0096045

SAF-RC-151
300 Area Field Remediation – Water
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 4/25/11
INITIAL/DATE

RECEIVED
MAY 10 2011
EDMC

COMMENTS:

SDG JP0136 SAF-RC-151

Rad only ☑ Chem only Rad & Chem

☑ Complete Partial

Sample Location/Waste Site: UPR-300-4

Analytical Data Package Prepared For

Washington Closure Hanford

Radiochemical Analysis By

TestAmerica

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

Assigned Laboratory Code: TARL

Data Package Contains 24 *Pages*

Report No.: 46101

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.
JP0136	RC-151	J1FL19	J1C230597-1	MF33G1AA	9MF33G10	1083080
		J1FL19	J1C230597-1	MF33G1AC	9MF33G10	1083081

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

TestAmerica Laboratories, Inc.

March 31, 2011

Attention: Joan Kessner

SAF Number	:	RC-151
Date SDG Closed	:	March 23, 2011
Number of Samples	:	One (1)
Sample Type	:	Water
SDG Number	:	JP0136
Data Deliverable	:	7– Day / Summary

CASE NARRATIVE

I. Introduction

On March 23, 2011, one water 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:

WCH ID#	TARL ID#	MATRIX	DATE OF RECEIPT
J1FL19	MF336	WATER	3/23/11

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-001
Gross Beta by method RL-GPC-001

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

Gross Alpha by method RL-GPC-001:
The LCS, batch blank, sample and sample duplicate (J1FL19) results are within contractual requirements.

Gross Beta by method RL-GPC-001 :
The LCS, batch blank, sample and sample duplicate (J1FL19) 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 = 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.
Total Uncert (#s) ***u_c - Combined Uncertainty.***	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 uncertainty.*** The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or TestAmerica "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. Lc=(1.645 * Sqrt(2*(BkgrndCnt/BkgrndCntMin)/SCntMin)) * (ConvFct/(Eff*Yld*Abn*Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC|MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. MDC = (4.65 * Sqrt((BkgrndCnt/BkgrndCntMin)/SCntMin) + 2.71/SCntMin) * (ConvFct/(Eff * Yld * Abn * Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the **Work Order** Number.
RER	The equation Replicate Error Ratio = (S-D)/[sqrt($TPUs^2$ + $TPUd^2$)] as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by TestAmerica upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

Sample Results Summary

Date: 31-Mar-11

TestAmerica TARL

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

Report No. : 46101

SDG No: JP0136

Batch	Client Id / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
1083080	9310_ALPHABETA_GPC								
	J1FL19								
	MF33G1AA	ALPHA	1.24E+00 +- 1.1E+00	U	pCi/L	100%	1.30E+00	3.00E+00	
	J1FL19 DUP								
	MF33G1AD	ALPHA	1.71E+00 +- 1.4E+00	U	pCi/L	100%	2.05E+00	3.00E+00	32.0
1083081	9310_ALPHABETA_GPC								
	J1FL19								
	MF33G1AC	BETA	3.55E+01 +- 5.9E+00		pCi/L	100%	3.98E+00	4.00E+00	
	J1FL19 DUP								
	MF33G1AE	BETA	3.46E+01 +- 5.6E+00		pCi/L	100%	3.82E+00	4.00E+00	2.5

No. of Results: 4

TestAmerica

rptSTLRchSaSummary2 V5.2.12 A2002

RPD - Relative Percent Difference.

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

QC Results Summary

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Date: 31-Mar-11

Report No. : 46101

SDG No.: JP0136

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC|MDA
9310_ALPHABETA_GPC								
1083080 BLANK QC,								
MF4CP1AA	ALPHA	9.85E-02 +- 2.8E-01	U	pCi/L	100%			5.91E-01
1083080 LCS,								
MF4CP1AC	ALPHA	1.91E+01 +- 4.4E+00		pCi/L	100%	84%	-0.2	4.79E-01
9310_ALPHABETA_GPC								
1083081 BLANK QC,								
MF4CQ1AA	BETA	7.42E-01 +- 1.4E+00	U	pCi/L	100%			2.93E+00
1083081 LCS,								
MF4CQ1AC	BETA	2.23E+01 +- 3.9E+00		pCi/L	100%	98%	0.0	2.68E+00

No. of Results: 4

TestAmerica
rptSTLRchQcSummary V5.2.12
A2002

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

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

FORM I

SAMPLE RESULTS

Date: 31-Mar-11

Lab Name:	TestAmerica	**SDG:**	JP0136	**Collection Date:**	3/23/2011 10:30:00 AM
Lot-Sample No.:	J1C230597-1	**Report No. :**	46101	**Received Date:**	3/23/2011 3:15:00 PM
Client Sample ID:	J1FL19	**COC No. :**		**Matrix:**	WATER

Ordered by Client Sample ID. Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1083080	9310_ALPHABETA_GPC			**Work Order:** MF33G1AA			**Report DB ID:** 9MF33G10					
ALPHA	***1.24E+00***	U	1.0E+00	1.1E+00	1.30E+00	pCi/L	100%	*0.95*	3/31/11 05:55 a		0.0987	GPC10A
						4.11E-01	3.00E+00	*(2.3)*			L	
Batch: 1083081	9310_ALPHABETA_GPC			**Work Order:** MF33G1AC			**Report DB ID:** 9MF33G10					
BETA	***3.55E+01***		3.7E+00	5.9E+00	3.98E+00	pCi/L	100%	*(8.9)*	3/30/11 08:49 p		0.1584	GPC32A
						1.89E+00	4.00E+00	*(12.)*			L	

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

TestAmerica
rptSTLRchSample
V5.2.12 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. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM II

Date: 31-Mar-11

DUPLICATE RESULTS

Lab Name:	TestAmerica	**SDG:**	JP0136	**Collection Date:**	3/23/2011 10:30:00 AM
Lot-Sample No.:	J1C230597-1	**Report No. :**	46101	**Received Date:**	3/23/2011 3:15:00 PM
Client Sample ID:	J1FL19 DUP	**COC No. :**		**Matrix:**	WATER

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1083080	9310_ALPHABETA_GPC			**Work Order:** MF33G1AD		**Report DB ID:** MF33G1DR			**Orig Sa DB ID:** 9MF33G10			
ALPHA	1.71E+00	U	1.4E+00	1.4E+00	2.05E+00	pCi/L	100%	0.83	3/31/11 05:55 a		0.0981	GPC10B
	1.24E+00	U	**RPD**	**32.0**		3.00E+00		(2.4)			L	
Batch: 1083081	9310_ALPHABETA_GPC			**Work Order:** MF33G1AE		**Report DB ID:** MF33G1ER			**Orig Sa DB ID:** 9MF33G10			
BETA	3.46E+01		3.6E+00	5.6E+00	3.82E+00	pCi/L	100%	(9.1)	3/30/11 08:49 p		0.1582	GPC32B
	3.55E+01		**RPD**	**2.5**		4.00E+00		(12.3)			L	

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

TestAmerica
rptSTLRchDupV5.2
.12 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. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM II

BLANK RESULTS

Date: 31-Mar-11

Lab Name: TestAmerica

Matrix: WATER

SDG: JP0136

Report No. : 46101

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA ,	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1083080	9310_ALPHABETA_GPC			**Work Order:**	MF4CP1AA		**Report DB ID:**	MF4CP1AB				
ALPHA	9.85E-02	U	2.8E-01	2.8E-01	5.91E-01	pCi/L	100%	0.17	3/31/11 05:55 a		0.2024	GPC10C
					2.29E-01	3.00E+00		0.71			L	
Batch: 1083081	9310_ALPHABETA_GPC			**Work Order:**	MF4CQ1AA		**Report DB ID:**	MF4CQ1AB				
BETA	7.42E-01	U	1.4E+00	1.4E+00	2.93E+00	pCi/L	100%	0.25	3/30/11 08:49 p		0.1999	GPC32D
					1.40E+00	4.00E+00		(1.1)			L	

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

TestAmerica
rptSTLRchBlank
V5.2.12 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. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM II

LCS RESULTS

Date: 31-Mar-11

Lab Name: TestAmerica

Matrix: WATER

SDG: JP0136

Report No. : 46101

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 1083080	9310_ALPHABETA_GPC			Work Order: MF4CP1AC			Report DB ID: MF4CP1CS						
ALPHA	1.91E+01		2.0E+00	4.4E+00	4.79E-01	pCi/L	100%	2.28E+01	2.3E-01	84%	3/31/11 05:55 a	0.1997	GPC10D
							Rec Limits:	70	130	-0.2		L	
Batch: 1083081	9310_ALPHABETA_GPC			Work Order: MF4CQ1AC			Report DB ID: MF4CQ1CS						
BETA	2.23E+01		2.4E+00	3.9E+00	2.68E+00	pCi/L	100%	2.27E+01	8.8E-01	98%	3/30/11 08:49 p	0.2004	GPC32C
							Rec Limits:	70	130	0.0		L	

No. of Results: 2 Comments:

TestAmerica Laboratories, Inc.

