0098079

SAF-RC-076
100-D/DR Burial Grounds & Remaining Sites – Water
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt	H4-21	KW 7/27/11 INITIAL/DATE

COMMENTS:

SDG JP0226 **SAF-RC-076**

Rad only Chem only ☑ Rad & Chem

☑ Complete Partial

Waste Site: 100-D-50:6 Pipelines and Catch Basins

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AUG 11 2011
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Analytical Data Package Prepared For

Washington Closure Hanford

RECEIVED
JUL 2011

Radiochemical Analysis By

TestAmerica

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

Assigned Laboratory Code: TARL

Data Package Contains 75 ***Pages***

Report No.: 47534

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.
JP0226	RC-076	J1FL22	J1G140511-1	MKXPQ1AG	9MKXPQ10	1196081
		J1FL22	J1G140511-1	MKXPQ1AK	9MKXPQ10	1196089
		J1FL22	J1G140511-1	MKXPQ1AC	9MKXPQ10	1196092
		J1FL22	J1G140511-1	MKXPQ1AA	9MKXPQ10	1196095
		J1FL22	J1G140511-1	MKXPQ1AD	9MKXPQ10	1196096
		J1FL22	J1G140511-1	MKXPQ1AF	9MKXPQ10	1196099
		J1FL22	J1G140511-1	MKXPQ1AE	9MKXPQ10	1196100
		J1FL22	J1G140511-1	MKXPQ1AH	9MKXPQ10	1196101
		J1FL22	J1G140511-1	MKXPQ1AJ	9MKXPQ10	1196102

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

TestAmerica Laboratories, Inc.

July 21, 2011

Attention: Joan Kessner

SAF Number	:	RC-076
Date SDG Closed	:	July 14, 2011
Number of Samples	:	One (1)
Sample Type	:	Water
SDG Number	:	JP0226
Data Deliverable	:	7– Day / Summary

CASE NARRATIVE

I. Introduction

On July 14, 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
J1FL22	MKXPQ	WATER	7/14/11

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
Strontium-90 by method RL-GPC-003
Gamma Spectroscopy
Gamma Spec by method RL-GAM-001
Iodine-129 by method RL-GAM-002
Liquid Scintillation Counting

Technetium-99 by method RL-LSC-013
Tritium by method RL-LSC-005
Carbon-14 by method RL-LSC-008
Chemical Analysis
Hexavalent Chromium by EPA method 7196A

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 (J1FL22) results are within contractual requirements.

Gross Beta by method RL-GPC-001:
The achieved MDA for the sample and the sample duplicate exceeded the CRDL due to reduced aliquot sizes based on the weight screens. The activity detected is greater than the MDA and CRDL. Except as noted, the LCS, batch blank, sample and sample duplicate (J1FL22) results are within contractual requirements.

Strontium-90 by method RL-GPC-003:
The LCS, batch blank, sample and sample duplicate (J1FL22) results are within contractual requirements.

Gamma Spectroscopy
Gamma Spec by method RL-GAM-001:
The CRDL was not met for some of the analytes. Except as noted, the LCS, batch blank, sample and sample duplicate (J1FL22) results are within contractual requirements.

Iodine-129 by method RL-GAM-002:
The LCS, batch blank, sample and sample duplicate (J1FL22) results are within contractual requirements.

Liquid Scintillation Counting
Technetium-99 by method RL-LSC-013:
The LCS, batch blank, sample, sample duplicate (J1FL22), and sample matrix spike (J1FL22) results are within contractual requirements.

Tritium by method RL-LSC-005:
The LCS, batch blank, sample and sample duplicate (J1FL22) results are within contractual

requirements.

Carbon-14 by method RL-LSC-008:
There was insufficient sample volume provided to analyze a duplicate sample. The first 5 minute count of the instrument blank was deleted from the calculation due to static discharge. Except as noted; the LCS, batch blank and sample results are within contractual requirements.

Chemical Analysis
Hexavalent Chromium by EPA method 7196A
The LCS, batch blank, sample, sample duplicate (J1FL22), sample matrix spike (J1FL22), and matrix spike duplicate (J1FL22) 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

TestAmerica TARL

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

Date: 21-Jul-11

Report No. : 47534

SDG No: JP0226

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
1196101 SRTOT_SEP_PRECIP_GPC									
J1FL22									
	MKXPQ1AH	STRONTIUM	1.20E+00 +- 1.1E+00	U	pCi/L	97%	1.98E+00		
J1FL22 DUP									
	MKXPQ1CA	STRONTIUM	2.69E-01 +- 9.1E-01	U	pCi/L	95%	1.83E+00		126.9
1196089 I129_SEP_LEPS_GS									
J1FL22									
	MKXPQ1AK	I-129L	3.81E-01 +- 8.2E-01	U	pCi/L	94%	1.66E+00		
J1FL22 DUP									
	MKXPQ1A4	I-129L	-4.43E-01 +- 1.0E+00	U	pCi/L	90%	1.74E+00		-2667.4
1196100 GAMMA_GS									
J1FL22									
	MKXPQ1AE	AMERICIUM 241	-3.90E+01 +- 5.4E+01	U	pCi/L		8.81E+01		
		CE-144	3.04E+01 +- 8.2E+01	U	pCi/L		1.44E+02		
		CO-60	2.87E+00 +- 1.6E+01	U	pCi/L		3.09E+01	2.50E+01	
		CS-134	2.05E+00 +- 2.0E+01	U	pCi/L		3.64E+01	1.50E+01	
		CS-137	-1.75E+00 +- 1.8E+01	U	pCi/L		3.16E+01	1.50E+01	
		EU-152	5.75E+00 +- 4.5E+01	U	pCi/L		7.95E+01	5.00E+01	
		EU-154	6.60E+00 +- 5.0E+01	U	pCi/L		9.38E+01	5.00E+01	
		EU-155	-1.90E+01 +- 4.3E+01	U	pCi/L		7.35E+01	5.00E+01	
		RU-106	8.45E+00 +- 1.6E+02	U	pCi/L		2.84E+02		
		SB-125	-2.87E+01 +- 4.8E+01	U	pCi/L		7.86E+01	5.00E+01	
		ZN-65	1.48E+01 +- 3.7E+01	U	pCi/L		6.89E+01		
J1FL22 DUP									
	MKXPQ1A9	AMERICIUM 241	6.07E+01 +- 1.4E+02	U	pCi/L		2.51E+02		915.7
		CE-144	2.21E+01 +- 9.7E+01	U	pCi/L		1.71E+02		31.9
		CO-60	-4.80E-01 +- 2.3E+01	U	pCi/L		4.09E+01	2.50E+01	280.5
		CS-134	1.15E+01 +- 2.2E+01	U	pCi/L		3.99E+01	1.50E+01	139.3
		CS-137	3.37E+00 +- 1.9E+01	U	pCi/L		3.48E+01	1.50E+01	632.2
		EU-152	1.39E+01 +- 5.6E+01	U	pCi/L		9.88E+01	5.00E+01	83.0
		EU-154	3.39E+01 +- 6.8E+01	U	pCi/L		1.27E+02	5.00E+01	134.8
		EU-155	-1.91E+01 +- 5.4E+01	U	pCi/L		9.03E+01	5.00E+01	-0.5
		RU-106	-6.36E+01 +- 1.8E+02	U	pCi/L		2.97E+02		-261.3
		SB-125	1.45E+01 +- 5.5E+01	U	pCi/L		9.64E+01	5.00E+01	-609.1
		ZN-65	-3.04E+01 +- 5.2E+01	U	pCi/L		8.81E+01		-576.8
1196092 9310_ALPHABETA_GPC									
J1FL22									
	MKXPQ1AC	BETA	1.54E+01 +- 3.5E+00		pCi/L	100%	4.14E+00	4.00E+00	
J1FL22 DUP									

TestAmerica

rptSTLRchSaSummary2 V5.2.15 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.

Sample Results Summary

TestAmerica TARL

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

Date: 21-Jul-11

Report No. : 47534

SDG No: JP0226

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
1196092 9310_ALPHABETA_GPC									
J1FL22 DUP									
	MKXPQ1A5	BETA	1.43E+01 +- 3.4E+00		pCi/L	100%	4.24E+00	4.00E+00	7.5
1196095 9310_ALPHABETA_GPC									
J1FL22									
	MKXPQ1AA	ALPHA	1.50E-01 +- 9.9E-01	U	pCi/L	100%	1.96E+00	3.00E+00	
J1FL22 DUP									
	MKXPQ1A6	ALPHA	4.38E-01 +- 1.5E+00	U	pCi/L	100%	2.75E+00	3.00E+00	98.2
1196081 7196_CR6									
J1FL22									
	MKXPQ1AG	HEXCHROME	3.70E-03 +- 0.0E+00	U	mg/L	N/A	3.70E-03	3.50E-01	
	MKXPQ1A3	HEXCHROME	3.70E-03 +- 0.0E+00	U	mg/L	N/A	3.70E-03	3.50E-01	0.0
1196096 906.0_H3_LSC									
J1FL22									
	MKXPQ1AD	H-3	3.39E+02 +- 1.6E+02		pCi/L	100%	3.23E+02	4.00E+02	
J1FL22 DUP									
	MKXPQ1CD	H-3	2.92E+02 +- 1.6E+02	U	pCi/L	100%	3.23E+02	4.00E+02	14.7
1196099 TC99_SEP_LSC									
J1FL22									
	MKXPQ1AF	TC-99	3.45E+00 +- 5.6E+00	U	pCi/L	100%	9.79E+00	1.50E+01	
J1FL22 DUP									
	MKXPQ1A8	TC-99	6.02E+00 +- 5.7E+00	U	pCi/L	100%	9.79E+00	1.50E+01	54.3
1196102 C14_LSC									
J1FL22									
	MKXPQ1AJ	C-14	-2.91E+00 +- 5.5E+00	U	pCi/L	100%	1.17E+01	2.00E+02	

No. of Results: 37

TestAmerica

rptSTLRchSaSummary2 V5.2.15 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

Date: 21-Jul-11

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Report No. : 47534 **SDG No.:** JP0226

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC|MDA
SRTOT_SEP_PRECIP_GPC								
1196101 BLANK QC,								
MKX1J1AA	STRONTIUM	2.57E-01 +- 9.4E-01	U	pCi/L	86%			1.88E+00
1196101 LCS,								
MKX1J1AC	STRONTIUM	5.82E+01 +- 1.5E+01		pCi/L	86%	87%	-0.1	1.93E+00
I129_SEP_LEPS_GS								
1196089 BLANK QC,								
MKX0R1AA	I-129L	7.56E-01 +- 8.7E-01	U	pCi/L	90%			1.84E+00
1196089 LCS,								
MKX0R1AC	I-129L	1.68E+01 +- 3.5E+00		pCi/L	88%	108%	0.1	2.50E+00
GAMMA_GS								
1196100 BLANK QC,								
MKX1H1AA	AMERICIUM 241	-1.95E+01 +- 5.0E+01	U	pCi/L				8.35E+01
	CE-144	1.44E+02 +- 1.7E+02	U	pCi/L				2.99E+02
	CO-60	-5.40E+00 +- 2.2E+01	U	pCi/L				3.97E+01
	CS-134	2.66E+01 +- 2.8E+01	U	pCi/L				5.47E+01
	CS-137	8.56E+00 +- 2.7E+01	U	pCi/L				5.02E+01
	EU-152	-1.19E+00 +- 7.1E+01	U	pCi/L				1.24E+02
	EU-154	-1.82E+01 +- 7.0E+01	U	pCi/L				1.25E+02
	EU-155	-7.99E-01 +- 7.9E+01	U	pCi/L				1.32E+02
	RU-106	-1.44E+02 +- 2.4E+02	U	pCi/L				3.96E+02
	SB-125	2.08E+01 +- 6.7E+01	U	pCi/L				1.19E+02
	ZN-65	-5.40E+01 +- 5.2E+01	U	pCi/L				8.21E+01
1196100 LCS,								
MKX1H1AC	CO-60	4.03E+02 +- 8.7E+01		pCi/L		105%	0.1	5.50E+01
	CS-137	4.92E+02 +- 1.0E+02		pCi/L		98%	0.0	5.96E+01
	EU-152	7.88E+02 +- 1.9E+02		pCi/L		104%	0.0	1.42E+02
9310_ALPHABETA_GPC								
1196092 BLANK QC,								
MKX0W1AA	BETA	-1.00E-02 +- 1.3E+00	U	pCi/L	100%			2.81E+00
1196092 LCS,								
MKX0W1AC	BETA	2.08E+01 +- 3.5E+00		pCi/L	100%	92%	-0.1	2.64E+00
9310_ALPHABETA_GPC								
1196095 BLANK QC,								
MKX011AA	ALPHA	1.28E-01 +- 1.6E-01	U	pCi/L	100%			2.37E-01
1196095 LCS,								
MKX011AC	ALPHA	2.01E+01 +- 4.4E+00		pCi/L	100%	89%	-0.1	4.84E-01
7196_CR6								
1196081 MATRIX SPIKE, J1FL22								
MKXPQ1A1	HEXCHROME	2.68E-01 +- 0.0E+00		mg/L	N/A	102%	0.0	3.70E-03
MKXPQ1A2	HEXCHROME	2.67E-01 +- 0.0E+00		mg/L	N/A	101%	0.0	3.70E-03
1196081 LCS,								

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

rptSTLRchQcSummary V5.2.15 A2002

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: 21-Jul-11

Report No. : 47534

SDG No.: JP0226

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC|MDA
MKXX91AC	HEXCHROME	4.97E-01 +- 0.0E+00		mg/L	N/A	99%	0.0	3.70E-03
1196081 BLANK QC,								
MKXX91AA	HEXCHROME	3.70E-03 +- 0.0E+00	U	mg/L	N/A			3.70E-03
906.0_H3_LSC								
1196096 BLANK QC,								
MKX041AA	H-3	4.59E+01 +- 1.5E+02	U	pCi/L	100%			3.30E+02
MKX041AD	H-3	-3.79E+01 +- 1.5E+02	U	pCi/L	100%			3.29E+02
1196096 LCS,								
MKX041AE	H-3	2.72E+03 +- 2.4E+02		pCi/L	100%	101%	0.0	3.36E+02
MKX041AC	H-3	2.61E+03 +- 2.4E+02		pCi/L	100%	97%	0.0	3.36E+02
TC99_SEP_LSC								
1196099 BLANK QC,								
MKX1F1AA	TC-99	6.04E-01 +- 5.4E+00	U	pCi/L	100%			9.76E+00
1196099 LCS,								
MKX1F1AC	TC-99	4.29E+02 +- 2.9E+01		pCi/L	100%	79%	-0.2	9.78E+00
1196099 MATRIX SPIKE, J1FL22								
MKXPQ1A7	TC-99	2.66E+03 +- 1.5E+02		pCi/L	100%	74%	-0.3	9.75E+00
C14_LSC								
1196102 BLANK QC,								
MKX1M1AA	C-14	3.49E+00 +- 5.8E+00	U	pCi/L	100%			1.17E+01
1196102 LCS,								
MKX1M1AC	C-14	7.19E+03 +- 5.2E+02		pCi/L	100%	98%	0.0	4.68E+02

No. of Results: 35

TestAmerica

rptSTLRchQcSummary V5.2.15
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: 21-Jul-11

Lab Name:	TestAmerica	**SDG:**	JP0226	**Collection Date:**	7/14/2011 2:30:00 PM
Lot-Sample No.:	J1G140511-1	**Report No. :**	47534	**Received Date:**	7/14/2011 5:50:00 PM
Client Sample ID:	J1FL22	**COC No. :**	RC-076-036	**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: 1196081	7196_CR6			**Work Order:**	MKXPQ1AG		**Report DB ID:**	9MKXPQ10				
HEXCHROME	***3.70E-03***	U		0.0E+00	3.70E-03	mg/L	N/A	*1.*	7/15/11 11:30 a		25.0	
							3.50E-01	*N/A*			ML	
Batch: 1196089	I129_SEP_LEPS_GS			**Work Order:**	MKXPQ1AK		**Report DB ID:**	9MKXPQ10				
I-129L	***3.81E-01***	U	8.2E-01	8.2E-01	1.66E+00	pCi/L	94%	*0.23*	7/20/11 04:59 a		1.0244	LEP4$1
						7.91E-01		*0.93*			L	
Batch: 1196092	9310_ALPHABETA_GPC			**Work Order:**	MKXPQ1AC		**Report DB ID:**	9MKXPQ10				
BETA	***1.54E+01***		2.9E+00	3.5E+00	4.14E+00	pCi/L	100%	*(3.7)*	7/19/11 05:20 p		0.1412	GPC27A
						1.96E+00	4.00E+00	*(8.9)*			L	
Batch: 1196095	9310_ALPHABETA_GPC			**Work Order:**	MKXPQ1AA		**Report DB ID:**	9MKXPQ10				
ALPHA	***1.50E-01***	U	9.9E-01	9.9E-01	1.96E+00	pCi/L	100%	*0.08*	7/19/11 06:22 p		0.054	GPC10B
						7.78E-01	3.00E+00	*0.3*			L	
Batch: 1196096	906.0_H3_LSC			**Work Order:**	MKXPQ1AD		**Report DB ID:**	9MKXPQ10				
H-3	***3.39E+02***		1.5E+02	1.6E+02	3.23E+02	pCi/L	100%	*(1.1)*	7/18/11 09:55 p		0.00502	LSC4
						1.54E+02	4.00E+02	*(4.2)*			L	
Batch: 1196099	TC99_SEP_LSC			**Work Order:**	MKXPQ1AF		**Report DB ID:**	9MKXPQ10				
TC-99	***3.45E+00***	U	4.1E+00	5.6E+00	9.79E+00	pCi/L	100%	*0.35*	7/20/11 04:57 p		0.1251	LSC4
						4.69E+00	1.50E+01	*(1.2)*			L	
Batch: 1196100	GAMMA_GS			**Work Order:**	MKXPQ1AE		**Report DB ID:**	9MKXPQ10				
AMERICIUM 241	***-3.90E+01***	U	5.4E+01	5.4E+01	8.81E+01	pCi/L		*-0.44*	7/18/11 01:28 p		0.1988	GER10$1
								-(1.4)			L	

TestAmerica
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V5.2.15 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 I

