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 23 ***Pages***

Report No.: 67707

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.
W07309	F15-005	B33M57	J5K110423-3	M7WEM1AC	9M7WEM10	5316046
		B33M57	J5K110423-3	M7WEM1AA	9M7WEM10	5316048
		B33M57	J5K110423-3	M7WEM1AD	9M7WEM10	5316049
		B33M62	J5K110423-1	M7WEK1AC	9M7WEK10	5316046
		B33M62	J5K110423-1	M7WEK1AA	9M7WEK10	5316048
		B33M62	J5K110423-1	M7WEK1AD	9M7WEK10	5316049
		B33M67	J5K110423-4	M7WEN1AC	9M7WEN10	5316046
		B33M67	J5K110423-4	M7WEN1AA	9M7WEN10	5316048
		B33M67	J5K110423-4	M7WEN1AD	9M7WEN10	5316049
		B33M72	J5K110423-2	M7WEL1AC	9M7WEL10	5316046
		B33M72	J5K110423-2	M7WEL1AA	9M7WEL10	5316048
		B33M72	J5K110423-2	M7WEL1AD	9M7WEL10	5316049

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

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

November 30, 2015

Attention: Scot Fitzgerald

SAF Number	:	F15-005
Date SDG Closed	:	November 11, 2015
Number of Samples	:	Four (4)
Sample Type	:	Water
SDG Number	:	W07309
Data Deliverable	:	15-Day / Summary

CASE NARRATIVE

I. Introduction

On November 11, 2015, four 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:

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

IV. Quality Control

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

QC and sample results are reported in the same units.

V. Comments

Gamma Spectroscopy

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

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

Liquid Scintillation Counting

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

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

Tritium by method RL-LSC-005:

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

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

Reviewed and approved:

Whitney M. Ritari

Digitally signed by Whitney Ritari
Date: 2015.11.30 18:23:03 -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 = constants * f(x,y,z,...). The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1,2, or 3).

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

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

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or TestAmerica.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
CSU (#s) ***u_c Combined Standard Uncert.***	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, *u_c the combined standard uncertainty*. The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or TestAmerica "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. Lc=(1.645 * Sqrt(2*(BkgrndCnt/BkgrndCntMin)/SCntMin)) * (ConvFct/(Eff*Yld*Abn*Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC|MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. MDC = (4.65 * Sqrt((BkgrndCnt/BkgrndCntMin)/SCntMin) + 2.71/SCntMin) * (ConvFct/(Eff * Yld * Abn * Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the **Work Order** Number.
RER	The equation Replicate Error Ratio = (S-D)/[sqrt($TPUs^2$ + $TPUd^2$)] as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by TestAmerica upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

TestAmerica Laboratories, Inc.

November 30, 2015

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-005-505	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	PRICE CODE 7C	DATA TURNAROUND
SAMPLING LOCATION 289-T, Effluent Tank, Valve V07-Y80 D*	PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Water Sampling		SAF NO. F15-005	AIR QUALITY ☐	15 Days / 15 Days
ICE CHEST NO. N/A	FIELD LOGBOOK NO. HNF-N-491-15/	ACTUAL SAMPLE DEPTH (N/A)	COA 303700	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. N/A

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HCl to pH <2	None	None
HOLDING TIME	6 Months	6 Months	6 Months
TYPE OF CONTAINER	P	P	G/P
NO. OF CONTAINER(S)	1	1	2
VOLUME	500mL	1L	4L
SAMPLE ANALYSIS	TC99_ETVDSK_LSC: COMMON;	TRITIUM_DIST_LSC: COMMON;	I129LL_SEP_LEPS_GS: COMMON;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B33M62	WATER	NOV 11 2015	0923	✓	✓	✓

J5K110423
W07309
Due 11-27-15
mnwEK

J5K110423

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM D.L. Floyd/CHPRC	DATE/TIME NOV 11 2015 1120	RECEIVED BY/STORED IN L.D. Wall CHPRC	DATE/TIME NOV 11 2015 1120
RELINQUISHED BY/REMOVED FROM L.D. Wall CHPRC	DATE/TIME NOV 11 2015 1505	RECEIVED BY/STORED IN J. Friesz, TARL	DATE/TIME NOV 11 2015 1505
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-16-016

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

PRINTED ON 11/3/2015 FSR ID = FSR8915 TRVL NUM = TRVL-16-016 A-6003-618 (REV 2)

TestAmerica Laboratories, Inc.