11

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

rptSTLRchLcs
V5.2.12 A2002

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

3/31/2011 11:44:03 AM

Lot No., Due Date: J1C230597; 03/30/2011
Client, Site: 127642; S00N063A00 HANFORD
QC Batch No., Method Test: 1083080; RALPHA-A Alpha by GPC-Am
SDG, Matrix: JP0136; WATER

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

6.0 Comments on any No response:

Thomas D McE

First Level _____ **Date** 3/31/11

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 1083080

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis 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. QC Samples 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?	✓		
C. Other 1. Are all Non-conformances included and noted?			✓
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: CRDL = 3.0 pCi/L

Second Level Review: [signature] Date: 3/31/11

LS-038B, Rev. 10, 9/07

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

3/31/2011 10:05:34 AM

Lot No., Due Date: J1C230597; 03/30/2011
Client, Site: 127642; S00N063A00 HANFORD
QC Batch No., Method Test: 1083081; RBETA-SR Beta by GPC-Sr/Y
SDG, Matrix: JP0136; WATER

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

6.0 Comments on any No response:

Thomas D McGee

First Level _____ **Date** 3/31/11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 1083081

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis 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. QC Samples 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?	✓		
C. Other 1. Are all Non-conformances included and noted?			✓
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: CRDL = 4.0 pCi/L

Second Level Review: [signature] Date: 5/31/11

LS-038B, Rev. 10, 9/07

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-151-001	Page 1 of 1

Collector Q. Stowe	Company Contact Joan Kessner	Telephone No. 509-375-4688	Project Coordinator KESSNER, JH	Price Code 7L	Data Turnaround ~~21~~ 7 Days OK 3/17/11
Project Designation 300 Area Field Remediation - Water	Sampling Location UPR-300-4		SAF No. RC-151		
Ice Chest No. N/A	Field Logbook No. EL-1395-18	COA RUP3042600	Method of Shipment Hand Deliver/~~Fed Ex~~ AJ 3-23-11		
Shipped To TestAmerica Incorporated, Richland	Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A		

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radioactive < DOT Limits JEB 3-23-11

Special Handling and/or Storage

~~Cool 4C~~ JEB 3-23-11

NONE

Preservation	HNO3 to pH <2	Cool 4C	HCl or H2SO4 to pH <2 Coo	Cool 4C	JEB 3-23-11 HNO3 to pH <2 ~~Cool 4C~~	None		
Type of Container	G/P	aG	G	aG	G/P	G/P		
No. of Container(s)	1	1	3	3	1	1		
Volume	250mL	500mL	40mL	1000mL	1000mL	120mL		
SAMPLE ANALYSIS	See item (1) in Special Instructions	IC Anions - 300.0; pH (Water) - 9040	VOA - 8260A (ETF)	Semi-VOA - 8270A (ETF)	Gross Alpha & Beta - 900.0	RCF GEA Shipping Screen		

S
Q 270230
Due 3:30 11
J1C230597

J1C230597

Sample No.	Matrix *	Sample Date	Sample Time										
J1FL19	WATER	3/23/11	1030						MF	336			

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Quincy Stowe	3/23/11 1050	Dauthe Delberg	3/23/11 1050
Dauthe Delberg	3/23/11 1240	J.E. Bahl	3-23-11 1240
J.E. Bahl	3-23-11 1515	TALR Carmen Kuzya	3-23-11 1515
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010TR (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Uranium, Vanadium, Zinc}; Mercury - 7470 - (CV) {Mercury}

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

JP0136

REVIEWED BY AJ DATE 3-23-11

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TestAmerica Laboratories, Inc.

16

Apex™ Non-Reg

Analysis Report for RCF27376

J1FL19 SAF-RC-151 FF2/UPR-300-4 120ml/131g

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF27376
Sample Description	: J1FL19 SAF-RC-151 FF2/UPR-300-4 120ml/131g
Sample Type	: 125 ml Poly Bottle
Sample Size	: 1.200E+02 mL
Facility	: Default
Sample Taken On	: 3/22/2011 1:30:00PM
Acquisition Started	: 3/22/2011 3:45:47PM
Procedure	: 125ml Poly Bottle
Operator	: RCT
Detector Name	: GEA2703
Geometry	: 125 ml Poly Bottle
Live Time	: 7200.0 seconds
Real Time	: 7203.1 seconds
Dead Time	: 0.04 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 40 - 4096
Peak Area Range (in channels)	: 40 - 4096
Identification Energy Tolerance	: 1.000 keV
Energy Calibration Used Done On	: 2/2/2011
Efficiency Calibration Used Done On	: 3/4/2011
Efficiency Calibration Description	: GEA2703 125mlPB022311EC SN82753-238
Sample Number	: 12816

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/mL)	Wt mean Activity Uncertainty	Comments
K-40	0.999	3.29E+00	1.22E+00	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 3-23-11 1515 GM Screen Result (out) .3 (in) .2 Initials [RC]

Client: WCH SDG #: JP0136 NA [ ] SAF #: RC-151 NA [ ]

Work Order Number: J1C230597 Chain of Custody # RC-151-001

Shipping Container ID: Hand Delivered NA [ ] Air Bill # _____ NA [RC]

Item 1 through 5 for shipping container only. Initial appropriate response.

1. Custody Seals on shipping container intact? Yes [RC] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [RC] No [ ] No Custody Seal [ ]
3. Chain of Custody record present? Yes [RC] No [ ]
4. Cooler temperature: on ice NA [ ] 5. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [RC]

Item 6 through 10 for samples. Initial appropriate response.

6. Number of samples in shipping container (Each sample may contain multiple bottles): 1 Sample @ 1 Bottle ea
7. Sample holding times exceeded? NA [ ] Yes [ ] No [RC]
8. Samples have:
   _____ tape
   [RC] custody seals
   _____ hazard labels
   [RC] appropriate sample labels

   J1C230597
9. Samples:
   [RC] ~~are~~ in good condition
   _____ are broken
   _____ are leaking
   _____ have air bubbles (Only for samples requiring no head space)
10. Sample pH appropriate for analysis requested Yes [ ] No [ ] N/A [✓] (Note discrepancies in #13)
    (If acidification necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition)

    RPL ID # of preservative used : N/A
11. Sample Location, Sample Collector Listed? * Yes [RC] No [ ]
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [RC]
13. Description of anomalies (include sample numbers): NA [X]

See other side for additional comments

Sample Custodian: [signature] Date: 3-23-11 1515

Client Informed on _____ by _____ Person contacted _____

[X] No action necessary; process as is

Project Manager [signature] Date 3/23/11

LS-023, Rev. 12, 10/10

3/26/2011 12:56:00 PM

Sample Preparation/Analysis

Balance Id:1117411003

127642, Washington Closure Hanford LLC , Bechtel Hanford, Inc.

AZ Gross Alpha Prp GPC001
S7 Gross Alpha by GPC using Am-241 curve
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 03/30/2011

Sep1 DT/Tm Tech:

Batch: 1083080 WATER pCi/L PM, Quote: RW2, 27023

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,BockJ

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MF33G-1-AA J1C230597-1-SAMP 03/23/2011 10:30		98.70g,in AmtRec: 1XJAR1000MLG	#Containers: 1	1.5	1.4407g 1.3981g 42.6mg	100	1A	Scr:	3/31/11 Alpha:	Beta:
2 MF33G-1-AD-X J1C230597-1-DUP 03/23/2011 10:30		98.10g,in AmtRec: 1XJAR1000MLG	#Containers: 1		1.4351g 1.3931g 42.0mg	100		Scr:	Alpha:	Beta:
3 MF4CP-1-AA-B J1C240000-80-BLK 03/24/2011 08:36 pd		202.40g,in AmtRec:	#Containers: 1		1.3955g 1.3950g 0.5mg	100		Scr:	Alpha:	Beta:
4 MF4CP-1-AC-C J1C240000-80-LCS 03/24/2011 08:36 pd		199.70g,in AmtRec:	ASD5081 12/14/10,pd #Containers: 1		1.3989g 1.3982g 0.7mg	100		Scr:	Alpha:	Beta:

Comments: pH <2.0 aliquots reduced due to weight screen. JB 3-26-11

All Clients for Batch:
127642, Washington Closure Hanford LLC Bechtel Hanford, Inc. , RW2, 27023

MF33G1AA-SAMP Constituent List:

ALPHA	RDL:3	pCi/L	LCL:	UCL:	RPD:
MF4CP1AA-BLK:					
ALPHA	RDL:3	pCi/L	LCL:	UCL:	RPD:
MF4CP1AC-LCS:					
Am-241	RDL:	pCi/L	LCL:70	UCL:130	RPD:20

MF33G1AA-SAMP Calc Info:

TestAmerica Laboratories, Inc.

3/26/2011 12:56:00 PM

Sample Preparation/Analysis

AZ Gross Alpha Prp GPC001
S7 Gross Alpha by GPC using Am-241 curve
5I CLIENT: HANFORD

Balance Id:1117411003

Pipet #: _____

AnalyDueDate: 03/30/2011

Sep1 DT/Tm Tech:

Batch: 1083080 pCi/L

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,BockJ

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

```
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MF4CP1AA-BLK:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MF4CP1AC-LCS:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```


TestAmerica Laboratories, Inc.

3/31/2011 11:43:38 AM

ICOC Fraction Transfer/Status Report

ByDate: 3/31/2010, 4/5/2011, Batch: '1083080', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
1083080						
AC		**Rev1C**	**BockJ**	3/26/2011 12:51:08		
SC			MaucieriS	IsBatched	3/24/2011 8:52:04 AM	ICOC_RADCALC v4.8.49
SC			BockJ	InPrep	3/26/2011 12:51:08 PM	RL-GPC-007 REVISION 1
SC			BockJ	Prep1C	3/26/2011 12:56:07 PM	RL-PRP-004 REVISION 1
SC			BockJ	InPrep2	3/30/2011 7:49:55 AM	RL-GPC-001 REVISION 1
SC			BockJ	Prep2C	3/30/2011 5:42:41 PM	RL-GPC-001 REVISION 1
SC			DawkinsO	InCnt1	3/30/2011 6:27:28 PM	RL-CI-006 REVISION 1
SC			BlackCL	CalcC	3/31/2011 9:39:27 AM	RL-CI-006 REVISION 1
SC			mcginnist	Rev1C	3/31/2011 11:43:31 AM	RL-DR-001 Rev 2
AC			**BockJ**	3/26/2011 12:56:07		
AC			**BockJ**	3/30/2011 7:49:55		
AC			**BockJ**	3/30/2011 5:42:41 PM		
AC			**DawkinsO**	3/30/2011 6:27:28 PM		
AC			**BlackCL**	3/31/2011 9:39:27		
AC			**mcginnist**	3/31/2011 11:43:31		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 7

ICOCFractions v4.8.44

3/26/2011 1:01:22 PM

Sample Preparation/Analysis

Balance Id:1117411003

127642, Washington Closure Hanford LLC , Bechtel Hanford, Inc.

BC Gross Beta Prp GPC001
S8 Gross Beta by GPC using Sr/Y-90 curve
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 03/30/2011

Sep1 DT/Tm Tech:

Batch: 1083081 WATER pCi/L PM, Quote: RW2, 27023

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,BockJ

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MF33G-1-AC J1C230597-1-SAMP 03/23/2011 10:30		158.40g,in AmtRec: 1XJAR1000MLG	#Containers: 1	1.5	1.4841g 1.3841g 100.0mg	100	32A	2139	3/30/11	Scr: Alpha: Beta:
2 MF33G-1-AE-X J1C230597-1-DUP 03/23/2011 10:30		158.20g,in AmtRec: 1XJAR1000MLG	#Containers: 1		1.4843g 1.3767g 107.6mg		32B			Scr: Alpha: Beta:
3 MF4CQ-1-AA-B J1C240000-81-BLK 03/24/2011 08:36 pd		199.90g,in AmtRec:	#Containers: 1		1.3757g 1.3754g 0.3mg		32D			Scr: Alpha: Beta:
4 MF4CQ-1-AC-C J1C240000-81-LCS 03/24/2011 08:36 pd		200.40g,in AmtRec:	BESB3667 03/01/11,pd #Containers: 1		1.3708g 1.3703g 0.5mg		32C			Scr: Alpha: Beta:

Comments: PH <2.0, Reduced aliquots are due to weight screen. JB 3-26-11

All Clients for Batch:
127642, Washington Closure Hanford LLC Bechtel Hanford, Inc. , RW2, 27023

MF33G1AC-SAMP Constituent List:

BETA	RDL:4	pCi/L	LCL:	UCL:	RPD:
MF4CQ1AA-BLK:					
BETA	RDL:4	pCi/L	LCL:	UCL:	RPD:
MF4CQ1AC-LCS:					
Sr-90	RDL:	pCi/L	LCL:70	UCL:130	RPD:20

MF33G1AC-SAMP Calc Info:

TestAmerica Laboratories, Inc.

22

3/26/2011 1:01:23 PM

Sample Preparation/Analysis

BC Gross Beta Prp GPC001
S8 Gross Beta by GPC using Sr/Y-90 curve
5I CLIENT: HANFORD

Balance Id:1117411003
Pipet #: _____

AnalyDueDate: 03/30/2011

Sep1 DT/Tm Tech:

Batch: 1083081 pCi/L
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,BockJ

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

```
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MF4CQ1AA-BLK:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MF4CQ1AC-LCS:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```

3/31/2011 10:05:01 AM

ICOC Fraction Transfer/Status Report

ByDate: 3/31/2010, 4/5/2011, Batch: '1083081', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
1083081						
AC		**Rev1C**	**BockJ**	3/26/2011 12:56:23		
SC			MauclerlS	IsBatched	3/24/2011 8:52:09 AM	ICOC_RADCALC v4.8.49
SC			BockJ	InPrep	3/26/2011 12:56:23 PM	RL-GPC-007 REVISION 1
SC			BockJ	Prep1C	3/26/2011 1:00:57 PM	RL-PRP-004 REVISION 1
SC			BockJ	InPrep2	3/30/2011 7:49:59 AM	RL-GPC-001 REVISION 1
SC			DawkinsO	InCnt1	3/30/2011 6:26:39 PM	RL-CI-006 REVISION 1
SC			DawkinsO	CalcC	3/30/2011 10:10:27 PM	RL-CI-006 REVISION 1
SC			DawkinsO	CalcC	3/31/2011 12:00:22 AM	RL-CI-006 REVISION 1
SC			mcginnist	Rev1C	3/31/2011 10:04:52 AM	RL-DR-001 Rev 2
AC			**BockJ**	3/26/2011 1:00:57 PM		
AC			**BockJ**	3/30/2011 7:49:59		
AC			**DawkinsO**	3/30/2011 6:26:39 PM		
AC			**DawkinsO**	3/30/2011 10:10:27		
AC			**DawkinsO**	3/31/2011 12:00:22		
AC			**mcginnist**	3/31/2011 10:04:52		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 7

ICOCFractions v4.8.44

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-13862-1

SDG Number: JP0136

Job Description: SAF# RC-151

For:
Washington Closure Hanford
2620 Fermi Avenue
Richland, WA 99354

Attention: Joan H Kessner

Approved for release
Kae E Yoder
Project Manager II
4/25/2011 3:03 PM

Kae E Yoder
Project Manager II
kae.yoder@testamericainc.com
04/25/2011

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

TestAmerica Laboratories, Inc.
TestAmerica Denver 4955 Yarrow Street, Arvada, CO 80002
Tel (303) 736-0100 Fax (303) 431-7171 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

Table of Contents

Cover Title Page 1

Report Narrative 3

Data Qualifiers 5

Method Summary 7

Method / Analyst Summary 8

Sample Summary 9

Sample Results 10

Sample Datasheets 11

QC Results 20

Qc Association Summary 21

Qc Reports 25

Client Chain of Custody 45

Sample Receipt Checklist 46

CASE NARRATIVE

Client: Washington Closure Hanford

Project: WASHINGTON CLOSURE HANFORD

Report Number: 280-13862-1

SDG #: JP0136
SAF#: RC-151

Date SDG Closed: March 24, 2011
Data Deliverable: 7 Day / Summary

CLIENT ID	LAB ID	ANALYSES REQUESTED	ANALYSES PERFORMED
J1FL19	280-13862-1	6010/7470/300.0/9040/8260A/8270A/ WTPH-D+/8310	6010B/6020/7470A/300.0/9040B/8260B/8270C/ NWTPH-Dx/8310

I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed in this Case Narrative. 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 signature on the Report Cover.

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted. Calculations are performed before rounding to avoid round-off errors in calculated results.

This report includes reporting limits (RLs) less than TestAmerica Denver's practical quantitation limits. These reporting limits are being used specifically at the client's request to meet the needs of this project. Please note that data are not normally reported to these levels without qualification, since they are inherently less reliable and potentially less defensible than required by the current NELAC standards.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The sample was received on 3/24/2011; the sample arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 1.2 C.

GC/MS VOLATILES - SW846 8260B
No anomalies were encountered.

GC/MS SEMIVOLATILES - SW846 8270C
Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to the presence of interfering, non-target compounds, sample J1FL19 had to be analyzed at a dilution, and the associated results have been flagged with a "D". The reporting limits have been adjusted relative to the dilution required.

Surrogate recoveries have been "D" flagged in sample J1FL19, as the recoveries obtained are calculated from a diluted sample and are not considered reliable.

Spike compound recoveries, RPD data and surrogate recoveries have been "D" flagged in the MS/MSD performed on sample J1FL19, as the recoveries obtained are calculated from diluted samples and are not considered reliable. The acceptable LCS analysis data indicated that the analytical system was operating within control.

No other anomalies were encountered.

GC SEMIVOLATILES - NWTPH-Dx - DRO
No anomalies were encountered.

HPLC - SW846 8310 - PAHs
The RPD between the primary and confirmation columns exceeded 40% for Fluoranthene in sample J1FL19. The lower of the two values have been reported, as matrix interference is evident. The result has been flagged with an "X".

The method required MS/MSD could not be performed for batch 280-59251, due to insufficient sample volume submitted by the client. A duplicate LCS (LCSD) was analyzed to provide some evidence of batch precision.

No other anomalies were encountered.

TOTAL METALS - SW846 6010B/6020/7470A

Due to insufficient sample volume submitted by the client, the Matrix Spike and Sample Duplicate analysis for SW846 6010B batch 280-59324, SW846 6020 batch 280-59323 and SW846 7470A batch 280-59293 could not be performed. Duplicate LCS (LCSD) were analyzed to provide some evidence of batch precision.

No other anomalies were encountered.

GENERAL CHEMISTRY - MCAWW 300.0 - ANIONS

The Fluoride Matrix Spike performed on sample J1FL19 exhibited the percent recovery outside the control limits, and the associated sample result has been flagged "N". There is no indication that the analytical system was operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

GENERAL CHEMISTRY - SW846 9040B - PH

No anomalies were encountered

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	J	Indicates an Estimated Value for TICs
	N	Presumptive evidence of material.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC/MS Semi VOA		
	U	Analyzed for but not detected.
	J	Indicates an Estimated Value for TICs
	N	Presumptive evidence of material.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
GC Semi VOA		
	U	Analyzed for but not detected.
Metals		
	U	Analyzed for but not detected.
	B	Estimated result. Result is less than the RL, but greater than MDL
General Chemistry		
	U	Analyzed for but not detected.
	B	Estimated result. Result is less than the RL, but greater than MDL
	N	MS, MSD: Spike recovery exceeds upper or lower control limits.

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Lab Section	Qualifier	Description
HPLC/IC		
	U	Analyzed for but not detected.
	X	More than 40% difference between columns, lower result reported.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL DEN	SW846 8260B	
Purge and Trap	TAL DEN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL DEN	SW846 8270C	
Liquid-Liquid Extraction (Continuous)	TAL DEN		SW846 3520C
Northwest - Semi-Volatile Petroleum Products (GC)	TAL DEN	NWTPH NWTPH-Dx	
Liquid-Liquid Extraction (Separatory Funnel)	TAL DEN		SW846 3510C
PAHs (HPLC)	TAL DEN	SW846 8310	
Liquid-Liquid Extraction (Separatory Funnel)	TAL DEN		SW846 3510C
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Total Metals	TAL DEN		SW846 3010A
Metals (ICP/MS)	TAL DEN	SW846 6020	
Preparation, Total Metals	TAL DEN		SW846 3020A
Mercury (CVAA)	TAL DEN	SW846 7470A	
Preparation, Mercury	TAL DEN		SW846 7470A
Anions, Ion Chromatography	TAL DEN	MCAWW 300.0	
pH	TAL DEN	SW846 9040B	

Lab References:

TAL DEN = TestAmerica Denver

Method References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Method	Analyst	Analyst ID
SW846 8260B	Ilczyszyn, Dennis P	DPI
SW846 8270C	Tinkham, Sarah A	SAT
NWTPH NWTPH-Dx	Birdsell, Matthew R	MRB
SW846 6010B	Bowen, Heidi E	HEB
SW846 6020	Lill, Thomas E	TEL
SW846 7470A	Stoltz, Katie	KS
MCAWW 300.0	Kudla, Ewa	EK
SW846 9040B	Taylor, Juli M	JMT
SW846 8310	Hall, Koley J	KJH