SAMPLE RESULTS

Date: 21-Jul-11

Lab Name:	TestAmerica	**SDG:**	JP0226	**Collection Date:**	7/14/2011 2:30:00 PM
Lot-Sample No.:	J1G140511-1	**Report No. :**	47534	**Received Date:**	7/14/2011 5:50:00 PM
Client Sample ID:	J1FL22	**COC No. :**	RC-076-036	**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
CE-144	***3.04E+01***	U	8.2E+01	8.2E+01	1.44E+02	pCi/L		*0.21*	7/18/11 01:28 p		0.1988	GER10$1
								0.74			L	
CO-60	***2.87E+00***	U	1.6E+01	1.6E+01	3.09E+01	pCi/L		*0.09*	7/18/11 01:28 p		0.1988	GER10$1
							2.50E+01	*0.35*			L	
CS-134	***2.05E+00***	U	2.0E+01	2.0E+01	3.64E+01	pCi/L		*0.06*	7/18/11 01:28 p		0.1988	GER10$1
							1.50E+01	*0.2*			L	
CS-137	***-1.75E+00***	U	1.8E+01	1.8E+01	3.16E+01	pCi/L		*-0.06*	7/18/11 01:28 p		0.1988	GER10$1
							1.50E+01	*-0.19*			L	
EU-152	***5.75E+00***	U	4.5E+01	4.5E+01	7.95E+01	pCi/L		*0.07*	7/18/11 01:28 p		0.1988	GER10$1
							5.00E+01	*0.25*			L	
EU-154	***6.60E+00***	U	5.0E+01	5.0E+01	9.38E+01	pCi/L		*0.07*	7/18/11 01:28 p		0.1988	GER10$1
							5.00E+01	*0.26*			L	
EU-155	***-1.90E+01***	U	4.3E+01	4.3E+01	7.35E+01	pCi/L		*-0.26*	7/18/11 01:28 p		0.1988	GER10$1
							5.00E+01	*-0.88*			L	
RU-106	***8.45E+00***	U	1.6E+02	1.6E+02	2.84E+02	pCi/L		*0.03*	7/18/11 01:28 p		0.1988	GER10$1
								0.1			L	
SB-125	***-2.87E+01***	U	4.8E+01	4.8E+01	7.86E+01	pCi/L		*-0.36*	7/18/11 01:28 p		0.1988	GER10$1
							5.00E+01	*-(1.2)*			L	
ZN-65	***1.48E+01***	U	3.7E+01	3.7E+01	6.89E+01	pCi/L		*0.21*	7/18/11 01:28 p		0.1988	GER10$1
								0.8			L	

Batch: 1196101 SRTOT_SEP_PRECIP_GPC **Work Order:** MKXPQ1AH **Report DB ID:** 9MKXPQ10

TestAmerica
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V5.2.15 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 I

SAMPLE RESULTS

Date: 21-Jul-11

Lab Name:	TestAmerica	**SDG:**	JP0226	**Collection Date:**	7/14/2011 2:30:00 PM
Lot-Sample No.:	J1G140511-1	**Report No. :**	47534	**Received Date:**	7/14/2011 5:50:00 PM
Client Sample ID:	J1FL22	**COC No. :**	RC-076-036	**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
STRONTIUM	***1.20E+00***	U	1.0E+00	1.1E+00	1.98E+00	pCi/L	97%	*0.61*	7/19/11 03:12 p		0.1989	GPC26A
						9.59E-01		*(2.2)*			L	
Batch: 1196102	C14_LSC			**Work Order:**	MKXPQ1AJ		**Report DB ID:**	9MKXPQ10				
C-14	***-2.91E+00***	U	4.6E+00	5.5E+00	1.17E+01	pCi/L	100%	*-0.25*	7/18/11 06:39 p		0.2	LSC4
						5.52E+00	2.00E+02	*-(1.1)*			L	

No. of Results: 19 **Comments:**

TestAmerica
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V5.2.15 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: 21-Jul-11

DUPLICATE RESULTS

Lab Name:	TestAmerica	**SDG:**	JP0226	**Collection Date:**	7/14/2011 2:30:00 PM
Lot-Sample No.:	J1G140511-1	**Report No. :**	47534	**Received Date:**	7/14/2011 5:50:00 PM
Client Sample ID:	J1FL22	**COC No. :**	RC-076-036	**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: 1196081	7196_CR6			**Work Order:** MKXPQ1A3		**Report DB ID:** MKXPQ1ER			**Orig Sa DB ID:** 9MKXPQ10			
HEXCHROME	3.70E-03	U		0.0E+00	3.70E-03	mg/L	N/A	1.	7/15/11 11:30 a		25.0	
	3.70E-03	U	**RPD**	**0.0**		3.50E-01		N/A			ML	

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

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.15 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

Date: 21-Jul-11

DUPLICATE RESULTS

Lab Name:	TestAmerica	**SDG:**	JP0226	**Collection Date:**	7/14/2011 2:30:00 PM
Lot-Sample No.:	J1G140511-1	**Report No. :**	47534	**Received Date:**	7/14/2011 5:50:00 PM
Client Sample ID:	J1FL22 DUP	**COC No. :**	RC-076-036	**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: 1196089	I129_SEP_LEPS_GS			**Work Order:** MKXPQ1A4		**Report DB ID:** MKXPQ14R			**Orig Sa DB ID:** 9MKXPQ10			
I-129L	-4.43E-01	U	1.0E+00	1.0E+00	1.74E+00	pCi/L	90%	-0.25	7/20/11 05:52 a		1.0187	LEP4$1
	3.81E-01	U	**RPD**	**-2667.4**				-0.87			L	
Batch: 1196092	9310_ALPHABETA_GPC			**Work Order:** MKXPQ1A5		**Report DB ID:** MKXPQ15R			**Orig Sa DB ID:** 9MKXPQ10			
BETA	1.43E+01		2.9E+00	3.4E+00	4.24E+00	pCi/L	100%	(3.4)	7/19/11 05:20 p		0.1394	GPC27B
	1.54E+01		**RPD**	**7.5**		4.00E+00		(8.5)			L	
Batch: 1196095	9310_ALPHABETA_GPC			**Work Order:** MKXPQ1A6		**Report DB ID:** MKXPQ16R			**Orig Sa DB ID:** 9MKXPQ10			
ALPHA	4.38E-01	U	1.5E+00	1.5E+00	2.75E+00	pCi/L	100%	0.16	7/19/11 06:22 p		0.0539	GPC10C
	1.50E-01	U	**RPD**	**98.2**		3.00E+00		0.58			L	
Batch: 1196096	906.0_H3_LSC			**Work Order:** MKXPQ1CD		**Report DB ID:** MKXPQ1DR			**Orig Sa DB ID:** 9MKXPQ10			
H-3	2.92E+02	U	1.4E+02	1.6E+02	3.23E+02	pCi/L	100%	0.9	7/18/11 11:19 p		0.00501	LSC4
	3.39E+02		**RPD**	**14.7**		4.00E+02		(3.7)			L	
Batch: 1196099	TC99_SEP_LSC			**Work Order:** MKXPQ1A8		**Report DB ID:** MKXPQ18R			**Orig Sa DB ID:** 9MKXPQ10			
TC-99	6.02E+00	U	4.2E+00	5.7E+00	9.79E+00	pCi/L	100%	0.61	7/20/11 07:02 p		0.126	LSC4
	3.45E+00	U	**RPD**	**54.3**		1.50E+01		(2.1)			L	
Batch: 1196100	GAMMA_GS			**Work Order:** MKXPQ1A9		**Report DB ID:** MKXPQ19R			**Orig Sa DB ID:** 9MKXPQ10			
AMERICIUM 241	6.07E+01	U	1.4E+02	1.4E+02	2.51E+02	pCi/L		0.24	7/18/11 05:29 p		0.1988	GER13$1
	-3.90E+01	U	**RPD**	**915.7**				0.87			L	

TestAmerica **RPD** - Relative Percent Difference.

rptSTLRchDupV5.2 .15 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: 21-Jul-11

DUPLICATE RESULTS

Lab Name:	TestAmerica	**SDG:**	JP0226	**Collection Date:**	7/14/2011 2:30:00 PM
Lot-Sample No.:	J1G140511-1	**Report No. :**	47534	**Received Date:**	7/14/2011 5:50:00 PM
Client Sample ID:	J1FL22 DUP	**COC No. :**	RC-076-036	**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
CE-144	2.21E+01	U	9.7E+01	9.7E+01	1.71E+02	pCi/L		0.13	7/18/11 05:29 p		0.1988	GER13$1
	3.04E+01	U	**RPD**	**31.9**				0.45			L	
CO-60	-4.80E-01	U	2.3E+01	2.3E+01	4.09E+01	pCi/L		-0.01	7/18/11 05:29 p		0.1988	GER13$1
	2.87E+00	U	**RPD**	**280.5**		2.50E+01		-0.04			L	
CS-134	1.15E+01	U	2.2E+01	2.2E+01	3.99E+01	pCi/L		0.29	7/18/11 05:29 p		0.1988	GER13$1
	2.05E+00	U	**RPD**	**139.3**		1.50E+01		(1.)			L	
CS-137	3.37E+00	U	1.9E+01	1.9E+01	3.48E+01	pCi/L		0.1	7/18/11 05:29 p		0.1988	GER13$1
	-1.75E+00	U	**RPD**	**632.2**		1.50E+01		0.35			L	
EU-152	1.39E+01	U	5.6E+01	5.6E+01	9.88E+01	pCi/L		0.14	7/18/11 05:29 p		0.1988	GER13$1
	5.75E+00	U	**RPD**	**83.0**		5.00E+01		0.5			L	
EU-154	3.39E+01	U	6.8E+01	6.8E+01	1.27E+02	pCi/L		0.27	7/18/11 05:29 p		0.1988	GER13$1
	6.60E+00	U	**RPD**	**134.8**		5.00E+01		1.			L	
EU-155	-1.91E+01	U	5.4E+01	5.4E+01	9.03E+01	pCi/L		-0.21	7/18/11 05:29 p		0.1988	GER13$1
	-1.90E+01	U	**RPD**	**-0.5**		5.00E+01		-0.7			L	
RU-106	-6.36E+01	U	1.8E+02	1.8E+02	2.97E+02	pCi/L		-0.21	7/18/11 05:29 p		0.1988	GER13$1
	8.45E+00	U	**RPD**	**-261.3**				-0.72			L	
SB-125	1.45E+01	U	5.5E+01	5.5E+01	9.64E+01	pCi/L		0.15	7/18/11 05:29 p		0.1988	GER13$1
	-2.87E+01	U	**RPD**	**-609.1**		5.00E+01		0.53			L	
ZN-65	-3.04E+01	U	5.2E+01	5.2E+01	8.81E+01	pCi/L		-0.35	7/18/11 05:29 p		0.1988	GER13$1
	1.48E+01	U	**RPD**	**-576.8**				-(1.2)			L	

Batch: 1196101 SRTOT_SEP_PRECIP_GPC **Work Order:** MKXPQ1CA **Report DB ID:** MKXPQ1AR **Orig Sa DB ID:** 9MKXPQ10

STRONTIUM	2.69E-01	U	9.1E-01	9.1E-01	1.83E+00	pCi/L	95%	0.15	7/19/11 03:12 p	0.2026	GPC26B
	1.20E+00	U	**RPD**	**126.9**				0.59		L	

TestAmerica
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.15 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

Date: 21-Jul-11

DUPLICATE RESULTS

Lab Name:	TestAmerica	SDG:	JP0226	Collection Date:	7/14/2011 2:30:00 PM
Lot-Sample No.:	J1G140511-1	Report No. :	47534	Received Date:	7/14/2011 5:50:00 PM
Client Sample ID:	J1FL22 DUP	COC No. :	RC-076-036	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

No. of Results: 17 Comments:

TestAmerica
rptSTLRchDupV5.2
.15 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.

FORM II

BLANK RESULTS

Date: 21-Jul-11

Lab Name: TestAmerica

Matrix: WATER

SDG: JP0226

Report No. : 47534

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: 1196081	7196_CR6			**Work Order:**	MKXX91AA		**Report DB ID:**	MKXX91AB				
HEXCHROME	3.70E-03	U		0.0E+00	3.70E-03	mg/L	N/A	1.	7/15/11 11:30 a		100.0	
						3.50E-01		N/A			ML	
Batch: 1196102	C14_LSC			**Work Order:**	MKX1M1AA		**Report DB ID:**	MKX1M1AB				
C-14	3.49E+00	U	4.9E+00	5.8E+00	1.17E+01	pCi/L	100%	0.3	7/18/11 07:02 p		0.2	LSC4
					5.51E+00	2.00E+02		(1.2)			L	
Batch: 1196099	TC99_SEP_LSC			**Work Order:**	MKX1F1AA		**Report DB ID:**	MKX1F1AB				
TC-99	6.04E-01	U	4.0E+00	5.4E+00	9.76E+00	pCi/L	100%	0.06	7/20/11 08:05 p		0.1256	LSC4
					4.68E+00	1.50E+01		0.22			L	
Batch: 1196096	906.0_H3_LSC			**Work Order:**	MKX041AA		**Report DB ID:**	MKX041AB				
H-3	4.59E+01	U	1.4E+02	1.5E+02	3.30E+02	pCi/L	100%	0.14	7/19/11 12:42 a		0.00502	LSC4
					1.57E+02	4.00E+02		0.6			L	
Batch: 1196096	906.0_H3_LSC			**Work Order:**	MKX041AD		**Report DB ID:**	MKX041DX				
H-3	-3.79E+01	U	1.3E+02	1.5E+02	3.29E+02	pCi/L	100%	-0.12	7/19/11 03:28 a		0.00501	LSC4
					1.57E+02	4.00E+02		-0.51			L	
Batch: 1196100	GAMMA_GS			**Work Order:**	MKX1H1AA		**Report DB ID:**	MKX1H1AB				
AMERICIUM 241	-1.95E+01	U	5.0E+01	5.0E+01	8.35E+01	pCi/L		-0.23	7/18/11 01:29 p		0.199	GER5$1
								-0.78			L	
CE-144	1.44E+02	U	1.7E+02	1.7E+02	2.99E+02	pCi/L		0.48	7/18/11 01:29 p		0.199	GER5$1
								(1.7)			L	
CO-60	-5.40E+00	U	2.2E+01	2.2E+01	3.97E+01	pCi/L		-0.14	7/18/11 01:29 p		0.199	GER5$1
						2.50E+01		-0.49			L	

TestAmerica
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V5.2.15 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

BLANK RESULTS

Date: 21-Jul-11

Lab Name: TestAmerica

Matrix: WATER

SDG: JP0226

Report No. : 47534

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
CS-134	2.66E+01	U	2.8E+01	2.8E+01	5.47E+01	pCi/L		0.49	7/18/11 01:29 p		0.199	GER5$1
								(1.9)			L	
CS-137	8.56E+00	U	2.7E+01	2.7E+01	5.02E+01	pCi/L		0.17	7/18/11 01:29 p		0.199	GER5$1
						1.50E+01		0.63			L	
EU-152	-1.19E+00	U	7.1E+01	7.1E+01	1.24E+02	pCi/L		-0.01	7/18/11 01:29 p		0.199	GER5$1
						5.00E+01		-0.03			L	
EU-154	-1.82E+01	U	7.0E+01	7.0E+01	1.25E+02	pCi/L		-0.15	7/18/11 01:29 p		0.199	GER5$1
						5.00E+01		-0.52			L	
EU-155	-7.99E-01	U	7.9E+01	7.9E+01	1.32E+02	pCi/L		-0.01	7/18/11 01:29 p		0.199	GER5$1
						5.00E+01		-0.02			L	
RU-106	-1.44E+02	U	2.4E+02	2.4E+02	3.96E+02	pCi/L		-0.36	7/18/11 01:29 p		0.199	GER5$1
								-(1.2)			L	
SB-125	2.08E+01	U	6.7E+01	6.7E+01	1.19E+02	pCi/L		0.17	7/18/11 01:29 p		0.199	GER5$1
								0.62			L	
ZN-65	-5.40E+01	U	5.2E+01	5.2E+01	8.21E+01	pCi/L		-0.66	7/18/11 01:29 p		0.199	GER5$1
								-(2.1)			L	
Batch: 1196095	9310_ALPHABETA_GPC			**Work Order:**	MKX011AA		**Report DB ID:**	MKX011AB				
ALPHA	1.28E-01	U	1.5E-01	1.6E-01	2.37E-01	pCi/L	100%	0.54	7/19/11 06:22 p		0.2006	GPC10A
					8.40E-02	3.00E+00		(1.6)			L	
Batch: 1196092	9310_ALPHABETA_GPC			**Work Order:**	MKX0W1AA		**Report DB ID:**	MKX0W1AB				
BETA	-1.00E-02	U	1.3E+00	1.3E+00	2.81E+00	pCi/L	100%	0.	7/19/11 05:20 p		0.1999	GPC27C
					1.34E+00	4.00E+00		-0.02			L	
Batch: 1196089	I129_SEP_LEPS_GS			**Work Order:**	MKX0R1AA		**Report DB ID:**	MKX0R1AB				

TestAmerica
rptSTLRchBlank
V5.2.15 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

BLANK RESULTS

Date: 21-Jul-11

Lab Name: TestAmerica

Matrix: WATER

SDG: JP0226

Report No. : 47534

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
I-129L	7.56E-01	U	8.7E-01	8.7E-01	1.84E+00	pCi/L	90%	0.41	7/20/11 06:44 a		1.0577	LEP4$1
					8.37E-01			(1.7)			L	
Batch: 1196101	SRTOT_SEP_PRECIP_GPC			**Work Order:**	MKX1J1AA		**Report DB ID:**	MKX1J1AB				
STRONTIUM	2.57E-01	U	9.3E-01	9.4E-01	1.88E+00	pCi/L	86%	0.14	7/19/11 03:12 p		0.2015	GPC26C
					9.04E-01			0.55			L	

No. of Results: 20 **Comments:**

TestAmerica
rptSTLRchBlank
V5.2.15 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: 21-Jul-11

Lab Name: TestAmerica

Matrix: WATER

SDG: JP0226

Report No. : 47534

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: 1196081	7196_CR6			**Work Order:**	MKXX91AC		**Report DB ID:**	MKXX91AS					
HEXCHROME	4.97E-01			0.0E+00	3.70E-03	mg/L	N/A	5.00E-01		99%	7/15/11 11:30 a	100.0	
							Rec Limits:	70	130	0.0		ML	
Batch: 1196102	C14_LSC			**Work Order:**	MKX1M1AC		**Report DB ID:**	MKX1M1CS					
C-14	7.19E+03		4.2E+02	5.2E+02	4.68E+02	pCi/L	100%	7.33E+03	1.2E+02	98%	7/18/11 07:24 p	0.005	LSC4
							Rec Limits:	70	130	0.0		L	
Batch: 1196099	TC99_SEP_LSC			**Work Order:**	MKX1F1AC		**Report DB ID:**	MKX1F1CS					
TC-99	4.29E+02		1.2E+01	2.9E+01	9.78E+00	pCi/L	100%	5.45E+02	5.7E+00	79%	7/20/11 09:07 p	0.1248	LSC4
							Rec Limits:	70	130	-0.2		L	
Batch: 1196096	906.0_H3_LSC			**Work Order:**	MKX041AC		**Report DB ID:**	MKX041CS					
H-3	2.61E+03		2.2E+02	2.4E+02	3.36E+02	pCi/L	100%	2.70E+03	8.1E+01	97%	7/19/11 02:05 a	0.00501	LSC4
							Rec Limits:	70	130	0.0		L	
Batch: 1196096	906.0_H3_LSC			**Work Order:**	MKX041AE		**Report DB ID:**	MKX041EM					
H-3	2.72E+03		2.2E+02	2.4E+02	3.36E+02	pCi/L	100%	2.70E+03	8.1E+01	101%	7/19/11 04:51 a	0.00501	LSC4
							Rec Limits:	70	130	0.0		L	
Batch: 1196100	GAMMA_GS			**Work Order:**	MKX1H1AC		**Report DB ID:**	MKX1H1CS					
CO-60	4.03E+02		8.7E+01	8.7E+01	5.50E+01	pCi/L		3.83E+02	3.3E+00	105%	7/18/11 01:30 p	0.2013	GER14$1
							Rec Limits:	70	130	0.1		L	
CS-137	4.92E+02		1.0E+02	1.0E+02	5.96E+01	pCi/L		5.02E+02	1.0E+01	98%	7/18/11 01:30 p	0.2013	GER14$1
							Rec Limits:	70	130	0.0		L	
EU-152	7.88E+02		1.9E+02	1.9E+02	1.42E+02	pCi/L		7.60E+02	1.1E+01	104%	7/18/11 01:30 p	0.2013	GER14$1
							Rec Limits:	70	130	0.0		L	
Batch: 1196095	9310_ALPHABETA_GPC			**Work Order:**	MKX011AC		**Report DB ID:**	MKX011CS					

