

**SAF-RC-217**  
**100F Remaining Sites Remediation –**  
**Soil Full Protocol**  
**FINAL DATA PACKAGE**

**COMPLETE COPY OF DATA PACKAGE TO:**

Kathy Wendt

H4-21

KW 7/27/11  
INITIAL/DATE

**COMMENTS:**

**SDG J01182**

**SAF-RC-217**

Rad only

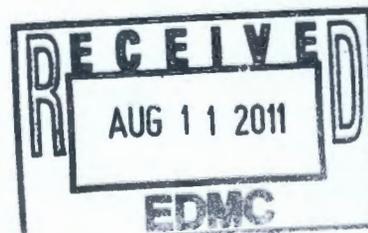
Chem only

Rad & Chem

Complete

Partial

**Sample Location: 100-F-48 VER (EXCAVATION)**



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



Radiochemical Analysis By  
**TestAmerica**

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

Assigned Laboratory Code: TARL

Data Package Contains 44 Pages

Report No.: 47463

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.	
J01162	RC-217	J1JWN1	J1G080407-1	MKQLR1AA	9MKQLR10	1189076	
		J1JWN1	J1G080407-1	MKQLR1AC	9MKQLR10	1189077	
		J1JWN2	J1G080407-2	MKQL21AA	9MKQL210	1189076	
		J1JWN2	J1G080407-2	MKQL21AC	9MKQL210	1189077	
		J1JWN3	J1G080407-3	MKQL51AA	9MKQL510	1189076	
		J1JWN3	J1G080407-3	MKQL51AC	9MKQL510	1189077	
		J1JWN4	J1G080407-4	MKQL81AA	9MKQL810	1189076	
		J1JWN4	J1G080407-4	MKQL81AC	9MKQL810	1189077	
		J1JWN5	J1G080407-5	MKQMC1AA	9MKQMC10	1189076	
		J1JWN5	J1G080407-5	MKQMC1AC	9MKQMC10	1189077	
		J1JWN6	J1G080407-6	MKQMD1AA	9MKQMD10	1189076	
		J1JWN6	J1G080407-6	MKQMD1AC	9MKQMD10	1189077	
		J1JWN7	J1G080407-7	MKQME1AA	9MKQME10	1189076	
		J1JWN7	J1G080407-7	MKQME1AC	9MKQME10	1189077	
		J1JWN8	J1G080407-8	MKQMH1AA	9MKQMH10	1189076	
		J1JWN8	J1G080407-8	MKQMH1AC	9MKQMH10	1189077	
		J1JWN9	J1G080407-9	MKQMM1AA	9MKQMM10	1189076	
		J1JWN9	J1G080407-9	MKQMM1AC	9MKQMM10	1189077	
		J1JWP0	J1G080407-10	MKQMQ1AA	9MKQMQ10	1189076	
		J1JWP0	J1G080407-10	MKQMQ1AC	9MKQMQ10	1189077	
		RC-217	J1JWP1	J1G080407-11	MKQMT1AA	9MKQMT10	1189076
			J1JWP1	J1G080407-11	MKQMT1AC	9MKQMT10	1189077
			J1JWP2	J1G080407-12	MKQM01AA	9MKQM010	1189076
			J1JWP2	J1G080407-12	MKQM01AC	9MKQM010	1189077
J1JWP3	J1G080407-13		MKQM41AA	9MKQM410	1189076		
J1JWP3	J1G080407-13	MKQM41AC	9MKQM410	1189077			

## Certificate of Analysis

Washington Hanford Closure  
2620 Fermi Avenue  
Richland, WA 99354

TestAmerica Laboratories, Inc.

July 18, 2011

Attention: Joan Kessner

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SAF Number	:	RC-217
Date SDG Closed	:	July 7, 2011
Number of Samples	:	Thirteen (13)
Sample Type	:	Soil
SDG Number	:	J01162
Data Deliverable	:	15- Day / Summary

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### CASE NARRATIVE

#### I. Introduction

On July 7, 2011 thirteen 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:

<u>WCH ID#</u>	<u>TARL ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
J1JWN1	MKQLR	SOIL	7/7/11
J1JWN2	MKQL2	SOIL	7/7/11
J1JWN3	MKQL5	SOIL	7/7/11
J1JWN4	MKQL8	SOIL	7/7/11
J1JWN5	MKQMC	SOIL	7/7/11
J1JWN6	MKQMD	SOIL	7/7/11
J1JWN7	MKQME	SOIL	7/7/11
J1JWN8	MKQMH	SOIL	7/7/11
J1JWN9	MKQMM	SOIL	7/7/11
J1JWP0	MKQMQ	SOIL	7/7/11
J1JWP1	MKQMT	SOIL	7/7/11
J1JWP2	MKQM0	SOIL	7/7/11
J1JWP3	MKQM4	SOIL	7/7/11

#### II. Sample Receipt

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

Washington Closure Hanford  
July 18, 2011

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### 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:

**Alpha Spectroscopy**

Thorium-228,230,232 by method RL-ALP-005

Uranium 234, 235 and 238 by method RL-ALP-015

### 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

**Alpha Spectroscopy**

Thorium-228,230,232 by method RL-ALP-005:

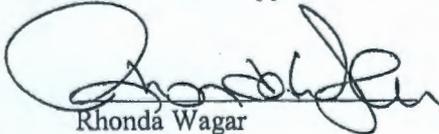
The LCS, batch blank, samples and sample duplicate (J1JWN2) results are within contractual requirements.

Uranium 234, 235 and 238 by method RL-ALP-015:

The LCS, batch blank, samples and sample duplicate (J1JWN1) results are within contractual requirements.

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

Reviewed and approved:



Rhonda Wagar  
Project Manager

### Drinking Water Method Cross References

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

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

### Uncertainty Estimation

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

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

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

## Report Definitions

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

### Sample Results Summary

Date: 18-Jul-11

#### TestAmerica TARL

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

Report No. : 47463

SDG No: J01162

Batch	Client Id Work Order	Parameter	Result +/- Uncertainty ( 2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
1189076 UISO_IE_PLATE_AEA									
J1JWN1									
	MKQLR1AA	U-234	7.17E-02 +- 9.7E-02	U	pCi/g	111%	1.76E-01	1.00E+00	
		U-235	-4.78E-03 +- 4.8E-02	U	pCi/g	111%	1.15E-01	1.00E+00	
		U-238	5.50E-02 +- 8.4E-02	U	pCi/g	111%	1.58E-01	1.00E+00	
J1JWN1 DUP									
	MKQLR1AD	U-234	1.72E-01 +- 1.5E-01		pCi/g	89%	1.70E-01	1.00E+00	82.4
		U-235	2.02E-02 +- 5.4E-02	U	pCi/g	89%	1.35E-01	1.00E+00	324.4
		U-238	9.41E-02 +- 1.1E-01	U	pCi/g	89%	1.61E-01	1.00E+00	52.5
J1JWN2									
	MKQL21AA	U-234	1.27E-01 +- 1.2E-01		pCi/g	91%	1.08E-01	1.00E+00	
		U-235	0.00E+00 +- 5.2E-02	U	pCi/g	91%	9.67E-02	1.00E+00	
		U-238	5.04E-02 +- 7.4E-02	U	pCi/g	91%	9.67E-02	1.00E+00	
J1JWN3									
	MKQL51AA	U-234	1.29E-01 +- 1.2E-01		pCi/g	84%	1.29E-01	1.00E+00	
		U-235	0.00E+00 +- 5.4E-02	U	pCi/g	84%	1.01E-01	1.00E+00	
		U-238	1.29E-01 +- 1.2E-01		pCi/g	84%	1.29E-01	1.00E+00	
J1JWN4									
	MKQL81AA	U-234	2.07E-01 +- 1.6E-01		pCi/g	83%	1.11E-01	1.00E+00	
		U-235	0.00E+00 +- 5.9E-02	U	pCi/g	83%	1.11E-01	1.00E+00	
		U-238	1.77E-01 +- 1.5E-01		pCi/g	83%	1.11E-01	1.00E+00	
J1JWN5									
	MKQMC1AA	U-234	1.23E-01 +- 1.2E-01		pCi/g	86%	1.15E-01	1.00E+00	
		U-235	0.00E+00 +- 5.1E-02	U	pCi/g	86%	9.52E-02	1.00E+00	
		U-238	2.29E-02 +- 5.1E-02	U	pCi/g	86%	1.06E-01	1.00E+00	
J1JWN6									
	MKQMD1AA	U-234	4.25E-01 +- 2.4E-01		pCi/g	79%	1.07E-01	1.00E+00	
		U-235	-1.42E-03 +- 5.7E-02	U	pCi/g	79%	1.07E-01	1.00E+00	
		U-238	2.23E-01 +- 1.7E-01		pCi/g	79%	1.28E-01	1.00E+00	
J1JWN7									
	MKQME1AA	U-234	1.89E-01 +- 1.5E-01		pCi/g	87%	1.10E-01	1.00E+00	
		U-235	2.68E-02 +- 5.5E-02	U	pCi/g	87%	9.21E-02	1.00E+00	
		U-238	1.36E-01 +- 1.3E-01		pCi/g	87%	9.96E-02	1.00E+00	
J1JWN8									
	MKQMH1AA	U-234	2.82E-01 +- 2.0E-01		pCi/g	86%	1.32E-01	1.00E+00	
		U-235	-3.81E-03 +- 6.3E-02	U	pCi/g	86%	1.37E-01	1.00E+00	
		U-238	1.84E-01 +- 1.6E-01		pCi/g	86%	1.52E-01	1.00E+00	
J1JWN9									
	MKQMM1AA	U-234	2.20E-01 +- 1.7E-01		pCi/g	88%	1.84E-01	1.00E+00	

TestAmerica

RPD - Relative Percent Difference.

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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: 18-Jul-11

#### TestAmerica TARL

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

Report No. : 47463

SDG No: J01162

Client Id	Batch	Work Order	Parameter	Result +- Uncertainty ( 2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
1189076 UIISO_IE_PLATE_AEA										
J1JWN9										
	MKQMM1AA	U-235		2.14E-02 +- 5.4E-02	U	pCi/g	88%	1.28E-01	1.00E+00	
		U-238		1.46E-01 +- 1.3E-01	U	pCi/g	88%	1.65E-01	1.00E+00	
J1JWP0										
	MKQMQ1AA	U-234		2.12E-01 +- 1.7E-01		pCi/g	84%	1.81E-01	1.00E+00	
		U-235		-7.17E-03 +- 5.8E-02	U	pCi/g	84%	1.44E-01	1.00E+00	
		U-238		1.00E-01 +- 1.2E-01	U	pCi/g	84%	1.72E-01	1.00E+00	
J1JWP1										
	MKQMT1AA	U-234		3.27E-01 +- 2.1E-01		pCi/g	78%	1.25E-01	1.00E+00	
		U-235		4.34E-02 +- 7.4E-02	U	pCi/g	78%	1.12E-01	1.00E+00	
		U-238		1.02E-01 +- 1.1E-01	U	pCi/g	78%	1.25E-01	1.00E+00	
J1JWP2										
	MKQM01AA	U-234		2.14E-01 +- 1.7E-01		pCi/g	72%	1.51E-01	1.00E+00	
		U-235		3.15E-02 +- 6.3E-02	U	pCi/g	72%	1.18E-01	1.00E+00	
		U-238		1.51E-01 +- 1.4E-01		pCi/g	72%	1.51E-01	1.00E+00	
J1JWP3										
	MKQM41AA	U-234		1.16E-01 +- 1.2E-01	U	pCi/g	81%	1.09E-01	1.00E+00	
		U-235		0.00E+00 +- 5.8E-02	U	pCi/g	81%	1.09E-01	1.00E+00	
		U-238		1.45E-01 +- 1.3E-01		pCi/g	81%	1.09E-01	1.00E+00	
1189077 THISO_IE_PRECIP_AEA										
J1JWN1										
	MKQLR1AC	TH-228		2.51E-01 +- 2.2E-01		pCi/g	96%	2.31E-01	1.00E+00	
		TH-230		1.72E-01 +- 1.8E-01	U	pCi/g	96%	1.63E-01	1.00E+00	
		TH-232		1.72E-01 +- 1.8E-01	U	pCi/g	96%	1.63E-01	1.00E+00	
J1JWN2										
	MKQL21AC	TH-228		3.26E-01 +- 3.0E-01		pCi/g	90%	2.47E-01	1.00E+00	
		TH-230		1.30E-01 +- 1.9E-01	U	pCi/g	90%	2.44E-01	1.00E+00	
		TH-232		2.51E-01 +- 2.6E-01	U	pCi/g	90%	2.94E-01	1.00E+00	
J1JWN2 DUP										
	MKQL21AD	TH-228		2.47E-01 +- 2.6E-01	U	pCi/g	95%	2.90E-01	1.00E+00	27.3
		TH-230		1.24E-01 +- 1.8E-01	U	pCi/g	95%	2.38E-01	1.00E+00	4.9
		TH-232		1.91E-01 +- 2.2E-01	U	pCi/g	95%	2.38E-01	1.00E+00	27.1
J1JWN3										
	MKQL51AC	TH-228		3.18E-01 +- 2.9E-01		pCi/g	93%	2.41E-01	1.00E+00	
		TH-230		1.91E-01 +- 2.2E-01	U	pCi/g	93%	2.38E-01	1.00E+00	
		TH-232		1.91E-01 +- 2.2E-01	U	pCi/g	93%	2.38E-01	1.00E+00	
J1JWN4										
	MKQL81AC	TH-228		3.27E-01 +- 2.6E-01		pCi/g	89%	1.98E-01	1.00E+00	

TestAmerica  
rptSTLRchSaSummary2 V5.2.15  
A2002

RPD - Relative Percent Difference.

