0096041

SAF-RC-190
100N Field Remediation – Soil In-Process
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

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

COMMENTS:

SDG J01058 SAF-RC-190

Rad only Chem only ☑ Rad & Chem

☑ Complete Partial

Sample Location: 100-N-23

RECEIVED
MAY 10 2011
EDMC

Analytical Data Package Prepared For

Washington Closure Hanford

Radiochemical Analysis By

TestAmerica

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

Assigned Laboratory Code: TARL

Data Package Contains 25 *Pages*

Report No.: 46324

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.
J01058	RC-190	J1H084	J1C310579-1	MGFMA1AA	9MGFMA10	1091095
		J1H085	J1C310579-2	MGFMT1AA	9MGFMT10	1091095
		J1H086	J1C310579-3	MGFMX1AA	9MGFMX10	1091095
		J1H087	J1C310579-4	MGFM21AA	9MGFM210	1091095

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

TestAmerica Laboratories, Inc.

April 25, 2011

Attention: Joan Kessner

SAF Number	:	RC-190
Date SDG Closed	:	March 31, 2011
Number of Samples	:	Four (4)
Sample Type	:	Soil
SDG Number	:	J01058
Data Deliverable	:	15– Day / Summary

CASE NARRATIVE

I. Introduction

On March 31, 2011 four soil samples were received at TestAmerica for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID number to correspond with the Washington Closure Hanford (WCH) specific ID:

WCH ID#	TARL ID#	MATRIX	DATE OF RECEIPT
J1H084	MGFMA	SOIL	3/31/11
J1H085	MGFMT	SOIL	3/31/11
J1H086	MGFMX	SOIL	3/31/11
J1H087	MGFM2	SOIL	3/31/11

II. Sample Receipt

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

III. Analytical Results/Methodology

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

The requested analyses were:

Gamma Spectroscopy
Gamma Spec by method RL-GAM-001

IV. Quality Control

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

QC and sample results are reported in the same units.

V. Comments

Gamma Spectroscopy

Gamma Spec by method RL-GAM-001 :

The CRDL was not met on some analytes due to reduced count time. The count time was reduced to meet the priority turn around time. Except as noted, the LCS, batch blank, samples and sample duplicate (J1H084) 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:

Whitney Ritari

for 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: 25-Apr-11

Report No. : 46324

SDG No: J01058

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
1091095 GAMMA_GS									
J1H084									
	MGFMA1AA	AMERICIUM 241	-1.74E-02 +- 1.6E-01	U	pCi/g		2.76E-01		
		CO-60	6.21E-03 +- 4.4E-02	U	pCi/g		8.04E-02	5.00E-02	
		CS-137	3.42E-02 +- 3.8E-02	U	pCi/g		7.01E-02	1.00E-01	
		EU-152	-1.08E-02 +- 7.5E-02	U	pCi/g		1.27E-01	1.00E-01	
		EU-154	8.13E-02 +- 1.2E-01	U	pCi/g		2.34E-01	1.00E-01	
		EU-155	-5.88E-02 +- 6.9E-02	U	pCi/g		1.14E-01	1.00E-01	
		RA-226	4.85E-01 +- 1.6E-01	U	pCi/g		2.13E-01		
J1H084 DUP									
	MGFMA1AC	AMERICIUM 241	5.00E-02 +- 1.3E-01	U	pCi/g		2.32E-01		413.8
		CO-60	8.00E-02 +- 7.0E-02	U	pCi/g		1.40E-01	5.00E-02	171.2
		CS-137	3.26E-02 +- 6.7E-02	U	pCi/g		1.20E-01	1.00E-01	4.7
		EU-152	6.91E-02 +- 1.4E-01	U	pCi/g		2.42E-01	1.00E-01	274.0
		EU-154	7.69E-02 +- 1.9E-01	U	pCi/g		3.54E-01	1.00E-01	5.5
		EU-155	1.91E-02 +- 1.1E-01	U	pCi/g		1.95E-01	1.00E-01	-392.5
		RA-226	7.37E-01 +- 2.7E-01		pCi/g		1.86E-01		41.3
J1H085									
	MGFMT1AA	AMERICIUM 241	1.80E-02 +- 8.3E-02	U	pCi/g		1.44E-01		
		CO-60	-7.43E-02 +- 8.4E-02	U	pCi/g		1.33E-01	5.00E-02	
		CS-137	7.80E-03 +- 7.4E-02	U	pCi/g		1.32E-01	1.00E-01	
		EU-152	-2.46E-02 +- 2.0E-01	U	pCi/g		3.29E-01	1.00E-01	
		EU-154	-6.31E-02 +- 2.2E-01	U	pCi/g		3.78E-01	1.00E-01	
		EU-155	9.31E-03 +- 1.4E-01	U	pCi/g		2.34E-01	1.00E-01	
		RA-226	7.01E-01 +- 3.0E-01		pCi/g		2.48E-01		
J1H086									
	MGFMX1AA	AMERICIUM 241	-1.55E-02 +- 2.2E-01	U	pCi/g		3.78E-01		
		CO-60	5.62E-02 +- 6.1E-02	U	pCi/g		1.23E-01	5.00E-02	
		CS-137	5.65E-02 +- 6.2E-02	U	pCi/g		1.14E-01	1.00E-01	
		EU-152	2.96E-02 +- 9.6E-02	U	pCi/g		1.72E-01	1.00E-01	
		EU-154	1.09E-02 +- 1.8E-01	U	pCi/g		3.31E-01	1.00E-01	
		EU-155	1.52E-02 +- 9.4E-02	U	pCi/g		1.67E-01	1.00E-01	
		RA-226	7.78E-01 +- 2.3E-01		pCi/g		1.56E-01		
J1H087									
	MGFM21AA	AMERICIUM 241	5.71E-02 +- 1.1E-01	U	pCi/g		1.94E-01		
		CO-60	9.88E-03 +- 5.3E-02	U	pCi/g		9.90E-02	5.00E-02	
		CS-137	2.91E-02 +- 5.0E-02	U	pCi/g		9.18E-02	1.00E-01	
		EU-152	6.88E-02 +- 1.2E-01	U	pCi/g		2.07E-01	1.00E-01	
		EU-154	-1.59E-01 +- 1.4E-01	U	pCi/g		2.06E-01	1.00E-01	

TestAmerica

rptSTLRchSaSummary2 V5.2.12
A2002

RPD - Relative Percent Difference.

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

Sample Results Summary

TestAmerica TARL

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

Date: 25-Apr-11

Report No. : 46324

SDG No: J01058

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
1091095	GAMMA_GS								
	J1H087								
	MGFM21AA	EU-155	5.24E-02 +- 9.3E-02	U	pCi/g		1.66E-01	1.00E-01	
		RA-226	7.70E-01 +- 2.2E-01	U	pCi/g		2.96E-01		

No. of Results: 35

TestAmerica

rptSTLRchSaSummary2 V5.2.12 A2002

RPD - Relative Percent Difference.

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

QC Results Summary

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Date: 25-Apr-11

Report No. : 46324

SDG No.: J01058

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC|MDA
GAMMA_GS								
1091095 BLANK QC,								
MGF4H1AA	AMERICIUM 241	2.23E-02 +- 5.5E-02	U	pCi/g				9.67E-02
	CO-60	-8.50E-03 +- 5.9E-02	U	pCi/g				1.04E-01
	CS-137	-1.93E-02 +- 5.4E-02	U	pCi/g				9.24E-02
	EU-152	1.01E-02 +- 1.4E-01	U	pCi/g				2.46E-01
	EU-154	1.62E-01 +- 1.7E-01	U	pCi/g				3.43E-01
	EU-155	3.53E-02 +- 9.4E-02	U	pCi/g				1.64E-01
	RA-226	1.91E-01 +- 1.5E-01	U	pCi/g				2.73E-01
1091095 LCS,								
MGF4H1AC	AMERICIUM 241	3.44E+01 +- 4.2E+00		pCi/g		85%	-0.1	5.18E-01
	CO-60	1.72E+01 +- 3.5E+00		pCi/g		89%	-0.1	1.40E-01
	CS-137	4.01E+01 +- 5.5E+00		pCi/g		91%	-0.1	1.91E-01

No. of Results: 10

TestAmerica

rptSTLRchQcSummary V5.2.12
A2002

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

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

FORM I

SAMPLE RESULTS

Date: 25-Apr-11

Lab Name:	TestAmerica	**SDG:**	J01058	**Collection Date:**	3/30/2011 9:35:00 AM
Lot-Sample No.:	J1C310579-1	**Report No. :**	46324	**Received Date:**	3/31/2011 11:55:00 AM
Client Sample ID:	J1H084	**COC No. :**	RC-190-038	**Matrix:**	SOIL

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: 1091095	GAMMA_GS			**Work Order:** MGFMA1AA			**Report DB ID:** 9MGFMA10					
AMERICIUM 241	***-1.74E-02***	U	1.6E-01	1.6E-01	2.76E-01	pCi/g		*-0.06*	4/21/11 10:51 a		53.0	GER11$1
								-0.22			g	
CO-60	***6.21E-03***	U	4.4E-02	4.4E-02	8.04E-02	pCi/g		*0.08*	4/21/11 10:51 a		53.0	GER11$1
							5.00E-02	*0.28*			g	
CS-137	***3.42E-02***	U	3.8E-02	3.8E-02	7.01E-02	pCi/g		*0.49*	4/21/11 10:51 a		53.0	GER11$1
							1.00E-01	*(1.8)*			g	
EU-152	***-1.08E-02***	U	7.5E-02	7.5E-02	1.27E-01	pCi/g		*-0.08*	4/21/11 10:51 a		53.0	GER11$1
							1.00E-01	*-0.29*			g	
EU-154	***8.13E-02***	U	1.2E-01	1.2E-01	2.34E-01	pCi/g		*0.35*	4/21/11 10:51 a		53.0	GER11$1
							1.00E-01	*(1.3)*			g	
EU-155	***-5.88E-02***	U	6.9E-02	6.9E-02	1.14E-01	pCi/g		*-0.51*	4/21/11 10:51 a		53.0	GER11$1
							1.00E-01	*-(1.7)*			g	
RA-226	***4.85E-01***	U	1.6E-01	1.6E-01	2.13E-01	pCi/g		*(2.3)*	4/21/11 10:51 a		53.0	GER11$1
								(6.2)			g	

No. of Results: 7 **Comments:**

TestAmerica
rptSTLRchSample
V5.2.12 A2002

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

TestAmerica Laboratories, Inc.

FORM I

SAMPLE RESULTS

Date: 25-Apr-11

Lab Name:	TestAmerica	**SDG:**	J01058	**Collection Date:**	3/30/2011 9:45:00 AM
Lot-Sample No.:	J1C310579-2	**Report No. :**	46324	**Received Date:**	3/31/2011 11:55:00 AM
Client Sample ID:	J1H085	**COC No. :**	RC-190-038	**Matrix:**	SOIL

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: 1091095	GAMMA_GS			**Work Order:** MGFMT1AA			**Report DB ID:** 9MGFMT10					
AMERICIUM 241	***1.80E-02***	U	8.3E-02	8.3E-02	1.44E-01	pCi/g		*0.12*	4/21/11 12:25 p		41.7	GER14$1
								0.43			g	
CO-60	***-7.43E-02***	U	8.4E-02	8.4E-02	1.33E-01	pCi/g		*-0.56*	4/21/11 12:25 p		41.7	GER14$1
							5.00E-02	*-(1.8)*			g	
CS-137	***7.80E-03***	U	7.4E-02	7.4E-02	1.32E-01	pCi/g		*0.06*	4/21/11 12:25 p		41.7	GER14$1
							1.00E-01	*0.21*			g	
EU-152	***-2.46E-02***	U	2.0E-01	2.0E-01	3.29E-01	pCi/g		*-0.07*	4/21/11 12:25 p		41.7	GER14$1
							1.00E-01	*-0.25*			g	
EU-154	***-6.31E-02***	U	2.2E-01	2.2E-01	3.78E-01	pCi/g		*-0.17*	4/21/11 12:25 p		41.7	GER14$1
							1.00E-01	*-0.58*			g	
EU-155	***9.31E-03***	U	1.4E-01	1.4E-01	2.34E-01	pCi/g		*0.04*	4/21/11 12:25 p		41.7	GER14$1
							1.00E-01	*0.14*			g	
RA-226	***7.01E-01***		3.0E-01	3.0E-01	2.48E-01	pCi/g		*(2.8)*	4/21/11 12:25 p		41.7	GER14$1
								(4.7)			g	

No. of Results: 7 **Comments:**

TestAmerica
rptSTLRchSample
V5.2.12 A2002

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

TestAmerica Laboratories, Inc.

