

**SAF-NFM-018**  
**300 D&D Near Field Monitoring –**  
**Air Filter Analysis**  
**FINAL DATA PACKAGE**

**COMPLETE COPY OF DATA PACKAGE TO:**

No Distribution Required

KW 4/16/15  
INITIAL/DATE

**COMMENTS:**

**SDG NFM0083**

**SAF NFM-018**

Rad only

Chem only

Rad & Chem

Complete

Partial

**Sample Location: Near Field Monitoring for 300 Area**

Analytical Data Package Prepared For  
**Washington Closure Hanford**

Radiochemical Analysis By

**TestAmerica Inc**

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

Assigned Laboratory Code: TARL

Data Package Contains 18 Pages

Report No.: 65370

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.
NFM0083	NFM-018	S955922	J5D070409-1	M6JPF1AA	9M6JPF10	5099041

## Certificate of Analysis

Washington Hanford Closure  
2620 Fermi Avenue  
Richland, WA 99354

April 16, 2015

Attention: Joan Kessner

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SAF Number	:	NFM-018
Date SDG Closed	:	April 6, 2015
Number of Samples	:	One (1)
Sample Type	:	Filter
SDG Number	:	NFM0083
Data Deliverable	:	21- Day / Summary

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### CASE NARRATIVE

#### **I. Introduction**

On April 6, 2015, one filter sample was received at TestAmerica for radiochemical analysis. Upon receipt, the sample was assigned the following laboratory ID number to correspond with the Washington Closure Hanford (WCH) specific ID:

<u>WCH ID#</u>	<u>TARL ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
S955922	M6JPF	FILTER	4/06/15

#### **II. Sample Receipt**

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

#### **III. Analytical Results/Methodology**

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

The requested analyses were:

**Gas Proportional Counting**  
Gross Alpha by method RL-GPC-008  
Gross Beta by method RL-GPC-008

#### **IV. Quality Control**

Washington Closure Hanford  
April 16, 2015

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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**

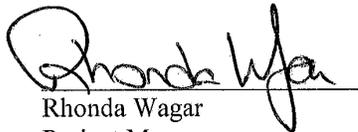
**Gas Proportional Counting**

Simultaneous Gross Alpha and Gross Beta by method RL-GPC-008:

The LCS, batch blank and sample results are within contractual requirements.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:



Rhonda Wagar

Project Manager

## Drinking Water Method Cross References

DRINKING WATER ASTM METHOD CROSS REFERENCES		
Referenced Method	Isotope(s)	TestAmerica Richland's SOP No.
EPA 901.1	Cs-134, I-131	RL-GAM-001
EPA 900.0	Alpha & Beta	RL-GPC-001
EPA 00-02	Gross Alpha (Coprecipitation)	RL-GPC-002
EPA 903.0	Total Alpha Radium (Ra-226)	RL-RA-002
EPA 903.1	Ra-226	RL-RA-001
EPA 904.0	Ra-228	RL-RA-001
EPA 905.0	Sr-89/90	RL-GPC-003
ASTM D5174	Uranium	RL-KPA-003
EPA 906.0	Tritium	RL-LSC-005

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

### Uncertainty Estimation

TestAmerica Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship,  $R = \text{constants} * f(x,y,z,\dots)$ . The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties ( $u_i$ ) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty ( $u_c$ ) multiplied by the coverage factor (1,2, or 3).

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

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

## Report Definitions

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

Sample Results Summary

Date: 16-Apr-15

TestAmerica Inc TARI

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

Report No. : 65370

SDG No: NFM0083

Client Id		Parameter	Result +/- CSU ( 2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
Batch	Work Order								
5099041	ALPHA_GPC								
<b>S955922</b>									
	M6JPF1AA	Alpha	7.73E-01 +/- 2.3E-01		pCi/sample	100%	7.62E-02	1.10E-01	
		Beta	1.09E+01 +/- 1.7E+00		pCi/sample	100%	2.37E-01	1.10E-01	
No. of Results:		2							

TestAmerica Inc RPD - Relative Percent Difference.

rptTALRchSaSum  
mary2 V5.3.6.8  
A2002

**QC Results Summary**

Date: 16-Apr-15

**TestAmerica Inc TARL**

Ordered by Method, Batch No, QC Type,

**Report No. : 65370**

**SDG No.: NFM0083**

Batch	Work Order	Parameter	Result +- CSU ( 2 s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDL
<b>ALPHA_GPC</b>									
5099041 BLANK QC,									
	M6KE51AA	Alpha	7.19E-02 +- 6.2E-02	U	pCi/sample	100%			8.00E-02
		Beta	8.09E-02 +- 1.5E-01	U	pCi/sample	100%			2.44E-01
5099041 LCS,									
	M6KE51AC	Alpha	1.68E+01 +- 3.3E+00		pCi/sample	100%	93%	-0.1	8.79E-02
		Beta	6.68E+00 +- 1.1E+00		pCi/sample	100%	87%	-0.1	2.54E-01
<b>No. of Results: 4</b>									