SAMPLE SUMMARY

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-13862-1	J1FL19	Water	03/23/2011 1030	03/24/2011 1000

SAMPLE RESULTS

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Client Sample ID: **J1FL19**

Lab Sample ID: 280-13862-1
Client Matrix: Water

Date Sampled: 03/23/2011 1030
Date Received: 03/24/2011 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-59977	Instrument ID:	MSV_G2
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	G2_2643.D
Dilution:	1 0			Initial Weight/Volume:	20 mL
Analysis Date:	03/30/2011 0345			Final Weight/Volume:	20 mL
Prep Date:	03/30/2011 0345				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	33		1.9	10
Benzene	0.16	U	0.16	1.0
n-Butanol	17	U	17	60
2-Butanone (MEK)	3.8	J	2.0	6.0
Carbon disulfide	1.1	J	0.45	2.0
Carbon tetrachloride	0.19	U	0.19	1.0
Chlorobenzene	0.17	U	0.17	1.0
Chloroform	0.35	J	0.16	1.0
1,4-Dichlorobenzene	0.16	U	0.16	1.0
1,1-Dichloroethane	0.22	U	0.22	1.0
1,2-Dichloroethane	0.13	U	0.13	1.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
trans-1,2-Dichloroethene	0.15	U	0.15	1.0
1,1-Dichloroethene	0.23	U	0.23	1.0
2-Hexanone	1.7	U	1.7	5.0
Methylene Chloride	0.32	U	0.32	2.0
4-Methyl-2-pentanone (MIBK)	2.2	J	0.98	5.0
2-Pentanone	1.0	U	1.0	5.0
Propionitrile	3.7	U	3.7	20
Tetrachloroethene	0.20	U	0.20	1.0
Tetrahydrofuran	2.0	U	2.0	7.0
Toluene	0.17	J	0.17	1.0
1,1,1-Trichloroethane	0.16	U	0.16	1.0
1,1,2-Trichloroethane	0.27	U	0.27	1.0
Trichloroethene	0.16	U	0.16	1.0
Vinyl chloride	0.10	U	0.10	1.0
Xylenes, Total	0.24	J	0.19	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	90		70 - 127
Toluene-d8 (Surr)	102		80 - 125
4-Bromofluorobenzene (Surr)	102		78 - 120
Dibromofluoromethane (Surr)	98		77 - 120

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Client Sample ID: **J1FL19**

Lab Sample ID: 280-13862-1
Client Matrix: Water

Date Sampled: 03/23/2011 1030
Date Received: 03/24/2011 1000

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-59977	Instrument ID:	MSV_G2
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	G2_2643.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	03/30/2011 0345			Final Weight/Volume:	20 mL
Prep Date:	03/30/2011 0345				

Tentatively Identified Compounds **Number TIC's Found:** **6**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Unknown	3.85	350	J N
	Unknown	4.12	12	J N
67-63-0	Isopropyl alcohol	5.58	23	J N
79-20-9	Methyl acetate	5.81	16	J N
1066-40-6	Silanol, trimethyl-	6.60	3.8	N J
95-47-6	o-Xylene	10.56	0.24	J N

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Client Sample ID: **J1FL19**

Lab Sample ID: 280-13862-1
Client Matrix: Water

Date Sampled: 03/23/2011 1030
Date Received: 03/24/2011 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-59803	Instrument ID:	MSS_Y
Prep Method:	3520C	Prep Batch:	280-59221	Lab File ID:	Y9088.D
Dilution:	10			Initial Weight/Volume:	1001.3 mL
Analysis Date:	03/29/2011 0352			Final Weight/Volume:	1000 uL
Prep Date:	03/24/2011 1615			Injection Volume:	0.5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodimethylamine	2.9	U D	2.9	100
1,4-Dichlorobenzene	3.2	U D	3.2	40
Benzyl alcohol	2.4	J D	2.3	100
2-Methylphenol	9.8	U D	9.8	100
3 & 4 Methylphenol	11	J D	2.5	100
Acetophenone	2.7	J D	2.4	100
Hexachloroethane	21	U D	21	100
Naphthalene	2.9	U D	2.9	40
2,4-Dinitrotoluene	17	U D	17	100
Di-n-octyl phthalate	3.5	U D	3.5	40
Tributyl phosphate	100	J D	11	500

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	93	D	51 - 120
Phenol-d5	100	D	51 - 120
Nitrobenzene-d5	97	D	48 - 120
2-Fluorobiphenyl	95	D	38 - 120
2,4,6-Tribromophenol	113	D	57 - 120
Terphenyl-d14	42	D	50 - 120

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Client Sample ID: **J1FL19**

Lab Sample ID: 280-13862-1
Client Matrix: Water

Date Sampled: 03/23/2011 1030
Date Received: 03/24/2011 1000

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-59803	Instrument ID:	MSS_Y
Prep Method:	3520C	Prep Batch:	280-59221	Lab File ID:	Y9088.D
Dilution:	10			Initial Weight/Volume:	1001.3 mL
Analysis Date:	03/29/2011 0352			Final Weight/Volume:	1000 uL
Prep Date:	03/24/2011 1615			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found:** **11**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Unknown	1.92	490	N J
	Unknown	3.18	560	N J
	Unknown	3.26	270	N J
107-92-6	Butanoic acid	3.46	56	N J
	Unknown	4.48	110	N J
108-39-4	3-Methylphenol	5.03	11	J N J
106-44-5	4-Methylphenol	5.03	11	J N J
65-85-0	Benzoic acid	5.57	100	J N J
	Unknown	6.54	55	N J
	Unknown	9.40	110	N J
117-81-7	Bis(2-ethylhexyl) phthalate	10.78	22	J N J

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Client Sample ID: **J1FL19**

Lab Sample ID: 280-13862-1
Client Matrix: Water

Date Sampled: 03/23/2011 1030
Date Received: 03/24/2011 1000

NWTPH-Dx Northwest - Semi-Volatile Petroleum Products (GC)

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-59801	Instrument ID:	GCS_U
Prep Method:	3510C	Prep Batch:	280-59256	Lab File ID:	029B2901.D
Dilution:	1.0			Initial Weight/Volume:	993.3 mL
Analysis Date:	03/28/2011 2330			Final Weight/Volume:	1000 uL
Prep Date:	03/24/2011 1618			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
C10-C36	7900		56	500
C10-C28	6500		33	250

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	92		50 - 115

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Client Sample ID: **J1FL19**

Lab Sample ID: 280-13862-1
Client Matrix: Water

Date Sampled: 03/23/2011 1030
Date Received: 03/24/2011 1000

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-59377	Instrument ID:	CHHPLC_G
Prep Method:	3510C	Prep Batch:	280-59251	Initial Weight/Volume:	978.2 mL
Dilution:	1.0			Final Weight/Volume:	1000 uL
Analysis Date:	03/25/2011 1800			Injection Volume:	20 uL
Prep Date:	03/24/2011 1740			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acenaphthene	0.044	U	0.044	1.0
Acenaphthylene	0.044	U	0.044	1.0
Anthracene	0.062	U	0.062	0.31
Benzo[a]anthracene	0.033	U	0.033	0.20
Benzo[a]pyrene	0.054	U	0.054	0.20
Benzo[b]fluoranthene	0.054	U	0.054	0.20
Benzo[g,h,i]perylene	0.020	U	0.020	0.20
Benzo[k]fluoranthene	0.023	U	0.023	0.10
Chrysene	0.029	U	0.029	0.20
Dibenzo(a,h)anthracene	0.056	U	0.056	0.31
Fluoranthene	0.084	J X	0.083	0.41
Fluorene	0.10	U	0.10	0.31
Indeno[1,2,3-cd]pyrene	0.048	U	0.048	0.20
Naphthalene	0.057	U	0.057	1.0
Phenanthrene	0.097	U	0.097	0.31
Pyrene	0.044	U	0.044	0.20

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	85		70 - 115

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Client Sample ID: **J1FL19**

Lab Sample ID: 280-13862-1
Client Matrix: Water

Date Sampled: 03/23/2011 1030
Date Received: 03/24/2011 1000

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-59747	Instrument ID:	MT_026
Prep Method:	3010A	Prep Batch:	280-59324	Lab File ID:	26a032811.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/28/2011 1523			Final Weight/Volume:	50 mL
Prep Date:	03/25/2011 1430				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Aluminum	0.91		0.018	0.050
Antimony	0.019		0.0031	0.0060
Arsenic	0.0047	B	0.0044	0.010
Barium	0.022		0.00058	0.0050
Beryllium	0.00047	U	0.00047	0.0010
Cadmium	0.0052		0.00045	0.0020
Calcium	12.7		0.034	0.20
Chromium	0.023		0.00066	0.0020
Copper	0.021		0.0014	0.010
Lead	0.041		0.0026	0.0050
Magnesium	0.46		0.011	0.20
Manganese	0.013		0.00025	0.0050
Nickel	0.010	B	0.0013	0.040
Potassium	34.7		0.24	3.0
Selenium	0.030		0.0049	0.010
Silicon	28.8		0.035	0.50
Silver	0.00093	U	0.00093	0.0020
Sodium	133		0.092	0.50
Vanadium	0.010		0.0011	0.010
Zinc	3.0		0.0045	0.010

Analysis Method:	6010B	Analysis Batch:	280-59905	Instrument ID:	MT_026
Prep Method:	3010A	Prep Batch:	280-59324	Lab File ID:	26a032911.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/29/2011 1358			Final Weight/Volume:	50 mL
Prep Date:	03/25/2011 1430				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Iron	0.36		0.022	0.050

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-59591	Instrument ID:	MT_024
Prep Method:	3020A	Prep Batch:	280-59323	Lab File ID:	313AREF D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/26/2011 0738			Final Weight/Volume:	50 mL
Prep Date:	03/25/2011 1430				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Uranium	0.0019		0.000020	0.0010

7470A Mercury (CVAA)

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Client Sample ID: **J1FL19**