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

### Sample Results Summary

Date: 18-Jul-11

#### TestAmerica TARL

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

Report No. : 47463

SDG No: J01162

Batch	Client Id Work Order	Parameter	Result +- Uncertainty ( 2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
1189077	THISO_IE_PRECIP_AEA								
	<b>J1JWN4</b>								
	MKQL81AC	TH-230	2.79E-01 +- 2.3E-01		pCi/g	89%	1.76E-01	1.00E+00	
		TH-232	3.70E-01 +- 2.7E-01		pCi/g	89%	1.96E-01	1.00E+00	
	<b>J1JWN5</b>								
	MKQMC1AC	TH-228	4.03E-01 +- 2.8E-01		pCi/g	99%	1.68E-01	1.00E+00	
		TH-230	3.06E-01 +- 2.4E-01		pCi/g	99%	1.85E-01	1.00E+00	
		TH-232	4.44E-01 +- 2.9E-01		pCi/g	99%	1.66E-01	1.00E+00	
	<b>J1JWN6</b>								
	MKQMD1AC	TH-228	6.09E-01 +- 3.2E-01		pCi/g	84%	1.43E-01	1.00E+00	
		TH-230	5.63E-01 +- 3.0E-01		pCi/g	84%	1.41E-01	1.00E+00	
		TH-232	6.74E-01 +- 3.4E-01		pCi/g	84%	1.57E-01	1.00E+00	
	<b>J1JWN7</b>								
	MKQME1AC	TH-228	4.06E-01 +- 2.5E-01		pCi/g	92%	1.56E-01	1.00E+00	
		TH-230	6.26E-01 +- 3.2E-01		pCi/g	92%	1.38E-01	1.00E+00	
		TH-232	6.26E-01 +- 3.2E-01		pCi/g	92%	1.38E-01	1.00E+00	
	<b>J1JWN8</b>								
	MKQMH1AC	TH-228	2.40E-01 +- 1.9E-01		pCi/g	97%	1.26E-01	1.00E+00	
		TH-230	3.76E-01 +- 2.3E-01		pCi/g	97%	1.15E-01	1.00E+00	
		TH-232	1.71E-01 +- 1.6E-01		pCi/g	97%	1.15E-01	1.00E+00	
	<b>J1JWN9</b>								
	MKQMM1AC	TH-228	3.52E-01 +- 2.4E-01		pCi/g	86%	1.32E-01	1.00E+00	
		TH-230	4.65E-01 +- 2.8E-01		pCi/g	86%	1.31E-01	1.00E+00	
		TH-232	3.10E-01 +- 2.2E-01		pCi/g	86%	1.31E-01	1.00E+00	
	<b>J1JWP0</b>								
	MKQMQ1AC	TH-228	2.72E-01 +- 1.9E-01		pCi/g	91%	1.23E-01	1.00E+00	
		TH-230	3.01E-01 +- 2.0E-01		pCi/g	91%	1.02E-01	1.00E+00	
		TH-232	3.60E-01 +- 2.2E-01		pCi/g	91%	1.22E-01	1.00E+00	
	<b>J1JWP1</b>								
	MKQMT1AC	TH-228	3.70E-01 +- 2.4E-01		pCi/g	95%	1.39E-01	1.00E+00	
		TH-230	6.97E-02 +- 1.0E-01	U	pCi/g	95%	1.53E-01	1.00E+00	
		TH-232	4.03E-01 +- 2.5E-01		pCi/g	95%	1.38E-01	1.00E+00	
	<b>J1JWP2</b>								
	MKQM01AC	TH-228	2.34E-01 +- 1.8E-01		pCi/g	97%	1.23E-01	1.00E+00	
		TH-230	1.65E-01 +- 1.5E-01		pCi/g	97%	1.28E-01	1.00E+00	
		TH-232	1.99E-01 +- 1.7E-01		pCi/g	97%	1.21E-01	1.00E+00	
	<b>J1JWP3</b>								
	MKQM41AC	TH-228	2.29E-01 +- 1.8E-01		pCi/g	97%	1.27E-01	1.00E+00	
		TH-230	2.27E-01 +- 1.8E-01		pCi/g	97%	1.26E-01	1.00E+00	

TestAmerica  
rptSTLRchSaSummary2 V5.2.15  
A2002

RPD - Relative Percent Difference.

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

# Sample Results Summary

Date: 18-Jul-11

## TestAmerica TARL

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

Report No. : 47463

SDG No: J01162

Batch	Client Id Work Order	Parameter	Result +- Uncertainty ( 2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
1189077	THISO_IE_PRECIP_AEA								
	J1JWP3								
	MKQM41AC	TH-232	6.54E-02 +- 9.3E-02	U	pCi/g	97%	1.10E-01	1.00E+00	
No. of Results:		84							

TestAmerica

RPD - Relative Percent Difference.

rptSTLRchSaSum  
mary2 V5.2.15  
A2002

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

**QC Results Summary**  
**TestAmerica TARL**  
 Ordered by Method, Batch No, QC Type,.

Date: 18-Jul-11

Report No. : 47463

SDG No.: J01162

Batch	Work Order	Parameter	Result +/- Uncertainty ( 2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC MDA
<b>UIISO_IE_PLATE_AEA</b>									
1189076 BLANK QC,									
	MKQRQ1AA	U-234	-4.29E-03 +/- 5.7E-02	U	pCi/g	77%			1.29E-01
		U-235	2.86E-02 +/- 5.8E-02	U	pCi/g	77%			1.07E-01
		U-238	2.71E-02 +/- 5.8E-02	U	pCi/g	77%			1.07E-01
1189076 LCS,									
	MKQRQ1AC	U-234	2.44E+00 +/- 6.7E-01		pCi/g	102%	76%	-0.2	8.54E-02
		U-238	2.82E+00 +/- 7.5E-01		pCi/g	102%	84%	-0.2	1.03E-01
<b>THISO_IE_PRECIP_AEA</b>									
1189077 BLANK QC,									
	MKQRV1AA	TH-228	2.35E-02 +/- 5.6E-02	U	pCi/g	97%			1.28E-01
		TH-230	-2.78E-03 +/- 5.6E-02	U	pCi/g	97%			1.16E-01
		TH-232	-1.67E-03 +/- 5.6E-02	U	pCi/g	97%			1.07E-01
1189077 LCS,									
	MKQRV1AC	TH-230	2.51E+00 +/- 7.2E-01		pCi/g	95%	110%	0.1	1.39E-01
No. of Results: 9									

TestAmerica Bias - (Result/Expected)-1 as defined by ANSI N13.30.  
 rptSTLRchQcSummary V5.2.15 U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or A2002 not identified by gamma scan software.



FORM I

Date: 18-Jul-11

SAMPLE RESULTS

Lab Name: TestAmerica

SDG: J01162

Collection Date: 7/6/2011 8:40:00 AM

Lot-Sample No.: J1G080407-2

Report No.: 47463

Received Date: 7/7/2011 3:45:00 PM

Client Sample ID: J1JWN2

COC No.: RC-217-003

Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error ( 2 s)	Total Uncert( 2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1189076	UIISO_IE_PLATE_AEA		Work Order: MKQL21AA			Report DB ID: 9MKQL210						
U-234	<b>1.27E-01</b>		1.2E-01	1.2E-01	1.08E-01	pCi/g	91%	(1.2)	7/14/11 05:26 p		1.0	ALP8
							1.89E-02	1.00E+00	(2.1)		g	
U-235	<b>0.00E+00</b>	U	0.0E+00	5.2E-02	9.67E-02	pCi/g	91%	0.	7/14/11 05:26 p		1.0	ALP8
							1.34E-02	1.00E+00	0.		g	
U-238	<b>5.04E-02</b>	U	7.3E-02	7.4E-02	9.67E-02	pCi/g	91%	0.52	7/14/11 05:26 p		1.0	ALP8
							1.34E-02	1.00E+00	(1.4)		g	
<b>Ratio U-234/Z38 = 2.5</b>												
Batch: 1189077	THISO_IE_PRECIP_AEA		Work Order: MKQL21AC			Report DB ID: 9MKQL210						
TH-228	<b>3.26E-01</b>		2.9E-01	3.0E-01	2.47E-01	pCi/g	90%	(1.3)	7/16/11 12:51 p		1.01	ALP173
							3.42E-02	1.00E+00	(2.2)		g	
TH-230	<b>1.30E-01</b>	U	1.8E-01	1.9E-01	2.44E-01	pCi/g	90%	0.53	7/16/11 12:51 p		1.01	ALP173
							3.39E-02	1.00E+00	(1.4)		g	
TH-232	<b>2.51E-01</b>	U	2.6E-01	2.6E-01	2.94E-01	pCi/g	90%	0.85	7/16/11 12:51 p		1.01	ALP173
							5.86E-02	1.00E+00	(1.9)		g	