TestAmerica Inc Bias - (Result/Expected)-1 as defined by ANSI N13.30.  
 rptSTLRchQcSummary V5.3.6.8 U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.  
 A2002

**FORM I**

Date: 16-Apr-15

**SAMPLE RESULTS**

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J5D070409-1  
 Client Sample ID: S955922

SDG: NFM0083  
 Report No.: 65370  
 COC No.:

Collection Date: 3/31/2015 2:22:00 PM  
 Received Date: 4/6/2015 2:30:00 PM  
 Matrix: OTHER OTHERSOLID

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: 5099041	ALPHA_GPC				M6JPF1AA		Report DB ID: 9M6JPF10					
Alpha	7.73E-01		1.8E-01	2.3E-01	7.62E-02	pCi/sample	100%	(10.2)	4/13/15 05:28 p	1.0	1.0	GPC29D
Beta	1.09E+01		3.6E-01	1.7E+00	2.37E-01	pCi/sample	100%	(46.1)	4/13/15 05:28 p	Sample	Sample	GPC29D
								(6.6)		Sample	Sample	
								(12.9)		Sample	Sample	

No. of Results: 2      Comments:

TestAmerica Inc      MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.  
 rp|STLRchSample      U Qual - Analyzed for but not detected above limiting criteria, Mdc|Mda|Mdl, Total Uncert, RDL or not identified by gamma scan software.  
 V5.3.6.8 A2002

**FORM II  
BLANK RESULTS**

Date: 16-Apr-15

Lab Name: TestAmerica Inc  
Matrix: OTHER

SDG: NFM0083  
Report No.: 65370

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: 5099041 ALPHA_GPC												
Work Order: M6KE51AA Report DB ID: M6KE51AB												
Alpha	7.19E-02	U	6.1E-02	6.2E-02	8.00E-02	pCi/sample	100%	0.9	4/14/15 10:14 a	1.0	1.0	GPC29A
Beta	8.09E-02	U	1.5E-01	1.5E-01	3.59E-02	1.10E-01	100%	(2.3)	4/14/15 10:14 a	Sample	Sample	GPC29A
					2.44E-01	pCi/sample	100%	0.33		1.0	1.0	
					1.19E-01	1.10E-01		(1.1)		Sample	Sample	

No. of Results: 2      Comments:

TestAmerica Inc      MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.  
 rpt|TLRch|Blank      U Qual - Analyzed for but not detected above limiting criteria, Mdc|Mda|Mdl, Total Uncert, RDL or not identified by gamma scan software.  
 V5.3.6.8 A2002

Date: 16-Apr-15

FORM II

LCS RESULTS

Lab Name: TestAmerica Inc      SDG: NFM0083      Report No.: 65370  
Matrix: OTHER

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: 5099041      ALPHA_GPC      Work Order: M6KE51AC      Report DB ID: M6KE51CS													
Alpha	1.68E+01		4.7E-01	3.3E+00	8.79E-02	pCi/sample	100%	1.80E+01	6.1E-01	93%	4/14/15 10:14 a	1.0	GPC29B
Beta	6.68E+00		3.4E-01	1.1E+00	2.54E-01	pCi/sample	100%	7.72E+00	1.5E-01	87%	4/14/15 10:14 a	1.0	GPC29B
Rec Limits:      -0.1													
Rec Limits:      -0.1													

No. of Results: 2      Comments:

TestAmerica Inc      Bias      - (Result/Expected)-1 as defined by ANSI N13.30.  
rptSTLRchLcs  
V5.3.6.8 A2002

Lot No., Due Date: J5D070409; 04/27/2015  
 Client, Site: 127642; S00W235B00 HANFORD  
 QC Batch No., Method Test: 5099041; RAB-P/SR Alpha,Beta by GPC  
 SDG, Matrix: NFM0083; OTHER