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

rptSTLRchLcs
V5.2.15 A2002

FORM II

LCS RESULTS

Date: 21-Jul-11

Lab Name: TestAmerica

Matrix: WATER

SDG: JP0226

Report No. : 47534

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
ALPHA	2.01E+01		1.5E+00	4.4E+00	4.84E-01	pCi/L	100%	2.26E+01	2.3E-01	89%	7/19/11 06:22 p	0.2009	GPC10D
							Rec Limits:	70	130	-0.1		L	
Batch: 1196092	9310_ALPHABETA_GPC			**Work Order:**	MKX0W1AC		**Report DB ID:**	MKX0W1CS					
BETA	2.08E+01		2.4E+00	3.5E+00	2.64E+00	pCi/L	100%	2.26E+01	8.7E-01	92%	7/19/11 05:20 p	0.2021	GPC27D
							Rec Limits:	70	130	-0.1		L	
Batch: 1196089	I129_SEP_LEPS_GS			**Work Order:**	MKX0R1AC		**Report DB ID:**	MKX0R1CS					
I-129L	1.68E+01		3.5E+00	3.5E+00	2.50E+00	pCi/L	88%	1.55E+01	5.1E-01	108%	7/20/11 07:36 a	1.0322	LEP4$1
							Rec Limits:	70	130	0.1		L	
Batch: 1196101	SRTOT_SEP_PRECIP_GPC			**Work Order:**	MKX1J1AC		**Report DB ID:**	MKX1J1CS					
STRONTIUM	5.82E+01		2.7E+00	1.5E+01	1.93E+00	pCi/L	86%	6.67E+01	1.8E+00	87%	7/19/11 03:12 p	0.2029	GPC26D
							Rec Limits:	70	130	-0.1		L	

No. of Results: 12 **Comments:**

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

rptSTLRchLcs
V5.2.15 A2002

FORM II

Date: 21-Jul-11

MATRIX SPIKE RESULTS

Lab Name: TestAmerica **SDG:** JP0226

Lot-Sample No.: J1G140511-1, J1FL22 **Report No. :** 47534 **Matrix:** WATER

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 1196081	**Work Order:** MKXPQ1A1			**Report DB ID:** MKXPQ1CW			**Orig Sa DB ID:** 9MKXPQ10					
HEXCHROME	2.68E-01			0.0E+00	3.70E-03	mg/L	N/A	101.84%	2.63E-01	7/15/11 11:30 a	25.0	7196_CR6
	3.70E-03										ML	
Batch: 1196081	**Work Order:** MKXPQ1A2			**Report DB ID:** MKXPQ1DW			**Orig Sa DB ID:** MKXPQ1CW					
HEXCHROME	2.67E-01			0.0E+00	3.70E-03	mg/L	N/A	101.46%	2.63E-01	7/15/11 11:30 a	25.0	7196_CR6
	2.68E-01										ML	
Batch: 1196099	**Work Order:** MKXPQ1A7			**Report DB ID:** MKXPQ17W			**Orig Sa DB ID:** 9MKXPQ10					
TC-99	2.66E+03		2.8E+01	1.5E+02	9.75E+00	pCi/L	100%	73.96%	3.59E+03	7/20/11 05:59 p	0.1259	TC99_SEP_LSC
	3.45E+00								1.5E+01		L	LSC4

Number of Results: 3

Comments:

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

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

V5.2.15 A2002

FORM II

Date: 21-Jul-11

MATRIX SPIKE DUPLICATE RESULTS

Lab Name: TestAmerica **SDG:** JP0226

Lot-Sample No.: J1G140511-1, J1FL22 **Report No. :** 47534 **Matrix:** WATER

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 1196081	7196_CR6			**Work Order:** MKXPQ1A1			**Report DB ID:** MKXPQ1CW			**Orig Sa DB ID:** MKXPQ1DW		
HEXCHROME	2.68E-01			0.0E+00	3.70E-03	mg/L	N/A	101.84%	2.63E-01	7/15/11 11:30 a	25.0	
	2.67E-01	***RPD***	0.4								ML	
Batch: 1196081	7196_CR6			**Work Order:** MKXPQ1A2			**Report DB ID:** MKXPQ1DW			**Orig Sa DB ID:** MKXPQ1CW		
HEXCHROME	2.67E-01			0.0E+00	3.70E-03	mg/L	N/A	101.46%	2.63E-01	7/15/11 11:30 a	25.0	
	2.68E-01	***RPD***	0.4								ML	

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

TestAmerica RER - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
rptSTLRchMsDup2 Bias - (Result/Expected)-1 as defined by ANSI N13.30.
V5.2.15 A2002

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

7/20/2011 11:44:37 AM

Lot No., Due Date: J1G140511; 07/21/2011
Client, Site: 127642; S00X235B00 HANFORD
QC Batch No., Method Test: 1196095; RALPHA-A Alpha by GPC-Am
SDG, Matrix: JP0226; 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:

First Level John Norris **Date** 7-20-11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 1196095

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 = 3.0pci/L

Second Level Review: Rhonda Wyer Date: 7/20/11

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/20/2011 11:47:03 AM

Lot No., Due Date: J1G140511; 07/21/2011
Client, Site: 127642; S00X235B00 HANFORD
QC Batch No., Method Test: 1196092; RBETA-SR Beta by GPC-Sr/Y
SDG, Matrix: JP0226; 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:
Please see NCM # 10-18808

First Level Josh Norton **Date** 7-20-11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 1196092

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
See NCM #: 10-18808

Second Level Review: Rhonda W. Jones Date: 7/20/11

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

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-18808**
NCM Initiated By: John Norton
Date Opened: 07/20/2011
Date Closed:

Classification: **Anomaly**
Status: **PMREVIEW**
Production Area: Environmental - Prep
Tests: Beta by GPC-Sr/Y
Lot #'s (Sample #'s): J1G140511 (1), J1G150000 (92),
QC Batches: 1196092,

Nonconformance: MDA not met
Subcategory: Sample size reduced due to high residue mass

Problem Description / Root Cause

Name	Date	Description
John Norton	07/20/2011	The sample and duplicate did not meet the CRDL due to reduced aliquot sizes caused by high residue weights.

Corrective Action

Name	Date	Corrective Action
John Norton	07/20/2011	The activity detected in the samples is greater than the IDC, the data can be accepted.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note
	Response	Response Note			

Quality Assurance Verification

Verified By	Due Date	Status	Notes
		This section not yet completed by QA.	

Approval History

Date Approved	Approved By	Position

Date Printed: 7/20/2011

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

7/20/2011 11:52:02 AM

Lot No., Due Date: J1G140511; 07/21/2011
Client, Site: 127642; S00X235B00 HANFORD
QC Batch No., Method Test: 1196101; RSRTOT SrTot by GPC
SDG, Matrix: JP0226; 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:

First Level John Norton **Date** 7-20-11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 1196101

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 = 2.0 pCi/L

Second Level Review: Rhonda Wyatt Date: 7/20/11

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

7/19/2011 9:30:49 AM

Lot No., Due Date: J1G140511; 07/21/2011
Client, Site: 127642; S00X235B00 HANFORD
QC Batch No., Method Test: 1196100; RGAMMA Gamma by GER
SDG, Matrix: JP0226; 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:
NCM 10-18800

First Level Lisa Autorson Date 7/19/11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 1196100

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 = 15pCi/L (Cs137)
See NCM #: 10-18800

Second Level Review: [signature] Date: 7/19/11

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

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: 10-18800
NCM Initiated By: Lisa Antonson
Date Opened: 07/19/2011
Date Closed:

Classification: Anomaly
Status: PMREVIEW
Production Area: Counting
Tests: Gamma by GER
Lot #'s (Sample #'s): J1G140511 (1), J1G150000 (100),
QC Batches: 1196100,

Nonconformance: MDA not met
Subcategory: Data accepted

Problem Description / Root Cause

Name	Date	Description
Lisa Antonson	07/19/2011	CRDL is not met for the samples in this batch.

Corrective Action

Name	Date	Corrective Action
Lisa Antonson	07/19/2011	none

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note
	Response	Response Note			

Quality Assurance Verification

Verified By	Due Date	Status	Notes
		This section not yet completed by QA.	

Approval History

Date Approved	Approved By	Position

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/20/2011 2:55:56 PM

Lot No., Due Date: J1G140511; 07/21/2011
Client, Site: 127642; S00X235B00 HANFORD
QC Batch No., Method Test: 1196089; RGAMLEPS Gamma by LEPS
SDG, Matrix: JP0226; 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:

First Level [signature] **Date** 7-20-11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 1196089

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=Spike

Second Level Review: [signature] Date: 7/21/11

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

7/21/2011 1:29:00 PM

Lot No., Due Date: J1G140511; 07/21/2011
Client, Site: 127642; S00X235B00 HANFORD
QC Batch No., Method Test: 1196099; RTC99 Tc-99 by LSC
SDG, Matrix: JP0226; 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:

First Level Lisa Antonson Date 7/21/11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 1196099

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 = 15.0 pCi/L

Second Level Review: Rhonda W. Jones Date: 7/21/11

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/20/2011 11:19:27 AM

Lot No., Due Date: J1G140511; 07/21/2011
Client, Site: 127642; S00X235B00 HANFORD
QC Batch No., Method Test: 1196096; RTRITIUM H-3 by LSC
SDG, Matrix: JP0226; 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:

First Level [signature] Date 7-20-11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 1196096

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?	✗	RW 7/20/14	✓
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 = 400 pCi/L

Second Level Review: [signature] Date: 7/20/14

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

7/20/2011 11:22:04 AM

Lot No., Due Date: J1G140511; 07/21/2011
Client, Site: 127642; S00X235B00 HANFORD
QC Batch No., Method Test: 1196102; RC14 C-14 by LSC
SDG, Matrix: JP0226; WATER

1.0 COC

	Yes	No	N/A
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		

2.0 QC Batch

	Yes	No	N/A
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

	Yes	No	N/A
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

	Yes	No	N/A
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

	Yes	No	N/A
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:
Please see NCM # 10-18806

First Level John Roth **Date** 7-20-11

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 1196102

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: SRDL = 200pCi/L
See NCM #: 10-8806

Second Level Review: Rhonda Wyatt Date: 7/20/14

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

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-18806**
NCM Initiated By: John Norton
Date Opened: 07/20/2011
Date Closed:

Classification: **Anomaly**
Status: **PMREVIEW**
Production Area: Counting
Tests: C-14 by LSC
Lot #'s (Sample #'s): J1G140511 (1), J1G150000 (102),
QC Batches: 1196102,

Nonconformance: Other (describe in detail)
Subcategory: Other (explanation required)

Problem Description / Root Cause

Name	Date	Description
John Norton	07/20/2011	1: The first 5 minute count of the instrument blank was 97.4 counts per minute, the other three counts were only 18 or 19 counts per minute. 2: The volume of un-acidified sample received was not sufficient for the creation of a dupliicate.

Corrective Action

Name	Date	Corrective Action
John Norton	07/20/2011	1: This first count was delelted from the calculation, probable static electric discharge. 2: Project management was notified.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

Verified By	Due Date	Status	Notes
		This section not yet completed by QA.	

Approval History

Date Approved	Approved By	Position

Date Printed: 7/20/2011

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Richland Laboratory
Data Review Check List
Hexavalent Chromium

Batch Number(s): **1196081**

Lab Sample Numbers or SDG: **JP0226**

Method/Test/Parameter: **Cr+6 in Water / RL-WC-003**

Review Item	Yes (✓)	No (✓)	N/A (✓)	2nd Level Review (✓)
A. Initial Calibration				
1. Performed at required frequency with required number of levels?	✓			✓
2. Correlation coefficient within QC limits?	✓			✓
3. Initial calibration verification (ICV) analyzed immediately after calibration and results within QC limits?	✓			✓
4. Initial calibration blank (ICB) analyzed immediately after ICV and concentrations of all parameters ≤ reporting limit?	✓			✓
B. Continuing Calibration				
1. CCV analyzed at required frequency and all parameters within QC limits?	✓			✓
2. CCB analyzed at required frequency and all results ≤ reporting limit?	✓			✓
C. Sample Analysis				
1. Were any samples with concentrations above the linear range for any parameter diluted and reanalyzed?			✓	N/A
2. Were all sample holding times met?	✓			✓
D. QC Samples				
1. All results for the preparation blank below limits?	✓			✓
2. MS or MS/MSD recoveries within QC limits and %RPD (for MSD) acceptable?	✓			✓
3. LCS percent recovery within QC limits and %RPD (for LCSD) acceptable?	✓			✓
4. Analytical spikes within QC limits where applicable?	✓			✓
5. ICP only: One serial dilution performed per SDG?			✓	N/A
6. ICP only: CRDL standard (CRI or CRA) analyzed at required frequency?			✓	N/A
7. ICP only: Interference check samples (ICSA, ICSAB) and HICAL analyzed at the required frequencies and within QC limits?			✓	N/A

Review Item	Yes (✓)	No (✓)	N/A (✓)	2nd Level Review (✓)
E. Other 1. Are all nonconformances included and noted?			✓	N/A
2. Is the correct date and time of analysis shown?	✓			✓
3. Did the analyst sign and date the front page of the analytical run?	✓			✓
4. Correct methodology used?	✓			✓
5. Transcriptions checked?	✓			✓
6. Calculations checked at minimum frequency?	✓			✓
7. Units checked?	✓			✓

Comments on any "No" response:

Analyst: H.R Date: 07-15-11

Second-Level Review: Date: 7/18/11

TestAmerica Laboratories, Inc.

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-076-036	Page 1 of 2

Collector: K. Lucas	Company Contact: D Woolery — Telephone No.: 509-431-0448	Project Coordinator: KESSNER, JH	Price Code: ~~7L~~ 7B — Data Turnaround: ~~24 Hours~~ 7 DAY
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Water	Sampling Location: 100-D-50:6 Pipelines and Catch Basins	SAF No.: RC-076	3/18/11 — 3/17/11
Ice Chest No.: N/A	Field Logbook No.: EL-1607-10 — COA: R00D502000	Method of Shipment: HAND DELIVER	
Shipped To: TestAmerica Incorporated, Richland	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: N/A	

POSSIBLE SAMPLE HAZARDS/REMARKS

NONE

AJ 7-14-1

Special Handling and/or Storage

Cool 4 degrees C

Preservation	HNO3 to pH <2	Cool 4C	Cool 4C	H2SO4 to pH <2 Cool 4C	NaOH to pH >= 12 Cool 4C	HCl or H2SO4 to pH <2 Coo	Cool 4C	Cool 4C	HCl or H2SO4 to pH <2 Coo	Cool 4C
Type of Container	G/P	G/P	P	G/P	G/P	G	G/P	P	aGs*	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	250mL	120mL	125mL	125mL	500mL	125mL	125mL	125mL	40mL	1000mL
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196 *	IC Anions - 300.0; NO2/NO3 - 353.2; pH (Water) - 9040	Ammonia - 350.1	Total Cyanide - 9010	TOC - 415.1	TDS - 2540C	Conductivity - 9050	VOA - 8260A (ETF)	Semi-VOA - 8270A (ETF)

J1G140511

Sample No.	Matrix *	Sample Date	Sample Time									
~~J1FL20~~ 7-14-11	WATER											
~~J1FL21~~	WATER											
J1FL22	WATER	7-14-11	1430		X	MKXPG						
~~J1FL23~~ 7-14-11	WATER											
~~J1FL24~~	WATER											

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
K. Lucas Kevin Lucas	7-14-11 1510	D Woolery	7-14-11 1510
D Woolery	7-14-11 1710	A Freier A. Freier	7-14-10 1710
A. Freier A. Freier (WCH)	7-14-11 1750	TALR RTANRJANA	7-14-11 1750

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}

#24 Hr. Hold Time

AJ 7-14-11

SDGJP0226

Due 7-21-11

REVIEWED BY CGR DATE 7-14-11

JP0226

Matrix *

S=Soil
SE=Sediment
SO=Solid
SL=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wi=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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-076-036	Page 2 of 2

Collector: K. Lucas	Company Contact: D Woolery Telephone No.: 509-431-0448	Project Coordinator: KESSNER, JH	Price Code: ~~7L~~ 7B Data Turnaround: ~~24 Hours~~ 7 DAY
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Water	Sampling Location: 100-D-50:6 Pipelines and Catch Basins	SAF No.: RC-076	
Ice Chest No.: N/A	Field Logbook No.: EL-1607-10 COA: R00D502000	Method of Shipment: HAND DELIVER	
Shipped To: TestAmerica Incorporated, Richland	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: N/A	

POSSIBLE SAMPLE HAZARDS/REMARKS

NONE AS 7-14-11

Special Handling and/or Storage

Cool 4 degrees C

Preservation	Cool 4C	HNO3 to pH <2	HNO3 to pH <2 Cool 4C	None	HCl to pH <2	None	None			
Type of Container	aG	G/P	G/P	G/P	G/P	G/P	G			
No. of Container(s)	1	1	1	2	1	1	1			
Volume	1000mL	1000mL 2	500mL	~~2000mL~~ 1000mL D 3/17/11	250mL	250mL	120mL			
SAMPLE ANALYSIS	PCBs - 8082	See item (1) in Special Instructions. D 3/17/11	Gross Alpha & Beta - 900.0	Iodine-129	Technetium-99	Carbon-14	Tritium - 906.0; Strontium-89,90 -- Total Sr			

Sample No.	Matrix *	Sample Date	Sample Time										
J1FL20 D 7-14-11	WATER												
J1FL21	WATER												
J1FL22 MXPO	WATER	7-14-11	1430		X	X	X	X	X	X			
J1FL23	WATER												
J1FL24 D 7-14-11	WATER												

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
K Lucas Kenneth Lucas	7-14-11 1510	D WOOLERY	7-14-11 1510
D WOOLERY	7-14-11 1710	A. Freier A. Freier	7-14-11 1710
A. Freier A. Freier WCH	7-14-11 1750	TALB 1750 RYAN REFANA	7-14-11 1710 7-14-11

SPECIAL INSTRUCTIONS

2 D 3/17/11

(1) Gamma Spec (Client List) {Americium-241, Antimony-125, Cerium-144, Cesium-134, Cesium-137, Cobalt-60, Curium-244, Europium-152, Europium-154, Europium-155, Neptunium-237, Niobium-94, Radium-226, Ruthenium-106, Zinc-65}

SDG JP0226
Due 7-21-11
J1G140511

REVIEWED BY CR DATE 7-14-11

JP0226

Matrix *
S=Soil
SE=Sediment
SO=Solid
SL=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=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

Sample Check-in List

Date/Time Received: 7-14-11 / 1750 GM Screen Result: (Airlock) .02 Initials[KB]
(Sample Receiving) .02 Initials[ ]

Client: WCH SDG #: ~~J01178~~ JP0226 NA [ ] SAF #: RC-076 NA [ ]
RL 7.15.11

Lot Number: J1G140511

Chain of Custody # RC-076-036

Shipping Container ID: hand delivered NA [ ]

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

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [KB]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [KB]
3. Cooler temperature: ON ICE ~~ONE~~ SKS 7/15/11 ~~10.5 °C~~ ~~NA [KB]~~ SKS 7/15/11
4. Vermiculite/packing materials is NA [KB] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [KB] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1 Sample, mult. bottles
7. Containers received: 3x1P, 1x 500 mP, 2x 250 mP, 1x 120 mLAG
8. Sample holding times exceeded? NA [ ] Yes [ ] No [KB]
9. Samples have:
   ____ tape
   KB custody seals
   ____ hazard labels
   KB appropriate sample labels
10. Matrix:
    ____ A (FLT, Wipe, Solid, Soil)
    ____ S (Air, Niosh 7400)
    KB I (Water)
    ____ T (Biological, Ni-63)

    J1G140511
11. Samples:
    KB are in good condition
    ____ are broken
    ____ Other
    ____ are leaking
    ____ have air bubbles (Only for samples requiring no head space)
12. Sample pH appropriate for analysis requested Yes [KB] No [KB] NA [ ]
    (If acidification is necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition on table overleaf)

    RPL ID # of preservative used :
13. Were any anomalies identified in sample receipt? Yes [ ] No [KB]
14. Description of anomalies (include sample numbers): NA [KB]

LS-023, Rev. 14, 06/11 See over for additional information.