FORM I

SAMPLE RESULTS

Date: 25-Apr-11

Lab Name:	TestAmerica	**SDG:**	J01058	**Collection Date:**	3/30/2011 9:55:00 AM
Lot-Sample No.:	J1C310579-3	**Report No. :**	46324	**Received Date:**	3/31/2011 11:55:00 AM
Client Sample ID:	J1H086	**COC No. :**	RC-190-038	**Matrix:**	SOIL

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: 1091095	GAMMA_GS			Work Order:	MGFMX1AA		Report DB ID:	9MGFMX10				
AMERICIUM 241	***-1.55E-02***	U	2.2E-01	2.2E-01	3.78E-01	pCi/g		*-0.04*	4/21/11 02:18 p		32.9	GER11$1
								-0.14			g	
CO-60	***5.62E-02***	U	6.1E-02	6.1E-02	1.23E-01	pCi/g		*0.46*	4/21/11 02:18 p		32.9	GER11$1
							5.00E-02	*(1.8)*			g	
CS-137	***5.65E-02***	U	6.2E-02	6.2E-02	1.14E-01	pCi/g		*0.5*	4/21/11 02:18 p		32.9	GER11$1
							1.00E-01	*(1.8)*			g	
EU-152	***2.96E-02***	U	9.6E-02	9.6E-02	1.72E-01	pCi/g		*0.17*	4/21/11 02:18 p		32.9	GER11$1
							1.00E-01	*0.62*			g	
EU-154	***1.09E-02***	U	1.8E-01	1.8E-01	3.31E-01	pCi/g		*0.03*	4/21/11 02:18 p		32.9	GER11$1
							1.00E-01	*0.12*			g	
EU-155	***1.52E-02***	U	9.4E-02	9.4E-02	1.67E-01	pCi/g		*0.09*	4/21/11 02:18 p		32.9	GER11$1
							1.00E-01	*0.32*			g	
RA-226	***7.78E-01***		2.3E-01	2.3E-01	1.56E-01	pCi/g		*(5.)*	4/21/11 02:18 p		32.9	GER11$1
								(6.6)			g	

No. of Results: 7 **Comments:**

TestAmerica
rptSTLRchSample
V5.2.12 A2002

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 25-Apr-11

Lab Name:	TestAmerica	**SDG:**	J01058	**Collection Date:**	3/30/2011 10:00:00 AM
Lot-Sample No.:	J1C310579-4	**Report No. :**	46324	**Received Date:**	3/31/2011 11:55:00 AM
Client Sample ID:	J1H087	**COC No. :**	RC-190-038	**Matrix:**	SOIL

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: 1091095	GAMMA_GS			**Work Order:**	MGFM21AA		**Report DB ID:**	9MGFM210				
AMERICIUM 241	***5.71E-02***	U	1.1E-01	1.1E-01	1.94E-01	pCi/g		*0.29*	4/21/11 02:19 p		61.1	GER7$1
								(1.)			g	
CO-60	***9.88E-03***	U	5.3E-02	5.3E-02	9.90E-02	pCi/g		*0.1*	4/21/11 02:19 p		61.1	GER7$1
							5.00E-02	*0.37*			g	
CS-137	***2.91E-02***	U	5.0E-02	5.0E-02	9.18E-02	pCi/g		*0.32*	4/21/11 02:19 p		61.1	GER7$1
							1.00E-01	*(1.2)*			g	
EU-152	***6.88E-02***	U	1.2E-01	1.2E-01	2.07E-01	pCi/g		*0.33*	4/21/11 02:19 p		61.1	GER7$1
							1.00E-01	*(1.2)*			g	
EU-154	***-1.59E-01***	U	1.4E-01	1.4E-01	2.06E-01	pCi/g		*-0.77*	4/21/11 02:19 p		61.1	GER7$1
							1.00E-01	*-(2.3)*			g	
EU-155	***5.24E-02***	U	9.3E-02	9.3E-02	1.66E-01	pCi/g		*0.32*	4/21/11 02:19 p		61.1	GER7$1
							1.00E-01	*(1.1)*			g	
RA-226	***7.70E-01***	U	2.2E-01	2.2E-01	2.96E-01	pCi/g		*(2.6)*	4/21/11 02:19 p		61.1	GER7$1
								(7.1)			g	

No. of Results: 7 **Comments:**

TestAmerica
rptSTLRchSample
V5.2.12 A2002

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 25-Apr-11

Lab Name:	TestAmerica	SDG:	J01058	Collection Date:	3/30/2011 10:00:00 AM
Lot-Sample No.:	J1C310579-4	Report No. :	46324	Received Date:	3/31/2011 11:55:00 AM
Client Sample ID:	J1H087	COC No. :	RC-190-038	Matrix:	SOIL

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

TestAmerica
rptSTLRchSample
V5.2.12 A2002

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM II

Date: 25-Apr-11

DUPLICATE RESULTS

Lab Name:	TestAmerica	**SDG:**	J01058	**Collection Date:**	3/30/2011 9:35:00 AM
Lot-Sample No.:	J1C310579-1	**Report No. :**	46324	**Received Date:**	3/31/2011 11:55:00 AM
Client Sample ID:	J1H084 DUP	**COC No. :**	RC-190-038	**Matrix:**	SOIL

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: 1091095	GAMMA_GS			**Work Order:**	MGFMA1AC	**Report DB ID:**	MGFMA1CR		**Orig Sa DB ID:** 9MGFMA10			
AMERICIUM 241	5.00E-02	U	1.3E-01	1.3E-01	2.32E-01	pCi/g		0.22	4/21/11 10:52 a		46.0	GER7$1
	-1.74E-02	U	**RPD**	**413.8**				0.75			g	
CO-60	8.00E-02	U	7.0E-02	7.0E-02	1.40E-01	pCi/g		0.57	4/21/11 10:52 a		46.0	GER7$1
	6.21E-03	U	**RPD**	**171.2**		5.00E-02		(2.3)			g	
CS-137	3.26E-02	U	6.7E-02	6.7E-02	1.20E-01	pCi/g		0.27	4/21/11 10:52 a		46.0	GER7$1
	3.42E-02	U	**RPD**	**4.7**		1.00E-01		0.98			g	
EU-152	6.91E-02	U	1.4E-01	1.4E-01	2.42E-01	pCi/g		0.29	4/21/11 10:52 a		46.0	GER7$1
	-1.08E-02	U	**RPD**	**274.0**		1.00E-01		(1.)			g	
EU-154	7.69E-02	U	1.9E-01	1.9E-01	3.54E-01	pCi/g		0.22	4/21/11 10:52 a		46.0	GER7$1
	8.13E-02	U	**RPD**	**5.5**		1.00E-01		0.82			g	
EU-155	1.91E-02	U	1.1E-01	1.1E-01	1.95E-01	pCi/g		0.1	4/21/11 10:52 a		46.0	GER7$1
	-5.88E-02	U	**RPD**	**-392.5**		1.00E-01		0.34			g	
RA-226	7.37E-01		2.7E-01	2.7E-01	1.86E-01	pCi/g		(4.)	4/21/11 10:52 a		46.0	GER7$1
	4.85E-01	U	**RPD**	**41.3**				(5.4)			g	

No. of Results: 7 **Comments:**

RPD - Relative Percent Difference.

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

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

FORM II

BLANK RESULTS

Date: 25-Apr-11

Lab Name: TestAmerica

Matrix: SOIL

SDG: J01058

Report No. : 46324

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: 1091095	GAMMA_GS			**Work Order:**	MGF4H1AA		**Report DB ID:**	MGF4H1AB				
AMERICIUM 241	2.23E-02	U	5.5E-02	5.5E-02	9.67E-02	pCi/g		0.23	4/21/11 04:27 p		52.0	GER14$1
								0.82			g	
CO-60	-8.50E-03	U	5.9E-02	5.9E-02	1.04E-01	pCi/g		-0.08	4/21/11 04:27 p		52.0	GER14$1
						5.00E-02		-0.29			g	
CS-137	-1.93E-02	U	5.4E-02	5.4E-02	9.24E-02	pCi/g		-0.21	4/21/11 04:27 p		52.0	GER14$1
						1.00E-01		-0.72			g	
EU-152	1.01E-02	U	1.4E-01	1.4E-01	2.46E-01	pCi/g		0.04	4/21/11 04:27 p		52.0	GER14$1
						1.00E-01		0.14			g	
EU-154	1.62E-01	U	1.7E-01	1.7E-01	3.43E-01	pCi/g		0.47	4/21/11 04:27 p		52.0	GER14$1
						1.00E-01		(1.9)			g	
EU-155	3.53E-02	U	9.4E-02	9.4E-02	1.64E-01	pCi/g		0.22	4/21/11 04:27 p		52.0	GER14$1
						1.00E-01		0.75			g	
RA-226	1.91E-01	U	1.5E-01	1.5E-01	2.73E-01	pCi/g		0.7	4/21/11 04:27 p		52.0	GER14$1
								(2.5)			g	

No. of Results: 7 **Comments:**

TestAmerica

rptSTLRchBlank
V5.2.12 A2002

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM II

LCS RESULTS

Date: 25-Apr-11

Lab Name: TestAmerica

Matrix: SOIL

SDG: J01058

Report No. : 46324

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: 1091095	GAMMA_GS			Work Order:	MGF4H1AC		Report DB ID:	MGF4H1CS					
AMERICIUM 241	3.44E+01		4.2E+00	4.2E+00	5.18E-01	pCi/g		4.02E+01	5.7E-03	85%	4/21/11 05:58 p	54.51	GER7$1
							Rec Limits:	70	130	-0.1		g	
CO-60	1.72E+01		3.5E+00	3.5E+00	1.40E-01	pCi/g		1.95E+01	2.8E-03	89%	4/21/11 05:58 p	54.51	GER7$1
							Rec Limits:	70	130	-0.1		g	
CS-137	4.01E+01		5.5E+00	5.5E+00	1.91E-01	pCi/g		4.39E+01	6.2E-03	91%	4/21/11 05:58 p	54.51	GER7$1
							Rec Limits:	70	130	-0.1		g	

No. of Results: 3 Comments:

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

rptSTLRchLcs
V5.2.12 A2002

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

4/22/2011 12:07:17 PM

Lot No., Due Date:	J1C310579; 04/21/2011
Client, Site:	127642; S00N063A00 HANFORD
QC Batch No., Method Test:	1091095; RGAMMA Gamma by GER
SDG, Matrix:	J01058; SOIL

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 10-18204

First Level Lisa Antonson Date 4/22/11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 1091095

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=0.1pCi/g
SCENCMEF: 10-18204

Second Level Review: [signature] Date 4/24/11

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

Clouseau
Nonconformance Memo

TestAmerica

NCM #:	10-18204		
NCM Initiated By:	Lisa Antonson	Classification:	Anomaly
Date Opened:	04/22/2011	Status:	PMREVIEW
Date Closed:		Production Area:	Counting
		Tests:	Gamma by GER
		Lot #'s (Sample #'s):	J1C310579 (1,2,3,4), J1D010000 (95),
		QC Batches:	1091095,
Nonconformance:	MDA not met		
Subcategory:	Data accepted		

Problem Description / Root Cause

Name	Date	Description
Lisa Antonson	04/22/2011	CRDL is not met on these samples due to reduced count time based on priority processing.

Corrective Action

Name	Date	Corrective Action
Lisa Antonson	04/22/2011	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

Date Printed: 4/22/2011

TestAmerica Laboratories, Inc.

20

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-190-038	Page 1 of 1

Collector BC Koelling	Company Contact Joan Kessner	Telephone No. 375-4688	Project Coordinator KESSNER, JH
Price Code 8L	Data Turnaround 21 Days		
Project Designation 100N Field Remediation - Soil In-Process	Sampling Location 100-N-23		SAF No. RC-190
Ice Chest No. NA	Field Logbook No. EL-1652-2	COA R11NX3Y000	Method of Shipment ~~Fed Ex~~ HAND Delivery MAB 3-28-11
Shipped To TestAmerica Incorporated, Richland	Offsite Property No. NA		Bill of Lading/Air Bill No. ~~See OSPC~~ NA MAB 3-28-11

POSSIBLE SAMPLE HAZARDS/REMARKS

~~Potential Radio Activity~~ NONE MAB 3/28/11

Special Handling and/or Storage

NONE MAB 3-28-11

Preservation	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None		SDG J01058		
Type of Container	G/P	G/P	aG	aG	G/P	G/P		J1C310574		
No. of Container(s)	1	1	1 MAB 3-28-11	0	1	1		Due 4/21/11		
Volume	60mL	60mL	250mL	250mL	250mL	60mL				

SAMPLE ANALYSIS

				See item (1) in Special Instructions	See item (2) in Special Instructions	PCBs - 8082	PAHs - 8310	See item (3) in Special Instructions	RCF GEA Shipping Screen			
Sample No.	Matrix *	Sample Date	Sample Time									RCF
J1H084	SOIL	3/30/11	0935		MGFMA			✓				27440
J1H085	SOIL	3/30/11	0945		MGFMT			✓				
J1H086	SOIL	3/30/11	0955		MGFMX			✓				
J1H087	SOIL	3/30/11	1000		MGFM2			✓				

J1C310579

MAB 3-28-11

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: BC Koelling	3/30/11 1020	Received By/Stored In: MA Bamberger	3/30/11 1020
Relinquished By/Removed From: MA Bamberger	3-30-11 1500	Received By/Stored In: J. E. Bahl	3-30-11 1500
Relinquished By/Removed From: J. E. Bahl	3-31-11 1155	Received By/Stored In: TALR Lucas Velazquez	3/31/11 1155
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010TR (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV) {Mercury}
(2) IC Anions - 9056 Modified {Bromide, Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorous in phosphate, Sulfate}; NO2/NO3 - 353.2 {Nitrogen in Nitrite and Nitrate}; pH (Soil) - 9045 {pH Measurement}
(3) Gamma Spec (Client List) {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Radium-226}

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

REVIEWED BY AJ
DATE 3-31-11

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

WCH-EE-011

Non-Reg

Analysis Report for RCF27440

J1H084 SAF:RC-190 100NFR/100-N-23 SOIL SAMPLE 60mL aG JAR

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF27440
Sample Description	: J1H084 SAF:RC-190 100NFR/100-N-23 SOIL SAMPLE 60mL aG JAR
Sample Type	: Non Standard Geometry
Sample Size	: 7.700E+01 grams
Facility	: Default
Sample Taken On	: 3/30/2011 9:35:00AM
Acquisition Started	: 3/30/2011 3:25:52PM
Procedure	: Non Standard Geometry
Operator	: RCT
Detector Name	: GEA2703
Geometry	: Non Standard Geometry
Live Time	: 3600.0 seconds
Real Time	: 3601.1 seconds
Dead Time	: 0.03 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 40 - 4096
Peak Area Range (in channels)	: 40 - 4096
Identification Energy Tolerance	: 1.000 keV
Energy Calibration Used Done On	: 2/2/2011
Efficiency Calibration Used Done On	: 2/2/2011
Efficiency Calibration Description	: GEA2703 NSTD EC 020211 SN82751A-238
Sample Number	: 13061

"Qualitative Only"

INTERFERENCE CORRECTED REPORT

Nuclide Name	*Nuclide Id Confidence*	*Wt mean Activity (pCi/grams)*	*Wt mean Activity Uncertainty*	*Comments*
K-40	0.999	1.21E+01	2.25E+00	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 3.31.11 1155 GM Screen Result (out) 0 (in) 0 Initials[ ]

Client: WCH SDG #: J01058 NA [ ] SAF #: RC-190 NA [ ]

Work Order Number: J1C310579 Chain of Custody # RC-190-038

Shipping Container ID: HAND Delivered NA [ ] Air Bill # NA[ ]

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

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

Item 6 through 10 for samples. Initial appropriate response.