<b>1.0 COC</b>		
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No N/A
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>2.0 QC Batch</b>		
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No N/A
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2.2 Are the QC appropriate for the analysis included in the batch?	Yes	No N/A
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No N/A
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2.4 Does the Worksheets include a Tracer Vial label for each sample?	Yes	No N/A
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>3.0 QC &amp; Samples</b>		
3.1 Is the blank results, yield, and MDA within contract limits?	Yes	No N/A
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3.2 Is the LCS result, yield, and MDA within contract limits?	Yes	No N/A
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3.3 Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No N/A
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.4 Are the duplicate result, yields, and MDAs within contract limits?	Yes	No N/A
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.5 Are the sample yields and MDAs within contract limits?	Yes	No N/A
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>4.0 Raw Data</b>		
4.1 Were results calculated in the correct units?	Yes	No N/A
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.2 Were analysis volumes entered correctly?	Yes	No N/A
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.3 Were Yields entered correctly?	Yes	No N/A
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.4 Were spectra reviewed/meet contractual requirements?	Yes	No N/A
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.5 Were raw counts reviewed for anomalies?	Yes	No N/A
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>5.0 Other</b>		
5.1 Are all nonconformances included and noted?	Yes	No N/A
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5.2 Are all required forms filled out?	Yes	No N/A
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5.3 Was the correct methodology used?	Yes	No N/A
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5.4 Was transcription checked?	Yes	No N/A
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5.5 Were all calculations checked at a minimum frequency?	Yes	No N/A
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5.6 Are worksheet entries complete and correct?	Yes	No N/A
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6.0 Comments on any No response:		

*Thomas DME*  
 First Level Date 4/14/15

## Data Review Checklist RADIOCHEMISTRY Second Level Review

Batch Number: 509904

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			✓
1. Are the sample yields within acceptance criteria?			✓
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
<b>B. QC Samples</b>			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?			✓
<b>C. Other</b>			✓
1. Are all Nonconformances (NCM) included and noted?			✓
2. Was the correct methodology used?	✓		
3. Were units checked?	✓		

Comments on any "No" response: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Second Level Review: Shonda W. Jones Date: 4/16/15

SDG #: NFM0083 / SAF #: NFM-018

<b>Mission Support Alliance</b>		<b>CHAIN OF CUSTODY FOR PSRP AIR SAMPLE ANALYSIS</b>		SAF No. NFM - Air	COC No. 20150401WCH
Sample Collector Felipe Gervis	Company Contact Craig J Perkins	Telephone No. 376-2049	Project Designation PSRP	Please refer to laboratory contract scope of work for composite and data deliverable details	
POSSIBLE SAMPLE HAZARDS N/A	Field Logbook No. / Page No. N/A	Shipment Method Gov't Vehicle		Shipped To Test America Richland Lab	Contract / Project no. WCH Samples
<b>EDP Code</b>	<b>Analysis</b>	<b>Comments</b>	<b>EDP Code</b>	<b>Analysis</b>	<b>Comments</b>
N482	Beta, Alpha	N/A	N/A	N/A	N/A
N517	Beta, Alpha	N/A	N/A	N/A	N/A
N518	Beta, Alpha	N/A	N/A	N/A	N/A
N548	Beta, Alpha	N/A	N/A	N/A	N/A
N549	Beta, Alpha	N/A	N/A	N/A	N/A
N557	Beta, Alpha	N/A	N/A	N/A	N/A
N579	Beta, Alpha	N/A	N/A	N/A	N/A
N580	Beta, Alpha	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

CHAIN OF POSSESSION		SIGN NAMES	
Relinquished By/Removed From Felipe Gervis	Date/Time 4/11/2015 10:30	Received By/Stored In J. Frisze	Date/Time 4/11/2015 10:30
Relinquished By/Removed From 2729WB	Date/Time 4/6/2015 9:40	Received By/Stored In Felipe Gervis	Date/Time 4/6/2015 9:40
Relinquished By/Removed From Felipe Gervis	Date/Time 4/6/2015 18:00	Received By/Stored In J. Frisze	Date/Time 4/6/2015 18:00
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

<b>LABORATORY SECTION</b>	Received By	Title
Drc: 410715		

**SPECIAL INSTRUCTIONS**  
Save each filter for composite unless specifically noted.  
See attached for sample specific details.

HPT Sign/Date: Felipe Gervis 4/16/2015  
Radiological Survey Report: AF-15-0209  
Reviewed By: J. Frisze

Pg 1 of 2

CUSTODY CHANGE REASON: ES to GEL/TestAmerica

Custody Changed By: [Redacted] Garza, Phil

SAP #:

Sample Number	Location Code	Off Date/Time	Sample Collected by
S955916	N482	04 / 01 / 2015 09:30	Garza, Phil
S955919	N517	04 / 01 / 2015 09:37	Garza, Phil
S955920	N518	04 / 01 / 2015 09:24	Garza, Phil
S955922 <i>MGJPF</i>	N557	03 / 31 / 2015 14:22	Garza, Phil <i>NFM-005</i>
S955950	N548	03 / 31 / 2015 11:13	Garza, Phil <i>NFM-018</i>
S955951	N549	03 / 31 / 2015 11:32	Garza, Phil
S955952	N579	03 / 31 / 2015 11:25	Garza, Phil <i>NFM-020</i>
S955953	N580	03 / 31 / 2015 11:18	Garza, Phil

J 5D070409  
SOG# NFM0083  
Due 4/27/15



Total Custody Changes: 8

Delivered to:  222 S  PFP  WSCF  Other

Delivered by: *N/R* \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received by: *N/R* \_\_\_\_\_ Date/Time: \_\_\_\_\_

*PJ 2 of 2*

Sample Check-in List

Date/Time Received: 4/16/15 1430 Container GM Screen Result: (Airlock) 40 cpm Initials [J]
Sample GM Screen Result (Sample Receiving) 40 cpm Initials [J]

Client: WCH SDG #: NFM0083 SAF #: NFM-018 NA [ ]

Lot Number: J50070409

Chain of Custody # 2015 0401 WCH

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

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

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

Item 5 through 16 for samples. Initial appropriate response.

