

July 12, 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 20 Pages

Report No.: 68931

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.
W07451I	S16-004	B34LT6	J6D260412-1	M8J0C5AA	9M8J0C50	6180074
		B34MN2	J6D190408-5	M8HQ55AA	9M8HQ550	6180074
		B34MN6	J6D190408-7	M8HQ75AA	9M8HQ750	6180074
		B34MN7	J6D190408-6	M8HQ65AA	9M8HQ650	6180074



Certificate of Analysis

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

July 12, 2016

Attention: Scot Fitzgerald

SAF Number	:	S16-004
Date SDG Closed	:	April 26, 2016
Number of Samples	:	Four (4)
Sample Type	:	Water
SDG Number	:	W07451-I
Data Deliverable	:	30-Day / Summary

CASE NARRATIVE

I. Introduction

Between April 15, 2016 and April 26, 2016, four samples were received at TestAmerica (TARL). Upon receipt, the samples were assigned laboratory ID numbers to correspond with the CH2M specific IDs. Per phone conversation on June 29, 2016, the Plutonium-241 results will be reported in SDG W07451-I, separate from the other analysis for W07451.

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:

Liquid Scintillation Counting
Plutonium-241 by method RL-ALP-002

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.

CH2M Hill Plateau Remediation Company
July 12, 2016

V. Comments

Liquid Scintillation Counting

Plutonium-241 by method RL-ALP-002:

Four water samples were analyzed for Plutonium-241 by TARL's SOP. Due to the inconsistency of the sample results and QC on the initial analysis and multiple reanalysis, a modification was made to the existing lab procedure and results are within acceptance criteria. The modified method results are attached to this report. No other 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: 2016.07.12
16:42:33 -07'00'

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, $R = \text{constants} * f(x,y,z,...)$. 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 MDL	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.

COPY

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.#

S16-004-347

Page 1 of 1

Collector: Will Wiese / CHPRC
Contact/Requester: Karen Waters-Husted
Telephone No.: 509-376-4650
SAF No.: S16-004
Sampling Origin: Hanford Site
Purchase Order/Charge Code: 300071
Project Title: SURV, APRIL 2016
Logbook No.: HNF-N-506 **85/37**
Ice Chest No.: N/A
Method of Shipment: GOVERNMENT VEHICLE
Bill of Lading/Air Bill No.: N/A
Priority: 30 Days
Offsite Property No.: N/A
Protocol: CERCLA
Priority: **PRIORITY**

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

Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B34MN7	N	4-15-16	0915	1x1-L-P	906-0-TRITHUM_LSG: COMMON	6-Months	None
B34MN7	N			1x4-L-P	9340-ALPHABETA_GPG: COMMON	6-Months	HNO3 to pH <2
B34MN7	N			1x4-L-G/P	AMGMISO-EIE-PLATE_AEA: COMMON	6-Months	HNO3 to pH <2
B34MN7	N			2x4-L-G/P	G14_LSG: COMMON	6-Months	None
B34MN7	N			3x4-L-G/P	GAMMA_GS: COMMON; GAMMA_GS: GW 01	6-Months	HNO3 to pH <2
B34MN7	N			2x4-L-G/P	I429LL-SEP_LEPS_GS_LL: COMMON	6-Months	None
B34MN7	N			3x1-L G/P	PU241_IE_LSC: COMMON MBHQ6 wme 118116	6-Months	HNO3 to pH <2
B34MN7	N			1x4-L-G/P	PUISO_PLATE_AEA: COMMON	6-Months	HNO3 to pH <2
B34MN7	N			2x1-L G/P	SE79_SEP_IE_LSC: COMMON	6-Months	HNO3 to pH <2
B34MN7	N			3x4-L-G/P	SRISO_SEP_PREGIP_GPG: COMMON	6-Months	HNO3 to pH <2
B34MN7	N			1x500 mL P	TC99_ETVDSK_LSC: COMMON	6-Months	HCl to pH <2
B34MN7	N			1x4-L-G/P	UISO_PLATE_AEA: COMMON MSHQ6	6-Months	HNO3 to pH <2

J60190405; 000451
W074511 Wme18116

Relinquished By: Will Wiese / CHPRC
Received By: L.D. Wall / CHPRC
Date/Time: APR 15 2016 0945
Sign: [Signature]
Print: L.D. Wall
Date/Time: APR 15 2016 0945
Relinquished By: L.D. Wall / CHPRC
Received By: J. Bock, TARRL
Date/Time: APR 15 2016 1430
Sign: [Signature]
Print: J. Bock, TARRL
Date/Time: APR 15 2016 1430