6. Number of samples in shipping container (Each sample may contain multiple bottles): 4 Sample @ 1 JAR Each
7. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
8. Samples have:
   ____tape
   ____custody seals
   ____hazard labels
   ____appropriate sample labels
   J1C310579
9. Samples:
   ____are in good condition
   ____are broken
   ____are leaking
   ____have air bubbles (Only for samples requiring no head space)
10. Sample pH appropriate for analysis requested Yes [ ] No [ ] N/A [ ] (Note discrepancies in #13)
    (If acidification necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition)

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

See other side for additional comments

Sample Custodian: Tom Pitema Date: 3.31.11 1155

Client Informed on ____ by ____ Person contacted ____

[ ] No action necessary, process as is

Project Manager Rhonda Lee Date 3/31/11

LS-023, Rev. 12, 10/10

WCH Soil

4/1/2011 3:22:34 PM

Sample Preparation/Analysis

Balance Id:1120421763

127642, Washington Closure Hanford LLC
Bechtel Hanford, Inc.

AX Gamma Prp PRP003/GAM001
TA Gamma by HPGE
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 04/21/2011

Sep1 DT/Tm Tech:

Batch: 1091095 SOIL pCi/g PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,BouslaughP

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 MGFMA-1-AA J1C310579-1-SAMP 03/30/2011 09:35			53.00g,in AmtRec: 1X250MLG	53.00g #Containers: 1		$25 gec	200 min	G11 Scr:	1411 Alpha:	4/21/11 nm Beta:	
2 MGFMA-1-AC-X J1C310579-1-DUP 03/30/2011 09:35			46.00g,in AmtRec: 1X250MLG	46.00g #Containers: 1				G7 Scr:	1412 Alpha:	Beta:	
3 MGFMT-1-AA J1C310579-2-SAMP 03/30/2011 09:45			41.70g,in AmtRec: 1X250MLG	41.70g #Containers: 1				G14 Scr:	1545 Alpha:	4/21/11 nm Beta:	
4 MGFMX-1-AA J1C310579-3-SAMP 03/30/2011 09:55			32.90g,in AmtRec: 1X250MLG	32.90g #Containers: 1				G11 Scr:	1738 Alpha:	4/21/11 nm Beta:	
5 MGFM2-1-AA J1C310579-4-SAMP 03/30/2011 10:00			61.10g,in AmtRec: 1X250MLG	61.10g #Containers: 1				G7 Scr:	1739 Alpha:	Beta:	
6 MGF4H-1-AA-B J1D010000-95-BLK 04/01/2011 08:02 pd			52.00g,in AmtRec:	52.00g #Containers: 1				G14 Scr:	1447 Alpha:	4/21/11 DKD Beta:	
7 MGF4H-1-AC-C J1D010000-95-LCS 04/01/2011 08:02 pd			54.51g,in AmtRec:	54.51g #Containers: 1	CAL5446 05/19/05,pd 06/08/05,r			G7 Scr:	2118 Alpha:	4/21/11 DKD Beta:	

TestAmerica Laboratories, Inc.

23

Sample Preparation/Analysis

AX Gamma Prp PRP003/GAM001
TA Gamma by HPGE
5I CLIENT: HANFORD

Balance Id:1120373922
Pipet #: _____
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: ,BouslaughP

AnalyDueDate: 04/21/2011

Batch: 1091095 pCi/g
SEQ Batch, Test: None

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:

Comments:

All Clients for Batch:
127642, Washington Closure Hanford LLC Bechtel Hanford, Inc. , RW2, 27038

MGFMA1AA-SAMP Constituent List:

Co-60	RDL:5.00E-02	pCi/g	LCL:	UCL:	RPD:	Cs-137	RDL:1.00E-01	pCi/g	LCL:70	UCL:130	RPD:35
Cs-137DA	RDL:1.00E-01	pCi/g	LCL:70	UCL:130	RPD:35	Eu-152	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:
Eu-154	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:	Eu-155	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:

MGF4H1AA-BLK:

MGF4H1AC-LCS:

MGFMA1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MGF4H1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MGF4H1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.

4/22/2011 12:04:45 PM

ICOC Fraction Transfer/Status Report

ByDate: 4/22/2010, 4/27/2011, Batch: '1091095', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
1091095						
AC		Rev1C	BouslaughP	4/1/2011 10:40:20		
SC			mcginnist	IsBatched	4/1/2011 8:19:48 AM	ICOC_RADCALC v4.8.49
SC			BouslaughP	InPrep	4/1/2011 10:40:20 AM	RL-GAM-001 REVISION 1
SC			BouslaughP	Prep1C	4/1/2011 3:23:56 PM	RL-GAM-001 REVISION 1
SC			DawkinsO	InCnt1	4/1/2011 3:29:32 PM	RL-CI-007 REVISION 1
SC			DawkinsO	CalcC	4/21/2011 11:36:27 PM	RL-CI-007 REVISION 1
SC			antonsonl	Rev1C	4/22/2011 12:04:26 PM	RL-DR-001 Rev 2
AC			BouslaughP	4/1/2011 3:23:56 PM		
AC			DawkinsO	4/1/2011 3:29:32 PM		
AC			DawkinsO	4/21/2011 11:36:27		
AC			antonsonl	4/22/2011 12:04:26		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 5

ICOCFractions v4.8.44

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-14131-1

SDG Number: J01058

Job Description: SAF# RC-190

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

Attention: Joan H Kessner

Approved for release.
Michael T Dedio
Project Mgmt. Assistant
4/22/2011 9:45 AM

Designee for
Kae E Yoder
Project Manager II
kae.yoder@testamericainc.com
04/22/2011

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

The Lab Certification ID# is E87667.

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

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

ACCREDITED IN ACCORDANCE WITH nelac

Table of Contents

Cover Title Page 1

Report Narrative 3

Data Qualifiers 5

Method Summary 6

Method / Analyst Summary 7

Sample Summary 8

Sample Results 9

Sample Datasheets 10

QC Results 30

Qc Association Summary 31

Qc Reports 37

Client Chain of Custody 56

Sample Receipt Checklist 58

CASE NARRATIVE

Client: Washington Closure Hanford

Project: WASHINGTON CLOSURE HANFORD

Report Number: 280-14131-1

SDG #: J01058
SAF#: RC-190

Date SDG Closed: April 1, 2011
Data Deliverable: 21 Day / Summary

CLIENT ID	LAB ID	ANALYSES REQUESTED	ANALYSES PERFORMED
J1H0L5	280-14131-1	8082/8310	8082/8310
J1H0L6	280-14131-2	8082/8310	8082/8310
J1H0L7	280-14131-3	8082/8310	8082/8310
J1H0L8	280-14131-4	8082/8310	8082/8310
J1H084	280-14131-5	6010/7471A/9056M/353.2/ 9045	6010/7471A/9056M/353.2/ 9045C
J1H085	280-14131-6	6010/7471A/9056M/353.2/ 9045	6010/7471A/9056M/353.2/ 9045C
J1H086	280-14131-7	6010/7471A/9056M/353.2/ 9045	6010/7471A/9056M/353.2/ 9045C
J1H087	280-14131-8	6010/7471A/9056M/353.2/ 9045	6010/7471A/9056M/353.2/ 9045C

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.

The results, RLs and MDLs included in this report have been adjusted for dry weight, as appropriate.

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 samples were received on 4/1/2011; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 3.4 C, 4.2 C and 2.7 C.

GC SEMIVOLATILES - SW846 8082 - PCBs
Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to the presence of high concentrations of target analytes, samples J1H0L5, J1H0L6, J1H0L7 and J1H0L8 had to be analyzed at dilutions, and the associated results have been flagged with a "D". The reporting limits have been adjusted relative to the dilutions required.

Surrogate recoveries have been "D" flagged in samples J1H0L5, J1H0L6, J1H0L7 and J1H0L8, as the recoveries obtained are calculated from a diluted sample and are not considered reliable.

Samples J1H0L5, J1H0L6, J1H0L7 and J1H0L8 required a sulfuric acid clean-up to reduce matrix interferences.

Samples J1H0L5, J1H0L6, J1H0L7 and J1H0L8 contained more than one Aroclor component. Results are estimated due to shared peaks.

Spike compound recoveries, RPD data and surrogate recoveries have been "D" flagged in the MS/MSD performed on sample J1H0L5, as the recoveries obtained are calculated from diluted samples and are not considered reliable. The acceptable LCS analysis data indicated that the analytical system was operating within control.

No other anomalies were encountered.

HPLC - SW846 8310 - PAHs

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to the presence of high concentrations of target analytes, samples J1H0L5 and J1H0L8 had to be analyzed at dilutions, and the associated results have been flagged with a "D". The reporting limits have been adjusted relative to the dilutions required.

Surrogate recoveries have been "D" flagged in samples J1H0L5 and J1H0L8, as the recoveries obtained are calculated from a diluted sample and are not considered reliable.

The RPD between the primary and confirmation columns exceeded 40% for analytes in samples J1H0L5, J1H0L6, J1H0L7 and J1H0L8. The lower of the two values have been reported, as matrix interference is evident. Associated results have been flagged with an "X".

The Continuing Calibration Verification (CCV) standard exhibited the %Difference (%D) value >15%, biased High, for Benzo(g,h,i)perylene (+21.1%) on the confirmation column. The overall mean %D is ≤15%; therefore, method criteria have been met and corrective action is deemed unnecessary.

No anomalies were encountered.

TOTAL METALS - SW846 6010B/7471A

Serial dilution of a digestate in batch 280-60624 indicates that physical and chemical interferences are present for Cobalt. Results have been flagged with an "X".

Low levels of Aluminum and Barium are present in the method blank associated with batch 280-60624. Because the concentrations in the method blank are not present at levels greater than the reporting limits, corrective action is deemed unnecessary.

Iron is present in the method blank associated with batch 280-60624 at a level above the reporting limit. The associated sample(s) contained detects for Iron at concentrations greater than 10X the value found in the method blank; therefore, corrective action is deemed unnecessary.

Silicon failed the recovery criteria low in the LCS associated with batch 280-60624, and the associated sample result has been flagged "N". Silicon is not controlled on for batch QC because there are not EPA prescribed limits for the LCS and MS recoveries. Limits are given to the client as guidance only; therefore, data are reported as is.

It can be noted that the sample amount was greater than four times the spike amount for Aluminum, Iron and Manganese in the Matrix Spike performed on sample J1H084; therefore, control limits are not applicable.

The duplicate analysis of sample J1H084 exhibited RPD data outside the control limits for several elements, 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 duplicate analysis of sample J1H087 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 - SW846 9056M - ANIONS

No anomalies were encountered

GENERAL CHEMISTRY - SW846 9045C - PH

No anomalies were encountered.

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Lab Section	Qualifier	Description
GC Semi VOA		
	U	Analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	D	The reported value is from a dilution.
Metals		
	U	Analyzed for but not detected.
	B	Estimated result. Result is less than the RL, but greater than MDL
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	N	Recovery exceeds upper or lower control limits
	M	Sample duplicate precision not met.
	X	Serial dilution in the analytical batch indicates that physical and chemical interferences are present.
General Chemistry		
	U	Analyzed for but not detected.
	B	Estimated result. Result is less than the RL, but greater than MDL
	M	Sample duplicate precision not met.
HPLC/IC		
	U	Analyzed for but not detected.
	X	More than 40% difference between columns, lower result reported.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	D	The reported value is from a dilution.

