lot Number: JF 12/30/15 J5L2 J5L300410

Chain of Custody # S16-012-381, 392, 394, 399, 400

Shipping Container ID or Air Bill Number : _____ NA [J]

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 [J]
- 2. Custody Seals dated and signed? Yes [] No [] No Custody Seal [J]
- 3. Cooler temperature: 12.0 air 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 [J] No []
- 6. Number of samples received (Each sample may contain multiple bottles): 5
- 7. Containers received: 5 x 500ml, 4 x 4l, 1 x 1l

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

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

12. Sample pH appropriate for analysis requested Yes [J] No [] NA []
(If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO₃ 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 [J] _____

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

16. Additional Information: MA

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

Sample Check-in List completed by Sample Custodian:
Signature: _____ Date: 12/29/15

Client Notification needed? Yes [] No [] Date: _____
By: _____
Person contacted: _____

[J] No action necessary; process as is
Project Manager Susan Jello Date 12-30-15

January 14, 2016

Sample Results Summary

Date: 14-Jan-16

TestAmerica Inc TARL

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

Report No. : 68009

SDG No: W07366

Batch	Client Id Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
5364038	SRISO_SEP_PRECIP_GPC								
	B32RJ7								
	M73FF1AG	STRONTIUM	1.13E-01 +- 3.5E-01	U	pCi/L	91%	6.01E-01	2.00E+00	
	B32RK7								
	M73FG1AG	STRONTIUM	2.63E-01 +- 4.0E-01	U	pCi/L	86%	6.56E-01	2.00E+00	
	B33HJ0 DUP								
	M73DG1AE	STRONTIUM	9.79E-02 +- 3.9E-01	U	pCi/L	80%	6.81E-01	2.00E+00	74.7
	B33HT9								
	M73E91AF	STRONTIUM	6.32E-01 +- 5.0E-01	U	pCi/L	76%	7.43E-01	2.00E+00	
	B33J03								
	M73FA1AK	STRONTIUM	1.32E-01 +- 4.3E-01	U	pCi/L	71%	7.50E-01	2.00E+00	
6012050	NP237_LLE_PLATE_AEA								
	B33J03								
	M73FA2AA	NP-237	1.34E-01 +- 2.1E-01	U	pCi/L	81%	3.11E-01	1.00E+00	
	B33J03 DUP								
	M73FA2AV	NP-237	0.00E+00 +- 1.8E-01	U	pCi/L	65%	3.09E-01	1.00E+00	200.0
5364033	PUISO_PLATE_AEA								
	B33J03								
	M73FA1AJ	PU-238	9.15E-02 +- 1.4E-01	U	pCi/L	85%	2.25E-01	1.00E+00	
		PU239/40	-2.25E-02 +- 8.2E-02	U	pCi/L	85%	2.11E-01	1.00E+00	
	B33J03 DUP								
	M73FA1AR	PU-238	4.56E-02 +- 1.1E-01	U	pCi/L	90%	2.19E-01	1.00E+00	67.0
		PU239/40	-3.04E-03 +- 7.6E-02	U	pCi/L	90%	1.40E-01	1.00E+00	-152.3
5364029	THISO_IE_PRECIP_AEA								
	B33J03								
	M73FA1AC	TH-228	1.16E-01 +- 1.6E-01	U	pCi/L	91%	2.32E-01	1.00E+00	
		TH-230	0.00E+00 +- 7.6E-02	U	pCi/L	91%	1.39E-01	1.00E+00	
		TH-232	0.00E+00 +- 7.6E-02	U	pCi/L	91%	1.39E-01	1.00E+00	
	B33J03 DUP								
	M73FA1AN	TH-228	2.68E-02 +- 8.0E-02	U	pCi/L	93%	1.83E-01	1.00E+00	125.3
		TH-230	1.13E-01 +- 1.4E-01	U	pCi/L	93%	1.43E-01	1.00E+00	200.0
		TH-232	-3.11E-03 +- 7.8E-02	U	pCi/L	93%	1.43E-01	1.00E+00	-200.0
5364030	AMCMISO_EIE_PLT_AEA								
	B33J03								
	M73FA1AE	AMERICIUM 241	1.19E-01 +- 1.6E-01	U	pCi/L	91%	2.37E-01	1.00E+00	
	B33J03 DUP								
	M73FA1AP	AMERICIUM 241	7.36E-02 +- 1.3E-01	U	pCi/L	94%	2.33E-01	1.00E+00	47.1
5364027	GAMMA_GS								
	B32RJ7								

TestAmerica Inc RPD - Relative Percent Difference.
rptTALRchSaSum U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan
mary2 V5.4.1 software.
A2002

January 14, 2016

Sample Results Summary

Date: 14-Jan-16

TestAmerica Inc TARL

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

Report No. : 68009

SDG No: W07366

Batch	Client Id Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
5364027 GAMMA_GS									
B32RJ7									
	M73FF1AE	CO-60	6.20E-01 +- 1.6E+00	U	pCi/L		3.17E+00	2.50E+01	
		CS-137	1.90E-01 +- 1.4E+00	U	pCi/L		2.61E+00	1.50E+01	
		EU-152	-1.11E-01 +- 3.6E+00	U	pCi/L		6.22E+00	5.00E+01	
		EU-154	2.40E+00 +- 4.5E+00	U	pCi/L		8.97E+00	5.00E+01	
		EU-155	-1.43E+00 +- 2.9E+00	U	pCi/L		4.85E+00	5.00E+01	
B32RJ7 DUP									
	M73FF1AJ	CO-60	-7.02E-01 +- 2.3E+00	U	pCi/L		4.09E+00	2.50E+01	-3238.7
		CS-137	6.32E-01 +- 2.1E+00	U	pCi/L		3.83E+00	1.50E+01	107.5
		EU-152	1.34E+00 +- 5.9E+00	U	pCi/L		1.02E+01	5.00E+01	236.0
		EU-154	-2.60E+00 +- 6.3E+00	U	pCi/L		1.08E+01	5.00E+01	-5144.5
		EU-155	1.62E-02 +- 5.6E+00	U	pCi/L		9.44E+00	5.00E+01	-204.6
B32RK7									
	M73FG1AE	CO-60	1.62E+00 +- 2.2E+00	U	pCi/L		4.31E+00	2.50E+01	
		CS-137	-2.18E-01 +- 1.9E+00	U	pCi/L		3.27E+00	1.50E+01	
		EU-152	3.08E+00 +- 5.7E+00	U	pCi/L		1.01E+01	5.00E+01	
		EU-154	-8.86E+00 +- 6.8E+00	U	pCi/L		9.94E+00	5.00E+01	
		EU-155	-1.34E+00 +- 5.5E+00	U	pCi/L		9.08E+00	5.00E+01	
5364031 GAMMA_GS									
B33J03									
	M73FA1AG	CO-60	8.63E-01 +- 2.5E+00	U	pCi/L		4.67E+00	2.50E+01	
		CS-134	2.23E+00 +- 2.4E+00	U	pCi/L		4.51E+00	8.00E+01	
		CS-137	-4.44E-01 +- 2.2E+00	U	pCi/L		3.88E+00	1.50E+01	
		EU-152	-6.13E+00 +- 5.5E+00	U	pCi/L		8.57E+00	5.00E+01	
		EU-154	-1.07E-01 +- 6.1E+00	U	pCi/L		1.11E+01	5.00E+01	
		EU-155	-1.19E+00 +- 5.4E+00	U	pCi/L		9.37E+00	5.00E+01	
		K-40	-1.44E+01 +- 6.6E+01	U	pCi/L		1.37E+02		
		SB-125	-5.81E+00 +- 5.6E+00	U	pCi/L		8.61E+00	5.00E+01	
B33J03 DUP									
	M73FA1AQ	CO-60	1.17E+00 +- 1.6E+00	U	pCi/L		3.27E+00	2.50E+01	30.4
		CS-134	-1.22E-01 +- 1.4E+00	U	pCi/L		2.56E+00	8.00E+01	223.2
		CS-137	-2.81E-04 +- 1.4E+00	U	pCi/L		2.61E+00	1.50E+01	-199.7
		EU-152	2.92E+00 +- 3.6E+00	U	pCi/L		6.73E+00	5.00E+01	-564.6
		EU-154	-6.92E-01 +- 4.6E+00	U	pCi/L		8.44E+00	5.00E+01	-146.2
		EU-155	2.13E+00 +- 3.3E+00	U	pCi/L		6.20E+00	5.00E+01	706.4
		K-40	-7.09E+00 +- 3.4E+01	U	pCi/L		6.49E+01		-68.3
		SB-125	-8.05E-01 +- 3.0E+00	U	pCi/L		5.12E+00	5.00E+01	-151.3
5364032 I129LL_SEP_LEPS_GS									

