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 45 ***Pages***

Report No.: 72587

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.
W08029	A18-003	B3HDB7	J8C130414-1	NAN8V1AC	9NAN8V10	8074018
		B3HDB7	J8C130414-1	NAN8V1AA	9NAN8V10	8074019
		B3HDC0	J8C130408-1	NAN8J1AA	9NAN8J10	8074019
	I18-006	B3HDJ1	J8C130413-1	NAN8T2AA	9NAN8T20	8084050
	S18-003	B3HF40	J8C130416-3	NAN821AA	9NAN8210	8074020
		B3HF44	J8C130416-5	NAN841AA	9NAN8410	8074020
		B3HF48	J8C130416-2	NAN811AA	9NAN8110	8074020
		B3HH67	J8C130416-4	NAN831AA	9NAN8310	8074020
		B3HHF9	J8C130415-1	NAN8W2AA	9NAN8W20	8084050
		B3HHH0	J8C130415-2	NAN8X2AA	9NAN8X20	8084050
		B3HHH1	J8C130416-1	NAN802AA	9NAN8020	8084050
		B3HHH2	J8C130416-6	NAN852AA	9NAN8520	8084050
		B3HHJ6	J8C130409-1	NAN8K2AA	9NAN8K20	8084050

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Certificate of Analysis

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

April 9, 2018

Attention: Scot Fitzgerald

SAF Number	:	A18-003, S18-003, I18-006
Date SDG Closed	:	March 14, 2018
Number of Samples	:	Twelve (12)
Sample Type	:	Water
SDG Number	:	W08029
Data Deliverable	:	30-Day / Summary

CASE NARRATIVE

I. Introduction

Between March 12, 2018 and March 13, 2018, twelve 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:

Gas Proportional Counting
Strontium by method RL-GPC-010
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

Gas Proportional Counting

Strontium by method RL-GPC-010:

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

Gamma Spectroscopy

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

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

Liquid Scintillation Counting

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

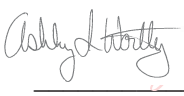
No analytical or quality issues were noted. The sample result and associated batch QC results are within contractual requirements.

Tritium by method RL-LSC-005:

No analytical or quality issues were noted. The sample result 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 Ashley L. Worthy
Date: 2018.04.09 14:00:29 -07'00'

Ashley L. Worthy
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|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.

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C.# A18-003-008
		Page 1 of 1

Collector: Kathy Turner /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650	
SAF No.: A18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071	
Project Title: LLWMA-3-PA, MARCH 2018	**Logbook No.:** HNF-N-506 -97-72	**Ice Chest No.:** N/A	
Shipped To (Lab): TestAmerica Incorporated, Rich	**Method of Shipment** GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.:** N/A	
Protocol Monitoring	**Priority:** 30 Days	**Offsite Property No.:** N/A	

POSSIBLE SAMPLE HAZARDS/REMARK
** ** 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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3HDC0	N	W	MAR 12 2018	/003	1x250-mL P	906.0_TRITIUM_LSC: COMMON NAN8J	6 Months	None

18C130408
108029

Page 6 of 45

04/09/2018

Relinquished By: Kathy Turner /CHPRC — Print First and Last Name; Signature; MAR 12 2018 1020 — Date/Time	Received By: Troy Bacon CHPRC — Print First and Last Name; Signature; MAR 12 2018 1020 — Date/Time	Matrix *
Relinquished By: Troy L. Bacon CHPRC — Print First and Last Name; Signature; MAR 12, 2018 1415 — Date/Time	Received By: B. Jorgenson, TARL — Print First and Last Name; Signature; 3-12-18 1415 — Date/Time	S = Soil, SE = Sediment, SO = Solid, SL = Sludge, W = Water, O = Oil, A = Air, DS = Drum Solids, DL = Drum Liquid, T = Tissue, WI = Wipe, L = Liquid, V = Vegetation, X = Other
Relinquished By: — Print First and Last Name; Signature; Date/Time	Received By: — Print First and Last Name; Signature; Date/Time	
Relinquished By: — Print First and Last Name; Signature; Date/Time	Received By: — Print First and Last Name; Signature; Date/Time	

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

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Sample Check-in List

04/09/2018 REV.0

Date/Time Received: 3-12-18 | 1415

Container GM Screen Result: (Airlock) 0 cpm Initials [BJ]
Sample GM Screen Result (Sample Receiving) 0 cpm Initials [BJ]
Container Alpha Screen Result: (Airlock) 0 cpm Initials [BJ]
Sample Alpha Screen Result (Sample Receiving) 0 cpm Initials [BJ]

Client: PGW SDG #: W08029 SAF #: A18-003 NA [ ]

Lot Number: J8C130408

Chain of Custody # A18-003-008

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

Samples received inside shipping container/cooler/box
Yes [BJ] 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 [BJ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [BJ]
3. Cooler temperature: 6.5 °C ICE NA [ ]
4. Vermiculite/packing materials is NA [BJ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [BJ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 1x250mLP
8. Sample holding times exceeded? NA [ ] Yes [ ] No [BJ]
9. Samples have: ____tape ____hazard labels [BJ] custody seals [BJ] appropriate sample labels
10. Matrix: ____A (FLT, Wipe, Solid, Soil) [BJ] I (Water) ____S (Air, Niosh 7400) ____T (Biological, Ni-63)
11. Samples:
[BJ] 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 [BJ] 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 [BJ]
14. Description of anomalies (include sample numbers): NA [BJ] _____
15. Sample Location, Sample Collector Listed on COC? * Yes [BJ] No [ ]
*For documentation only. No corrective action needed.
16. Additional Information: N/A

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

Sample Check-in List completed by Sample Custodian:
Signature: BJorgensen Date: 3-12-18

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

[X] No action necessary; process as is

Project Manager [signature] Date 3-14-18

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S18-003-357

Collector: Juan Aguilar /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: CERCLA, MARCH 2018	**Logbook No.:** HNF-N-506-98/SS	**Ice Chest No.:** N/A
Shipped To (Lab): TestAmerica Incorporated, Rich	**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/REMARK
** ** 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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3HHJ6	N	W	3-12-18	0905	1x500-mL P	TC99_ETVDSK_LSC: COMMON NAN8K	6 Months	HCl to pH <2

J8C130409
WO 8029

04/09/2018

Relinquished By: Juan Aguilar /CHPRC	MAR 12 2018	1100	Received By: Troy Bacon CHPRC Troy L. Bacon	MAR 12 2018	1100
Print First and Last Name	Signature	Date/Time	Print First and Last Name	Signature	Date/Time
Relinquished By: Troy L. Bacon CHPRC Troy L. Bacon	MAR 12, 2018	1415	Received By: B. Jorgenson, TARL B Jorgenson	3-12-18	1415
Print First and Last Name	Signature	Date/Time	Print First and Last Name	Signature	Date/Time
Relinquished By:			Received By:		
Print First and Last Name	Signature	Date/Time	Print First and Last Name	Signature	Date/Time
Relinquished By:			Received By:		
Print First and Last Name	Signature	Date/Time	Print First and Last Name	Signature	Date/Time

