0100870

SAF-RC-075
100-D/DR Burial Grounds & Remaining Sites – Soil Full Protocol
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 12/21/11
INITIAL/DATE

COMMENTS:

SDG J01351 SAF RC-075

Rad only Chem only ☑ Rad & Chem

☑ Complete Partial

Waste Site: 1607-D-1 Septic System – Focus Samples

RECEIVED
JAN 13 2012
EDMC

Analytical Data Package Prepared For

Washington Closure Hanford

RECEIVED
DEC 2011

Radiochemical Analysis By

TestAmerica

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

Assigned Laboratory Code: TARL

Data Package Contains 30 ***Pages***

Report No.: 49885

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.
J01351	RC-075	J1MM87	J1K300475-1	MPC1V1AA	9MPC1V10	1335105
		J1MM87	J1K300475-1	MPC1V1AC	9MPC1V10	1335133
		J1MM88	J1K300475-2	MPC161AA	9MPC1610	1335105
		J1MM88	J1K300475-2	MPC161AC	9MPC1610	1335133
		J1MM89	J1K300475-3	MPC2A1AA	9MPC2A10	1335105
		J1MM89	J1K300475-3	MPC2A1AC	9MPC2A10	1335133
		J1MM90	J1K300475-4	MPC2C1AA	9MPC2C10	1335105
		J1MM90	J1K300475-4	MPC2C1AC	9MPC2C10	1335133

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

TestAmerica Laboratories, Inc.

December 21, 2011

Attention: Joan Kessner

SAF Number	:	RC-075
Date SDG Closed	:	November 30, 2011
Number of Samples	:	Four (4)
Sample Type	:	Soil
SDG Number	:	J01351
Data Deliverable	:	21-Day / Summary

CASE NARRATIVE

I. Introduction

On November 30, 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
J1MM87	MPC1V	SOIL	11/30/11
J1MM88	MPC16	SOIL	11/30/11
J1MM89	MPC2A	SOIL	11/30/11
J1MM90	MPC2C	SOIL	11/30/11

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
Chemical Analysis
Hexavalent Chromium by EPA method 7196A

IV. Quality Control

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

QC and sample results are reported in the same units.

V. Comments

Gamma Spectroscopy

Gamma Spec by method RL-GAM-001:

The CRDL was not met for some of the analytes. Except as noted, the LCS, batch blank, samples and sample duplicate (J1MM87) results are within contractual requirements.

Chemical Analysis

Hexavalent Chromium by EPA method 7196A

The LCS, batch blank, samples, sample duplicate (J1MM87) and sample matrix spike (J1MM87) results are within contractual requirements.

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

Reviewed and approved:

Rhonda Wagar
Project Manager

Drinking Water Method Cross References

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

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

Uncertainty Estimation

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

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

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

Report Definitions

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

Sample Results Summary

TestAmerica TARL

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

Date: 21-Dec-11

Report No. : 49885

SDG No: J01351

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
1335133 GAMMA_GS									
J1MM87									
	MPC1V1AC	AMERICIUM 241	-3.49E-02 +- 1.6E-01	U	pCi/g		2.81E-01		
		CO-60	-3.03E-04 +- 1.8E-02	U	pCi/g		3.10E-02	5.00E-02	
		CS-137	1.93E-03 +- 1.6E-02	U	pCi/g		2.79E-02	1.00E-01	
		EU-152	-2.15E-02 +- 4.4E-02	U	pCi/g		7.16E-02	1.00E-01	
		EU-154	-4.38E-02 +- 5.8E-02	U	pCi/g		9.48E-02	1.00E-01	
		EU-155	6.58E-02 +- 5.6E-02	U	pCi/g		9.59E-02	1.00E-01	
J1MM87 DUP									
	MPC1V1AF	AMERICIUM 241	1.28E-02 +- 8.8E-02	U	pCi/g		1.49E-01		-432.0
		CO-60	3.32E-03 +- 1.7E-02	U	pCi/g		2.99E-02	5.00E-02	240.2
		CS-137	1.48E-02 +- 1.9E-02	U	pCi/g		3.31E-02	1.00E-01	153.9
		EU-152	-1.39E-02 +- 8.8E-02	U	pCi/g		8.66E-02	1.00E-01	-43.0
		EU-154	-2.27E-03 +- 5.7E-02	U	pCi/g		9.86E-02	1.00E-01	-180.3
		EU-155	5.11E-02 +- 6.5E-02	U	pCi/g		1.10E-01	1.00E-01	25.3
J1MM88									
	MPC161AC	AMERICIUM 241	-1.58E-02 +- 8.1E-02	U	pCi/g		1.33E-01		
		CO-60	-1.70E-03 +- 2.5E-02	U	pCi/g		4.37E-02	5.00E-02	
		CS-137	1.19E-02 +- 2.5E-02	U	pCi/g		4.46E-02	1.00E-01	
		EU-152	-1.87E-02 +- 5.9E-02	U	pCi/g		1.01E-01	1.00E-01	
		EU-154	3.38E-02 +- 7.7E-02	U	pCi/g		1.39E-01	1.00E-01	
		EU-155	5.35E-02 +- 6.0E-02	U	pCi/g		1.04E-01	1.00E-01	
J1MM89									
	MPC2A1AC	AMERICIUM 241	-4.85E-02 +- 4.7E-02	U	pCi/g		7.64E-02		
		CO-60	-2.73E-02 +- 2.5E-02	U	pCi/g		3.89E-02	5.00E-02	
		CS-137	1.38E-03 +- 2.4E-02	U	pCi/g		4.24E-02	1.00E-01	
		EU-152	7.33E-03 +- 7.3E-02	U	pCi/g		1.07E-01	1.00E-01	
		EU-154	7.68E-02 +- 7.4E-02	U	pCi/g		1.39E-01	1.00E-01	
		EU-155	4.29E-02 +- 6.5E-02	U	pCi/g		1.09E-01	1.00E-01	
J1MM90									
	MPC2C1AC	AMERICIUM 241	7.25E-02 +- 9.8E-02	U	pCi/g		1.73E-01		
		CO-60	-5.70E-03 +- 1.6E-02	U	pCi/g		2.79E-02	5.00E-02	
		CS-137	-2.43E-03 +- 1.5E-02	U	pCi/g		2.61E-02	1.00E-01	
		EU-152	-9.88E-03 +- 3.7E-02	U	pCi/g		6.18E-02	1.00E-01	
		EU-154	-1.54E-02 +- 5.4E-02	U	pCi/g		9.14E-02	1.00E-01	
		EU-155	3.84E-02 +- 4.3E-02	U	pCi/g		7.66E-02	1.00E-01	
1335105 7196_CR6									
J1MM87									
	MPC1V1AA	HEXCHROME	1.55E-01 +- 0.0E+00	U	mg/kg	N/A	1.55E-01	1.55E-01	

TestAmerica **RPD - Relative Percent Difference.**

rptSTLRchSaSummary2 V5.2.18.1 A2002

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

Sample Results Summary

Date: 21-Dec-11

TestAmerica TARL

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

Report No. : 49885

SDG No: J01351

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
1335105	7196_CR6								
	J1MM87								
	MPC1V1AE	HEXCHROME	1.55E-01 +- 0.0E+00	U	mg/kg	N/A	1.55E-01	3.50E-01	0.0
	J1MM88								
	MPC161AA	HEXCHROME	1.55E-01 +- 0.0E+00	U	mg/kg	N/A	1.55E-01	1.55E-01	
	J1MM89								
	MPC2A1AA	HEXCHROME	1.55E-01 +- 0.0E+00	U	mg/kg	N/A	1.55E-01	1.55E-01	
	J1MM90								
	MPC2C1AA	HEXCHROME	1.55E-01 +- 0.0E+00	U	mg/kg	N/A	1.55E-01	1.55E-01	

No. of Results: 35

TestAmerica

rptSTLRchSaSummary2 V5.2.18.1 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: 21-Dec-11

Report No. : 49885

SDG No.: J01351

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDL
GAMMA_GS								
1335133 BLANK QC,								
MPDNT1AA	AMERICIUM 241	-6.85E-03 +- 9.0E-02	U	pCi/g				1.59E-01
	CO-60	5.66E-03 +- 1.1E-02	U	pCi/g				2.09E-02
	CS-137	4.27E-03 +- 9.7E-03	U	pCi/g				1.80E-02
	EU-152	-6.11E-03 +- 2.7E-02	U	pCi/g				4.62E-02
	EU-154	-8.07E-04 +- 2.9E-02	U	pCi/g				5.36E-02
	EU-155	1.78E-02 +- 2.6E-02	U	pCi/g				4.67E-02
1335133 LCS,								
MPDNT1AC	CS-137	1.11E+00 +- 1.5E-01		pCi/g		103%	0.0	2.96E-02
7196_CR6								
1335105 MATRIX SPIKE, J1MM87								
MPC1V1AD	HEXCHROME	9.01E+00 +- 0.0E+00		mg/kg	N/A	88%	-0.1	1.55E-01
1335105 LCS,								
MPDHK1AC	HEXCHROME	1.95E+01 +- 0.0E+00		mg/kg	N/A	97%	0.0	1.55E-01
1335105 BLANK QC,								
MPDHK1AA	HEXCHROME	1.55E-01 +- 0.0E+00	U	mg/kg	N/A			1.55E-01

No. of Results: 10

TestAmerica

rptSTLRchQcSummary V5.2.18.1 A2002

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

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

FORM I

SAMPLE RESULTS

Date: 21-Dec-11

Lab Name:	TestAmerica	**SDG:**	J01351	**Collection Date:**	11/29/2011 10:19:00 AM
Lot-Sample No.:	J1K300475-1	**Report No. :**	49885	**Received Date:**	11/30/2011 2:45:00 PM
Client Sample ID:	J1MM87	**COC No. :**	RC-075-277	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1335105	7196_CR6			**Work Order:**	MPC1V1AA		**Report DB ID:**	9MPC1V10				
HEXCHROME	***1.55E-01***	U		0.0E+00	1.55E-01	mg/kg	N/A	*(1.)*	12/1/11 11:00 a		2.5066	
							1.55E-01	*N/A*			g	
Batch: 1335133	GAMMA_GS			**Work Order:**	MPC1V1AC		**Report DB ID:**	9MPC1V10				
AMERICIUM 241	***-3.49E-02***	U	1.6E-01	1.6E-01	2.81E-01	pCi/g		*-0.12*	12/8/11 01:13 a		358.9	GER13$1
								-0.43			g	
CO-60	***-3.03E-04***	U	1.8E-02	1.8E-02	3.10E-02	pCi/g		*-0.01*	12/8/11 01:13 a		358.9	GER13$1
							5.00E-02	*-0.03*			g	
CS-137	***1.93E-03***	U	1.6E-02	1.6E-02	2.79E-02	pCi/g		*0.07*	12/8/11 01:13 a		358.9	GER13$1
							1.00E-01	*0.24*			g	
EU-152	***-2.15E-02***	U	4.4E-02	4.4E-02	7.16E-02	pCi/g		*-0.3*	12/8/11 01:13 a		358.9	GER13$1
							1.00E-01	*-0.99*			g	
EU-154	***-4.38E-02***	U	5.8E-02	5.8E-02	9.48E-02	pCi/g		*-0.46*	12/8/11 01:13 a		358.9	GER13$1
							1.00E-01	*-(1.5)*			g	
EU-155	***6.58E-02***	U	5.6E-02	5.6E-02	9.59E-02	pCi/g		*0.69*	12/8/11 01:13 a		358.9	GER13$1
							1.00E-01	*(2.4)*			g	

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

TestAmerica
rptSTLRchSample
V5.2.18.1 A2002

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

FORM I

SAMPLE RESULTS

Date: 21-Dec-11

Lab Name:	TestAmerica	**SDG:**	J01351	**Collection Date:**	11/29/2011 10:23:00 AM
Lot-Sample No.:	J1K300475-2	**Report No. :**	49885	**Received Date:**	11/30/2011 2:45:00 PM
Client Sample ID:	J1MM88	**COC No. :**	RC-075-277	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1335105	7196_CR6			**Work Order:** MPC161AA			**Report DB ID:** 9MPC1610					
HEXCHROME	***1.55E-01***	U		0.0E+00	1.55E-01	mg/kg	N/A	*(1.)*	12/1/11 11:00 a		2.5064	
							1.55E-01	*N/A*			g	
Batch: 1335133	GAMMA_GS			**Work Order:** MPC161AC			**Report DB ID:** 9MPC1610					
AMERICIUM 241	***-1.58E-02***	U	8.1E-02	8.1E-02	1.33E-01	pCi/g		*-0.12*	12/8/11 04:43 a		337.7	GER7$1
								-0.39			g	
CO-60	***-1.70E-03***	U	2.5E-02	2.5E-02	4.37E-02	pCi/g		*-0.04*	12/8/11 04:43 a		337.7	GER7$1
							5.00E-02	*-0.14*			g	
CS-137	***1.19E-02***	U	2.5E-02	2.5E-02	4.46E-02	pCi/g		*0.27*	12/8/11 04:43 a		337.7	GER7$1
							1.00E-01	*0.94*			g	
EU-152	***-1.87E-02***	U	5.9E-02	5.9E-02	1.01E-01	pCi/g		*-0.18*	12/8/11 04:43 a		337.7	GER7$1
							1.00E-01	*-0.63*			g	
EU-154	***3.38E-02***	U	7.7E-02	7.7E-02	1.39E-01	pCi/g		*0.24*	12/8/11 04:43 a		337.7	GER7$1
							1.00E-01	*0.88*			g	
EU-155	***5.35E-02***	U	6.0E-02	6.0E-02	1.04E-01	pCi/g		*0.51*	12/8/11 04:43 a		337.7	GER7$1
							1.00E-01	*(1.8)*			g	

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

TestAmerica
rptSTLRchSample
V5.2.18.1 A2002

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

FORM I

SAMPLE RESULTS

Date: 21-Dec-11

Lab Name:	TestAmerica	**SDG:**	J01351	**Collection Date:**	11/29/2011 10:17:00 AM
Lot-Sample No.:	J1K300475-3	**Report No. :**	49885	**Received Date:**	11/30/2011 2:45:00 PM
Client Sample ID:	J1MM89	**COC No. :**	RC-075-277	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1335105	7196_CR6			**Work Order:**	MPC2A1AA		**Report DB ID:**	9MPC2A10				
HEXCHROME	***1.55E-01***	U		0.0E+00	1.55E-01	mg/kg	N/A	*(1.)*	12/1/11 11:00 a		2.5047	
							1.55E-01	*N/A*			g	
Batch: 1335133	GAMMA_GS			**Work Order:**	MPC2A1AC		**Report DB ID:**	9MPC2A10				
AMERICIUM 241	***-4.85E-02***	U	4.7E-02	4.7E-02	7.64E-02	pCi/g		*-0.63*	12/8/11 04:44 a		346.8	GER14$1
								-(2.1)			g	
CO-60	***-2.73E-02***	U	2.5E-02	2.5E-02	3.89E-02	pCi/g		*-0.7*	12/8/11 04:44 a		346.8	GER14$1
							5.00E-02	*-(2.2)*			g	
CS-137	***1.38E-03***	U	2.4E-02	2.4E-02	4.24E-02	pCi/g		*0.03*	12/8/11 04:44 a		346.8	GER14$1
							1.00E-01	*0.11*			g	
EU-152	***7.33E-03***	U	7.3E-02	7.3E-02	1.07E-01	pCi/g		*0.07*	12/8/11 04:44 a		346.8	GER14$1
							1.00E-01	*0.2*			g	
EU-154	***7.68E-02***	U	7.4E-02	7.4E-02	1.39E-01	pCi/g		*0.55*	12/8/11 04:44 a		346.8	GER14$1
							1.00E-01	*(2.1)*			g	
EU-155	***4.29E-02***	U	6.5E-02	6.5E-02	1.09E-01	pCi/g		*0.39*	12/8/11 04:44 a		346.8	GER14$1
							1.00E-01	*(1.3)*			g	

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

TestAmerica
rptSTLRchSample
V5.2.18.1 A2002

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

FORM I

SAMPLE RESULTS

Date: 21-Dec-11

Lab Name:	TestAmerica	**SDG:**	J01351	**Collection Date:**	11/29/2011 10:21:00 AM
Lot-Sample No.:	J1K300475-4	**Report No. :**	49885	**Received Date:**	11/30/2011 2:45:00 PM
Client Sample ID:	J1MM90	**COC No. :**	RC-075-277	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1335105	7196_CR6			**Work Order:** MPC2C1AA			**Report DB ID:** 9MPC2C10					
HEXCHROME	***1.55E-01***	U		0.0E+00	1.55E-01	mg/kg	N/A	*(1.)*	12/1/11 11:00 a		2.5095	
							1.55E-01	*N/A*			g	
Batch: 1335133	GAMMA_GS			**Work Order:** MPC2C1AC			**Report DB ID:** 9MPC2C10					
AMERICIUM 241	***7.25E-02***	U	9.8E-02	9.8E-02	1.73E-01	pCi/g		*0.42*	12/8/11 04:44 a		341.8	GER11$1
								(1.5)			g	
CO-60	***-5.70E-03***	U	1.6E-02	1.6E-02	2.79E-02	pCi/g		*-0.2*	12/8/11 04:44 a		341.8	GER11$1
							5.00E-02	*-0.71*			g	
CS-137	***-2.43E-03***	U	1.5E-02	1.5E-02	2.61E-02	pCi/g		*-0.09*	12/8/11 04:44 a		341.8	GER11$1
							1.00E-01	*-0.32*			g	
EU-152	***-9.88E-03***	U	3.7E-02	3.7E-02	6.18E-02	pCi/g		*-0.16*	12/8/11 04:44 a		341.8	GER11$1
							1.00E-01	*-0.54*			g	
EU-154	***-1.54E-02***	U	5.4E-02	5.4E-02	9.14E-02	pCi/g		*-0.17*	12/8/11 04:44 a		341.8	GER11$1
							1.00E-01	*-0.57*			g	
EU-155	***3.84E-02***	U	4.3E-02	4.3E-02	7.66E-02	pCi/g		*0.5*	12/8/11 04:44 a		341.8	GER11$1
							1.00E-01	*(1.8)*			g	

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

TestAmerica
rptSTLRchSample
V5.2.18.1 A2002

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

FORM II

Date: 21-Dec-11

DUPLICATE RESULTS

Lab Name:	TestAmerica	**SDG:**	J01351	**Collection Date:**	11/29/2011 10:19:00 AM
Lot-Sample No.:	J1K300475-1	**Report No. :**	49885	**Received Date:**	11/30/2011 2:45:00 PM
Client Sample ID:	J1MM87	**COC No. :**	RC-075-277	**Matrix:**	SOIL

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1335105	7196_CR6			**Work Order:** MPC1V1AE		**Report DB ID:** MPC1V1ER			**Orig Sa DB ID:** 9MPC1V10			
HEXCHROME	1.55E-01	U		0.0E+00	1.55E-01	mg/kg	N/A	(1.)	12/1/11 11:00 a		2.5008	
	1.55E-01	U	**RPD** 0.0			3.50E-01		N/A			g	