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-005-516	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	PRICE CODE 7C AIR QUALITY ☐	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 289-TA, Pre-Resin Tanks, Valve V05-Y20	PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Water Sampling		SAF NO. F15-005		
ICE CHEST NO. N/A	FIELD LOGBOOK NO. HNF-N-491-15/1	ACTUAL SAMPLE DEPTH (N/A)	COA 303700	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

November 30, 2015

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. N/A

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HCl to pH <2	None	None
HOLDING TIME	6 Months	6 Months	6 Months
TYPE OF CONTAINER	P	P	G/P
NO. OF CONTAINER(S)	1	1	2
VOLUME	500mL	1L	4L
SAMPLE ANALYSIS	TC99_ETVDSK_LSC: COMMON;	TRITIUM_DIST_LSC: COMMON;	I129LL_SEP_LEPS_GS: COMMON;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B33M72	WATER	NOV 11 2015	0850	✓	✓	✓

JSK110423
WO7309
Due 11-27-15
MMWEL

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
D.L. Floyd/CHPRC	NOV 11 2015 1120	L.D. Wall CHPRC	NOV 11 2015 1120
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L.D. Wall CHPRC	NOV 11 2015 1505	J. Friesz, TARL	NOV 11 2015 1505
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-16-016

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

7 of 23

PRINTED ON 11/3/2015 FSR ID = FSR8921 TRVL NUM = TRVL-16-016 A-6003-618 (REV 2)

TestAmerica Laboratories, Inc.

November 30, 2015

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F15-005-499	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 7C	DATA TURNAROUND
D.L. Floyd/CHPRC	SUMNER, LC	376-3922	SUMNER, LC	AIR QUALITY ☐	15 Days / 15 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
289-T, Influent Tank, Valve V12-Y30	200W Pump & Treat - Treatment Plant Water Sampling		F15-005		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**	
N/A	HNF-N-491-15/1	N/A	303700	GOVERNMENT VEHICLE	**ORIGINAL**
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
TestAmerica Incorporated, Richland	N/A		N/A		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. N/A

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HCl to pH <2	None	None
HOLDING TIME	6 Months	6 Months	6 Months
TYPE OF CONTAINER	P	P	G/P
NO. OF CONTAINER(S)	1	1	2
VOLUME	500mL	1L	4L
SAMPLE ANALYSIS	TC99_ETVDSK_LSC: COMMON;	TRITIUM_DIST_LSC: COMMON;	I129LL_SEP_LEPS_GS: COMMON;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B33M57	WATER	NOV 11 2015	0924	✓	✓	✓

JSK110423
W07309
Due 11-27-15
MJWEM

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-16-016
D.L. Floyd/CHPRC	NOV 11 2015 1120	L.D. Wall CHPRC	NOV 11 2015 1120	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
L.D. Wall CHPRC	NOV 11 2015 1505	J. Friesz, TARL	NOV 11 2015 1505	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

PRINTED ON 11/3/2015 FSR ID = FSR8919 TRVL NUM = TRVL-16-016 A-6003-618 (REV 2)

8023

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-005-511	PAGE 1 OF 1
COLLECTOR: D.L. Floyd/CHPRC	COMPANY CONTACT: SUMNER, LC	TELEPHONE NO.: 376-3922	PROJECT COORDINATOR: SUMNER, LC	PRICE CODE: 7C	DATA TURNAROUND: 15 Days / 15 Days
SAMPLING LOCATION: 289-T, Effluent Tank, Valve V07-Y801 DUP	PROJECT DESIGNATION: 200W Pump & Treat - Treatment Plant Water Sampling		SAF NO.: F15-005	AIR QUALITY ☐	
ICE CHEST NO.: N/A	FIELD LOGBOOK NO.: HNF-N-491-15/1	ACTUAL SAMPLE DEPTH: (N/A)	COA: 303700	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO.: ~~HNF-N-~~ 11-11-2 (N/A) ~~D.L. Rauer~~/CHPRC		BILL OF LADING/AIR BILL NO.: N/A		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. N/A