Matrix *

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

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

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Sample Check-in List

04/09/2018 REV.0

Date/Time Received: 3-12-18 | 1415 Container GM Screen Result: (Airlock) 0 cpm Initials [BJ]
Sample GM Screen Result (Sample Receiving) 0 cpm Initials [BJ]
Container Alpha Screen Result: (Airlock) 0 cpm Initials [BJ]
Sample Alpha Screen Result (Sample Receiving) 0 cpm Initials [BJ]

Client: PGW SDG #: WO8029 SAF #: 518-00330 NA [ ]

Lot Number: J8C130409

Chain of Custody # 518-003-357

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

Samples received inside shipping container/cooler/box Yes [BJ] 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 [BJ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [BJ]
3. Cooler temperature: 6.5 °C ICE NA [ ]
4. Vermiculite/packing materials is NA [BJ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [BJ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 1x500mLP
8. Sample holding times exceeded? NA [ ] Yes [ ] No [BJ]
9. Samples have: ____tape ____hazard labels [BJ] custody seals [BJ] appropriate sample labels
10. Matrix: ____A (FLT, Wipe, Solid, Soil) [BJ] I (Water) ____S (Air, Niosh 7400) ____T (Biological, Ni-63)
11. Samples:
[BJ] 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 [BJ] 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 [BJ]
14. Description of anomalies (include sample numbers): NA [BJ] ____
15. Sample Location, Sample Collector Listed on COC? * Yes [BJ] No [ ]
*For documentation only. No corrective action needed.
16. Additional Information: N/A

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

Sample Check-in List completed by Sample Custodian:
Signature: BJagmson Date: 3-12-18

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

[X] No action necessary; process as is

Project Manager [signature] Date 3-14-18

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I18-006-080
		Page 1 of 1

Collector: Kathy Turner /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: I18-006	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: AEA, MARCH 2018	**Logbook No.:** HNF-N-506-77-72	**Ice Chest No.:** N/A
Shipped To (Lab): TestAmerica Incorporated, Rich	**Method of Shipment** GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.:** N/A
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** N/A

POSSIBLE SAMPLE HAZARDS/REMARK
** ** 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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3HDJ1	N	W	MAR 12 2018	1236	1x500-mL P	TC99_ETVDSK_LSC: COMMON NANBT	6 Months	HCl to pH <2

J8C130413
W08029

Page 10 of 45

04/09/2018

Relinquished By: Kathy Turner /CHPRC — Print First and Last Name; Signature; MAR 12 2018 1420 — Date/Time	Received By: SSU-1 — Print First and Last Name; Signature; MAR 12 2018 1420 — Date/Time	Matrix *
Relinquished By: SSU-1 — Print First and Last Name; Signature; MAR 13 2018 1050 — Date/Time	Received By: Frank Hall /CHPRC — Print First and Last Name; Signature; MAR 13 2018 1050 — Date/Time	S = Soil, SE = Sediment, SO = Solid, SL = Sludge, W = Water, O = Oil, A = Air, DS = Drum Solids, DL = Drum Liquid, T = Tissue, WI = Wipe, L = Liquid, V = Vegetation, X = Other
Relinquished By: Frank Hall /CHPRC — Print First and Last Name; Signature; MAR 13 2018 1205 — Date/Time	Received By: TM9 R Holm TARL — Print First and Last Name; Signature; 3/13/18 1205 — Date/Time	
Relinquished By: — Print First and Last Name; Signature; Date/Time	Received By: — Print First and Last Name; Signature; Date/Time	

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

REV.0

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04/09/2018

Sample Check-in List

REV.0

Date/Time Received: 3/13/18 12:05 Container GM Screen Result: (Airlock) 0 cpm Initials [BJ]
Sample GM Screen Result (Sample Receiving) 0 cpm Initials [BJ]
Container Alpha Screen Result: (Airlock) 0 cpm Initials [BJ]
Sample Alpha Screen Result (Sample Receiving) 0 cpm Initials [BJ]

Client: PGL SDG #: W0829 SAF #: 118-0006 NA [ ]

Lot Number:

Chain of Custody # 118-0006-080

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

Samples received inside shipping container/cooler/box Yes [BJ] 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 [BJ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [BJ]
3. Cooler temperature: 5.9 °C ICE NA [ ]
4. Vermiculite/packing materials is NA [BJ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [BJ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 1 x 500mLP
8. Sample holding times exceeded? NA [ ] Yes [ ] No [BJ]
9. Samples have: ____tape ____hazard labels [BJ] custody seals [BJ] appropriate sample labels
10. Matrix: ____A (FLT, Wipe, Solid, Soil) [BJ] I (Water) ____S (Air, Niosh 7400) ____T (Biological, Ni-63)
11. Samples:
[BJ] 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 [BJ] 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 [BJ]
14. Description of anomalies (include sample numbers): NA [BJ]
15. Sample Location, Sample Collector Listed on COC? * Yes [BJ] No [ ]
*For documentation only. No corrective action needed.
16. Additional Information: N/A

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

Sample Check-in List completed by Sample Custodian:
Signature: BJoagmson Date: 3-13-18

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

[X] No action necessary; process as is

Project Manager Ashley Worth Date

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # A18-003-007
		Page 1 of 1

Collector: Kathy Turner /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: A18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: LLWMA-3-PA, MARCH 2018	**Logbook No.:** HNF-N-506-97-72	**Ice Chest No.:** N/A
Shipped To (Lab): TestAmerica Incorporated, Rich	**Method of Shipment** GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.:** N/A
Protocol Monitoring	**Priority:** 30 Days	**Offsite Property No.:** N/A

POSSIBLE SAMPLE HAZARDS/REMARK
** ** 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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3HDB7	N	W	MAR 12 2018	1236	1x250-mL P	906.0_TRITIUM_LSC: COMMON	6 Months	None
B3HDB7	N	W	↓	↓	1x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON NA N8V	6 Months	None

Page 12 of 45

J8C130414
W08029

04/09/2018

Relinquished Kathy Turner /CHPRC — Print First and Last Name: Kathy Turner — Signature — MAR 12 2018 1430 Date/Time	Received By: SSU-1 — Print First and Last Name — Signature — MAR 12 2018 1430 Date/Time	Matrix *
Relinquished By: SSU-1 — Print First and Last Name — Signature — MAR 13 2018 Date/Time	Received By: Frank Hall /CHPRC — Print First and Last Name — Signature — MAR 13 2018 Date/Time	S = Soil, SE = Sediment, SO = Solid, SL = Sludge, W = Water, O = Oil, A = Air, DS = Drum Solids, DL = Drum Liquid, T = Tissue, WI = Wipe, L = Liquid, V = Vegetation, X = Other
Relinquished By: Frank Hall /CHPRC — Print First and Last Name — Signature — MAR 13 2018 Date/Time	Received By: Tina R Holm TARL — Print First and Last Name — Signature — 3/13/18 12:15 Date/Time	
Relinquished By: — Print First and Last Name — Signature — Date/Time	Received By: — Print First and Last Name — Signature — Date/Time	

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

REV.0

TestAmerica
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04/09/2018

Sample Check-in List

REV.0

Date/Time Received: 3/13/18 12:05 Container GM Screen Result: (Airlock) 0 cpm Initials [BJ]
Sample GM Screen Result (Sample Receiving) 0 cpm Initials [BJ]
Container Alpha Screen Result: (Airlock) 0 cpm Initials [BJ]
Sample Alpha Screen Result (Sample Receiving) 0 cpm Initials [BJ]