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THE LEADER IN ENVIRONMENTAL TESTING

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

16. Additional Information: Sample JIFL22 is for analyses Strontium, but not acidified. However, also has tritium on same bottle. Will ask PM about 7-15-11.

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

Sample Custodian: Julie Beck / 1750 Date: 7-14-11

Client Informed on N/A by N/A Person contacted N/A

[✓] No action necessary; process as is

Project Manager Sandra Seger Date 7/15/11

SAMPLE ID	Initial pH	Acid Amt	Final pH	SAMPLE ID	Initial pH	Acid Amt	Final pH
	SKS 7/15/11				SKS 7/15/11		

JIG140511

See over for additional information.

7/18/2011 10:51:44 AM

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: 07/21/2011

Sep1 DT/Tm Tech:

Batch: 1196095 WATER pCi/L PM, Quote: RW2, 27023

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: AZS7, 1196049 BCS8, 1196052 ARS6, 1196054 AZS7, 1196081 88EA, 1196089 BNTB, 1196092 BCS8, 1196095 AZS7, 1196096 ARS6, 1196099 AMS5, 1196100 AWTA, 1196101 CGTH, 1196102 5SS3

Prep Tech: ,LoeberL/BaughB

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 MKXPQ-1-AA J1G140511-1-SAMP 07/14/2011 14:30		54.00g,in AmtRec: 1X120MLAG;2X250MLP;1X500M #Containers: 7		1.5	1.4517g 200 1.4155g 36.2mg	10B	2003		7/19/11 OD	Scr: Alpha: -9.00E-06 uCi/Sa Beta: -2.85E-05 uCi/Sa
2 MKXPQ-1-A6-X J1G140511-1-DUP 07/14/2011 14:30		53.90g,in AmtRec: 1X120MLAG;2X250MLP;1X500M #Containers: 7			1.4316g 1.3947g 36.9mg	10C				Scr: Alpha: -9.00E-06 uCi/Sa Beta: -2.85E-05 uCi/Sa
3 MKX01-1-AA-B J1G150000-95-BLK 07/15/2011 11:19 pd		200.60g,in AmtRec: #Containers: 1			1.3999g 1.3989g 1.0mg	10A				Scr: Alpha: Beta:
4 MKX01-1-AC-C J1G150000-95-LCS 07/15/2011 11:19 pd		200.90g,in AmtRec: #Containers: 1	ASD5127 04/29/11,pd		1.3940g 1.3930g 1.0mg	10D				Scr: Alpha: Beta:

Comments: PH < 2D ALIQUOTS REDUCED DUE TO WEIGHT SCREENS. LL 7/18/11

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

MKXPQ1AA-SAMP Constituent List:

ALPHA	RDL:3	pCi/L	LCL:	UCL:	RPD:
MKX011AA-BLK:					
ALPHA	RDL:3	pCi/L	LCL:	UCL:	RPD:
MKX011AC-LCS:					
Am-241	RDL:	pCi/L	LCL:70	UCL:130	RPD:20

MKXPQ1AA-SAMP Calc Info:

TestAmerica Laboratories, Inc.

7/18/2011 10:51:45 AM

Sample Preparation/Analysis

Balance Id:1117411003

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

Pipet #: _____

AnalyDueDate: 07/21/2011

Sep1 DT/Tm Tech:

Batch: 1196095 pCi/L

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,LoeberL

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
MKX011AA-BLK:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MKX011AC-LCS:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```

7/20/2011 11:42:12 AM

ICOC Fraction Transfer/Status Report

ByDate: 7/20/2010, 7/25/2011, Batch: '1196095', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
1196095						
AC		**Rev1C**	**LoeberL**	7/18/2011 10:45:35		
SC			MauclerlS	IsBatched	7/15/2011 11:21:39 AM	ICOC_RADCALC v4.8.49
SC			LoeberL	InPrep	7/18/2011 10:45:35 AM	RL-PRP-004 REVISION 1
SC			LoeberL	Prep1C	7/18/2011 10:56:35 AM	RL-PRP-004 REVISION 1
SC			BaughB	InPrep2	7/18/2011 12:37:32 PM	RL-GPC-001 REVISION 1
SC			BaughB	Prep2C	7/19/2011 4:08:32 PM	RL-GPC-001 REVISION 1
SC			DawkinsO	InCnt1	7/19/2011 4:18:51 PM	RL-CI-006 REVISION 1
SC			DawkinsO	CalcC	7/19/2011 11:48:07 PM	RL-CI-006 REVISION 1
SC			norton|	Rev1C	7/20/2011 11:41:35 AM	RL-DR-001 Rev 2
AC			**LoeberL**	7/18/2011 10:56:35		
AC			**BaughB**	7/18/2011 12:37:32		
AC			**BaughB**	7/19/2011 4:08:32 PM		
AC			**DawkinsO**	7/19/2011 4:18:51 PM		
AC			**DawkinsO**	7/19/2011 11:48:07		
AC			**norton|**	7/20/2011 11:41:35		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 7

ICOCFractions v4.8.44

7/18/2011 11:08:00 AM

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: 07/21/2011

Sep1 DT/Tm Tech:

Batch: 1196092 WATER pCi/L PM, Quote: RW2, 27023

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,LoeberL / BaughB

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 MKXPQ-1-AC J1G140511-1-SAMP 07/14/2011 14:30	AmtRec: 1X120MLAG;2X250MLP;1X500M	141.20g,in	#Containers: 7	1.5	1.49649 100 1.39719 99.3mg		27A	1810	7/19/11 OD	Scr: Alpha: -9.00E-06 uCi/Sa Beta: -2.85E-05 uCi/Sa
2 MKXPQ-1-A5-X J1G140511-1-DUP 07/14/2011 14:30	AmtRec: 1X120MLAG;2X250MLP;1X500M	139.40g,in	#Containers: 7		1.5079g 1.4104g 97.5mg		27B			Scr: Alpha: -9.00E-06 uCi/Sa Beta: -2.85E-05 uCi/Sa
3 MKX0W-1-AA-B J1G150000-92-BLK 07/15/2011 11:19 pd	AmtRec:	199.90g,in	#Containers: 1		1.4074g 1.4071g 0.3mg		27C			Scr: Alpha: Beta:
4 MKX0W-1-AC-C J1G150000-92-LCS 07/15/2011 11:19 pd	AmtRec:	202.10g,in	BESB3729 05/20/11,pd 10/01/01,r #Containers: 1		1.4010g 1.4005g 0.5mg		27D			Scr: Alpha: Beta:

Comments: pH < 2.0 Aliquots reduced due to weight screen. LC 7/18/11

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

MKXPQ1AC-SAMP Constituent List:

BETA	RDL:4	pCi/L	LCL:	UCL:	RPD:

MKX0W1AA-BLK:

BETA	RDL:4	pCi/L	LCL:	UCL:	RPD:

MKX0W1AC-LCS:

Sr-90	RDL:	pCi/L	LCL:70	UCL:130	RPD:20

MKXPQ1AC-SAMP Calc Info:

TestAmerica Laboratories, Inc.

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: 07/21/2011

Sep1 DT/Tm Tech:

Batch: 1196092 pCi/L
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,LoeberL

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
MKX0W1AA-BLK:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MKX0W1AC-LCS:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```


TestAmerica Laboratories, Inc.

7/20/2011 11:45:47 AM

ICOC Fraction Transfer/Status Report

ByDate: 7/20/2010, 7/25/2011, Batch: '1196092', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
1196092						
AC		**Rev1C**	**LoeberL**	7/18/2011 11:02:58		
SC			MauclerlS	IsBatched	7/15/2011 11:21:34 AM	ICOC_RADCALC v4.8.49
SC			LoeberL	InPrep	7/18/2011 11:02:58 AM	RL-PRP-004 REVISION 1
SC			LoeberL	Prep1C	7/18/2011 11:10:09 AM	RL-PRP-004 REVISION 1
SC			BaughB	InPrep2	7/18/2011 12:37:28 PM	RL-GPC-001 REVISION 1
SC			BaughB	Prep2C	7/19/2011 4:08:48 PM	RL-GPC-001 REVISION 1
SC			DawkinsO	InCnt1	7/19/2011 4:19:17 PM	RL-CI-006 REVISION 1
SC			DawkinsO	CalcC	7/19/2011 11:48:12 PM	RL-CI-006 REVISION 1
SC			norton|	Rev1C	7/20/2011 11:45:07 AM	RL-DR-001 Rev 2
AC			**LoeberL**	7/18/2011 11:10:09		
AC			**BaughB**	7/18/2011 12:37:28		
AC			**BaughB**	7/19/2011 4:08:48 PM		
AC			**DawkinsO**	7/19/2011 4:19:17 PM		
AC			**DawkinsO**	7/19/2011 11:48:12		
AC			**norton|**	7/20/2011 11:45:07		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 7

ICOCFractions v4.8.44

7/18/2011 9:56:29 AM

Sample Preparation/Analysis

Balance Id:1117411003

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

CG Sr-Total Prp/Sep GPC003
TH Total Strontium by GPC
5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 07/21/2011

Sep1 DT/Tm Tech: 9:50 7/19/11 APA

Batch: 1196101 WATER pCi/L PM, Quote: RW2, 27023

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ~~BaughB~~ LoeberL

Work Ord, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	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 MKXPQ-1-AH J1G140511-1-SAMP 07/14/2011 14:30			198.90g,in	198.90g	SRTA21334 06/30/11	1.5	1.4909g -1.3940g 96.9 mg	50	200 26A 7/18/11 APA	1650	7/19/11 ME	
			AmtRec: 1X120MLAG;2X250MLP;1X500M #Containers: 7					Scr:	Alpha: -9.00E-06 uCi/Sa		Beta: -2.85E-05 uCi/Sa	
2 MKXPQ-1-CA-X J1G140511-1-DUP 07/14/2011 14:30			202.60g,in	202.60g	SRTA21335 06/30/11		1.4900g -1.3950g 95.0 mg		26B			
			AmtRec: 1X120MLAG;2X250MLP;1X500M #Containers: 7					Scr:	Alpha: -9.00E-06 uCi/Sa		Beta: -2.85E-05 uCi/Sa	
3 MKX1J-1-AA-B J1G150000-101-BLK 07/15/2011 11:19 pd			201.50g,in	201.50g	SRTA21336 06/30/11		1.4800g -1.3945g 85.5 mg		26C			
			AmtRec:	#Containers: 1				Scr:	Alpha:		Beta:	
4 MKX1J-1-AC-C J1G150000-101-LCS 07/15/2011 11:19 pd			202.90g,in	202.90g	STSC2423 05/13/11		1.4891g -1.4032g 85.9mg		26D			
			AmtRec:	#Containers: 1				Scr:	Alpha:		Beta:	

Comments: PH < 2.0 LL 7/18/11

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

MKXPQ1AH-SAMP Constituent List:

Sr-90	RDL:2	pCi/L	LCL:70	UCL:130	RPD:20

MKX1J1AA-BLK:

Sr-90	RDL:2	pCi/L	LCL:	UCL:	RPD:

MKX1J1AC-LCS:

Sr-90	RDL:2	pCi/L	LCL:70	UCL:130	RPD:20

MKXPQ1AH-SAMP Calc Info:

TestAmerica Laboratories, Inc.

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7/18/2011 9:56:30 AM

Sample Preparation/Analysis

CG Sr-Total Prp/Sep GPC003
TH Total Strontium by GPC
5I CLIENT: HANFORD

Balance Id:1117411003

Pipet #: _____

AnalyDueDate: 07/21/2011

Sep1 DT/Tm Tech:

Batch: 1196101 pCi/L

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,BaughB

Work Ord, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	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
MKX1J1AA-BLK:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MKX1J1AC-LCS:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```

7/20/2011 11:50:05 AM

ICOC Fraction Transfer/Status Report

ByDate: 7/20/2010, 7/25/2011, Batch: '1196101', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
1196101						
AC		**Rev1C**	**BaughB**	7/18/2011 9:44:46		
SC			MaucierlS	IsBatched	7/15/2011 11:21:59 AM	ICOC_RADCALC v4.8.49
SC			BaughB	InPrep	7/18/2011 9:44:46 AM	RL-PRP-004 REVISION 1
SC			LoeberL	Prep1C	7/18/2011 9:58:55 AM	RL-PRP-004 REVISION 1
SC			AshworthA	Sep2C	7/19/2011 11:14:24 AM	RL-GPC-003 REVISION 1
SC			ClarkR	InCnt1	7/19/2011 11:23:51 AM	RL-CI-006 REVISION 1
SC			DawkinsO	CalcC	7/19/2011 11:48:19 PM	RL-CI-006 REVISION 1
SC			nortonj	Rev1C	7/20/2011 11:49:53 AM	RL-DR-001 Rev 2
AC			**LoeberL**	7/18/2011 9:58:55		
AC			**AshworthA**	7/19/2011 11:14:24		
AC			**ClarkR**	7/19/2011 11:23:51		
AC			**DawkinsO**	7/19/2011 11:48:19		
AC			**nortonj**	7/20/2011 11:49:53		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

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Grp Rec Cnt: 6

ICOCFractions v4.8.44

7/18/2011 9:29:00 AM

Sample Preparation/Analysis

TRLSP. Libery

Balance Id:1117411003

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

AW Gamma Prp GAM001
TA Gamma by HPGE
5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 07/21/2011

Sep1 DT/Tm Tech:

Batch: 1196100 WATER pCi/L PM, Quote: RW2, 27023

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: AZS7, 1196049 BCS8, 1196052 ARS6, 1196054 AZS7, 1196081 88EA, 1196089 BNTB, 1196092 BCS8, 1196095 AZS7, 1196096 ARS6, 1196099 AMS5, 1196100 AWTA, 1196101 CGTH, 1196102 5SS3

Prep Tech: ,BaughB

Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MKXPQ-1-AE J1G140511-1-SAMP 07/14/2011 14:30			198.80g,in	198.80g		200ml	200	G10	1648	7/18/am	
			AmtRec: 1X120MLAG;2X250MLP;1X500M #Containers: 7					Scr:	Alpha: -9.00E-06 uCi/Sa	Beta: -2.85E-05 uCi/Sa	
2 MKXPQ-1-A9-X ISV J1G140511-1-DUP 07/14/2011 14:30								G13	2049	7/18/11 OND	
			AmtRec: 1X120MLAG;2X250MLP;1X500M #Containers: 7					Scr:	Alpha: -9.00E-06 uCi/Sa	Beta: -2.85E-05 uCi/Sa	
3 MKX1H-1-AA-B J1G150000-100-BLK 07/15/2011 11:19 pd			199.00g,in	199.00g				G5	1649	7/18/am	
			AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:	
4 MKX1H-1-AC-C J1G150000-100-LCS 07/15/2011 11:19 pd			201.30g,in	201.30g	QCAG1754 06/10/11,pd 11/07/03,r			7/18/11 G14	1650		
			AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:	

Comments: PH<2.0. No dup due to ISV. Please re-count on different detector. BB 7/18/11.