TestAmerica Inc RPD - Relative Percent Difference.
 rptTALRchSaSummary2 V5.4.1 U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.
 A2002

January 14, 2016

Sample Results Summary

Date: 14-Jan-16

TestAmerica Inc TARL

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

Report No. : 68009

SDG No: W07366

Batch	Client Id Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
5364032 I129LL_SEP_LEPS_GS									
B32RJ7									
	M73FF1AF	I129	1.23E-01 +- 3.1E-01	U	pCi/L	92%	5.93E-01	1.00E+00	
B32RJ7 DUP									
	M73FF1AK	I129	2.02E-01 +- 2.7E-01	U	pCi/L	91%	5.53E-01	1.00E+00	48.7
B32RK7									
	M73FG1AF	I129	-2.26E-01 +- 2.8E-01	U	pCi/L	86%	4.58E-01	1.00E+00	
B33HT9									
	M73E91AE	I129	5.19E+00 +- 1.0E+00		pCi/L	89%	6.83E-01	1.00E+00	
B33J03									
	M73FA1AH	I129	3.69E+00 +- 7.4E-01		pCi/L	88%	5.22E-01	1.00E+00	
5364034 9310_ALPHABETA_GPC									
B32RJ7									
	M73FF1AD	Beta	9.30E+00 +- 1.9E+00		pCi/L	100%	1.78E+00	4.00E+00	
B32RK7									
	M73FG1AD	Beta	5.52E+00 +- 1.5E+00		pCi/L	100%	1.73E+00	4.00E+00	
B33HT9									
	M73E91AD	Beta	2.32E+01 +- 3.6E+00		pCi/L	100%	1.88E+00	4.00E+00	
B33HT9 DUP									
	M73E91AH	Beta	2.06E+01 +- 3.2E+00		pCi/L	100%	1.77E+00	4.00E+00	12.1
5364035 9310_ALPHABETA_GPC									
B32RJ7									
	M73FF1AC	Alpha	1.80E+00 +- 1.2E+00		pCi/L	100%	1.59E+00	3.00E+00	
B32RK7									
	M73FG1AC	Alpha	1.32E-01 +- 8.8E-01	U	pCi/L	100%	1.56E+00	3.00E+00	
B33HT9									
	M73E91AC	Alpha	2.27E+00 +- 1.4E+00		pCi/L	100%	1.81E+00	3.00E+00	
B33J85 DUP									
	M73DF1AE	Alpha	5.15E+00 +- 2.7E+00		pCi/L	100%	3.30E+00	3.00E+00	53.6
5364036 906.0_H3_LSC									
B32RJ7									
	M73FF1AA	H-3	8.74E+03 +- 4.1E+02		pCi/L	100%	3.01E+02	4.00E+02	
B32RK7									
	M73FG1AA	H-3	9.42E+02 +- 1.7E+02		pCi/L	100%	3.00E+02	4.00E+02	
B33HT9									
	M73E91AA	H-3	1.74E+04 +- 6.5E+02		pCi/L	100%	3.00E+02	4.00E+02	
B33HT9 DUP									
	M73E91AJ	H-3	1.75E+04 +- 6.6E+02		pCi/L	100%	2.99E+02	4.00E+02	0.5
B33J03									
	M73FA1AD	H-3	7.44E+03 +- 3.8E+02		pCi/L	100%	3.00E+02	4.00E+02	

TestAmerica Inc RPD - Relative Percent Difference.
 rptTALRchSaSummary2 V5.4.1 U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.
 A2002

January 14, 2016

Sample Results Summary

Date: 14-Jan-16

TestAmerica Inc TARL

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

Report No. : 68009

SDG No: W07366

Batch	Client Id Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
5364036	906.0_H3_LSC								
	B33J07								
	M73FC1AA	H-3	1.09E+04 +- 4.7E+02		pCi/L	100%	2.99E+02	4.00E+02	
5364037	TC99_ETVDSK_LSC								
	B32RJ7								
	M73FF1AH	Tc-99	1.03E+01 +- 4.5E+00		pCi/L	100%	9.54E+00	1.50E+01	
	B32RK7								
	M73FG1AH	Tc-99	1.19E+00 +- 4.0E+00	U	pCi/L	100%	9.09E+00	1.50E+01	
	B33HT9								
	M73E91AG	Tc-99	6.29E+01 +- 6.1E+00		pCi/L	100%	9.26E+00	1.50E+01	
	B33HT9 DUP								
	M73E91AK	Tc-99	6.02E+01 +- 6.1E+00		pCi/L	100%	9.41E+00	1.50E+01	4.4
	B33J03								
	M73FA1AL	Tc-99	6.08E+03 +- 1.4E+02		pCi/L	100%	9.17E+00	1.50E+01	
	B33J07								
	M73FC1AC	Tc-99	1.39E+04 +- 3.1E+02		pCi/L	100%	9.16E+00	1.50E+01	
	B33J18								
	M73FD1AA	Tc-99	9.54E+02 +- 2.7E+01		pCi/L	100%	9.07E+00	1.50E+01	
	B33J20								
	M73FE1AA	Tc-99	1.00E+04 +- 2.3E+02		pCi/L	100%	9.10E+00	1.50E+01	
6013029	C14_LSC								
	B33J03								
	M73FA2AF	C-14	5.76E+01 +- 4.5E+00		pCi/L	100%	3.81E+00	5.00E+00	
	B33J03 DUP								
	M73FA2AM	C-14	5.23E+01 +- 4.2E+00		pCi/L	100%	3.83E+00	5.00E+00	9.5
	No. of Results: 79								

January 14, 2016

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

Date: 14-Jan-16

Report No. : 68009

SDG No.: W07362

Batch	Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDL
SRISO_SEP_PRECIP_GPC									
5364038	BLANK QC,								
	M73F91AA	STRONTIUM	1.18E-01 +- 3.9E-01	U	pCi/L	78%			6.74E-01
5364038	LCS,								
	M73F91AC	STRONTIUM	6.88E+00 +- 1.8E+00		pCi/L	76%	102%	0.0	7.06E-01
NP237_LLE_PLATE_AEA									
6012050	BLANK QC,								
	M74DW1AA	NP-237	7.71E-02 +- 1.6E-01	U	pCi/L	73%			2.66E-01
6012050	LCS,								
	M74DW1AC	NP-237	8.94E+00 +- 3.0E+00		pCi/L	71%	104%	0.0	3.65E-01
PUISO_PLATE_AEA									
5364033	BLANK QC,								
	M73F41AA	PU-238	4.14E-02 +- 9.9E-02	U	pCi/L	98%			1.99E-01
		PU239/40	6.62E-02 +- 9.8E-02	U	pCi/L	98%			1.27E-01
5364033	LCS,								
	M73F41AC	PU239/40	2.27E+01 +- 4.1E+00		pCi/L	79%	101%	0.0	1.57E-01
THISO_IE_PRECIP_AEA									
5364029	BLANK QC,								
	M73F02AA	TH-228	1.22E-01 +- 1.6E-01	U	pCi/L	82%			2.11E-01
		TH-230	1.23E-01 +- 1.6E-01	U	pCi/L	82%			1.96E-01
		TH-232	0.00E+00 +- 9.0E-02	U	pCi/L	82%			1.64E-01
5364029	LCS,								
	M73F01AC	TH-230	1.18E+01 +- 2.6E+00		pCi/L	90%	104%	0.0	1.71E-01
AMCMISO_EIE_PLT_AEA									
5364030	BLANK QC,								
	M73F11AA	AMERICIUM 241	7.45E-02 +- 1.4E-01	U	pCi/L	83%			2.51E-01
5364030	LCS,								
	M73F11AC	AMERICIUM 241	2.14E+01 +- 3.7E+00		pCi/L	105%	95%	-0.1	1.76E-01
GAMMA_GS									
5364027	BLANK QC,								
	M73FW1AA	CO-60	-1.55E+00 +- 1.7E+00	U	pCi/L				2.75E+00
		CS-137	5.15E-01 +- 1.4E+00	U	pCi/L				2.56E+00
		EU-152	2.30E-02 +- 3.4E+00	U	pCi/L				6.01E+00
		EU-154	-2.22E+00 +- 4.9E+00	U	pCi/L				8.60E+00
		EU-155	2.67E-01 +- 3.1E+00	U	pCi/L				5.41E+00
5364027	LCS,								
	M73FW1AC	CO-60	4.00E+01 +- 7.2E+00		pCi/L		105%	0.0	3.55E+00
		CS-137	5.14E+01 +- 8.5E+00		pCi/L		102%	0.0	4.14E+00
		EU-152	6.95E+01 +- 1.5E+01		pCi/L		90%	-0.1	1.19E+01
GAMMA_GS									
5364031	BLANK QC,								
	M73F21AA	CO-60	-5.06E-01 +- 1.6E+00	U	pCi/L				2.91E+00

TestAmerica Inc Bias - (Result/Expected)-1 as defined by ANSI N13.30.
 rptSTLRchQcSummary V5.4.1 A2002 U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.