Client: PGL SDG #: W08029 SAF #: AIB-003 NA [ ]

Lot Number: J8C130414

Chain of Custody # AIB-003-007

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

Samples received inside shipping container/cooler/box Yes [BJ] 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 [BJ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [BJ]
3. Cooler temperature: 5.9 °C ICE NA [ ]
4. Vermiculite/packing materials is NA [BJ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [BJ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 2
7. Containers received: 1 x 250 mL P; 1 x 4 L P
8. Sample holding times exceeded? NA [ ] Yes [ ] No [BJ]
9. Samples have: ____tape ____hazard labels [BJ] custody seals [BJ] appropriate sample labels
10. Matrix: ____A (FLT, Wipe, Solid, Soil) [BJ] I (Water) ____S (Air, Niosh 7400) ____T (Biological, Ni-63)
11. Samples:
[BJ] 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 [BJ] 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 [BJ]
14. Description of anomalies (include sample numbers): NA [BJ] _____
15. Sample Location, Sample Collector Listed on COC? * Yes [BJ] No [ ]
*For documentation only. No corrective action needed.
16. Additional Information: N/A

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

Sample Check-in List completed by Sample Custodian:
Signature: BJ Jagnson Date: 3-13-18

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

[X] No action necessary; process as is

Project Manager Ashley Worthy Date 3-14-18

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S18-003-350
		Page 1 of 1

Collector: Juan Aguilar /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: CERCLA, MARCH 2018	**Logbook No.:** HNF-N-506-98/56	**Ice Chest No.:** N/A
Shipped To (Lab): TestAmerica Incorporated, Rich	**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/REMARK
** ** 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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3HHH0	N	W	3-13-18	0849	1x500-mL P	TC99_ETVDSK_LSC: COMMON NANOX	6 Months	HCl to pH <2

J8C130415
W08029

Page 14 of 45

04/09/2018

Relinquished By: Juan Aguilar /CHPRC Print First and Last Name	Signature	MAR 13 2018 0950 Date/Time	Received By: Mike Esparza /CHPRC Print First and Last Name / Signature / MAR 13 2018 0950 Date/Time
Relinquished By: Mike Esparza /CHPRC Print First and Last Name	Signature	MAR 13 2018 1050 Date/Time	Received By: Frank Hall /CHPRC Print First and Last Name / Signature / MAR 13 2018 1050 Date/Time
Relinquished By: Frank Hall /CHPRC Print First and Last Name	Signature	MAR 13 2018 1205 Date/Time	Received By: Tme R Holm TARL Print First and Last Name / Signature / 3/13/18 1205 Date/Time
Relinquished By: Print First and Last Name	Signature	Date/Time	Received By: Print First and Last Name / Signature / Date/Time

Matrix *

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

REV.0

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

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S18-003-349
		Page 1 of 1

Collector: Juan Aguilar /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: CERCLA, MARCH 2018	**Logbook No.:** HNF-N-506 - 98156	**Ice Chest No.:** N/A
Shipped To (Lab): TestAmerica Incorporated, Rich	**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/REMARK
** ** 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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3HHF9	N	W	3-13-18	0645	1x500-mL P	TC99_ETVDSK_LSC: COMMON NAN84	6 Months	HCl to pH <2

J8C130415
W08029

Page 15 of 45

04/09/2018

Relinquished By	Received By
Juan Aguilar /CHPRC — Print First and Last Name / Signature / MAR 13 2018 0950 Date/Time	Mike Esparza /CHPRC — Print First and Last Name / Signature / MAR 13 2018 0950 Date/Time
Mike Esparza /CHPRC — Print First and Last Name / Signature / MAR 13 2018 1030 Date/Time	Frank Hall /CHPRC — Print First and Last Name / Signature / MAR 13 2018 1330 Date/Time
Frank Hall /CHPRC — Print First and Last Name / Signature / MAR 13 2018 1330 Date/Time	Eric R Holm TARL — Print First and Last Name / Signature / 3/13/18/1205 Date/Time
Relinquished By: — Print First and Last Name / Signature / Date/Time	Received By: — Print First and Last Name / Signature / Date/Time

Matrix *

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

REV.0

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

04/09/2018 REV.0

Date/Time Received: 3/13/18 12:05 Container GM Screen Result: (Airlock) 0 cpm Initials [BJ]
Sample GM Screen Result (Sample Receiving) 0 cpm Initials [BJ]
Container Alpha Screen Result: (Airlock) 0 cpm Initials [BJ]
Sample Alpha Screen Result (Sample Receiving) 0 cpm Initials [BJ]

Client: PGLV SDG #: W08029 SAF #: 518-003 NA [ ]

Lot Number: JBC130415

Chain of Custody # 518-003-349; 350

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

Samples received inside shipping container/cooler/box Yes [BJ] 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 [BJ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [BJ]
3. Cooler temperature: 5.9 °C ICE NA [ ]
4. Vermiculite/packing materials is NA [BJ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [BJ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 2
7. Containers received: 2x500mLP
8. Sample holding times exceeded? NA [ ] Yes [ ] No [BJ]
9. Samples have: ____tape ____hazard labels [BJ] custody seals [BJ] appropriate sample labels
10. Matrix: ____A (FLT, Wipe, Solid, Soil) [BJ] I (Water) ____S (Air, Niosh 7400) ____T (Biological, Ni-63)
11. Samples:
[BJ] 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 [BJ] 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 [BJ]
14. Description of anomalies (include sample numbers): NA [BJ]]
15. Sample Location, Sample Collector Listed on COC? * Yes [BJ] No [ ]
*For documentation only. No corrective action needed.
16. Additional Information: N/A

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

Sample Check-in List completed by Sample Custodian:
Signature: BJ augmson Date: 3-13-18

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

[✓] No action necessary; process as is

Project Manager [signature] Date 3-14-18

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S18-003-351
		Page 1 of 1

Collector: Juan Aguilar /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: CERCLA, MARCH 2018	**Logbook No.:** HNF-N-506 -9815 6	**Ice Chest No.:** N/A
Shipped To (Lab): TestAmerica Incorporated, Rich	**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/REMARK
** ** 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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3HHH1	N	W	3-13-18	1127	1x500-mL P	TC99_ETVDSK_LSC: COMMON NAN80	6 Months	HCl to pH <2

J8C130416
W08029

Page 17 of 45

04/09/2018

Relinquished By: Juan Aguilar /CHPRC	MAR 1 3 2018 1206	Received By: CHRIS FULTON CHPRC	MAR 1 3 2018 1206	Matrix *
Print First and Last Name	Signature Date/Time	Print First and Last Name	Signature Date/Time	S = Soil, DS = Drum Solids, SE = Sediment, DL = Drum Liquid, SO = Solid, T = Tissue, SL = Sludge, WI = Wipe, W = Water, L = Liquid, O = Oil, V = Vegetation, A = Air, X = Other
Relinquished By: CHRIS FULTON CHPRC	MAR 1 3 2018 1230	Received By: Mike Esparza /CHPRC	MAR 1 3 2018 1230	
Print First and Last Name	Signature Date/Time	Print First and Last Name	Signature Date/Time	
Relinquished By: Mike Esparza /CHPRC	MAR 1 3 2018 1420	Received By: Tina R Holm TARGET HC	MAR 1 3 2018 1420	
Print First and Last Name	Signature Date/Time	Print First and Last Name	Signature Date/Time	
Relinquished By:		Received By:		
Print First and Last Name	Signature Date/Time	Print First and Last Name	Signature Date/Time	