- 5. Chain of Custody record present? Yes [J] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 1x Filter

- 8. Sample holding times exceeded? NA [ ] Yes [ ] No [J]
9. Samples have: tape hazard labels custody seals appropriate sample labels
10. Matrix: A (FLT, Wipe, Solid, Soil) I (Water) JS (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 [J]
13. Were any anomalies identified in sample receipt? Yes [ ] No [J]
14. Description of anomalies (include sample numbers): NA [J]
15. Sample Location, Sample Collector Listed on COC? \* Yes [ ] No [J]
\*For documentation only. No corrective action needed.
16. Additional Information: N/A

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

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

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

[X] No action necessary; process as is
Project Manager: Grand Wagon Date: 4/18/15

**Sample Preparation/Analysis**

4/10/2015 9:04:51 AM

Balance Id.:

127642, Washington Closure Hanford LLC  
 Washington Closure Hanford LLC  
 BE Gross Alpha/Beta Prp GPC008  
 S9 Gross Alpha and Beta by GPC using Pu-239, Sr/Y90  
 01 STANDARD TEST SET

Pipet #:

AnalysDueDate: 04/27/2015  
 PM, Quote: RW2, 91174

Sep1 DT/Tm Tech:

Batch: 5099041 OTHER pCi/samp1  
 SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech:

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 M6JPF-1-AA J5D070409-1-SAMP 03/31/2015 14:22										291	2027	413159	
2 M6KE5-1-AA-B J5D090000-41-BLK 04/10/2015 09:04 pd										29A	1337	413159	
3 M6KE5-1-AC-C J5D090000-41-LCS 04/10/2015 09:04 pd										29A			

4/10/2015 9:04:52 AM **Sample Preparation/Analysis** Balance Id:;  
 BE Gross Alpha/Beta Prp GPC008 Pipet #:  
 S9 Gross Alpha and Beta by GPC using Pu-239,SrY90  
 01 STANDARD TEST SET  
 AnalytDueDate: 04/27/2015  
 Batch: 5099041 pCi/sampl  
 SEQ Batch, Test: None

Work Ord. Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj. Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Pot or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:

**Comments:**

All Clients for Batch:  
 127642, Washington Closure Hanford LLC Washington Closure Hanford LLC, RW2, 91174

M6JPF1AA-SAMP Constituent List:  
 ALPHA RDL:1.10E-01 pCi/sam LCL: UCL: RPD: BETA RDL:1.10E-01 pCi/sam LCL: UCL: RPD:

M6KE51AA-BLK Constituent List:  
 ALPHA RDL:1.10E-01 pCi/sam LCL: UCL: RPD: BETA RDL:1.10E-01 pCi/sam LCL: UCL: RPD:

M6KE51AC-LCS:  
 M6JPF1AA-SAMP Calc Info:  
 Uncert Level (#s): 2 Decay to Sadt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

M6KE51AA-BLK Calc Info:  
 Uncert Level (#s): 2 Decay to Sadt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

M6KE51AC-LCS:  
 Uncert Level (#s): 2 Decay to Sadt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

4/14/2015 4:31:45 PM

# ICOC Fraction Transfer/Status Report

ByDate: 4/14/2014, 4/19/2015, Batch: '5099041', User: \*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	SOPs,Reagents,Comments
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5099041

AC	Rev1C	BullJ	4/10/2015 9:32:21		
SC		campbellsc	IsBatched	4/10/2015 9:12:06 AM	ICOC_RADCALC v4.9.0
SC		BullJ	InPrep	4/10/2015 9:32:21 AM	RL-GPC-008 REVISION 6
SC		BullJ	InCnt1	4/10/2015 9:32:53 AM	RL-CI-006 REVISION 5
SC		BullJ	CalcC	4/14/2015 2:28:31 PM	RL-CI-006 REVISION 5
SC		McginnisT	Rev1C	4/14/2015 4:31:38 PM	RL-DR-001 Rev 5
AC		BullJ	4/10/2015 9:32:53		
AC		BullJ	4/14/2015 2:28:31 PM		
AC		McginnisT	4/14/2015 4:31:38 PM		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland  
Richland Wa.