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

TestAmerica
rptSTLRchDupV5.2
.18.1 A2002

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

FORM II

Date: 21-Dec-11

DUPLICATE RESULTS

Lab Name:	TestAmerica	SDG:	J01351	Collection Date:	11/29/2011 10:19:00 AM
Lot-Sample No.:	J1K300475-1	Report No. :	49885	Received Date:	11/30/2011 2:45:00 PM
Client Sample ID:	J1MM87 DUP	COC No. :	RC-075-277	Matrix:	SOIL

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1335133	GAMMA_GS			Work Order:	MPC1V1AF	Report DB ID:	MPC1V1FR		Orig Sa DB ID: 9MPC1V10			
AMERICIUM 241	1.28E-02	U	8.8E-02	8.8E-02	1.49E-01	pCi/g		0.09	12/8/11 04:43 a		358.9	GER10$1
	-3.49E-02	U	RPD	-432.0				0.29			g	
CO-60	3.32E-03	U	1.7E-02	1.7E-02	2.99E-02	pCi/g		0.11	12/8/11 04:43 a		358.9	GER10$1
	-3.03E-04	U	RPD	240.2		5.00E-02		0.39			g	
CS-137	1.48E-02	U	1.9E-02	1.9E-02	3.31E-02	pCi/g		0.45	12/8/11 04:43 a		358.9	GER10$1
	1.93E-03	U	RPD	153.9		1.00E-01		(1.6)			g	
EU-152	-1.39E-02	U	8.8E-02	8.8E-02	8.66E-02	pCi/g		-0.16	12/8/11 04:43 a		358.9	GER10$1
	-2.15E-02	U	RPD	-43.0		1.00E-01		-0.32			g	
EU-154	-2.27E-03	U	5.7E-02	5.7E-02	9.86E-02	pCi/g		-0.02	12/8/11 04:43 a		358.9	GER10$1
	-4.38E-02	U	RPD	-180.3		1.00E-01		-0.08			g	
EU-155	5.11E-02	U	6.5E-02	6.5E-02	1.10E-01	pCi/g		0.46	12/8/11 04:43 a		358.9	GER10$1
	6.58E-02	U	RPD	25.3		1.00E-01		(1.6)			g	

No. of Results: 6 Comments:

TestAmerica RPD - Relative Percent Difference.
rptSTLRchDupV5.2 .18.1 A2002 MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM II

BLANK RESULTS

Date: 21-Dec-11

Lab Name: TestAmerica

Matrix: SOIL

SDG: J01351

Report No. : 49885

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Lc	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1335105	7196_CR6			**Work Order:**	MPDHK1AA		**Report DB ID:**	MPDHK1AB				
HEXCHROME	1.55E-01	U		0.0E+00	1.55E-01	mg/kg	N/A	(1.)	12/1/11 11:00 a		2.5	
						1.55E-01		N/A			g	
Batch: 1335133	GAMMA_GS			**Work Order:**	MPDNT1AA		**Report DB ID:**	MPDNT1AB				
AMERICIUM 241	-6.85E-03	U	9.0E-02	9.0E-02	1.59E-01	pCi/g		-0.04	12/8/11 04:45 a		348.0	GER13$1
								-0.15			g	
CO-60	5.66E-03	U	1.1E-02	1.1E-02	2.09E-02	pCi/g		0.27	12/8/11 04:45 a		348.0	GER13$1
						5.00E-02		(1.1)			g	
CS-137	4.27E-03	U	9.7E-03	9.7E-03	1.80E-02	pCi/g		0.24	12/8/11 04:45 a		348.0	GER13$1
						1.00E-01		0.88			g	
EU-152	-6.11E-03	U	2.7E-02	2.7E-02	4.62E-02	pCi/g		-0.13	12/8/11 04:45 a		348.0	GER13$1
						1.00E-01		-0.45			g	
EU-154	-8.07E-04	U	2.9E-02	2.9E-02	5.36E-02	pCi/g		-0.02	12/8/11 04:45 a		348.0	GER13$1
						1.00E-01		-0.06			g	
EU-155	1.78E-02	U	2.6E-02	2.6E-02	4.67E-02	pCi/g		0.38	12/8/11 04:45 a		348.0	GER13$1
						1.00E-01		(1.4)			g	

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

TestAmerica
rptSTLRchBlank
V5.2.18.1 A2002

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

FORM II

LCS RESULTS

Date: 21-Dec-11

Lab Name: TestAmerica

Matrix: SOIL

SDG: J01351

Report No. : 49885

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 1335105	7196_CR6			**Work Order:**	MPDHK1AC		**Report DB ID:**	MPDHK1AS					
HEXCHROME	1.95E+01			0.0E+00	1.55E-01	mg/kg	N/A	2.00E+01		97%	12/1/11 11:00 a	2.5	
							Rec Limits:	80	120	0.0		g	
Batch: 1335133	GAMMA_GS			**Work Order:**	MPDNT1AC		**Report DB ID:**	MPDNT1CS					
CS-137	1.11E+00		1.5E-01	1.5E-01	2.96E-02	pCi/g		1.07E+00	1.1E-02	103%	12/8/11 08:32 a	350.1	GER11$1
							Rec Limits:	70	130	0.0		g	

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

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

rptSTLRchLcs
V5.2.18.1 A2002

FORM II

MATRIX SPIKE RESULTS

Date: 21-Dec-11

Lab Name: TestAmerica **SDG:** J01351

Lot-Sample No.: J1K300475-1, J1MM87 **Report No. :** 49885 **Matrix:** SOIL

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 1335105	Work Order:	MPC1V1AD		Report DB ID:	MPC1V1CW		Orig Sa DB ID:	9MPC1V10				
HEXCHROME	9.01E+00			0.0E+00	1.55E-01	mg/kg	N/A	87.99%	1.02E+01	12/1/11 11:00 a	2.5047	7196_CR6
	1.55E-01										g	

Number of Results: 1

Comments:

TestAmerica
rptSTLRchMs
V5.2.18.1 A2002

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

12/20/2011 3:14:07 PM

Lot No., Due Date: J1K300475; 12/21/2011
Client, Site: 127642; S00X235B00 HANFORD
QC Batch No., Method Test: 1335133; RGAMMA Gamma by GER
SDG, Matrix: J01351; 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:
Please see NCM # 10-20083

First Level John Norton **Date** 12-20-11

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 1335133

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: RDL = 0.1 pCi/g
See NCM #: 10-20083

Second Level Review: [signature] Date: 12/21/14

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

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-20083**
NCM Initiated By: John Norton
Date Opened: 12/20/2011
Date Closed:

Classification: **Anomaly**
Status: **PMREVIEW**
Production Area: Counting
Tests: Gamma by GER
Lot #'s (Sample #'s): J1K300475 (1,2,3,4), J1L010000 (133),
QC Batches: 1335133,

Nonconformance: MDA not met
Subcategory: Data accepted

Problem Description / Root Cause

Name	Date	Description
John Norton	12/20/2011	Some of the samples did not meet the CRDL for some of the elements of interest.

Corrective Action

Name	Date	Corrective Action
John Norton	12/20/2011	Due to the priority nature of the samples the data will be presented to the client, the samples can be re-counted for a longer time frame at client request.

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: 12/20/2011

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Richland Laboratory
Data Review Check List
Hexavalent Chromium

Batch Number(s): 1335105

Lab Sample Numbers or SDG:J01351

Method/Test/Parameter: **Cr+6 in SOLID / RL-WC-004**

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

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

Comments on any "No" response:

Analyst: H. Rahavi Date: 12/02/11

Second-Level Review: [signature] Date: 12/02/11

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-277	Page 1 of 1
Collector: Q Stowe	Company Contact: Joan Kessner; Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH	Price Code: 8L; Data Turnaround: 21 Days
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location: 1607-D-1 Septic System- Focus Samples	SAF No.: RC-075	
Ice Chest No.: NA	Field Logbook No.: EL-1662; COA: 0607D12000	Method of Shipment: Hand Deliver	
Shipped To: TestAmerica Incorporated, Richland	Offsite Property No.: NA	Bill of Lading/Air Bill No.: NA	

POSSIBLE SAMPLE HAZARDS/REMARKS

None

Special Handling and/or Storage

Cool 4 Deg. C

~~J013149~~ 11-30-11

~~J1K300475~~

~~Due 12-21-11~~

SDG # J01357
LOT #J1K300475
Report: 12/2/11

SAMPLE ANALYSIS

Preservation	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None		
Type of Container	G/P	G/P	G/P	aG	aG	aG	aG	G/P		
No. of Container(s)	1	1	1	1	1	1	1	1		
Volume	120mL	120mL	120mL	125mL	125mL	120mL	125mL	500mL		
	See item (1) in Special Instructions.	Chromium Hex - 7196	IC Anions - 9056 Modified; NO2/NO3 - 353.2; pH (Soil) - 9045	Semi-VOA - 8270A (TCL)	PAHs - 8310	PCBs - 8082	Pesticides - 8081	See item (2) in Special Instructions.		

AZ - 11-29-11

AZ 11-29-11

Sample No.	Matrix *	Sample Date	Sample Time									
J1MM87 MPC1V	SOIL	11/29/11	1019		X						X	
J1MM88 MPC1G	SOIL	↓	1023		X						X	
J1MM89 MPC2A	SOIL		1017		X						X	
J1MM90 MPC2C	SOIL	↓	1021		X						X	

CHAIN OF POSSESSION

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Quincy Stowe	11/29/11 1445	WCH MZH M Stankovich	11/29/11 1445
MZH Stankovich	11/29/11 1600	1060#1 A. Freier A. Freier	11-29-11 1600
WCH A. Freier A. Freier	11-30-11 1445	Julie Fox Julie Fox TALL	11-30-11 1445

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010TR (Close-out 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) Gamma Spec (Client List) {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}

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

J1K300475

REVIEWED BY Pq DATE 11-30-11

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

WCH-EE-011

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THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 11-30-11 / 1445 Container GM Screen Result: (Airlock) .07 Initials [RB]
Sample GM Screen Result (Sample Receiving) .06 Initials [RB]

Client: WCH SDG #: J01351 NA [ ] SAF #: RC-015 NA [ ]

Lot Number: J1K300475

Chain of Custody # RC-015-277

Shipping Container ID: hand deliv NA [RB] Air Bill Number: NA [RB]

Samples received inside shipping container/cooler/box Yes [RB] Continue with 1 through 4. Initial appropriate response.

No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [RB]

2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [RB]

3. Cooler temperature: -2 °C on ice NA [ ]

4. Vermiculite/packing materials is NA [RB] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [RB] No [ ]

6. Number of samples received (Each sample may contain multiple bottles): 4

7. Containers received: 4 x 120 mLp; 4 x 500 mLp

8. Sample holding times exceeded? NA [ ] Yes [ ] No [RB]

9. Samples have:
   - ____ tape
   - RB custody seals
   - ____ hazard labels
   - RB appropriate sample labels

10. Matrix:
    - RB A (FLT, Wipe, Solid, Soil)
    - ____ S (Air, Niosh 7400)
    - ____ I (Water)
    - ____ T (Biological, Ni-63)

11. Samples:
    - RB are in good condition
    - ____ are broken
    - ____ are leaking
    - ____ have air bubbles (Only for samples requiring no head space)
    - ____ Other

12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [RB]
    (If acidification is necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition on table overleaf)

    RPL ID # of preservative used :

13. Were any anomalies identified in sample receipt? Yes [ ] No [RB]

14. Description of anomalies (include sample numbers): NA [RB]

LS-023, Rev. 15, 07/11 See over for additional information.

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THE LEADER IN ENVIRONMENTAL TESTING

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

16. Additional Information: _____

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

Sample Custodian [signature] Date: 11-30-11

Client Informed on _____ by _____ Person contacted _____

[✓] No action necessary; process as is.

Project Manager [signature] Date 12/1/11

SAMPLE ID	Initial pH	Acid Amt	Final pH	SAMPLE ID	Initial pH	Acid Amt	Final pH

JK300475 [signature] 12/1/11

12/6/2011 3:19:17 PM

Sample Preparation/Analysis

127642, Washington Closure Hanford LLC
Bechtel Hanford, Inc.

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

AnalyDueDate: 12/21/2011

Batch: 1335133 **SOIL** **pCi/g** **PM, Quote: RW2, 27038**
SEQ Batch, Test: None All Tests: 1335105 DWEA, 1335133 AXTA,

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

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MPC1V-1-AC J1K300475-1-SAMP 11/29/2011 10:19			358.90g,in AmtRec: 1X120MLP;1X500MLP	358.90g #Containers: 2					S200	200min	G13	0433	12/8/11 ORE Scr: Alpha: Beta:
2 MPC1V-1-AF-X J1K300475-1-DUP 11/29/2011 10:19			ISV AmtRec: 1X120MLP;1X500MLP	#Containers: 2							G10	0807	12/8/11 ORE Scr: Alpha: Beta:
3 MPC16-1-AC J1K300475-2-SAMP 11/29/2011 10:23			337.70g,in AmtRec: 1X120MLP;1X500MLP	337.70g #Containers: 2							G7	0803 Scr: Alpha: Beta:	
4 MPC2A-1-AC J1K300475-3-SAMP 11/29/2011 10:17			346.80g,in AmtRec: 1X120MLP;1X500MLP	346.80g #Containers: 2							G14	0804 Scr: Alpha: Beta:	
5 MPC2C-1-AC J1K300475-4-SAMP 11/29/2011 10:21			341.80g,in AmtRec: 1X120MLP;1X500MLP	341.80g #Containers: 2							G11	0804 Scr: Alpha: Beta:	
6 MPDNT-1-AA-B J1L010000-133-BLK 12/01/2011 16:07 pd			348.00g,in AmtRec:	348.00g #Containers: 1							G13	0805 Scr: Alpha: Beta:	
7 MPDNT-1-AC-C J1L010000-133-LCS 12/01/2011 16:07 pd			350.10g,in AmtRec:	350.10g #Containers: 1	qc20009 08/04/09,pd 09/01/09,r						G11	1152 Scr: Alpha: Beta:	12/8/11 ORE

TestAmerica Richland Wa.
Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1
pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added
ISV - Insufficient Volume for Analysis
WO Cnt: 7
Prep_SamplePrep v4.8.58

12/6/2011 3:19:18 PM

Sample Preparation/Analysis

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

Balance Id:

Pipet #:

AnalyDueDate: 12/21/2011

Sep1 DT/Tm Tech:

Batch: 1335133 pCi/g
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,SannohS

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

Comments: MPC1V-SAMP "CommentsISV-Recount DUP On a Different Detector"

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

MPC1V1AC-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:

MPDNT1AA-BLK:

Co-60	RDL:5.00E-02	pCi/g	LCL:	UCL:	RPD:	Cs-137	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:
Cs-137DA	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:	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:

MPDNT1AC-LCS:

Cs-137	RDL:0.1	pCi/g	LCL:70	UCL:130	RPD:35	Cs-137DA	RDL:0.1	pCi/g	LCL:70	UCL:130	RPD:35
K-40	RDL:--	pCi/g	LCL:70	UCL:130	RPD:35	Ra-226	RDL:0.1	pCi/g	LCL:70	UCL:130	RPD:35
RA-228	RDL:0.2	pCi/g	LCL:70	UCL:130	RPD:35	RA-228DA	RDL:0.2	pCi/g	LCL:70	UCL:130	RPD:35
U-238	RDL:	pCi/g	LCL:70	UCL:130	RPD:35						

MPC1V1AC-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

MPDNT1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

MPDNT1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

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12/20/2011 3:13:02 PM

ICOC Fraction Transfer/Status Report

ByDate: 12/20/2010, 12/25/2011, Batch: '1335133', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
1335133						
AC		Rev1C	WoodT	12/6/2011 6:08:30		
SC			MaucierlS	IsBatched	12/1/2011 4:07:19 PM	ICOC_RADCALC v4.8.49
SC			WoodT	InPrep	12/6/2011 6:08:30 AM	RL-PRP-003 REVISION 2
SC			WoodT	Prep1C	12/6/2011 6:10:19 AM	RL-PRP-003 REVISION 2
SC			SannohS	InPrep	12/6/2011 11:20:52 AM	RL-GAM-001 Revision 2
SC			ClarkR	InCnt1	12/6/2011 3:54:50 PM	RL-CI-007 REV. 2
SC			DawkinsO	CalcC	12/9/2011 1:19:41 AM	RL-CI-007 REV. 2
SC			nortonj	Rev1C	12/20/2011 3:04:21 PM	RL-DR-001 Rev 2
AC			WoodT	12/6/2011 6:10:19		
AC			SannohS	12/6/2011 11:20:52		
AC			ClarkR	12/6/2011 3:54:50 PM		
AC			DawkinsO	12/9/2011 1:19:41		
AC			nortonj	12/20/2011 3:04:21		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Grp Rec Cnt: 6

ICOCFractions v4.8.44

12/1/2011 12:02:57 PM

Sample Preparation/Analysis

127642, Washington Closure Hanford LLC
Bechtel Hanford, Inc.

DW Alkaline Digestion by method 3060A
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

AnalyDueDate: 12/21/2011

Batch: 1335105 **SOIL** **mg/kg** **PM, Quote: RW2, 27038**
SEQ Batch, Test: None All Tests: AXTA, 1335105 DWEA,

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

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MPC1V-1-AA J1K300475-1-SAMP 11/29/2011 10:19			2.5066		AmtRec: 1X120MLP;1X500MLP		#Containers: 2		Scr:		Alpha:		Beta:
2 MPC1V-1-AD-S J1K300475-1-MS 11/29/2011 10:19			2.5047		AmtRec: 1X120MLP;1X500MLP		#Containers: 2		Scr:		Alpha:		Beta:
3 MPC1V-1-AE-X J1K300475-1-DUP 11/29/2011 10:19			2.5008 / phenol: 2.501		AmtRec: 1X120MLP;1X500MLP		#Containers: 2		Scr:		Alpha:		Beta:
4 MPC16-1-AA J1K300475-2-SAMP 11/29/2011 10:23			2.5064		AmtRec: 1X120MLP;1X500MLP		#Containers: 2		Scr:		Alpha:		Beta:
5 MPC2A-1-AA J1K300475-3-SAMP 11/29/2011 10:17			2.5047		AmtRec: 1X120MLP;1X500MLP		#Containers: 2		Scr:		Alpha:		Beta:
6 MPC2C-1-AA J1K300475-4-SAMP 11/29/2011 10:21			2.5095		AmtRec: 1X120MLP;1X500MLP		#Containers: 2		Scr:		Alpha:		Beta:
7 MPDHK-1-AA-B J1L010000-105-BLK 12/01/2011 12:02 pd					AmtRec:		#Containers: 1		Scr:		Alpha:		Beta:

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12/1/2011 12:02:58 PM

Sample Preparation/Analysis

DW Alkaline Digestion by method 3060A
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

Balance Id:

Pipet #:

AnalyDueDate: 12/21/2011

Sep1 DT/Tm Tech:

Batch: 1335105 mg/kg

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 MPDHK-1-AC-C													
J1L010000-105-LCS													
12/01/2011 12:02 pd			AmtRec:		#Containers: 1					Scr:	Alpha:		Beta:

Comments:

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

MPC1V1AA-SAMP Constituent List:
HEXCHROME RDL:0.1548 mg/kg LCL:80 UCL:120 RPD:20
MPC1V1AD-MS Constituent List:

MPDHK1AA-BLK:

MPDHK1AC-LCS:

MPC1V1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MPC1V1AD-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MPDHK1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MPDHK1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-23278-1

SDG Number: J01351

Job Description: SAF# RC-075

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

Attention: Joan H Kessner

RECEIVED
DEC 2011

Approved for release.
Kae E Yoder
Project Manager II
12/19/2011 3:52 PM

Kae E Yoder
Project Manager II
kae.yoder@testamericainc.com
12/19/2011

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.