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

REV.0

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S18-003-260 Page 1 of 1

Collector: Kathy Turner /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: CERCLA, MARCH 2018	**Logbook No.:** HNF-N-506 -97-73	**Ice Chest No.:** N/A
Shipped To (Lab): TestAmerica Incorporated, Rich	**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/REMARK
** ** 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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3HF48	N	W	MAR 13 2018	1104	1x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON NANBI	6 Months	HNO3 to pH <2

J8C130416
W08029

Page 18 of 45

04/09/2018

Relinquished By: Kathy Turner /CHPRC	Signature	MAR 13 2018 1135	Received By: Maria Esparza /CHPRC	Signature	MAR 13 2018 1135
Relinquished By: Maria Esparza /CHPRC	Signature	MAR 13 2018 1420	Received By: Tina R Holm TARL	Signature	MAR 13 2018 1420
Relinquished By:	Signature		Received By:	Signature	
Relinquished By:	Signature		Received By:	Signature	

Matrix *

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

REV.0

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

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S18-003-256
		Page 1 of 1

Collector: Kathy Turner /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650	
SAF No.: S18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071	
Project Title: CERCLA, MARCH 2018	**Logbook No.:** HNF-N-506 ~~97-73~~ 97318	**Ice Chest No.:** N/A	
Shipped To (Lab): TestAmerica Incorporated, Rich	**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/REMARK
** ** 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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3HF40	N		MAR 13 2018	0837	1x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON VAN82	6 Months	HNO3 to pH <2

J8C130416
W08029

Page 19 of 45

04/09/2018

Relinquished By: Kathy Turner /CHPRC — Print First and Last Name; Signature; MAR 13 2018 1135 — Date/Time	Received By: Mike Esperza /CHPRC — Print First and Last Name; Signature; MAR 13 2018 1135 — Date/Time	Matrix *
Relinquished By: Mike Esperza /CHPRC — Print First and Last Name; Signature; MAR 13 2018 1420 — Date/Time	Received By: Tracy R Holm TAR — Print First and Last Name; Signature; MAR 13 2018 1420 — Date/Time	S = Soil; SE = Sediment; SO = Solid; SL = Sludge; W = Water; O = Oil; A = Air; DS = Drum Solids; DL = Drum Liquid; T = Tissue; WI = Wipe; L = Liquid; V = Vegetation; X = Other
Relinquished By: — Print First and Last Name; Signature; Date/Time	Received By: — Print First and Last Name; Signature; Date/Time	
Relinquished By: — Print First and Last Name; Signature; Date/Time	Received By: — Print First and Last Name; Signature; Date/Time	

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

REV.0

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S18-003-242 Page 1 of 1

Collector:	Kathy Turner /CHPRC	**Contact/Requester:**	Karen Waters-Husted	**Telephone No.:**	509-376-4650
SAF No.:	S18-003	**Sampling Origin:**	Hanford Site	**Purchase Order/Charge Code:**	300071
Project Title:	CERCLA, MARCH 2018	**Logbook No.:**	HNF-N-506 - 97-73	**Ice Chest No.:**	N/A
Shipped To (Lab):	TestAmerica Incorporated, Rich	**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/REMARK
** ** 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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3HH67	N	W	MAR 13 2018	0940	1x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON NAN83	6 Months	HNO3 to pH <2

J8C130416
W08029

Page 20 of 45

04/09/2018

Relinquished By:	Signature	Date/Time	Received By:	Signature	Date/Time
Kathy Turner /CHPRC	Kathy Turner	MAR 13 2018 1135	Mike Esparza /CHPRC	Mike Esparza	MAR 13 2018 1135
Mike Esparza /CHPRC	Mike Esparza	MAR 13 2018 1420	Thom Holm TARL	Thom Holm	MAR 13 2018 1420

Matrix *

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

REV.0

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

Printed On 1/15/2018 FSR ID = FSR57097 A-6004-842 (REV 3)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C.# S18-003-258 Page 1 of 1

Collector: Kathy Turner /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: CERCLA, MARCH 2018	**Logbook No.:** HNF-N-506 -97-73	**Ice Chest No.:** N/A
Shipped To (Lab): TestAmerica Incorporated, Rich	**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/REMARK
** ** 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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3HF44	N	W	MAR 13 2018	1221	1x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON NAN84	6 Months	HNO3 to pH <2

J8C130416
W08029

Page 21 of 45

04/09/2018

Relinquished By:	Received By:
Kathy Turner /CHPRC — Kathy Turner — MAR 13 2018 1330	Mike Esparza /CHPRC — MAR 13 2018 1330
Print First and Last Name / Signature / Date/Time	Print First and Last Name / Signature / Date/Time
Mike Esparza /CHPRC — MAR 13 2018 1420	TMR Holm TARL — MAR 13 2018 1420
Print First and Last Name / Signature / Date/Time	Print First and Last Name / Signature / Date/Time
Relinquished By:	Received By:
Print First and Last Name / Signature / Date/Time	Print First and Last Name / Signature / Date/Time
Relinquished By:	Received By:
Print First and Last Name / Signature / Date/Time	Print First and Last Name / Signature / Date/Time

Matrix *

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

REV.0

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

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C.# S18-003-353
		Page 1 of 1

Collector: Juan Aguilar /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: CERCLA, MARCH 2018	**Logbook No.:** HNF-N-506 - 98156	**Ice Chest No.:** N/A
Shipped To (Lab): TestAmerica Incorporated, Rich	**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/REMARK
** ** 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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3HHH2	N	W	3-13-18	1127	1x500-mL P	TC99_ETVDSK_LSC: COMMON NAN85	6 Months	HCl to pH <2

J8C130416
W08029

Page 22 of 45

04/09/2018

Relinquished By: Juan Aguilar /CHPRC	MAR 13 2018 1206	Received By: CHRIS FULTON CHPRC	MAR 13 2018 1206
Print First and Last Name / Signature / Date/Time		Print First and Last Name / Signature / Date/Time	
Relinquished By: CHRIS FULTON CHPRC	MAR 13 2018 1230	Received By: Mike Espinoza /CHPRC	MAR 13 2018 1230
Print First and Last Name / Signature / Date/Time		Print First and Last Name / Signature / Date/Time	
Relinquished By: Mike Espinoza /CHPRC	MAR 13 2018 1430	Received By: Tina R Holmes HARC	MAR 13 2018 1430
Print First and Last Name / Signature / Date/Time		Print First and Last Name / Signature / Date/Time	
Relinquished By:		Received By:	
Print First and Last Name / Signature / Date/Time		Print First and Last Name / Signature / Date/Time	