January 14, 2016

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

Date: 14-Jan-16

Report No. : 68009

SDG No.: W07366

Table with columns: Batch, Work Order, Parameter, Result +- CSU (2 s), Qual, Units, Tracer Yield, LCS Recovery, Bias, MDL. Rows include various test results for parameters like CS-134, EU-152, CO-60, I129, Beta, Alpha, H-3, and Tc-99.

TestAmerica Inc Bias - (Result/Expected)-1 as defined by ANSI N13.30.
rptSTLRchQcSummary V5.4.1 A2002 U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.

January 14, 2016

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

Date: 14-Jan-16

Report No. : 68009

SDG No.: W07366

Batch	Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDL
	M73FX2AA	C-14	-3.47E-01 +- 2.0E+00	U	pCi/L	100%			3.82E+00
6013029 LCS,	M73FX2AC	C-14	1.45E+02 +- 9.0E+00		pCi/L	100%	100%	0.0	3.79E+00
No. of Results:		46							

TestAmerica Inc Bias - (Result/Expected)-1 as defined by ANSI N13.30.
rptSTLRchQcSummary V5.4.1 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: 14-Jan-16

SAMPLE RESULTS

Lab Name: TestAmerica Inc
 Lot-Sample No.: J5L300411-1
 Client Sample ID: B32RJ7

SDG: W07366
 Report No.: 68009
 COC No.: S16-010-473

Collection Date: 12/29/2015 10:17:00 AM
 Received Date: 12/29/2015 1:30:00 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/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5364027 GAMMA_GS Work Order: M73FF1AE Report DB ID: 9M73FF10												
CO-60	6.20E-01	U	1.6E+00	1.6E+00	3.17E+00	pCi/L	0.2	0.2	1/6/16 06:59 a	1.9887	1.9887	GER11\$1
CS-137	1.90E-01	U	1.4E+00	1.4E+00	2.61E+00	pCi/L	0.07	0.76	1/6/16 06:59 a	1.9887	1.9887	GER11\$1
EU-152	-1.11E-01	U	3.6E+00	3.6E+00	6.22E+00	pCi/L	-0.02	0.26	1/6/16 06:59 a	1.9887	1.9887	GER11\$1
EU-154	2.40E+00	U	4.5E+00	4.5E+00	8.97E+00	pCi/L	0.27	-0.06	1/6/16 06:59 a	1.9887	1.9887	GER11\$1
EU-155	-1.43E+00	U	2.9E+00	2.9E+00	4.85E+00	pCi/L	-0.3	(1.1)	1/6/16 06:59 a	1.9887	1.9887	GER11\$1
Batch: 5364032 1129LL_SEP_LEPS_GS Work Order: M73FF1AF Report DB ID: 9M73FF10												
1129	1.23E-01	U	3.1E-01	3.1E-01	5.93E-01	pCi/L	92%	0.21	1/8/16 09:46 a	2.0215	2.0215	LEP4\$1
Batch: 5364034 9310_ALPHABETA_GPC Work Order: M73FF1AD Report DB ID: 9M73FF10												
Beta	9.30E+00		1.5E+00	1.9E+00	1.78E+00	pCi/L	100%	(5.2)	1/6/16 06:34 p	0.2029	0.2029	GPC31B
Batch: 5364035 9310_ALPHABETA_GPC Work Order: M73FF1AC Report DB ID: 9M73FF10												
Alpha	1.80E+00		1.1E+00	1.2E+00	1.59E+00	pCi/L	100%	(1.1)	1/6/16 06:49 p	0.2049	0.2049	GPC22A
Batch: 5364036 906.0_H3_LSC Work Order: M73FF1AA Report DB ID: 9M73FF10												

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FORM I

Date: 14-Jan-16

SAMPLE RESULTS

Lab Name: TestAmerica Inc
 Lot-Sample No.: J5L300411-1
 Client Sample ID: B32RJ7

SDG: W07366
 Report No.: 68009
 COC No.: S16-010-473

Collection Date: 12/29/2015 10:17:00 AM
 Received Date: 12/29/2015 1:30:00 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
H-3	8.74E+03		3.3E+02	4.1E+02	3.01E+02	pCi/L	100%	(29.)	1/12/16 01:57 p		0.00501	LSC9
							4.00E+02	(42.2)			L	
Batch: 5364037 TC99_ETVDSK_LSC												
Tc-99	1.03E+01		4.3E+00	4.5E+00	9.54E+00	pCi/L	100%	(1.1)	1/6/16 06:53 a		0.126	LSC8
							4.58E+00	(4.6)			L	
Batch: 5364038 SRISO_SEP_PRECIP_GPC												
STRONTIUM	1.13E-01	U	3.5E-01	3.5E-01	6.01E-01	pCi/L	91%	0.19	1/7/16 06:00 p		1.0035	GPC32C
							2.75E-01	2.00E+00			L	

No. of Results: 11 Comments:

January 14, 2016

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TestAmerica Inc MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rptSTLRLchSample U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.
 V5.4.1 A2002

FORM I

Date: 14-Jan-16

SAMPLE RESULTS

Lab Name: TestAmerica Inc
 Lot-Sample No.: J5L300411-2
 Client Sample ID: B32RK7

SDG: W07366
 Report No.: 68009
 COC No.: S16-010-474

Collection Date: 12/29/2015 11:29:00 AM
 Received Date: 12/29/2015 1:30:00 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
Batch: 5364027 GAMMA_GS Work Order: M73FG1AE Report DB ID: 9M73FG10												
CO-60	1.62E+00	U	2.2E+00	2.2E+00	4.31E+00	pCi/L	2.50E+01	0.38 (1.5)	1/6/16 07:06 a		2.0048	GER12\$1
CS-137	-2.18E-01	U	1.9E+00	1.9E+00	3.27E+00	pCi/L	1.50E+01	-0.07 -0.23	1/6/16 07:06 a		2.0048	GER12\$1
EU-152	3.08E+00	U	5.7E+00	5.7E+00	1.01E+01	pCi/L	5.00E+01	0.31 (1.1)	1/6/16 07:06 a		2.0048	GER12\$1
EU-154	-8.86E+00	U	6.8E+00	6.8E+00	9.94E+00	pCi/L	5.00E+01	-0.89 -(2.6)	1/6/16 07:06 a		2.0048	GER12\$1
EU-155	-1.34E+00	U	5.5E+00	5.5E+00	9.08E+00	pCi/L	5.00E+01	-0.15 -0.49	1/6/16 07:06 a		2.0048	GER12\$1
Batch: 5364032 I129LL_SEP_LEPS_GS Work Order: M73FG1AF Report DB ID: 9M73FG10												
1129	-2.26E-01	U	2.8E-01	2.8E-01	4.58E-01	pCi/L	2.00E-01	86% -0.49 -(1.6)	1/8/16 12:26 p		2.0783	LEP4\$1
Batch: 5364034 9310_ALPHABETA_GPC Work Order: M73FG1AD Report DB ID: 9M73FG10												
Beta	5.52E+00	U	1.3E+00	1.5E+00	1.73E+00	pCi/L	8.27E-01	100% (3.2) (7.6)	1/6/16 06:34 p		0.203	GPC31D
Batch: 5364035 9310_ALPHABETA_GPC Work Order: M73FG1AC Report DB ID: 9M73FG10												
Alpha	1.32E-01	U	8.8E-01	8.8E-01	1.56E+00	pCi/L	7.06E-01	100% 0.08 0.3	1/6/16 06:49 p		0.2016	GPC22B
Batch: 5364036 906.0_H3_LSC Work Order: M73FG1AA Report DB ID: 9M73FG10												