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Description	Lab Location	Method	Preparation Method
Matrix Solid			
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL DEN	SW846 8082	
Ultrasonic Extraction	TAL DEN		SW846 3550C
PAHs (HPLC)	TAL DEN	SW846 8310	
Ultrasonic Extraction	TAL DEN		SW846 3550C
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Metals	TAL DEN		SW846 3050B
Mercury (CVAA)	TAL DEN	SW846 7471A	
Preparation, Mercury	TAL DEN		SW846 7471A
Nitrogen, Nitrate-Nitrite	TAL DEN	MCAWW 353.2	
Deionized Water Leaching Procedure	TAL DEN		ASTM DI Leach
pH	TAL DEN	SW846 9045C	
Deionized Water Leaching Procedure	TAL DEN		ASTM DI Leach
Anions, Ion Chromatography	TAL DEN	SW846 9056M	
Deionized Water Leaching Procedure	TAL DEN		ASTM DI Leach
ASTM D-2216	TAL DEN	ASTM D-2216	

Lab References:

TAL DEN = TestAmerica Denver

Method References:

ASTM = ASTM International

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

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: 280-14131-1
Sdg Number: J01058

Method	Analyst	Analyst ID
SW846 8082	Pavlakovich, Adam M	AMP
SW846 6010B	Bowen, Heidi E	HEB
SW846 7471A	Stoltz, Katie	KS
MCAWW 353.2	Stosak, Lara E	LES
SW846 9045C	Taylor, Juli M	JMT
SW846 9056M	Phan, Thu L	TLP
ASTM D-2216	Berry III, Paul B	PBB
SW846 8310	Hall, Koley J	KJH

SAMPLE SUMMARY

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-14131-1	J1H0L5	Solid	03/31/2011 1000	04/01/2011 0830
280-14131-2	J1H0L6	Solid	03/31/2011 1002	04/01/2011 0830
280-14131-3	J1H0L7	Solid	03/31/2011 1005	04/01/2011 0830
280-14131-4	J1H0L8	Solid	03/31/2011 1010	04/01/2011 0830
280-14131-5	J1H084	Solid	03/30/2011 0935	04/01/2011 0830
280-14131-6	J1H085	Solid	03/30/2011 0945	04/01/2011 0830
280-14131-7	J1H086	Solid	03/30/2011 0955	04/01/2011 0830
280-14131-8	J1H087	Solid	03/30/2011 1000	04/01/2011 0830

SAMPLE RESULTS

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Client Sample ID: **J1H0L5**

Lab Sample ID: 280-14131-1
Client Matrix: Solid
% Moisture: 9.1

Date Sampled: 03/31/2011 1000
Date Received: 04/01/2011 0830

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-62775	Instrument ID:	GCS_P3
Prep Method:	3550C	Prep Batch:	280-61826	Initial Weight/Volume:	30.6 g
Dilution:	25			Final Weight/Volume:	5000 uL
Analysis Date:	04/15/2011 1841			Injection Volume:	1 uL
Prep Date:	04/12/2011 1440			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		75	U D	75	270
Aroclor 1221		220	U D	220	440
Aroclor 1232		54	U D	54	270
Aroclor 1242		130	U D	130	270
Aroclor 1248		130	U D	130	270
Aroclor 1254		2000	D	70	270
Aroclor 1260		70	U D	70	270

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	44	D	59 - 130
Tetrachloro-m-xylene	88	D	53 - 128

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Client Sample ID: **J1H0L6**

Lab Sample ID: 280-14131-2
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 03/31/2011 1002
Date Received: 04/01/2011 0830

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-62775	Instrument ID:	GCS_P3
Prep Method:	3550C	Prep Batch:	280-61826	Initial Weight/Volume:	31.4 g
Dilution:	50			Final Weight/Volume:	5000 uL
Analysis Date:	04/15/2011 1902			Injection Volume:	1 uL
Prep Date:	04/12/2011 1440			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		140	U D	140	520
Aroclor 1221		420	U D	420	860
Aroclor 1232		100	U D	100	520
Aroclor 1242		240	U D	240	520
Aroclor 1248		240	U D	240	520
Aroclor 1254		2200	D	130	520
Aroclor 1260		1300	D	130	520

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	52	D	59 - 130
Tetrachloro-m-xylene	14	D	53 - 128

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Client Sample ID: **J1H0L7**

Lab Sample ID: 280-14131-3
Client Matrix: Solid % Moisture: 28.2

Date Sampled: 03/31/2011 1005
Date Received: 04/01/2011 0830

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-62775	Instrument ID:	GCS_P3
Prep Method:	3550C	Prep Batch:	280-61826	Initial Weight/Volume:	31.0 g
Dilution:	10			Final Weight/Volume:	5000 uL
Analysis Date:	04/15/2011 1924			Injection Volume:	1 uL
Prep Date:	04/12/2011 1440			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		37	U D	37	130
Aroclor 1221		110	U D	110	220
Aroclor 1232		27	U D	27	130
Aroclor 1242		63	U D	63	130
Aroclor 1248		63	U D	63	130
Aroclor 1254		910	D	35	130
Aroclor 1260		600	D	35	130

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	98	D	59 - 130
Tetrachloro-m-xylene	75	D	53 - 128

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Client Sample ID: **J1H0L8**

Lab Sample ID: 280-14131-4
Client Matrix: Solid
% Moisture: 2.8

Date Sampled: 03/31/2011 1010
Date Received: 04/01/2011 0830

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-62783	Instrument ID:	GCS_P3
Prep Method:	3550C	Prep Batch:	280-61826	Initial Weight/Volume:	30.0 g
Dilution:	2000			Final Weight/Volume:	5000 uL
Analysis Date:	04/16/2011 1547			Injection Volume:	1 uL
Prep Date:	04/12/2011 1440			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		5700	U D	5700	21000
Aroclor 1221		17000	U D	17000	34000
Aroclor 1232		4100	U D	4100	21000
Aroclor 1242		9600	U D	9600	21000
Aroclor 1248		9600	U D	9600	21000
Aroclor 1254		120000	D	5300	21000
Aroclor 1260		69000	D	5300	21000

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	0	D	59 - 130
Tetrachloro-m-xylene	0	D	53 - 128

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Client Sample ID: **J1H0L5**

Lab Sample ID: 280-14131-1
Client Matrix: Solid
% Moisture: 9.1

Date Sampled: 03/31/2011 1000
Date Received: 04/01/2011 0830

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-62220	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-61821	Initial Weight/Volume:	31.3 g
Dilution:	20			Final Weight/Volume:	4000 uL
Analysis Date:	04/15/2011 0810			Injection Volume:	20 uL
Prep Date:	04/12/2011 1350			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		210	U D	210	2100
Acenaphthylene		190	U D	190	2100
Anthracene		7200	D	64	420
Benzo[a]anthracene		50000	D X	67	320
Benzo[a]pyrene		23000	D	140	320
Benzo[b]fluoranthene		24000	D	89	320
Benzo[g,h,i]perylene		4700	D X	150	630
Benzo[k]fluoranthene		13000	D	83	320
Chrysene		46000	D	100	840
Dibenzo(a,h)anthracene		2500	D X	230	630
Fluoranthene		75000	D	270	840
Fluorene		4400	D	110	630
Indeno[1,2,3-cd]pyrene		13000	D	250	630
Naphthalene		250	U D	250	2100
Phenanthrene		24000	D	250	840
Pyrene		90000	D	250	840

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	2301	D	72 - 115

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Client Sample ID: **J1H0L6**

Lab Sample ID: 280-14131-2
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 03/31/2011 1002
Date Received: 04/01/2011 0830

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-62017	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-61821	Initial Weight/Volume:	31.5 g
Dilution:	1.0			Final Weight/Volume:	4000 uL
Analysis Date:	04/13/2011 1604			Injection Volume:	20 uL
Prep Date:	04/12/2011 1350			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	100
Acenaphthylene		9.3	U	9.3	100
Anthracene		21		3.2	21
Benzo[a]anthracene		250		3.3	16
Benzo[a]pyrene		160	X	6.6	16
Benzo[b]fluoranthene		310		4.3	16
Benzo[g,h,i]perylene		7.4	U	7.4	31
Benzo[k]fluoranthene		160		4.1	16
Chrysene		230		5.0	41
Dibenzo(a,h)anthracene		150	X	11	31
Fluoranthene		550		13	41
Fluorene		22	J	5.5	31
Indeno[1,2,3-cd]pyrene		160		12	31
Naphthalene		12	U	12	100
Phenanthrene		320		12	41
Pyrene		430	X	12	41

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	110		72 - 115

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Client Sample ID: **J1H0L7**

Lab Sample ID: 280-14131-3
Client Matrix: Solid
% Moisture: 28.2

Date Sampled: 03/31/2011 1005
Date Received: 04/01/2011 0830

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-62017	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-61821	Initial Weight/Volume:	30.2 g
Dilution:	1.0			Final Weight/Volume:	4000 uL
Analysis Date:	04/13/2011 1735			Injection Volume:	20 uL
Prep Date:	04/12/2011 1350			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		14	U	14	140
Acenaphthylene		12	U	12	140
Anthracene		21	J	4.2	28
Benzo[a]anthracene		18	J X	4.4	21
Benzo[a]pyrene		240		8.9	21
Benzo[b]fluoranthene		230		5.8	21
Benzo[g,h,i]perylene		130		10	42
Benzo[k]fluoranthene		120		5.5	21
Chrysene		270		6.7	55
Dibenzo(a,h)anthracene		35	J X	15	42
Fluoranthene		470		18	55
Fluorene		34	J	7.3	42
Indeno[1,2,3-cd]pyrene		170		17	42
Naphthalene		17	U	17	140
Phenanthrene		220		17	55
Pyrene		510		17	55

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	106		72 - 115

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Client Sample ID: **J1H0L8**

Lab Sample ID: 280-14131-4
Client Matrix: Solid
% Moisture: 2.8

Date Sampled: 03/31/2011 1010
Date Received: 04/01/2011 0830

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-62220	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-61821	Initial Weight/Volume:	30.3 g
Dilution:	5.0			Final Weight/Volume:	4000 uL
Analysis Date:	04/15/2011 0841			Injection Volume:	20 uL
Prep Date:	04/12/2011 1350			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		51	U D	51	510
Acenaphthylene		46	U D	46	510
Anthracene		16	J D	16	100
Benzo[a]anthracene		180	D	16	76
Benzo[a]pyrene		170	D	33	76
Benzo[b]fluoranthene		190	D	21	76
Benzo[g,h,i]perylene		37	U D	37	150
Benzo[k]fluoranthene		83	D X	20	76
Chrysene		220	D	25	200
Dibenzo(a,h)anthracene		61	J D	56	150
Fluoranthene		350	D	66	200
Fluorene		27	U D	27	150
Indeno[1,2,3-cd]pyrene		140	J D	61	150
Naphthalene		61	U D	61	510
Phenanthrene		160	J D	61	200
Pyrene		380	D	61	200

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	110	D	72 - 115

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Client Sample ID: **J1H084**

Lab Sample ID: 280-14131-5
Client Matrix: Solid % Moisture: 9.1

Date Sampled: 03/30/2011 0935
Date Received: 04/01/2011 0830

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-61777	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-60624	Lab File ID:	26b041111.asc
Dilution:	1.0			Initial Weight/Volume:	1.05 g
Analysis Date:	04/11/2011 1847			Final Weight/Volume:	100 mL
Prep Date:	04/11/2011 0930				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5360	M	1.6	5.2
Antimony		0.46	B	0.40	0.63
Arsenic		2.9	M	0.69	1.0
Barium		55.4	M	0.080	0.52
Beryllium		0.035	U	0.035	0.21
Boron		2.2	M	1.0	2.1
Cadmium		0.18	B M	0.043	0.21
Calcium		4890	M	14.8	52.4
Chromium		11.1	M	0.061	0.21
Cobalt		6.6	X M	0.10	1.0
Copper		20.7	M	0.23	1.0
Iron		18100	M	4.0	5.2
Lead		25.7	M	0.28	0.52
Manganese		281	M	0.10	1.0
Molybdenum		0.88	B M	0.27	2.1
Nickel		13.7	M	0.13	4.2
Potassium		1190	M	43.0	314
Selenium		1.1		0.90	1.0
Silver		0.17	U	0.17	0.21
Sodium		232	M	61.8	126
Vanadium		43.1	M	0.099	2.1
Zinc		51.5	M	0.42	1.0

Analysis Method:	6010B	Analysis Batch:	280-61996	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-60624	Lab File ID:	26a041211.asc
Dilution:	1.0			Initial Weight/Volume:	1.05 g
Analysis Date:	04/12/2011 1335			Final Weight/Volume:	100 mL
Prep Date:	04/11/2011 0930				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Magnesium		4010	M	3.9	21.0
Silicon		210	N	5.9	10.5

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-61031	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-60732	Lab File ID:	110405AB.txt
Dilution:	1.0			Initial Weight/Volume:	0.67 g
Analysis Date:	04/05/2011 2013			Final Weight/Volume:	50 mL
Prep Date:	04/05/2011 1345				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0090	B M	0.0054	0.017

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Client Sample ID: **J1H085**

Lab Sample ID: 280-14131-6
Client Matrix: Solid % Moisture: 9.1

Date Sampled: 03/30/2011 0945
Date Received: 04/01/2011 0830

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-61777	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-60624	Lab File ID:	26b041111.asc
Dilution:	1.0			Initial Weight/Volume:	1.07 g
Analysis Date:	04/11/2011 1856			Final Weight/Volume:	100 mL
Prep Date:	04/11/2011 0930				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		3540		1.6	5.1
Antimony		0.39	U	0.39	0.62
Arsenic		1.3		0.68	1.0
Barium		28.6		0.078	0.51
Beryllium		0.034	U	0.034	0.21
Boron		1.0	U	1.0	2.1
Cadmium		0.042	U	0.042	0.21
Calcium		2760		14.5	51.4
Chromium		9.9		0.060	0.21
Cobalt		3.6	X	0.10	1.0
Copper		9.6		0.22	1.0
Iron		9210		3.9	5.1
Lead		24.6		0.28	0.51
Manganese		149		0.10	1.0
Molybdenum		1.0	B	0.27	2.1
Nickel		6.2		0.13	4.1
Potassium		682		42.1	308
Selenium		0.91	B	0.88	1.0
Silver		0.16	U	0.16	0.21
Sodium		114	B	60.7	123
Vanadium		25.3		0.097	2.1
Zinc		28.6		0.41	1.0

Analysis Method:	6010B	Analysis Batch:	280-61996	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-60624	Lab File ID:	26a041211.asc
Dilution:	1.0			Initial Weight/Volume:	1.07 g
Analysis Date:	04/12/2011 1344			Final Weight/Volume:	100 mL
Prep Date:	04/11/2011 0930				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Magnesium		2220		3.8	20.6
Silicon		208	N	5.8	10.3

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-61031	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-60732	Lab File ID:	110405AB.txt
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	04/05/2011 2024			Final Weight/Volume:	50 mL
Prep Date:	04/05/2011 1345				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.14		0.0059	0.018

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Client Sample ID: **J1H086**