Matrix *

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

REV.0

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

Printed On 1/30/2018

FSR ID = FSR57456

A-6004-842 (REV 3)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

04/09/2018

Sample Check-in List

REV.0

Date/Time Received: 3-13-18 / 1420 Container GM Screen Result: (Airlock) 0 cpm Initials [JN]
Sample GM Screen Result (Sample Receiving) 0 cpm Initials [JN]
Container Alpha Screen Result: (Airlock) 0 cpm Initials [JN]
Sample Alpha Screen Result (Sample Receiving) 0 cpm Initials [JN]

Client: PGW SDG #: W08029 SAF #: 518-003 NA [ ]

Lot Number: JBC130416

Chain of Custody # 518-003-351 ; 260; 256; 242; 258; 353

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

Samples received inside shipping container/cooler/box Yes [JN] 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 [JN]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [JN]
3. Cooler temperature: 12.0 °C Ice. NA [ ]
4. Vermiculite/packing materials is NA [JN] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [JN] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 6
7. Containers received: 2 x 500mLP; 4xLP
8. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
9. Samples have: ____tape ____hazard labels [JN] custody seals [JN] appropriate sample labels
10. Matrix: ____A (FLT, Wipe, Solid, Soil) [JN] I (Water) ____S (Air, Niosh 7400) ____T (Biological, Ni-63)
11. Samples:
[JN] 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 [JN] 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 [JN]
14. Description of anomalies (include sample numbers): NA [JN] ____
15. Sample Location, Sample Collector Listed on COC? * Yes [JN] No [ ]
*For documentation only. No corrective action needed.
16. Additional Information: N/A

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

Sample Check-in List completed by Sample Custodian:
Signature: _____ Date: 3/13/18 JN 3/13/18 3/13/18

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

[X] No action necessary; process as is

Project Manager _____ Date 3-14-18

Sample Results Summary

Date: 09-Apr-18

TestAmerica Inc TARL

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

Report No. : 72587 **SDG No:** W08029

Batch	Client Id / Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
8074020 SRISO_SEP_PRECIP_GPC									
B3HF40									
	NAN821AA	STRONTIUM	1.87E+00 +- 9.8E-01		pCi/L	88%	1.24E+00	2.00E+00	
B3HF44									
	NAN841AA	STRONTIUM	9.28E-01 +- 8.5E-01	U	pCi/L	83%	1.32E+00	2.00E+00	
B3HF48									
	NAN811AA	STRONTIUM	1.10E+00 +- 8.8E-01	U	pCi/L	84%	1.32E+00	2.00E+00	
B3HF48 DUP									
	NAN811AC	STRONTIUM	1.78E-01 +- 7.1E-01	U	pCi/L	86%	1.26E+00	2.00E+00	144.1
B3HH67									
	NAN831AA	STRONTIUM	2.04E+01 +- 5.2E+00		pCi/L	85%	1.34E+00	2.00E+00	
8074018 I129LL_SEP_LEPS_GS									
B3HDB7									
	NAN8V1AC	I129	6.72E-02 +- 2.7E-01	U	pCi/L	87%	5.23E-01	1.00E+00	
B3HDB7 DUP									
	NAN8V1AD	I129	-8.42E-02 +- 4.3E-01	U	pCi/L	89%	7.49E-01	1.00E+00	-1788.3
8074019 906.0_H3_LSC									
B3HDB7									
	NAN8V1AA	H-3	-5.59E+01 +- 2.1E+02	U	pCi/L	100%	4.52E+02	7.00E+02	
B3HDC0									
	NAN8J1AA	H-3	3.10E+02 +- 2.3E+02	U	pCi/L	100%	4.53E+02	7.00E+02	
B3HDC0 DUP									
	NAN8J1AC	H-3	2.00E+02 +- 2.2E+02	U	pCi/L	100%	4.54E+02	7.00E+02	43.3
8084050 TC99_ETVDSK_LSC									
B3HDJ1									
	NAN8T2AA	TC-99	-8.74E-01 +- 5.9E+00	U	pCi/L	100%	1.31E+01	5.00E+01	
B3HDJ1 DUP									
	NAN8T2AC	TC-99	-3.06E+00 +- 5.7E+00	U	pCi/L	100%	1.24E+01	5.00E+01	-111.0
B3HHF9									
	NAN8W2AA	TC-99	-4.47E+00 +- 5.5E+00	U	pCi/L	100%	1.20E+01	5.00E+01	
B3HHH0									
	NAN8X2AA	TC-99	2.44E+03 +- 7.1E+01		pCi/L	100%	1.15E+01	5.00E+01	
B3HHH1									
	NAN802AA	TC-99	1.14E+04 +- 3.0E+02		pCi/L	100%	1.25E+01	5.00E+01	
B3HHH2									
	NAN852AA	TC-99	1.08E+04 +- 2.8E+02		pCi/L	100%	1.16E+01	5.00E+01	
B3HHJ6									
	NAN8K2AA	TC-99	1.94E+03 +- 5.8E+01		pCi/L	100%	1.22E+01	5.00E+01	

No. of Results: 17

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: 09-Apr-18

TestAmerica Inc TARL

Ordered by Method, Batch No, QC Type,.

Report No. : 72587 **SDG No.:** W08029

Batch / Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDL
SRISO_SEP_PRECIP_GPC								
8074020 BLANK QC,								
NAPDN1AA	STRONTIUM	-2.05E-01 +- 6.8E-01	U	pCi/L	82%			1.30E+00
8074020 LCS,								
NAPDN1AC	STRONTIUM	1.45E+01 +- 3.7E+00		pCi/L	87%	107%	0.1	1.25E+00
I129LL_SEP_LEPS_GS								
8074018 BLANK QC,								
NAPDL1AA	I129	1.49E-01 +- 2.7E-01	U	pCi/L	93%			5.45E-01
8074018 LCS,								
NAPDL2AC	I129	1.94E+01 +- 2.8E+00		pCi/L	93%	102%	0.0	7.19E-01
906.0_H3_LSC								
8074019 MATRIX SPIKE, B3HDB7								
NAN8V1AE	H-3	1.64E+03 +- 3.3E+02		pCi/L	100%	101%	0.0	5.30E+02
8074019 BLANK QC,								
NAPDM1AA	H-3	2.11E+02 +- 2.2E+02	U	pCi/L	100%			4.64E+02
8074019 LCS,								
NAPDM1AC	H-3	2.76E+03 +- 3.5E+02		pCi/L	100%	100%	0.0	4.61E+02
TC99_ETVDSK_LSC								
8084050 MATRIX SPIKE, B3HHJ6								
NAN8K2AC	TC-99	4.83E+02 +- 9.2E+01		pCi/L	100%	90%	-0.1	1.23E+01
8084050 BLANK QC,								
NAPDQ2AA	TC-99	-3.67E+00 +- 5.6E+00	U	pCi/L	100%			1.21E+01
8084050 LCS,								
NAPDQ2AC	TC-99	8.78E+01 +- 8.8E+00		pCi/L	100%	81%	-0.2	1.16E+01

No. of Results: 10

TestAmerica Inc

rptSTLRchQcSummary V5.8.5 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: 09-Apr-18