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CASE NARRATIVE

Client: Washington Closure Hanford

Project: WASHINGTON CLOSURE HANFORD

Report Number: 280-23278-1

SDG #: J01351
SAF#: RC-075

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

CLIENT ID	LAB ID	ANALYSES REQUESTED	ANALYSES PERFORMED
J1MM87	280-23278-1	6010/7471/9056M/353.2/9045/8270A/6310/ 8082/8081	6010B/7471A/9056M/353.2/9045C/8270C/8310/ 8082/8081A
J1MM88	280-23278-2	6010/7471/9056M/353.2/9045/8270A/8310/ 8082/8081	6010B/7471A/9056M/353.2/9045C/8270C/8310/ 8082/8081A
J1MM89	280-23278-3	6010/7471/9056M/353.2/9045/8270A/8310/ 8082/8081	6010B/7471A/9056M/353.2/9045C/8270C/8310/ 8082/8081A
J1MM90	280-23278-4	6010/7471/9056M/353.2/9045/8270A/8310/ 8082/8081	6010B/7471A/9056M/353.2/9045C/8270C/8310/ 8082/8081A

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 12/1/2011; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 5.3 C and 2.3 C.

GC/MS SEMIVOLATILES - SW846 8270C
Low levels of Bis(2-ethylhexyl) phthalate and Dimethyl phthalate are present in the method blank associated with batch 280-98664. Because the concentrations in the method blank are not present at levels greater than the reporting limits, corrective action is deemed unnecessary. Associated sample results present above the MDL and/or RL have been flagged with a "B".

No other anomalies were encountered.

GC SEMIVOLATILES - SW846 8081A - PESTICIDEs
No anomalies were encountered.

GC SEMIVOLATILES - SW846 8082 - PCBs
No anomalies were encountered.

HPLC - SW846 8310 - PAHs
No anomalies were encountered.

TOTAL METALS - SW846 6010B/7471A
Serial dilution of a digestate in batch 280-98375 indicates that physical and chemical interferences are present for Cobalt and Zinc. Results have been flagged with an "X".

Low levels of Zinc are present in the method blank associated with batch 280-98375. Because the concentration in the method blank is not present at a level greater than half the reporting limit, corrective action is deemed unnecessary.

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 J1MM87; therefore, control limits are not applicable.

Silicon was recovered outside the control limits in the Matrix Spike performed on sample J1MM87, and the associated sample result has been flagged "N". There is no indication that the analytical system was operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

GENERAL CHEMISTRY - MCAWW 353.2 - NITRATE+NITRITE as N
No 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: 280-23278-1
Sdg Number: J01351

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	B	Analyte was found in the associated method blank as well as in the sample.
	U	Analyzed for but not detected.
	J	Indicates an Estimated Value for TICs
	N	Presumptive evidence of material.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	U	Analyzed for but not detected.
Metals		
	U	Analyzed for but not detected.
	B	Estimated result. Result is less than the RL, but greater than MDL
	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
	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
HPLC/IC		
	U	Analyzed for but not detected.

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Semivolatile Organic Compounds (GC/MS)	TAL DEN	SW846 8270C	
Ultrasonic Extraction			SW846 3550C
Organochlorine Pesticides (GC)	TAL DEN	SW846 8081A	
Ultrasonic Extraction			SW846 3550C
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL DEN	SW846 8082	
Ultrasonic Extraction			SW846 3550C
PAHs (HPLC)	TAL DEN	SW846 8310	
Ultrasonic Extraction			SW846 3550C
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Metals			SW846 3050B
Mercury (CVAA)	TAL DEN	SW846 7471A	
Preparation, Mercury			SW846 7471A
Nitrogen, Nitrate-Nitrite	TAL DEN	MCAWW 353.2	
Deionized Water Leaching Procedure			ASTM DI Leach
pH	TAL DEN	SW846 9045C	
Deionized Water Leaching Procedure			ASTM DI Leach
Anions, Ion Chromatography	TAL DEN	SW846 9056M	
Deionized Water Leaching Procedure			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: 280-23278-1
Sdg Number: J01351

Method	Analyst	Analyst ID
SW846 8270C	Schiller, Jon	JS
SW846 8081A	Wells, David	DW
SW846 8082	Jackson, Todd D	TDJ
SW846 6010B	Bowen, Heidi E	HEB
SW846 6010B	Harre, John K	JKH
SW846 7471A	Rawlings, Brendon L	BLR
MCAWW 353.2	Scott, Samantha J	SJS
SW846 9045C	Ayala, Delaina	DA
SW846 9056M	Kudla, Ewa	EK
ASTM D-2216	Berry III, Paul B	PBB
SW846 8310	Hall, Koley J	KJH

SAMPLE SUMMARY

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-23278-1	J1MM87	Solid	11/29/2011 1019	12/01/2011 0930
280-23278-2	J1MM88	Solid	11/29/2011 1023	12/01/2011 0930
280-23278-3	J1MM89	Solid	11/29/2011 1017	12/01/2011 0930
280-23278-4	J1MM90	Solid	11/29/2011 1021	12/01/2011 0930

SAMPLE RESULTS

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM87**

Lab Sample ID: 280-23278-1
Client Matrix: Solid
% Moisture: 2.7

Date Sampled: 11/29/2011 1019
Date Received: 12/01/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-99656	Instrument ID:	MSS_K
Prep Method:	3550C	Prep Batch:	280-98664	Lab File ID:	K3259.D
Dilution:	1.0			Initial Weight/Volume:	32.6 g
Analysis Date:	12/09/2011 1839			Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		9.7	U	9.7	310
Acenaphthylene		16	U	16	310
Anthracene		16	U	16	310
Benzo[a]anthracene		19	U	19	310
Benzo[a]pyrene		19	U	19	310
Benzo[b]fluoranthene		25	U	25	310
Benzo[ghi]perylene		15	U	15	310
Benzo[k]fluoranthene		38	U	38	310
Bis(2-chloroethoxy)methane		22	U	22	310
Bis(2-chloroethyl)ether		16	U	16	310
bis (2-chloroisopropyl) ether		22	U	22	310
Bis(2-ethylhexyl) phthalate		44	U	44	310
4-Bromophenyl phenyl ether		18	U	18	310
Butyl benzyl phthalate		41	U	41	310
Carbazole		34	U	34	310
4-Chloroaniline		77	U	77	310
4-Chloro-3-methylphenol		62	U	62	310
2-Chloronaphthalene		9.5	U	9.5	310
2-Chlorophenol		20	U	20	310
4-Chlorophenyl phenyl ether		20	U	20	310
Chrysene		26	U	26	310
Dibenz(a,h)anthracene		18	U	18	310
Dibenzofuran		19	U	19	310
1,2-Dichlorobenzene		21	U	21	310
1,3-Dichlorobenzene		11	U	11	310
1,4-Dichlorobenzene		13	U	13	310
3,3'-Dichlorobenzidine		85	U	85	620
2,4-Dichlorophenol		9.5	U	9.5	310
Diethyl phthalate		25	U	25	310
2,4-Dimethylphenol		62	U	62	310
Dimethyl phthalate		110	J B	22	310
Di-n-butyl phthalate		27	U	27	310
4,6-Dinitro-2-methylphenol		310	U	310	620
2,4-Dinitrophenol		320	U	320	780
2,4-Dinitrotoluene		62	U	62	310
2,6-Dinitrotoluene		26	U	26	310
Di-n-octyl phthalate		14	U	14	310
Fluoranthene		34	U	34	310
Fluorene		17	U	17	310
Hexachlorobenzene		27	U	27	310
Hexachlorobutadiene		9.5	U	9.5	310
Hexachlorocyclopentadiene		47	U	47	310
Hexachloroethane		20	U	20	310
Indeno[1,2,3-cd]pyrene		21	U	21	310
Isophorone		16	U	16	310
2-Methylnaphthalene		18	U	18	310

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM87**

Lab Sample ID: 280-23278-1
Client Matrix: Solid
% Moisture: 2.7

Date Sampled: 11/29/2011 1019
Date Received: 12/01/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-99656	Instrument ID:	MSS_K
Prep Method:	3550C	Prep Batch:	280-98664	Lab File ID:	K3259.D
Dilution:	1.0			Initial Weight/Volume:	32.6 g
Analysis Date:	12/09/2011 1839			Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		12	U	12	310
3 & 4 Methylphenol		31	U	31	310
Naphthalene		29	U	29	310
2-Nitroaniline		47	U	47	310
3-Nitroaniline		69	U	69	310
4-Nitroaniline		69	U	69	310
Nitrobenzene		21	U	21	310
2-Nitrophenol		9.5	U	9.5	310
4-Nitrophenol		92	U	92	620
N-Nitrosodi-n-propylamine		29	U	29	310
N-Nitrosodiphenylamine		20	U	20	310
Pentachlorophenol		310	U	310	620
Phenanthrene		16	U	16	310
Phenol		17	U	17	310
Pyrene		11	U	11	310
1,2,4-Trichlorobenzene		26	U	26	310
2,4,5-Trichlorophenol		9.5	U	9.5	310
2,4,6-Trichlorophenol		9.5	U	9.5	310

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	68		50 - 120
2-Fluorophenol	73		53 - 120
Nitrobenzene-d5	70		50 - 120
Phenol-d5	74		52 - 120
Terphenyl-d14	79		55 - 120
2,4,6-Tribromophenol	74		51 - 120

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM87**

Lab Sample ID: 280-23278-1
Client Matrix: Solid
% Moisture: 2.7

Date Sampled: 11/29/2011 1019
Date Received: 12/01/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-99656	Instrument ID:	MSS_K
Prep Method:	3550C	Prep Batch:	280-98664	Lab File ID:	K3259.D
Dilution:	1.0			Initial Weight/Volume:	32.6 g
Analysis Date:	12/09/2011 1839			Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found:** 1

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	3.22	3100	N J

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM88**

Lab Sample ID: 280-23278-2
Client Matrix: Solid
% Moisture: 3.0

Date Sampled: 11/29/2011 1023
Date Received: 12/01/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-99656	Instrument ID:	MSS_K
Prep Method:	3550C	Prep Batch:	280-98664	Lab File ID:	K3260.D
Dilution:	1.0			Initial Weight/Volume:	30.1 g
Analysis Date:	12/09/2011 1859			Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		11	U	11	340
Acenaphthylene		17	U	17	340
Anthracene		17	U	17	340
Benzo[a]anthracene		21	U	21	340
Benzo[a]pyrene		21	U	21	340
Benzo[b]fluoranthene		27	U	27	340
Benzo[ghi]perylene		16	U	16	340
Benzo[k]fluoranthene		41	U	41	340
Bis(2-chloroethoxy)methane		24	U	24	340
Bis(2-chloroethyl)ether		17	U	17	340
bis (2-chloroisopropyl) ether		24	U	24	340
Bis(2-ethylhexyl) phthalate		47	U	47	340
4-Bromophenyl phenyl ether		20	U	20	340
Butyl benzyl phthalate		44	U	44	340
Carbazole		37	U	37	340
4-Chloroaniline		84	U	84	340
4-Chloro-3-methylphenol		68	U	68	340
2-Chloronaphthalene		10	U	10	340
2-Chlorophenol		22	U	22	340
4-Chlorophenyl phenyl ether		22	U	22	340
Chrysene		28	U	28	340
Dibenz(a,h)anthracene		20	U	20	340
Dibenzofuran		21	U	21	340
1,2-Dichlorobenzene		23	U	23	340
1,3-Dichlorobenzene		12	U	12	340
1,4-Dichlorobenzene		14	U	14	340
3,3'-Dichlorobenzidine		92	U	92	680
2,4-Dichlorophenol		10	U	10	340
Diethyl phthalate		27	U	27	340
2,4-Dimethylphenol		68	U	68	340
Dimethyl phthalate		24	U	24	340
Di-n-butyl phthalate		30	U	30	340
4,6-Dinitro-2-methylphenol		340	U	340	680
2,4-Dinitrophenol		340	U	340	850
2,4-Dinitrotoluene		68	U	68	340
2,6-Dinitrotoluene		29	U	29	340
Di-n-octyl phthalate		15	U	15	340
Fluoranthene		37	U	37	340
Fluorene		18	U	18	340
Hexachlorobenzene		30	U	30	340
Hexachlorobutadiene		10	U	10	340
Hexachlorocyclopentadiene		51	U	51	340
Hexachloroethane		22	U	22	340
Indeno[1,2,3-cd]pyrene		23	U	23	340
Isophorone		17	U	17	340
2-Methylnaphthalene		20	U	20	340

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM88**

Lab Sample ID: 280-23278-2
Client Matrix: Solid
% Moisture: 3.0

Date Sampled: 11/29/2011 1023
Date Received: 12/01/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-99656	Instrument ID:	MSS_K
Prep Method:	3550C	Prep Batch:	280-98664	Lab File ID:	K3260.D
Dilution:	1.0			Initial Weight/Volume:	30.1 g
Analysis Date:	12/09/2011 1859			Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		13	U	13	340
3 & 4 Methylphenol		34	U	34	340
Naphthalene		32	U	32	340
2-Nitroaniline		51	U	51	340
3-Nitroaniline		75	U	75	340
4-Nitroaniline		74	U	74	340
Nitrobenzene		23	U	23	340
2-Nitrophenol		10	U	10	340
4-Nitrophenol		100	U	100	680
N-Nitrosodi-n-propylamine		32	U	32	340
N-Nitrosodiphenylamine		22	U	22	340
Pentachlorophenol		340	U	340	680
Phenanthrene		17	U	17	340
Phenol		18	U	18	340
Pyrene		12	U	12	340
1,2,4-Trichlorobenzene		29	U	29	340
2,4,5-Trichlorophenol		10	U	10	340
2,4,6-Trichlorophenol		10	U	10	340

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	74		50 - 120
2-Fluorophenol	77		53 - 120
Nitrobenzene-d5	75		50 - 120
Phenol-d5	79		52 - 120
Terphenyl-d14	79		55 - 120
2,4,6-Tribromophenol	78		51 - 120

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM88**

Lab Sample ID: 280-23278-2
Client Matrix: Solid
% Moisture: 3.0

Date Sampled: 11/29/2011 1023
Date Received: 12/01/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-99656	Instrument ID:	MSS_K
Prep Method:	3550C	Prep Batch:	280-98664	Lab File ID:	K3260.D
Dilution:	1.0			Initial Weight/Volume:	30.1 g
Analysis Date:	12/09/2011 1859			Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found:** 1

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	3.22	3600	N J

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM89**

Lab Sample ID: 280-23278-3
Client Matrix: Solid
% Moisture: 1.7

Date Sampled: 11/29/2011 1017
Date Received: 12/01/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-99656	Instrument ID:	MSS_K
Prep Method:	3550C	Prep Batch:	280-98664	Lab File ID:	K3263.D
Dilution:	1.0			Initial Weight/Volume:	30.9 g
Analysis Date:	12/09/2011 2000			Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	330
Acenaphthylene		17	U	17	330
Anthracene		17	U	17	330
Benzo[a]anthracene		20	U	20	330
Benzo[a]pyrene		20	U	20	330
Benzo[b]fluoranthene		26	U	26	330
Benzo[ghi]perylene		16	U	16	330
Benzo[k]fluoranthene		40	U	40	330
Bis(2-chloroethoxy)methane		23	U	23	330
Bis(2-chloroethyl)ether		16	U	16	330
bis (2-chloroisopropyl) ether		23	U	23	330
Bis(2-ethylhexyl) phthalate		45	U	45	330
4-Bromophenyl phenyl ether		19	U	19	330
Butyl benzyl phthalate		42	U	42	330
Carbazole		36	U	36	330
4-Chloroaniline		81	U	81	330
4-Chloro-3-methylphenol		65	U	65	330
2-Chloronaphthalene		9.9	U	9.9	330
2-Chlorophenol		21	U	21	330
4-Chlorophenyl phenyl ether		21	U	21	330
Chrysene		27	U	27	330
Dibenz(a,h)anthracene		19	U	19	330
Dibenzofuran		20	U	20	330
1,2-Dichlorobenzene		22	U	22	330
1,3-Dichlorobenzene		12	U	12	330
1,4-Dichlorobenzene		13	U	13	330
3,3'-Dichlorobenzidine		89	U	89	650
2,4-Dichlorophenol		9.9	U	9.9	330
Diethyl phthalate		26	U	26	330
2,4-Dimethylphenol		65	U	65	330
Dimethyl phthalate		110	J B	23	330
Di-n-butyl phthalate		29	U	29	330
4,6-Dinitro-2-methylphenol		330	U	330	650
2,4-Dinitrophenol		330	U	330	810
2,4-Dinitrotoluene		65	U	65	330
2,6-Dinitrotoluene		28	U	28	330
Di-n-octyl phthalate		14	U	14	330
Fluoranthene		36	U	36	330
Fluorene		18	U	18	330
Hexachlorobenzene		29	U	29	330
Hexachlorobutadiene		9.9	U	9.9	330
Hexachlorocyclopentadiene		49	U	49	330
Hexachloroethane		21	U	21	330
Indeno[1,2,3-cd]pyrene		22	U	22	330
Isophorone		17	U	17	330
2-Methylnaphthalene		19	U	19	330

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM89**

Lab Sample ID: 280-23278-3
Client Matrix: Solid
% Moisture: 1.7

Date Sampled: 11/29/2011 1017
Date Received: 12/01/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-99656	Instrument ID:	MSS_K
Prep Method:	3550C	Prep Batch:	280-98664	Lab File ID:	K3263.D
Dilution:	1.0			Initial Weight/Volume:	30.9 g
Analysis Date:	12/09/2011 2000			Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		13	U	13	330
3 & 4 Methylphenol		33	U	33	330
Naphthalene		31	U	31	330
2-Nitroaniline		49	U	49	330
3-Nitroaniline		72	U	72	330
4-Nitroaniline		72	U	72	330
Nitrobenzene		22	U	22	330
2-Nitrophenol		9.9	U	9.9	330
4-Nitrophenol		96	U	96	650
N-Nitrosodi-n-propylamine		31	U	31	330
N-Nitrosodiphenylamine		21	U	21	330
Pentachlorophenol		330	U	330	650
Phenanthrene		17	U	17	330
Phenol		18	U	18	330
Pyrene		12	U	12	330
1,2,4-Trichlorobenzene		28	U	28	330
2,4,5-Trichlorophenol		9.9	U	9.9	330
2,4,6-Trichlorophenol		9.9	U	9.9	330

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	67		50 - 120
2-Fluorophenol	71		53 - 120
Nitrobenzene-d5	68		50 - 120
Phenol-d5	73		52 - 120
Terphenyl-d14	78		55 - 120
2,4,6-Tribromophenol	64		51 - 120