Lab Sample ID: 280-13862-1
Client Matrix: Water

Date Sampled: 03/23/2011 1030
Date Received: 03/24/2011 1000

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	280-59598	Instrument ID:	MT_033
Prep Method:	7470A	Prep Batch:	280-59293	Lab File ID:	110325AC.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	03/25/2011 1655			Final Weight/Volume:	30 mL
Prep Date:	03/25/2011 1120				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	0.00040		0.000027	0.00020

General Chemistry

Client Sample ID: **J1FL19**

Lab Sample ID: 280-13862-1
Client Matrix: Water

Date Sampled: 03/23/2011 1030
Date Received: 03/24/2011 1000

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Bromide	0.11	U	mg/L	0.11	0.20	1.0	300.0
Analysis Batch: 280-59283	Analysis Date: 03/24/2011 1933						
Nitrate as N	0.042	U	mg/L	0.042	0.50	1.0	300.0
Analysis Batch: 280-59282	Analysis Date: 03/24/2011 1933						
Chloride	10.3		mg/L	0.25	3.0	1.0	300.0
Analysis Batch: 280-59283	Analysis Date: 03/24/2011 1933						
Nitrite as N	0.049	U	mg/L	0.049	0.50	1.0	300.0
Analysis Batch: 280-59282	Analysis Date: 03/24/2011 1933						
Fluoride	5.2	N	mg/L	0.060	0.50	1.0	300.0
Analysis Batch: 280-59283	Analysis Date: 03/24/2011 1933						
Orthophosphate as P	0.22	B	mg/L	0.19	0.50	1.0	300.0
Analysis Batch: 280-59282	Analysis Date: 03/24/2011 1933						
Sulfate	46.1		mg/L	0.23	5.0	1.0	300.0
Analysis Batch: 280-59283	Analysis Date: 03/24/2011 1933						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH	10.9		SU	0.100	0.100	1.0	9040B
Analysis Batch: 280-59335	Analysis Date: 03/25/2011 0911						

QUALITY CONTROL RESULTS

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:280-59977					
LCS 280-59977/6	Lab Control Sample	T	Water	8260B	
LCSD 280-59977/7	Lab Control Sample Duplicate	T	Water	8260B	
MB 280-59977/8	Method Blank	T	Water	8260B	
280-13862-1	J1FL19	T	Water	8260B	
280-13862-1MS	Matrix Spike	T	Water	8260B	
280-13862-1MSD	Matrix Spike Duplicate	T	Water	8260B	

Report Basis
T = Total

GC/MS Semi VOA					
Prep Batch: 280-59221					
LCS 280-59221/2-A	Lab Control Sample	T	Water	3520C	
MB 280-59221/1-A	Method Blank	T	Water	3520C	
280-13862-1	J1FL19	T	Water	3520C	
280-13862-1MS	Matrix Spike	T	Water	3520C	
280-13862-1MSD	Matrix Spike Duplicate	T	Water	3520C	
Analysis Batch:280-59803					
LCS 280-59221/2-A	Lab Control Sample	T	Water	8270C	280-59221
MB 280-59221/1-A	Method Blank	T	Water	8270C	280-59221
280-13862-1	J1FL19	T	Water	8270C	280-59221
280-13862-1MS	Matrix Spike	T	Water	8270C	280-59221
280-13862-1MSD	Matrix Spike Duplicate	T	Water	8270C	280-59221

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 280-59256					
LCS 280-59256/2-A	Lab Control Sample	T	Water	3510C	
MB 280-59256/1-A	Method Blank	T	Water	3510C	
280-13862-1	J1FL19	T	Water	3510C	
280-13862-1MS	Matrix Spike	T	Water	3510C	
280-13862-1MSD	Matrix Spike Duplicate	T	Water	3510C	
Analysis Batch:280-59801					
LCS 280-59256/2-A	Lab Control Sample	T	Water	NWTPH-Dx	280-59256
MB 280-59256/1-A	Method Blank	T	Water	NWTPH-Dx	280-59256
280-13862-1	J1FL19	T	Water	NWTPH-Dx	280-59256
280-13862-1MS	Matrix Spike	T	Water	NWTPH-Dx	280-59256
280-13862-1MSD	Matrix Spike Duplicate	T	Water	NWTPH-Dx	280-59256

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-59293					
LCS 280-59293/2-A	Lab Control Sample	T	Water	7470A	
LCSD 280-59293/3-A	Lab Control Sample Duplicate	T	Water	7470A	
MB 280-59293/1-A	Method Blank	T	Water	7470A	
280-13862-1	J1FL19	T	Water	7470A	
Prep Batch: 280-59323					
LCS 280-59323/2-A	Lab Control Sample	T	Water	3020A	
LCSD 280-59323/3-A	Lab Control Sample Duplicate	T	Water	3020A	
MB 280-59323/1-A	Method Blank	T	Water	3020A	
280-13862-1	J1FL19	T	Water	3020A	
Prep Batch: 280-59324					
LCS 280-59324/2-A	Lab Control Sample	T	Water	3010A	
LCSD 280-59324/3-A	Lab Control Sample Duplicate	T	Water	3010A	
MB 280-59324/1-A	Method Blank	T	Water	3010A	
280-13862-1	J1FL19	T	Water	3010A	
Analysis Batch:280-59591					
LCS 280-59323/2-A	Lab Control Sample	T	Water	6020	280-59323
LCSD 280-59323/3-A	Lab Control Sample Duplicate	T	Water	6020	280-59323
MB 280-59323/1-A	Method Blank	T	Water	6020	280-59323
280-13862-1	J1FL19	T	Water	6020	280-59323
Analysis Batch:280-59598					
LCS 280-59293/2-A	Lab Control Sample	T	Water	7470A	280-59293
LCSD 280-59293/3-A	Lab Control Sample Duplicate	T	Water	7470A	280-59293
MB 280-59293/1-A	Method Blank	T	Water	7470A	280-59293
280-13862-1	J1FL19	T	Water	7470A	280-59293
Analysis Batch:280-59747					
LCS 280-59324/2-A	Lab Control Sample	T	Water	6010B	280-59324
LCSD 280-59324/3-A	Lab Control Sample Duplicate	T	Water	6010B	280-59324
MB 280-59324/1-A	Method Blank	T	Water	6010B	280-59324
280-13862-1	J1FL19	T	Water	6010B	280-59324
Analysis Batch:280-59905					
LCS 280-59324/2-A	Lab Control Sample	T	Water	6010B	280-59324
LCSD 280-59324/3-A	Lab Control Sample Duplicate	T	Water	6010B	280-59324
MB 280-59324/1-A	Method Blank	T	Water	6010B	280-59324
280-13862-1	J1FL19	T	Water	6010B	280-59324

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-59282					
LCS 280-59282/34	Lab Control Sample	T	Water	300.0	
MB 280-59282/35	Method Blank	T	Water	300.0	
280-13862-1	J1FL19	T	Water	300.0	
280-13862-1DU	Duplicate	T	Water	300.0	
280-13862-1MS	Matrix Spike	T	Water	300.0	
Analysis Batch:280-59283					
LCS 280-59283/34	Lab Control Sample	T	Water	300.0	
MB 280-59283/35	Method Blank	T	Water	300.0	
280-13862-1	J1FL19	T	Water	300.0	
280-13862-1DU	Duplicate	T	Water	300.0	
280-13862-1MS	Matrix Spike	T	Water	300.0	
Analysis Batch:280-59335					
LCS 280-59335/4	Lab Control Sample	T	Water	9040B	
LCSD 280-59335/5	Lab Control Sample Duplicate	T	Water	9040B	
280-13862-1	J1FL19	T	Water	9040B	
280-13862-1DU	Duplicate	T	Water	9040B	

Report Basis
T = Total

HPLC/IC

Prep Batch: 280-59251					
LCS 280-59251/2-A	Lab Control Sample	T	Water	3510C	
LCSD 280-59251/3-A	Lab Control Sample Duplicate	T	Water	3510C	
MB 280-59251/1-A	Method Blank	T	Water	3510C	
280-13862-1	J1FL19	T	Water	3510C	
Analysis Batch:280-59377					
LCS 280-59251/2-A	Lab Control Sample	T	Water	8310	280-59251
LCSD 280-59251/3-A	Lab Control Sample Duplicate	T	Water	8310	280-59251
MB 280-59251/1-A	Method Blank	T	Water	8310	280-59251
280-13862-1	J1FL19	T	Water	8310	280-59251

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Method Blank - Batch: 280-59977

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 280-59977/8	Analysis Batch:	280-59977	Instrument ID:	MSV_G2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	G2_2628.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	03/29/2011 2255	Units:	ug/L	Final Weight/Volume:	20 mL
Prep Date:	03/29/2011 2255				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acetone	1.9	U	1.9	10
Benzene	0.16	U	0.16	1.0
Bromodichloromethane	0.17	U	0.17	1.0
n-Butanol	17	U	17	60
2-Butanone (MEK)	2.0	U	2.0	6.0
Carbon disulfide	0.45	U	0.45	2.0
Carbon tetrachloride	0.19	U	0.19	1.0
Chlorobenzene	0.17	U	0.17	1.0
Chloroform	0.16	U	0.16	1.0
1,3-Dichlorobenzene	0.13	U	0.13	1.0
1,4-Dichlorobenzene	0.16	U	0.16	1.0
1,1-Dichloroethane	0.22	U	0.22	1.0
1,2-Dichloroethane	0.13	U	0.13	1.0
cis-1,2-Dichloroethene	0.15	U	0.15	1.0
trans-1,2-Dichloroethene	0.15	U	0.15	1.0
1,1-Dichloroethene	0.23	U	0.23	1.0
1,2-Dichloropropane	0.18	U	0.18	1.0
Ethylbenzene	0.16	U	0.16	1.0
2-Hexanone	1.7	U	1.7	5.0
Methylene Chloride	0.32	U	0.32	2.0
4-Methyl-2-pentanone (MIBK)	0.98	U	0.98	5.0
2-Pentanone	1.0	U	1.0	5.0
Propionitrile	3.7	U	3.7	20
Tetrachloroethene	0.20	U	0.20	1.0
Tetrahydrofuran	2.0	U	2.0	7.0
Toluene	0.17	U	0.17	1.0
1,1,1-Trichloroethane	0.16	U	0.16	1.0
1,1,2-Trichloroethane	0.27	U	0.27	1.0
Trichloroethene	0.16	U	0.16	1.0
Vinyl chloride	0.10	U	0.10	1.0
Xylenes, Total	0.19	U	0.19	2.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92	70 - 127
Toluene-d8 (Surr)	103	80 - 125
4-Bromofluorobenzene (Surr)	102	78 - 120
Dibromofluoromethane (Surr)	97	77 - 120