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TestAmerica Inc MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rptSTLrchSample U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.
 V5.4.1 A2002

FORM I

Date: 14-Jan-16

SAMPLE RESULTS

Lab Name: TestAmerica Inc
 Lot-Sample No.: J5L300411-2
 Client Sample ID: B32RK7

SDG: W07366
 Report No.: 68009
 COC No.: S16-010-474

Collection Date: 12/29/2015 11:29:00 AM
 Received Date: 12/29/2015 1:30:00 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/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
H-3	9.42E+02		1.6E+02	1.7E+02	3.00E+02	pCi/L	100%	(3.1)	1/12/16 03:19 p		0.00503	LSC9
							4.00E+02	(11.1)			L	
Batch: 5364037 TC99_ETVDSK_LSC Work Order: M73FG1AH Report DB ID: 9M73FG10												
Tc-99	1.19E+00	U	3.8E+00	4.0E+00	9.09E+00	pCi/L	100%	0.13	1/6/16 07:55 a		0.1301	LSC8
							4.36E+00	0.59			L	
Batch: 5364038 SRISO_SEP_PRECIP_GPC Work Order: M73FG1AG Report DB ID: 9M73FG10												
STRONTIUM	2.63E-01	U	3.9E-01	4.0E-01	6.56E-01	pCi/L	86%	0.4	1/7/16 07:45 p		0.9952	GPC32A
							3.01E-01	2.00E+00			L	

No. of Results: 11 Comments:

January 14, 2016

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TestAmerica Inc MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rptSTLRLchSample U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.
 V5.4.1 A2002

FORM I SAMPLE RESULTS

Date: 14-Jan-16

Lab Name: TestAmerica Inc
 Lot-Sample No.: J5L300410-1
 Client Sample ID: B33HT9

SDG: W07366
 Report No.: 68009
 COC No.: S16-012-381

Collection Date: 12/29/2015 8:36:00 AM
 Received Date: 12/29/2015 1:30:00 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/TotUcert	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5364032 1129LL_SEP_LEPS_GS Work Order: M73E91AE Report DB ID: 9M73E910												
1129	5.19E+00		1.0E+00	1.0E+00	6.83E-01 pCi/L		89% (7.6)		1/8/16 07:04 a		2.0087 L	LEP4\$1
Batch: 5364034 9310_ALPHABETA_GPC Work Order: M73E91AD Report DB ID: 9M73E910												
Beta	2.32E+01		1.9E+00	3.6E+00	1.88E+00 pCi/L		100% (12.3)		1/6/16 09:59 p		0.2032 L	GPC28C
Batch: 5364035 9310_ALPHABETA_GPC Work Order: M73E91AC Report DB ID: 9M73E910												
Alpha	2.27E+00		1.3E+00	1.4E+00	1.81E+00 pCi/L		100% (1.3)		1/6/16 06:49 p		0.1407 L	GPC249
Batch: 5364036 906.0_H3_LSC Work Order: M73E91AA Report DB ID: 9M73E910												
H-3	1.74E+04		4.5E+02	6.5E+02	3.00E+02 pCi/L		100% (58.)		1/12/16 07:07 a		0.00502 L	LSC8
Batch: 5364037 TC99_ETVDSK_LSC Work Order: M73E91AG Report DB ID: 9M73E910												
Tc-99	6.29E+01		5.7E+00	6.1E+00	9.26E+00 pCi/L		100% (6.8)		1/5/16 11:33 p		0.1279 L	LSC8
Batch: 5364038 SRISO_SEP_PRECIP_GPC Work Order: M73E91AF Report DB ID: 9M73E910												
STRONTIUM	6.32E-01	U	4.8E-01	5.0E-01	7.43E-01 pCi/L		76% (2.5)	0.85	1/7/16 06:00 p		1.0127 L	GPC32A

No. of Results: 6 Comments:

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TestAmerica Inc MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rptSTLRLchSample U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.
 V5.4.1 A2002

FORM I

Date: 14-Jan-16

SAMPLE RESULTS

Lab Name: TestAmerica Inc **SDG:** W07366 **Collection Date:** 12/29/2015 10:55:00 AM
Lot-Sample No.: J5L300410-2 **Report No.:** 68009 **Received Date:** 12/29/2015 1:30:00 PM
Client Sample ID: B33J03 **COC No.:** S16-012-392 **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
Batch: 5364029 THISO_IE_PRECIP_AEA Work Order: M73FA1AC Report DB ID: 9M73FA10												
TH-228	1.16E-01	U	1.5E-01	1.6E-01	2.32E-01	pCi/L	91%	0.5 (1.5)	1/12/16 01:02 p		0.2027	ALP421
TH-230	0.00E+00	U	0.0E+00	7.6E-02	1.39E-01	pCi/L	1.00E+00	0.	1/12/16 01:02 p		0.2027	ALP421
TH-232	0.00E+00	U	0.0E+00	7.6E-02	1.39E-01	pCi/L	1.00E+00	0.	1/12/16 01:02 p		0.2027	ALP421
Batch: 5364030 AMCMISO_EIE_PLT_AEA Work Order: M73FA1AE Report DB ID: 9M73FA10												
AMERICIUM 241	1.19E-01	U	1.6E-01	1.6E-01	2.37E-01	pCi/L	91%	0.5 (1.5)	1/7/16 01:10 p		0.2001	ALP251
Batch: 5364031 GAMMA_GS Work Order: M73FA1AG Report DB ID: 9M73FA10												
CO-60	8.63E-01	U	2.5E+00	2.5E+00	4.67E+00	pCi/L	2.50E+01	0.18	1/5/16 02:44 p		2.0252	GER12\$1
CS-134	2.23E+00	U	2.4E+00	2.4E+00	4.51E+00	pCi/L	8.00E+01	0.49 (1.9)	1/5/16 02:44 p		2.0252	GER12\$1
CS-137	-4.44E-01	U	2.2E+00	2.2E+00	3.88E+00	pCi/L	1.50E+01	-0.11	1/5/16 02:44 p		2.0252	GER12\$1
EU-152	-6.13E+00	U	5.5E+00	5.5E+00	8.57E+00	pCi/L	5.00E+01	-0.39	1/5/16 02:44 p		2.0252	GER12\$1
EU-154	-1.07E-01	U	6.1E+00	6.1E+00	1.11E+01	pCi/L	5.00E+01	-0.71	1/5/16 02:44 p		2.0252	GER12\$1
EU-154	-1.07E-01	U	6.1E+00	6.1E+00	1.11E+01	pCi/L	5.00E+01	-0.71	1/5/16 02:44 p		2.0252	GER12\$1

January 14 2016

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FORM I

Date: 14-Jan-16

SAMPLE RESULTS

Lab Name: TestAmerica Inc
 Lot-Sample No.: J5L300410-2
 Client Sample ID: B33J03

SDG: W07366
 Report No.: 68009
 COC No.: S16-012-392

Collection Date: 12/29/2015 10:55:00 AM
 Received Date: 12/29/2015 1:30:00 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/TotUcert	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
EU-155	-1.19E+00	U	5.4E+00	5.4E+00	9.37E+00	pCi/L	5.00E+01	-0.13 -0.44	1/5/16 02:44 p	2.0252	L	GER12\$1
K-40	-1.44E+01	U	6.6E+01	6.6E+01	1.37E+02	pCi/L	5.00E+01	-0.11 -0.44	1/5/16 02:44 p	2.0252	L	GER12\$1
SB-125	-5.81E+00	U	5.6E+00	5.6E+00	8.61E+00	pCi/L	5.00E+01	-0.67 -(2.1)	1/5/16 02:44 p	2.0252	L	GER12\$1
Batch: 5364032	1129LL_SEP_LEPS_GS				M73FA1AH							
1129	3.69E+00		7.4E-01	7.4E-01	5.22E-01	pCi/L	2.31E-01	88% (7.1) (10.)	1/8/16 07:05 a	2.0033	L	LEPS\$1
Batch: 5364033	PUISO_PLATE_AEA				M73FA1AJ							
PU-238	9.15E-02	U	1.4E-01	1.4E-01	2.25E-01	pCi/L	7.41E-02	85% (1.3)	1/7/16 01:07 p	0.2001	L	ALP268
PU239/40	-2.25E-02	U	8.2E-02	8.2E-02	2.11E-01	pCi/L	6.74E-02	85% -0.11 -0.55	1/7/16 01:07 p	0.2001	L	ALP258
Batch: 5364036	906.0_H3_LSC				M73FA1AD							
H-3	7.44E+03		3.1E+02	3.8E+02	3.00E+02	pCi/L	1.43E+02	100% (24.8) (39.6)	1/12/16 09:51 a	0.00502	L	LSC9
Batch: 5364037	TC99_ETVDSK_LSC				M73FA1AL							
Tc-99	6.08E+03		4.1E+01	1.4E+02	9.17E+00	pCi/L	4.40E+00	100% (663.7) (86.3)	1/6/16 01:39 a	0.1288	L	LSC8
Batch: 5364038	SRISO_SEP_PRECIP_GPC				M73FA1AK							