Lab Sample ID: 280-14131-7
Client Matrix: Solid
% Moisture: 22.7

Date Sampled: 03/30/2011 0955
Date Received: 04/01/2011 0830

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-61777	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-60624	Lab File ID:	26b041111.asc
Dilution:	1.0			Initial Weight/Volume:	1.00 g
Analysis Date:	04/11/2011 1858			Final Weight/Volume:	100 mL
Prep Date:	04/11/2011 0930				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		3810		2.0	6.5
Antimony		0.49	U	0.49	0.78
Arsenic		2.0		0.85	1.3
Barium		67.4		0.098	0.65
Beryllium		0.043	U	0.043	0.26
Boron		7.3		1.3	2.6
Cadmium		0.058	B	0.053	0.26
Calcium		18300		18.2	64.7
Chromium		12.6		0.075	0.26
Cobalt		3.2	X	0.13	1.3
Copper		15.7		0.28	1.3
Iron		8220		4.9	6.5
Lead		11.0		0.35	0.65
Manganese		136		0.13	1.3
Molybdenum		0.34	U	0.34	2.6
Nickel		8.6		0.16	5.2
Potassium		912		53.0	388
Selenium		1.1	U	1.1	1.3
Silver		0.21	U	0.21	0.26
Sodium		160		76.3	155
Vanadium		26.4		0.12	2.6
Zinc		82.9		0.51	1.3

Analysis Method:	6010B	Analysis Batch:	280-61996	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-60624	Lab File ID:	26a041211.asc
Dilution:	1.0			Initial Weight/Volume:	1.00 g
Analysis Date:	04/12/2011 1346			Final Weight/Volume:	100 mL
Prep Date:	04/11/2011 0930				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Magnesium		2030		4.8	25.9
Silicon		190	N	7.3	12.9

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-61031	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-60732	Lab File ID:	110405AB.txt
Dilution:	1 0			Initial Weight/Volume:	0.60 g
Analysis Date:	04/05/2011 2027			Final Weight/Volume:	50 mL
Prep Date:	04/05/2011 1345				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.48		0.0072	0.022

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Client Sample ID: **J1H087**

Lab Sample ID: 280-14131-8
Client Matrix: Solid
% Moisture: 4.9

Date Sampled: 03/30/2011 1000
Date Received: 04/01/2011 0830

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-61777	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-60624	Lab File ID:	26b041111.asc
Dilution:	1.0			Initial Weight/Volume:	1.17 g
Analysis Date:	04/11/2011 1900			Final Weight/Volume:	100 mL
Prep Date:	04/11/2011 0930				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		3650		1.4	4.5
Antimony		0.34	U	0.34	0.54
Arsenic		1.3		0.59	0.90
Barium		27.6		0.068	0.45
Beryllium		0.030	U	0.030	0.18
Boron		1.4	B	0.88	1.8
Cadmium		0.74		0.037	0.18
Calcium		1460		12.7	44.9
Chromium		6.6		0.052	0.18
Cobalt		3.0	X	0.090	0.90
Copper		7.2		0.20	0.90
Iron		8230		3.4	4.5
Lead		10.7		0.24	0.45
Manganese		185		0.090	0.90
Molybdenum		0.23	U	0.23	1.8
Nickel		5.9		0.11	3.6
Potassium		689		36.9	270
Selenium		0.77	U	0.77	0.90
Silver		0.14	U	0.14	0.18
Sodium		92.6	B	53.0	108
Vanadium		19.6		0.084	1.8
Zinc		30.0		0.36	0.90

Analysis Method:	6010B	Analysis Batch:	280-61996	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-60624	Lab File ID:	26a041211.asc
Dilution:	1.0			Initial Weight/Volume:	1.17 g
Analysis Date:	04/12/2011 1349			Final Weight/Volume:	100 mL
Prep Date:	04/11/2011 0930				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Magnesium		1560		3.3	18.0
Silicon		364	N	5.1	9.0

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-61031	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-60732	Lab File ID:	110405AB.txt
Dilution:	1.0			Initial Weight/Volume:	0.63 g
Analysis Date:	04/05/2011 2029			Final Weight/Volume:	50 mL
Prep Date:	04/05/2011 1345				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0058	B	0.0055	0.017

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

General Chemistry

Client Sample ID: **J1H0L5**

Lab Sample ID: 280-14131-1
Client Matrix: Solid

Date Sampled: 03/31/2011 1000
Date Received: 04/01/2011 0830

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	9.1		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-60401 Analysis Date: 04/01/2011 1421 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

General Chemistry

Client Sample ID: **J1H0L6**

Lab Sample ID: 280-14131-2
Client Matrix: Solid

Date Sampled: 03/31/2011 1002
Date Received: 04/01/2011 0830

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	7.8		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-60401 Analysis Date: 04/01/2011 1421 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

General Chemistry

Client Sample ID: **J1H0L7**

Lab Sample ID: 280-14131-3
Client Matrix: Solid

Date Sampled: 03/31/2011 1005
Date Received: 04/01/2011 0830

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	28.2		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-60401 Analysis Date: 04/01/2011 1421 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

General Chemistry

Client Sample ID: **J1H0L8**

Lab Sample ID: 280-14131-4
Client Matrix: Solid

Date Sampled: 03/31/2011 1010
Date Received: 04/01/2011 0830

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	2.8		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-60401 Analysis Date: 04/01/2011 1421 DryWt Corrected: N

General Chemistry

Client Sample ID: **J1H084**

Lab Sample ID: 280-14131-5
Client Matrix: Solid
% Moisture: 9.1
Date Sampled: 03/30/2011 0935
Date Received: 04/01/2011 0830

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate Nitrite as N-Soluble	13.1		mg/Kg	0.39	0.81	1.0	353.2
Analysis Batch: 280-60832	Analysis Date: 04/05/2011 1302						DryWt Corrected: Y
Chloride-Soluble	493		mg/Kg	2.2	5.5	1.0	9056M
Analysis Batch: 280-60988	Analysis Date: 04/06/2011 0024						DryWt Corrected: Y
Nitrate as N-Soluble	14.5		mg/Kg	0.35	2.8	1.0	9056M
Analysis Batch: 280-60991	Analysis Date: 04/06/2011 0024						DryWt Corrected: Y
Bromide-Soluble	0.43	U	mg/Kg	0.43	2.2	1.0	9056M
Analysis Batch: 280-60988	Analysis Date: 04/06/2011 0024						DryWt Corrected: Y
Nitrite as N-Soluble	0.37	U	mg/Kg	0.37	2.8	1.0	9056M
Analysis Batch: 280-60991	Analysis Date: 04/06/2011 0024						DryWt Corrected: Y
Orthophosphate as P-Soluble	1.4	U	mg/Kg	1.4	5.5	1.0	9056M
Analysis Batch: 280-60991	Analysis Date: 04/06/2011 0024						DryWt Corrected: Y
Sulfate-Soluble	23.8		mg/Kg	1.9	5.5	1.0	9056M
Analysis Batch: 280-60988	Analysis Date: 04/06/2011 0024						DryWt Corrected: Y
Fluoride-Soluble	0.90	U	mg/Kg	0.90	5.5	1.0	9056M
Analysis Batch: 280-60988	Analysis Date: 04/06/2011 0024						DryWt Corrected: Y

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH adj. to 25 deg C-Soluble	7.91		SU	0.0100	0.0100	1.0	9045C
Analysis Batch: 280-60498	Analysis Date: 04/02/2011 1000						DryWt Corrected: N
Percent Moisture	9.1		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-60401	Analysis Date: 04/01/2011 1421						DryWt Corrected: N

General Chemistry

Client Sample ID: **J1H085**

Lab Sample ID: 280-14131-6
Client Matrix: Solid
% Moisture: 9.1

Date Sampled: 03/30/2011 0945
Date Received: 04/01/2011 0830

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate Nitrite as N-Soluble	0.79		mg/Kg	0.36	0.76	1.0	353.2
Analysis Batch: 280-60832	Analysis Date: 04/05/2011 1304						DryWt Corrected: Y
Chloride-Soluble	2.2	U	mg/Kg	2.2	5.5	1.0	9056M
Analysis Batch: 280-60988	Analysis Date: 04/06/2011 0148						DryWt Corrected: Y
Nitrate as N-Soluble	1.2	B	mg/Kg	0.35	2.8	1.0	9056M
Analysis Batch: 280-60991	Analysis Date: 04/06/2011 0148						DryWt Corrected: Y
Bromide-Soluble	0.43	U	mg/Kg	0.43	2.2	1.0	9056M
Analysis Batch: 280-60988	Analysis Date: 04/06/2011 0148						DryWt Corrected: Y
Nitrite as N-Soluble	0.37	U	mg/Kg	0.37	2.8	1.0	9056M
Analysis Batch: 280-60991	Analysis Date: 04/06/2011 0148						DryWt Corrected: Y
Orthophosphate as P-Soluble	2.1	B	mg/Kg	1.4	5.5	1.0	9056M
Analysis Batch: 280-60991	Analysis Date: 04/06/2011 0148						DryWt Corrected: Y
Sulfate-Soluble	2.1	B	mg/Kg	1.9	5.5	1.0	9056M
Analysis Batch: 280-60988	Analysis Date: 04/06/2011 0148						DryWt Corrected: Y
Fluoride-Soluble	0.90	U	mg/Kg	0.90	5.5	1.0	9056M
Analysis Batch: 280-60988	Analysis Date: 04/06/2011 0148						DryWt Corrected: Y

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH adj. to 25 deg C-Soluble	8.90		SU	0.0100	0.0100	1.0	9045C
Analysis Batch: 280-60498	Analysis Date: 04/02/2011 1002						DryWt Corrected: N
Percent Moisture	9.1		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-60401	Analysis Date: 04/01/2011 1421						DryWt Corrected: N

General Chemistry

Client Sample ID: **J1H086**

Lab Sample ID: 280-14131-7
Client Matrix: Solid
% Moisture: 22.7
Date Sampled: 03/30/2011 0955
Date Received: 04/01/2011 0830

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate Nitrite as N-Soluble	7.6		mg/Kg	0.46	0.97	1.0	353.2
Analysis Batch: 280-60832	Analysis Date: 04/05/2011 1314						DryWt Corrected: Y
Chloride-Soluble	14.5		mg/Kg	2.5	6.5	1.0	9056M
Analysis Batch: 280-60988	Analysis Date: 04/06/2011 0205						DryWt Corrected: Y
Nitrate as N-Soluble	20.1		mg/Kg	0.41	3.2	1.0	9056M
Analysis Batch: 280-60991	Analysis Date: 04/06/2011 0205						DryWt Corrected: Y
Bromide-Soluble	0.50	U	mg/Kg	0.50	2.6	1.0	9056M
Analysis Batch: 280-60988	Analysis Date: 04/06/2011 0205						DryWt Corrected: Y
Nitrite as N-Soluble	0.43	U	mg/Kg	0.43	3.2	1.0	9056M
Analysis Batch: 280-60991	Analysis Date: 04/06/2011 0205						DryWt Corrected: Y
Orthophosphate as P-Soluble	1.6	U	mg/Kg	1.6	6.5	1.0	9056M
Analysis Batch: 280-60991	Analysis Date: 04/06/2011 0205						DryWt Corrected: Y
Sulfate-Soluble	11.3		mg/Kg	2.2	6.5	1.0	9056M
Analysis Batch: 280-60988	Analysis Date: 04/06/2011 0205						DryWt Corrected: Y
Fluoride-Soluble	1.1	U	mg/Kg	1.1	6.5	1.0	9056M
Analysis Batch: 280-60988	Analysis Date: 04/06/2011 0205						DryWt Corrected: Y

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH adj. to 25 deg C-Soluble	9.65		SU	0.0100	0.0100	1.0	9045C
Analysis Batch: 280-60498	Analysis Date: 04/02/2011 1004						DryWt Corrected: N
Percent Moisture	22.7		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-60401	Analysis Date: 04/01/2011 1421						DryWt Corrected: N

General Chemistry

Client Sample ID: **J1H087**

Lab Sample ID: 280-14131-8
Client Matrix: Solid
% Moisture: 4.9

Date Sampled: 03/30/2011 1000
Date Received: 04/01/2011 0830

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate Nitrite as N-Soluble	2.4	M	mg/Kg	0.37	0.77	1.0	353.2
Analysis Batch: 280-60832	Analysis Date: 04/05/2011 1316						DryWt Corrected: Y
Chloride-Soluble	2.1	U	mg/Kg	2.1	5.3	1.0	9056M
Analysis Batch: 280-60988	Analysis Date: 04/06/2011 0221						DryWt Corrected: Y
Nitrate as N-Soluble	2.6		mg/Kg	0.33	2.6	1.0	9056M
Analysis Batch: 280-60991	Analysis Date: 04/06/2011 0221						DryWt Corrected: Y
Bromide-Soluble	0.41	U	mg/Kg	0.41	2.1	1.0	9056M
Analysis Batch: 280-60988	Analysis Date: 04/06/2011 0221						DryWt Corrected: Y
Nitrite as N-Soluble	0.35	U	mg/Kg	0.35	2.6	1.0	9056M
Analysis Batch: 280-60991	Analysis Date: 04/06/2011 0221						DryWt Corrected: Y
Orthophosphate as P-Soluble	1.5	B	mg/Kg	1.3	5.3	1.0	9056M
Analysis Batch: 280-60991	Analysis Date: 04/06/2011 0221						DryWt Corrected: Y
Sulfate-Soluble	1.8	U	mg/Kg	1.8	5.3	1.0	9056M
Analysis Batch: 280-60988	Analysis Date: 04/06/2011 0221						DryWt Corrected: Y
Fluoride-Soluble	0.86	U	mg/Kg	0.86	5.3	1.0	9056M
Analysis Batch: 280-60988	Analysis Date: 04/06/2011 0221						DryWt Corrected: Y