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

MKXPQ1AE-SAMP Constituent List:

Co-58	RDL:--	pCi/L	LCL:	UCL:	RPD:	Co-60	RDL:25	pCi/L	LCL:	UCL:	RPD:
Cs-137	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20
Eu-152	RDL:50	pCi/L	LCL:	UCL:	RPD:	Eu-154	RDL:50	pCi/L	LCL:	UCL:	RPD:
Eu-155	RDL:50	pCi/L	LCL:	UCL:	RPD:	Fe-59	RDL:--	pCi/L	LCL:	UCL:	RPD:

MKX1H1AA-BLK:

Co-58	RDL:--	pCi/L	LCL:	UCL:	RPD:	Co-60	RDL:25	pCi/L	LCL:	UCL:	RPD:

7/18/2011 9:29:01 AM

Sample Preparation/Analysis

Balance Id:1117411003

AW Gamma Prp GAM001
TA Gamma by HPGE
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 07/21/2011

Sep1 DT/Tm Tech:

Batch: 1196100 pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,BaughB

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

Cs-137	RDL:15	pCi/L	LCL:	UCL:	RPD:	Cs-137DA	RDL:15	pCi/L	LCL:	UCL:	RPD:	
Eu-152	RDL:50	pCi/L	LCL:	UCL:	RPD:	Eu-154	RDL:50	pCi/L	LCL:	UCL:	RPD:	
Eu-155	RDL:50	pCi/L	LCL:	UCL:	RPD:	Fe-59	RDL:--	pCi/L	LCL:	UCL:	RPD:	
MKX1H1AC-LCS:												
Cs-137	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20	Cs-137DA	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20	
K-40	RDL:6	pCi/L	LCL:70	UCL:130	RPD:20	Ra-226	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20	
RA-228	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20	RA-228DA	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20	
U-238	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20							

MKXPQ1AE-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

MKX1H1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

MKX1H1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

7/19/2011 9:24:30 AM

ICOC Fraction Transfer/Status Report

ByDate: 7/19/2010, 7/24/2011, Batch: '1196100', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
1196100						
AC		**Rev1C**	**BaughB**	7/18/2011 9:04:19		
SC			MaucleriS	IsBatched	7/15/2011 11:21:55 AM	ICOC_RADCALC v4.8.49
SC			BaughB	InPrep	7/18/2011 9:04:19 AM	RL-PRP-004 REVISION 1
SC			BaughB	Prep2C	7/18/2011 9:37:10 AM	RL-GAM-001 REVISION 1
SC			ClarkR	InCnt1	7/18/2011 9:40:19 AM	RL-CI-007 REVISION 1
SC			DawkinsO	CalcC	7/19/2011 12:19:20 AM	RL-CI-007 REVISION 1
SC			antonsonl	Rev1C	7/19/2011 9:24:04 AM	RL-DR-001 Rev 2
AC			**BaughB**	7/18/2011 9:37:10		
AC			**ClarkR**	7/18/2011 9:40:19		
AC			**DawkinsO**	7/19/2011 12:19:20		
AC			**antonsonl**	7/19/2011 9:24:04		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

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Grp Rec Cnt: 5

ICOCFractions v4.8.44

7/18/2011 9:55:50 AM

Sample Preparation/Analysis

Balance Id:1120482733

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

BN I-129 Prp/Sep GAM002
TB Gamma by LEPD
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 07/21/2011

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: ,NyeM

PRIORITY

Batch: 1196089 WATER pCi/L PM, Quote: RW2, 27023

SEQ Batch, Test: None All Tests: AZS7, 1196049 BCS8, 1196052 ARS6, 1196054 AZS7, 1196081 88EA, 1196089 BNTB, 1196092 BCS8, 1196095 AZS7, 1196096 ARS6, 1196099 AMS5, 1196100 AWTA, 1196101 CGTH, 1196102 5SS3

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 MKXPQ-1-AK J1G140511-1-SAMP 07/14/2011 14:30		1024.40g,in AmtRec: 1X120MLAG;2X250MLP;1X500M #Containers: 7	ITA10976 06/03/11		0.1159 g 50 0.0819 g 34.0 mg		L4 Scr:	0549 Alpha: -9.00E-06 uCi/Sa	7/25/11 Beta: -2.85E-05 uCi/Sa	
2 MKXPQ-1-A4-X J1G140511-1-DUP 07/14/2011 14:30		1018.70g,in AmtRec: 1X120MLAG;2X250MLP;1X500M #Containers: 7	ITA10977 06/03/11		0.1150 g 0.0825 g 32.5 mg		L4 Scr:	0642 Alpha: -9.00E-06 uCi/Sa	7/25/11 Beta: -2.85E-05 uCi/Sa	
3 MKX0R-1-AA-B J1G150000-89-BLK 07/15/2011 11:19 pd		1057.70g,in AmtRec: #Containers: 1	ITA10978 06/03/11		0.1163 g 0.0829 g 33.4 mg		L4 Scr:	0734 Alpha:	↓ Beta:	
4 MKX0R-1-AC-C J1G150000-89-LCS 07/15/2011 11:19 pd		1032.20g,in AmtRec: #Containers: 1	ISA0002 06/23/11		0.1177 g 0.0824 g 35.3 mg		L4 Scr:	0824 Alpha:	7/25/11 Beta:	

Comments: pH>2 - 7/15/11 MN

PRIORITY

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

MKXPQ1AK-SAMP Constituent List:

I-129	RDL:5	pCi/L	LCL:70	UCL:130	RPD:20

MKX0R1AA-BLK:

I-129	RDL:5	pCi/L	LCL:	UCL:	RPD:

MKX0R1AC-LCS:

I-129	RDL:5	pCi/L	LCL:70	UCL:130	RPD:20

MKXPQ1AK-SAMP Calc Info:

TestAmerica Laboratories, Inc.

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7/18/2011 9:55:51 AM

Sample Preparation/Analysis

Balance Id:1120482733

BN I-129 Prp/Sep GAM002
TB Gamma by LEPD
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 07/21/2011

Sep1 DT/Tm Tech:

Batch: 1196089 pCi/L

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,NyeM

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
MKX0R1AA-BLK:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MKX0R1AC-LCS:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```


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7/20/2011 2:53:20 PM

ICOC Fraction Transfer/Status Report

ByDate: 7/20/2010, 7/25/2011, Batch: '1196089', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
1196089						
AC		Rev1C	NyeM	7/18/2011 9:41:44		
SC			MauclerlS	IsBatched	7/15/2011 11:21:29 AM	ICOC_RADCALC v4.8.49
SC			NyeM	Prep1C	7/18/2011 9:41:44 AM	RL-PRP-004 REVISION 1
SC			NyeM	InPrep	7/18/2011 9:42:26 AM	RL-PRP-004 REVISION 1
SC			NyeM	Prep2C	7/19/2011 12:43:33 PM	RL-GAM-002 REVISION 1
SC			ClarkR	InCnt1	7/19/2011 12:49:55 PM	RL-CI-007 REVISION 1
SC			ClarkR	CalcC	7/20/2011 2:18:40 PM	RL-CI-007 REVISION 1
SC			norton|	Rev1C	7/20/2011 2:50:48 PM	RL-DR-001 Rev 2
AC			NyeM	7/18/2011 9:42:26		
AC			NyeM	7/19/2011 12:43:33		
AC			ClarkR	7/19/2011 12:49:55		
AC			ClarkR	7/20/2011 2:18:40 PM		
AC			norton|	7/20/2011 2:50:48 PM		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

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Grp Rec Cnt: 6

ICOCFractions v4.8.44

7/18/2011 9:28:10 AM

Sample Preparation/Analysis

Balance Id:1120482733

127642, Washington Closure Hanford LLC
Bechtel Hanford, Inc.

AM Tc-99 Prp/Sep LSC013
S5 Technetium-99 by Liquid Scint
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 07/21/2011

Sep1 DT/Tm Tech:

Batch: 1196099 WATER pCi/L **PM, Quote: RW2, 27023**

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: AZS7, 1196049 BCS8, 1196052 ARS6, 1196054 AZS7, 1196081 88EA, 1196089 BNTB, 1196092 BCS8, 1196095 AZS7, 1196096 ARS6, 1196099 AMS5, 1196100 AWTA, 1196101 CGTH, 1196102 5SS3

Prep Tech: ,LuksicS

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MKXPQ-1-AF J1G140511-1-SAMP 07/14/2011 14:30		125.10g,in AmtRec: 1X120MLAG;2X250MLP;1X500M #Containers: 7		60			Scr: Alpha: -9.00E-06 uCi/Sa	Beta: -2.85E-05 uCi/Sa
2 MKXPQ-1-A7-S J1G140511-1-MS 07/14/2011 14:30		125.90g,in AmtRec: 1X120MLAG;2X250MLP;1X500M #Containers: 7	TCSG3090 12/21/10,pd 01/01/87 r				Scr: Alpha: -9.00E-06 uCi/Sa	Beta: -2.85E-05 uCi/Sa
3 MKXPQ-1-A8-X J1G140511-1-DUP 07/14/2011 14:30		126.00g,in AmtRec: 1X120MLAG;2X250MLP;1X500M #Containers: 7					Scr: Alpha: -9.00E-06 uCi/Sa	Beta: -2.85E-05 uCi/Sa
4 MKX1F-1-AA-B J1G150000-99-BLK 07/15/2011 11:19 pd		125.60g,in AmtRec: #Containers: 1					Scr: Alpha:	Beta:
5 MKX1F-1-AC-C J1G150000-99-LCS 07/15/2011 11:19 pd		124.80g,in AmtRec: #Containers: 1	TCSE2519 10/01/10,pd 07/01/05 r				Scr: Alpha:	Beta:
6 MKX1F-1-AD-BN J1G150000-99-IBLK 07/15/2011 11:19 pd		AmtRec: #Containers: 1					Scr: Alpha:	Beta:

7/18/2011 9:28:11 AM

Sample Preparation/Analysis

AM Tc-99 Prp/Sep LSC013
S5 Technetium-99 by Liquid Scint
5I CLIENT: HANFORD

AnalyDueDate: 07/21/2011

Batch: 1196099 pCi/L
SEQ Batch, Test: None

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

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

Comments:

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

MKXPQ1AF-SAMP Constituent List:
  Tc-99       RDL:15          pCi/L     LCL:70      UCL:130     RPD:20
MKXPQ1A7-MS Constituent List:

MKX1F1AA-BLK:
  Tc-99       RDL:15          pCi/L     LCL:        UCL:        RPD:
MKX1F1AC-LCS:
  Tc-99       RDL:15          pCi/L     LCL:70      UCL:130     RPD:20
MKX1F1AD-IBLK:
  Tc-99       RDL:15          pCi/L     LCL:        UCL:        RPD:
MKXPQ1AF-SAMP Calc Info:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MKXPQ1A7-MS Calc Info:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MKX1F1AA-BLK:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MKX1F1AC-LCS:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MKX1F1AD-IBLK:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```


TestAmerica Laboratories, Inc.

7/21/2011 1:28:25 PM

ICOC Fraction Transfer/Status Report

ByDate: 7/21/2010, 7/26/2011, Batch: '1196099', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
1196099						
AC		Rev1C	ClarkR	7/20/2011 10:10:49		
SC			MauclerIS	IsBatched	7/15/2011 11:21:48 AM	ICOC_RADCALC v4.8.49
SC			ClarkR	InCnt1	7/20/2011 10:10:49 AM	RL-CI-005 REVISION 1
SC			ClarkR	CalcC	7/21/2011 10:32:40 AM	RL-CI-005 REVISION 1
SC			antonsonl	Rev1C	7/21/2011 1:27:46 PM	RL-DR-001 Rev 2
AC			ClarkR	7/21/2011 10:32:40		
AC			antonsonl	7/21/2011 1:27:46 PM		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

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Grp Rec Cnt: 3

ICOCFractions v4.8.44

7/18/2011 11:07:04 AM

Sample Preparation/Analysis

127642, Washington Closure Hanford LLC
Bechtel Hanford, Inc.

AR H-3 Prp/Sep LSC005
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Balance Id:
Pipet #:

AnalyDueDate: 07/21/2011

Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

Batch: 1196096 **WATER** **pCi/L** **PM, Quote: RW2, 27023**

SEQ Batch, Test: None All Tests: AZS7, 1196049 BCS8, 1196052 ARS6, 1196054 AZS7, 1196081 88EA, 1196089 BNTB, 1196092 BCS8, 1196095 AZS7, 1196096 ARS6, 1196099 AMS5, 1196100 AWTA, 1196101 CGTH, 1196102 5SS3

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MKXPQ-1-AD								
J1G140511-1-SAMP								
07/14/2011 14:30		AmtRec: 1X120MLAG;2X250MLP;1X500M #Containers: 7				Scr:	Alpha: -9.00E-06 uCi/Sa	Beta: -2.85E-05 uCi/Sa
2 MKXPQ-1-CD-X								
J1G140511-1-DUP								
07/14/2011 14:30		AmtRec: 1X120MLAG;2X250MLP;1X500M #Containers: 7				Scr:	Alpha: -9.00E-06 uCi/Sa	Beta: -2.85E-05 uCi/Sa
3 MKX04-1-AA-B								
J1G150000-96-BLK								
07/15/2011 11:19 pd		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
4 MKX04-1-AC-C								
J1G150000-96-LCS								
07/15/2011 11:19 pd		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
5 MKX04-1-AD-BX								
J1G150000-96-MBLK								
07/15/2011 11:19 pd		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
6 MKX04-1-AE-CM								
J1G150000-96-MLCS								
07/15/2011 11:19 pd		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
7 MKX04-1-AF-BN								
J1G150000-96-IBLK								
07/15/2011 11:19 pd		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:

TestAmerica Laboratories, Inc.

Sample Preparation/Analysis

AR H-3 Prp/Sep LSC005
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

AnalyDueDate: 07/21/2011

Batch: 1196096 pCi/L
SEQ Batch, Test: None

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

Comments:

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

MKXPQ1AD-SAMP Constituent List:
H-3 RDL:400 pCi/L LCL:70 UCL:130 RPD:20
MKX041AA-BLK:
H-3 RDL:400 pCi/L LCL: UCL: RPD:
MKX041AC-LCS:
H-3 RDL:400 pCi/L LCL:70 UCL:130 RPD:20
MKX041AD-MBLK:
H-3 RDL:400 pCi/L LCL: UCL: RPD:
MKX041AE-MLCS:
H-3 RDL:400 pCi/L LCL:70 UCL:130 RPD:20
MKX041AF-IBLK:
H-3 RDL:400 pCi/L LCL: UCL: RPD:

MKXPQ1AD-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MKX041AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MKX041AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MKX041AD-MBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MKX041AE-MLCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MKX041AF-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.

7/20/2011 11:16:48 AM

ICOC Fraction Transfer/Status Report

ByDate: 7/20/2010, 7/25/2011, Batch: '1196096', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
1196096						
AC		**Rev1C**	**DefordP**	7/18/2011 11:31:31		
SC			MaucierlS	IsBatched	7/15/2011 11:21:44 AM	ICOC_RADCALC v4.8.49
SC			DefordP	Sep1C	7/18/2011 11:31:31 AM	RL-LSC-005 REVISION 1
SC			WagnerF	Sep1C	7/18/2011 11:32:10 AM	RL-LSC-005 REVISION 1
SC			ClarkR	InCnt1	7/18/2011 12:58:55 PM	RL-CI-005 REVISION 1
SC			ClarkR	CalcC	7/19/2011 11:42:48 AM	RL-CI-005 REVISION 1
SC			nortonj	Rev1C	7/20/2011 11:16:18 AM	RL-DR-001 Rev 2
AC			**WagnerF**	7/18/2011 11:32:10		
AC			**ClarkR**	7/18/2011 12:58:55		
AC			**ClarkR**	7/19/2011 11:42:48		
AC			**nortonj**	7/20/2011 11:16:18		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

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Grp Rec Cnt: 5

ICOCFractions v4.8.44

7/15/2011 11:20:11 AM

Sample Preparation/Analysis

127642, Washington Closure Hanford LLC
Bechtel Hanford, Inc.

PRIOR

5S C-14 Prp/Sep LSC008
S3 Carbon-14 by Liquid Scint
5I CLIENT: HANFORD

Balance Id:
Pipet #:

AnalyDueDate: 07/21/2011

Sep1 DT/Tm Tech:

Batch: 1196102 WATER pCi/L PM, Quote: RW2, 27023

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MKXPQ-1-AJ J1G140511-1-SAMP 07/14/2011 14:30		AmtRec: 1X120MLAG;2X250MLP;1X500M		#Containers: 7		Scr:	Alpha:	Beta:
2 MKXPQ-1-CC-X J1G140511-1-DUP 07/14/2011 14:30		AmtRec: 1X120MLAG;2X250MLP;1X500M		#Containers: 7		Scr:	Alpha:	Beta:
3 MKX1M-1-AA-B J1G150000-102-BLK 07/15/2011 11:19 pd		AmtRec:		#Containers: 1		Scr:	Alpha:	Beta:
4 MKX1M-1-AC-C J1G150000-102-LCS 07/15/2011 11:19 pd		AmtRec:		#Containers: 1		Scr:	Alpha:	Beta:
5 MKX1M-1-AD-BN J1G150000-102-IBLK 07/15/2011 11:19 pd		AmtRec:		#Containers: 1		Scr:	Alpha:	Beta:

200ml

~~INSV~~

Comments:

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

MKXPQ1AJ-SAMP Constituent List:
C-14 RDL:200 pCi/L LCL:70 UCL:130 RPD:20

Test America Laboratories, Inc.

Sample Preparation/Analysis

5S C-14 Prp/Sep LSC008
S3 Carbon-14 by Liquid Scint
5I CLIENT: HANFORD

AnalyDueDate: 07/21/2011

Batch: 1196102 pCi/L
SEQ Batch, Test: None

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

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

MKX1M1AA-BLK:

MKX1M1AC-LCS:

MKX1M1AD-IBLK:

MKXPQ1AJ-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MKX1M1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MKX1M1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MKX1M1AD-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

7/20/2011 11:20:32 AM

ICOC Fraction Transfer/Status Report

ByDate: 7/20/2010, 7/25/2011, Batch: '1196102', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
1196102						
AC		Rev1C	DefordP	7/18/2011 11:31:44		
SC			MaucleriS	IsBatched	7/15/2011 11:22:03 AM	ICOC_RADCALC v4.8.49
SC			DefordP	Sep1C	7/18/2011 11:31:44 AM	RL-LSC-008 REVISION 1
SC			WagnerF	Sep1C	7/18/2011 11:32:18 AM	RL-LSC-008 REVISION 1
SC			ClarkR	InCnt1	7/18/2011 12:58:47 PM	RL-CI-005 REVISION 1
SC			ClarkR	CalcC	7/19/2011 11:37:53 AM	RL-CI-005 REVISION 1
SC			nortonj	Rev1C	7/20/2011 11:20:17 AM	RL-DR-001 Rev 2
AC			WagnerF	7/18/2011 11:32:18		
AC			ClarkR	7/18/2011 12:58:47		
AC			ClarkR	7/19/2011 11:37:53		
AC			nortonj	7/20/2011 11:20:17		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 5

ICOCFractions v4.8.44

7/15/2011 11:02:37 AM

Sample Preparation/Analysis

127642, Washington Closure Hanford LLC
Bechtel Hanford, Inc.

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

AnalyDueDate: 07/21/2011

Batch: 1196081 WATER mg/L PM, Quote: RW2, 27023

SEQ Batch, Test: None All Tests: AZS7, 1196049 BCS8, 1196052 ARS6, 1196054 AZS7, 1196081 88EA, 1196089 BNTB, 1196092 BCS8, 1196095 AZS7, 1196096 ARS6, 1196099 AMS5, 1196100 AWTA, 1196101 CGTH, 1196102 5SS3

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech: JP 0226
Prep Tech:

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MKXPQ-1-AG J1G140511-1-SAMP 07/14/2011 14:30	AmtRec: 1X120MLAG;2X250MLP;1X500M #Containers: 7					Scr:	Alpha:	Beta:
2 MKXPQ-1-A1-S J1G140511-1-MS 07/14/2011 14:30	AmtRec: 1X120MLAG;2X250MLP;1X500M #Containers: 7					Scr:	Alpha:	Beta:
3 MKXPQ-1-A2-D J1G140511-1-MSD 07/14/2011 14:30	AmtRec: 1X120MLAG;2X250MLP;1X500M #Containers: 7					Scr:	Alpha:	Beta:
4 MKXPQ-1-A3-X J1G140511-1-DUP 07/14/2011 14:30	AmtRec: 1X120MLAG;2X250MLP;1X500M #Containers: 7					Scr:	Alpha:	Beta:
5 MKXX9-1-AA-B J1G150000-81-BLK 07/15/2011 11:02 pd	AmtRec: #Containers: 1					Scr:	Alpha:	Beta:
6 MKXX9-1-AC-C J1G150000-81-LCS 07/15/2011 11:02 pd	AmtRec: #Containers: 1					Scr:	Alpha:	Beta:

TestAmerica Laboratories, Inc.