TestAmerica Inc MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rptSTLrChSample U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.
 V5.4.1 A2002

FORM I

Date: 14-Jan-16

SAMPLE RESULTS

Lab Name: TestAmerica Inc
 Lot-Sample No.: J5L300410-2
 Client Sample ID: B33J03

SDG: W07366
 Report No.: 68009
 COC No.: S16-012-392

Collection Date: 12/29/2015 10:55:00 AM
 Received Date: 12/29/2015 1:30:00 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
STRONTIUM	1.32E-01	U	4.3E-01	4.3E-01	7.50E-01	pCi/L	71%	0.18	1/7/16 06:00 p	1.0057	L	GPC32B
Batch: 6012050 NP237_LLE_PLATE_AEA Work Order: M73FA2AA Report DB ID: 9M73FA20												
NP-237	1.34E-01	U	2.1E-01	2.1E-01	3.11E-01	pCi/L	81%	0.43	1/14/16 12:38 p	0.2006	L	ALP429
Batch: 6013029 C14_LSC Work Order: M73FA2AF Report DB ID: 9M73FA20												
C-14	5.76E+01	U	2.6E+00	4.5E+00	3.81E+00	pCi/L	100%	(15.1)	1/13/16 08:00 p	0.25	L	LSC42

No. of Results: 20 **Comments:**

January 14, 2016

FORM I

Date: 14-Jan-16

SAMPLE RESULTS

Lab Name: TestAmerica Inc
 Lot-Sample No.: J5L300410-3
 Client Sample ID: B33J07

SDG: W07366
 Report No.: 68009
 COC No.: S16-012-394

Collection Date: 12/29/2015 11:45:00 AM
 Received Date: 12/29/2015 1:30:00 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/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5364036 906.0_H3_LSC												
Work Order: M73FC1AA Report DB ID: 9M73FC10												
H-3	1.09E+04		3.6E+02	4.7E+02	2.99E+02 pCi/L	1.42E+02	100%	(36.6)	1/12/16 12:35 p		0.00502	LSC9
						4.00E+02		(46.1)			L	
Batch: 5364037 TC99_ETVDSK_LSC												
Work Order: M73FC1AC Report DB ID: 9M73FC10												
Tc-99	1.39E+04		6.2E+01	3.1E+02	9.16E+00 pCi/L	4.39E+00	100%	(1515.7)	1/6/16 03:44 a		0.1285	LSC8
						1.50E+01		(88.5)			L	

No. of Results: 2 Comments:

January 14, 2016

FORM I

Date: 14-Jan-16

SAMPLE RESULTS

Lab Name: TestAmerica Inc
Lot-Sample No.: J5L300410-4
Client Sample ID: B33J18

SDG: W07366
Report No.: 68009
COC No.: S16-012-399

Collection Date: 12/29/2015 9:10:00 AM
Received Date: 12/29/2015 1:30:00 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/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5364037	TC99_ETVDSK_LSC				Work Order: M73FD1AA	Report DB ID: 9M73FD10						
Tc-99	9.54E+02		1.7E+01	2.7E+01	9.07E+00 pCi/L	4.35E+00	100%	(105.1)	1/6/16 04:47 a		0.1294	LSC8
						1.50E+01		(70.5)			L	

No. of Results: 1 Comments:

January 14, 2016

FORM I

Date: 14-Jan-16

SAMPLE RESULTS

Lab Name: TestAmerica Inc
 Lot-Sample No.: J5L300410-5
 Client Sample ID: B33J20

SDG: W07366
 Report No.: 68009
 COC No.: S16-012-400

Collection Date: 12/29/2015 9:40:00 AM
 Received Date: 12/29/2015 1:30:00 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/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5364037	TC99_ETVDSK_LSC				Work Order: M73FE1AA	Report DB ID: 9M73FE10						
Tc-99	1.00E+04		5.3E+01	2.3E+02	9.10E+00 pCi/L	4.36E+00	100%	(1102.5)	1/6/16 05:50 a		0.1289	LSC8
						1.50E+01	(87.9)				L	

No. of Results: 1 Comments:

January 14, 2016

FORM II

Date: 14-Jan-16

DUPLICATE RESULTS

Lab Name: TestAmerica Inc
 Lot-Sample No.: J5L300411-1
 Client Sample ID: B32RJ7 DUP
 SDG: W07366
 Report No.: 68009
 COC No.: S16-010-473
 Matrix: WATER
 Collection Date: 12/29/2015 10:17:00 AM
 Received Date: 12/29/2015 1:30:00 PM

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: 5364027 GAMMA_GS												
CO-60	-7.02E-01	U	2.3E+00	2.3E+00	4.09E+00	pCi/L		-0.17	1/6/16 11:27 a	9M73FF10	1,987	GER12\$1
CS-137	6.20E-01	U	RPD -3238.7	2.50E+01	3.83E+00	pCi/L		-0.61	1/6/16 11:27 a		L	GER12\$1
EU-152	1.90E-01	U	RPD 107.5	1.50E+01	1.02E+01	pCi/L		0.17	1/6/16 11:27 a		1,987	GER12\$1
EU-154	1.34E+00	U	5.9E+00	5.00E+01	1.08E+01	pCi/L		0.59	1/6/16 11:27 a		L	GER12\$1
EU-155	-1.11E-01	U	RPD 236.0	6.3E+00	9.44E+00	pCi/L		0.13	1/6/16 11:27 a		1,987	GER12\$1
	-2.60E+00	U	6.3E+00	5.6E+00	5.00E+01	pCi/L		0.46	1/6/16 11:27 a		L	GER12\$1
	2.40E+00	U	RPD -5144.5	5.00E+01	0.01			-0.24	1/6/16 11:27 a		1,987	GER12\$1
	1.62E-02	U	5.6E+00	5.00E+01	0.01			-0.82	1/6/16 11:27 a		L	GER12\$1
	-1.43E+00	U	RPD -204.6	5.00E+01	0.01			0.01	1/6/16 11:27 a		1,987	GER12\$1
Batch: 5364032 1129LL_SEP_LEPS_GS												
1129	2.02E-01	U	2.7E-01	2.7E-01	5.53E-01	pCi/L	91%	0.37	1/8/16 09:48 a	9M73FF10	2,0042	LEP5\$1
	1.23E-01	U	RPD 48.7	1.00E+00	(1.5)						L	

No. of Results: 6 Comments:

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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.
 4.1 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

Date: 14-Jan-16

DUPLICATE RESULTS

Lab Name: TestAmerica Inc **SDG:** W07362 **Collection Date:** 12/28/2015 12:12:00 PM
Lot-Sample No.: J5L290405-2 **Report No.:** 68009 **Received Date:** 12/29/2015 8:05:00 AM
Client Sample ID: B33HJ0 DUP **COC No.:** S16-012-358 **Matrix:** WATER

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: 5364038	SRISO_SEP_PRECIP_GPC											
STRONTIUM	9.79E-02	U	3.9E-01	3.9E-01	6.81E-01	pCi/L	80%	0.14	1/7/16 06:00 p		0.997	GPC31B
	2.15E-01	U	RPD 74.7			2.00E+00		0.5	Orig Sa DB ID: 9M73DG10		L	

No. of Results: 1 Comments:

January 14, 2016

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.
 4.1 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