No. of Results: 6      Comments:

## FORM I SAMPLE RESULTS

Date: 18-Jul-11

Lab Name: TestAmerica  
 Lot-Sample No.: J1G080407-3  
 Client Sample ID: J1JWN3

SDG: J01162  
 Report No.: 47463  
 COC No.: RC-217-003

Collection Date: 7/6/2011 9:00:00 AM  
 Received Date: 7/7/2011 3:45:00 PM  
 Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error ( 2 s)	Total Uncert( 2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1189076	UIISO_IE_PLATE_AEA			Work Order: MKQL51AA		Report DB ID: 9MKQL510						
U-234	<b>1.29E-01</b>		1.2E-01	1.2E-01	1.29E-01	pCi/g	84%	(1.)	7/14/11 05:26 p		1.0	ALP9
							2.80E-02	1.00E+00	(2.1)		9	
U-235	<b>0.00E+00</b>	U	0.0E+00	5.4E-02	1.01E-01	pCi/g	84%	0.	7/14/11 05:26 p		1.0	ALP9
							1.40E-02	1.00E+00	0.		9	
U-238	<b>1.29E-01</b>		1.2E-01	1.2E-01	1.29E-01	pCi/g	84%	(1.)	7/14/11 05:26 p		1.0	ALP9
							2.80E-02	1.00E+00	(2.1)		9	
<b>Ratio U-234/238 = 1.0</b>												
Batch: 1189077	THISO_IE_PRECIP_AEA			Work Order: MKQL51AC		Report DB ID: 9MKQL510						
TH-228	<b>3.18E-01</b>		2.9E-01	2.9E-01	2.41E-01	pCi/g	93%	(1.3)	7/16/11 12:51 p		1.0	ALP175
							3.34E-02	1.00E+00	(2.2)		9	
TH-230	<b>1.91E-01</b>	U	2.2E-01	2.2E-01	2.38E-01	pCi/g	93%	0.8	7/16/11 12:51 p		1.0	ALP175
							3.31E-02	1.00E+00	(1.7)		9	
TH-232	<b>1.91E-01</b>	U	2.2E-01	2.2E-01	2.38E-01	pCi/g	93%	0.8	7/16/11 12:51 p		1.0	ALP175
							3.31E-02	1.00E+00	(1.7)		9	

No. of Results: 6      Comments:

## FORM I SAMPLE RESULTS

Date: 18-Jul-11

Lab Name: TestAmerica  
 Lot-Sample No.: J1G080407-4  
 Client Sample ID: J1JWN4

SDG: J01162  
 Report No.: 47463  
 COC No.: RC-217-003

Collection Date: 7/6/2011 9:30:00 AM  
 Received Date: 7/7/2011 3:45:00 PM  
 Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error ( 2 s)	Total Uncert( 2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1189076	UIISO_IE_PLATE_AEA			Work Order: MKQL81AA	Report DB ID: 9MKQL810							
U-234	<b>2.07E-01</b>		1.6E-01	1.6E-01	1.11E-01	pCi/g	83%	(1.9)	7/14/11 05:26 p		1.01	ALP10
							1.53E-02	1.00E+00	(2.5)		g	
U-235	<b>0.00E+00</b>	U	0.0E+00	5.9E-02	1.11E-01	pCi/g	83%	0.	7/14/11 05:26 p		1.01	ALP10
							1.53E-02	1.00E+00	0.		g	
U-238	<b>1.77E-01</b>		1.4E-01	1.5E-01	1.11E-01	pCi/g	83%	(1.6)	7/14/11 05:26 p		1.01	ALP10
							1.53E-02	1.00E+00	(2.4)		g	
<b>Ratio U-234/238 = 1.2</b>												
Batch: 1189077	THISO_IE_PRECIP_AEA			Work Order: MKQL81AC	Report DB ID: 9MKQL810							
TH-228	<b>3.27E-01</b>		2.5E-01	2.6E-01	1.98E-01	pCi/g	89%	(1.7)	7/16/11 12:51 p		1.02	ALP176
							3.48E-02	1.00E+00	(2.6)		g	
TH-230	<b>2.79E-01</b>		2.3E-01	2.3E-01	1.76E-01	pCi/g	89%	(1.6)	7/16/11 12:51 p		1.02	ALP176
							2.44E-02	1.00E+00	(2.4)		g	
TH-232	<b>3.70E-01</b>		2.7E-01	2.7E-01	1.96E-01	pCi/g	89%	(1.9)	7/16/11 12:51 p		1.02	ALP176
							3.45E-02	1.00E+00	(2.7)		g	

No. of Results: 6      Comments:

## FORM I

Date: 18-Jul-11

## SAMPLE RESULTS

Lab Name: TestAmerica

SDG: J01162

Collection Date: 7/6/2011 9:45:00 AM

Lot-Sample No.: J1G080407-5

Report No.: 47463

Received Date: 7/7/2011 3:45:00 PM

Client Sample ID: J1JWN5

COC No.: RC-217-003

Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error ( 2 s)	Total Uncert( 2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1189076	UIISO_IE_PLATE_AEA		Work Order: MKQMC1AA		Report DB ID: 9MKQMC10							
U-234	<b>1.23E-01</b>		1.1E-01	1.2E-01	1.15E-01	pCi/g	86%	(1.1)	7/14/11 05:27 p		1.01	ALP11
							2.29E-02	1.00E+00	(2.1)		g	
U-235	<b>0.00E+00</b>	U	0.0E+00	5.1E-02	9.52E-02	pCi/g	86%	0.	7/14/11 05:27 p		1.01	ALP11
							1.32E-02	1.00E+00	0.		g	
U-238	<b>2.29E-02</b>	U	5.1E-02	5.1E-02	1.06E-01	pCi/g	86%	0.22	7/14/11 05:27 p		1.01	ALP11
							1.87E-02	1.00E+00	0.89		g	
<b>Ratio U-234/238 = 5.4</b>												
Batch: 1189077	THISO_IE_PRECIP_AEA		Work Order: MKQMC1AC		Report DB ID: 9MKQMC10							
TH-228	<b>4.03E-01</b>		2.7E-01	2.8E-01	1.68E-01	pCi/g	99%	(2.4)	7/16/11 12:51 p		0.99	ALP177
							2.33E-02	1.00E+00	(2.9)		g	
TH-230	<b>3.06E-01</b>		2.3E-01	2.4E-01	1.85E-01	pCi/g	99%	(1.7)	7/16/11 12:51 p		0.99	ALP177
							3.26E-02	1.00E+00	(2.6)		g	
TH-232	<b>4.44E-01</b>		2.8E-01	2.9E-01	1.66E-01	pCi/g	99%	(2.7)	7/16/11 12:51 p		0.99	ALP177
							2.31E-02	1.00E+00	(3.1)		g	