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM89**

Lab Sample ID: 280-23278-3
Client Matrix: Solid
% Moisture: 1.7

Date Sampled: 11/29/2011 1017
Date Received: 12/01/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-99656	Instrument ID:	MSS_K
Prep Method:	3550C	Prep Batch:	280-98664	Lab File ID:	K3263.D
Dilution:	1.0			Initial Weight/Volume:	30.9 g
Analysis Date:	12/09/2011 2000			Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found:** 1

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	3.22	3200	N J

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM90**

Lab Sample ID: 280-23278-4
Client Matrix: Solid
% Moisture: 1.7

Date Sampled: 11/29/2011 1021
Date Received: 12/01/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-99766	Instrument ID:	MSS_K
Prep Method:	3550C	Prep Batch:	280-98664	Lab File ID:	K3288.D
Dilution:	1.0			Initial Weight/Volume:	30.2 g
Analysis Date:	12/12/2011 1556			Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	330
Acenaphthylene		17	U	17	330
Anthracene		17	U	17	330
Benzo[a]anthracene		20	U	20	330
Benzo[a]pyrene		20	U	20	330
Benzo[b]fluoranthene		26	U	26	330
Benzo[ghi]perylene		16	U	16	330
Benzo[k]fluoranthene		40	U	40	330
Bis(2-chloroethoxy)methane		23	U	23	330
Bis(2-chloroethyl)ether		17	U	17	330
bis (2-chloroisopropyl) ether		23	U	23	330
Bis(2-ethylhexyl) phthalate		46	U	46	330
4-Bromophenyl phenyl ether		19	U	19	330
Butyl benzyl phthalate		43	U	43	330
Carbazole		36	U	36	330
4-Chloroaniline		83	U	83	330
4-Chloro-3-methylphenol		67	U	67	330
2-Chloronaphthalene		10	U	10	330
2-Chlorophenol		21	U	21	330
4-Chlorophenyl phenyl ether		21	U	21	330
Chrysene		27	U	27	330
Dibenz(a,h)anthracene		19	U	19	330
Dibenzofuran		20	U	20	330
1,2-Dichlorobenzene		22	U	22	330
1,3-Dichlorobenzene		12	U	12	330
1,4-Dichlorobenzene		14	U	14	330
3,3'-Dichlorobenzidine		91	U	91	670
2,4-Dichlorophenol		10	U	10	330
Diethyl phthalate		26	U	26	330
2,4-Dimethylphenol		67	U	67	330
Dimethyl phthalate		23	U	23	330
Di-n-butyl phthalate		29	U	29	330
4,6-Dinitro-2-methylphenol		330	U	330	670
2,4-Dinitrophenol		340	U	340	830
2,4-Dinitrotoluene		67	U	67	330
2,6-Dinitrotoluene		28	U	28	330
Di-n-octyl phthalate		15	U	15	330
Fluoranthene		36	U	36	330
Fluorene		18	U	18	330
Hexachlorobenzene		29	U	29	330
Hexachlorobutadiene		10	U	10	330
Hexachlorocyclopentadiene		51	U	51	330
Hexachloroethane		22	U	22	330
Indeno[1,2,3-cd]pyrene		22	U	22	330
Isophorone		17	U	17	330
2-Methylnaphthalene		19	U	19	330

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM90**

Lab Sample ID: 280-23278-4
Client Matrix: Solid
% Moisture: 1.7

Date Sampled: 11/29/2011 1021
Date Received: 12/01/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-99766	Instrument ID:	MSS_K
Prep Method:	3550C	Prep Batch:	280-98664	Lab File ID:	K3288.D
Dilution:	1.0			Initial Weight/Volume:	30.2 g
Analysis Date:	12/12/2011 1556			Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		13	U	13	330
3 & 4 Methylphenol		33	U	33	330
Naphthalene		31	U	31	330
2-Nitroaniline		51	U	51	330
3-Nitroaniline		74	U	74	330
4-Nitroaniline		73	U	73	330
Nitrobenzene		22	U	22	330
2-Nitrophenol		10	U	10	330
4-Nitrophenol		98	U	98	670
N-Nitrosodi-n-propylamine		31	U	31	330
N-Nitrosodiphenylamine		21	U	21	330
Pentachlorophenol		330	U	330	670
Phenanthrene		17	U	17	330
Phenol		18	U	18	330
Pyrene		12	U	12	330
1,2,4-Trichlorobenzene		28	U	28	330
2,4,5-Trichlorophenol		10	U	10	330
2,4,6-Trichlorophenol		10	U	10	330

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	78		50 - 120
2-Fluorophenol	79		53 - 120
Nitrobenzene-d5	81		50 - 120
Phenol-d5	81		52 - 120
Terphenyl-d14	81		55 - 120
2,4,6-Tribromophenol	74		51 - 120

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM90**

Lab Sample ID: 280-23278-4
Client Matrix: Solid
% Moisture: 1.7

Date Sampled: 11/29/2011 1021
Date Received: 12/01/2011 0930

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-99766	Instrument ID:	MSS_K
Prep Method:	3550C	Prep Batch:	280-98664	Lab File ID:	K3288.D
Dilution:	1.0			Initial Weight/Volume:	30.2 g
Analysis Date:	12/12/2011 1556			Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found:** **2**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	2.75	640	N J
	Unknown	3.22	3600	N J

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM87**

Lab Sample ID: 280-23278-1
Client Matrix: Solid
% Moisture: 2.7

Date Sampled: 11/29/2011 1019
Date Received: 12/01/2011 0930

8081A Organochlorine Pesticides (GC)

Analysis Method:	8081A	Analysis Batch:	280-100094	Instrument ID:	GCS_P2
Prep Method:	3550C	Prep Batch:	280-99834	Initial Weight/Volume:	30.6 g
Dilution:	1.0			Final Weight/Volume:	10000 uL
Analysis Date:	12/14/2011 2031			Injection Volume:	1 uL
Prep Date:	12/13/2011 1955			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		0.55	U	0.55	1.7
4,4'-DDE		0.24	U	0.24	1.7
4,4'-DDT		0.59	U	0.59	1.7
Aldrin		0.25	U	0.25	1.7
alpha-BHC		0.22	U	0.22	1.7
beta-BHC		0.67	U	0.67	1.7
delta-BHC		0.40	U	0.40	1.7
gamma-BHC (Lindane)		0.47	U	0.47	1.7
Heptachlor		0.22	U	0.22	1.7
Heptachlor epoxide		0.43	U	0.43	1.7
Endosulfan I		0.18	U	0.18	1.7
Endosulfan II		0.29	U	0.29	1.7
Endosulfan sulfate		0.28	U	0.28	1.7
Endrin		0.31	U	0.31	1.7
Endrin aldehyde		0.17	U	0.17	1.7
Endrin ketone		0.49	U	0.49	1.7
gamma-Chlordane		0.27	U	0.27	1.7
Methoxychlor		0.45	U	0.45	3.3
alpha-Chlordane		0.33	U	0.33	1.7
Dieldrin		0.21	U	0.21	1.7
Toxaphene		16	U	16	170

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	95		59 - 115
Decachlorobiphenyl	103		63 - 124

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM88**

Lab Sample ID: 280-23278-2
Client Matrix: Solid
% Moisture: 3.0

Date Sampled: 11/29/2011 1023
Date Received: 12/01/2011 0930

8081A Organochlorine Pesticides (GC)

Analysis Method:	8081A	Analysis Batch:	280-100094	Instrument ID:	GCS_P2
Prep Method:	3550C	Prep Batch:	280-99834	Initial Weight/Volume:	30.1 g
Dilution:	1.0			Final Weight/Volume:	10000 uL
Analysis Date:	12/14/2011 2047			Injection Volume:	1 uL
Prep Date:	12/13/2011 1955			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		0.56	U	0.56	1.7
4,4'-DDE		0.24	U	0.24	1.7
4,4'-DDT		0.61	U	0.61	1.7
Aldrin		0.26	U	0.26	1.7
alpha-BHC		0.22	U	0.22	1.7
beta-BHC		0.68	U	0.68	1.7
delta-BHC		0.41	U	0.41	1.7
gamma-BHC (Lindane)		0.48	U	0.48	1.7
Heptachlor		0.22	U	0.22	1.7
Heptachlor epoxide		0.44	U	0.44	1.7
Endosulfan I		0.18	U	0.18	1.7
Endosulfan II		0.29	U	0.29	1.7
Endosulfan sulfate		0.28	U	0.28	1.7
Endrin		0.31	U	0.31	1.7
Endrin aldehyde		0.18	U	0.18	1.7
Endrin ketone		0.50	U	0.50	1.7
gamma-Chlordane		0.27	U	0.27	1.7
Methoxychlor		0.46	U	0.46	3.4
alpha-Chlordane		0.33	U	0.33	1.7
Dieldrin		0.22	U	0.22	1.7
Toxaphene		16	U	16	170

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	96		59 - 115
Decachlorobiphenyl	103		63 - 124

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM89**

Lab Sample ID: 280-23278-3
Client Matrix: Solid
% Moisture: 1.7

Date Sampled: 11/29/2011 1017
Date Received: 12/01/2011 0930

8081A Organochlorine Pesticides (GC)

Analysis Method:	8081A	Analysis Batch:	280-100094	Instrument ID:	GCS_P2
Prep Method:	3550C	Prep Batch:	280-99834	Initial Weight/Volume:	30.8 g
Dilution:	1.0			Final Weight/Volume:	10000 uL
Analysis Date:	12/14/2011 2137			Injection Volume:	1 uL
Prep Date:	12/13/2011 1955			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		0.54	U	0.54	1.7
4,4'-DDE		0.24	U	0.24	1.7
4,4'-DDT		0.58	U	0.58	1.7
Aldrin		0.25	U	0.25	1.6
alpha-BHC		0.21	U	0.21	1.6
beta-BHC		0.66	U	0.66	1.6
delta-BHC		0.40	U	0.40	1.6
gamma-BHC (Lindane)		0.46	U	0.46	1.6
Heptachlor		0.21	U	0.21	1.6
Heptachlor epoxide		0.42	U	0.42	1.6
Endosulfan I		0.17	U	0.17	1.6
Endosulfan II		0.28	U	0.28	1.7
Endosulfan sulfate		0.27	U	0.27	1.7
Endrin		0.30	U	0.30	1.7
Endrin aldehyde		0.17	U	0.17	1.7
Endrin ketone		0.48	U	0.48	1.7
gamma-Chlordane		0.26	U	0.26	1.7
Methoxychlor		0.45	U	0.45	3.3
alpha-Chlordane		0.32	U	0.32	1.7
Dieldrin		0.21	U	0.21	1.7
Toxaphene		16	U	16	160

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	92		59 - 115
Decachlorobiphenyl	99		63 - 124

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM90**

Lab Sample ID: 280-23278-4
Client Matrix: Solid
% Moisture: 1.7

Date Sampled: 11/29/2011 1021
Date Received: 12/01/2011 0930

8081A Organochlorine Pesticides (GC)

Analysis Method:	8081A	Analysis Batch:	280-100094	Instrument ID:	GCS_P2
Prep Method:	3550C	Prep Batch:	280-99834	Initial Weight/Volume:	30.2 g
Dilution:	1.0			Final Weight/Volume:	10000 uL
Analysis Date:	12/14/2011 2153			Injection Volume:	1 uL
Prep Date:	12/13/2011 1955			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		0.55	U	0.55	1.7
4,4'-DDE		0.24	U	0.24	1.7
4,4'-DDT		0.60	U	0.60	1.7
Aldrin		0.25	U	0.25	1.7
alpha-BHC		0.22	U	0.22	1.7
beta-BHC		0.67	U	0.67	1.7
delta-BHC		0.41	U	0.41	1.7
gamma-BHC (Lindane)		0.47	U	0.47	1.7
Heptachlor		0.22	U	0.22	1.7
Heptachlor epoxide		0.43	U	0.43	1.7
Endosulfan I		0.18	U	0.18	1.7
Endosulfan II		0.29	U	0.29	1.7
Endosulfan sulfate		0.28	U	0.28	1.7
Endrin		0.31	U	0.31	1.7
Endrin aldehyde		0.17	U	0.17	1.7
Endrin ketone		0.49	U	0.49	1.7
gamma-Chlordane		0.27	U	0.27	1.7
Methoxychlor		0.45	U	0.45	3.3
alpha-Chlordane		0.33	U	0.33	1.7
Dieldrin		0.21	U	0.21	1.7
Toxaphene		16	U	16	170

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	100		59 - 115
Decachlorobiphenyl	105		63 - 124

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM87**

Lab Sample ID: 280-23278-1
Client Matrix: Solid
% Moisture: 2.7

Date Sampled: 11/29/2011 1019
Date Received: 12/01/2011 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-99205	Instrument ID:	GCS_P3
Prep Method:	3550C	Prep Batch:	280-98741	Initial Weight/Volume:	32.1 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	12/07/2011 2328			Injection Volume:	1 uL
Prep Date:	12/05/2011 1625			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.7	U	2.7	9.6
Aroclor 1221		7.7	U	7.7	16
Aroclor 1232		1.9	U	1.9	9.6
Aroclor 1242		4.5	U	4.5	9.6
Aroclor 1248		4.5	U	4.5	9.6
Aroclor 1254		2.5	U	2.5	9.6
Aroclor 1260		2.5	U	2.5	9.6

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	96		59 - 130
Tetrachloro-m-xylene	103		53 - 128

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM88**

Lab Sample ID: 280-23278-2
Client Matrix: Solid
% Moisture: 3.0

Date Sampled: 11/29/2011 1023
Date Received: 12/01/2011 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-99205	Instrument ID:	GCS_P3
Prep Method:	3550C	Prep Batch:	280-98741	Initial Weight/Volume:	30.6 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	12/07/2011 2350			Injection Volume:	1 uL
Prep Date:	12/05/2011 1625			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.8	U	2.8	10
Aroclor 1221		8.1	U	8.1	17
Aroclor 1232		2.0	U	2.0	10
Aroclor 1242		4.7	U	4.7	10
Aroclor 1248		4.7	U	4.7	10
Aroclor 1254		2.6	U	2.6	10
Aroclor 1260		2.6	U	2.6	10

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	96		59 - 130
Tetrachloro-m-xylene	102		53 - 128

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM89**

Lab Sample ID: 280-23278-3
Client Matrix: Solid
% Moisture: 1.7

Date Sampled: 11/29/2011 1017
Date Received: 12/01/2011 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-99205	Instrument ID:	GCS_P3
Prep Method:	3550C	Prep Batch:	280-98741	Initial Weight/Volume:	30.5 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	12/08/2011 0011			Injection Volume:	1 uL
Prep Date:	12/05/2011 1625			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.8	U	2.8	10
Aroclor 1221		8.0	U	8.0	17
Aroclor 1232		2.0	U	2.0	10
Aroclor 1242		4.7	U	4.7	10
Aroclor 1248		4.7	U	4.7	10
Aroclor 1254		2.6	U	2.6	10
Aroclor 1260		2.6	U	2.6	10

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	97		59 - 130
Tetrachloro-m-xylene	109		53 - 128

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM90**

Lab Sample ID: 280-23278-4
Client Matrix: Solid
% Moisture: 1.7

Date Sampled: 11/29/2011 1021
Date Received: 12/01/2011 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-99205	Instrument ID:	GCS_P3
Prep Method:	3550C	Prep Batch:	280-98741	Initial Weight/Volume:	30.3 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	12/08/2011 0033			Injection Volume:	1 uL
Prep Date:	12/05/2011 1625			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.8	U	2.8	10
Aroclor 1221		8.1	U	8.1	17
Aroclor 1232		2.0	U	2.0	10
Aroclor 1242		4.7	U	4.7	10
Aroclor 1248		4.7	U	4.7	10
Aroclor 1254		2.6	U	2.6	10
Aroclor 1260		2.6	U	2.6	10

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	96		59 - 130
Tetrachloro-m-xylene	101		53 - 128

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM87**

Lab Sample ID: 280-23278-1
Client Matrix: Solid
% Moisture: 2.7

Date Sampled: 11/29/2011 1019
Date Received: 12/01/2011 0930

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-99247	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-98761	Initial Weight/Volume:	30.4 g
Dilution:	1.0			Final Weight/Volume:	4000 uL
Analysis Date:	12/09/2011 0200			Injection Volume:	20 uL
Prep Date:	12/05/2011 1739			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	100
Acenaphthylene		9.1	U	9.1	100
Anthracene		3.1	U	3.1	20
Benzo[a]anthracene		3.2	U	3.2	15
Benzo[a]pyrene		6.5	U	6.5	15
Benzo[b]fluoranthene		4.3	U	4.3	15
Benzo[g,h,i]perylene		7.3	U	7.3	30
Benzo[k]fluoranthene		4.0	U	4.0	15
Chrysene		4.9	U	4.9	41
Dibenzo(a,h)anthracene		11	U	11	30
Fluoranthene		13	U	13	41
Fluorene		5.4	U	5.4	30
Indeno[1,2,3-cd]pyrene		12	U	12	30
Naphthalene		12	U	12	100
Phenanthrene		12	U	12	41
Pyrene		12	U	12	41

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	101		72 - 115

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM88**

Lab Sample ID: 280-23278-2
Client Matrix: Solid
% Moisture: 3.0

Date Sampled: 11/29/2011 1023
Date Received: 12/01/2011 0930

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-99247	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-98761	Initial Weight/Volume:	30.0 g
Dilution:	1.0			Final Weight/Volume:	4000 uL
Analysis Date:	12/09/2011 0231			Injection Volume:	20 uL
Prep Date:	12/05/2011 1739			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		3.1	U	3.1	21
Benzo[a]anthracene		3.3	U	3.3	15
Benzo[a]pyrene		6.6	U	6.6	15
Benzo[b]fluoranthene		4.3	U	4.3	15
Benzo[g,h,i]perylene		7.4	U	7.4	31
Benzo[k]fluoranthene		4.1	U	4.1	15
Chrysene		5.0	U	5.0	41
Dibenzo(a,h)anthracene		11	U	11	31
Fluoranthene		13	U	13	41
Fluorene		5.4	U	5.4	31
Indeno[1,2,3-cd]pyrene		12	U	12	31
Naphthalene		12	U	12	100
Phenanthrene		12	U	12	41
Pyrene		12	U	12	41

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	96		72 - 115

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM89**

Lab Sample ID: 280-23278-3
Client Matrix: Solid
% Moisture: 1.7

Date Sampled: 11/29/2011 1017
Date Received: 12/01/2011 0930

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-99247	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-98761	Initial Weight/Volume:	30.0 g
Dilution:	1.0			Final Weight/Volume:	4000 uL
Analysis Date:	12/09/2011 0402			Injection Volume:	20 uL
Prep Date:	12/05/2011 1739			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	100
Acenaphthylene		9.2	U	9.2	100
Anthracene		3.1	U	3.1	20
Benzo[a]anthracene		3.2	U	3.2	15
Benzo[a]pyrene		6.5	U	6.5	15
Benzo[b]fluoranthene		4.3	U	4.3	15
Benzo[g,h,i]perylene		7.3	U	7.3	31
Benzo[k]fluoranthene		4.0	U	4.0	15
Chrysene		4.9	U	4.9	41
Dibenzo(a,h)anthracene		11	U	11	31
Fluoranthene		13	U	13	41
Fluorene		5.4	U	5.4	31
Indeno[1,2,3-cd]pyrene		12	U	12	31
Naphthalene		12	U	12	100
Phenanthrene		12	U	12	41
Pyrene		12	U	12	41