Date: 14-Jan-16

DUPLICATE RESULTS

Lab Name: TestAmerica Inc
 Lot-Sample No.: J5L300410-1
 Client Sample ID: B33HT9 DUP

SDG: W07366
 Report No.: 68009
 COC No.: S16-012-381
 Matrix: WATER

Collection Date: 12/29/2015 8:36:00 AM
 Received Date: 12/29/2015 1:30:00 PM

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: 5364034	9310_ALPHABETA_GPC								Orig Sa DB ID: 9M73E910			
Beta	2.06E+01		1.8E+00	3.2E+00	1.77E+00	pCi/L	100%	(11.6)	1/6/16 09:59 p	0.2022	L	GPC28D
	2.32E+01		RPD 12.1		4.00E+00			(12.8)				
Batch: 5364036	906.0_H3_LSC								Orig Sa DB ID: 9M73E910			
H-3	1.75E+04		4.5E+02	6.6E+02	2.99E+02	pCi/L	100%	(58.6)	1/12/16 08:29 a	0.00504	L	LSC9
	1.74E+04		RPD 0.5		4.00E+02			(53.3)				
Batch: 5364037	TC99_ETVDSK_LSC								Orig Sa DB ID: 9M73E910			
Tc-99	6.02E+01		5.7E+00	6.1E+00	9.41E+00	pCi/L	100%	(6.4)	1/6/16 12:36 a	0.126	L	LSC8
	6.29E+01		RPD 4.4		1.50E+01			(19.9)				

No. of Results: 3 Comments:

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January 14, 2016

FORM II

Date: 14-Jan-16

DUPLICATE RESULTS

Lab Name: TestAmerica Inc SDG: W07366 Collection Date: 12/29/2015 10:55:00 AM
 Lot-Sample No.: J5L300410-2 Report No.: 68009 Received Date: 12/29/2015 1:30:00 PM
 Client Sample ID: B33J03 DUP COC No.: S16-012-392 Matrix: WATER

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: 5364029	THISO_IE_PRECIP_AEA Work Order: M73FA1AN Report DB ID: M73FA1NR Orig Sa DB ID: 9M73FA10											
TH-228	2.68E-02	U	8.0E-02	8.0E-02	1.83E-01	pCi/L	93%	0.15	1/12/16 01:03 p	0.2015	0.2015	ALP422
	1.16E-01	U	RPD 125.3			1.00E+00		0.67			L	
TH-230	1.13E-01	U	1.3E-01	1.4E-01	1.43E-01	pCi/L	93%	0.79	1/12/16 01:03 p	0.2015	0.2015	ALP422
	0.00E+00	U	RPD 200.0			1.00E+00		(1.7)			L	
TH-232	-3.11E-03	U	7.8E-02	7.8E-02	1.43E-01	pCi/L	93%	-0.02	1/12/16 01:03 p	0.2015	0.2015	ALP422
	0.00E+00	U	RPD -200.0			1.00E+00		-0.08			L	

Alpha Spec Result Sum = 1.4E-01

Batch: 5364030	AMCMISO_EIE_PLT_AEA Work Order: M73FA1AP Report DB ID: M73FA1PR Orig Sa DB ID: 9M73FA10											
AMERICIUM 241	7.36E-02	U	1.3E-01	1.3E-01	2.33E-01	pCi/L	94%	0.32	1/7/16 01:10 p	0.2014	0.2014	ALP252
	1.19E-01	U	RPD 47.1			1.00E+00		(1.1)			L	

Alpha Spec Result Sum = 2.1E-01

Batch: 5364031	GAMMA_GS Work Order: M73FA1AQ Report DB ID: M73FA1QR Orig Sa DB ID: 9M73FA10											
CO-60	1.17E+00	U	1.6E+00	1.6E+00	3.27E+00	pCi/L		0.36	1/5/16 09:21 p	2.0252	2.0252	GER13\$1
	8.63E-01	U	RPD 30.4			2.50E+01		(1.5)			L	
CS-134	-1.22E-01	U	1.4E+00	1.4E+00	2.56E+00	pCi/L		-0.05	1/5/16 09:21 p	2.0252	2.0252	GER13\$1
	2.23E+00	U	RPD 223.2			8.00E+01		-0.17			L	
CS-137	-2.81E-04	U	1.4E+00	1.4E+00	2.61E+00	pCi/L		0.	1/5/16 09:21 p	2.0252	2.0252	GER13\$1
	-4.44E-01	U	RPD -199.7			1.50E+01		0.			L	
EU-152	2.92E+00	U	3.6E+00	3.6E+00	6.73E+00	pCi/L		0.43	1/5/16 09:21 p	2.0252	2.0252	GER13\$1
	-6.13E+00	U	RPD -564.6			5.00E+01		(1.6)			L	

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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.
 4.1 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

Date: 14-Jan-16

DUPLICATE RESULTS

Lab Name: TestAmerica Inc **SDG:** W07366 **Collection Date:** 12/29/2015 10:55:00 AM
Lot-Sample No.: J5L300410-2 **Report No.:** 68009 **Received Date:** 12/29/2015 1:30:00 PM
Client Sample ID: B33J03 DUP **COC No.:** S16-012-392 **Matrix:** WATER

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
EU-154	-6.92E-01	U	4.6E+00	4.6E+00	8.44E+00	pCi/L		-0.08	1/5/16 09:21 p	2.0252	2.0252	GER13\$1
EU-155	-1.07E-01	U	RPD -146.2	3.3E+00	6.20E+00	pCi/L		-0.3	1/5/16 09:21 p	2.0252	L	GER13\$1
K-40	2.13E+00	U	RPD 706.4	3.4E+01	6.49E+01	pCi/L		0.34 (1.3)	1/5/16 09:21 p	2.0252	L	GER13\$1
SB-125	-1.19E+00	U	RPD -68.3	3.0E+00	5.12E+00	pCi/L		-0.11 -0.42	1/5/16 09:21 p	2.0252	L	GER13\$1
	-7.09E+00	U	RPD -151.3	3.0E+00	5.12E+00	pCi/L		-0.16	1/5/16 09:21 p	2.0252	L	GER13\$1
	-1.44E+01	U		3.0E+00	5.12E+00	pCi/L		-0.54				

Batch:	5364033	Work Order:	M73FA1AR	Report DB ID:	M73FA1RR	Orig Sa DB ID:	9M73FA10
PU-238	PUISO_PLATE_AEA	1.1E-01	1.1E-01	90%	0.21	1/7/16 01:07 p	
PU239/40	NP237_LLE_PLATE_AEA	RPD 67.0	7.6E-02	90%	0.83	1/7/16 01:07 p	
		RPD -152.3	7.6E-02	90%	-0.02		
					-0.08		

Alpha Spec Result Sum = 4.3E-02

Batch:	6012050	Work Order:	M73FA2AV	Report DB ID:	M73FA2VR	Orig Sa DB ID:	9M73FA20
NP-237	NP237_LLE_PLATE_AEA	1.8E-01	3.09E-01	65%	0.	1/14/16 12:38 p	
		RPD 200.0	3.09E-01	65%	0.		
					0.2041		ALP430
					L		

Alpha Spec Result Sum = 4.3E-02

Batch:	6013029	Work Order:	M73FA2AM	Report DB ID:	M73FA2MR	Orig Sa DB ID:	9M73FA20
C-14	C14_LSC	4.2E+00	3.83E+00	100%	(13.7)	1/13/16 10:03 p	
		RPD 9.5	3.83E+00	100%	(24.8)		
					0.25		LSC4
					L		

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

FORM II

Date: 14-Jan-16

DUPLICATE RESULTS

Lab Name: TestAmerica Inc
 Lot-Sample No.: J5L300410-2
 Client Sample ID: B33J03 DUP
 SDG: W07366
 Report No.: 68009
 COC No.: S16-012-392
 Collection Date: 12/29/2015 10:55:00 AM
 Received Date: 12/29/2015 1:30:00 PM
 Matrix: WATER

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
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No. of Results: 16 Comments:

January 14, 2016

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FORM II

Date: 14-Jan-16

DUPLICATE RESULTS

Lab Name: TestAmerica Inc **SDG:** W07362 **Collection Date:** 12/28/2015 11:15:00 AM
Lot-Sample No.: J5L290405-1 **Report No.:** 68009 **Received Date:** 12/29/2015 8:05:00 AM
Client Sample ID: B33J85 DUP **COC No.:** S16-012-414 **Matrix:** WATER