Lab Name:	**TestAmerica Inc**	**SDG:**	W08029	**Collection Date:**	3/12/2018 12:36:00 PM
Lot-Sample No.:	**J8C130414-1**	**Report No. :**	72587	**Received Date:**	3/13/2018 12:05:00 PM
Client Sample ID:	**B3HDB7**	**COC No. :**	A18-003-007	**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: 8074018	I129LL_SEP_LEPS_GS			**Work Order:** NAN8V1AC			**Report DB ID:** 9NAN8V10					
I129	**6.72E-02**	U	2.7E-01	2.7E-01	5.23E-01	pCi/L	87%	*0.13*	4/3/18 01:19 p		2.00044	LEP5$1
							1.00E+00	*0.5*			L	
Batch: 8074019	906.0_H3_LSC			**Work Order:** NAN8V1AA			**Report DB ID:** 9NAN8V10					
H-3	**-5.59E+01**	U	1.8E+02	2.1E+02	4.52E+02	pCi/L	100%	*-0.12*	4/6/18 02:08 a		0.00503	LSC6
						2.09E+02	7.00E+02	*-0.54*			L	

No. of Results: 2 **Comments:**

04/09/2018

REV.0

TestAmerica Inc

rptSTLRchSample V5.8.5 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: 09-Apr-18

Lab Name: TestAmerica Inc | **SDG:** W08029 | **Collection Date:** 3/12/2018 10:03:00 AM

Lot-Sample No.: J8C130408-1 | **Report No. :** 72587 | **Received Date:** 3/12/2018 2:15:00 PM

Client Sample ID: B3HDC0 | **COC No. :** A18-003-008 | **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: 8074019	906.0_H3_LSC			**Work Order:** NAN8J1AA		**Report DB ID:** 9NAN8J10						
H-3	**3.10E+02**	U	2.0E+02	2.3E+02	4.53E+02	pCi/L	100%	*0.68*	4/6/18 12:40 a		0.00501	LSC6
						2.10E+02	7.00E+02	*(2.7)*			L	

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

04/09/2018

REV.0

FORM I

SAMPLE RESULTS

Date: 09-Apr-18

Lab Name: TestAmerica Inc | **SDG:** W08029 | **Collection Date:** 3/12/2018 12:36:00 PM

Lot-Sample No.: J8C130413-1 | **Report No. :** 72587 | **Received Date:** 3/13/2018 12:05:00 PM

Client Sample ID: B3HDJ1 | **COC No. :** I18-006-080 | **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: 8084050	TC99_ETVDSK_LSC			**Work Order:** NAN8T2AA			**Report DB ID:** 9NAN8T20					
TC-99	**-8.74E-01**	U	5.2E+00	5.9E+00	1.31E+01	pCi/L	100%	*-0.07*	3/28/18 04:56 p		0.12549	LSC10
						6.20E+00	5.00E+01	*-0.3*			L	

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

04/09/2018

REV.0

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: 09-Apr-18

Lab Name: TestAmerica Inc | **SDG:** W08029 | **Collection Date:** 3/13/2018 8:37:00 AM

Lot-Sample No.: J8C130416-3 | **Report No. :** 72587 | **Received Date:** 3/13/2018 2:20:00 PM

Client Sample ID: B3HF40 | **COC No. :** S18-003-256 | **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: 8074020	SRISO_SEP_PRECIP_GPC			**Work Order:** NAN821AA			**Report DB ID:** 9NAN8210					
STRONTIUM	**1.87E+00**		8.8E-01	9.8E-01	1.24E+00	pCi/L	88%	*(1.5)*	3/22/18 07:50 a		0.5007	GPC32C
						5.60E-01	2.00E+00	*(3.8)*			L	

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

04/09/2018

REV.0

FORM I

SAMPLE RESULTS

Date: 09-Apr-18

Lab Name: TestAmerica Inc | **SDG:** W08029 | **Collection Date:** 3/13/2018 12:21:00 PM

Lot-Sample No.: J8C130416-5 | **Report No. :** 72587 | **Received Date:** 3/13/2018 2:20:00 PM

Client Sample ID: B3HF44 | **COC No. :** S18-003-258 | **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: 8074020	SRISO_SEP_PRECIP_GPC			**Work Order:**	NAN841AA		**Report DB ID:**	9NAN8410				
STRONTIUM	**9.28E-01**	U	8.3E-01	8.5E-01	1.32E+00	pCi/L	83%	*0.7*	3/22/18 08:42 a		0.50069	GPC32A
						5.95E-01	2.00E+00	*(2.2)*			L	

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

04/09/2018

REV.0

FORM I

SAMPLE RESULTS

Date: 09-Apr-18

Lab Name: TestAmerica Inc | **SDG:** W08029 | **Collection Date:** 3/13/2018 11:04:00 AM

Lot-Sample No.: J8C130416-2 | **Report No. :** 72587 | **Received Date:** 3/13/2018 2:20:00 PM

Client Sample ID: B3HF48 | **COC No. :** S18-003-260 | **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: 8074020	SRISO_SEP_PRECIP_GPC			**Work Order:**	NAN811AA		**Report DB ID:**	9NAN8110				
STRONTIUM	**1.10E+00**	U	8.4E-01	8.8E-01	1.32E+00	pCi/L	84%	*0.83*	3/22/18 07:50 a		0.50035	GPC32A
						5.94E-01	2.00E+00	*(2.5)*			L	

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

04/09/2018

REV.0

TestAmerica Inc

rptSTLRchSample V5.8.5 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: 09-Apr-18

Lab Name:	**TestAmerica Inc**	**SDG:**	W08029	**Collection Date:**	3/13/2018 9:40:00 AM
Lot-Sample No.:	**J8C130416-4**	**Report No. :**	72587	**Received Date:**	3/13/2018 2:20:00 PM
Client Sample ID:	**B3HH67**	**COC No. :**	S18-003-242	**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: 8074020	SRISO_SEP_PRECIP_GPC			**Work Order:**	NAN831AA		**Report DB ID:**	9NAN8310				
STRONTIUM	**2.04E+01**		2.0E+00	5.2E+00	1.34E+00	pCi/L	85%	*(15.2)*	3/22/18 07:50 a		0.50051	GPC32D
						6.06E-01	2.00E+00	*(7.8)*			L	

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

04/09/2018

REV.0

TestAmerica Inc

rptSTLRchSample V5.8.5 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: 09-Apr-18

Lab Name: TestAmerica Inc | **SDG:** W08029 | **Collection Date:** 3/13/2018 6:45:00 AM

Lot-Sample No.: J8C130415-1 | **Report No. :** 72587 | **Received Date:** 3/13/2018 12:05:00 PM

Client Sample ID: B3HHF9 | **COC No. :** S18-003-349 | **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: 8084050	TC99_ETVDSK_LSC			**Work Order:** NAN8W2AA			**Report DB ID:** 9NAN8W20					
TC-99	**-4.47E+00**	U	4.8E+00	5.5E+00	1.20E+01	pCi/L	100%	*-0.37*	3/28/18 06:25 p		0.12712	LSC10
						5.68E+00	5.00E+01	*-(1.6)*			L	

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

04/09/2018

REV.0

TestAmerica Inc

rptSTLRchSample V5.8.5 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: 09-Apr-18