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HCl to pH <2	None	None
HOLDING TIME	6 Months	6 Months	6 Months
TYPE OF CONTAINER	P	P	G/P
NO. OF CONTAINER(S)	1	1	2
VOLUME	500mL	1L	4L
SAMPLE ANALYSIS	TC99_ETVDSK_LSC: COMMON;	TRITIUM_DIST_LSC: COMMON;	I129LL_SEP_LEPS_GS: COMMON;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B33M67	WATER	NOV 1 1 2015	0923	✓	✓	✓

JSK110423
WO7309
Due 11-27-15
MMWEN

November 30, 2015

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: D.L. Floyd/CHPRC	DATE/TIME: NOV 1 1 2015 1120	RECEIVED BY/STORED IN: L.D. Wall CHPRC	DATE/TIME: NOV 1 1 2015 1120
RELINQUISHED BY/REMOVED FROM: L.D. Wall CHPRC	DATE/TIME: NOV 1 1 2015 1505	RECEIVED BY/STORED IN: J. Friesz, TARL	DATE/TIME: NOV 1 1 2015 1505
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-16-016

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

PRINTED ON 11/3/2015 FSR ID = FSR8916 TRVL NUM = TRVL-16-016 A-6003-618 (REV 2)

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Sample Check-in List

Date/Time Received: 11/11/15 1505 Container GM Screen Result: (Airlock) 0 cpm Initials [ ]
Sample GM Screen Result (Sample Receiving) 0 cpm Initials [ ]

Client: FLH SDG #: WO7309 SAF #: F15-005 NA [ ]

Lot Number: JSK110423

Chain of Custody # F15-005-505; 516; 499; 511

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: 4.2 °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): 4
7. Containers received: 4x500 mLp; 4xLp; 8x4Lp
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 HNO_3 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: 11/11/15

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

[ ] No action necessary; process as is

Project Manager Whitney M Ritari Date 11/12/15

LS-023 Rev. 17, 05/13

Sample Results Summary

Date: 30-Nov-15

TestAmerica Inc TARL

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

Report No. : 67707 **SDG No:** W07309

Batch	Client Id Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
5316046 I129LL_SEP_LEPS_GS									
B33M57									
	M7WEM1A	I129	5.49E-01 +- 4.1E-01	U	pCi/L	91%	6.45E-01	1.00E+00	
B33M57 DUP									
	M7WEM1AE	I129	5.31E-01 +- 3.6E-01		pCi/L	98%	4.63E-01	1.00E+00	3.2
B33M62									
	M7WEK1AC	I129	1.79E-01 +- 3.7E-01	U	pCi/L	89%	6.07E-01	1.00E+00	
B33M67									
	M7WEN1AC	I129	4.39E-01 +- 3.3E-01	U	pCi/L	99%	6.69E-01	1.00E+00	
B33M72									
	M7WEL1AC	I129	1.09E+00 +- 3.2E-01		pCi/L	92%	4.42E-01	1.00E+00	
5316048 TRITIUM_DIST_LSC									
B33M57									
	M7WEM1AA	H-3	2.75E+03 +- 2.3E+02		pCi/L	100%	2.89E+02	4.00E+02	
B33M62									
	M7WEK1AA	H-3	2.74E+03 +- 2.4E+02		pCi/L	100%	2.98E+02	4.00E+02	
B33M67									
	M7WEN1AA	H-3	2.43E+03 +- 2.2E+02		pCi/L	100%	2.90E+02	4.00E+02	
B33M72									
	M7WEL1AA	H-3	6.00E+03 +- 3.3E+02		pCi/L	100%	2.90E+02	4.00E+02	
B33M72 DUP									
	M7WEL1AE	H-3	5.83E+03 +- 3.3E+02		pCi/L	100%	2.91E+02	4.00E+02	3.0
5316049 TC99_ETVDSK_LSC									
B33M57									
	M7WEM1A	Tc-99	6.66E+01 +- 6.2E+00		pCi/L	100%	9.20E+00	1.50E+01	
B33M62									
	M7WEK1AD	Tc-99	6.04E+01 +- 6.0E+00		pCi/L	100%	9.23E+00	1.50E+01	
B33M67									
	M7WEN1AD	Tc-99	6.28E+01 +- 6.1E+00		pCi/L	100%	9.25E+00	1.50E+01	
B33M72									
	M7WEL1AD	Tc-99	9.47E+02 +- 2.7E+01		pCi/L	100%	9.25E+00	1.50E+01	
B33M78 DUP									
	M7WGW1A	Tc-99	9.72E+02 +- 2.8E+01		pCi/L	100%	9.19E+00	1.50E+01	5.4

No. of Results: 15

TestAmerica Inc

rptTALRchSaSummary2 V5.4.1 A2002

RPD - Relative Percent Difference.