Method Blank TICs- Batch: 280-59977

Cas Number	Analyte	RT	Est. Result	Qual
	Unknown	3.79	24.9	N J

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-59977

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 280-59977/6	Analysis Batch:	280-59977	Instrument ID:	MSV_G2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	G2_2626.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	03/29/2011 2217	Units:	ug/L	Final Weight/Volume:	20 mL
Prep Date:	03/29/2011 2217				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-59977/7	Analysis Batch:	280-59977	Instrument ID:	MSV_G2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	G2_2627.D
Dilution:	1 0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	03/29/2011 2236	Units:	ug/L	Final Weight/Volume:	20 mL
Prep Date:	03/29/2011 2236				
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Benzene	96	86	77 - 120	10	20		
Bromodichloromethane	95	84	78 - 120	12	20		
Carbon tetrachloride	96	86	80 - 120	11	21		
Chlorobenzene	101	92	78 - 120	10	20		
Chloroform	98	88	78 - 120	11	20		
1,3-Dichlorobenzene	99	90	75 - 120	10	20		
1,1-Dichloroethane	94	84	77 - 120	12	21		
trans-1,2-Dichloroethene	99	91	80 - 120	9	24		
1,1-Dichloroethene	103	92	68 - 133	11	20		
1,2-Dichloropropane	89	80	76 - 120	11	20		
Ethylbenzene	99	90	78 - 120	9	26		
Methylene Chloride	100	83	60 - 134	19	20		
Tetrachloroethene	99	91	77 - 120	8	20		
Toluene	98	88	73 - 120	10	20		
1,1,1-Trichloroethane	93	84	78 - 120	10	20		
Trichloroethene	97	88	78 - 122	9	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100	87	70 - 127
Toluene-d8 (Surr)	111	99	80 - 125
4-Bromofluorobenzene (Surr)	112	100	78 - 120
Dibromofluoromethane (Surr)	109	95	77 - 120

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-59977

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	280-13862-1	Analysis Batch:	280-59977	Instrument ID:	MSV_G2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	G2_2644.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	03/30/2011 0404			Final Weight/Volume:	20 mL
Prep Date:	03/30/2011 0404				
Leach Date:	N/A				

MSD Lab Sample ID:	280-13862-1	Analysis Batch:	280-59977	Instrument ID:	MSV_G2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	G2_2645.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	03/30/2011 0423			Final Weight/Volume:	20 mL
Prep Date:	03/30/2011 0423				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	92	90	77 - 120	2	20		
Bromodichloromethane	89	88	78 - 120	1	20		
Carbon tetrachloride	92	85	80 - 120	8	21		
Chlorobenzene	96	94	78 - 120	2	20		
Chloroform	93	89	78 - 120	4	20		
1,3-Dichlorobenzene	91	91	75 - 120	1	20		
1,1-Dichloroethane	90	86	77 - 120	5	21		
trans-1,2-Dichloroethene	95	91	80 - 120	3	24		
1,1-Dichloroethene	101	95	68 - 133	6	20		
1,2-Dichloropropane	85	84	76 - 120	1	20		
Ethylbenzene	94	93	78 - 120	1	26		
Methylene Chloride	83	79	60 - 134	6	20		
Tetrachloroethene	95	90	77 - 120	5	20		
Toluene	91	89	73 - 120	3	20		
1,1,1-Trichloroethane	89	85	78 - 120	4	20		
Trichloroethene	91	88	78 - 122	3	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92	91	70 - 127
Toluene-d8 (Surr)	104	102	80 - 125
4-Bromofluorobenzene (Surr)	106	104	78 - 120
Dibromofluoromethane (Surr)	101	98	77 - 120

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Method Blank - Batch: 280-59221

Method: 8270C
Preparation: 3520C

Lab Sample ID:	MB 280-59221/1-A	Analysis Batch:	280-59803	Instrument ID:	MSS_Y
Client Matrix:	Water	Prep Batch:	280-59221	Lab File ID:	Y9077.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/29/2011 0013	Units:	ug/L	Final Weight/Volume:	1000 uL
Prep Date:	03/24/2011 1615			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
N-Nitrosodimethylamine	0.29	U	0.29	10
1,4-Dichlorobenzene	0.32	U	0.32	4.0
Benzyl alcohol	0.23	U	0.23	10
2-Methylphenol	0.98	U	0.98	10
3 & 4 Methylphenol	0.25	U	0.25	10
Acetophenone	0.24	U	0.24	10
Hexachloroethane	2.1	U	2.1	10
Naphthalene	0.29	U	0.29	4.0
2,4-Dinitrotoluene	1.7	U	1.7	10
Di-n-octyl phthalate	0.35	U	0.35	4.0
Tributyl phosphate	1.1	U	1.1	50

Surrogate	% Rec	Acceptance Limits
2-Fluorophenol	93	51 - 120
Phenol-d5	95	51 - 120
Nitrobenzene-d5	94	48 - 120
2-Fluorobiphenyl	90	38 - 120
2,4,6-Tribromophenol	93	57 - 120
Terphenyl-d14	105	50 - 120

Method Blank TICs- Batch: 280-59221

Cas Number	Analyte	RT	Est. Result	Qual
68-12-2	Dimethylformamide	2.72	34.3	J N J
	Unknown	4.48	112	N J
	Unknown	1.92	222	N J

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Lab Control Sample - Batch: 280-59221

Method: 8270C
Preparation: 3520C

Lab Sample ID:	LCS 280-59221/2-A	Analysis Batch:	280-59803	Instrument ID:	MSS_Y
Client Matrix:	Water	Prep Batch:	280-59221	Lab File ID:	Y9078.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/29/2011 0033	Units:	ug/L	Final Weight/Volume:	1000 uL
Prep Date:	03/24/2011 1615			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Phenol	80.0	81.4	102	52 - 120	
2-Chlorophenol	80.0	78.4	98	57 - 120	
1,4-Dichlorobenzene	80.0	67.7	85	27 - 120	
2-Methylphenol	80.0	77.8	97	50 - 120	
N-Nitrosodi-n-propylamine	80.0	79.1	99	50 - 120	
1,2,4-Trichlorobenzene	80.0	67.2	84	23 - 120	
4-Chloro-3-methylphenol	80.0	82.5	103	63 - 120	
2-Methylnaphthalene	80.0	76.0	95	32 - 120	
2,4,6-Trichlorophenol	80.0	84.9	106	52 - 120	
Acenaphthene	80.0	78.8	99	45 - 120	
4-Nitrophenol	80.0	89.7	112	49 - 124	
2,4-Dinitrotoluene	80.0	89.2	111	51 - 120	
Pentachlorophenol	80.0	83.0	104	40 - 120	
Anthracene	80.0	82.0	103	56 - 120	
Carbazole	80.0	83.3	104	48 - 120	
Pyrene	80.0	84.2	105	56 - 120	

Surrogate	% Rec	Acceptance Limits
2-Fluorophenol	96	51 - 120
Phenol-d5	98	51 - 120
Nitrobenzene-d5	99	48 - 120
2-Fluorobiphenyl	95	38 - 120
2,4,6-Tribromophenol	108	57 - 120
Terphenyl-d14	102	50 - 120

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-59221

Method: 8270C
Preparation: 3520C

MS Lab Sample ID:	280-13862-1	Analysis Batch:	280-59803	Instrument ID:	MSS_Y
Client Matrix:	Water	Prep Batch:	280-59221	Lab File ID:	Y9089.D
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	1016.2 mL
Analysis Date:	03/29/2011 0412			Final Weight/Volume:	1000 uL
Prep Date:	03/24/2011 1615			Injection Volume:	0.5 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-13862-1	Analysis Batch:	280-59803	Instrument ID:	MSS_Y
Client Matrix:	Water	Prep Batch:	280-59221	Lab File ID:	Y9090.D
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	968 mL
Analysis Date:	03/29/2011 0432			Final Weight/Volume:	1000 uL
Prep Date:	03/24/2011 1615			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Phenol	106	95	52 - 120	2	42	D	D
2-Chlorophenol	101	97	57 - 120	1	30	J D	J D
1,4-Dichlorobenzene	92	86	27 - 120	2	52	D	D
2-Methylphenol	107	104	50 - 120	2	30	J D	J D
N-Nitrosodi-n-propylamine	103	97	50 - 120	1	30	J D	J D
1,2,4-Trichlorobenzene	91	86	23 - 120	1	42	D	D
4-Chloro-3-methylphenol	110	106	63 - 120	1	30	J D	J D
2-Methylnaphthalene	102	97	32 - 120	0	32	D	D
2,4,6-Trichlorophenol	109	101	52 - 120	3	30	J D	J D
Acenaphthene	103	99	45 - 120	2	30	D	D
4-Nitrophenol	107	109	49 - 124	6	35	J D	J D
2,4-Dinitrotoluene	105	97	51 - 120	3	32	J D	J D
Pentachlorophenol	NC	NC	40 - 120	NC	33	U D	U D
Anthracene	90	92	56 - 120	8	30	D	D
Carbazole	111	105	48 - 120	1	30	D	D
Pyrene	76	80	56 - 120	10	30	J D	J D

Surrogate	MS % Rec		MSD % Rec		Acceptance Limits
2-Fluorophenol	96	D	93	D	51 - 120
Phenol-d5	104	D	101	D	51 - 120
Nitrobenzene-d5	103	D	96	D	48 - 120
2-Fluorobiphenyl	98	D	97	D	38 - 120
2,4,6-Tribromophenol	118	D	118	D	57 - 120
Terphenyl-d14	56	D	68	D	50 - 120