Lab Name:	**TestAmerica Inc**	**SDG:**	W08029	**Collection Date:**	3/13/2018 8:49:00 AM
Lot-Sample No.:	**J8C130415-2**	**Report No. :**	72587	**Received Date:**	3/13/2018 12:05:00 PM
Client Sample ID:	**B3HHH0**	**COC No. :**	S18-003-350	**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: 8084050	TC99_ETVDSK_LSC			**Work Order:** NAN8X2AA			**Report DB ID:** 9NAN8X20					
TC-99	**2.44E+03**		3.3E+01	7.1E+01	1.15E+01	pCi/L	100%	*(211.7)*	3/28/18 07:10 p		0.1255	LSC10
						5.45E+00	5.00E+01	*(68.9)*			L	

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

04/09/2018

REV.0

FORM I

SAMPLE RESULTS

Date: 09-Apr-18

Lab Name: TestAmerica Inc | **SDG:** W08029 | **Collection Date:** 3/13/2018 11:27:00 AM

Lot-Sample No.: J8C130416-1 | **Report No. :** 72587 | **Received Date:** 3/13/2018 2:20:00 PM

Client Sample ID: B3HHH1 | **COC No. :** S18-003-351 | **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: 8084050	TC99_ETVDSK_LSC			**Work Order:** NAN802AA			**Report DB ID:** 9NAN8020					
TC-99	**1.14E+04**		7.3E+01	3.0E+02	1.25E+01	pCi/L	100%	*(913.)*	3/28/18 07:54 p		0.1253	LSC10
						5.89E+00	5.00E+01	*(75.9)*			L	

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

04/09/2018

REV.0

FORM I

SAMPLE RESULTS

Date: 09-Apr-18

Lab Name: TestAmerica Inc | **SDG:** W08029 | **Collection Date:** 3/13/2018 11:27:00 AM

Lot-Sample No.: J8C130416-6 | **Report No. :** 72587 | **Received Date:** 3/13/2018 2:20:00 PM

Client Sample ID: B3HHH2 | **COC No. :** S18-003-353 | **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: 8084050	TC99_ETVDSK_LSC			**Work Order:** NAN852AA			**Report DB ID:** 9NAN8520					
TC-99	**1.08E+04**		6.8E+01	2.8E+02	1.16E+01	pCi/L	100%	*(926.9)*	3/28/18 08:39 p		0.12566	LSC10
						5.50E+00	5.00E+01	*(76.)*			L	

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

04/09/2018

REV.0

FORM I

SAMPLE RESULTS

Date: 09-Apr-18

Lab Name: TestAmerica Inc | **SDG:** W08029 | **Collection Date:** 3/12/2018 9:05:00 AM

Lot-Sample No.: J8C130409-1 | **Report No. :** 72587 | **Received Date:** 3/12/2018 2:15:00 PM

Client Sample ID: B3HHJ6 | **COC No. :** S18-003-357 | **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: 8084050	TC99_ETVDSK_LSC			**Work Order:** NAN8K2AA			**Report DB ID:** 9NAN8K20					
TC-99	**1.94E+03**		3.0E+01	5.8E+01	1.22E+01	pCi/L	100%	*(158.7)*	3/28/18 03:28 p		0.12626	LSC10
						5.78E+00	5.00E+01	*(66.4)*			L	

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

04/09/2018

REV.0

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: 09-Apr-18

DUPLICATE RESULTS

Lab Name:	**TestAmerica Inc**	**SDG:**	W08029	**Collection Date:**	3/12/2018 12:36:00 PM
Lot-Sample No.:	**J8C130414-1**	**Report No. :**	72587	**Received Date:**	3/13/2018 12:05:00 PM
Client Sample ID:	**B3HDB7 DUP**	**COC No. :**	A18-003-007	**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: 8074018	I129LL_SEP_LEPS_GS			**Work Order:**	NAN8V1AD	**Report DB ID:**	NAN8V1DR		**Orig Sa DB ID:**	9NAN8V10		
I129	-8.42E-02	U	4.3E-01	4.3E-01	7.49E-01	pCi/L	89%	-0.11	4/3/18 03:06 p		1.87573	LEP4$1
	6.72E-02	U	**RPD**	**-1788.3**		1.00E+00		-0.4			L	

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

04/09/2018

REV.0

FORM II

Date: 09-Apr-18

DUPLICATE RESULTS

Lab Name:	**TestAmerica Inc**	**SDG:**	W08029	**Collection Date:**	3/12/2018 10:03:00 AM
Lot-Sample No.:	**J8C130408-1**	**Report No. :**	72587	**Received Date:**	3/12/2018 2:15:00 PM
Client Sample ID:	**B3HDC0 DUP**	**COC No. :**	A18-003-008	**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: 8074019	906.0_H3_LSC			**Work Order:**	NAN8J1AC	**Report DB ID:**	NAN8J1CR		**Orig Sa DB ID:**	9NAN8J10		
H-3	2.00E+02	U	1.9E+02	2.2E+02	4.54E+02	pCi/L	100%	0.44	4/6/18 01:24 a		0.00504	LSC6
	3.10E+02	U	**RPD**	**43.3**		7.00E+02		(1.8)			L	

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

04/09/2018

REV.0

TestAmerica Inc

rptSTLRchDupV5.8.5 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: 09-Apr-18

DUPLICATE RESULTS

Lab Name:	**TestAmerica Inc**	**SDG:**	W08029	**Collection Date:**	3/12/2018 12:36:00 PM
Lot-Sample No.:	**J8C130413-1**	**Report No. :**	72587	**Received Date:**	3/13/2018 12:05:00 PM
Client Sample ID:	**B3HDJ1 DUP**	**COC No. :**	I18-006-080	**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: 8084050	TC99_ETVDSK_LSC			**Work Order:**	NAN8T2AC	**Report DB ID:**	NAN8T2CR		**Orig Sa DB ID:**	9NAN8T20		
TC-99	-3.06E+00	U	5.0E+00	5.7E+00	1.24E+01	pCi/L	100%	-0.25	3/28/18 05:41 p		0.12557	LSC10
	-8.74E-01	U	**RPD**	**-111.0**		5.00E+01		-(1.1)			L	

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

04/09/2018

REV.0

TestAmerica Inc

rptSTLRchDupV5. 8.5 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: 09-Apr-18

DUPLICATE RESULTS

Lab Name:	**TestAmerica Inc**	**SDG:**	W08029	**Collection Date:**	3/13/2018 11:04:00 AM
Lot-Sample No.:	**J8C130416-2**	**Report No. :**	72587	**Received Date:**	3/13/2018 2:20:00 PM
Client Sample ID:	**B3HF48 DUP**	**COC No. :**	S18-003-260	**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: 8074020	SRISO_SEP_PRECIP_GPC			**Work Order:**	NAN811AC	**Report DB ID:**	NAN811CR		**Orig Sa DB ID:**	9NAN8110		
STRONTIUM	1.78E-01	U	7.1E-01	7.1E-01	1.26E+00	pCi/L	86%	0.14	3/22/18 07:50 a		0.49441	GPC32B
	1.10E+00	U	**RPD**	**144.1**		2.00E+00		0.5			L	