U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.

QC Results Summary

Date: 30-Nov-15

TestAmerica Inc TARL

Ordered by Method, Batch No, QC Type,.

Report No. : 67707

SDG No.: W07309

Batch Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDL
I129LL_SEP_LEPS_GS								
5316046 BLANK QC,								
M7WHC1AA	I129	4.54E-02 +- 2.9E-01	U	pCi/L	94%			5.41E-01
5316046 LCS,								
M7WHC1AC	I129	1.73E+01 +- 2.3E+00		pCi/L	87%	90%	-0.1	9.62E-01
TRITIUM_DIST_LSC								
5316048 MATRIX SPIKE, B33M57								
M7WEM1AF	H-3	1.12E+03 +- 3.8E+02		pCi/L	100%	75%	-0.3	3.41E+02
5316048 BLANK QC,								
M7WHE1AA	H-3	-4.50E+00 +- 1.6E+02	U	pCi/L	100%			3.48E+02
5316048 LCS,								
M7WHE1AC	H-3	2.87E+03 +- 2.4E+02		pCi/L	100%	102%	0.0	2.98E+02
TC99_ETVDSK_LSC								
5316049 MATRIX SPIKE, B33M77								
M7WGX1AC	Tc-99	5.10E+02 +- 2.5E+01		pCi/L	100%	95%	-0.1	9.21E+00
5316049 BLANK QC,								
M7WHF1AA	Tc-99	-1.38E+00 +- 2.5E+00	U	pCi/L	100%			5.77E+00
5316049 LCS,								
M7WHF1AC	Tc-99	6.81E+01 +- 4.6E+00		pCi/L	100%	100%	0.0	5.78E+00

No. of Results: 8

TestAmerica Inc

rptSTLRchQcSummary V5.4.1 A2002

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

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

SAMPLE RESULTS

Date: 30-Nov-15

November 30, 2015

Lab Name:	**TestAmerica Inc**	**SDG:**	W07309	**Collection Date:**	11/11/2015 9:24:00 AM
Lot-Sample No.:	**J5K110423-3**	**Report No. :**	67707	**Received Date:**	11/11/2015 3:05:00 PM
Client Sample ID:	**B33M57**	**COC No. :**	F15-005-499	**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: 5316046	I129LL_SEP_LEPS_GS			**Work Order:** M7WEM1AC			**Report DB ID:** 9M7WEM10					
I129	**5.49E-01**	U	4.1E-01	4.1E-01	6.45E-01	pCi/L	91%	*0.85*	11/24/15 05:04 p		2.03	LEP4$1
						2.93E-01	1.00E+00	*(2.7)*			L	
Batch: 5316048	TRITIUM_DIST_LSC			**Work Order:** M7WEM1AA			**Report DB ID:** 9M7WEM10					
H-3	**2.75E+03**		2.1E+02	2.3E+02	2.89E+02	pCi/L	100%	*(9.5)*	11/20/15 05:54 p		0.00503	LSC9
						1.38E+02	4.00E+02	*(23.6)*			L	
Batch: 5316049	TC99_ETVDSK_LSC			**Work Order:** M7WEM1AD			**Report DB ID:** 9M7WEM10					
Tc-99	**6.66E+01**		5.8E+00	6.2E+00	9.20E+00	pCi/L	100%	*(7.2)*	11/25/15 09:59 p		0.1258	LSC8
						4.41E+00	1.50E+01	*(21.5)*			L	