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Method Blank - Batch: 280-59256

Method: NWTPH-Dx
Preparation: 3510C

Lab Sample ID:	MB 280-59256/1-A	Analysis Batch:	280-59801	Instrument ID:	GCS_U
Client Matrix:	Water	Prep Batch:	280-59256	Lab File ID:	027B2701.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/28/2011 2234	Units:	ug/L	Final Weight/Volume:	1000 uL
Prep Date:	03/24/2011 1618			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
C10-C36	56	U	56	500
C10-C28	33	U	33	250

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	86	50 - 115

Lab Control Sample - Batch: 280-59256

Method: NWTPH-Dx
Preparation: 3510C

Lab Sample ID:	LCS 280-59256/2-A	Analysis Batch:	280-59801	Instrument ID:	GCS_U
Client Matrix:	Water	Prep Batch:	280-59256	Lab File ID:	028B2801.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/28/2011 2302	Units:	ug/L	Final Weight/Volume:	1000 uL
Prep Date:	03/24/2011 1618			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
C10-C36	2000	1800	90	57 - 115	
C10-C28	2000	1810	90	54 - 115	

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	85	50 - 115

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-59256

Method: NWTPH-Dx
Preparation: 3510C

MS Lab Sample ID:	280-13862-1	Analysis Batch:	280-59801	Instrument ID:	GCS_U
Client Matrix:	Water	Prep Batch:	280-59256	Lab File ID:	030B3001.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	998.9 mL
Analysis Date:	03/28/2011 2358			Final Weight/Volume:	1000 uL
Prep Date:	03/24/2011 1618			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-13862-1	Analysis Batch:	280-59801	Instrument ID:	GCS_U
Client Matrix:	Water	Prep Batch:	280-59256	Lab File ID:	031B3101.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1052.2 mL
Analysis Date:	03/29/2011 0026			Final Weight/Volume:	1000 uL
Prep Date:	03/24/2011 1618			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
C10-C36	86	88	50 - 115	0	31		
C10-C28	79	93	50 - 115	2	31		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
o-Terphenyl	85	96	50 - 115

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Method Blank - Batch: 280-59251

Method: 8310
Preparation: 3510C

Lab Sample ID:	MB 280-59251/1-A	Analysis Batch:	280-59377	Instrument ID:	CHHPLC_G
Client Matrix:	Water	Prep Batch:	280-59251	Lab File ID:	G0325008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/25/2011 1628	Units:	ug/L	Final Weight/Volume:	1000 uL
Prep Date:	03/24/2011 1740			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Acenaphthene	0.043	U	0.043	1.0
Acenaphthylene	0.043	U	0.043	1.0
Anthracene	0.061	U	0.061	0.30
Benzo[a]anthracene	0.032	U	0.032	0.20
Benzo[a]pyrene	0.053	U	0.053	0.20
Benzo[b]fluoranthene	0.053	U	0.053	0.20
Benzo[g,h,i]perylene	0.020	U	0.020	0.20
Benzo[k]fluoranthene	0.023	U	0.023	0.10
Chrysene	0.028	U	0.028	0.20
Dibenzo(a,h)anthracene	0.055	U	0.055	0.30
Fluoranthene	0.081	U	0.081	0.40
Fluorene	0.099	U	0.099	0.30
Indeno[1,2,3-cd]pyrene	0.047	U	0.047	0.20
Naphthalene	0.056	U	0.056	1.0
Phenanthrene	0.095	U	0.095	0.30
Pyrene	0.043	U	0.043	0.20

Surrogate	% Rec	Acceptance Limits
Terphenyl-d14 (SUR)	90	70 - 115

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-59251

Method: 8310
Preparation: 3510C

LCS Lab Sample ID:	LCS 280-59251/2-A	Analysis Batch:	280-59377	Instrument ID:	CHHPLC_G
Client Matrix:	Water	Prep Batch:	280-59251	Lab File ID:	G0325009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/25/2011 1659	Units:	ug/L	Final Weight/Volume:	1000 uL
Prep Date:	03/24/2011 1740			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 280-59251/3-A	Analysis Batch:	280-59377	Instrument ID:	CHHPLC_G
Client Matrix:	Water	Prep Batch:	280-59251	Lab File ID:	G0325010.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/25/2011 1729	Units:	ug/L	Final Weight/Volume:	1000 uL
Prep Date:	03/24/2011 1740			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Acenaphthene	91	89	63 - 115	3	20		
Acenaphthylene	87	85	46 - 115	3	30		
Anthracene	86	83	59 - 115	3	20		
Benzo[a]anthracene	101	101	73 - 115	0	20		
Benzo[a]pyrene	81	82	68 - 115	1	20		
Benzo[b]fluoranthene	98	98	74 - 115	0	20		
Benzo[g,h,i]perylene	92	93	68 - 115	1	20		
Benzo[k]fluoranthene	98	99	83 - 115	1	20		
Chrysene	97	97	68 - 115	0	20		
Dibenzo(a,h)anthracene	99	100	77 - 115	1	20		
Fluoranthene	96	95	67 - 115	2	20		
Fluorene	92	89	58 - 116	3	27		
Indeno[1,2,3-cd]pyrene	103	104	72 - 115	1	20		
Naphthalene	84	82	56 - 115	3	20		
Phenanthrene	95	92	68 - 115	3	20		
Pyrene	97	95	72 - 115	2	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Terphenyl-d14 (SUR)	89	90	70 - 115

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Method Blank - Batch: 280-59324

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 280-59324/1-A	Analysis Batch:	280-59747	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-59324	Lab File ID:	26a032811.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/28/2011 1516	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/25/2011 1430				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	0.018	U	0.018	0.050
Antimony	0.0031	U	0.0031	0.0060
Arsenic	0.0044	U	0.0044	0.010
Barium	0.000790	B	0.00058	0.0050
Beryllium	0.00047	U	0.00047	0.0010
Cadmium	0.00045	U	0.00045	0.0020
Calcium	0.034	U	0.034	0.20
Chromium	0.00066	U	0.00066	0.0020
Copper	0.0014	U	0.0014	0.010
Lead	0.0026	U	0.0026	0.0050
Magnesium	0.011	U	0.011	0.20
Manganese	0.00025	U	0.00025	0.0050
Nickel	0.0013	U	0.0013	0.040
Potassium	0.24	U	0.24	3.0
Selenium	0.0049	U	0.0049	0.010
Silicon	0.035	U	0.035	0.50
Silver	0.00093	U	0.00093	0.0020
Sodium	0.092	U	0.092	0.50
Vanadium	0.0011	U	0.0011	0.010
Zinc	0.0045	U	0.0045	0.010

Method Blank - Batch: 280-59324

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 280-59324/1-A	Analysis Batch:	280-59905	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-59324	Lab File ID:	26a032911.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/29/2011 1351	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/25/2011 1430				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Iron	0.022	U	0.022	0.050

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-59324

Method: 6010B
Preparation: 3010A

LCS Lab Sample ID:	LCS 280-59324/2-A	Analysis Batch:	280-59747	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-59324	Lab File ID:	26a032811.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/28/2011 1519	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/25/2011 1430				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-59324/3-A	Analysis Batch:	280-59747	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-59324	Lab File ID:	26a032811.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/28/2011 1521	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/25/2011 1430				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Aluminum	93	92	87 - 111	0	20		
Antimony	96	96	88 - 110	0	20		
Arsenic	96	96	88 - 110	0	20		
Barium	99	97	90 - 112	2	20		
Beryllium	99	96	89 - 113	2	20		
Cadmium	89	89	88 - 111	0	20		
Calcium	97	96	90 - 111	1	20		
Chromium	93	93	90 - 113	1	20		
Copper	99	98	86 - 112	1	20		
Lead	96	95	89 - 110	1	20		
Magnesium	98	98	90 - 113	1	20		
Manganese	99	98	90 - 110	1	20		
Nickel	95	94	89 - 111	0	20		
Potassium	101	99	89 - 114	1	20		
Selenium	95	94	85 - 112	0	20		
Silicon	99	98	90 - 110	1	20		
Silver	98	98	86 - 115	1	20		
Sodium	101	101	90 - 115	0	20		
Vanadium	99	99	90 - 111	0	20		
Zinc	98	98	85 - 111	1	20		

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-59324

Method: 6010B
Preparation: 3010A

LCS Lab Sample ID:	LCS 280-59324/2-A	Analysis Batch:	280-59905	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-59324	Lab File ID:	26a032911.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/29/2011 1353	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/25/2011 1430				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-59324/3-A	Analysis Batch:	280-59905	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-59324	Lab File ID:	26a032911.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/29/2011 1355	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/25/2011 1430				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Iron	104	104	89 - 115	1	20		

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Method Blank - Batch: 280-59323

Method: 6020
Preparation: 3020A

Lab Sample ID:	MB 280-59323/1-A	Analysis Batch:	280-59591	Instrument ID:	MT_024
Client Matrix:	Water	Prep Batch:	280-59323	Lab File ID:	310_BLK.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/26/2011 0729	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/25/2011 1430				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Uranium	0.000020	U	0.000020	0.0010

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-59323

Method: 6020
Preparation: 3020A

LCS Lab Sample ID:	LCS 280-59323/2-A	Analysis Batch:	280-59591	Instrument ID:	MT_024
Client Matrix:	Water	Prep Batch:	280-59323	Lab File ID:	311_LCS.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/26/2011 0732	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/25/2011 1430				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-59323/3-A	Analysis Batch:	280-59591	Instrument ID:	MT_024
Client Matrix:	Water	Prep Batch:	280-59323	Lab File ID:	312LCSD.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/26/2011 0735	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/25/2011 1430				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Uranium	110	112	85 - 119	2	20		

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Method Blank - Batch: 280-59293

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 280-59293/1-A	Analysis Batch:	280-59598	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-59293	Lab File ID:	110325AC.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	03/25/2011 1648	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	03/25/2011 1120				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.000027	U	0.000027	0.00020