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH adj. to 25 deg C-Soluble	7.47		SU	0.0100	0.0100	1.0	9045C
Analysis Batch: 280-60498	Analysis Date: 04/02/2011 1006						DryWt Corrected: N
Percent Moisture	4.9		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-60401	Analysis Date: 04/01/2011 1421						DryWt Corrected: N

QUALITY CONTROL RESULTS

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 280-61826					
LCS 280-61826/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-61826/1-A	Method Blank	T	Solid	3550C	
280-14131-1	J1H0L5	T	Solid	3550C	
280-14131-2	J1H0L6	T	Solid	3550C	
280-14131-3	J1H0L7	T	Solid	3550C	
280-14131-4	J1H0L8	T	Solid	3550C	
280-14131-4MS	Matrix Spike	T	Solid	3550C	
280-14131-4MSD	Matrix Spike Duplicate	T	Solid	3550C	
Analysis Batch:280-62775					
LCS 280-61826/2-A	Lab Control Sample	T	Solid	8082	280-61826
MB 280-61826/1-A	Method Blank	T	Solid	8082	280-61826
280-14131-1	J1H0L5	T	Solid	8082	280-61826
280-14131-2	J1H0L6	T	Solid	8082	280-61826
280-14131-3	J1H0L7	T	Solid	8082	280-61826
Analysis Batch:280-62778					
LCS 280-61826/2-A	Lab Control Sample	T	Solid	8082	280-61826
MB 280-61826/1-A	Method Blank	T	Solid	8082	280-61826
280-14131-1	J1H0L5	T	Solid	8082	280-61826
280-14131-2	J1H0L6	T	Solid	8082	280-61826
280-14131-3	J1H0L7	T	Solid	8082	280-61826
Analysis Batch:280-62783					
280-14131-4	J1H0L8	T	Solid	8082	280-61826
280-14131-4MS	Matrix Spike	T	Solid	8082	280-61826
280-14131-4MSD	Matrix Spike Duplicate	T	Solid	8082	280-61826
Analysis Batch:280-62784					
LCS 280-61826/2-A	Lab Control Sample	T	Solid	8082	280-61826
MB 280-61826/1-A	Method Blank	T	Solid	8082	280-61826
280-14131-4	J1H0L8	T	Solid	8082	280-61826
280-14131-4MS	Matrix Spike	T	Solid	8082	280-61826
280-14131-4MSD	Matrix Spike Duplicate	T	Solid	8082	280-61826

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-60624					
LCS 280-60624/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-60624/1-A	Method Blank	T	Solid	3050B	
280-14131-5	J1H084	T	Solid	3050B	
280-14131-5DU	Duplicate	T	Solid	3050B	
280-14131-5MS	Matrix Spike	T	Solid	3050B	
280-14131-6	J1H085	T	Solid	3050B	
280-14131-7	J1H086	T	Solid	3050B	
280-14131-8	J1H087	T	Solid	3050B	
Prep Batch: 280-60732					
LCS 280-60732/2-A	Lab Control Sample	T	Solid	7471A	
MB 280-60732/1-A	Method Blank	T	Solid	7471A	
280-14131-5	J1H084	T	Solid	7471A	
280-14131-5DU	Duplicate	T	Solid	7471A	
280-14131-5MS	Matrix Spike	T	Solid	7471A	
280-14131-6	J1H085	T	Solid	7471A	
280-14131-7	J1H086	T	Solid	7471A	
280-14131-8	J1H087	T	Solid	7471A	
Analysis Batch:280-61031					
LCS 280-60732/2-A	Lab Control Sample	T	Solid	7471A	280-60732
MB 280-60732/1-A	Method Blank	T	Solid	7471A	280-60732
280-14131-5	J1H084	T	Solid	7471A	280-60732
280-14131-5DU	Duplicate	T	Solid	7471A	280-60732
280-14131-5MS	Matrix Spike	T	Solid	7471A	280-60732
280-14131-6	J1H085	T	Solid	7471A	280-60732
280-14131-7	J1H086	T	Solid	7471A	280-60732
280-14131-8	J1H087	T	Solid	7471A	280-60732
Analysis Batch:280-61777					
LCS 280-60624/2-A	Lab Control Sample	T	Solid	6010B	280-60624
MB 280-60624/1-A	Method Blank	T	Solid	6010B	280-60624
280-14131-5	J1H084	T	Solid	6010B	280-60624
280-14131-5DU	Duplicate	T	Solid	6010B	280-60624
280-14131-5MS	Matrix Spike	T	Solid	6010B	280-60624
280-14131-6	J1H085	T	Solid	6010B	280-60624
280-14131-7	J1H086	T	Solid	6010B	280-60624
280-14131-8	J1H087	T	Solid	6010B	280-60624

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:280-61996					
LCS 280-60624/2-A	Lab Control Sample	T	Solid	6010B	280-60624
MB 280-60624/1-A	Method Blank	T	Solid	6010B	280-60624
280-14131-5	J1H084	T	Solid	6010B	280-60624
280-14131-5DU	Duplicate	T	Solid	6010B	280-60624
280-14131-5MS	Matrix Spike	T	Solid	6010B	280-60624
280-14131-6	J1H085	T	Solid	6010B	280-60624
280-14131-7	J1H086	T	Solid	6010B	280-60624
280-14131-8	J1H087	T	Solid	6010B	280-60624

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-60401					
280-14131-1	J1H0L5	T	Solid	D-2216	
280-14131-1DU	Duplicate	T	Solid	D-2216	
280-14131-2	J1H0L6	T	Solid	D-2216	
280-14131-3	J1H0L7	T	Solid	D-2216	
280-14131-4	J1H0L8	T	Solid	D-2216	
280-14131-5	J1H084	T	Solid	D-2216	
280-14131-6	J1H085	T	Solid	D-2216	
280-14131-7	J1H086	T	Solid	D-2216	
280-14131-8	J1H087	T	Solid	D-2216	
Prep Batch: 280-60472					
280-14131-5	J1H084	S	Solid	DI Leach	
280-14131-5DU	Duplicate	S	Solid	DI Leach	
280-14131-6	J1H085	S	Solid	DI Leach	
280-14131-7	J1H086	S	Solid	DI Leach	
280-14131-8	J1H087	S	Solid	DI Leach	
Analysis Batch:280-60498					
LCS 280-60498/4	Lab Control Sample	T	Water	9045C	
LCSD 280-60498/5	Lab Control Sample Duplicate	T	Water	9045C	
280-14131-5	J1H084	S	Solid	9045C	
280-14131-5DU	Duplicate	S	Solid	9045C	
280-14131-6	J1H085	S	Solid	9045C	
280-14131-7	J1H086	S	Solid	9045C	
280-14131-8	J1H087	S	Solid	9045C	
Prep Batch: 280-60712					
LCS 280-60712/2-A	Lab Control Sample	S	Solid	DI Leach	
MB 280-60712/1-A	Method Blank	S	Solid	DI Leach	
280-14131-5	J1H084	S	Solid	DI Leach	
280-14131-6	J1H085	S	Solid	DI Leach	
280-14131-7	J1H086	S	Solid	DI Leach	
280-14131-8	J1H087	S	Solid	DI Leach	
280-14131-8DU	Duplicate	S	Solid	DI Leach	
280-14131-8MS	Matrix Spike	S	Solid	DI Leach	
Analysis Batch:280-60832					
LCS 280-60712/2-A	Lab Control Sample	S	Solid	353.2	
MB 280-60712/1-A	Method Blank	S	Solid	353.2	
280-14131-5	J1H084	S	Solid	353.2	
280-14131-6	J1H085	S	Solid	353.2	
280-14131-7	J1H086	S	Solid	353.2	
280-14131-8	J1H087	S	Solid	353.2	
280-14131-8DU	Duplicate	S	Solid	353.2	
280-14131-8MS	Matrix Spike	S	Solid	353.2	

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 280-60847					
LCS 280-60847/1-A	Lab Control Sample	S	Solid	DI Leach	
MB 280-60847/2-A	Method Blank	S	Solid	DI Leach	
280-14131-5	J1H084	S	Solid	DI Leach	
280-14131-5DU	Duplicate	S	Solid	DI Leach	
280-14131-5MS	Matrix Spike	S	Solid	DI Leach	
280-14131-6	J1H085	S	Solid	DI Leach	
280-14131-7	J1H086	S	Solid	DI Leach	
280-14131-8	J1H087	S	Solid	DI Leach	
Analysis Batch:280-60988					
LCS 280-60847/1-A	Lab Control Sample	S	Solid	9056M	
MB 280-60847/2-A	Method Blank	S	Solid	9056M	
280-14131-5	J1H084	S	Solid	9056M	
280-14131-5DU	Duplicate	S	Solid	9056M	
280-14131-5MS	Matrix Spike	S	Solid	9056M	
280-14131-6	J1H085	S	Solid	9056M	
280-14131-7	J1H086	S	Solid	9056M	
280-14131-8	J1H087	S	Solid	9056M	
Analysis Batch:280-60991					
LCS 280-60847/1-A	Lab Control Sample	S	Solid	9056M	
MB 280-60847/2-A	Method Blank	S	Solid	9056M	
280-14131-5	J1H084	S	Solid	9056M	
280-14131-5DU	Duplicate	S	Solid	9056M	
280-14131-5MS	Matrix Spike	S	Solid	9056M	
280-14131-6	J1H085	S	Solid	9056M	
280-14131-7	J1H086	S	Solid	9056M	
280-14131-8	J1H087	S	Solid	9056M	

Report Basis
S = Soluble
T = Total

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
HPLC/IC					
Prep Batch: 280-61821					
LCS 280-61821/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-61821/1-A	Method Blank	T	Solid	3550C	
280-14131-1	J1H0L5	T	Solid	3550C	
280-14131-2	J1H0L6	T	Solid	3550C	
280-14131-2MS	Matrix Spike	T	Solid	3550C	
280-14131-2MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-14131-3	J1H0L7	T	Solid	3550C	
280-14131-4	J1H0L8	T	Solid	3550C	
Analysis Batch:280-62017					
LCS 280-61821/2-A	Lab Control Sample	T	Solid	8310	280-61821
MB 280-61821/1-A	Method Blank	T	Solid	8310	280-61821
280-14131-2	J1H0L6	T	Solid	8310	280-61821
280-14131-2MS	Matrix Spike	T	Solid	8310	280-61821
280-14131-2MSD	Matrix Spike Duplicate	T	Solid	8310	280-61821
280-14131-3	J1H0L7	T	Solid	8310	280-61821
Analysis Batch:280-62220					
280-14131-1	J1H0L5	T	Solid	8310	280-61821
280-14131-4	J1H0L8	T	Solid	8310	280-61821

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Method Blank - Batch: 280-61826

Method: 8082
Preparation: 3550C

Lab Sample ID:	MB 280-61826/1-A	Analysis Batch:	280-62775	Instrument ID:	GCS_P3
Client Matrix:	Solid	Prep Batch:	280-61826	Lab File ID:	015B1501.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.1 g
Analysis Date:	04/15/2011 1758	Units:	ug/Kg	Final Weight/Volume:	5000 uL
Prep Date:	04/12/2011 1440			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	2.8	U	2.8	10
Aroclor 1221	8.0	U	8.0	16
Aroclor 1232	2.0	U	2.0	10
Aroclor 1242	4.6	U	4.6	10
Aroclor 1248	4.6	U	4.6	10
Aroclor 1254	2.6	U	2.6	10
Aroclor 1260	2.6	U	2.6	10

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	90	59 - 130
Tetrachloro-m-xylene	88	53 - 128

Lab Control Sample - Batch: 280-61826

Method: 8082
Preparation: 3550C

Lab Sample ID:	LCS 280-61826/2-A	Analysis Batch:	280-62775	Instrument ID:	GCS_P3
Client Matrix:	Solid	Prep Batch:	280-61826	Lab File ID:	016B1601.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.7 g
Analysis Date:	04/15/2011 1820	Units:	ug/Kg	Final Weight/Volume:	5000 uL
Prep Date:	04/12/2011 1440			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	32.6	30.7	94	54 - 132	
Aroclor 1260	32.6	34.0	104	62 - 129	

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	91	59 - 130
Tetrachloro-m-xylene	87	53 - 128

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-61826

Method: 8082
Preparation: 3550C

MS Lab Sample ID:	280-14131-4	Analysis Batch:	280-62783	Instrument ID:	GCS_P3
Client Matrix:	Solid	Prep Batch:	280-61826	Lab File ID:	069B0901.D
Dilution:	2000	Leach Batch:	N/A	Initial Weight/Volume:	31.0 g
Analysis Date:	04/16/2011 1608			Final Weight/Volume:	5000 uL
Prep Date:	04/12/2011 1440			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	280-14131-4	Analysis Batch:	280-62783	Instrument ID:	GCS_P3
Client Matrix:	Solid	Prep Batch:	280-61826	Lab File ID:	070B1001.D
Dilution:	2000	Leach Batch:	N/A	Initial Weight/Volume:	31.6 g
Analysis Date:	04/16/2011 1630			Final Weight/Volume:	5000 uL
Prep Date:	04/12/2011 1440			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aroclor 1016	NC	NC	54 - 132	NC	26	J D	U D
Aroclor 1260	-27518	-91449	62 - 129	41	26	D	D

Surrogate	MS % Rec		MSD % Rec		Acceptance Limits
Decachlorobiphenyl	0	D	0	D	59 - 130
Tetrachloro-m-xylene	0	D	0	D	53 - 128

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Method Blank - Batch: 280-61821