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: 5364035	9310_ALPHABETA_GPC											
Alpha	5.15E+00		2.4E+00	2.7E+00	3.30E+00	pCi/L	100%	(1.6)	1/6/16 06:49 p		0.0957	GPC21B
	8.93E+00		RPD 53.6			3.00E+00		(3.8)	Orig Sa DB ID: 9M73DF10		L	

No. of Results: 1 Comments:

January 14, 2016

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FORM II
BLANK RESULTS

Date: 14-Jan-16

Lab Name: **TestAmerica Inc** SDG: **W07366**
 Matrix: **WATER** Report No.: **68009**

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
Batch: 6013029 C14_LSC Work Order: M73FX2AA Report DB ID: M73FX2AB												
C-14	-3.47E-01	U	1.6E+00	2.0E+00	3.82E+00	pCi/L	100%	-0.09	1/14/16 12:07 a	0.25	L	LSC4
					1.86E+00	2.00E+02		-0.35				
Batch: 5364033 PUI50_PLATE_AEA Work Order: M73F41AA Report DB ID: M73F41AB												
PU-238	4.14E-02	U	9.9E-02	9.9E-02	1.99E-01	pCi/L	98%	0.21	1/8/16 07:18 a	0.2047	L	ALP259
					6.63E-02	1.00E+00		0.83				
PU239/40	6.62E-02	U	9.8E-02	9.8E-02	1.27E-01	pCi/L	98%	0.52	1/8/16 07:18 a	0.2047	L	ALP259
					3.22E-02	1.00E+00		(1.3)				
Batch: 5364030 AMCMISO_EIE_PLT_AEA Work Order: M73F11AA Report DB ID: M73F11AB												
AMERICIUM 241	7.45E-02	U	1.4E-01	1.4E-01	2.51E-01	pCi/L	83%	0.3	1/7/16 01:11 p	0.2047	L	ALP254
					8.71E-02	1.00E+00		(1.1)				
Batch: 5364029 THISO_IE_PRECIP_AEA Work Order: M73F02AA Report DB ID: M73F02AB												
TH-228	1.22E-01	U	1.6E-01	1.6E-01	2.11E-01	pCi/L	82%	0.58	1/13/16 08:52 p	0.203	L	ALP27
					6.25E-02	1.00E+00		(1.5)				
TH-230	1.23E-01	U	1.6E-01	1.6E-01	1.96E-01	pCi/L	82%	0.63	1/13/16 08:52 p	0.203	L	ALP27
					5.61E-02	1.00E+00		(1.6)				
TH-232	0.00E+00	U	0.0E+00	9.0E-02	1.64E-01	pCi/L	82%	0.	1/13/16 08:52 p	0.203	L	ALP27
					4.18E-02	1.00E+00		0.				
Batch: 5364036 906.0_H3_LSC Work Order: M73F71AA Report DB ID: M73F71AB												
H-3	1.34E+02	U	1.3E+02	1.4E+02	3.09E+02	pCi/L	100%	0.43	1/12/16 06:03 p	0.00501	L	LSC9
					1.47E+02	4.00E+02		(1.9)				
Batch: 5364027 GAMMA_GS Work Order: M73FW1AA Report DB ID: M73FW1AB												

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TestAmerica Inc MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rptSTLrchBlank U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.
 V5.4.1 A2002

FORM II
BLANK RESULTS

Date: 14-Jan-16

Lab Name: **TestAmerica Inc** SDG: **W07366**
 Matrix: **WATER** Report No.: **68009**

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
CO-60	-1.55E+00	U	1.7E+00	1.7E+00	2.75E+00	pCi/L		-0.56	1/6/16 07:08 a	2.012	2.012	GER13\$1
CS-137	5.15E-01	U	1.4E+00	1.4E+00	2.56E+00	pCi/L		0.2	1/6/16 07:08 a	2.012	2.012	GER13\$1
EU-152	2.30E-02	U	3.4E+00	3.4E+00	6.01E+00	pCi/L		0.76	1/6/16 07:08 a	2.012	2.012	GER13\$1
EU-154	-2.22E+00	U	4.9E+00	4.9E+00	8.60E+00	pCi/L		0.01	1/6/16 07:08 a	2.012	2.012	GER13\$1
EU-155	2.67E-01	U	3.1E+00	3.1E+00	5.41E+00	pCi/L		-0.26	1/6/16 07:08 a	2.012	2.012	GER13\$1
								-0.9				
								0.05	1/6/16 07:08 a	2.012	2.012	GER13\$1
								0.17				
Batch: 5364031												
	GAMMA_GS				M73F21AA				M73F21AB			
CO-60	-5.06E-01	U	1.6E+00	1.6E+00	2.91E+00	pCi/L		-0.17	1/5/16 02:45 p	2.0076	2.0076	GER13\$1
CS-134	-6.17E-01	U	1.5E+00	1.5E+00	2.52E+00	pCi/L		-0.61	1/5/16 02:45 p	2.0076	2.0076	GER13\$1
CS-137	2.90E-01	U	1.4E+00	1.4E+00	2.52E+00	pCi/L		-0.24	1/5/16 02:45 p	2.0076	2.0076	GER13\$1
EU-152	-1.03E+00	U	3.3E+00	3.3E+00	5.68E+00	pCi/L		-0.84	1/5/16 02:45 p	2.0076	2.0076	GER13\$1
EU-154	6.14E-01	U	4.6E+00	4.6E+00	8.79E+00	pCi/L		0.11	1/5/16 02:45 p	2.0076	2.0076	GER13\$1
EU-155	1.22E+00	U	2.8E+00	2.8E+00	5.30E+00	pCi/L		0.43	1/5/16 02:45 p	2.0076	2.0076	GER13\$1
K-40	-1.95E+01	U	3.3E+01	3.3E+01	6.17E+01	pCi/L		-0.18	1/5/16 02:45 p	2.0076	2.0076	GER13\$1
								-0.63				
								0.07	1/5/16 02:45 p	2.0076	2.0076	GER13\$1
								0.26	1/5/16 02:45 p	2.0076	2.0076	GER13\$1
								0.23	1/5/16 02:45 p	2.0076	2.0076	GER13\$1
								0.86	1/5/16 02:45 p	2.0076	2.0076	GER13\$1
								-0.32	1/5/16 02:45 p	2.0076	2.0076	GER13\$1
								-(1.2)				

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FORM II

Date: 14-Jan-16

BLANK RESULTS

Lab Name: TestAmerica Inc

SDG: W07366

Matrix: WATER

Report No.: 68009

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
SB-125	7.63E-01	U	3.3E+00	3.3E+00	5.96E+00	pCi/L		0.13	1/5/16 02:45 p	2.0076	2.0076	GER13\$1
						5.00E+01		0.46			L	
Batch: 5364035	9310_ALPHABETA_GPC				Work Order: M73F61AA		Report DB ID: M73F61AB					
Alpha	5.22E-01	U	4.8E-01	5.0E-01	7.54E-01	pCi/L	100%	0.69	1/6/16 06:49 p	0.2032	0.2032	GPC22C
					3.37E-01	3.00E+00	(2.1)				L	
Batch: 5364034	9310_ALPHABETA_GPC				Work Order: M73F52AA		Report DB ID: M73F52AB					
Beta	9.83E-02	U	1.0E+00	1.0E+00	1.76E+00	pCi/L	100%	0.06	1/7/16 10:53 a	0.2022	0.2022	GPC26A
					8.48E-01	4.00E+00	0.19				L	
Batch: 5364032	I129LL_SEP_LEPS_GS				Work Order: M73F31AA		Report DB ID: M73F31AB					
I129	3.17E-02	U	2.4E-01	2.4E-01	4.66E-01	pCi/L	91%	0.07	1/8/16 12:28 p	2.0284	2.0284	LEP5\$1
					2.13E-01	1.00E+00	0.26				L	
Batch: 5364038	SRISO_SEP_PRECIP_GPC				Work Order: M73F91AA		Report DB ID: M73F91AB					
STRONTIUM	1.18E-01	U	3.9E-01	3.9E-01	6.74E-01	pCi/L	78%	0.18	1/7/16 07:45 p	1.004	1.004	GPC32B
					3.08E-01	2.00E+00	0.61				L	
Batch: 5364037	TC99_ETVDSK_LSC				Work Order: M73F81AA		Report DB ID: M73F81AB					
Tc-99	2.49E-01	U	3.9E+00	4.1E+00	9.32E+00	pCi/L	100%	0.03	1/6/16 10:01 a	0.1262	0.1262	LSC8
					4.47E+00	1.50E+01	0.12				L	
Batch: 6012050	NP237_LLE_PLATE_AEA				Work Order: M74DW1AA		Report DB ID: M74DW1AB					
NP-237	7.71E-02	U	1.5E-01	1.6E-01	2.66E-01	pCi/L	73%	0.29	1/14/16 12:38 p	0.2014	0.2014	ALP432
					5.90E-02	1.00E+00	0.99				L	