No. of Results: 6

Comments:

TestAmerica

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

rptSTLRchSample  
V5.2.15 A2002

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

FORM I  
SAMPLE RESULTS

Date: 18-Jul-11

Lab Name: TestAmerica  
Lot-Sample No.: J1G080407-6  
Client Sample ID: J1JWN6

SDG: J01162  
Report No.: 47463  
COC No.: RC-217-003

Collection Date: 7/6/2011 10:00:00 AM  
Received Date: 7/7/2011 3:45:00 PM  
Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error ( 2 s)	Total Uncert( 2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1189076	UIISO_IE_PLATE_AEA		Work Order: MKQMD1AA		Report DB ID: 9MKQMD10							
U-234	<b>4.25E-01</b>		2.2E-01	2.4E-01	1.07E-01	pCi/g	79%	(4.)	7/14/11 05:27 p		1.02	ALP12
							1.48E-02	1.00E+00			g	
U-235	<b>-1.42E-03</b>	U	5.7E-02	5.7E-02	1.07E-01	pCi/g	79%	-0.01	7/14/11 05:27 p		1.02	ALP12
							1.48E-02	1.00E+00			g	
U-238	<b>2.23E-01</b>		1.6E-01	1.7E-01	1.28E-01	pCi/g	79%	(1.7)	7/14/11 05:27 p		1.02	ALP12
							2.56E-02	1.00E+00			g	
<i>Ratio U-234/238 = 1.9</i>												
Batch: 1189077	THISO_IE_PRECIP_AEA		Work Order: MKQMD1AC		Report DB ID: 9MKQMD10							
TH-228	<b>6.09E-01</b>		3.0E-01	3.2E-01	1.43E-01	pCi/g	84%	(4.3)	7/16/11 12:51 p		1.04	ALP178
							1.98E-02	1.00E+00			g	
TH-230	<b>5.63E-01</b>		2.9E-01	3.0E-01	1.41E-01	pCi/g	84%	(4.)	7/16/11 12:51 p		1.04	ALP178
							1.96E-02	1.00E+00			g	
TH-232	<b>6.74E-01</b>		3.2E-01	3.4E-01	1.57E-01	pCi/g	84%	(4.3)	7/16/11 12:51 p		1.04	ALP178
							2.77E-02	1.00E+00			g	

No. of Results: 6      Comments:

FORM I

Date: 18-Jul-11

SAMPLE RESULTS

Lab Name: TestAmerica  
 Lot-Sample No.: J1G080407-7  
 Client Sample ID: J1JWN7

SDG: J01162  
 Report No.: 47463  
 COC No.: RC-217-003

Collection Date: 7/6/2011 10:15:00 AM  
 Received Date: 7/7/2011 3:45:00 PM  
 Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error ( 2 s)	Total Uncert( 2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1189076	UIISO_IE_PLATE_AEA				Work Order: MKQME1AA		Report DB ID: 9MKQME10					
U-234	<b>1.89E-01</b>		1.4E-01	1.5E-01	1.10E-01	pCi/g	87%	(1.7)	7/14/11 05:28 p		1.01	ALP71
							1.80E-02	1.00E+00			g	
U-235	<b>2.68E-02</b>	U	5.5E-02	5.5E-02	9.21E-02	pCi/g	87%	0.29	7/14/11 05:28 p		1.01	ALP71
							9.01E-03	1.00E+00			g	
U-238	<b>1.36E-01</b>		1.2E-01	1.3E-01	9.96E-02	pCi/g	87%	(1.4)	7/14/11 05:28 p		1.01	ALP71
							1.27E-02	1.00E+00			g	
<i>Ratio U-234/238 = 1.4</i>												
Batch: 1189077	THISO_IE_PRECIP_AEA				Work Order: MKQME1AC		Report DB ID: 9MKQME10					
TH-228	<b>4.06E-01</b>		2.5E-01	2.5E-01	1.56E-01	pCi/g	92%	(2.6)	7/16/11 12:52 p		1.03	ALP113
							2.74E-02	1.00E+00			g	
TH-230	<b>6.26E-01</b>		3.0E-01	3.2E-01	1.38E-01	pCi/g	92%	(4.5)	7/16/11 12:52 p		1.03	ALP113
							1.92E-02	1.00E+00			g	
TH-232	<b>6.26E-01</b>		3.0E-01	3.2E-01	1.38E-01	pCi/g	92%	(4.5)	7/16/11 12:52 p		1.03	ALP113
							1.92E-02	1.00E+00			g	

No. of Results: 6      Comments:

FORM I

Date: 18-Jul-11

SAMPLE RESULTS

Lab Name: TestAmerica

SDG: J01162

Collection Date: 7/6/2011 10:30:00 AM

Lot-Sample No.: J1G080407-8

Report No. : 47463

Received Date: 7/7/2011 3:45:00 PM

Client Sample ID: J1JWN8

COC No. : RC-217-003

Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error ( 2 s)	Total Uncert( 2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1189076	UIISO_IE_PLATE_AEA		Work Order: MKQMH1AA		Report DB ID: 9MKQMH10							
U-234	<b>2.82E-01</b>		1.9E-01	2.0E-01	1.32E-01	pCi/g	86%	(2.1)	7/14/11 05:28 p		1.03	ALP84
							2.33E-02	1.00E+00			g	
U-235	<b>-3.81E-03</b>	U	6.3E-02	6.3E-02	1.37E-01	pCi/g	86%	-0.03	7/14/11 05:28 p		1.03	ALP84
							2.56E-02	1.00E+00			g	
U-238	<b>1.84E-01</b>		1.6E-01	1.6E-01	1.52E-01	pCi/g	86%	(1.2)	7/14/11 05:28 p		1.03	ALP84
							3.30E-02	1.00E+00			g	
<b>Ratio U-234/238 = 1.5</b>												
Batch: 1189077	THISO_IE_PRECIP_AEA		Work Order: MKQMH1AC		Report DB ID: 9MKQMH10							
TH-228	<b>2.40E-01</b>		1.8E-01	1.9E-01	1.26E-01	pCi/g	97%	(1.9)	7/16/11 01:22 p		1.0	ALP116
							1.61E-02	1.00E+00			g	
TH-230	<b>3.76E-01</b>		2.3E-01	2.3E-01	1.15E-01	pCi/g	97%	(3.3)	7/16/11 01:22 p		1.0	ALP116
							1.13E-02	1.00E+00			g	
TH-232	<b>1.71E-01</b>		1.5E-01	1.6E-01	1.15E-01	pCi/g	97%	(1.5)	7/16/11 01:22 p		1.0	ALP116
							1.13E-02	1.00E+00			g	

No. of Results: 6      Comments:

FORM I

Date: 18-Jul-11

SAMPLE RESULTS

Lab Name: TestAmerica

SDG: J01162

Collection Date: 7/6/2011 10:45:00 AM

Lot-Sample No.: J1G080407-9

Report No.: 47463

Received Date: 7/7/2011 3:45:00 PM

Client Sample ID: J1JWN9

COC No.: RC-217-003

Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error ( 2 s)	Total Uncert( 2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1189076	UIISO_IE_PLATE_AEA		Work Order: MKQMM1AA		Report DB ID: 9MKQMM10							
U-234	<b>2.20E-01</b>		1.6E-01	1.7E-01	1.84E-01	pCi/g	88%	(1.2)	7/14/11 07:07 p		1.03	ALP3
							5.57E-02	1.00E+00			g	
U-235	<b>2.14E-02</b>	U	5.4E-02	5.4E-02	1.28E-01	pCi/g	88%	0.17	7/14/11 07:07 p		1.03	ALP3
							2.79E-02	1.00E+00			g	
U-238	<b>1.46E-01</b>	U	1.3E-01	1.3E-01	1.65E-01	pCi/g	88%	0.88	7/14/11 07:07 p		1.03	ALP3
							4.62E-02	1.00E+00			g	
<i>Ratio U-234/238 = 1.5</i>												
Batch: 1189077	THISO_IE_PRECIP_AEA		Work Order: MKQMM1AC		Report DB ID: 9MKQMM10							
TH-228	<b>3.52E-01</b>		2.3E-01	2.4E-01	1.32E-01	pCi/g	86%	(2.7)	7/16/11 01:22 p		1.0	ALP117
							1.29E-02	1.00E+00			g	
TH-230	<b>4.65E-01</b>		2.7E-01	2.8E-01	1.31E-01	pCi/g	86%	(3.6)	7/16/11 01:22 p		1.0	ALP117
							1.27E-02	1.00E+00			g	
TH-232	<b>3.10E-01</b>		2.2E-01	2.2E-01	1.31E-01	pCi/g	86%	(2.4)	7/16/11 01:22 p		1.0	ALP117
							1.27E-02	1.00E+00			g	

No. of Results: 6      Comments:

FORM I

Date: 18-Jul-11

SAMPLE RESULTS

Lab Name: TestAmerica  
 Lot-Sample No.: J1G080407-10  
 Client Sample ID: J1JWP0

SDG: J01162  
 Report No. : 47463  
 COC No. : RC-217-003

Collection Date: 7/6/2011 11:00:00 AM  
 Received Date: 7/7/2011 3:45:00 PM  
 Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error ( 2 s)	Total Uncert( 2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1189076	UIISO_IE_PLATE_AEA		Work Order: MKQMQ1AA		Report DB ID: 9MKQMQ10							
U-234	<b>2.12E-01</b>		1.6E-01	1.7E-01	1.81E-01	pCi/g	84%	(1.2)	7/14/11 07:08 p	1.0	g	ALP4
							5.16E-02	1.00E+00				
U-235	<b>-7.17E-03</b>	U	5.8E-02	5.8E-02	1.44E-01	pCi/g	84%	-0.05	7/14/11 07:08 p	1.0	g	ALP4
							3.33E-02	1.00E+00				
U-238	<b>1.00E-01</b>	U	1.1E-01	1.2E-01	1.72E-01	pCi/g	84%	0.58	7/14/11 07:08 p	1.0	g	ALP4
							4.71E-02	1.00E+00				
<b>Ratio U-234/238 = 2.1</b>												
Batch: 1189077	THISO_IE_PRECIP_AEA		Work Order: MKQMQ1AC		Report DB ID: 9MKQMQ10							
TH-228	<b>2.72E-01</b>		1.8E-01	1.9E-01	1.23E-01	pCi/g	91%	(2.2)	7/16/11 01:22 p	1.02	g	ALP118
							2.01E-02	1.00E+00				
TH-230	<b>3.01E-01</b>		1.9E-01	2.0E-01	1.02E-01	pCi/g	91%	(3.)	7/16/11 01:22 p	1.02	g	ALP118
							9.94E-03	1.00E+00				
TH-232	<b>3.60E-01</b>		2.1E-01	2.2E-01	1.22E-01	pCi/g	91%	(3.)	7/16/11 01:22 p	1.02	g	ALP118
							1.99E-02	1.00E+00				

No. of Results: 6      Comments:



FORM I

Date: 18-Jul-11

SAMPLE RESULTS

Lab Name: TestAmerica  
 Lot-Sample No.: J1G080407-12  
 Client Sample ID: J1JWP2

SDG: J01162  
 Report No.: 47463  
 COC No.: RC-217-003

Collection Date: 7/6/2011 11:30:00 AM  
 Received Date: 7/7/2011 3:45:00 PM  
 Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error ( 2 s)	Total Uncert( 2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1189076	UIISO_IE_PLATE_AEA		Work Order: MKQM01AA		Report DB ID: 9MKQM010							
U-234	<b>2.14E-01</b>		1.7E-01	1.7E-01	1.51E-01	pCi/g	72%	(1.4)	7/14/11 07:08 p		1.0	ALP9
							3.28E-02	1.00E+00	(2.5)		g	
U-235	<b>3.15E-02</b>	U	6.3E-02	6.3E-02	1.18E-01	pCi/g	72%	0.27	7/14/11 07:08 p		1.0	ALP9
							1.64E-02	1.00E+00	0.99		g	
U-238	<b>1.51E-01</b>		1.4E-01	1.4E-01	1.51E-01	pCi/g	72%	(1.)	7/14/11 07:08 p		1.0	ALP9
							3.28E-02	1.00E+00	(2.1)		g	
<i>Ratio U-234/238 = 1.4</i>												
Batch: 1189077	THISO_IE_PRECIP_AEA		Work Order: MKQM01AC		Report DB ID: 9MKQM010							
TH-228	<b>2.34E-01</b>		1.8E-01	1.8E-01	1.23E-01	pCi/g	97%	(1.9)	7/16/11 01:23 p		1.03	ALP23
							1.57E-02	1.00E+00	(2.6)		g	
TH-230	<b>1.65E-01</b>		1.5E-01	1.5E-01	1.28E-01	pCi/g	97%	(1.3)	7/16/11 01:23 p		1.03	ALP23
							1.90E-02	1.00E+00	(2.2)		g	
TH-232	<b>1.99E-01</b>		1.6E-01	1.7E-01	1.21E-01	pCi/g	97%	(1.6)	7/16/11 01:23 p		1.03	ALP23
							1.55E-02	1.00E+00	(2.4)		g	

No. of Results: 6      Comments:

## FORM I

Date: 18-Jul-11

## SAMPLE RESULTS

Lab Name: TestAmerica  
 Lot-Sample No.: J1G080407-13  
 Client Sample ID: J1JWP3