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	101		72 - 115

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM90**

Lab Sample ID: 280-23278-4
Client Matrix: Solid
% Moisture: 1.7

Date Sampled: 11/29/2011 1021
Date Received: 12/01/2011 0930

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-99247	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-98761	Initial Weight/Volume:	30.8 g
Dilution:	1.0			Final Weight/Volume:	4000 uL
Analysis Date:	12/09/2011 0433			Injection Volume:	20 uL
Prep Date:	12/05/2011 1739			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	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		6.3	U	6.3	15
Benzo[b]fluoranthene		4.2	U	4.2	15
Benzo[g,h,i]perylene		7.1	U	7.1	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	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	93		72 - 115

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM87**

Lab Sample ID: 280-23278-1
Client Matrix: Solid
% Moisture: 2.7

Date Sampled: 11/29/2011 1019
Date Received: 12/01/2011 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-99363	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-98375	Lab File ID:	25A6120811.asc
Dilution:	1.0			Initial Weight/Volume:	1.08 g
Analysis Date:	12/09/2011 0336			Final Weight/Volume:	100 mL
Prep Date:	12/08/2011 0530				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		7320		1.5	4.8
Antimony		0.36	U	0.36	0.57
Arsenic		2.8		0.63	0.95
Barium		64.5		0.072	0.48
Beryllium		0.24		0.031	0.19
Boron		1.4	B	0.93	1.9
Cadmium		0.071	B	0.039	0.19
Calcium		4930		13.4	47.6
Chromium		11.2		0.055	0.19
Cobalt		5.4	X	0.095	0.95
Iron		15300		3.6	4.8
Lead		3.9		0.26	0.48
Magnesium		4070		3.5	19.0
Molybdenum		0.25	U	0.25	1.9
Nickel		10.7		0.12	3.8
Potassium		1300		39.0	286
Selenium		0.82	U	0.82	0.95
Silicon		255	N	5.4	9.5
Silver		0.15	U	0.15	0.19
Sodium		192		56.2	114

Analysis Method:	6010B	Analysis Batch:	280-99605	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-98375	Lab File ID:	25A3120911.asc
Dilution:	1.0			Initial Weight/Volume:	1.08 g
Analysis Date:	12/09/2011 1742			Final Weight/Volume:	100 mL
Prep Date:	12/08/2011 0530				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Copper		11.0		0.21	0.95
Manganese		272		0.095	0.95
Vanadium		34.4		0.089	1.9
Zinc		31.9	X	0.38	0.95

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-99152	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-98450	Lab File ID:	111207TAA.txt
Dilution:	1.0			Initial Weight/Volume:	0.51 g
Analysis Date:	12/07/2011 2001			Final Weight/Volume:	50 mL
Prep Date:	12/07/2011 1030				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0087	B	0.0067	0.021

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM88**

Lab Sample ID: 280-23278-2
Client Matrix: Solid
% Moisture: 3.0

Date Sampled: 11/29/2011 1023
Date Received: 12/01/2011 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-99363	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-98375	Lab File ID:	25A6120811.asc
Dilution:	1.0			Initial Weight/Volume:	1.11 g
Analysis Date:	12/09/2011 0345			Final Weight/Volume:	100 mL
Prep Date:	12/08/2011 0530				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		7240		1.4	4.6
Antimony		0.35	U	0.35	0.56
Arsenic		3.2		0.61	0.93
Barium		66.6		0.071	0.46
Beryllium		0.23		0.031	0.19
Boron		1.2	B	0.91	1.9
Cadmium		0.080	B	0.038	0.19
Calcium		5030		13.1	46.4
Chromium		11.7		0.054	0.19
Cobalt		5.4	X	0.093	0.93
Iron		15300		3.5	4.6
Lead		3.9		0.25	0.46
Magnesium		4300		3.4	18.6
Molybdenum		0.24	U	0.24	1.9
Nickel		10.2		0.11	3.7
Potassium		1260		38.1	279
Selenium		0.80	U	0.80	0.93
Silicon		237		5.3	9.3
Silver		0.15	U	0.15	0.19
Sodium		192		54.8	111

Analysis Method:	6010B	Analysis Batch:	280-99605	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-98375	Lab File ID:	25A3120911.asc
Dilution:	1.0			Initial Weight/Volume:	1.11 g
Analysis Date:	12/09/2011 1751			Final Weight/Volume:	100 mL
Prep Date:	12/08/2011 0530				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Copper		12.0		0.20	0.93
Manganese		273		0.093	0.93
Vanadium		34.5		0.087	1.9
Zinc		34.2	X	0.37	0.93

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-99152	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-98450	Lab File ID:	111207TAA.txt
Dilution:	1.0			Initial Weight/Volume:	0.66 g
Analysis Date:	12/07/2011 2013			Final Weight/Volume:	50 mL
Prep Date:	12/07/2011 1030				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.018		0.0052	0.016

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM89**

Lab Sample ID: 280-23278-3
Client Matrix: Solid
% Moisture: 1.7

Date Sampled: 11/29/2011 1017
Date Received: 12/01/2011 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-99363	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-98375	Lab File ID:	25A6120811.asc
Dilution:	1.0			Initial Weight/Volume:	1.09 g
Analysis Date:	12/09/2011 0348			Final Weight/Volume:	100 mL
Prep Date:	12/08/2011 0530				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6990		1.4	4.7
Antimony		0.35	U	0.35	0.56
Arsenic		3.1		0.62	0.93
Barium		84.0		0.071	0.47
Beryllium		0.22		0.031	0.19
Boron		1.2	B	0.91	1.9
Cadmium		0.068	B	0.038	0.19
Calcium		7060		13.2	46.7
Chromium		11.9		0.054	0.19
Cobalt		5.2	X	0.093	0.93
Iron		14600		3.5	4.7
Lead		4.0		0.25	0.47
Magnesium		4270		3.5	18.7
Molybdenum		0.24	U	0.24	1.9
Nickel		10.2		0.11	3.7
Potassium		1300		38.3	280
Selenium		0.80	U	0.80	0.93
Silicon		266		5.3	9.3
Silver		0.15	U	0.15	0.19
Sodium		172		55.1	112

Analysis Method:	6010B	Analysis Batch:	280-99605	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-98375	Lab File ID:	25A3120911.asc
Dilution:	1.0			Initial Weight/Volume:	1.09 g
Analysis Date:	12/09/2011 1754			Final Weight/Volume:	100 mL
Prep Date:	12/08/2011 0530				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Copper		11.8		0.20	0.93
Manganese		255		0.093	0.93
Vanadium		32.1		0.088	1.9
Zinc		31.7	X	0.37	0.93

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-99152	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-98450	Lab File ID:	111207TAA.txt
Dilution:	1.0			Initial Weight/Volume:	0.61 g
Analysis Date:	12/07/2011 2015			Final Weight/Volume:	50 mL
Prep Date:	12/07/2011 1030				

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

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Client Sample ID: **J1MM90**

Lab Sample ID: 280-23278-4
Client Matrix: Solid
% Moisture: 1.7

Date Sampled: 11/29/2011 1021
Date Received: 12/01/2011 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-99363	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-98375	Lab File ID:	25A6120811.asc
Dilution:	1.0			Initial Weight/Volume:	1.08 g
Analysis Date:	12/09/2011 0350			Final Weight/Volume:	100 mL
Prep Date:	12/08/2011 0530				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6920		1.5	4.7
Antimony		0.36	U	0.36	0.56
Arsenic		3.4		0.62	0.94
Barium		60.9		0.072	0.47
Beryllium		0.22		0.031	0.19
Boron		1.2	B	0.92	1.9
Cadmium		0.086	B	0.039	0.19
Calcium		10800		13.3	47.1
Chromium		12.4		0.055	0.19
Cobalt		5.1	X	0.094	0.94
Iron		14300		3.6	4.7
Lead		4.0		0.25	0.47
Magnesium		4800		3.5	18.8
Molybdenum		0.24	U	0.24	1.9
Nickel		10.9		0.12	3.8
Potassium		1160		38.6	282
Selenium		0.81	U	0.81	0.94
Silicon		247		5.3	9.4
Silver		0.15	U	0.15	0.19
Sodium		183		55.6	113

Analysis Method:	6010B	Analysis Batch:	280-99605	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-98375	Lab File ID:	25A3120911.asc
Dilution:	1.0			Initial Weight/Volume:	1.08 g
Analysis Date:	12/09/2011 1756			Final Weight/Volume:	100 mL
Prep Date:	12/08/2011 0530				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Copper		12.3		0.20	0.94
Manganese		249		0.094	0.94
Vanadium		30.8		0.089	1.9
Zinc		31.0	X	0.37	0.94

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-99152	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-98450	Lab File ID:	111207TAA.txt
Dilution:	1.0			Initial Weight/Volume:	0.52 g
Analysis Date:	12/07/2011 2017			Final Weight/Volume:	50 mL
Prep Date:	12/07/2011 1030				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0065	U	0.0065	0.020

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

General Chemistry

Client Sample ID: **J1MM87**

Lab Sample ID: 280-23278-1
Client Matrix: Solid
% Moisture: 2.7

Date Sampled: 11/29/2011 1019
Date Received: 12/01/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate Nitrite as N-Soluble	0.30	U	mg/Kg	0.30	0.76	1.0	353.2
Analysis Batch: 280-98602	Analysis Date: 12/03/2011 1342						DryWt Corrected: Y
Chloride-Soluble	2.0	U	mg/Kg	2.0	5.0	1.0	9056M
Analysis Batch: 280-99725	Analysis Date: 12/12/2011 2150						DryWt Corrected: Y
Nitrate as N-Soluble	0.46	B	mg/Kg	0.32	2.5	1.0	9056M
Analysis Batch: 280-99724	Analysis Date: 12/12/2011 2150						DryWt Corrected: Y
Bromide-Soluble	0.39	U	mg/Kg	0.39	2.0	1.0	9056M
Analysis Batch: 280-99725	Analysis Date: 12/12/2011 2150						DryWt Corrected: Y
Nitrite as N-Soluble	0.34	U	mg/Kg	0.34	2.5	1.0	9056M
Analysis Batch: 280-99724	Analysis Date: 12/12/2011 2150						DryWt Corrected: Y
Orthophosphate as P-Soluble	1.2	U	mg/Kg	1.2	5.0	1.0	9056M
Analysis Batch: 280-99724	Analysis Date: 12/12/2011 2150						DryWt Corrected: Y
Sulfate-Soluble	1.7	U	mg/Kg	1.7	5.0	1.0	9056M
Analysis Batch: 280-99725	Analysis Date: 12/12/2011 2150						DryWt Corrected: Y
Fluoride-Soluble	0.83	U	mg/Kg	0.83	5.0	1.0	9056M
Analysis Batch: 280-99725	Analysis Date: 12/12/2011 2150						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: 280-98864	Analysis Date: 12/02/2011 1610						DryWt Corrected: N
Percent Moisture	2.7		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-98437	Analysis Date: 12/02/2011 1008						DryWt Corrected: N

General Chemistry

Client Sample ID: **J1MM88**

Lab Sample ID: 280-23278-2
Client Matrix: Solid
% Moisture: 3.0

Date Sampled: 11/29/2011 1023
Date Received: 12/01/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate Nitrite as N-Soluble	1.7		mg/Kg	0.31	0.77	1.0	353.2
Analysis Batch: 280-98602	Analysis Date: 12/03/2011 1347						DryWt Corrected: Y
Chloride-Soluble	2.0	U	mg/Kg	2.0	5.0	1.0	9056M
Analysis Batch: 280-99725	Analysis Date: 12/12/2011 2207						DryWt Corrected: Y
Nitrate as N-Soluble	2.6		mg/Kg	0.31	2.5	1.0	9056M
Analysis Batch: 280-99724	Analysis Date: 12/12/2011 2207						DryWt Corrected: Y
Bromide-Soluble	0.38	U	mg/Kg	0.38	2.0	1.0	9056M
Analysis Batch: 280-99725	Analysis Date: 12/12/2011 2207						DryWt Corrected: Y
Nitrite as N-Soluble	0.33	U	mg/Kg	0.33	2.5	1.0	9056M
Analysis Batch: 280-99724	Analysis Date: 12/12/2011 2207						DryWt Corrected: Y
Orthophosphate as P-Soluble	1.2	U	mg/Kg	1.2	5.0	1.0	9056M
Analysis Batch: 280-99724	Analysis Date: 12/12/2011 2207						DryWt Corrected: Y
Sulfate-Soluble	2.2	B	mg/Kg	1.7	5.0	1.0	9056M
Analysis Batch: 280-99725	Analysis Date: 12/12/2011 2207						DryWt Corrected: Y
Fluoride-Soluble	0.81	U	mg/Kg	0.81	5.0	1.0	9056M
Analysis Batch: 280-99725	Analysis Date: 12/12/2011 2207						DryWt Corrected: Y

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH adj. to 25 deg C-Soluble	9.22		SU	0.0100	0.0100	1.0	9045C
Analysis Batch: 280-98864	Analysis Date: 12/02/2011 1617						DryWt Corrected: N
Percent Moisture	3.0		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-98437	Analysis Date: 12/02/2011 1008						DryWt Corrected: N

General Chemistry

Client Sample ID: **J1MM89**

Lab Sample ID: 280-23278-3
Client Matrix: Solid
% Moisture: 1.7

Date Sampled: 11/29/2011 1017
Date Received: 12/01/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate Nitrite as N-Soluble	1.6		mg/Kg	0.30	0.76	1.0	353.2
Analysis Batch: 280-98602	Analysis Date: 12/03/2011 1348						DryWt Corrected: Y
Chloride-Soluble	2.0	U	mg/Kg	2.0	5.0	1.0	9056M
Analysis Batch: 280-99725	Analysis Date: 12/12/2011 2223						DryWt Corrected: Y
Nitrate as N-Soluble	1.4	B	mg/Kg	0.31	2.5	1.0	9056M
Analysis Batch: 280-99724	Analysis Date: 12/12/2011 2223						DryWt Corrected: Y
Bromide-Soluble	0.39	U	mg/Kg	0.39	2.0	1.0	9056M
Analysis Batch: 280-99725	Analysis Date: 12/12/2011 2223						DryWt Corrected: Y
Nitrite as N-Soluble	0.34	U	mg/Kg	0.34	2.5	1.0	9056M
Analysis Batch: 280-99724	Analysis Date: 12/12/2011 2223						DryWt Corrected: Y
Orthophosphate as P-Soluble	1.2	U	mg/Kg	1.2	5.0	1.0	9056M
Analysis Batch: 280-99724	Analysis Date: 12/12/2011 2223						DryWt Corrected: Y
Sulfate-Soluble	1.7	U	mg/Kg	1.7	5.0	1.0	9056M
Analysis Batch: 280-99725	Analysis Date: 12/12/2011 2223						DryWt Corrected: Y
Fluoride-Soluble	0.82	U	mg/Kg	0.82	5.0	1.0	9056M
Analysis Batch: 280-99725	Analysis Date: 12/12/2011 2223						DryWt Corrected: Y

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH adj. to 25 deg C-Soluble	9.32		SU	0.0100	0.0100	1.0	9045C
Analysis Batch: 280-98864	Analysis Date: 12/02/2011 1622						DryWt Corrected: N
Percent Moisture	1.7		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-98437	Analysis Date: 12/02/2011 1008						DryWt Corrected: N

General Chemistry

Client Sample ID: **J1MM90**

Lab Sample ID: 280-23278-4
Client Matrix: Solid
% Moisture: 1.7

Date Sampled: 11/29/2011 1021
Date Received: 12/01/2011 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate Nitrite as N-Soluble	2.6		mg/Kg	0.31	0.76	1.0	353.2
Analysis Batch: 280-98602	Analysis Date: 12/03/2011 1350						DryWt Corrected: Y
Chloride-Soluble	3.5	B	mg/Kg	2.0	5.0	1.0	9056M
Analysis Batch: 280-99725	Analysis Date: 12/12/2011 2314						DryWt Corrected: Y
Nitrate as N-Soluble	4.5		mg/Kg	0.32	2.5	1.0	9056M
Analysis Batch: 280-99724	Analysis Date: 12/12/2011 2314						DryWt Corrected: Y
Bromide-Soluble	0.39	U	mg/Kg	0.39	2.0	1.0	9056M
Analysis Batch: 280-99725	Analysis Date: 12/12/2011 2314						DryWt Corrected: Y
Nitrite as N-Soluble	0.34	U	mg/Kg	0.34	2.5	1.0	9056M
Analysis Batch: 280-99724	Analysis Date: 12/12/2011 2314						DryWt Corrected: Y
Orthophosphate as P-Soluble	1.2	U	mg/Kg	1.2	5.0	1.0	9056M
Analysis Batch: 280-99724	Analysis Date: 12/12/2011 2314						DryWt Corrected: Y
Sulfate-Soluble	12.1		mg/Kg	1.7	5.0	1.0	9056M
Analysis Batch: 280-99725	Analysis Date: 12/12/2011 2314						DryWt Corrected: Y
Fluoride-Soluble	0.83	U	mg/Kg	0.83	5.0	1.0	9056M
Analysis Batch: 280-99725	Analysis Date: 12/12/2011 2314						DryWt Corrected: Y

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH adj. to 25 deg C-Soluble	9.29		SU	0.0100	0.0100	1.0	9045C
Analysis Batch: 280-98864	Analysis Date: 12/02/2011 1623						DryWt Corrected: N
Percent Moisture	1.7		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-98437	Analysis Date: 12/02/2011 1008						DryWt Corrected: N

QUALITY CONTROL RESULTS

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 280-98664					
LCS 280-98664/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-98664/1-A	Method Blank	T	Solid	3550C	
280-23278-1	J1MM87	T	Solid	3550C	
280-23278-2	J1MM88	T	Solid	3550C	
280-23278-2MS	Matrix Spike	T	Solid	3550C	
280-23278-2MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-23278-3	J1MM89	T	Solid	3550C	
280-23278-4	J1MM90	T	Solid	3550C	
Analysis Batch:280-99656					
LCS 280-98664/2-A	Lab Control Sample	T	Solid	8270C	280-98664
MB 280-98664/1-A	Method Blank	T	Solid	8270C	280-98664
280-23278-1	J1MM87	T	Solid	8270C	280-98664
280-23278-2	J1MM88	T	Solid	8270C	280-98664
280-23278-2MS	Matrix Spike	T	Solid	8270C	280-98664
280-23278-2MSD	Matrix Spike Duplicate	T	Solid	8270C	280-98664
280-23278-3	J1MM89	T	Solid	8270C	280-98664
Analysis Batch:280-99766					
280-23278-4	J1MM90	T	Solid	8270C	280-98664