Method: 8310
Preparation: 3550C

Lab Sample ID:	MB 280-61821/1-A	Analysis Batch:	280-62017	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-61821	Lab File ID:	G0413008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.2 g
Analysis Date:	04/13/2011 1432	Units:	ug/Kg	Final Weight/Volume:	4000 uL
Prep Date:	04/12/2011 1350			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Acenaphthene	9.9	U	9.9	99
Acenaphthylene	8.9	U	8.9	99
Anthracene	3.0	U	3.0	20
Benzo[a]anthracene	3.2	U	3.2	15
Benzo[a]pyrene	6.4	U	6.4	15
Benzo[b]fluoranthene	4.2	U	4.2	15
Benzo[g,h,i]perylene	7.2	U	7.2	30
Benzo[k]fluoranthene	3.9	U	3.9	15
Chrysene	4.8	U	4.8	40
Dibenzo(a,h)anthracene	11	U	11	30
Fluoranthene	13	U	13	40
Fluorene	5.2	U	5.2	30
Indeno[1,2,3-cd]pyrene	12	U	12	30
Naphthalene	12	U	12	99
Phenanthrene	12	U	12	40
Pyrene	12	U	12	40

Surrogate	% Rec	Acceptance Limits
Terphenyl-d14 (SUR)	94	72 - 115

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Lab Control Sample - Batch: 280-61821

Method: 8310
Preparation: 3550C

Lab Sample ID:	LCS 280-61821/2-A	Analysis Batch:	280-62017	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-61821	Lab File ID:	G0413009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.9 g
Analysis Date:	04/13/2011 1503	Units:	ug/Kg	Final Weight/Volume:	4000 uL
Prep Date:	04/12/2011 1350			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	1940	1870	96	72 - 115	
Acenaphthylene	1940	1810	93	60 - 115	
Anthracene	1940	1720	88	61 - 115	
Benzo[a]anthracene	1940	2010	104	76 - 115	
Benzo[a]pyrene	1940	1700	87	69 - 115	
Benzo[b]fluoranthene	1940	1910	98	81 - 115	
Benzo[g,h,i]perylene	1940	1890	97	71 - 115	
Benzo[k]fluoranthene	1940	1830	94	85 - 115	
Chrysene	1940	1870	97	70 - 115	
Dibenzo(a,h)anthracene	1940	1910	98	79 - 115	
Fluoranthene	1940	1870	96	67 - 115	
Fluorene	1940	1860	96	72 - 115	
Indeno[1,2,3-cd]pyrene	1940	2010	103	76 - 115	
Naphthalene	1940	1900	98	77 - 115	
Phenanthrene	1940	1900	98	79 - 115	
Pyrene	1940	1890	97	77 - 115	

Surrogate	% Rec	Acceptance Limits
Terphenyl-d14 (SUR)	92	72 - 115

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-61821

Method: 8310
Preparation: 3550C

MS Lab Sample ID:	280-14131-2	Analysis Batch:	280-62017	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-61821	Lab File ID:	G0413012.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.7 g
Analysis Date:	04/13/2011 1634			Final Weight/Volume:	4000 uL
Prep Date:	04/12/2011 1350			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	280-14131-2	Analysis Batch:	280-62017	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-61821	Lab File ID:	G0413013.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.7 g
Analysis Date:	04/13/2011 1705			Final Weight/Volume:	4000 uL
Prep Date:	04/12/2011 1350			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	97	103	72 - 115	7	20		
Acenaphthylene	92	95	60 - 115	4	21		
Anthracene	94	99	61 - 115	5	20		
Benzo[a]anthracene	106	112	76 - 115	5	20		
Benzo[a]pyrene	104	108	69 - 115	4	20		
Benzo[b]fluoranthene	96	98	81 - 115	1	20		
Benzo[g,h,i]perylene	102	111	71 - 115	8	20		
Benzo[k]fluoranthene	101	101	85 - 115	0	20		
Chrysene	99	103	70 - 115	3	20		
Dibenzo(a,h)anthracene	94	101	79 - 115	7	20		
Fluoranthene	97	111	67 - 115	11	20		
Fluorene	97	100	72 - 115	4	20		
Indeno[1,2,3-cd]pyrene	111	109	76 - 115	2	20		
Naphthalene	104	105	77 - 115	2	20		
Phenanthrene	97	106	79 - 115	8	20		
Pyrene	105	107	77 - 115	2	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Terphenyl-d14 (SUR)	107	107	72 - 115

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Method Blank - Batch: 280-60624

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 280-60624/1-A	Analysis Batch:	280-61777	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-60624	Lab File ID:	26b041111.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/11/2011 1842	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/11/2011 0930				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	2.89	B	1.6	5.0
Antimony	0.38	U	0.38	0.60
Arsenic	0.66	U	0.66	1.0
Barium	0.102	B	0.076	0.50
Beryllium	0.033	U	0.033	0.20
Boron	0.98	U	0.98	2.0
Cadmium	0.041	U	0.041	0.20
Calcium	14.1	U	14.1	50.0
Chromium	0.058	U	0.058	0.20
Cobalt	0.10	U	0.10	1.0
Copper	0.22	U	0.22	1.0
Iron	7.83		3.8	5.0
Lead	0.27	U	0.27	0.50
Manganese	0.10	U	0.10	1.0
Molybdenum	0.26	U	0.26	2.0
Nickel	0.12	U	0.12	4.0
Potassium	41.0	U	41.0	300
Selenium	0.86	U	0.86	1.0
Silver	0.16	U	0.16	0.20
Sodium	59.0	U	59.0	120
Vanadium	0.094	U	0.094	2.0
Zinc	0.40	U	0.40	1.0

Method Blank - Batch: 280-60624

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 280-60624/1-A	Analysis Batch:	280-61996	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-60624	Lab File ID:	26a041211.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/12/2011 1331	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/11/2011 0930				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Magnesium	3.7	U	3.7	20.0
Silicon	5.7	U	5.7	10.0

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Lab Control Sample - Batch: 280-60624

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 280-60624/2-A	Analysis Batch:	280-61777	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-60624	Lab File ID:	26b041111.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/11/2011 1845	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/11/2011 0930				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	179.5	90	82 - 116	
Antimony	50.0	48.21	96	82 - 110	
Arsenic	100	97.32	97	85 - 110	
Barium	200	180.4	90	87 - 112	
Beryllium	5.00	4.49	90	84 - 114	
Boron	100	87.39	87	81 - 110	
Cadmium	10.0	8.89	89	87 - 110	
Calcium	5000	4416	88	82 - 114	
Chromium	20.0	18.55	93	84 - 114	
Cobalt	50.0	45.68	91	87 - 110	
Copper	25.0	22.60	90	88 - 110	
Iron	100	94.81	95	87 - 120	
Lead	50.0	49.09	98	86 - 110	
Manganese	50.0	45.10	90	88 - 110	
Molybdenum	100	101.4	101	86 - 110	
Nickel	50.0	47.12	94	87 - 110	
Potassium	5000	4597	92	89 - 110	
Selenium	200	187.7	94	83 - 110	
Silver	5.00	4.44	89	87 - 114	
Sodium	5000	4759	95	90 - 112	
Vanadium	50.0	45.31	91	88 - 110	
Zinc	50.0	44.30	89	76 - 114	

Lab Control Sample - Batch: 280-60624

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 280-60624/2-A	Analysis Batch:	280-61996	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-60624	Lab File ID:	26a041211.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/12/2011 1333	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/11/2011 0930				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Magnesium	5000	4593	92	90 - 110	
Silicon	1000	85.77	9	10 - 70	N

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Matrix Spike - Batch: 280-60624

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-14131-5	Analysis Batch:	280-61777	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-60624	Lab File ID:	26b041111.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.01 g
Analysis Date:	04/11/2011 1854	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/11/2011 0930				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	5360		218	7246	865	50 - 200	4
Antimony	0.46	B	54.5	29.16	53	20 - 200	
Arsenic	2.9		109	95.96	85	76 - 111	
Barium	55.4		218	246.0	87	52 - 159	
Beryllium	0.035	U	5.45	4.25	78	72 - 105	
Boron	2.2		109	85.08	76	75 - 107	
Cadmium	0.18	B	10.9	8.99	81	40 - 130	
Calcium	4890		5450	10430	102	43 - 165	
Chromium	11.1		21.8	29.54	85	70 - 200	
Cobalt	6.6		54.5	51.77	83	72 - 106	
Copper	20.7		27.2	42.32	79	37 - 187	
Iron	18100		109	19500	1244	70 - 200	4
Lead	25.7		54.5	70.65	82	70 - 200	
Manganese	281		54.5	325.3	82	40 - 200	4
Molybdenum	0.88	B	109	96.44	88	75 - 103	
Nickel	13.7		54.5	59.54	84	61 - 126	
Potassium	1190		5450	5890	86	56 - 172	
Selenium	1.1		218	182.7	83	76 - 104	
Silver	0.17	U	5.45	4.48	82	75 - 141	
Sodium	232		5450	5364	94	78 - 111	
Vanadium	43.1		54.5	95.08	95	50 - 169	
Zinc	51.5		54.5	96.54	83	70 - 200	

Matrix Spike - Batch: 280-60624

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-14131-5	Analysis Batch:	280-61996	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-60624	Lab File ID:	26a041211.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.01 g
Analysis Date:	04/12/2011 1342	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/11/2011 0930				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Magnesium	4010	5450	8915	90	64 - 145	
Silicon	210	1090	423.6	20	20 - 200	

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Duplicate - Batch: 280-60624

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-14131-5	Analysis Batch:	280-61777	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-60624	Lab File ID:	26b041111.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.11 g
Analysis Date:	04/11/2011 1851	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/11/2011 0930				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	5360		2865	61	40	M
Antimony	0.46	B	0.38	NC	40	U
Arsenic	2.9		1.41	69	30	M
Barium	55.4		27.21	68	30	M
Beryllium	0.035	U	0.033	NC	30	U
Boron	2.2		1.05	71	30	B M
Cadmium	0.18	B	0.0803	77	30	B M
Calcium	4890		2542	63	30	M
Chromium	11.1		7.02	45	40	M
Cobalt	6.6		3.87	52	30	M
Copper	20.7		11.91	54	30	M
Iron	18100		11050	49	40	M
Lead	25.7		12.54	69	40	M
Manganese	281		151.9	59	40	M
Molybdenum	0.88	B	0.302	98	30	B M
Nickel	13.7		8.09	51	30	M
Potassium	1190		585.8	68	40	M
Selenium	1.1		0.85	NC	30	U
Silver	0.17	U	0.16	NC	30	U
Sodium	232		137.4	51	30	M
Vanadium	43.1		27.50	44	30	M
Zinc	51.5		29.54	54	40	M

Duplicate - Batch: 280-60624

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-14131-5	Analysis Batch:	280-61996	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-60624	Lab File ID:	26a041211.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.11 g
Analysis Date:	04/12/2011 1340	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/11/2011 0930				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Magnesium	4010	2154	60	30	M
Silicon	210	143.2	38	40	N

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Method Blank - Batch: 280-60732

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 280-60732/1-A	Analysis Batch:	280-61031	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-60732	Lab File ID:	110405AB.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	04/05/2011 2008	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/05/2011 1345				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.0055	U	0.0055	0.017

Lab Control Sample - Batch: 280-60732

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 280-60732/2-A	Analysis Batch:	280-61031	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-60732	Lab File ID:	110405AB.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	04/05/2011 2010	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/05/2011 1345				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.417	0.404	97	87 - 111	

Matrix Spike - Batch: 280-60732

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-14131-5	Analysis Batch:	280-61031	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-60732	Lab File ID:	110405AB.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.65 g
Analysis Date:	04/05/2011 2022	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/05/2011 1345				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.0090	B	0.423	0.399	92	87 - 111	

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Duplicate - Batch: 280-60732

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-14131-5	Analysis Batch:	280-61031	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-60732	Lab File ID:	110405AB.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.69 g
Analysis Date:	04/05/2011 2020	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/05/2011 1345				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.0090	B	0.0116	25	20	B M

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Method Blank - Batch: 280-60832

Method: 353.2
Preparation: N/A

Lab Sample ID:	MB 280-60712/1-A	Analysis Batch:	280-60832	Instrument ID:	WC_Alp 2
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0405NXN.
Dilution:	1.0	Leach Batch:	280-60712	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/05/2011 1259	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/02/2011 1105				

Analyte	Result	Qual	MDL	RL
Nitrate Nitrite as N-Soluble	0.36	U	0.36	0.75

Method Reporting Limit Check - Batch: 280-60832

Method: 353.2
Preparation: N/A

Lab Sample ID:	MRL 280-60832/17	Analysis Batch:	280-60832	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0405NXN.
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	04/05/2011 1223	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-Soluble	0.100	0.0693	69	50 - 150	B

Lab Control Sample - Batch: 280-60832

Method: 353.2
Preparation: N/A

Lab Sample ID:	LCS 280-60712/2-A	Analysis Batch:	280-60832	Instrument ID:	WC_Alp 2
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0405NXN.
Dilution:	1.0	Leach Batch:	280-60712	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/05/2011 1301	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/02/2011 1105				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N-Soluble	48.5	48.50	100	90 - 110	

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Matrix Spike - Batch: 280-60832

Method: 353.2
Preparation: N/A

Lab Sample ID:	280-14131-8	Analysis Batch:	280-60832	Instrument ID:	WC_Alp 2
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0405NXN.
Dilution:	1.0	Leach Batch:	280-60712	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/05/2011 1319	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/02/2011 1105				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N-Soluble	2.4	39.7	43.63	104	90 - 110	

Duplicate - Batch: 280-60832

Method: 353.2
Preparation: N/A

Lab Sample ID:	280-14131-8	Analysis Batch:	280-60832	Instrument ID:	WC_Alp 2
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0405NXN.
Dilution:	1.0	Leach Batch:	280-60712	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/05/2011 1317	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/02/2011 1105				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Nitrate Nitrite as N-Soluble	2.4	2.06	15	10	M