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

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.#

S16-004-346

Page 1 of 1

Collector	Whitewise CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	S16-004	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	SURV, APRIL 2016	Logbook No.	HNF-N-506 85 / 37	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B34MNG	N	W	4/15/16	0720	1x1-LP	906-0_TRITIUM_LSC: COMMON	6 Months	None
*B34MNG	N	W			1x1-LP	9310_ALPHABETA_GPC: COMMON	6 Months	HNO3 to pH <2
*B34MNG	N	W			1x1-L-G/P	AMCMISO_EIE_PLATE_AEA: COMMON	6 Months	HNO3 to pH <2
*B34MNG	N	W			2x1-L-G/P	G44_LSG: COMMON	6 Months	None
*B34MNG	N	W			3x1-L-G/P	GAMMA_GS: COMMON, GAMMA_GS: GW 01	6 Months	HNO3 to pH <2
*B34MNG	N	W			2x4-L-G/P	H29LL_SEP_LEPS_GS_LL: COMMON	6 Months	None
*B34MNG	N	W			3x1-L-G/P	PU241_IE_LSC: COMMON MBHQ7 WMP-718116	6 Months	HNO3 to pH <2
*B34MNG	N	W			1x1-L-G/P	PUISO_PLATE_AEA: COMMON	6 Months	HNO3 to pH <2
*B34MNG	N	W			2x1-L-G/P	SE79_SEP_IE_LSC: COMMON	6 Months	HNO3 to pH <2
*B34MNG	N	W			3x4-L-G/P	SRISO_SEP_PRECIP_GPC: COMMON	6 Months	HNO3 to pH <2
*B34MNG	N	W			1x500-mL P	TC99_ETVDSK_LSC: COMMON	6 Months	HG to pH <2
*B34MNG	N	W			1x4-L-G/P	UIISO_PLATE_AEA: COMMON M8HQ7	6 Months	HNO3 to pH <2

360190408; 204451 W07451I WMP-718116

Relinquished By Whitewise CHPRC	Print <i>L.D. Wall</i>	Sign L.D. Wall	Date/Time APR 15 2016 0945	Received By CHPRC	Print <i>J. Back, TARL</i>	Sign J. Back, TARL	Date/Time APR 15 2016 1430
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time

Matrix *	S	Soil	DS	Drum Solids
	SE	Sediment <td>DL</td> <td>Drum Liquids </td>	DL	Drum Liquids
	SO	Solid <td>T</td> <td>Tissue </td>	T	Tissue
	SL	Sludge <td>W1</td> <td>Wipe </td>	W1	Wipe
	W	Water <td>L</td> <td>Liquid </td>	L	Liquid
	O	Oil <td>V</td> <td>Vegetation </td>	V	Vegetation
	A	Air <td>X</td> <td>Other </td>	X	Other

Date/Time Received: 4-15-16 / 1430 Container GM Screen Result: (Airlock) 0 cpm Initials []

Sample GM Screen Result (Sample Receiving) 0 cpm Initials []

Client: P6W SDG #: W074511 SAF #: S16-004 NA []

Lot Number: J6D190408 WMR7/8/16

Chain of Custody # S16-004-356, 339, 343, 351, 345, 347, 346

Shipping Container ID or Air Bill Number : NA []

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

- 1. Custody Seals on shipping container intact? Yes [] No [] No Custody Seal []
2. Custody Seals dated and signed? Yes [] No [] No Custody Seal []
3. Cooler temperature: 15.6 °C NA []
4. Vermiculite/packing materials is NA [] Wet [] Dry []

Item 5 through 16 for samples. Initial appropriate response.

- 5. Chain of Custody record present? Yes [] No []
6. Number of samples received (Each sample may contain multiple bottles): 43 WMR7/8/16
7. Containers received: 6 x 500 mL; 70 x 1 L; 8 x 4 L; 9 x 1 L WMR7/8/16

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

11. Samples: 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 [] 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 []
14. Description of anomalies (include sample numbers): NA []

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

16. Additional Information: N/A

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

Sample Check-in List completed by Sample Custodian: Signature: Date: 4-15-16

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

No action necessary; process as is Project Manager: Date: 4/20/16 7/8/16

Sample Check-in List

Date/Time Received: 4/26/16 0840 Container GM Screen Result: (Airlock) 0 cpm Initials [X]
Sample GM Screen Result (Sample Receiving) 0 cpm Initials [X]

Client: Pbw SDG #: W07451I SAF #: S16-004 NA []

Lot Number: J6D260412 wmr7/8/16

Chain of Custody # S16-004-281

Shipping Container ID or Air Bill Number : NA [X]

Samples received inside shipping container/cooler/box Yes [X] 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 [X]
2. Custody Seals dated and signed? Yes [] No [] No Custody Seal [X]
3. Cooler temperature: 6.6 C ICE NA []
4. Vermiculite/packing materials is NA [] Wet [X] Dry []

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [X] No []

6. Number of samples received (Each sample may contain multiple bottles): 1

7. Containers received: 4 x 250mlp; 4 x 500mlp; 3 x LP 1 LP wmr7/8/16

8. Sample holding times exceeded? NA [] Yes [] No [X]

9. Samples have: tape hazard labels [X] custody seals [X] appropriate sample labels

10. Matrix: A (FLT, Wipe, Solid, Soil) [X] I (Water) S (Air, Niosh 7400) T (Biological, Ni-63)

11. Samples: [X] 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 [X] 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 [X]