7/15/2011 11:02:37 AM

Sample Preparation/Analysis

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

Balance Id:

Pipet #:

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech:

AnalyDueDate: 07/21/2011

Batch: 1196081 mg/L
SEQ Batch, Test: None

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

Comments:

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

MKXPQ1AG-SAMP Constituent List:
HEXCHROME RDL:0.0037 mg/L LCL:85 UCL:115 RPD:20
MKXPQ1A1-MS Constituent List:

MKXPQ1A2-MSD:

MKXX91AA-BLK:

MKXX91AC-LCS:

MKXPQ1AG-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MKXPQ1A1-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MKXPQ1A2-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MKXX91AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MKXX91AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-18144-1

SDG Number: JP0226

Job Description: SAF# RC-076

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

Attention: Joan H Kessner

RECEIVED
JUL 2011

Approved for release.
Kae E Yoder
Project Manager II
7/27/2011 12:35 PM

Kae E Yoder
Project Manager II
kae.yoder@testamericainc.com
07/27/2011

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

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CASE NARRATIVE

Client: Washington Closure Hanford

Project: WASHINGTON CLOSURE HANFORD

Report Number: 280-18144-1

SDG #: JP0226
SAF#: RC-076

Date SDG Closed: July 16, 2011
Data Deliverable: 7 Day / Summary

CLIENT ID	LAB ID	ANALYSES REQUESTED	ANALYSES PERFORMED
J1FL22	280-18144-1	6010/7470/300.0/353.2/9040/350.1/9010/ 415.1/2540C/9050/8260A/6270A/8082	6010B/6020/7470A/300.0/353.2/9040B/350.1/9012A/ 5310B/2540C/9050A/8260B/8270C/8082

The Uranium, Total Cyanide and TOC method substitutions noted above, as agreed to by all parties, have no technical impact on the data.

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 7/16/2011; the sample arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 3.6 C.

GC/MS VOLATILES - SW846 8260B
The method required MS/MSD could not be performed for batch 280-77800, due to insufficient sample volume submitted by the client. Due to analyst oversight, a duplicate LCS (LCSD) was not analyzed.

No other anomalies were encountered.

GC/MS SEMIVOLATILES - SW846 8270C
Benzyl alcohol is present in the method blank associated with batch 280-76936 at a level exceeding the reporting limit. The associated sample exhibited a low level detection present above the MDL but below the RL, and the result has been flagged with a "B". Due to insufficient sample volume submitted by the client, corrective action could not be initiated.

The method required MS/MSD could not be performed for batch 280-76936, 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.

GC SEMIVOLATILES - SW846 8082 - PCBs
The method required MS/MSD could not be performed for batch 280-76971, 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
Low levels of Manganese, Silver and Uranium are present in the method blanks associated with batches 280-76938 and 280-76937, respectively. Because the concentrations in the method blanks are not present at levels greater than the reporting limits, corrective action is deemed unnecessary.

Due to insufficient sample volume submitted by the client, the Matrix Spike and Sample Duplicate analysis for SW846 6010B batch 280-76938 and SW846 6020 batch 280-76937 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 Nitrate as N, Nitrite as N and Orthophosphate as P analyses for sample J1FL22 were performed after the recommended 48 hour sample holding time had expired. The sample was received at the laboratory with insufficient time remaining for the laboratory to perform the analyses within the holding time. It is TestAmerica's policy to analyze all samples within holding times; however, the laboratory cannot guarantee that hold times will be met when samples are received with less than half the hold time remaining.

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to high constituent concentration, the Sulfate analysis of sample J1FL22 had to be performed at a dilution, and the associated result has been flagged with a "D". The reporting limit has been adjusted relative to the dilution required.

No other anomalies were encountered.

GENERAL CHEMISTRY - MCAWW 350.1 - AMMONIA as N

The Matrix Spike performed on sample J1FL22 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.

The duplicate analysis of sample J1FL22 exhibited RPD data outside the control limits, and the associated sample result has been flagged "M". 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 - MCAWW 353.2 - NITRATE+NITRITE

The Matrix Spike performed on sample J1FL22 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 9012A - TOTAL CYANIDE

No anomalies were encountered.

GENERAL CHEMISTRY - SM 2540C - TOTAL DISSOLVED SOLIDS

Sample J1FL22 exhibited an elevated detection limit due to the limited sample volume used. The nominal sample amount could not be used due to high constituent concentration.

Due to insufficient sample volume submitted by the client, the Sample Duplicate analysis for batch 280-77068 could not be performed. A duplicate LCS (LCSD) was analyzed to provide some evidence of batch precision.

No other anomalies were encountered.

GENERAL CHEMISTRY - SM 5310B - TOTAL ORGANIC CARBON

Low levels of Total Organic Carbon are present in the method blank associated with batch 280-77506. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

No other anomalies were encountered.

GENERAL CHEMISTRY - SW846 9040B - PH

No anomalies were encountered.

GENERAL CHEMISTRY - SW846 9050A - SPECIFIC CONDUCTANCE

No anomalies were encountered.

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

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		
	B	Analyte was found in the associated method blank as well as in the sample.
	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 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
	C	The analyte was detected in both the sample and the assoicated QC blank, and the sample concentration was </= 5X the blank concentration.

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Lab Section	Qualifier	Description
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.
	M	Sample duplicate precision not met.
	D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

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)			SW846 3520C
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL DEN	SW846 8082	
Liquid-Liquid Extraction (Separatory Funnel)			SW846 3510C
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Total Metals			SW846 3010A
Metals (ICP/MS)	TAL DEN	SW846 6020	
Preparation, Total Metals			SW846 3020A
Mercury (CVAA)	TAL DEN	SW846 7470A	
Preparation, Mercury			SW846 7470A
Anions, Ion Chromatography	TAL DEN	MCAWW 300.0	
Nitrogen, Ammonia	TAL DEN	MCAWW 350.1	
Nitrogen, Nitrate-Nitrite	TAL DEN	MCAWW 353.2	
Total Cyanide (Automated Colorimetric]	TAL DEN	SW846 9012A	
Cyanide, Total and/or Amenable, Distillation			SW846 9012A
pH	TAL DEN	SW846 9040B	
Specific Conductance	TAL DEN	SW846 9050A	
Solids, Total Dissolved (TDS)	TAL DEN	SM SM 2540C	
Organic Carbon, Total (TOC)	TAL DEN	SM SM 5310B	

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.

SM = "Standard Methods For The Examination Of Water And Wastewater",

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: 280-18144-1
Sdg Number: JP0226

Method	Analyst	Analyst ID
SW846 8260B	Stapp, Jennifer L	JLS
SW846 8270C	Kiekel, Daniel C	DCK
SW846 8082	Pavlakovich, Adam M	AMP
SW846 6010B	Harre, John K	JKH
SW846 6020	Lill, Thomas E	TEL
SW846 7470A	Niman, Katie M	KMN
MCAWW 300.0	Yates, George E	GEY
MCAWW 350.1	Scott, Samantha J	SJS
MCAWW 353.2	Scott, Samantha J	SJS
SW846 9012A	Kilker, Lorelei M	LMK
SW846 9040B	Ayala, Delaina	DA
SW846 9050A	Plumb, Paul M	PMP
SM SM 2540C	Domnick, Brandon J	BJD
SM SM 5310B	Yates, George E	GEY

SAMPLE SUMMARY

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-18144-1	J1FL22	Water	07/14/2011 1430	07/16/2011 0930

SAMPLE RESULTS

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Client Sample ID: **J1FL22**

Lab Sample ID: 280-18144-1
Client Matrix: Water

Date Sampled: 07/14/2011 1430
Date Received: 07/16/2011 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-77800	Instrument ID:	MSV_R2
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	RR7636.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	07/21/2011 0144			Final Weight/Volume:	20 mL
Prep Date:	07/21/2011 0144				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	2.9	J	1.9	10
Benzene	0.16	U	0.16	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
1,4-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)	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	0.32	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	0.19	U	0.19	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101		70 - 127
Toluene-d8 (Surr)	112		80 - 125
4-Bromofluorobenzene (Surr)	112		78 - 120
Dibromofluoromethane (Surr)	104		77 - 120

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Client Sample ID: **J1FL22**

Lab Sample ID: 280-18144-1
Client Matrix: Water

Date Sampled: 07/14/2011 1430
Date Received: 07/16/2011 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-77800	Instrument ID:	MSV_R2
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	RR7636.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Analysis Date:	07/21/2011 0144			Final Weight/Volume:	20 mL
Prep Date:	07/21/2011 0144				

Tentatively Identified Compounds **Number TIC's Found:** **4**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Unknown	5.18	2.0	N J
1066-40-6	Silanol, trimethyl-	7.41	1.5	N J
	Unknown	12.67	2.8	N J
	Unknown	14.81	1.6	N J

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Client Sample ID: **J1FL22**

Lab Sample ID: 280-18144-1
Client Matrix: Water

Date Sampled: 07/14/2011 1430
Date Received: 07/16/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-77403	Instrument ID:	MSS_K
Prep Method:	3520C	Prep Batch:	280-76936	Lab File ID:	K1242.D
Dilution:	1.0			Initial Weight/Volume:	962.2 mL
Analysis Date:	07/19/2011 1633			Final Weight/Volume:	1000 uL
Prep Date:	07/16/2011 1350			Injection Volume:	0.5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
N-Nitrosodimethylamine	0.30	U	0.30	10
1,4-Dichlorobenzene	0.33	U	0.33	4.2
Benzyl alcohol	8.5	J B	0.24	10
2-Methylphenol	1.0	U	1.0	10
3 & 4 Methylphenol	0.26	U	0.26	10
Acetophenone	0.25	U	0.25	10
Hexachloroethane	2.2	U	2.2	10
Naphthalene	0.30	U	0.30	4.2
2,4-Dinitrotoluene	1.7	U	1.7	10
Di-n-octyl phthalate	0.36	U	0.36	4.2

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	75		51 - 120
Phenol-d5	86		51 - 120
Nitrobenzene-d5	76		48 - 120
2-Fluorobiphenyl	69		38 - 120
2,4,6-Tribromophenol	94		57 - 120
Terphenyl-d14	99		50 - 120

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Client Sample ID: **J1FL22**

Lab Sample ID: 280-18144-1
Client Matrix: Water

Date Sampled: 07/14/2011 1430
Date Received: 07/16/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-77403	Instrument ID:	MSS_K
Prep Method:	3520C	Prep Batch:	280-76936	Lab File ID:	K1242.D
Dilution:	1.0			Initial Weight/Volume:	962.2 mL
Analysis Date:	07/19/2011 1633			Final Weight/Volume:	1000 uL
Prep Date:	07/16/2011 1350			Injection Volume:	0.5 uL

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

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
593-71-5	Chloroiodomethane	2.41	18	N J
111-76-2	Ethanol, 2-butoxy-	3.89	15	N J
20324-32-7	2-Propanol, 1-(2-methoxy-1-methylethoxy)	4.61	24	N J
13429-07-7	2-Propanol, 1-(2-methoxypropoxy)-	4.72	58	N J
84-66-2	Diethyl phthalate	8.13	0.48	J N J
117-81-7	Bis(2-ethylhexyl) phthalate	11.02	1.1	J B N J

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Client Sample ID: **J1FL22**

Lab Sample ID: 280-18144-1
Client Matrix: Water

Date Sampled: 07/14/2011 1430
Date Received: 07/16/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-78331	Instrument ID:	MSS_K
Prep Method:	3520C	Prep Batch:	280-76936	Lab File ID:	K1300.D
Dilution:	1.0			Initial Weight/Volume:	962.2 mL
Analysis Date:	07/26/2011 1111			Final Weight/Volume:	1000 uL
Prep Date:	07/16/2011 1350			Injection Volume:	0.5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Tributyl phosphate	1.2	U	1.2	52

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Client Sample ID: **J1FL22**

Lab Sample ID: 280-18144-1
Client Matrix: Water

Date Sampled: 07/14/2011 1430
Date Received: 07/16/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-78331	Instrument ID:	MSS_K
Prep Method:	3520C	Prep Batch:	280-76936	Lab File ID:	K1300.D
Dilution:	1.0			Initial Weight/Volume:	962.2 mL
Analysis Date:	07/26/2011 1111			Final Weight/Volume:	1000 uL
Prep Date:	07/16/2011 1350			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Client Sample ID: **J1FL22**

Lab Sample ID: 280-18144-1
Client Matrix: Water

Date Sampled: 07/14/2011 1430
Date Received: 07/16/2011 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-77432	Instrument ID:	GCS_P3
Prep Method:	3510C	Prep Batch:	280-76971	Initial Weight/Volume:	952.4 mL
Dilution:	1.0			Final Weight/Volume:	10000 uL
Analysis Date:	07/19/2011 1807			Injection Volume:	1 uL
Prep Date:	07/17/2011 1200			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aroclor 1016	0.13	U	0.13	0.52
Aroclor 1221	0.22	U	0.22	0.52
Aroclor 1232	0.17	U	0.17	0.52
Aroclor 1242	0.11	U	0.11	0.52
Aroclor 1248	0.096	U	0.096	0.52
Aroclor 1254	0.12	U	0.12	0.52
Aroclor 1260	0.17	U	0.17	0.52

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	80		30 - 136
Tetrachloro-m-xylene	79		25 - 120

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Client Sample ID: **J1FL22**

Lab Sample ID: 280-18144-1
Client Matrix: Water

Date Sampled: 07/14/2011 1430
Date Received: 07/16/2011 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-77377	Instrument ID:	MT_025
Prep Method:	3010A	Prep Batch:	280-76938	Lab File ID:	25A1071911.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	07/19/2011 1344			Final Weight/Volume:	50 mL
Prep Date:	07/18/2011 1500				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Aluminum	0.38		0.018	0.050
Antimony	0.0031	U	0.0031	0.0060
Arsenic	0.0044	U	0.0044	0.010
Barium	0.019		0.00058	0.0050
Beryllium	0.00047	U	0.00047	0.0010
Cadmium	0.00045	U	0.00045	0.0020
Calcium	24.7		0.035	0.20
Chromium	0.0021		0.00066	0.0020
Copper	0.0022	B	0.0014	0.010
Iron	0.56		0.022	0.050
Lead	0.0026	U	0.0026	0.0050
Magnesium	2.5		0.011	0.20
Manganese	0.038		0.00025	0.0050
Nickel	0.0014	B	0.0013	0.040
Potassium	14.6		0.24	3.0
Selenium	0.0049	U	0.0049	0.010
Silicon	3.6		0.035	0.50
Silver	0.0011	B C	0.00093	0.0020
Sodium	184		0.092	0.50
Vanadium	0.0014	B	0.0011	0.010
Zinc	0.0045	U	0.0045	0.010

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-77231	Instrument ID:	MT_024
Prep Method:	3020A	Prep Batch:	280-76937	Lab File ID:	157AREF.D
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	07/19/2011 0241			Final Weight/Volume:	50 mL
Prep Date:	07/16/2011 1204				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Uranium	0.000073	B C	0.000020	0.0010

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	280-77405	Instrument ID:	MT_034
Prep Method:	7470A	Prep Batch:	280-77046	Lab File ID:	110719TD.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	07/19/2011 2013			Final Weight/Volume:	30 mL
Prep Date:	07/19/2011 1130				

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

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Client Sample ID: **J1FL22**

Lab Sample ID: 280-18144-1
Client Matrix: Water

Date Sampled: 07/14/2011 1430
Date Received: 07/16/2011 0930

7470A Mercury (CVAA)

General Chemistry

Client Sample ID: **J1FL22**

Lab Sample ID: 280-18144-1
Client Matrix: Water

Date Sampled: 07/14/2011 1430
Date Received: 07/16/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Bromide	0.14	B	mg/L	0.11	0.20	1.0	300.0
Analysis Batch: 280-77369	Analysis Date: 07/16/2011 2101						
Nitrate as N	0.042	U	mg/L	0.042	0.50	1.0	300.0
Analysis Batch: 280-77368	Analysis Date: 07/16/2011 2101						
Chloride	12.9		mg/L	0.25	3.0	1.0	300.0
Analysis Batch: 280-77369	Analysis Date: 07/16/2011 2101						
Nitrite as N	0.049	U	mg/L	0.049	0.50	1.0	300.0
Analysis Batch: 280-77368	Analysis Date: 07/16/2011 2101						
Fluoride	1.0		mg/L	0.060	0.50	1.0	300.0
Analysis Batch: 280-77369	Analysis Date: 07/16/2011 2101						
Orthophosphate as P	0.19	U	mg/L	0.19	0.50	1.0	300.0
Analysis Batch: 280-77368	Analysis Date: 07/16/2011 2101						
Sulfate	398	D	mg/L	2.3	50.0	10	300.0
Analysis Batch: 280-77369	Analysis Date: 07/17/2011 0937						
Ammonia as N	0.056	B M N	mg/L	0.022	0.10	1.0	350.1
Analysis Batch: 280-77766	Analysis Date: 07/21/2011 1224						
Nitrate Nitrite as N	0.019	U N	mg/L	0.019	0.10	1.0	353.2
Analysis Batch: 280-77764	Analysis Date: 07/21/2011 1224						
Total Cyanide	0.0020	U	mg/L	0.0020	0.010	1.0	9012A
Analysis Batch: 280-77540	Analysis Date: 07/20/2011 1429						
Prep Batch: 280-77451	Prep Date: 07/20/2011 0830						
Total Dissolved Solids	1060		mg/L	9.4	20.0	1.0	SM 2540C
Analysis Batch: 280-77068	Analysis Date: 07/18/2011 1035						
Total Organic Carbon - Quad	4.3		mg/L	0.16	1.0	1.0	SM 5310B
Analysis Batch: 280-77506	Analysis Date: 07/19/2011 2142						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH	9.32		SU	0.100	0.100	1.0	9040B
Analysis Batch: 280-76963	Analysis Date: 07/16/2011 1607						
Specific Conductance	983		umhos/cm	2.00	2.00	1.0	9050A
Analysis Batch: 280-77698	Analysis Date: 07/21/2011 1241						

QUALITY CONTROL RESULTS

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:280-77800					
LCS 280-77800/6	Lab Control Sample	T	Water	8260B	
MB 280-77800/5	Method Blank	T	Water	8260B	
280-18144-1	J1FL22	T	Water	8260B	

Report Basis
T = Total

GC/MS Semi VOA					
Prep Batch: 280-76936					
LCS 280-76936/2-A	Lab Control Sample	T	Water	3520C	
LCSD 280-76936/3-A	Lab Control Sample Duplicate	T	Water	3520C	
MB 280-76936/1-A	Method Blank	T	Water	3520C	
280-18144-1	J1FL22	T	Water	3520C	
Analysis Batch:280-77403					
LCS 280-76936/2-A	Lab Control Sample	T	Water	8270C	280-76936
LCSD 280-76936/3-A	Lab Control Sample Duplicate	T	Water	8270C	280-76936
MB 280-76936/1-A	Method Blank	T	Water	8270C	280-76936
280-18144-1	J1FL22	T	Water	8270C	280-76936
Analysis Batch:280-78331					
MB 280-76936/1-A	Method Blank	T	Water	8270C	280-76936
280-18144-1	J1FL22	T	Water	8270C	280-76936

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 280-76971					
LCS 280-76971/2-A	Lab Control Sample	T	Water	3510C	
LCSD 280-76971/3-A	Lab Control Sample Duplicate	T	Water	3510C	
MB 280-76971/1-A	Method Blank	T	Water	3510C	
280-18144-1	J1FL22	T	Water	3510C	
Analysis Batch:280-77432					
LCS 280-76971/2-A	Lab Control Sample	T	Water	8082	280-76971
LCSD 280-76971/3-A	Lab Control Sample Duplicate	T	Water	8082	280-76971
MB 280-76971/1-A	Method Blank	T	Water	8082	280-76971
280-18144-1	J1FL22	T	Water	8082	280-76971