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 280-98741					
LCS 280-98741/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-98741/1-A	Method Blank	T	Solid	3550C	
280-23278-1	J1MM87	T	Solid	3550C	
280-23278-2	J1MM88	T	Solid	3550C	
280-23278-3	J1MM89	T	Solid	3550C	
280-23278-4	J1MM90	T	Solid	3550C	
280-23278-4MS	Matrix Spike	T	Solid	3550C	
280-23278-4MSD	Matrix Spike Duplicate	T	Solid	3550C	
Analysis Batch:280-99205					
LCS 280-98741/2-A	Lab Control Sample	T	Solid	8082	280-98741
MB 280-98741/1-A	Method Blank	T	Solid	8082	280-98741
280-23278-1	J1MM87	T	Solid	8082	280-98741
280-23278-2	J1MM88	T	Solid	8082	280-98741
280-23278-3	J1MM89	T	Solid	8082	280-98741
280-23278-4	J1MM90	T	Solid	8082	280-98741
280-23278-4MS	Matrix Spike	T	Solid	8082	280-98741
280-23278-4MSD	Matrix Spike Duplicate	T	Solid	8082	280-98741
Prep Batch: 280-99834					
LCS 280-99834/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-99834/1-A	Method Blank	T	Solid	3550C	
280-23278-1	J1MM87	T	Solid	3550C	
280-23278-2	J1MM88	T	Solid	3550C	
280-23278-2MS	Matrix Spike	T	Solid	3550C	
280-23278-2MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-23278-3	J1MM89	T	Solid	3550C	
280-23278-4	J1MM90	T	Solid	3550C	
Analysis Batch:280-100094					
LCS 280-99834/2-A	Lab Control Sample	T	Solid	8081A	280-99834
MB 280-99834/1-A	Method Blank	T	Solid	8081A	280-99834
280-23278-1	J1MM87	T	Solid	8081A	280-99834
280-23278-2	J1MM88	T	Solid	8081A	280-99834
280-23278-2MS	Matrix Spike	T	Solid	8081A	280-99834
280-23278-2MSD	Matrix Spike Duplicate	T	Solid	8081A	280-99834
280-23278-3	J1MM89	T	Solid	8081A	280-99834
280-23278-4	J1MM90	T	Solid	8081A	280-99834

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-98375					
LCS 280-98375/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-98375/1-A	Method Blank	T	Solid	3050B	
280-23278-1	J1MM87	T	Solid	3050B	
280-23278-1DU	Duplicate	T	Solid	3050B	
280-23278-1MS	Matrix Spike	T	Solid	3050B	
280-23278-2	J1MM88	T	Solid	3050B	
280-23278-3	J1MM89	T	Solid	3050B	
280-23278-4	J1MM90	T	Solid	3050B	
Prep Batch: 280-98450					
LCS 280-98450/2-A	Lab Control Sample	T	Solid	7471A	
MB 280-98450/1-A	Method Blank	T	Solid	7471A	
280-23278-1	J1MM87	T	Solid	7471A	
280-23278-1DU	Duplicate	T	Solid	7471A	
280-23278-1MS	Matrix Spike	T	Solid	7471A	
280-23278-2	J1MM88	T	Solid	7471A	
280-23278-3	J1MM89	T	Solid	7471A	
280-23278-4	J1MM90	T	Solid	7471A	
Analysis Batch:280-99152					
LCS 280-98450/2-A	Lab Control Sample	T	Solid	7471A	280-98450
MB 280-98450/1-A	Method Blank	T	Solid	7471A	280-98450
280-23278-1	J1MM87	T	Solid	7471A	280-98450
280-23278-1DU	Duplicate	T	Solid	7471A	280-98450
280-23278-1MS	Matrix Spike	T	Solid	7471A	280-98450
280-23278-2	J1MM88	T	Solid	7471A	280-98450
280-23278-3	J1MM89	T	Solid	7471A	280-98450
280-23278-4	J1MM90	T	Solid	7471A	280-98450
Analysis Batch:280-99363					
LCS 280-98375/2-A	Lab Control Sample	T	Solid	6010B	280-98375
MB 280-98375/1-A	Method Blank	T	Solid	6010B	280-98375
280-23278-1	J1MM87	T	Solid	6010B	280-98375
280-23278-1DU	Duplicate	T	Solid	6010B	280-98375
280-23278-1MS	Matrix Spike	T	Solid	6010B	280-98375
280-23278-2	J1MM88	T	Solid	6010B	280-98375
280-23278-3	J1MM89	T	Solid	6010B	280-98375
280-23278-4	J1MM90	T	Solid	6010B	280-98375

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:280-99605					
LCS 280-98375/2-A	Lab Control Sample	T	Solid	6010B	280-98375
MB 280-98375/1-A	Method Blank	T	Solid	6010B	280-98375
280-23278-1	J1MM87	T	Solid	6010B	280-98375
280-23278-1DU	Duplicate	T	Solid	6010B	280-98375
280-23278-1MS	Matrix Spike	T	Solid	6010B	280-98375
280-23278-2	J1MM88	T	Solid	6010B	280-98375
280-23278-3	J1MM89	T	Solid	6010B	280-98375
280-23278-4	J1MM90	T	Solid	6010B	280-98375

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-98437					
280-23278-1	J1MM87	T	Solid	D-2216	
280-23278-1DU	Duplicate	T	Solid	D-2216	
280-23278-2	J1MM88	T	Solid	D-2216	
280-23278-3	J1MM89	T	Solid	D-2216	
280-23278-4	J1MM90	T	Solid	D-2216	
Prep Batch: 280-98513					
280-23278-1	J1MM87	S	Solid	DI Leach	
280-23278-1DU	Duplicate	S	Solid	DI Leach	
280-23278-2	J1MM88	S	Solid	DI Leach	
280-23278-3	J1MM89	S	Solid	DI Leach	
280-23278-4	J1MM90	S	Solid	DI Leach	
Prep Batch: 280-98535					
LCS 280-98535/2-A	Lab Control Sample	S	Solid	DI Leach	
MB 280-98535/1-A	Method Blank	S	Solid	DI Leach	
280-23278-1	J1MM87	S	Solid	DI Leach	
280-23278-1DU	Duplicate	S	Solid	DI Leach	
280-23278-1MS	Matrix Spike	S	Solid	DI Leach	
280-23278-2	J1MM88	S	Solid	DI Leach	
280-23278-3	J1MM89	S	Solid	DI Leach	
280-23278-4	J1MM90	S	Solid	DI Leach	
Analysis Batch:280-98602					
LCS 280-98535/2-A	Lab Control Sample	S	Solid	353.2	
MB 280-98535/1-A	Method Blank	S	Solid	353.2	
280-23278-1	J1MM87	S	Solid	353.2	
280-23278-1DU	Duplicate	S	Solid	353.2	
280-23278-1MS	Matrix Spike	S	Solid	353.2	
280-23278-2	J1MM88	S	Solid	353.2	
280-23278-3	J1MM89	S	Solid	353.2	
280-23278-4	J1MM90	S	Solid	353.2	
Analysis Batch:280-98864					
LCS 280-98864/4	Lab Control Sample	T	Water	9045C	
LCSD 280-98864/5	Lab Control Sample Duplicate	T	Water	9045C	
280-23278-1	J1MM87	S	Solid	9045C	
280-23278-1DU	Duplicate	S	Solid	9045C	
280-23278-2	J1MM88	S	Solid	9045C	
280-23278-3	J1MM89	S	Solid	9045C	
280-23278-4	J1MM90	S	Solid	9045C	

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 280-99664					
LCS 280-99664/1-A	Lab Control Sample	S	Solid	DI Leach	
MB 280-99664/2-A	Method Blank	S	Solid	DI Leach	
280-23278-1	J1MM87	S	Solid	DI Leach	
280-23278-2	J1MM88	S	Solid	DI Leach	
280-23278-3	J1MM89	S	Solid	DI Leach	
280-23278-3DU	Duplicate	S	Solid	DI Leach	
280-23278-3MS	Matrix Spike	S	Solid	DI Leach	
280-23278-4	J1MM90	S	Solid	DI Leach	
Analysis Batch:280-99724					
LCS 280-99664/1-A	Lab Control Sample	S	Solid	9056M	
MB 280-99664/2-A	Method Blank	S	Solid	9056M	
280-23278-1	J1MM87	S	Solid	9056M	
280-23278-2	J1MM88	S	Solid	9056M	
280-23278-3	J1MM89	S	Solid	9056M	
280-23278-3DU	Duplicate	S	Solid	9056M	
280-23278-3MS	Matrix Spike	S	Solid	9056M	
280-23278-4	J1MM90	S	Solid	9056M	
Analysis Batch:280-99725					
LCS 280-99664/1-A	Lab Control Sample	S	Solid	9056M	
MB 280-99664/2-A	Method Blank	S	Solid	9056M	
280-23278-1	J1MM87	S	Solid	9056M	
280-23278-2	J1MM88	S	Solid	9056M	
280-23278-3	J1MM89	S	Solid	9056M	
280-23278-3DU	Duplicate	S	Solid	9056M	
280-23278-3MS	Matrix Spike	S	Solid	9056M	
280-23278-4	J1MM90	S	Solid	9056M	

Report Basis
S = Soluble
T = Total

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
HPLC/IC					
Prep Batch: 280-98761					
LCS 280-98761/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-98761/1-A	Method Blank	T	Solid	3550C	
280-23278-1	J1MM87	T	Solid	3550C	
280-23278-2	J1MM88	T	Solid	3550C	
280-23278-2MS	Matrix Spike	T	Solid	3550C	
280-23278-2MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-23278-3	J1MM89	T	Solid	3550C	
280-23278-4	J1MM90	T	Solid	3550C	
Analysis Batch:280-99247					
LCS 280-98761/2-A	Lab Control Sample	T	Solid	8310	280-98761
MB 280-98761/1-A	Method Blank	T	Solid	8310	280-98761
280-23278-1	J1MM87	T	Solid	8310	280-98761
280-23278-2	J1MM88	T	Solid	8310	280-98761
280-23278-2MS	Matrix Spike	T	Solid	8310	280-98761
280-23278-2MSD	Matrix Spike Duplicate	T	Solid	8310	280-98761
280-23278-3	J1MM89	T	Solid	8310	280-98761
280-23278-4	J1MM90	T	Solid	8310	280-98761

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Method Blank - Batch: 280-98664

Method: 8270C
Preparation: 3550C

Lab Sample ID:	MB 280-98664/1-A	Analysis Batch:	280-99656	Instrument ID:	MSS_K
Client Matrix:	Solid	Prep Batch:	280-98664	Lab File ID:	K3246.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.3 g
Analysis Date:	12/09/2011 1413	Units:	ug/Kg	Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acenaphthene	10	U	10	330
Acenaphthylene	17	U	17	330
Anthracene	17	U	17	330
Benzo[a]anthracene	20	U	20	330
Benzo[a]pyrene	20	U	20	330
Benzo[b]fluoranthene	26	U	26	330
Benzo[ghi]perylene	16	U	16	330
Benzo[k]fluoranthene	40	U	40	330
Bis(2-chloroethoxy)methane	23	U	23	330
Bis(2-chloroethyl)ether	16	U	16	330
bis (2-chloroisopropyl) ether	23	U	23	330
Bis(2-ethylhexyl) phthalate	64.1	J	46	330
4-Bromophenyl phenyl ether	19	U	19	330
Butyl benzyl phthalate	43	U	43	330
Carbazole	36	U	36	330
4-Chloroaniline	81	U	81	330
4-Chloro-3-methylphenol	65	U	65	330
2-Chloronaphthalene	9.9	U	9.9	330
2-Chlorophenol	21	U	21	330
4-Chlorophenyl phenyl ether	21	U	21	330
Chrysene	27	U	27	330
Dibenz(a,h)anthracene	19	U	19	330
Dibenzofuran	20	U	20	330
1,2-Dichlorobenzene	22	U	22	330
1,3-Dichlorobenzene	12	U	12	330
1,4-Dichlorobenzene	13	U	13	330
3,3'-Dichlorobenzidine	89	U	89	650
2,4-Dichlorophenol	9.9	U	9.9	330
Diethyl phthalate	26	U	26	330
2,4-Dimethylphenol	65	U	65	330
Dimethyl phthalate	27.9	J	23	330
Di-n-butyl phthalate	29	U	29	330
4,6-Dinitro-2-methylphenol	330	U	330	650
2,4-Dinitrophenol	330	U	330	820
2,4-Dinitrotoluene	65	U	65	330
2,6-Dinitrotoluene	28	U	28	330
Di-n-octyl phthalate	14	U	14	330
Fluoranthene	36	U	36	330
Fluorene	18	U	18	330
Hexachlorobenzene	29	U	29	330
Hexachlorobutadiene	9.9	U	9.9	330
Hexachlorocyclopentadiene	50	U	50	330
Hexachloroethane	21	U	21	330
Indeno[1,2,3-cd]pyrene	22	U	22	330
Isophorone	17	U	17	330

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Method Blank - Batch: 280-98664

Method: 8270C
Preparation: 3550C

Lab Sample ID:	MB 280-98664/1-A	Analysis Batch:	280-99656	Instrument ID:	MSS_K
Client Matrix:	Solid	Prep Batch:	280-98664	Lab File ID:	K3246.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.3 g
Analysis Date:	12/09/2011 1413	Units:	ug/Kg	Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
2-Methylnaphthalene	19	U	19	330
2-Methylphenol	13	U	13	330
3 & 4 Methylphenol	33	U	33	330
Naphthalene	31	U	31	330
2-Nitroaniline	50	U	50	330
3-Nitroaniline	72	U	72	330
4-Nitroaniline	72	U	72	330
Nitrobenzene	22	U	22	330
2-Nitrophenol	9.9	U	9.9	330
4-Nitrophenol	96	U	96	650
N-Nitrosodi-n-propylamine	31	U	31	330
N-Nitrosodiphenylamine	21	U	21	330
Pentachlorophenol	330	U	330	650
Phenanthrene	17	U	17	330
Phenol	18	U	18	330
Pyrene	12	U	12	330
1,2,4-Trichlorobenzene	28	U	28	330
2,4,5-Trichlorophenol	9.9	U	9.9	330
2,4,6-Trichlorophenol	9.9	U	9.9	330

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	75	50 - 120
2-Fluorophenol	75	53 - 120
Nitrobenzene-d5	76	50 - 120
Phenol-d5	78	52 - 120
Terphenyl-d14	81	55 - 120
2,4,6-Tribromophenol	71	51 - 120

Method Blank TICs- Batch: 280-98664

Cas Number	Analyte	RT	Est. Result	Qual
	Unknown	1.83	144	N J
	Unknown	3.21	3370	N J

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Lab Control Sample - Batch: 280-98664

Method: 8270C
Preparation: 3550C

Lab Sample ID:	LCS 280-98664/2-A	Analysis Batch:	280-99656	Instrument ID:	MSS_K
Client Matrix:	Solid	Prep Batch:	280-98664	Lab File ID:	K3247.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.1 g
Analysis Date:	12/09/2011 1434	Units:	ug/Kg	Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	2660	2120	80	52 - 120	
Acenaphthylene	2660	2260	85	53 - 120	
Anthracene	2660	2300	87	57 - 120	
Benzo[a]anthracene	2660	2190	82	55 - 120	
Benzo[a]pyrene	2660	2110	79	54 - 120	
Benzo[b]fluoranthene	2660	2160	81	52 - 120	
Benzo[ghi]perylene	2660	2320	87	50 - 120	
Benzo[k]fluoranthene	2660	2380	90	54 - 120	
Bis(2-chloroethoxy)methane	2660	2070	78	49 - 120	
Bis(2-chloroethyl)ether	2660	2320	87	48 - 120	
bis (2-chloroisopropyl) ether	2660	2120	80	47 - 120	
Bis(2-ethylhexyl) phthalate	2660	2380	89	51 - 120	
4-Bromophenyl phenyl ether	2660	2270	85	53 - 120	
Butyl benzyl phthalate	2660	2330	88	49 - 120	
Carbazole	2660	2310	87	54 - 120	
4-Chloroaniline	2660	1040	39	28 - 120	
4-Chloro-3-methylphenol	2660	2340	88	57 - 120	
2-Chloronaphthalene	2660	2090	78	53 - 120	
2-Chlorophenol	2660	2150	81	53 - 120	
4-Chlorophenyl phenyl ether	2660	2230	84	55 - 120	
Chrysene	2660	2260	85	55 - 120	
Dibenz(a,h)anthracene	2660	2330	88	55 - 120	
Dibenzofuran	2660	2240	84	56 - 120	
1,2-Dichlorobenzene	2660	2080	78	48 - 120	
1,3-Dichlorobenzene	2660	2000	75	46 - 120	
1,4-Dichlorobenzene	2660	2030	76	46 - 120	
3,3'-Dichlorobenzidine	2660	1380	52	34 - 120	
2,4-Dichlorophenol	2660	2160	81	53 - 120	
Diethyl phthalate	2660	2420	91	57 - 120	
2,4-Dimethylphenol	2660	1970	74	53 - 120	
Dimethyl phthalate	2660	2380	90	57 - 120	
Di-n-butyl phthalate	2660	2410	91	57 - 120	
4,6-Dinitro-2-methylphenol	2660	2160	81	30 - 120	
2,4-Dinitrophenol	2660	1890	71	15 - 120	
2,4-Dinitrotoluene	2660	2430	92	53 - 120	
2,6-Dinitrotoluene	2660	2340	88	53 - 120	
Di-n-octyl phthalate	2660	2470	93	54 - 120	
Fluoranthene	2660	2390	90	55 - 120	
Fluorene	2660	2280	86	55 - 120	
Hexachlorobenzene	2660	2170	82	51 - 120	
Hexachlorobutadiene	2660	2020	76	48 - 120	

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Lab Control Sample - Batch: 280-98664

Method: 8270C
Preparation: 3550C

Lab Sample ID:	LCS 280-98664/2-A	Analysis Batch:	280-99656	Instrument ID:	MSS_K
Client Matrix:	Solid	Prep Batch:	280-98664	Lab File ID:	K3247.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.1 g
Analysis Date:	12/09/2011 1434	Units:	ug/Kg	Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Hexachlorocyclopentadiene	2660	2120	80	35 - 120	
Hexachloroethane	2660	2010	76	46 - 120	
Indeno[1,2,3-cd]pyrene	2660	2240	84	54 - 120	
Isophorone	2660	2100	79	46 - 120	
2-Methylnaphthalene	2660	2020	76	55 - 120	
2-Methylphenol	2660	2110	79	51 - 120	
3 & 4 Methylphenol	5320	4230	80	53 - 120	
Naphthalene	2660	2060	78	50 - 120	
2-Nitroaniline	2660	2450	92	50 - 120	
3-Nitroaniline	2660	1530	57	35 - 120	
4-Nitroaniline	2660	2090	79	44 - 120	
Nitrobenzene	2660	2100	79	49 - 120	
2-Nitrophenol	2660	2150	81	53 - 120	
4-Nitrophenol	2660	2520	95	41 - 120	
N-Nitrosodi-n-propylamine	2660	2140	81	51 - 120	
N-Nitrosodiphenylamine	2270	1940	85	55 - 120	
Pentachlorophenol	2660	1840	69	30 - 120	
Phenanthrene	2660	2320	87	58 - 120	
Phenol	2660	2190	82	54 - 120	
Pyrene	2660	2230	84	50 - 120	
1,2,4-Trichlorobenzene	2660	1960	74	50 - 120	
2,4,5-Trichlorophenol	2660	2280	86	56 - 120	
2,4,6-Trichlorophenol	2660	2280	86	50 - 120	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	76	50 - 120
2-Fluorophenol	77	53 - 120
Nitrobenzene-d5	76	50 - 120
Phenol-d5	79	52 - 120
Terphenyl-d14	83	55 - 120
2,4,6-Tribromophenol	82	51 - 120