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-60498

Method: 9045C
Preparation: N/A

LCS Lab Sample ID:	LCS 280-60498/4	Analysis Batch:	280-60498	Instrument ID:	WC_pH Probe
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/02/2011 0955	Units:	SU	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-60498/5	Analysis Batch:	280-60498	Instrument ID:	WC_pH Probe
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/02/2011 0956	Units:	SU	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
pH adj. to 25 deg C-Soluble	101	101	97 - 103	0	5		

Duplicate - Batch: 280-60498

Method: 9045C
Preparation: N/A

Lab Sample ID:	280-14131-5	Analysis Batch:	280-60498	Instrument ID:	WC_pH Probe
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	280-60472	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/02/2011 1001	Units:	SU	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/02/2011 0814				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
pH adj. to 25 deg C-Soluble	7.91	7.940	0.4	5	

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Method Blank - Batch: 280-60988

Method: 9056M
Preparation: N/A

Lab Sample ID:	MB 280-60847/2-A	Analysis Batch:	280-60988	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	160.TXT
Dilution:	1.0	Leach Batch:	280-60847	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/06/2011 0007	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/05/2011 1600				

Analyte	Result	Qual	MDL	RL
Chloride-Soluble	2.0	U	2.0	5.0
Bromide-Soluble	0.39	U	0.39	2.0
Sulfate-Soluble	1.7	U	1.7	5.0
Fluoride-Soluble	0.82	U	0.82	5.0

Method Reporting Limit Check - Batch: 280-60988

Method: 9056M
Preparation: N/A

Lab Sample ID:	MRL 280-60988/3	Analysis Batch:	280-60988	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:	04/05/2011 1040	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride-Soluble	1.00	0.981	98	50 - 150	B
Bromide-Soluble	0.200	0.182	91	50 - 150	B
Sulfate-Soluble	1.00	0.946	95	50 - 150	B
Fluoride-Soluble	0.200	0.191	96	50 - 150	B

Lab Control Sample - Batch: 280-60988

Method: 9056M
Preparation: N/A

Lab Sample ID:	LCS 280-60847/1-A	Analysis Batch:	280-60988	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	159.TXT
Dilution:	1.0	Leach Batch:	280-60847	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/05/2011 2350	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/05/2011 1600				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride-Soluble	250	256.4	103	90 - 110	
Bromide-Soluble	50.0	51.18	102	90 - 110	
Sulfate-Soluble	250	256.4	103	90 - 110	
Fluoride-Soluble	50.0	52.05	104	90 - 110	

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Matrix Spike - Batch: 280-60988

Method: 9056M
Preparation: N/A

Lab Sample ID:	280-14131-5	Analysis Batch:	280-60988	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	165.TXT
Dilution:	1.0	Leach Batch:	280-60847	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/06/2011 0131	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/05/2011 1600				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Chloride-Soluble	493		275	786.5	107	80 - 120	
Bromide-Soluble	0.43	U	55.0	52.67	96	80 - 120	
Sulfate-Soluble	23.8		275	294.9	99	80 - 120	
Fluoride-Soluble	0.90	U	55.0	48.65	88	80 - 120	

Duplicate - Batch: 280-60988

Method: 9056M
Preparation: N/A

Lab Sample ID:	280-14131-5	Analysis Batch:	280-60988	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	164.TXT
Dilution:	1.0	Leach Batch:	280-60847	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/06/2011 0114	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/05/2011 1600				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Chloride-Soluble	493		494.1	0.3	15	
Bromide-Soluble	0.43	U	0.43	NC	15	U
Sulfate-Soluble	23.8		23.82	0.2	15	
Fluoride-Soluble	0.90	U	0.90	NC	15	U

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Method Blank - Batch: 280-60991

Method: 9056M
Preparation: N/A

Lab Sample ID:	MB 280-60847/2-A	Analysis Batch:	280-60991	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	160.TXT
Dilution:	1.0	Leach Batch:	280-60847	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/06/2011 0007	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/05/2011 1600				

Analyte	Result	Qual	MDL	RL
Nitrate as N-Soluble	0.31	U	0.31	2.5
Nitrite as N-Soluble	0.34	U	0.34	2.5
Orthophosphate as P-Soluble	1.2	U	1.2	5.0

Method Reporting Limit Check - Batch: 280-60991

Method: 9056M
Preparation: N/A

Lab Sample ID:	MRL 280-60991/3	Analysis Batch:	280-60991	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:	04/05/2011 1040	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-Soluble	0.200	0.198	99	50 - 150	B
Nitrite as N-Soluble	0.200	0.192	96	50 - 150	B
Orthophosphate as P-Soluble	0.200	0.216	108	50 - 150	B

Lab Control Sample - Batch: 280-60991

Method: 9056M
Preparation: N/A

Lab Sample ID:	LCS 280-60847/1-A	Analysis Batch:	280-60991	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	159.TXT
Dilution:	1.0	Leach Batch:	280-60847	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/05/2011 2350	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/05/2011 1600				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as N-Soluble	50.0	52.02	104	90 - 110	
Nitrite as N-Soluble	50.0	51.68	103	90 - 110	
Orthophosphate as P-Soluble	50.0	46.98	94	90 - 110	

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Matrix Spike - Batch: 280-60991

Method: 9056M
Preparation: N/A

Lab Sample ID:	280-14131-5	Analysis Batch:	280-60991	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	165.TXT
Dilution:	1.0	Leach Batch:	280-60847	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/06/2011 0131	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/05/2011 1600				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as N-Soluble	14.5		55.0	70.25	101	80 - 120	
Nitrite as N-Soluble	0.37	U	55.0	53.13	97	80 - 120	
Orthophosphate as P-Soluble	1.4	U	55.0	49.85	91	80 - 120	

Duplicate - Batch: 280-60991

Method: 9056M
Preparation: N/A

Lab Sample ID:	280-14131-5	Analysis Batch:	280-60991	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	164.TXT
Dilution:	1.0	Leach Batch:	280-60847	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/06/2011 0114	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/05/2011 1600				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Nitrate as N-Soluble	14.5		14.51	0.2	15	
Nitrite as N-Soluble	0.37	U	0.37	NC	15	U
Orthophosphate as P-Soluble	1.4	U	1.4	NC	15	U

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14131-1
Sdg Number: J01058

Duplicate - Batch: 280-60401

Method: D-2216
Preparation: N/A

Lab Sample ID:	280-14131-1	Analysis Batch:	280-60401	Instrument ID:	No Equipment
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	04/01/2011 1421	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	9.1	7.8	15	20	

3.4.4.2.2.7

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-190-043	Page 1 of 1
Collector ~~BC Koelling~~ PR Wilson MAB 3-31-11	**Company Contact** Joan Kessner **Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH	**Price Code** 8L **Data Turnaround** 21 Days
Project Designation 100N Field Remediation - Soil In-Process	**Sampling Location** 100-N-23	**SAF No.** RC-190	
Ice Chest No. WCH-08-042	**Field Logbook No.** EL-1652-2 **COA** R11NX34000	**Method of Shipment** Fed Ex	
Shipped To TestAmerica Incorporated, ~~Richland~~ Denver MAB 3-31-11	**Offsite Property No.** NA	**Bill of Lading/Air Bill No.** 7969 3631 ~~44~~ 4598 AJ 3-31-11	

POSSIBLE SAMPLE HAZARDS/REMARKS

None

Special Handling and/or Storage

Cool 4 degrees C

Preservation	Cool 4C	Cool 4C									
Type of Container	aG	aG									
No. of Container(s)	1	0									
Volume	120mL	120mL									
SAMPLE ANALYSIS	PCBs - 8082	PAHs - 8310									
Sample No. / Matrix * / Sample Date / Sample Time											RCF
J1H0L5 / SOIL / 3-31-11 / 1000	✓	✓									274411
J1H0L6 / SOIL / 3-31-11 / 1002	✓	✓									
J1H0L7 / SOIL / 3-31-11 / 1005	✓	✓									
J1H0L8 / SOIL / 3-31-11 / 1010	✓	✓									

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS
Relinquished By/Removed From: PR Wilson 3-31-11 Date/Time 1015	Received By/Stored In: MA Bamberger Date/Time 3-31-11 1015	REVIEWED BY AJ DATE 3-31-11
Relinquished By/Removed From: MA Bamberger Date/Time 3-31-11 1115	Received By/Stored In: FED EX Date/Time 3-31-11	
Relinquished By/Removed From: Date/Time	Received By/Stored In: Date/Time 4/1/11 830	
Relinquished By/Removed From: Date/Time	Received By/Stored In: Date/Time	
Relinquished By/Removed From: Date/Time	Received By/Stored In: Date/Time	
Relinquished By/Removed From: Date/Time	Received By/Stored In: Date/Time	

JD1058

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-190-038	Page 1 of 1

Collector BC Koelling	Company Contact Joan Kessner	Telephone No. 375-4688	Project Coordinator KESSNER, JH
Project Designation 100N Field Remediation - Soil In-Process	Sampling Location 100-N-23		SAF No. RC-190
Ice Chest No. WCH-08-042	Field Logbook No. EL-1652-2	COA R11NX3Y000	Method of Shipment Fed Ex
Shipped To TestAmerica Incorporated, ~~Richland~~ Denver MAB 3-28-11	Offsite Property No. NA		Bill of Lading/Air Bill No. ~~See OSPC~~ ~~NA~~ JEB 3-30-11 MAB 3/28/11 7969 3631 4598

Price Code 8L

Data Turnaround 21 Days

POSSIBLE SAMPLE HAZARDS/REMARKS

~~Potential Radio Activity~~ NONE MAB 3/28/11

Special Handling and/or Storage

Cool 4°C MAB 3-28-11

Preservation	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None					
Type of Container	G/P	G/P	aG	aG	G/P	G/P					
No. of Container(s)	1	1	1 MAB 3-28-11	0	1	1					
Volume	60mL	60mL	250mL	250mL	250mL	60mL					
SAMPLE ANALYSIS	See item (1) in Special Instructions.	See item (2) in Special Instructions.	PCBs - 8082 MAB 3-30-11	PAHs - 8310	See item (3) in Special Instructions. MAB 3-28-11	RCF GEA Shipping Screen MAB 3-28-11					

Sample No.	Matrix *	Sample Date	Sample Time										RCF
J1H084	SOIL	3/30/11	0935	✓	✓	✓	✓						27440
J1H085	SOIL	3/30/11	0945	✓	✓	✓	✓						↓
J1H086	SOIL	3/30/11	0955	✓	✓	✓	✓						↓
J1H087	SOIL	3/30/11	1000	✓	✓	✓	✓						↓

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[signature]	3/30/11 1020	MABamberger MABamberger	3/30/11 1020
MABamberger MABamberger 3-30-11	1500	J. E. Beahl	3-30-11 1500
J. E. Beahl WEH	3-31-11 1000	FED EX	
			4/1/11 830

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010TR (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV) {Mercury}

(2) IC Anions - 9056 Modified {Bromide, Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorous in phosphate, Sulfate}; NO2/NO3 - 353.2 {Nitrogen in Nitrite and Nitrate}; pH (Soil) - 9045 {pH Measurement}

(3) Gamma Spec (Client List) {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Radium-226}

REVIEWED BY [signature] DATE 3-31-11

J01058

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 -GAIOTR -S.i.d

Analytical Due:

Report Due: 4/22/11

Sample Check-in List

Date/Time Received: 4/1/11 830 GM Screen Result 12 microR/hr

Client: Washington Closure Hanford SDG #: J01058 NA[ ] SAF #: RC-190 NA [ ]

Job Number: 14131 Chain of Custody # RC-190-038

Shipping Container ID: WCH-08-042 WCH-08-072 WCH-12-019 Air Bill # 7969 3631 4598 7969 3631 4690 7969 3631 4680

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: 3.4, 4.2, 2.7 NA [ ] 5. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [✓]
6. Number of samples in shipping container: 8
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: 4/1/11

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on ___ by ___ Person Contacted ___

[ ] No action necessary; process as is.

Project Manager [signature] Date 4/4/11

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

RICHLAND, WA 99354

FedEx. Express

J11151102250225

Ship Date: 31MAR11
ActWgt: 84.0 LB
CAD: 8897843/INET3130

Delivery Address Bar Code

SHIP TO: (303) 736-0100 BILL SENDER

Sample Recieving
Test America Denver
4955 YARROW ST

ARVADA, CO 80002

Ref #
Invoice #
PO #
Dept #

1 of 3

FRI - 01 APR A1
PRIORITY OVERNIGHT

TRK# 7969 3631 4598
0201

MASTER

XH WHHA

80002
CO-US
DEN

50DG3/26A8/7EFB

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WCH MAILROOM
WASHINGTON CLOSURE HANFORD
2620 FERMI AVE

RICHLAND, WA 99354

J11151102250225

Ship Date: 31MAR11
ActWgt: 70.0 LB
CAD: 8897843/INET3130

Delivery Address Bar Code

Ref #
Invoice #
PO #
Dept #

SHIP TO: (303) 736-0100 BILL SENDER

Sample Recieving
Test America Denver
4955 YARROW ST

ARVADA, CO 80002

2 of 3

FRI - 01 APR A1
PRIORITY OVERNIGHT

MPS# 7969 3631 4690
0263
Mstr# 7969 3631 4598 0201

XH WHHA

80002
CO-US
DEN

50DG3/26A8/7EFB

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

RICHLAND, WA 99354

FedEx. Express

J1115110225225

Ship Date: 31MAR11
ActWgt: 31.0 LB
CAD: 8897843/INET3130

Delivery Address Bar Code

Ref #
Invoice #
PO #
Dept #

SHIP TO: (303) 736-0100 BILL SENDER

Sample Recieving
Test America Denver
4955 YARROW ST

ARVADA, CO 80002

3 of 3

FRI - 01 APR A1
PRIORITY OVERNIGHT

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0263
Mstr# 7969 3631 4598 0201

XH WHHA

80002
CO-US
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50DG3/26A8/7EFB

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