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-76937					
LCS 280-76937/2-A	Lab Control Sample	T	Water	3020A	
LCSD 280-76937/3-A	Lab Control Sample Duplicate	T	Water	3020A	
MB 280-76937/1-A	Method Blank	T	Water	3020A	
280-18144-1	J1FL22	T	Water	3020A	
Prep Batch: 280-76938					
LCS 280-76938/2-A	Lab Control Sample	T	Water	3010A	
LCSD 280-76938/3-A	Lab Control Sample Duplicate	T	Water	3010A	
MB 280-76938/1-A	Method Blank	T	Water	3010A	
280-18144-1	J1FL22	T	Water	3010A	
Prep Batch: 280-77046					
LCS 280-77046/2-A	Lab Control Sample	T	Water	7470A	
MB 280-77046/1-A	Method Blank	T	Water	7470A	
280-18144-1	J1FL22	T	Water	7470A	
280-18144-1DU	Duplicate	T	Water	7470A	
280-18144-1MS	Matrix Spike	T	Water	7470A	
Analysis Batch:280-77231					
LCS 280-76937/2-A	Lab Control Sample	T	Water	6020	280-76937
LCSD 280-76937/3-A	Lab Control Sample Duplicate	T	Water	6020	280-76937
MB 280-76937/1-A	Method Blank	T	Water	6020	280-76937
280-18144-1	J1FL22	T	Water	6020	280-76937
Analysis Batch:280-77377					
LCS 280-76938/2-A	Lab Control Sample	T	Water	6010B	280-76938
LCSD 280-76938/3-A	Lab Control Sample Duplicate	T	Water	6010B	280-76938
MB 280-76938/1-A	Method Blank	T	Water	6010B	280-76938
280-18144-1	J1FL22	T	Water	6010B	280-76938
Analysis Batch:280-77405					
LCS 280-77046/2-A	Lab Control Sample	T	Water	7470A	280-77046
MB 280-77046/1-A	Method Blank	T	Water	7470A	280-77046
280-18144-1	J1FL22	T	Water	7470A	280-77046
280-18144-1DU	Duplicate	T	Water	7470A	280-77046
280-18144-1MS	Matrix Spike	T	Water	7470A	280-77046

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-76963					
LCS 280-76963/4	Lab Control Sample	T	Water	9040B	
LCSD 280-76963/5	Lab Control Sample Duplicate	T	Water	9040B	
280-18144-1	J1FL22	T	Water	9040B	
280-18144-1DU	Duplicate	T	Water	9040B	
Analysis Batch:280-77068					
LCS 280-77068/2	Lab Control Sample	T	Water	SM 2540C	
LCSD 280-77068/3	Lab Control Sample Duplicate	T	Water	SM 2540C	
MB 280-77068/1	Method Blank	T	Water	SM 2540C	
280-18144-1	J1FL22	T	Water	SM 2540C	
Analysis Batch:280-77368					
LCS 280-77368/11	Lab Control Sample	T	Water	300.0	
MB 280-77368/12	Method Blank	T	Water	300.0	
280-18144-1	J1FL22	T	Water	300.0	
280-18144-1DU	Duplicate	T	Water	300.0	
280-18144-1MS	Matrix Spike	T	Water	300.0	
Analysis Batch:280-77369					
LCS 280-77369/11	Lab Control Sample	T	Water	300.0	
MB 280-77369/12	Method Blank	T	Water	300.0	
280-18144-1	J1FL22	T	Water	300.0	
280-18144-1DU	Duplicate	T	Water	300.0	
280-18144-1MS	Matrix Spike	T	Water	300.0	
Prep Batch: 280-77451					
HLCS 280-77451/1-A	High Level Control Sample	T	Water	9012A	
LCS 280-77451/3-A	Lab Control Sample	T	Water	9012A	
LLCS 280-77451/2-A	Low Level Control Sample	T	Water	9012A	
MB 280-77451/4-A	Method Blank	T	Water	9012A	
280-18144-1	J1FL22	T	Water	9012A	
280-18144-1DU	Duplicate	T	Water	9012A	
280-18144-1MS	Matrix Spike	T	Water	9012A	
Analysis Batch:280-77506					
LCS 280-77506/3	Lab Control Sample	T	Water	SM 5310B	
MB 280-77506/4	Method Blank	T	Water	SM 5310B	
280-18144-1	J1FL22	T	Water	SM 5310B	
280-18144-1DU	Duplicate	T	Water	SM 5310B	
280-18144-1MS	Matrix Spike	T	Water	SM 5310B	

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-77540					
HLCS 280-77451/1-A	High Level Control Sample	T	Water	9012A	280-77451
LCS 280-77451/3-A	Lab Control Sample	T	Water	9012A	280-77451
LLCS 280-77451/2-A	Low Level Control Sample	T	Water	9012A	280-77451
MB 280-77451/4-A	Method Blank	T	Water	9012A	280-77451
280-18144-1	J1FL22	T	Water	9012A	280-77451
280-18144-1DU	Duplicate	T	Water	9012A	280-77451
280-18144-1MS	Matrix Spike	T	Water	9012A	280-77451
Analysis Batch:280-77698					
LCS 280-77698/3	Lab Control Sample	T	Water	9050A	
LCSD 280-77698/4	Lab Control Sample Duplicate	T	Water	9050A	
MB 280-77698/5	Method Blank	T	Water	9050A	
280-18144-1	J1FL22	T	Water	9050A	
280-18144-1DU	Duplicate	T	Water	9050A	
Analysis Batch:280-77764					
LCS 280-77764/21	Lab Control Sample	T	Water	353.2	
MB 280-77764/20	Method Blank	T	Water	353.2	
280-18144-1	J1FL22	T	Water	353.2	
280-18144-1DU	Duplicate	T	Water	353.2	
280-18144-1MS	Matrix Spike	T	Water	353.2	
Analysis Batch:280-77766					
LCS 280-77766/21	Lab Control Sample	T	Water	350.1	
MB 280-77766/20	Method Blank	T	Water	350.1	
280-18144-1	J1FL22	T	Water	350.1	
280-18144-1DU	Duplicate	T	Water	350.1	
280-18144-1MS	Matrix Spike	T	Water	350.1	

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Method Blank - Batch: 280-77800

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 280-77800/5	Analysis Batch:	280-77800	Instrument ID:	MSV_R2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	RR7624.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	07/20/2011 2103	Units:	ug/L	Final Weight/Volume:	20 mL
Prep Date:	07/20/2011 2103				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acetone	1.9	U	1.9	10
Benzene	0.16	U	0.16	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
1,4-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)	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)	102	70 - 127
Toluene-d8 (Surr)	109	80 - 125
4-Bromofluorobenzene (Surr)	107	78 - 120
Dibromofluoromethane (Surr)	102	77 - 120

Method Blank TICs- Batch: 280-77800

Cas Number	Analyte	RT	Est. Result	Qual
	Tentatively Identified Compound		None	

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Lab Control Sample - Batch: 280-77800

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 280-77800/6	Analysis Batch:	280-77800	Instrument ID:	MSV_R2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	RR7625.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	07/20/2011 2126	Units:	ug/L	Final Weight/Volume:	20 mL
Prep Date:	07/20/2011 2126				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	5.00	5.24	105	77 - 120	
Bromodichloromethane	5.00	5.47	109	78 - 120	
Carbon tetrachloride	5.00	5.09	102	80 - 120	
Chlorobenzene	5.00	5.07	101	78 - 120	
Chloroform	5.00	5.22	104	78 - 120	
1,3-Dichlorobenzene	5.00	5.12	102	75 - 120	
1,1-Dichloroethane	5.00	5.40	108	77 - 120	
trans-1,2-Dichloroethene	5.00	5.31	106	80 - 120	
1,1-Dichloroethene	5.00	5.71	114	68 - 133	
1,2-Dichloropropane	5.00	5.35	107	76 - 120	
Ethylbenzene	5.00	5.10	102	78 - 120	
Methylene Chloride	5.00	6.04	121	60 - 134	
Tetrachloroethene	5.00	5.05	101	77 - 120	
Toluene	5.00	5.24	105	73 - 120	
1,1,1-Trichloroethane	5.00	4.82	96	78 - 120	
Trichloroethene	5.00	5.13	103	78 - 122	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97	70 - 127
Toluene-d8 (Surr)	109	80 - 125
4-Bromofluorobenzene (Surr)	110	78 - 120
Dibromofluoromethane (Surr)	99	77 - 120

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Method Blank - Batch: 280-76936

Method: 8270C
Preparation: 3520C

Lab Sample ID:	MB 280-76936/1-A	Analysis Batch:	280-77403	Instrument ID:	MSS_K
Client Matrix:	Water	Prep Batch:	280-76936	Lab File ID:	K1234.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	07/19/2011 1331	Units:	ug/L	Final Weight/Volume:	1000 uL
Prep Date:	07/16/2011 1350			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	20.2		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

Surrogate	% Rec	Acceptance Limits
2-Fluorophenol	86	51 - 120
Phenol-d5	70	51 - 120
Nitrobenzene-d5	84	48 - 120
2-Fluorobiphenyl	70	38 - 120
2,4,6-Tribromophenol	94	57 - 120
Terphenyl-d14	94	50 - 120

Method Blank TICs- Batch: 280-76936

Cas Number	Analyte	RT	Est. Result	Qual
20324-32-7	2-Propanol, 1-(2-methoxy-1-methylethoxy)	4.61	45.8	N J
13429-07-7	2-Propanol, 1-(2-methoxypropoxy)-	4.73	107	N J
117-81-7	Bis(2-ethylhexyl) phthalate	11.06	0.590	J N J
111-76-2	Ethanol, 2-butoxy-	3.89	36.9	N J
	Unknown	4.82	4.96	N J

Method Blank - Batch: 280-76936

Method: 8270C
Preparation: 3520C

Lab Sample ID:	MB 280-76936/1-A	Analysis Batch:	280-78331	Instrument ID:	MSS_K
Client Matrix:	Water	Prep Batch:	280-76936	Lab File ID:	K1299.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	07/26/2011 1048	Units:	ug/L	Final Weight/Volume:	1000 uL
Prep Date:	07/16/2011 1350			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Tributyl phosphate	1.1	U	1.1	50

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Method Blank TICs- Batch: 280-76936

Cas Number	Analyte	RT	Est. Result	Qual
	Tentatively Identified Compound		None	

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-76936

Method: 8270C
Preparation: 3520C

LCS Lab Sample ID:	LCS 280-76936/2-A	Analysis Batch:	280-77403	Instrument ID:	MSS_K
Client Matrix:	Water	Prep Batch:	280-76936	Lab File ID:	K1235.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	07/19/2011 1353	Units:	ug/L	Final Weight/Volume:	1000 uL
Prep Date:	07/16/2011 1350			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-76936/3-A	Analysis Batch:	280-77403	Instrument ID:	MSS_K
Client Matrix:	Water	Prep Batch:	280-76936	Lab File ID:	K1236.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	07/19/2011 1415	Units:	ug/L	Final Weight/Volume:	1000 uL
Prep Date:	07/16/2011 1350			Injection Volume:	0.5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Phenol	99	89	52 - 120	11	42		
2-Chlorophenol	81	82	57 - 120	1	30		
1,4-Dichlorobenzene	56	58	27 - 120	5	52		
2-Methylphenol	88	85	50 - 120	3	30		
N-Nitrosodi-n-propylamine	85	83	50 - 120	2	30		
1,2,4-Trichlorobenzene	62	67	23 - 120	8	42		
4-Chloro-3-methylphenol	90	91	63 - 120	1	30		
2-Methylnaphthalene	79	84	32 - 120	5	32		
2,4,6-Trichlorophenol	94	96	52 - 120	2	30		
Acenaphthene	88	91	45 - 120	4	30		
4-Nitrophenol	86	92	49 - 124	7	35		
2,4-Dinitrotoluene	96	100	51 - 120	5	32		
Pentachlorophenol	95	97	40 - 120	3	33		
Anthracene	94	96	56 - 120	3	30		
Carbazole	92	96	48 - 120	4	30		
Pyrene	95	96	56 - 120	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2-Fluorophenol	84	84	51 - 120
Phenol-d5	91	89	51 - 120
Nitrobenzene-d5	83	86	48 - 120
2-Fluorobiphenyl	88	91	38 - 120
2,4,6-Tribromophenol	100	102	57 - 120
Terphenyl-d14	96	98	50 - 120

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Method Blank - Batch: 280-76971

Method: 8082
Preparation: 3510C

Lab Sample ID:	MB 280-76971/1-A	Analysis Batch:	280-77432	Instrument ID:	GCS_P3
Client Matrix:	Water	Prep Batch:	280-76971	Lab File ID:	009B0901.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	07/19/2011 1703	Units:	ug/L	Final Weight/Volume:	10000 uL
Prep Date:	07/17/2011 1200			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	0.12	U	0.12	0.50
Aroclor 1221	0.21	U	0.21	0.50
Aroclor 1232	0.17	U	0.17	0.50
Aroclor 1242	0.10	U	0.10	0.50
Aroclor 1248	0.092	U	0.092	0.50
Aroclor 1254	0.11	U	0.11	0.50
Aroclor 1260	0.16	U	0.16	0.50

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	75	30 - 136
Tetrachloro-m-xylene	85	25 - 120

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-76971

Method: 8082
Preparation: 3510C

LCS Lab Sample ID:	LCS 280-76971/2-A	Analysis Batch:	280-77432	Instrument ID:	GCS_P3
Client Matrix:	Water	Prep Batch:	280-76971	Lab File ID:	010B1001.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	07/19/2011 1725	Units:	ug/L	Final Weight/Volume:	10000 uL
Prep Date:	07/17/2011 1200			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY
LCSD Lab Sample ID:	LCSD 280-76971/3-A	Analysis Batch:	280-77432	Instrument ID:	GCS_P3
Client Matrix:	Water	Prep Batch:	280-76971	Lab File ID:	011B1101.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	07/19/2011 1746	Units:	ug/L	Final Weight/Volume:	10000 uL
Prep Date:	07/17/2011 1200			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Aroclor 1016	94	96	58 - 128	2	30		
Aroclor 1260	96	99	69 - 140	2	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Decachlorobiphenyl	85	90	30 - 136
Tetrachloro-m-xylene	89	89	25 - 120

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Method Blank - Batch: 280-76938

Method: 6010B
Preparation: 3010A

Lab Sample ID:	MB 280-76938/1-A	Analysis Batch:	280-77377	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-76938	Lab File ID:	25A1071911.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/19/2011 1338	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/18/2011 1500				
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	0.00058	U	0.00058	0.0050
Beryllium	0.00047	U	0.00047	0.0010
Cadmium	0.00045	U	0.00045	0.0020
Calcium	0.035	U	0.035	0.20
Chromium	0.00066	U	0.00066	0.0020
Copper	0.0014	U	0.0014	0.010
Iron	0.022	U	0.022	0.050
Lead	0.0026	U	0.0026	0.0050
Magnesium	0.011	U	0.011	0.20
Manganese	0.000250	B	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	0.000970	B	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

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-76938

Method: 6010B
Preparation: 3010A

LCS Lab Sample ID:	LCS 280-76938/2-A	Analysis Batch:	280-77377	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-76938	Lab File ID:	25A1071911.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/19/2011 1340	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/18/2011 1500				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-76938/3-A	Analysis Batch:	280-77377	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-76938	Lab File ID:	25A1071911.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/19/2011 1342	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/18/2011 1500				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Aluminum	92	94	87 - 111	2	20		
Antimony	100	100	88 - 110	0	20		
Arsenic	101	101	88 - 110	0	20		
Barium	102	101	90 - 112	1	20		
Beryllium	98	97	89 - 113	1	20		
Cadmium	102	102	88 - 111	0	20		
Calcium	95	95	90 - 111	0	20		
Chromium	101	102	90 - 113	0	20		
Copper	100	102	86 - 112	1	20		
Iron	97	102	89 - 115	5	20		
Lead	100	101	89 - 110	1	20		
Magnesium	95	95	90 - 113	0	20		
Manganese	97	98	90 - 110	1	20		
Nickel	98	99	89 - 111	1	20		
Potassium	99	99	89 - 114	0	20		
Selenium	99	100	85 - 112	0	20		
Silicon	98	98	90 - 110	0	20		
Silver	101	102	86 - 115	1	20		
Sodium	102	103	90 - 115	1	20		
Vanadium	100	101	90 - 111	1	20		
Zinc	93	94	85 - 111	1	20		

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Method Blank - Batch: 280-76937

Method: 6020
Preparation: 3020A

Lab Sample ID:	MB 280-76937/1-A	Analysis Batch:	280-77231	Instrument ID:	MT_024
Client Matrix:	Water	Prep Batch:	280-76937	Lab File ID:	154_BLK.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/19/2011 0233	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/16/2011 1204				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Uranium	0.0000314	B	0.000020	0.0010

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-76937

Method: 6020
Preparation: 3020A

LCS Lab Sample ID:	LCS 280-76937/2-A	Analysis Batch:	280-77231	Instrument ID:	MT_024
Client Matrix:	Water	Prep Batch:	280-76937	Lab File ID:	155_LCS.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/19/2011 0235	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/16/2011 1204				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-76937/3-A	Analysis Batch:	280-77231	Instrument ID:	MT_024
Client Matrix:	Water	Prep Batch:	280-76937	Lab File ID:	156LCSD.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/19/2011 0238	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/16/2011 1204				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Uranium	105	106	85 - 119	2	20		

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Method Blank - Batch: 280-77046

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 280-77046/1-A	Analysis Batch:	280-77405	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-77046	Lab File ID:	110719TD.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	07/19/2011 2008	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	07/19/2011 1130				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.000027	U	0.000027	0.00020

Lab Control Sample - Batch: 280-77046

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 280-77046/2-A	Analysis Batch:	280-77405	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-77046	Lab File ID:	110719TD.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	07/19/2011 2011	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	07/19/2011 1130				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00491	98	88 - 111	

Matrix Spike - Batch: 280-77046

Method: 7470A
Preparation: 7470A

Lab Sample ID:	280-18144-1	Analysis Batch:	280-77405	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-77046	Lab File ID:	110719TD.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	07/19/2011 2018	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	07/19/2011 1130				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.000027	U	0.00500	0.00461	92	88 - 111	

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Duplicate - Batch: 280-77046

Method: 7470A
Preparation: 7470A

Lab Sample ID:	280-18144-1	Analysis Batch:	280-77405	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-77046	Lab File ID:	110719TD.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	07/19/2011 2015	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	07/19/2011 1130				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.000027	U	0.000027	NC	20	U

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Method Blank - Batch: 280-77368

Method: 300.0
Preparation: N/A

Lab Sample ID:	MB 280-77368/12	Analysis Batch:	280-77368	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:	07/16/2011 2045	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: 280-77368