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

04/09/2018

REV.0

FORM II

BLANK RESULTS

Date: 09-Apr-18

Lab Name: TestAmerica Inc **SDG:** W08029

Matrix: WATER **Report No. :** 72587

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: 8074019	906.0_H3_LSC			**Work Order:**	NAPDM1AA		**Report DB ID:**	NAPDM1AB				
H-3	2.11E+02	U	2.0E+02	2.2E+02	4.64E+02	pCi/L	100%	0.46	4/6/18 03:35 a		0.00501	LSC6
					2.15E+02	7.00E+02		(1.9)			L	
Batch: 8074018	I129LL_SEP_LEPS_GS			**Work Order:**	NAPDL1AA		**Report DB ID:**	NAPDL1AB				
I129	1.49E-01	U	2.7E-01	2.7E-01	5.45E-01	pCi/L	93%	0.27	4/3/18 03:06 p		2.00017	LEP5$1
						1.00E+00		(1.1)			L	
Batch: 8074020	SRISO_SEP_PRECIP_GPC			**Work Order:**	NAPDN1AA		**Report DB ID:**	NAPDN1AB				
STRONTIUM	-2.05E-01	U	6.8E-01	6.8E-01	1.30E+00	pCi/L	82%	-0.16	3/22/18 08:42 a		0.50069	GPC32B
					5.83E-01	2.00E+00		-0.6			L	
Batch: 8084050	TC99_ETVDSK_LSC			**Work Order:**	NAPDQ2AA		**Report DB ID:**	NAPDQ2AB				
TC-99	-3.67E+00	U	4.9E+00	5.6E+00	1.21E+01	pCi/L	100%	-0.3	3/28/18 09:23 p		0.12592	LSC10
					5.72E+00	5.00E+01		-(1.3)			L	

No. of Results: 4 **Comments:**

04/09/2018

REV.0

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: 09-Apr-18

Lab Name: TestAmerica Inc **SDG:** W08029

Matrix: WATER **Report No. :** 72587

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: 8074019	906.0_H3_LSC			**Work Order:**	NAPDM1AC		**Report DB ID:**	NAPDM1CS					
H-3	2.76E+03		3.1E+02	3.5E+02	4.61E+02	pCi/L	100%	2.75E+03	8.3E+01	100%	4/6/18 04:19 a	0.00501	LSC6
							Rec Limits:	80	120	0.0		L	
Batch: 8074018	I129LL_SEP_LEPS_GS			**Work Order:**	NAPDL2AC		**Report DB ID:**	NAPDL2CS					
I129	1.94E+01		2.8E+00	2.8E+00	7.19E-01	pCi/L	93%	1.91E+01		102%	4/5/18 08:07 a	2.00176	LEP5$1
							Rec Limits:	80	120	0.0		L	
Batch: 8074020	SRISO_SEP_PRECIP_GPC			**Work Order:**	NAPDN1AC		**Report DB ID:**	NAPDN1CS					
STRONTIUM	1.45E+01		1.7E+00	3.7E+00	1.25E+00	pCi/L	87%	1.35E+01	9.6E-02	107%	3/22/18 08:42 a	0.50028	GPC32C
							Rec Limits:	80	120	0.1		L	
Batch: 8084050	TC99_ETVDSK_LSC			**Work Order:**	NAPDQ2AC		**Report DB ID:**	NAPDQ2CS					
TC-99	8.78E+01		7.9E+00	8.8E+00	1.16E+01	pCi/L	100%	1.08E+02	6.2E-01	81%	3/28/18 10:07 p	0.12559	LSC10
							Rec Limits:	80	120	-0.2		L	

No. of Results: 4 **Comments:**

04/09/2018

REV.0

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

rptSTLRchLcs
V5.8.5 A2002

FORM II

MATRIX SPIKE RESULTS

Date: 09-Apr-18

Lab Name: TestAmerica Inc **SDG:** W08029

Lot-Sample No.: J8C130409-1, B3HHJ6 **Report No. :** 72587 **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: 8084050	**Work Order:** NAN8K2AC			**Report DB ID:** NAN8K2CW			**Orig Sa DB ID:** 9NAN8K20					
TC-99	4.83E+02		3.4E+01	9.2E+01	1.23E+01	pCi/L	100%	90.30%	5.35E+02	3/28/18 04:12 p	0.12633	TC99_ETVDSK_LSC
	1.94E+03								3.1E+00		L	LSC10

Number of Results: 1

Comments:

04/09/2018

REV.0

TestAmerica Inc

rptSTLRchMs V5.8.5 A2002

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

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

FORM II

MATRIX SPIKE RESULTS

Date: 09-Apr-18

Lab Name: TestAmerica Inc **SDG:** W08029

Lot-Sample No.: J8C130414-1, B3HDB7 **Report No. :** 72587 **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: 8074019	**Work Order:** NAN8V1AE			**Report DB ID:** NAN8V1EW			**Orig Sa DB ID:** 9NAN8V10					
H-3	1.64E+03		3.0E+02	3.3E+02	5.30E+02	pCi/L	100%	101.07%	1.63E+03	4/6/18 02:51 a	0.0043	906.0_H3_LSC
	-5.59E+01								4.9E+01		L	LSC6

Number of Results: 1

Comments:

04/09/2018

REV.0

TestAmerica Inc

rptSTLRchMs V5.8.5 A2002

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

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

W08029

SAMP NUM	WMU Code	WELL NAME	SITE TYPE	PARENT WMU	DESCRIPTION
B3HDB7	218-W-3A	299-W10-29	TSD	218-W-3A	218-W-3A Burial Ground
B3HDC0	218-W-3A	299-W10-31	TSD	218-W-3A	218-W-3A Burial Ground
B3HDJ1	218-W-3A	299-W10-29	TSD	218-W-3A	218-W-3A Burial Ground
B3HDB7	218-W-3AE	299-W10-29	TSD	218-W-3AE	218-W-3AE Burial Ground
B3HDC0	218-W-3AE	299-W10-31	TSD	218-W-3AE	218-W-3AE Burial Ground
B3HDJ1	218-W-3AE	299-W10-29	TSD	218-W-3AE	218-W-3AE Burial Ground
B3HDB7	218-W-5	299-W10-29	TSD	218-W-5	218-W-5 Burial Ground
B3HDC0	218-W-5	299-W10-31	TSD	218-W-5	218-W-5 Burial Ground
B3HDJ1	218-W-5	299-W10-29	TSD	218-W-5	218-W-5 Burial Ground
B3HHH0	241S	299-W22-115	WMU	SST	200 West Area Underground Waste Storage Tank Farm
B3HHH1	241S	299-W22-116	WMU	SST	200 West Area Underground Waste Storage Tank Farm
B3HHH2	241S	299-W22-116	WMU	SST	200 West Area Underground Waste Storage Tank Farm
B3HHJ6	241S	299-W22-93	WMU	SST	200 West Area Underground Waste Storage Tank Farm
B3HHH0	241SX	299-W22-115	WMU	SST	200 West Area Underground Waste Storage Tank Farm
B3HHH1	241SX	299-W22-116	WMU	SST	200 West Area Underground Waste Storage Tank Farm
B3HHH2	241SX	299-W22-116	WMU	SST	200 West Area Underground Waste Storage Tank Farm
B3HHJ6	241SX	299-W22-93	WMU	SST	200 West Area Underground Waste Storage Tank Farm