14. Description of anomalies (include sample numbers): NA [X]

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

16. Additional Information: N/A

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

Sample Check-in List completed by Sample Custodian:
Signature: Jon Anderson Date: 4/26/16

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

[X] No action necessary; process as is
Project Manager: Whitney M. Pitari Date: 4/27/16
Whitney M. Pitari 7/8/16

Sample Results Summary

Date: 12-Jul-16

TestAmerica Inc TARL

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

Report No. : 68931

SDG No: W074511

Batch	Client Id Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
6180074	PU241_IE_LSC								
	B34LT6								
	M8J0C5AA PU-241		-5.13E+00 +- 1.6E+01	U	pCi/L	100%	1.61E+01	2.50E+01	
	B34MN2								
	M8HQ55AA PU-241		-7.28E+00 +- 1.7E+01	U	pCi/L	95%	1.73E+01	2.50E+01	
	B34MN2 DUP								
	M8HQ55AQ PU-241		-4.13E+00 +- 1.8E+01	U	pCi/L	94%	1.82E+01	2.50E+01	-55.2
	B34MN6								
	M8HQ75AA PU-241		-6.64E+00 +- 1.9E+01	U	pCi/L	90%	1.86E+01	2.50E+01	
	B34MN7								
	M8HQ65AA PU-241		-6.63E+00 +- 1.7E+01	U	pCi/L	95%	1.71E+01	2.50E+01	
	No. of Results:								5

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

Date: 12-Jul-16

Report No. : 68931

SDG No.: W074511

Batch	Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDL
PU241_IE_LSC									
6180074	BLANK QC,								
	M8P843AA	PU-241	-3.19E+00 +- 1.7E+01	U	pCi/L	100%			1.72E+01
6180074	LCS,								
	M8P843AC	PU-241	9.66E+02 +- 1.6E+02		pCi/L	100%	84%	-0.2	1.66E+01
No. of Results: 2									

TestAmerica Inc Bias - (Result/Expected)-1 as defined by ANSI N13.30.
 rptSTLRchQcSummary V5.6 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: 12-Jul-16

SAMPLE RESULTS

Lab Name: TestAmerica Inc
Lot-Sample No.: J6D190408-5
Client Sample ID: B34MN2

SDG: W074511
Report No.: 68931
COC No.: S16-004-345

Collection Date: 4/15/2016 12:54:00 PM
Received Date: 4/15/2016 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/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6180074	PU241_IE_LSC				Work Order: M8HQ55AA	Report DB ID: 9M8HQ550						
PU-241	-7.28E+00	U	6.7E+00	1.7E+01	1.73E+01 pCi/L	8.34E+00	95%	-0.42	7/7/16 09:42 p		0.2036	LSC10
						2.50E+01		-0.84			L	

No. of Results: 1 Comments:

FORM II

Date: 12-Jul-16

DUPLICATE RESULTS

Lab Name: TestAmerica Inc
 Lot-Sample No.: J6D190408-5
 Client Sample ID: B34MN2 DUP

SDG: W074511
 Report No.: 68931
 COC No.: S16-004-345

Collection Date: 4/15/2016 12:54:00 PM
 Received Date: 4/15/2016 2:30:00 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
Batch: 6180074	PU241_IE_LSC											
PU-241	-4.13E+00	U	7.1E+00	1.8E+01	1.82E+01	pCi/L	94%	-0.23	7/7/16 11:47 p	9M8HQ550	0.2021	LSC10
	-7.28E+00	U	RPD -55.2			2.50E+01		-0.45			L	

No. of Results: 1 Comments:

TestAmerica Inc RPD - Relative Percent Difference.
 rpts TLRchDupV5. MDC(MDA)Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 6/2/2002 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: 12-Jul-16

Lab Name: TestAmerica Inc SDG: W074511
 Matrix: WATER Report No.: 68931

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: 6180074 PU241_IE_LSC Work Order: M8P843AA Report DB ID: M8P843AB												
PU-241	-3.19E+00	U	6.7E+00	1.7E+01	1.72E+01	pCi/L	100%	-0.19	7/8/16 08:09 a	0.2016	L	LSC10
					8.30E+00	2.50E+01		-0.37				

No. of Results: 1 Comments:

TestAmerica Inc MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rpts TLRchBlank U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.
 V 5.6 A2002

FORM II
Date: 12-Jul-16

LCS RESULTS

Lab Name: TestAmerica Inc

SDG: W07451I

Matrix: WATER

Report No. : 68931

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: 6180074	PU241_IE_LSC												
PU-241	9.66E+02		2.2E+01	1.6E+02	1.66E+01	pCi/L	100%	1.15E+03	4.1E+01	84%	7/8/16 10:15 a	0.2005	LSC10
Work Order: M8P843AC							Report DB ID: M8P843CS						
Rec Limits:							80	120	-0.2				

No. of Results: 1 Comments:

20