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-59293

Method: 7470A
Preparation: 7470A

LCS Lab Sample ID:	LCS 280-59293/2-A	Analysis Batch:	280-59598	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-59293	Lab File ID:	110325AC.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	03/25/2011 1650	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	03/25/2011 1120				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-59293/3-A	Analysis Batch:	280-59598	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-59293	Lab File ID:	110325AC.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	03/25/2011 1652	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	03/25/2011 1120				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Mercury	95	94	88 - 111	1	10		

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Method Blank - Batch: 280-59282

Method: 300.0
Preparation: N/A

Lab Sample ID:	MB 280-59282/35	Analysis Batch:	280-59282	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	144.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	03/24/2011 1916	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrate as N	0.042	U	0.042	0.50
Nitrite as N	0.049	U	0.049	0.50
Orthophosphate as P	0.19	U	0.19	0.50

Method Reporting Limit Check - Batch: 280-59282

Method: 300.0
Preparation: N/A

Lab Sample ID:	MRL 280-59282/3	Analysis Batch:	280-59282	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	112.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	03/24/2011 1017	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as N	0.200	0.195	98	50 - 150	B
Nitrite as N	0.200	0.190	95	50 - 150	B
Orthophosphate as P	0.200	0.19	60	50 - 150	U

Lab Control Sample - Batch: 280-59282

Method: 300.0
Preparation: N/A

Lab Sample ID:	LCS 280-59282/34	Analysis Batch:	280-59282	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	143.TXT
Dilution:	1 0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	03/24/2011 1859	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as N	5.00	5.06	101	90 - 110	
Nitrite as N	5.00	5.06	101	90 - 110	
Orthophosphate as P	5.00	5.17	103	90 - 110	

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Matrix Spike - Batch: 280-59282

Method: 300.0
Preparation: N/A

Lab Sample ID:	280-13862-1	Analysis Batch:	280-59282	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	147.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	03/24/2011 2024	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as N	0.042	U	5.00	4.95	99	80 - 120	
Nitrite as N	0.049	U	5.00	4.99	100	80 - 120	
Orthophosphate as P	0.22	B	5.00	4.68	89	80 - 120	

Duplicate - Batch: 280-59282

Method: 300.0
Preparation: N/A

Lab Sample ID:	280-13862-1	Analysis Batch:	280-59282	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	146.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	03/24/2011 1950	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Nitrate as N	0.042	U	0.042	NC	15	U
Nitrite as N	0.049	U	0.049	NC	15	U
Orthophosphate as P	0.22	B	0.224	2	15	B

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Method Blank - Batch: 280-59283

Method: 300.0
Preparation: N/A

Lab Sample ID:	MB 280-59283/35	Analysis Batch:	280-59283	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	144.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	03/24/2011 1916	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Bromide	0.11	U	0.11	0.20
Chloride	0.25	U	0.25	3.0
Fluoride	0.060	U	0.060	0.50
Sulfate	0.23	U	0.23	5.0

Method Reporting Limit Check - Batch: 280-59283

Method: 300.0
Preparation: N/A

Lab Sample ID:	MRL 280-59283/3	Analysis Batch:	280-59283	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	112.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	03/24/2011 1017	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Bromide	0.200	0.198	99	50 - 150	B
Chloride	1.00	0.979	98	50 - 150	B
Fluoride	0.200	0.186	93	50 - 150	B
Sulfate	1.00	0.982	98	50 - 150	B

Lab Control Sample - Batch: 280-59283

Method: 300.0
Preparation: N/A

Lab Sample ID:	LCS 280-59283/34	Analysis Batch:	280-59283	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	143.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	03/24/2011 1859	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Bromide	5.00	5.01	100	90 - 110	
Chloride	25.0	25.07	100	90 - 110	
Fluoride	5.00	5.14	103	90 - 110	
Sulfate	25.0	25.09	100	90 - 110	

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Matrix Spike - Batch: 280-59283

Method: 300.0
Preparation: N/A

Lab Sample ID:	280-13862-1	Analysis Batch:	280-59283	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	147.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	03/24/2011 2024	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Bromide	0.11	U	5.00	5.00	100	80 - 120	
Chloride	10.3		25.0	35.16	99	80 - 120	
Fluoride	5.2		5.00	9.04	77	80 - 120	N
Sulfate	46.1		25.0	70.42	97	80 - 120	

Duplicate - Batch: 280-59283

Method: 300.0
Preparation: N/A

Lab Sample ID:	280-13862-1	Analysis Batch:	280-59283	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	146.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	03/24/2011 1950	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Bromide	0.11	U	0.11	NC	15	U
Chloride	10.3		10.32	0.3	15	
Fluoride	5.2		5.18	0.3	15	
Sulfate	46.1		46.20	0.2	15	

Client: Washington Closure Hanford

Job Number: 280-13862-1
Sdg Number: JP0136

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-59335

Method: 9040B
Preparation: N/A

LCS Lab Sample ID:	LCS 280-59335/4	Analysis Batch:	280-59335	Instrument ID:	WC_pH Probe
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	032511.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	03/25/2011 0908	Units:	SU	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-59335/5	Analysis Batch:	280-59335	Instrument ID:	WC_pH Probe
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	032511.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	03/25/2011 0909	Units:	SU	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
pH	100	100	99 - 101	0	5		

Duplicate - Batch: 280-59335

Method: 9040B
Preparation: N/A

Lab Sample ID:	280-13862-1	Analysis Batch:	280-59335	Instrument ID:	WC_pH Probe
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	032511.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	03/25/2011 0912	Units:	SU	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
pH	10.9	10.88	0.09	5	

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-151-001	Page 1 of 1

Collector Q. Stowe	Company Contact Joan Kessner	Telephone No. 509-375-4688	Project Coordinator KESSNER, JH	Price Code 7L	Data Turnaround DH 3/21/11 ~~21~~ 7 Days
Project Designation 300 Area Field Remediation - Water	Sampling Location UPR-300-4		SAF No. RC-151		
Ice Chest No. WCH-08-042	Field Logbook No. EL-1395-18	COA RUP3042600	Method of Shipment AJ 3-23-11 ~~Hand Deliver~~/Fed Ex		
Shipped To TestAmerica Incorporated, ~~Richland~~ Denver DH 3/21/11	Offsite Property No. NA		Bill of Lading/Air Bill No. 7945 6703 1657		

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radioactive < DOT Limits JEB 3-23-11

Special Handling and/or Storage

Cool 4C

Preservation	HNO3 to pH <2	Cool 4C	HCl or H2SO4 to pH <2 Coo	Cool 4C	HCl to pH <2 Cool 4C	HNO3 to pH <2 Cool 4C	Cool 4C	None		
Type of Container	G/P	aG	G	aG	aG	G/P	aG	G/P		
No. of Container(s)	1	1	3	3	3	1	2	1		
Volume	250mL	500mL	40mL	1000mL	1000mL	1000mL	1000mL	120mL		
SAMPLE ANALYSIS	See item (1) in Special Instructions.	IC Anions - 300.0; pH (Water) - 9040	VOA - 8260A (ETF)	Semi-VOA - 8270A (ETF)	TPH-Diesel Range - WTPH-D +	Gross Alpha & Beta - 900.0	PAHs - 8310	RCF GEA Shipping Screen		

Sample No.	Matrix *	Sample Date	Sample Time										RCF
J1FL19	WATER	3/23/11	1030	X	X	X	X	X		X			27376

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Quincy Stowe	3/23/11 1050	Don Heilberg	3/23/11 1050
Don Heilberg	3/23/11 1240	J.E. Bechel	3-23-11 1240
J.E. Bechel	3-23-11 1415	FED EX	
			3/24/11 1000

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010TR (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Uranium, Vanadium, Zinc}; Mercury - 7470 - (CV) {Mercury}

REVIEWED BY AJ DATE 3-23-11

JP0136

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Project 28002142 - 6 outer water - water

Analytical Due:

Report Due: 3/31/11 (Rush 5d TAT)

Sample Check-in List

Date/Time Received: 3/24/11 1000 GM Screen Result 13 microR/hr

Client: Washington Closure Hanford SDG #: JP0136 NA[ ] SAF #: RC-151 NA [ ]

Job Number: 13862 Chain of Custody # RC-151-001

Shipping Container ID: WCH-08-042 Air Bill # 7945670316 57

1. Custody Seals on shipping container intact? NA [ ] Yes [✓] No [ ]
2. Custody Seals dated and signed? NA [ ] Yes [✓] No [ ]
3. Chain of Custody record present? NA [ ] Yes [✓] No [ ]
4. Cooler Temperature °C: 1.2 NA [ ] 5. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [✓]
6. Number of samples in shipping container: 1
7. Sample holding times exceeded? NA [ ] Yes [ ] No [✓]
8. Samples have:
   - ✓ Tape
   - ✓ Custody Seals
   - ✓ Hazard Lables
   - ✓ Appropriate Sample Lables
9. Samples are:
   - ✓ In Good Condition
   - Broken
   - Leaking
   - Have Air Bubbles
   - (Only for samples requiring no head space.)
10. Sample pH taken? NA [✓] pH<2 [ ] pH>2 [ ] pH>9 [ ] **Amount HNO_3 Added**
11. Sample Location, Sample Collector Listed? *
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers):

Sample Custodian: [signature] **Date:** 3/24/11

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is

Project Manager [signature] Date 3/25/11

From: (509) 375-4640 Origin ID: PSCA
WCH MAILROOM
WASHINGTON CLOSURE HANFORD
2620 FERMI AVE

RICHLAND, WA 99354

FedEx. Express

J1115110225022 5

Ship Date: 23MAR11
ActWgt: 82.0 LB
CAD: 8897843/INET3130

Delivery Address Bar Code

Ref #
Invoice #
PO #
Dept #

SHIP TO: (303) 736-0100 BILL SENDER

Sample Recieving
Test America Denver
4955 YARROW ST

ARVADA, CO 80002

1 of 2

THU - 24 MAR A1
PRIORITY OVERNIGHT

TRK# 7945 6703 1657
0201

MASTER

XH WHHA

80002
CO-US
DEN

50DG2/BDD9/7EFB

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic valueof the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $500, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.