No. of Results: 3 **Comments:**

13 of 23

TestAmerica Inc
rptSTLRchSample
V5.4.1 A2002

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 I

SAMPLE RESULTS

Date: 30-Nov-15

November 30, 2015

Lab Name:	**TestAmerica Inc**	**SDG:**	W07309	**Collection Date:**	11/11/2015 9:23:00 AM
Lot-Sample No.:	**J5K110423-1**	**Report No. :**	67707	**Received Date:**	11/11/2015 3:05:00 PM
Client Sample ID:	**B33M62**	**COC No. :**	F15-005-505	**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: 5316046	I129LL_SEP_LEPS_GS			**Work Order:**	M7WEK1AC		**Report DB ID:**	9M7WEK10				
I129	**1.79E-01**	U	3.7E-01	3.7E-01	6.07E-01	pCi/L	89%	*0.29*	11/24/15 03:14 p		2.0077	LEP4$1
						2.72E-01	1.00E+00	*0.96*			L	
Batch: 5316048	TRITIUM_DIST_LSC			**Work Order:**	M7WEK1AA		**Report DB ID:**	9M7WEK10				
H-3	**2.74E+03**		2.1E+02	2.4E+02	2.98E+02	pCi/L	100%	*(9.2)*	11/20/15 01:48 p		0.00502	LSC9
						1.42E+02	4.00E+02	*(23.2)*			L	
Batch: 5316049	TC99_ETVDSK_LSC			**Work Order:**	M7WEK1AD		**Report DB ID:**	9M7WEK10				
Tc-99	**6.04E+01**		5.6E+00	6.0E+00	9.23E+00	pCi/L	100%	*(6.5)*	11/25/15 07:54 p		0.1259	LSC8
						4.42E+00	1.50E+01	*(20.)*			L	

No. of Results: 3 **Comments:**

14 of 23

TestAmerica Inc
rptSTLRchSample
V5.4.1 A2002

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 I

SAMPLE RESULTS

Date: 30-Nov-15

November 30, 2015

Lab Name:	**TestAmerica Inc**	**SDG:**	W07309	**Collection Date:**	11/11/2015 9:23:00 AM
Lot-Sample No.:	**J5K110423-4**	**Report No. :**	67707	**Received Date:**	11/11/2015 3:05:00 PM
Client Sample ID:	**B33M67**	**COC No. :**	F15-005-511	**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: 5316046	I129LL_SEP_LEPS_GS			**Work Order:**	M7WEN1AC		**Report DB ID:**	9M7WEN10				
I129	**4.39E-01**	U	3.3E-01	3.3E-01	6.69E-01	pCi/L	99%	*0.66*	11/24/15 07:07 p		2.0084	LEP4$1
						3.31E-01	1.00E+00	*(2.6)*			L	
Batch: 5316048	TRITIUM_DIST_LSC			**Work Order:**	M7WEN1AA		**Report DB ID:**	9M7WEN10				
H-3	**2.43E+03**		2.0E+02	2.2E+02	2.90E+02	pCi/L	100%	*(8.4)*	11/20/15 08:38 p		0.00502	LSC9
						1.38E+02	4.00E+02	*(21.7)*			L	
Batch: 5316049	TC99_ETVDSK_LSC			**Work Order:**	M7WEN1AD		**Report DB ID:**	9M7WEN10				
Tc-99	**6.28E+01**		5.7E+00	6.1E+00	9.25E+00	pCi/L	100%	*(6.8)*	11/25/15 11:01 p		0.126	LSC8
						4.43E+00	1.50E+01	*(20.6)*			L	

No. of Results: 3 **Comments:**

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TestAmerica Inc
rptSTLRchSample
V5.4.1 A2002

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 I

SAMPLE RESULTS

Date: 30-Nov-15

November 30, 2015

Lab Name:	**TestAmerica Inc**	**SDG:**	W07309	**Collection Date:**	11/11/2015 8:50:00 AM
Lot-Sample No.:	**J5K110423-2**	**Report No. :**	67707	**Received Date:**	11/11/2015 3:05:00 PM
Client Sample ID:	**B33M72**	**COC No. :**	F15-005-516	**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: 5316046	I129LL_SEP_LEPS_GS			**Work Order:**	M7WEL1AC		**Report DB ID:**	9M7WEL10				
I129	**1.09E+00**		3.2E-01	3.2E-01	4.42E-01	pCi/L	92%	*(2.5)*	11/24/15 03:16 p		2.0045	LEP5$1
						2.06E-01	1.00E+00	*(6.9)*			L	
Batch: 5316048	TRITIUM_DIST_LSC			**Work Order:**	M7WEL1AA		**Report DB ID:**	9M7WEL10				
H-3	**6.00E+03**		2.8E+02	3.3E+02	2.90E+02	pCi/L	100%	*(20.7)*	11/20/15 03:10 p		0.00503	LSC9
						1.38E+02	4.00E+02	*(36.)*			L	
Batch: 5316049	TC99_ETVDSK_LSC			**Work Order:**	M7WEL1AD		**Report DB ID:**	9M7WEL10				
Tc-99	**9.47E+02**		1.7E+01	2.7E+01	9.25E+00	pCi/L	100%	*(102.3)*	11/25/15 08:57 p		0.1252	LSC8
						4.43E+00	1.50E+01	*(69.8)*			L	