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-98664

Method: 8270C
Preparation: 3550C

MS Lab Sample ID:	280-23278-2	Analysis Batch:	280-99656	Instrument ID:	MSS_K
Client Matrix:	Solid	Prep Batch:	280-98664	Lab File ID:	K3261.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.6 g
Analysis Date:	12/09/2011 1920			Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-23278-2	Analysis Batch:	280-99656	Instrument ID:	MSS_K
Client Matrix:	Solid	Prep Batch:	280-98664	Lab File ID:	K3262.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.8 g
Analysis Date:	12/09/2011 1940			Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	77	80	52 - 120	0	30		
Acenaphthylene	82	86	53 - 120	0	30		
Anthracene	84	87	57 - 120	0	30		
Benzo[a]anthracene	82	84	55 - 120	2	30		
Benzo[a]pyrene	75	78	54 - 120	1	30		
Benzo[b]fluoranthene	72	86	52 - 120	14	44		
Benzo[ghi]perylene	77	78	50 - 120	2	31		
Benzo[k]fluoranthene	86	79	54 - 120	12	30		
Bis(2-chloroethoxy)methane	75	80	49 - 120	4	30		
Bis(2-chloroethyl)ether	76	84	48 - 120	6	30		
bis (2-chloroisopropyl) ether	73	80	47 - 120	4	30		
Bis(2-ethylhexyl) phthalate	90	89	51 - 120	5	30		
4-Bromophenyl phenyl ether	81	85	53 - 120	0	30		
Butyl benzyl phthalate	85	86	49 - 120	3	30		
Carbazole	85	88	54 - 120	1	30		
4-Chloroaniline	51	53	28 - 120	1	30		
4-Chloro-3-methylphenol	86	90	57 - 120	0	30		
2-Chloronaphthalene	74	78	53 - 120	2	30		
2-Chlorophenol	78	85	53 - 120	5	30		
4-Chlorophenyl phenyl ether	81	84	55 - 120	0	30		
Chrysene	82	82	55 - 120	3	35		
Dibenz(a,h)anthracene	80	81	55 - 120	2	30		
Dibenzofuran	80	84	56 - 120	1	30		
1,2-Dichlorobenzene	72	80	48 - 120	6	30		
1,3-Dichlorobenzene	69	76	46 - 120	6	32		
1,4-Dichlorobenzene	70	77	46 - 120	6	30		
3,3'-Dichlorobenzidine	72	75	34 - 120	0	30		
2,4-Dichlorophenol	80	84	53 - 120	1	30		
Diethyl phthalate	85	89	57 - 120	1	30		
2,4-Dimethylphenol	83	86	53 - 120	0	30		
Dimethyl phthalate	84	91	57 - 120	4	30		
Di-n-butyl phthalate	87	92	57 - 120	2	30		

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-98664

Method: 8270C
Preparation: 3550C

MS Lab Sample ID:	280-23278-2	Analysis Batch:	280-99656	Instrument ID:	MSS_K
Client Matrix:	Solid	Prep Batch:	280-98664	Lab File ID:	K3261.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.6 g
Analysis Date:	12/09/2011 1920			Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-23278-2	Analysis Batch:	280-99656	Instrument ID:	MSS_K
Client Matrix:	Solid	Prep Batch:	280-98664	Lab File ID:	K3262.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.8 g
Analysis Date:	12/09/2011 1940			Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
4,6-Dinitro-2-methylphenol	60	64	30 - 120	2	30		
2,4-Dinitrophenol	31	33	15 - 120	2	34		
2,4-Dinitrotoluene	86	90	53 - 120	0	30		
2,6-Dinitrotoluene	82	85	53 - 120	0	30		
Di-n-octyl phthalate	91	93	54 - 120	2	30		
Fluoranthene	85	89	55 - 120	1	30		
Fluorene	80	83	55 - 120	0	30		
Hexachlorobenzene	80	82	51 - 120	2	30		
Hexachlorobutadiene	70	77	48 - 120	6	30		
Hexachlorocyclopentadiene	63	69	35 - 120	6	30		
Hexachloroethane	70	75	46 - 120	3	30		
Indeno[1,2,3-cd]pyrene	81	82	54 - 120	3	30		
Isophorone	75	81	46 - 120	4	30		
2-Methylnaphthalene	74	79	55 - 120	3	30		
2-Methylphenol	77	83	51 - 120	3	30		
3 & 4 Methylphenol	79	84	53 - 120	1	30		
Naphthalene	73	77	50 - 120	2	30		
2-Nitroaniline	89	93	50 - 120	0	30		
3-Nitroaniline	72	77	35 - 120	3	30		
4-Nitroaniline	86	91	44 - 120	1	30		
Nitrobenzene	75	80	49 - 120	3	30		
2-Nitrophenol	76	82	53 - 120	4	30		
4-Nitrophenol	84	87	41 - 120	1	30		
N-Nitrosodi-n-propylamine	79	85	51 - 120	4	30		
N-Nitrosodiphenylamine	83	86	55 - 120	0	36		
Pentachlorophenol	45	46	30 - 120	3	30		
Phenanthrene	84	87	58 - 120	0	30		
Phenol	80	86	54 - 120	3	30		
Pyrene	80	81	50 - 120	4	38		
1,2,4-Trichlorobenzene	69	74	50 - 120	4	30		
2,4,5-Trichlorophenol	81	84	56 - 120	0	30		
2,4,6-Trichlorophenol	83	86	50 - 120	0	30		

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-98664

Method: 8270C
Preparation: 3550C

MS Lab Sample ID:	280-23278-2	Analysis Batch:	280-99656	Instrument ID:	MSS_K
Client Matrix:	Solid	Prep Batch:	280-98664	Lab File ID:	K3261.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.6 g
Analysis Date:	12/09/2011 1920			Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-23278-2	Analysis Batch:	280-99656	Instrument ID:	MSS_K
Client Matrix:	Solid	Prep Batch:	280-98664	Lab File ID:	K3262.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.8 g
Analysis Date:	12/09/2011 1940			Final Weight/Volume:	1000 uL
Prep Date:	12/05/2011 1143			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl	74	78	50 - 120
2-Fluorophenol	75	81	53 - 120
Nitrobenzene-d5	73	79	50 - 120
Phenol-d5	77	84	52 - 120
Terphenyl-d14	80	81	55 - 120
2,4,6-Tribromophenol	76	80	51 - 120

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Method Blank - Batch: 280-99834

Method: 8081A
Preparation: 3550C

Lab Sample ID:	MB 280-99834/1-A	Analysis Batch:	280-100094	Instrument ID:	GCS_P2
Client Matrix:	Solid	Prep Batch:	280-99834	Lab File ID:	12140033.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	33.0 g
Analysis Date:	12/14/2011 2210	Units:	ug/Kg	Final Weight/Volume:	10000 uL
Prep Date:	12/13/2011 1955			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	0.50	U	0.50	1.5
4,4'-DDE	0.22	U	0.22	1.5
4,4'-DDT	0.54	U	0.54	1.5
Aldrin	0.23	U	0.23	1.5
alpha-BHC	0.19	U	0.19	1.5
beta-BHC	0.60	U	0.60	1.5
delta-BHC	0.36	U	0.36	1.5
gamma-BHC (Lindane)	0.42	U	0.42	1.5
Heptachlor	0.19	U	0.19	1.5
Heptachlor epoxide	0.39	U	0.39	1.5
Endosulfan I	0.16	U	0.16	1.5
Endosulfan II	0.26	U	0.26	1.5
Endosulfan sulfate	0.25	U	0.25	1.5
Endrin	0.28	U	0.28	1.5
Endrin aldehyde	0.16	U	0.16	1.5
Endrin ketone	0.44	U	0.44	1.5
gamma-Chlordane	0.24	U	0.24	1.5
Methoxychlor	0.41	U	0.41	3.0
alpha-Chlordane	0.29	U	0.29	1.5
Dieldrin	0.19	U	0.19	1.5
Toxaphene	14	U	14	150

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	94	59 - 115
Decachlorobiphenyl	105	63 - 124

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Lab Control Sample - Batch: 280-99834

Method: 8081A
Preparation: 3550C

Lab Sample ID:	LCS 280-99834/2-A	Analysis Batch:	280-100094	Instrument ID:	GCS_P2
Client Matrix:	Solid	Prep Batch:	280-99834	Lab File ID:	12140026.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.3 g
Analysis Date:	12/14/2011 2014	Units:	ug/Kg	Final Weight/Volume:	10000 uL
Prep Date:	12/13/2011 1955			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	16.0	16.5	103	57 - 118	
4,4'-DDE	16.0	17.0	106	61 - 115	
4,4'-DDT	16.0	17.7	111	53 - 125	
Aldrin	16.0	16.0	100	60 - 115	
alpha-BHC	16.0	15.6	98	54 - 115	
beta-BHC	16.0	16.4	103	58 - 115	
delta-BHC	16.0	16.5	103	62 - 115	
gamma-BHC (Lindane)	16.0	15.9	100	59 - 115	
Heptachlor	16.0	16.2	101	61 - 115	
Heptachlor epoxide	16.0	16.7	105	62 - 112	
Endosulfan I	16.0	16.4	103	55 - 115	
Endosulfan II	16.0	17.1	107	60 - 115	
Endosulfan sulfate	16.0	17.7	111	58 - 118	
Endrin	16.0	18.8	118	61 - 121	
Endrin aldehyde	16.0	12.0	75	54 - 115	
Endrin ketone	16.0	16.1	101	61 - 118	
gamma-Chlordane	16.0	16.5	103	60 - 115	
Methoxychlor	16.0	17.7	111	52 - 123	
alpha-Chlordane	16.0	16.6	104	60 - 115	
Dieldrin	16.0	17.7	111	63 - 117	

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	97	59 - 115
Decachlorobiphenyl	102	63 - 124

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-99834

Method: 8081A
Preparation: 3550C

MS Lab Sample ID:	280-23278-2	Analysis Batch:	280-100094	Instrument ID:	GCS_P2
Client Matrix:	Solid	Prep Batch:	280-99834	Lab File ID:	12140029.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.8 g
Analysis Date:	12/14/2011 2104			Final Weight/Volume:	10000 uL
Prep Date:	12/13/2011 1955			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	280-23278-2	Analysis Batch:	280-100094	Instrument ID:	GCS_P2
Client Matrix:	Solid	Prep Batch:	280-99834	Lab File ID:	12140030.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.5 g
Analysis Date:	12/14/2011 2120			Final Weight/Volume:	10000 uL
Prep Date:	12/13/2011 1955			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
4,4'-DDD	94	91	57 - 118	2	20		
4,4'-DDE	100	98	61 - 115	2	15		
4,4'-DDT	106	102	53 - 125	2	29		
Aldrin	96	93	60 - 115	3	50		
alpha-BHC	96	92	54 - 115	3	17		
beta-BHC	100	95	58 - 115	5	17		
delta-BHC	98	93	62 - 115	4	19		
gamma-BHC (Lindane)	97	92	59 - 115	4	24		
Heptachlor	99	93	61 - 115	4	18		
Heptachlor epoxide	99	96	62 - 112	2	18		
Endosulfan I	96	93	55 - 115	2	26		
Endosulfan II	98	95	60 - 115	2	20		
Endosulfan sulfate	101	97	58 - 118	4	22		
Endrin	110	106	61 - 121	2	30		
Endrin aldehyde	67	73	54 - 115	9	29		
Endrin ketone	94	91	61 - 118	1	20		
gamma-Chlordane	97	94	60 - 115	3	21		
Methoxychlor	100	96	52 - 123	3	23		
alpha-Chlordane	99	95	60 - 115	2	18		
Dieldrin	104	101	63 - 117	2	25		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	98	96	59 - 115
Decachlorobiphenyl	102	101	63 - 124

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Method Blank - Batch: 280-98741

Method: 8082
Preparation: 3550C

Lab Sample ID:	MB 280-98741/1-A	Analysis Batch:	280-99205	Instrument ID:	GCS_P3
Client Matrix:	Solid	Prep Batch:	280-98741	Lab File ID:	023F2301.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.6 g
Analysis Date:	12/07/2011 2246	Units:	ug/Kg	Final Weight/Volume:	5000 uL
Prep Date:	12/05/2011 1625			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	2.7	U	2.7	9.8
Aroclor 1221	7.9	U	7.9	16
Aroclor 1232	2.0	U	2.0	9.8
Aroclor 1242	4.6	U	4.6	9.8
Aroclor 1248	4.6	U	4.6	9.8
Aroclor 1254	2.5	U	2.5	9.8
Aroclor 1260	2.5	U	2.5	9.8

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	94	59 - 130
Tetrachloro-m-xylene	94	53 - 128

Lab Control Sample - Batch: 280-98741

Method: 8082
Preparation: 3550C

Lab Sample ID:	LCS 280-98741/2-A	Analysis Batch:	280-99205	Instrument ID:	GCS_P3
Client Matrix:	Solid	Prep Batch:	280-98741	Lab File ID:	024F2401.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	33.0 g
Analysis Date:	12/07/2011 2307	Units:	ug/Kg	Final Weight/Volume:	5000 uL
Prep Date:	12/05/2011 1625			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	30.3	30.6	101	54 - 132	
Aroclor 1260	30.3	31.3	103	62 - 129	

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	94	59 - 130
Tetrachloro-m-xylene	101	53 - 128

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-98741

Method: 8082
Preparation: 3550C

MS Lab Sample ID:	280-23278-4	Analysis Batch:	280-99205	Instrument ID:	GCS_P3
Client Matrix:	Solid	Prep Batch:	280-98741	Lab File ID:	029F2901.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.3 g
Analysis Date:	12/08/2011 0054			Final Weight/Volume:	5000 uL
Prep Date:	12/05/2011 1625			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	280-23278-4	Analysis Batch:	280-99205	Instrument ID:	GCS_P3
Client Matrix:	Solid	Prep Batch:	280-98741	Lab File ID:	030F3001.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.8 g
Analysis Date:	12/08/2011 0115			Final Weight/Volume:	5000 uL
Prep Date:	12/05/2011 1625			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aroclor 1016	119	102	54 - 132	17	26		
Aroclor 1260	105	107	62 - 129	1	26		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Decachlorobiphenyl	90	96	59 - 130
Tetrachloro-m-xylene	94	93	53 - 128

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Method Blank - Batch: 280-98761

Method: 8310
Preparation: 3550C

Lab Sample ID:	MB 280-98761/1-A	Analysis Batch:	280-99247	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-98761	Lab File ID:	G1208027.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.3 g
Analysis Date:	12/09/2011 0059	Units:	ug/Kg	Final Weight/Volume:	4000 uL
Prep Date:	12/05/2011 1739			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	6.3	U	6.3	15
Benzo[b]fluoranthene	4.2	U	4.2	15
Benzo[g,h,i]perylene	7.1	U	7.1	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)	98	72 - 115

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Lab Control Sample - Batch: 280-98761

Method: 8310
Preparation: 3550C

Lab Sample ID:	LCS 280-98761/2-A	Analysis Batch:	280-99247	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-98761	Lab File ID:	G1208028.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	32.7 g
Analysis Date:	12/09/2011 0130	Units:	ug/Kg	Final Weight/Volume:	4000 uL
Prep Date:	12/05/2011 1739			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	1830	1900	104	78 - 116	
Acenaphthylene	1830	1760	96	76 - 115	
Anthracene	1830	1820	99	74 - 115	
Benzo[a]anthracene	1830	1910	104	85 - 120	
Benzo[a]pyrene	1830	1850	101	74 - 121	
Benzo[b]fluoranthene	1830	1870	102	85 - 115	
Benzo[g,h,i]perylene	1830	1980	108	85 - 120	
Benzo[k]fluoranthene	1830	1820	99	85 - 115	
Chrysene	1830	1810	99	83 - 115	
Dibenzo(a,h)anthracene	1830	1870	102	83 - 115	
Fluoranthene	1830	1860	102	83 - 115	
Fluorene	1830	1830	99	80 - 115	
Indeno[1,2,3-cd]pyrene	1830	1920	105	85 - 123	
Naphthalene	1830	1820	99	80 - 121	
Phenanthrene	1830	1840	100	80 - 115	
Pyrene	1830	1840	100	75 - 116	

Surrogate	% Rec	Acceptance Limits
Terphenyl-d14 (SUR)	97	72 - 115

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-98761

Method: 8310
Preparation: 3550C

MS Lab Sample ID:	280-23278-2	Analysis Batch:	280-99247	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-98761	Lab File ID:	G1208031.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.6 g
Analysis Date:	12/09/2011 0301			Final Weight/Volume:	4000 uL
Prep Date:	12/05/2011 1739			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	280-23278-2	Analysis Batch:	280-99247	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-98761	Lab File ID:	G1208032.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.1 g
Analysis Date:	12/09/2011 0332			Final Weight/Volume:	4000 uL
Prep Date:	12/05/2011 1739			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	103	104	78 - 116	6	20		
Acenaphthylene	95	97	76 - 115	7	21		
Anthracene	98	101	74 - 115	7	20		
Benzo[a]anthracene	104	106	85 - 120	6	20		
Benzo[a]pyrene	101	103	74 - 121	6	20		
Benzo[b]fluoranthene	104	106	85 - 115	7	20		
Benzo[g,h,i]perylene	108	109	85 - 120	6	20		
Benzo[k]fluoranthene	101	103	85 - 115	7	20		
Chrysene	99	101	83 - 115	7	20		
Dibenzo(a,h)anthracene	102	103	83 - 115	6	20		
Fluoranthene	101	103	83 - 115	6	20		
Fluorene	99	101	80 - 115	7	20		
Indeno[1,2,3-cd]pyrene	105	106	85 - 123	6	20		
Naphthalene	98	100	80 - 121	8	20		
Phenanthrene	100	102	80 - 115	7	20		
Pyrene	100	102	75 - 116	6	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Terphenyl-d14 (SUR)	96	98	72 - 115

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Method Blank - Batch: 280-98375

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 280-98375/1-A	Analysis Batch:	280-99363	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-98375	Lab File ID:	25A6120811.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	12/09/2011 0331	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/08/2011 0530				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	1.6	U	1.6	5.0
Antimony	0.38	U	0.38	0.60
Arsenic	0.66	U	0.66	1.0
Barium	0.076	U	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
Iron	3.8	U	3.8	5.0
Lead	0.27	U	0.27	0.50
Magnesium	3.7	U	3.7	20.0
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
Silicon	5.7	U	5.7	10.0
Silver	0.16	U	0.16	0.20
Sodium	59.0	U	59.0	120

Method Blank - Batch: 280-98375

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 280-98375/1-A	Analysis Batch:	280-99605	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-98375	Lab File ID:	25A3120911.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	12/09/2011 1737	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/08/2011 0530				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Copper	0.22	U	0.22	1.0
Manganese	0.10	U	0.10	1.0
Vanadium	0.094	U	0.094	2.0
Zinc	0.490	B	0.40	1.0