Method: 300.0
Preparation: N/A

Lab Sample ID:	MRL 280-77368/10	Analysis Batch:	280-77368	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	110.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	07/16/2011 2011	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	0.192	96	50 - 150	B
Nitrite as N	0.200	0.191	96	50 - 150	B
Orthophosphate as P	0.200	0.19	86	50 - 150	U

Lab Control Sample - Batch: 280-77368

Method: 300.0
Preparation: N/A

Lab Sample ID:	LCS 280-77368/11	Analysis Batch:	280-77368	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	111.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	07/16/2011 2028	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	5.14	103	90 - 110	
Nitrite as N	5.00	5.21	104	90 - 110	
Orthophosphate as P	5.00	5.38	108	90 - 110	

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Matrix Spike - Batch: 280-77368

Method: 300.0
Preparation: N/A

Lab Sample ID:	280-18144-1	Analysis Batch:	280-77368	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	115.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	07/16/2011 2135	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	4.86	97	80 - 120	
Nitrite as N	0.049	U	5.00	5.04	101	80 - 120	
Orthophosphate as P	0.19	U	5.00	5.35	107	80 - 120	

Duplicate - Batch: 280-77368

Method: 300.0
Preparation: N/A

Lab Sample ID:	280-18144-1	Analysis Batch:	280-77368	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	114.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	07/16/2011 2118	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	0.19	U	0.19	NC	15	U

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Method Blank - Batch: 280-77369

Method: 300.0
Preparation: N/A

Lab Sample ID:	MB 280-77369/12	Analysis Batch:	280-77369	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:	07/16/2011 2045	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: 280-77369

Method: 300.0
Preparation: N/A

Lab Sample ID:	MRL 280-77369/10	Analysis Batch:	280-77369	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	110.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	07/16/2011 2011	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	0.190	95	50 - 150	B
Chloride	1.00	0.969	97	50 - 150	B
Fluoride	0.200	0.192	96	50 - 150	B
Sulfate	1.00	0.978	98	50 - 150	B

Lab Control Sample - Batch: 280-77369

Method: 300.0
Preparation: N/A

Lab Sample ID:	LCS 280-77369/11	Analysis Batch:	280-77369	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	111.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	07/16/2011 2028	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	5.14	103	90 - 110	
Chloride	25.0	25.54	102	90 - 110	
Fluoride	5.00	5.26	105	90 - 110	
Sulfate	25.0	25.70	103	90 - 110	

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Matrix Spike - Batch: 280-77369

Method: 300.0
Preparation: N/A

Lab Sample ID:	280-18144-1	Analysis Batch:	280-77369	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	115.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	07/16/2011 2135	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	0.14	B	5.00	5.25	102	80 - 120	
Chloride	12.9		25.0	38.69	103	80 - 120	
Fluoride	1.0		5.00	5.78	95	80 - 120	

Matrix Spike - Batch: 280-77369

Method: 300.0
Preparation: N/A

Lab Sample ID:	280-18144-1	Analysis Batch:	280-77369	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	122.TXT
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	07/17/2011 1011	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
Sulfate	398	250	645.5	99	80 - 120	D

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Duplicate - Batch: 280-77369

Method: 300.0
Preparation: N/A

Lab Sample ID:	280-18144-1	Analysis Batch:	280-77369	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	114.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	07/16/2011 2118	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	0.14	B	0.136	0.7	15	B
Chloride	12.9		13.03	0.7	15	
Fluoride	1.0		1.01	0.2	15	

Duplicate - Batch: 280-77369

Method: 300.0
Preparation: N/A

Lab Sample ID:	280-18144-1	Analysis Batch:	280-77369	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121.TXT
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	07/17/2011 0954	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
Sulfate	398	397.4	0.2	15	D

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Method Blank - Batch: 280-77766

Method: 350.1
Preparation: N/A

Lab Sample ID:	MB 280-77766/20	Analysis Batch:	280-77766	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0721NXNB
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	07/21/2011 1219	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Ammonia as N	0.022	U	0.022	0.10

Lab Control Sample - Batch: 280-77766

Method: 350.1
Preparation: N/A

Lab Sample ID:	LCS 280-77766/21	Analysis Batch:	280-77766	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0721NXNB
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	07/21/2011 1221	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Ammonia as N	5.00	5.04	101	90 - 110	

Matrix Spike - Batch: 280-77766

Method: 350.1
Preparation: N/A

Lab Sample ID:	280-18144-1	Analysis Batch:	280-77766	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0721NXNB
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	07/21/2011 1227	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
Ammonia as N	0.056	B	4.00	5.07	125	90 - 110	N

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Duplicate - Batch: 280-77766

Method: 350.1
Preparation: N/A

Lab Sample ID:	280-18144-1	Analysis Batch:	280-77766	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0721NXNB
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	07/21/2011 1225	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
Ammonia as N	0.056	B	0.0437	24	10	B M

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Method Blank - Batch: 280-77764

Method: 353.2
Preparation: N/A

Lab Sample ID:	MB 280-77764/20	Analysis Batch:	280-77764	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0721NXNB
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	07/21/2011 1219	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrate Nitrite as N	0.019	U	0.019	0.10

Method Reporting Limit Check - Batch: 280-77764

Method: 353.2
Preparation: N/A

Lab Sample ID:	MRL 280-77764/18	Analysis Batch:	280-77764	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0721NXNB
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	07/21/2011 1216	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N	0.100	0.146	146	50 - 150	

Lab Control Sample - Batch: 280-77764

Method: 353.2
Preparation: N/A

Lab Sample ID:	LCS 280-77764/21	Analysis Batch:	280-77764	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0721NXNB
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	07/21/2011 1221	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N	5.00	5.08	102	90 - 110	

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Matrix Spike - Batch: 280-77764

Method: 353.2
Preparation: N/A

Lab Sample ID:	280-18144-1	Analysis Batch:	280-77764	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0721NXNB
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	07/21/2011 1227	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 Nitrite as N	0.019	U	4.00	5.33	133	72 - 113	N

Duplicate - Batch: 280-77764

Method: 353.2
Preparation: N/A

Lab Sample ID:	280-18144-1	Analysis Batch:	280-77764	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0721NXNB
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	07/21/2011 1225	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 Nitrite as N	0.019	U	0.019	NC	20	U

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Method Blank - Batch: 280-77451

Method: 9012A
Preparation: 9012A

Lab Sample ID:	MB 280-77451/4-A	Analysis Batch:	280-77540	Instrument ID:	WC_Alp 1
Client Matrix:	Water	Prep Batch:	280-77451	Lab File ID:	C:\FLOW_4\CN072011
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/20/2011 1427	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/20/2011 0830				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Cyanide	0.0020	U	0.0020	0.010

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

High Level Control Sample - Batch: 280-77451

Method: 9012A
Preparation: 9012A

Lab Sample ID:	HLCS 280-77451/1-A	Analysis Batch:	280-77540	Instrument ID:	WC_Alp 1
Client Matrix:	Water	Prep Batch:	280-77451	Lab File ID:	C:\FLOW_4\CN072011
Dilution:	2.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/20/2011 1423	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/20/2011 0830				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Cyanide	0.400	0.398	99	90 - 110	

Low Level Control Sample - Batch: 280-77451

Method: 9012A
Preparation: 9012A

Lab Sample ID:	LLCS 280-77451/2-A	Analysis Batch:	280-77540	Instrument ID:	WC_Alp 1
Client Matrix:	Water	Prep Batch:	280-77451	Lab File ID:	C:\FLOW_4\CN072011
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/20/2011 1424	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/20/2011 0830				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Cyanide	0.100	0.101	101	90 - 110	

Lab Control Sample - Batch: 280-77451

Method: 9012A
Preparation: 9012A

Lab Sample ID:	LCS 280-77451/3-A	Analysis Batch:	280-77540	Instrument ID:	WC_Alp 1
Client Matrix:	Water	Prep Batch:	280-77451	Lab File ID:	C:\FLOW_4\CN072011
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/20/2011 1426	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/20/2011 0830				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Cyanide	0.100	0.102	102	90 - 110	

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Matrix Spike - Batch: 280-77451

Method: 9012A
Preparation: 9012A

Lab Sample ID:	280-18144-1	Analysis Batch:	280-77540	Instrument ID:	WC_Alp 1
Client Matrix:	Water	Prep Batch:	280-77451	Lab File ID:	C:\FLOW_4\CN072011
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/20/2011 1430	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/20/2011 0830				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Total Cyanide	0.0020	U	0.100	0.101	101	90 - 110	

Duplicate - Batch: 280-77451

Method: 9012A
Preparation: 9012A

Lab Sample ID:	280-18144-1	Analysis Batch:	280-77540	Instrument ID:	WC_Alp 1
Client Matrix:	Water	Prep Batch:	280-77451	Lab File ID:	C:\FLOW_4\CN072011
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/20/2011 1432	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	07/20/2011 0830				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Total Cyanide	0.0020	U	0.0020	NC	20	U

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-76963

Method: 9040B
Preparation: N/A

LCS Lab Sample ID:	LCS 280-76963/4	Analysis Batch:	280-76963	Instrument ID:	WC_pH Probe
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	071611A.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	07/16/2011 1600	Units:	SU	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-76963/5	Analysis Batch:	280-76963	Instrument ID:	WC_pH Probe
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	071611A.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	07/16/2011 1602	Units:	SU	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

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

Duplicate - Batch: 280-76963

Method: 9040B
Preparation: N/A

Lab Sample ID:	280-18144-1	Analysis Batch:	280-76963	Instrument ID:	WC_pH Probe
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	071611A.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	07/16/2011 1608	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	9.32	9.340	0.2	5	

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Method Blank - Batch: 280-77698

Method: 9050A
Preparation: N/A

Lab Sample ID:	MB 280-77698/5	Analysis Batch:	280-77698	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	07/21/2011 1241	Units:	umhos/cm	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Specific Conductance	2.00	U	2.00	2.00

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-77698

Method: 9050A
Preparation: N/A

LCS Lab Sample ID:	LCS 280-77698/3	Analysis Batch:	280-77698	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	07/21/2011 1241	Units:	umhos/cm	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-77698/4	Analysis Batch:	280-77698	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	07/21/2011 1241	Units:	umhos/cm	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Specific Conductance	103	103	90 - 110	0	10		

Duplicate - Batch: 280-77698

Method: 9050A
Preparation: N/A

Lab Sample ID:	280-18144-1	Analysis Batch:	280-77698	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	07/21/2011 1241	Units:	umhos/cm	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Specific Conductance	983	994.0	1.0	10	

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Method Blank - Batch: 280-77068

Method: SM 2540C
Preparation: N/A

Lab Sample ID:	MB 280-77068/1	Analysis Batch:	280-77068	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	07/18/2011 1035	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Dissolved Solids	4.7	U	4.7	10.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-77068

Method: SM 2540C
Preparation: N/A

LCS Lab Sample ID:	LCS 280-77068/2	Analysis Batch:	280-77068	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	07/18/2011 1035	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-77068/3	Analysis Batch:	280-77068	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	07/18/2011 1035	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Total Dissolved Solids	94	94	86 - 110	0	20		

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Method Blank - Batch: 280-77506

Method: SM 5310B
Preparation: N/A

Lab Sample ID:	MB 280-77506/4	Analysis Batch:	280-77506	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	071911.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	07/19/2011 2124	Units:	mg/L	Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Organic Carbon - Quad	0.405	B	0.16	1.0

Lab Control Sample - Batch: 280-77506

Method: SM 5310B
Preparation: N/A

Lab Sample ID:	LCS 280-77506/3	Analysis Batch:	280-77506	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	071911.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	07/19/2011 2103	Units:	mg/L	Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Organic Carbon - Quad	25.0	24.98	100	88 - 112	

Matrix Spike - Batch: 280-77506

Method: SM 5310B
Preparation: N/A

Lab Sample ID:	280-18144-1	Analysis Batch:	280-77506	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	071911.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	07/19/2011 2219	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Total Organic Carbon - Quad	4.3	25.0	28.92	99	88 - 112	

Client: Washington Closure Hanford

Job Number: 280-18144-1
Sdg Number: JP0226

Duplicate - Batch: 280-77506

Method: SM 5310B
Preparation: N/A

Lab Sample ID:	280-18144-1	Analysis Batch:	280-77506	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	071911.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	07/19/2011 2201	Units:	mg/L	Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Organic Carbon - Quad	4.3	4.16	2	15	

3.6 FPNP 7/16

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-076-036	Page 1 of 2

Collector: K. Lucas	Company Contact: D Woolery Telephone No.: 509-431-0448	Project Coordinator: KESSNER, JH	Price Code: ~~7L~~ 7B Data Turnaround: ~~24 Hours~~ 7 DAY
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Water	Sampling Location: 100-D-50:6 Pipelines and Catch Basins	SAF No.: RC-076	D 3/18/11
Ice Chest No.: ERC-96-061	Field Logbook No.: EL-1607-10 COA: R00D502000	Method of Shipment: FED EX	D 3/17/11
Shipped To: TestAmerica Incorporated, ~~Richland~~ DENVER D 3/17/11	Offsite Property No.: A100700	Bill of Lading/Air Bill No.: See OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

None
D 7-14-11

Special Handling and/or Storage

Cool 4 degrees C

Preservation	HNO3 to pH <2	Cool 4C	Cool 4C	H2SO4 to pH <2 Cool 4C	NaOH to pH >= 12 Cool 4C	HCl or H2SO4 to pH <2 Coo	Cool 4C	Cool 4C	HCl or H2SO4 to pH <2 Coo	Cool 4C
Type of Container	G/P	G/P	P	G/P	G/P	G	G/P	P	aCs*	aG
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	250mL	120mL	125mL	125mL	500mL	125mL	125mL	125mL	40mL	1000mL
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 3196 D 3/17/11	IC Anions - 300.0; NO2/NO3 - 353.2; pH (Water) - 9040	Ammonia - 350.1	Total Cyanide - 9010	TOC - 415.1	TDS - 2540C	Conductivity - 9050	VOA - 8260A (ETF)	Semi-VOA - 8270A (ETF)

Sample No.	Matrix *	Sample Date	Sample Time									
J1FL20 D 7-14-11	WATER											
J1FL21	WATER											
J1FL22	WATER	7-14-11	1430	X		X	X	X	X	X	X	X
J1FL23 D 7-14-11	WATER											
J1FL24	WATER											

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: K. Lucas Kenneth Lucas	7-14-11 1510	D WOOLERY	7-14-11 1510
Relinquished By/Removed From: D WOOLERY	7-14-11 1710	Received By/Stored In: 1060, #1 A. Freier A. Freier	7-14-11 1710
Relinquished By/Removed From: 1060, #1 A Freier A. Freier WCH	7-15-11 0700	Received By/Stored In: Fed Ex	
Relinquished By/Removed From		Received By/Stored In: [illegible]	7/16/11 0930
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

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 A7 DATE 7-15-11

UP0226

REVIEWED BY DATE

Matrix *: S=Soil; SE=Sediment; SO=Solid; Sl=Sludge; W = Water; O=Oil; A=Air; DS=Drum Solids; DL=Drum Liquids; T=Tissue; Wi=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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-076-036	Page 2 of 2

Collector: K. Lucas	Company Contact: D Woolery Telephone No.: 509-431-0448	Project Coordinator: KESSNER, JH	Price Code: 7L 87B 23/10/11 23/10/11	Data Turnaround: ~~24 Hours~~ 7 DAY 23/17/11
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Water	Sampling Location: 100-D-50:6 Pipelines and Catch Basins	SAF No.: RC-076		
Ice Chest No.: ERC-96-061	Field Logbook No.: EL-1607-10 COA: R00D502000	Method of Shipment: FED EX		
Shipped To: 23/17/11 TestAmerica Incorporated, ~~Richland~~ DENVER	Offsite Property No.: A100700	Bill of Lading/Air Bill No.: See OSPC		

POSSIBLE SAMPLE HAZARDS/REMARKS

NONE
AJ 7-14-11

Special Handling and/or Storage

Cool 4 degrees C

Preservation			Cool 4C	HNO3 to pH <2	HNO3 to pH <2 Cool 4C	None	HCl to pH <2	None	None		
Type of Container			aG	G/P	G/P	G/P	G/P	G/P	G		
No. of Container(s)			1	1	1	2	1	1	1		
Volume			1000mL	1000mL	500mL	2000mL	250mL	250mL	120mL		
SAMPLE ANALYSIS			PCBs - 8082	See item (1) in Special Instructions.	Gross Alpha & Beta - 900.0	Iodine-129	Technetium-99	Carbon-14	Tritium - 906.0; Strontium-89,90 -- Total Sr		
Sample No.	Matrix *	Sample Date	Sample Time								
J1FL20 7-14-11	WATER										
J1FL21	WATER										
J1FL22	WATER	7-14-11	1400	X							
J1FL23	WATER										
J1FL24 7-14-11	WATER										

3/17/11

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: K.Lucas Kenen Lucas	Date/Time: 7-14-11 1510	Received By/Stored In: DWOOLERY	Date/Time: 7-14-11 1510
Relinquished By/Removed From: DWOOLERY	Date/Time: 7-14-11 1710	Received By/Stored In: 1060, #1 A.Freier A. Freier	Date/Time: 7-14-11 1710
Relinquished By/Removed From: WCH A.Freier A. Freier 1060, #1	Date/Time: 0700 7-15-11	Received By/Stored In: Fed Ex	Date/Time:
Relinquished By/Removed From:	Date/Time:	Received By/Stored In: 7/16/11	Date/Time: 0930
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) Gamma Spec (Client List) {Americium-241, Antimony-125, Cerium-144, ~~Cesium-134, Cesium-137,~~ Cobalt-60, Curium-244, Europium-152, ~~Europium-154,~~ Europium-155, Neptunium-237, Niobium-94, ~~Radium-226,~~ Ruthenium-106, Zinc-65}

REVIEWED BY AJ
DATE 7-15-11
JP0226

REVIEWED BY
DATE

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

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 - Water Water Metals

Analytical Due:

Report Due: 7/25/11 (Rush by TAT)

Sample Check-in List

Date/Time Received: 7/16/11 0930 **GM Screen Result** 12 microR/hr

Client: Washington Closure Hanford **SDG #:** JP6226 NA[ ] **SAF #:** RC-076 NA [ ]

Job Number: 18144 **Chain of Custody #** RC-076-036

Shipping Container ID: ERC-96-061 **Air Bill #** 7949 7693 3752

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: 3.6° 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:** 7/16/11

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager [signature] Date 7/18/11

LS-023, Rev. 7, 1/08

From: (509) 376-7768
1162 SHIPPING DEPT
US DOE
2355 STEVENS DR

RICHLAND, WA 99354

Origin ID: PSCA

FedEx. Express

J112011042902225

Ship Date: 15JUL11
ActWgt: 15.0 LB
CAD: 5851986/INET3180

Delivery Address Bar Code

Ref # R00D502 2000
Invoice #
PO #
Dept #

SHIP TO: (303) 736-1000 BILL THIRD PARTY

KAE YODER
TEST AMERICA
4955 YARROW ST # A100667

ARVADA, CO 80002

SATURDAY ### A1
PRIORITY OVERNIGHT

TRK# 0201 7949 7693 3752

X0 WHHA

80002
CO-US
DEN

50FG2/F556/F5F4

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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.

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