No. of Results: 3 **Comments:**

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TestAmerica Inc
rptSTLRchSample
V5.4.1 A2002

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: 30-Nov-15

DUPLICATE RESULTS

November 30, 2015

Lab Name:	**TestAmerica Inc**	**SDG:**	W07309	**Collection Date:**	11/11/2015 9:24:00 AM
Lot-Sample No.:	**J5K110423-3**	**Report No. :**	67707	**Received Date:**	11/11/2015 3:05:00 PM
Client Sample ID:	**B33M57 DUP**	**COC No. :**	F15-005-499	**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: 5316046	I129LL_SEP_LEPS_GS			**Work Order:**	M7WEM1AE	**Report DB ID:**	M7WEM1ER		**Orig Sa DB ID:**	9M7WEM10		
I129	5.31E-01		3.6E-01	3.6E-01	4.63E-01	pCi/L	98%	(1.1)	11/24/15 05:05 p		2.0213	LEP5$1
	5.49E-01	U	**RPD**	**3.2**		1.00E+00		(2.9)			L	

No. of Results: 1 **Comments:**

17 of 23

TestAmerica Inc

rptSTLRchDupV5.4.1 A2002

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: 30-Nov-15

DUPLICATE RESULTS

November 30, 2015

Lab Name:	**TestAmerica Inc**	**SDG:**	W07309	**Collection Date:**	11/11/2015 8:50:00 AM
Lot-Sample No.:	**J5K110423-2**	**Report No. :**	67707	**Received Date:**	11/11/2015 3:05:00 PM
Client Sample ID:	**B33M72 DUP**	**COC No. :**	F15-005-516	**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: 5316048	TRITIUM_DIST_LSC			**Work Order:** M7WEL1AE		**Report DB ID:** M7WEL1ER			**Orig Sa DB ID:** 9M7WEL10			
H-3	5.83E+03		2.7E+02	3.3E+02	2.91E+02	pCi/L	100%	(20.)	11/20/15 04:32 p		0.00504	LSC9
	6.00E+03		**RPD**	**3.0**		4.00E+02		(35.4)			L	

No. of Results: 1 **Comments:**

18 of 23

TestAmerica Inc **RPD - Relative Percent Difference.**

rptSTLRchDupV5.4.1 A2002 **MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.**

FORM II

Date: 30-Nov-15

DUPLICATE RESULTS

November 30, 2015

Lab Name:	**TestAmerica Inc**	**SDG:**	W07311	**Collection Date:**	11/11/2015 12:55:00 PM
Lot-Sample No.:	**J5K120412-1**	**Report No. :**	67707	**Received Date:**	11/12/2015 9:55:00 AM
Client Sample ID:	**B33M78 DUP**	**COC No. :**	F15-005-522	**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: 5316049	TC99_ETVDSK_LSC			**Work Order:**	M7WGW1AC	**Report DB ID:**	M7WGW1CR		**Orig Sa DB ID:**	9M7WGW10		
Tc-99	9.72E+02		1.7E+01	2.8E+01	9.19E+00	pCi/L	100%	(105.8)	11/26/15 01:06 a		0.1254	LSC8
	1.03E+03		**RPD**	**5.4**		1.50E+01		(70.2)			L	

No. of Results: 1 **Comments:**

19 of 23

TestAmerica Inc **RPD - Relative Percent Difference.**

rptSTLRchDupV5.4.1 A2002 **MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.**