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Lab Control Sample - Batch: 280-98375

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 280-98375/2-A	Analysis Batch:	280-99363	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-98375	Lab File ID:	25A6120811.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	12/09/2011 0334	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/08/2011 0530				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	199.5	100	82 - 116	
Antimony	50.0	49.30	99	82 - 110	
Arsenic	100	101.5	102	85 - 110	
Barium	200	197.7	99	87 - 112	
Beryllium	5.00	4.79	96	84 - 114	
Boron	100	97.85	98	81 - 110	
Cadmium	10.0	10.04	100	87 - 110	
Calcium	5000	4680	94	82 - 114	
Chromium	20.0	19.65	98	84 - 114	
Cobalt	50.0	48.66	97	87 - 110	
Iron	100	94.66	95	87 - 120	
Lead	50.0	50.00	100	86 - 110	
Magnesium	5000	4813	96	90 - 110	
Molybdenum	100	97.28	97	86 - 110	
Nickel	50.0	49.13	98	87 - 110	
Potassium	5000	4858	97	89 - 110	
Selenium	200	199.4	100	83 - 110	
Silicon	1000	178.6	18	10 - 70	
Silver	5.00	5.02	100	87 - 114	
Sodium	5000	5040	101	90 - 112	

Lab Control Sample - Batch: 280-98375

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 280-98375/2-A	Analysis Batch:	280-99605	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-98375	Lab File ID:	25A3120911.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	12/09/2011 1740	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/08/2011 0530				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Copper	25.0	24.62	98	88 - 110	
Manganese	50.0	48.07	96	88 - 110	
Vanadium	50.0	48.03	96	88 - 110	
Zinc	50.0	47.14	94	76 - 114	

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Matrix Spike - Batch: 280-98375

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-23278-1	Analysis Batch:	280-99363	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-98375	Lab File ID:	25A6120811.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.02 g
Analysis Date:	12/09/2011 0343	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/08/2011 0530				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	7320		202	9268	968	50 - 200	4
Antimony	0.36	U	50.4	29.44	58	20 - 200	
Arsenic	2.8		101	97.05	93	76 - 111	
Barium	64.5		202	257.5	96	52 - 159	
Beryllium	0.24		5.04	4.66	88	72 - 105	
Boron	1.4	B	101	90.00	88	75 - 107	
Cadmium	0.071	B	10.1	9.44	93	40 - 130	
Calcium	4930		5040	9781	96	43 - 165	
Chromium	11.2		20.2	30.58	96	70 - 200	
Cobalt	5.4		50.4	49.84	88	72 - 106	
Iron	15300		101	16040	737	70 - 200	4
Lead	3.9		50.4	49.53	91	70 - 200	
Magnesium	4070		5040	9003	98	64 - 145	
Molybdenum	0.25	U	101	88.08	87	75 - 103	
Nickel	10.7		50.4	55.32	89	61 - 126	
Potassium	1300		5040	6020	94	56 - 172	
Selenium	0.82	U	202	183.2	91	76 - 104	
Silicon	255		1010	436.0	18	20 - 200	N
Silver	0.15	U	5.04	4.62	92	75 - 141	
Sodium	192		5040	5054	96	78 - 111	

Matrix Spike - Batch: 280-98375

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-23278-1	Analysis Batch:	280-99605	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-98375	Lab File ID:	25A3120911.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.02 g
Analysis Date:	12/09/2011 1749	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/08/2011 0530				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Copper	11.0	25.2	35.79	98	37 - 187	
Manganese	272	50.4	336.4	127	40 - 200	4
Vanadium	34.4	50.4	86.06	103	50 - 169	
Zinc	31.9	50.4	77.84	91	70 - 200	

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Duplicate - Batch: 280-98375

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-23278-1	Analysis Batch:	280-99363	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-98375	Lab File ID:	25A6120811.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.20 g
Analysis Date:	12/09/2011 0341	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/08/2011 0530				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	7320		7319	0.02	40	
Antimony	0.36	U	0.33	NC	40	U
Arsenic	2.8		2.78	1	30	
Barium	64.5		66.99	4	30	
Beryllium	0.24		0.240	0	30	
Boron	1.4	B	1.21	12	30	B
Cadmium	0.071	B	0.0617	15	30	B
Calcium	4930		4786	3	30	
Chromium	11.2		10.99	1	40	
Cobalt	5.4		5.38	0.01	30	
Iron	15300		15460	1	40	
Lead	3.9		3.91	1	40	
Magnesium	4070		4114	1	30	
Molybdenum	0.25	U	0.22	NC	30	U
Nickel	10.7		10.07	6	30	
Potassium	1300		1309	0.6	40	
Selenium	0.82	U	0.74	NC	30	U
Silicon	255		251.2	1	40	
Silver	0.15	U	0.14	NC	30	U
Sodium	192		185.2	4	30	

Duplicate - Batch: 280-98375

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-23278-1	Analysis Batch:	280-99605	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-98375	Lab File ID:	25A3120911.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.20 g
Analysis Date:	12/09/2011 1747	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/08/2011 0530				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Copper	11.0	11.05	0.3	30	
Manganese	272	268.2	1	40	
Vanadium	34.4	35.05	2	30	
Zinc	31.9	32.35	1	40	

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Method Blank - Batch: 280-98450

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 280-98450/1-A	Analysis Batch:	280-99152	Instrument ID:	MT_034
Client Matrix:	Solid	Prep Batch:	280-98450	Lab File ID:	111207TAA.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.6 g
Analysis Date:	12/07/2011 1957	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	12/07/2011 1030				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.0055	U	0.0055	0.017

Lab Control Sample - Batch: 280-98450

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 280-98450/2-A	Analysis Batch:	280-99152	Instrument ID:	MT_034
Client Matrix:	Solid	Prep Batch:	280-98450	Lab File ID:	111207TAA.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.6 g
Analysis Date:	12/07/2011 1959	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	12/07/2011 1030				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.417	0.443	106	87 - 111	

Matrix Spike - Batch: 280-98450

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-23278-1	Analysis Batch:	280-99152	Instrument ID:	MT_034
Client Matrix:	Solid	Prep Batch:	280-98450	Lab File ID:	111207TAA.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.59 g
Analysis Date:	12/07/2011 2004	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	12/07/2011 1030				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.0087	B	0.436	0.467	105	87 - 111	

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Duplicate - Batch: 280-98450

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-23278-1	Analysis Batch:	280-99152	Instrument ID:	MT_034
Client Matrix:	Solid	Prep Batch:	280-98450	Lab File ID:	111207TAA.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.64 g
Analysis Date:	12/07/2011 2011	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	12/07/2011 1030				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.0087	B	0.0053	NC	20	U

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Method Blank - Batch: 280-98602

Method: 353.2
Preparation: N/A

Lab Sample ID:	MB 280-98535/1-A	Analysis Batch:	280-98602	Instrument ID:	WC_Alp 2
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1203NXNB
Dilution:	1.0	Leach Batch:	280-98535	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/03/2011 1330	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	12/02/2011 1513				

Analyte	Result	Qual	MDL	RL
Nitrate Nitrite as N-Soluble	0.30	U	0.30	0.75

Method Reporting Limit Check - Batch: 280-98602

Method: 353.2
Preparation: N/A

Lab Sample ID:	MRL 280-98602/18	Analysis Batch:	280-98602	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1203NXNB
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/03/2011 1202	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	0.0668	67	50 - 150	B

Lab Control Sample - Batch: 280-98602

Method: 353.2
Preparation: N/A

Lab Sample ID:	LCS 280-98535/2-A	Analysis Batch:	280-98602	Instrument ID:	WC_Alp 2
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1203NXNB
Dilution:	1.0	Leach Batch:	280-98535	Initial Weight/Volume:	100 mL
Analysis Date:	12/03/2011 1341	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	12/02/2011 1513				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N-Soluble	50.0	49.92	100	90 - 110	

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Matrix Spike - Batch: 280-98602

Method: 353.2
Preparation: N/A

Lab Sample ID:	280-23278-1	Analysis Batch:	280-98602	Instrument ID:	WC_Alp 2
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1203NXNB
Dilution:	1.0	Leach Batch:	280-98535	Initial Weight/Volume:	5 mL
Analysis Date:	12/03/2011 1345	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	12/02/2011 1513				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N-Soluble	0.30	U	40.3	38.96	97	90 - 110	

Duplicate - Batch: 280-98602

Method: 353.2
Preparation: N/A

Lab Sample ID:	280-23278-1	Analysis Batch:	280-98602	Instrument ID:	WC_Alp 2
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1203NXNB
Dilution:	1.0	Leach Batch:	280-98535	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/03/2011 1344	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	12/02/2011 1513				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Nitrate Nitrite as N-Soluble	0.30	U	0.30	NC	10	U

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-98864

Method: 9045C
Preparation: N/A

LCS Lab Sample ID:	LCS 280-98864/4	Analysis Batch:	280-98864	Instrument ID:	WC_pH Probe
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	120211.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/02/2011 1604	Units:	SU	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-98864/5	Analysis Batch:	280-98864	Instrument ID:	WC_pH Probe
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	120211.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/02/2011 1606	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	100	97 - 103	0	5		

Duplicate - Batch: 280-98864

Method: 9045C
Preparation: N/A

Lab Sample ID:	280-23278-1	Analysis Batch:	280-98864	Instrument ID:	WC_pH Probe
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	120211.txt
Dilution:	1.0	Leach Batch:	280-98513	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/02/2011 1611	Units:	SU	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	12/02/2011 1045				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
pH adj. to 25 deg C-Soluble	7.47	7.530	0.8	5	

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Method Blank - Batch: 280-99724

Method: 9056M
Preparation: N/A

Lab Sample ID:	MB 280-99664/2-A	Analysis Batch:	280-99724	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	154.TXT
Dilution:	1.0	Leach Batch:	280-99664	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/12/2011 2133	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	12/12/2011 1359				

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

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Method Reporting Limit Check - Batch: 280-99724

Method: 9056M
Preparation: N/A

Lab Sample ID:	MRL 280-99724/3	Analysis Batch:	280-99724	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:	12/12/2011 0835	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Orthophosphate as P-Soluble	0.500	0.433	87	50 - 150	B

Method Reporting Limit Check - Batch: 280-99724

Method: 9056M
Preparation: N/A

Lab Sample ID:	MRL 280-99724/4	Analysis Batch:	280-99724	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	113.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/12/2011 0852	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	0.125	63	50 - 150	B
Nitrite as N-Soluble	0.200	0.116	58	50 - 150	B

Lab Control Sample - Batch: 280-99724

Method: 9056M
Preparation: N/A

Lab Sample ID:	LCS 280-99664/1-A	Analysis Batch:	280-99724	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	153.TXT
Dilution:	1.0	Leach Batch:	280-99664	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/12/2011 2116	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	12/12/2011 1359				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as N-Soluble	50.0	51.11	102	90 - 110	
Nitrite as N-Soluble	50.0	52.12	104	90 - 110	
Orthophosphate as P-Soluble	50.0	47.81	96	90 - 110	

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Matrix Spike - Batch: 280-99724

Method: 9056M
Preparation: N/A

Lab Sample ID:	280-23278-3	Analysis Batch:	280-99724	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	159.TXT
Dilution:	1.0	Leach Batch:	280-99664	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/12/2011 2257	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	12/12/2011 1359				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as N-Soluble	1.4	B	49.4	52.01	102	80 - 120	
Nitrite as N-Soluble	0.34	U	49.4	50.29	102	80 - 120	
Orthophosphate as P-Soluble	1.2	U	49.4	39.50	80	80 - 120	

Duplicate - Batch: 280-99724

Method: 9056M
Preparation: N/A

Lab Sample ID:	280-23278-3	Analysis Batch:	280-99724	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	158.TXT
Dilution:	1.0	Leach Batch:	280-99664	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/12/2011 2240	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	12/12/2011 1359				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Nitrate as N-Soluble	1.4	B	1.43	0	15	B
Nitrite as N-Soluble	0.34	U	0.34	NC	15	U
Orthophosphate as P-Soluble	1.2	U	1.2	NC	15	U

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Method Blank - Batch: 280-99725

Method: 9056M
Preparation: N/A

Lab Sample ID:	MB 280-99664/2-A	Analysis Batch:	280-99725	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	154.TXT
Dilution:	1.0	Leach Batch:	280-99664	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/12/2011 2133	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	12/12/2011 1359				

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: 280-99725

Method: 9056M
Preparation: N/A

Lab Sample ID:	MRL 280-99725/4	Analysis Batch:	280-99725	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	113.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/12/2011 0852	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	0.623	62	50 - 150	B
Bromide-Soluble	0.200	0.169	85	50 - 150	B
Sulfate-Soluble	1.00	0.658	66	50 - 150	B
Fluoride-Soluble	0.200	0.109	55	50 - 150	B

Lab Control Sample - Batch: 280-99725

Method: 9056M
Preparation: N/A

Lab Sample ID:	LCS 280-99664/1-A	Analysis Batch:	280-99725	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	153.TXT
Dilution:	1.0	Leach Batch:	280-99664	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/12/2011 2116	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	12/12/2011 1359				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride-Soluble	250	256.0	102	90 - 110	
Bromide-Soluble	50.0	51.12	102	90 - 110	
Sulfate-Soluble	250	255.4	102	90 - 110	
Fluoride-Soluble	50.0	51.40	103	90 - 110	

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Matrix Spike - Batch: 280-99725

Method: 9056M
Preparation: N/A

Lab Sample ID:	280-23278-3	Analysis Batch:	280-99725	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	159.TXT
Dilution:	1.0	Leach Batch:	280-99664	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/12/2011 2257	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	12/12/2011 1359				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Chloride-Soluble	2.0	U	247	255.2	103	80 - 120	
Bromide-Soluble	0.39	U	49.4	49.39	100	80 - 120	
Sulfate-Soluble	1.7	U	247	244.6	99	80 - 120	
Fluoride-Soluble	0.82	U	49.4	43.39	88	80 - 120	

Duplicate - Batch: 280-99725

Method: 9056M
Preparation: N/A

Lab Sample ID:	280-23278-3	Analysis Batch:	280-99725	Instrument ID:	WC_IC8
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	158.TXT
Dilution:	1.0	Leach Batch:	280-99664	Initial Weight/Volume:	1.0 mL
Analysis Date:	12/12/2011 2240	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	12/12/2011 1359				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Chloride-Soluble	2.0	U	2.0	NC	15	U
Bromide-Soluble	0.39	U	0.39	NC	15	U
Sulfate-Soluble	1.7	U	1.7	NC	15	U
Fluoride-Soluble	0.82	U	0.82	NC	15	U

Client: Washington Closure Hanford

Job Number: 280-23278-1
Sdg Number: J01351

Duplicate - Batch: 280-98437

Method: D-2216
Preparation: N/A

Lab Sample ID:	280-23278-1	Analysis Batch:	280-98437	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:	12/02/2011 1008	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	2.7	2.4	13	20	

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-277	Page 1 of 1

Collector: Q Stowe	Company Contact: Joan Kessner	Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH
Price Code: 8L	Data Turnaround: 21 Days		
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location: 1607-D-1 Septic System- Focus Samples		SAF No.: RC-075
Ice Chest No.: ERC-02-007	Field Logbook No.: EL-1662	COA: 0607D12000	Method of Shipment: Fed Ex
Shipped To: TestAmerica Incorporated, ~~Richland~~ Denver (11/29/11)	Offsite Property No.: A100 996 -998		Bill of Lading/Air Bill No.: See OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

None

Special Handling and/or Storage

Cool 4 Deg. C

Preservation	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None			
Type of Container	G/P	G/P	G/P	aG	aG	aG	aG	G/P			
No. of Container(s)	1	1	1	1	1	1	1	1			
Volume	120mL	120mL	120mL	125mL	125mL	120mL	125mL	500mL			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	IC Anions - 9056 Modified, NO2/NO3 - 353.2; pH (Soil) - 9045	Semi-VOA - 8270A (TCL)	PAHs - 8310	PCBs - 8082	Pesticides - 8081	See item (2) in Special Instructions.			

Sample No.	Matrix *	Sample Date	Sample Time										
J1MM87	SOIL	11/29/11	1019	X		X	X	X	X	X			
J1MM88	SOIL		1023	X		X	X	X	X	X			
J1MM89	SOIL		1017	X		X	X	X	X	X			
J1MM90	SOIL		1021	X		X	X	X	X	X			

CHAIN OF POSSESSION

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Quincy Stowe	11/29/11 1445	MStankovich (WCH)	11/29/11 1445
MStankovich	11/29/11 1600	A. Freier (1060#1)	11-29-11 1600
A. Freier (1060#1)	11-30-11 1300	Fed Ex	

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010TR (Close-out 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) Gamma Spec (Client List) {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}

SDG J01351

REVIEWED BY CMB DATE 11/30/11

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

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

WCH-EE-011

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Project 28002142 - 601012 - Solid

Analytical Due:

Report Due: 12/22/11 (15 day TAT)

Sample Check-in List

Date/Time Received: 12/1/11 0930 GM Screen Result 12 microR/hr

Client: Washington Closure Hanford SDG #: J01351 NA[ ] SAF #: RC-075 NA [ ]

Job Number: 23278 Chain of Custody # RC-075-277

Shipping Container ID: ERL 99-046, ERL-99-061 Air Bill # 7954 5944 4212, 7954 5944 4234

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: 5.3, 2.3 NA [ ] 5. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [✓]
6. Number of samples in shipping container: 4
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: 12/1/11

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on ___ by ___ Person Contacted ___

[ ] No action necessary; process as is.

Project Manager [signature] Date 12/1/11

ERL-99-046 5.3°

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

RICHLAND, WA 99354

Origin ID: PSCA

FedEx. Express

J1120110805022 5

Ship Date: 30NOV11
ActWgt: 66.0 LB
CAD: 5851986/INET3210

Delivery Address Bar Code

Ref # 0607D1 2000
Invoice #
PO #
Dept #

SHIP TO: (303) 736-0190

BILL THIRD PARTY

KAE YODER
TEST AMERICA
4955 YARROW ST # A100994

ARVADA, CO 80002

6 of 7

THU - 01 DEC A1
PRIORITY OVERNIGHT

MPS# 7954 5994 4212
0263
Mstr# 7954 5994 4050 0201

XH WHHA

80002
CO-US
DEN

50FG1/8C50/F5F4

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2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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ERL-99-061 23°

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

RICHLAND, WA 99354

Origin ID: PSCA

FedEx. Express

J112011080502225

Ship Date: 30NOV11
ActWgt: 68.0 LB
CAD: 5851986/INET3210

Delivery Address Bar Code

Ref # 0607D1 2000
Invoice #
PO #
Dept #

SHIP TO: (303) 736-0190 BILL THIRD PARTY

KAE YODER
TEST AMERICA
4955 YARROW ST # A100994

ARVADA, CO 80002

5 of 7

THU - 01 DEC A1
PRIORITY OVERNIGHT

MPS# 7954 5994 4234
0263
Mstr# 7954 5994 4050 0201

XH WHHA

80002
CO-US
DEN

50FG1/BC50/F5F4

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