No. of Results: 27 Comments:

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TestAmerica Inc MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rptSTLrchBlank U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.
 V5.4.1 A2002

January 14, 2016

FORM II LCS RESULTS

Date: 14-Jan-16

Lab Name: TestAmerica Inc

SDG: W07366

Matrix: WATER

Report No.: 68009

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
Batch: 6013029 C14_LSC													
C-14	1.45E+02		3.6E+00	9.0E+00	3.79E+00	pCi/L	100%	1.44E+02	2.9E+00	100%	1/14/16 02:10 a	0.25	LSC4
Work Order: M73FX2AC Report DB ID: M73FX2CS Rec Limits: 70 130 0.0													
Batch: 5364033 PUIISO_PLATE_AEA													
PU239/40	2.27E+01		2.0E+00	4.1E+00	1.57E-01	pCi/L	79%	2.24E+01	2.6E-01	101%	1/7/16 01:08 p	0.201	ALP261
Work Order: M73F41AC Report DB ID: M73F41CS Rec Limits: 70 130 0.0													
Batch: 5364030 AMCMISO_EIE_PLT_AEA													
AMERICIUM 241	2.14E+01		1.7E+00	3.7E+00	1.76E-01	pCi/L	105%	2.26E+01	2.3E-01	95%	1/7/16 01:12 p	0.201	ALP257
Work Order: M73F11AC Report DB ID: M73F11CS Rec Limits: 70 130 -0.1													
Batch: 5364029 THISO_IE_PRECIP_AEA													
TH-230	1.18E+01		1.4E+00	2.6E+00	1.71E-01	pCi/L	90%	1.13E+01	1.2E-01	104%	1/12/16 01:03 p	0.2013	ALP424
Work Order: M73F01AC Report DB ID: M73F01CS Rec Limits: 70 130 0.0													
Batch: 5364036 906.0_H3_LSC													
H-3	3.01E+03		2.2E+02	2.4E+02	3.09E+02	pCi/L	100%	2.80E+03	8.4E+01	107%	1/12/16 07:26 p	0.00501	LSC9
Work Order: M73F71AC Report DB ID: M73F71CS Rec Limits: 70 130 0.1													
Batch: 5364027 GAMMA_GS													
CO-60	4.00E+01		7.2E+00	7.2E+00	3.55E+00	pCi/L		3.81E+01	3.3E-01	105%	1/6/16 07:25 a	2.0072	GER10\$1
CS-137	5.14E+01		8.5E+00	8.5E+00	4.14E+00	pCi/L		5.04E+01	5.2E-01	102%	1/6/16 07:25 a	2.0072	GER10\$1
EU-152	6.95E+01		1.5E+01	1.5E+01	1.19E+01	pCi/L		7.72E+01	1.1E+00	90%	1/6/16 07:25 a	2.0072	GER10\$1
Work Order: M73F21AC Report DB ID: M73F21CS Rec Limits: 70 130 -0.1													
Batch: 5364031 GAMMA_GS													

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

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FORM II
LCS RESULTS

Date: 14-Jan-16

Lab Name: TestAmerica Inc

SDG: W07366

Matrix: WATER

Report No.: 68009

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
CO-60	3.76E+01		7.6E+00	7.6E+00	4.13E+00	pCi/L		3.75E+01	3.2E-01	100%	1/5/16 09:37 p	2.0391	GER12\$1
							Rec Limits:	70	130	0.0		L	
CS-137	4.77E+01		8.8E+00	8.8E+00	3.75E+00	pCi/L		4.95E+01	5.1E-01	96%	1/5/16 09:37 p	2.0391	GER12\$1
							Rec Limits:	70	130	0.0		L	
EU-152	7.87E+01		1.6E+01	1.6E+01	1.09E+01	pCi/L		7.59E+01	1.1E+00	104%	1/5/16 09:37 p	2.0391	GER12\$1
							Rec Limits:	70	130	0.0		L	
Batch: 5364035	9310_ALPHABETA_GPC				Work Order: M73F61AC		Report DB ID: M73F61CS						
Alpha	1.77E+01		1.5E+00	4.7E+00	7.84E-01	pCi/L	100%	2.26E+01	2.3E-01	78%	1/6/16 06:49 p	0.201	GPC22D
							Rec Limits:	70	130	-0.2		L	
Batch: 5364034	9310_ALPHABETA_GPC				Work Order: M73F51AC		Report DB ID: M73F51CS						
Beta	2.38E+01		1.8E+00	3.5E+00	1.57E+00	pCi/L	100%	2.24E+01	1.6E-01	106%	1/6/16 06:34 p	0.2008	GPC32B
							Rec Limits:	70	130	0.1		L	
Batch: 5364032	1129LL_SEP_LEPS_GS				Work Order: M73F31AC		Report DB ID: M73F31CS						
1129	1.69E+01		2.3E+00	2.3E+00	9.03E-01	pCi/L	86%	1.92E+01	3.1E-01	88%	1/8/16 06:27 p	2.0027	LEP4\$1
							Rec Limits:	70	130	-0.1		L	
Batch: 5364038	SRISO_SEP_PRECIP_GPC				Work Order: M73F91AC		Report DB ID: M73F91CS						
STRONTIUM	6.88E+00		8.7E-01	1.8E+00	7.06E-01	pCi/L	76%	6.75E+00	4.8E-02	102%	1/7/16 07:45 p	1.0014	GPC32C
							Rec Limits:	70	130	0.0		L	
Batch: 5364037	TC99_ETVDSK_LSC				Work Order: M73F81AC		Report DB ID: M73F81CS						
Tc-99	9.79E+01		6.5E+00	7.1E+00	9.31E+00	pCi/L	100%	1.09E+02	6.4E-01	90%	1/6/16 11:03 a	0.1257	LSC8
							Rec Limits:	70	130	-0.1		L	
Batch: 6012050	NP237_LLE_PLATE_AEA				Work Order: M74DW1AC		Report DB ID: M74DW1CS						

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

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**FORM II
LCS RESULTS**

Date: 14-Jan-16

Lab Name: TestAmerica Inc SDG: W07366
 Matrix: WATER Report No. : 68009

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
NP-237	8.94E+00		1.7E+00	3.0E+00	3.65E-01	pCi/L	71%	8.57E+00	4.0E-01	104%	1/14/16 12:39 p	0.2108	ALP433
							Rec Limits:	70	130	0.0		L	

No. of Results: 17 Comments:

January 14, 2016

FORM II

Date: 14-Jan-16

MATRIX SPIKE RESULTS

Lab Name: TestAmerica Inc SDG: W07366 Matrix: WATER
 Lot-Sample No.: J5L300410-2, B33J03 Report No.: 68009

Parameter	SpikeResult, Orig Rst	Qual	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
Batch: 5364036												
	Work Order: M73FA1AT		Report DB ID: M73FA1TW				Orig Sa DB ID: 9M73FA10					
H-3	1.41E+03		3.6E+02	5.8E+02	3.49E+02	pCi/L	100%	93.95%	1.50E+03	1/12/16 11:13 a	0.00431	906.0_H3_LSC
	7.44E+03								4.5E+01		L	LSC9
Batch: 5364037												
	Work Order: M73FA1AU		Report DB ID: M73FA1UW				Orig Sa DB ID: 9M73FA10					
Tc-99	3.48E+02		4.2E+01	2.0E+02	9.19E+00	pCi/L	100%	65.00%	5.35E+02	1/6/16 02:41 a	0.1276	TC99_ETVDSK_LSC
	6.08E+03								3.1E+00		L	LSC8

Number of Results: 2

Comments:

January 14, 2016