FORM II

BLANK RESULTS

Date: 30-Nov-15

November 30, 2015

Lab Name: TestAmerica Inc

Matrix: WATER

SDG: W07309

Report No. : 67707

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: 5316048	TRITIUM_DIST_LSC			**Work Order:**	M7WHE1AA		**Report DB ID:**	M7WHE1AB				
H-3	-4.50E+00	U	1.4E+02	1.6E+02	3.48E+02	pCi/L	100%	-0.01	11/20/15 11:21 p		0.00501	LSC9
					1.66E+02	4.00E+02		-0.06			L	
Batch: 5316046	I129LL_SEP_LEPS_GS			**Work Order:**	M7WHC1AA		**Report DB ID:**	M7WHC1AB				
I129	4.54E-02	U	2.9E-01	2.9E-01	5.41E-01	pCi/L	94%	0.08	11/24/15 08:57 p		2.0006	LEP4$1
					2.55E-01	1.00E+00		0.31			L	
Batch: 5316049	TC99_ETVDSK_LSC			**Work Order:**	M7WHF1AA		**Report DB ID:**	M7WHF1AB				
Tc-99	-1.38E+00	U	2.3E+00	2.5E+00	5.77E+00	pCi/L	100%	-0.24	11/26/15 08:25 a		0.2009	LSC8
					2.76E+00	1.50E+01		-(1.1)			L	

No. of Results: 3 **Comments:**

20 of 23

TestAmerica Inc

rptSTLRchBlank
V5.4.1 A2002

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

LCS RESULTS

Date: 30-Nov-15

November 30, 2015

Lab Name: **TestAmerica Inc** **SDG:** W07309

Matrix: WATER **Report No. :** 67707

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: 5316048	TRITIUM_DIST_LSC			**Work Order:**	M7WHE1AC		**Report DB ID:**	M7WHE1CS					
H-3	2.87E+03		2.1E+02	2.4E+02	2.98E+02	pCi/L	100%	2.80E+03	8.41E+01	102%	11/21/15 12:43 a	0.00504	LSC9
							Rec Limits:	70	130	0.0		L	
Batch: 5316046	I129LL_SEP_LEPS_GS			**Work Order:**	M7WHC1AC		**Report DB ID:**	M7WHC1CS					
I129	1.73E+01		2.3E+00	2.3E+00	9.62E-01	pCi/L	87%	1.92E+01	3.10E-01	90%	11/24/15 08:59 p	2.0035	LEP5$1
							Rec Limits:	70	130	-0.1		L	
Batch: 5316049	TC99_ETVDSK_LSC			**Work Order:**	M7WHF1AC		**Report DB ID:**	M7WHF1CS					
Tc-99	6.81E+01		4.2E+00	4.6E+00	5.78E+00	pCi/L	100%	6.78E+01	4.00E-01	100%	11/26/15 09:28 a	0.2004	LSC8
							Rec Limits:	70	130	0.0		L	

No. of Results: 3 **Comments:**

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

rptSTLRchLcs
V5.4.1 A2002

FORM II

MATRIX SPIKE RESULTS

Date: 30-Nov-15

November 30, 2015

Lab Name: TestAmerica Inc **SDG:** W07309

Lot-Sample No.: J5K110423-3, B33M57 **Report No. :** 67707 **Matrix:** WATER

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	CSU (2 s)	MDC|MDA	Rpt Unit	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 5316048	**Work Order:** M7WEM1AF			**Report DB ID:** M7WEM1FW			**Orig Sa DB ID:** 9M7WEM10					
H-3	1.12E+03		2.6E+02	3.8E+02	3.41E+02	pCi/L	100%	74.50%	1.50E+03	11/20/15 07:16 p	0.00431	TRITIUM_DIST_LSC
	2.75E+03								4.51E+01		L	LSC9

Number of Results: 1

Comments:

22 of 23

TestAmerica Inc **RER** - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

rptSTLRchMs **Bias** - (Result/Expected)-1 as defined by ANSI N13.30.

V5.4.1 A2002

FORM II

MATRIX SPIKE RESULTS

Date: 30-Nov-15

November 30, 2015

Lab Name: TestAmerica Inc **SDG:** W07311

Lot-Sample No.: J5K120412-2, B33M77 **Report No. :** 67707 **Matrix:** WATER

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	CSU (2 s)	MDC|MDA	Rpt Unit	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 5316049	**Work Order:** M7WGX1AC			**Report DB ID:** M7WGX1CW			**Orig Sa DB ID:** 9M7WGX10					
Tc-99	5.10E+02		1.5E+01	2.5E+01	9.21E+00	pCi/L	100%	94.77%	5.38E+02	11/26/15 03:11 a	0.1261	TC99_ETVDSK_LSC
	2.34E+02								3.08E+00		L	LSC8

Number of Results: 1

Comments:

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TestAmerica Inc **RER** - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

rptSTLRchMs **Bias** - (Result/Expected)-1 as defined by ANSI N13.30.

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