SDG: J01162  
 Report No.: 47463  
 COC No.: RC-217-003

Collection Date: 7/6/2011 9:00:00 AM  
 Received Date: 7/7/2011 3:45:00 PM  
 Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error ( 2 s)	Total Uncert( 2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1189076	UIISO_IE_PLATE_AEA		Work Order: MKQM41AA		Report DB ID: 9MKQM410							
U-234	<b>1.16E-01</b>	U	1.2E-01	1.2E-01	1.09E-01	pCi/g	81%	(1.1)	7/14/11 07:08 p	1.04	9	ALP10
							1.51E-02	1.00E+00	(2.)			
U-235	<b>0.00E+00</b>	U	0.0E+00	5.8E-02	1.09E-01	pCi/g	81%	0.	7/14/11 07:08 p	1.04	9	ALP10
							1.51E-02	1.00E+00	0.			
U-238	<b>1.45E-01</b>		1.3E-01	1.3E-01	1.09E-01	pCi/g	81%	(1.3)	7/14/11 07:08 p	1.04	9	ALP10
							1.51E-02	1.00E+00	(2.2)			
<b>Ratio U-234/238 = 0.8</b>												
Batch: 1189077	THISO_IE_PRECIP_AEA		Work Order: MKQM41AC		Report DB ID: 9MKQM410							
TH-228	<b>2.29E-01</b>		1.7E-01	1.8E-01	1.27E-01	pCi/g	97%	(1.8)	7/16/11 01:23 p	1.02	9	ALP27
							1.88E-02	1.00E+00	(2.6)			
TH-230	<b>2.27E-01</b>		1.7E-01	1.8E-01	1.26E-01	pCi/g	97%	(1.8)	7/16/11 01:23 p	1.02	9	ALP27
							1.86E-02	1.00E+00	(2.6)			
TH-232	<b>6.54E-02</b>	U	9.2E-02	9.3E-02	1.10E-01	pCi/g	97%	0.59	7/16/11 01:23 p	1.02	9	ALP27
							1.08E-02	1.00E+00	(1.4)			

No. of Results: 6

Comments:

FORM II

Date: 18-Jul-11

DUPLICATE RESULTS

Lab Name: TestAmerica  
 Lot-Sample No.: J1G080407-1  
 Client Sample ID: J1JWN1 DUP

SDG: J01162  
 Report No. : 47463  
 COC No. : RC-217-003

Collection Date: 7/6/2011 8:20:00 AM  
 Received Date: 7/7/2011 3:45:00 PM  
 Matrix: SOIL

Parameter	Result, Orig Rst	Qual	Count Error ( 2 s)	Total Uncert( 2 s)	MDC MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1189076	UIISO_IE_PLATE_AEA		Work Order: MKQLR1AD			Report DB ID: MKQLR1DR			Orig Sa DB ID: 9MKQLR10			
U-234	1.72E-01		1.4E-01	1.5E-01	1.70E-01	pCi/g	89%	(1.)	7/14/11 05:26 p		1.01	ALP4
	7.17E-02	U	RPD 82.4			1.00E+00		(2.3)			g	
U-235	2.02E-02	U	5.4E-02	5.4E-02	1.35E-01	pCi/g	89%	0.15	7/14/11 05:26 p		1.01	ALP4
	-4.78E-03	U	RPD 324.4			1.00E+00		0.74			g	
U-238	9.41E-02	U	1.1E-01	1.1E-01	1.61E-01	pCi/g	89%	0.58	7/14/11 05:26 p		1.01	ALP4
	5.50E-02	U	RPD 52.5			1.00E+00		(1.7)			g	
<i>Ratio U-234/238 = 1.8</i>								<i>Alpha Spec Result Sum = 2.9E-01</i>				

No. of Results: 3      Comments:

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

FORM II

Date: 18-Jul-11

DUPLICATE RESULTS

Lab Name: TestAmerica  
 Lot-Sample No.: J1G080407-2  
 Client Sample ID: J1JWN2 DUP

SDG: J01162  
 Report No. : 47463  
 COC No. : RC-217-003

Collection Date: 7/6/2011 8:40:00 AM  
 Received Date: 7/7/2011 3:45:00 PM  
 Matrix: SOIL

Parameter	Result, Orig Rst	Qual	Count Error ( 2 s)	Total Uncert( 2 s)	MDC MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1189077	THISO_IE_PRECIP_AEA				Work Order: MKQL21AD	Report DB ID: MKQL21DR			Orig Sa DB ID: 9MKQL210			
TH-228	2.47E-01	U	2.6E-01	2.6E-01	2.90E-01	pCi/g	95%	0.85	7/16/11 12:51 p		1.0	ALP174
	3.26E-01			RPD 27.3		1.00E+00		(1.9)			g	
TH-230	1.24E-01	U	1.8E-01	1.8E-01	2.38E-01	pCi/g	95%	0.52	7/16/11 12:51 p		1.0	ALP174
	1.30E-01	U		RPD 4.9		1.00E+00		(1.4)			g	
TH-232	1.91E-01	U	2.2E-01	2.2E-01	2.38E-01	pCi/g	95%	0.8	7/16/11 12:51 p		1.0	ALP174
	2.51E-01	U		RPD 27.1		1.00E+00		(1.7)			g	

Alpha Spec Result Sum = 5.6E-01

No. of Results: 3      Comments:

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

**FORM II**  
**BLANK RESULTS**

Date: 18-Jul-11

Lab Name: TestAmerica  
Matrix: SOIL

SDG: J01162  
Report No. : 47463

Parameter	Result	Qual	Count Error (2 s)	Total Uncert( 2 s)	MDC MDA ,	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
<b>Batch: 1189076</b>			UISO_IE_PLATE_AEA		<b>Work Order: MKQRQ1AA</b>		<b>Report DB ID: MKQRQ1AB</b>					
U-234	-4.29E-03	U	5.7E-02	5.7E-02	1.29E-01	pCi/g	77%	-0.03	7/14/11 07:09 p		1.01	ALP11
					2.58E-02	1.00E+00		-0.15			g	
U-235	2.86E-02	U	5.7E-02	5.8E-02	1.07E-01	pCi/g	77%	0.27	7/14/11 07:09 p		1.01	ALP11
					1.49E-02	1.00E+00		0.99			g	
U-238	2.71E-02	U	5.7E-02	5.8E-02	1.07E-01	pCi/g	77%	0.25	7/14/11 07:09 p		1.01	ALP11
					1.49E-02	1.00E+00		0.94			g	
<i>Ratio U-234/238 = -0.2</i>												
<b>Batch: 1189077</b>			THISO_IE_PRECIP_AEA		<b>Work Order: MKQRV1AA</b>		<b>Report DB ID: MKQRV1AB</b>					
TH-228	2.35E-02	U	5.6E-02	5.6E-02	1.28E-01	pCi/g	97%	0.18	7/16/11 01:23 p		1.03	ALP28
					2.61E-02	1.00E+00		0.84			g	
TH-230	-2.78E-03	U	5.6E-02	5.6E-02	1.16E-01	pCi/g	97%	-0.02	7/16/11 01:23 p		1.03	ALP28
					2.04E-02	1.00E+00		-0.1			g	
TH-232	-1.67E-03	U	5.5E-02	5.6E-02	1.07E-01	pCi/g	97%	-0.02	7/16/11 01:23 p		1.03	ALP28
					1.58E-02	1.00E+00		-0.06			g	

No. of Results: 6      Comments:

**FORM II**  
**LCS RESULTS**

Date: 18-Jul-11

Lab Name: TestAmerica

SDG: J01162

Matrix: SOIL

Report No. : 47463

Parameter	Result	Count Qual Error ( 2 s)	Total Uncert( 2 s)	MDC MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 1189076	UIISO_IE_PLATE_AEA				Work Order: MKQRQ1AC		Report DB ID: MKQRQ1CS					
U-234	2.44E+00	4.7E-01	6.7E-01	8.54E-02	pCi/g	102%	3.20E+00	9.9E-02	76%	7/14/11 07:10 p	1.01	ALP12
						Rec Limits:	70	130	-0.2		g	
U-238	2.82E+00	5.1E-01	7.5E-01	1.03E-01	pCi/g	102%	3.35E+00	1.0E-01	84%	7/14/11 07:10 p	1.01	ALP12
						Rec Limits:	70	130	-0.2		g	
Batch: 1189077	THISO_IE_PRECIP_AEA				Work Order: MKQRV1AC		Report DB ID: MKQRV1CS					
TH-230	2.51E+00	6.1E-01	7.2E-01	1.39E-01	pCi/g	95%	2.28E+00	6.8E-02	110%	7/16/11 03:34 p	0.99	ALP113
						Rec Limits:	70	130	0.1		g	
No. of Results: 3		Comments:										

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

rptSTLRchLcs  
V5.2.15 A2002

Lot No., Due Date: J1G080407; 07/22/2011  
 Client, Site: 127642; S00X235B00 HANFORD  
 QC Batch No., Method Test: 1189077; RTHISO Thiso by ALP  
 SDG, Matrix: J01162; 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

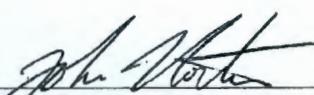
5.3 Was the correct methodology used? Yes No N/A

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:

First Level  Date 7-18-11

**Data Review Checklist**  
**RADIOCHEMISTRY**  
Second Level Review

Batch Number: 1189077

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

Comments on any "No" response: CRDL = 1.0 pCi/g

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Second Level Review: *[Signature]* Date: 7/18/11

Lot No., Due Date: J1G080407; 07/22/2011  
Client, Site: 127642; S00X235B00 HANFORD  
QC Batch No., Method Test: 1189076; RUIISO Also by ALP  
SDG, Matrix: J01162; 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:

First Level *John [Signature]* Date 7-15-11

**Data Review Checklist**  
**RADIOCHEMISTRY**  
Second Level Review

Batch Number: 1189076

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
<b>B. QC Samples</b>			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
<b>C. Other</b>			
1. Are all 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: ARDC = 1.0 pCi/g

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Second Level Review: *[Signature]* Date: 7/18/11

<b>Washington Closure Hanford</b>				<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>						RC-217-003		Page 1 of 3								
Collector D. Rice				Company Contact Jen Russell		Telephone No. (509) 380-8093		Project Coordinator KESSNER, JH		Price Code JR 4/27/11 <del>8E</del> 8C		Data Turnaround JR 4/27/11 <del>21 Days</del> 15/15								
Project Designation 100F Remaining Sites Remediation - Soil-Full Protocol				Sampling Location 100-F-48 VER (EXCAVATION)				SAF No. RC-217												
Ice Chest No. NA				Field Logbook No. EL-1651-01		COA R00F482000		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 4C  <div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;">                     REVIEWED BY                        DATE                      7-7-11                 </div>				Preservation		Cool 4C	Cool 4C	Freeze	Cool 4C	Cool 4C	Cool 4C	None	None							
				Type of Container		G/P	G	Gs*	aG	aG	aG	G/P	G/P							
				No. of Container(s)		1	1	5	1	1	1	1	0							
				Volume		60mL	120mL	40mL	120mL	120mL	120mL	60mL 120mL	60mL							
				See item (1) in Special Instructions.		TPH-Diesel Range - WTPH-D +		VOA - 5035/8260 (TCL)		Semi-VOA - 8270A (TCL)		PCBs - 8082		Pesticides - 8081		Isotopic Uranium		Isotopic Thorium		
SAMPLE ANALYSIS																				
Sample No.		Matrix *	Sample Date		Sample Time															
J1JWN1		SOIL	7/6/11		0820								X		X		MKQIR		1	
J1JWN2		SOIL	7/6/11		0840								X		X		MKQIZ		2	
J1JWN3		SOIL	7/6/11		0900								X		X		MKQIS		3	
J1JWN4		SOIL	7/6/11		0930								X		X		MKQIB		4	
J1JWN5		SOIL	7/6/11		0945								X		X		MKQIC		5	
<b>CHAIN OF POSSESSION</b>						<b>Sign/Print Names</b>						<b>SPECIAL INSTRUCTIONS</b>						<b>Matrix *</b>		
Relinquished By/Removed From David O. Rice			Date/Time 7-6-11 1530			Received By/Stored In Jen Russell			Date/Time 7-6-11 1530			(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)  SDG J08162 Due 7-22-11   J1G080407						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		
Relinquished By/Removed From Jen Russell			Date/Time 7-6-11 1630			Received By/Stored In A. Freier			Date/Time 7-6-11 1630											
Relinquished By/Removed From A. Freier			Date/Time 7-7-11 1545			Received By/Stored In M. Rodriguez			Date/Time 7-7-11 1545											
Relinquished By/Removed From			Date/Time			Received By/Stored In			Date/Time											
Relinquished By/Removed From			Date/Time			Received By/Stored In			Date/Time											
<b>LABORATORY SECTION</b>		Received By				Title				Date/Time										
<b>FINAL SAMPLE DISPOSITION</b>		Disposal Method				Disposed By				Date/Time										

<b>Washington Closure Hanford</b>				<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>						RC-217-003		Page 2 of 3				
Collector D. Rice				Company Contact Jen Russell		Telephone No. (509) 380-8093		Project Coordinator KESSNER, JH		Price Code JR 4/27/11 8E 8C		JR 4/27/11 Data Turnaround 21 Days 15/15				
Project Designation 100F Remaining Sites Remediation - Soil-Full Protocol				Sampling Location 100-F-48 VER (EXCAVATION)				SAF No. RC-217								
Ice Chest No. NA				Field Logbook No. EL-1651-01		COA R00F482000		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 4C  <div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;">                     REVIEWED BY                        DATE                      7-7-11                 </div>				Preservation		Cool 4C	Cool 4C	Freeze	Cool 4C	Cool 4C	Cool 4C	None	None			
				Type of Container		G/P	G	Gs*	aG	aG	aG	G/P	G/P			
				No. of Container(s)		1	1	5	1	1	1	1	D			
				Volume		60mL	120mL	40mL	120mL	120mL	120mL	120mL	60mL JR 4/27/11 120mL	60mL		
				See item (1) in Special Instructions.	TPH-Diesel Range - WTPFD +	VOA - 5035/8260 (TCL)	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081	Isotopic Uranium	Isotopic Thorium					
				SAMPLE ANALYSIS												
				<div style="position: absolute; top: 50px; right: 50px; transform: rotate(-45deg); font-size: 20px; font-weight: bold;">JR 4/27/11</div>												
Sample No.	Matrix *	Sample Date	Sample Time													
J1JWN6	SOIL	7-6-11	1000								X	X	MKQND 6			
J1JWN7	SOIL	7-6-11	1015								X	X	MKQNE 7			
J1JWN8	SOIL	7-6-11	1030								X	X	MKQNH 8			
J1JWN9	SOIL	7-6-11	1045								X	X	MKQNI 9			
J1JWP0	SOIL	7-6-11	1100								X	X	MKQNJ 10			
<b>CHAIN OF POSSESSION</b>				<b>Sign/Print Names</b>				<b>SPECIAL INSTRUCTIONS</b>								
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		(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)						<b>Matrix *</b> S=Soil SE=Sediment SO=Solid SL=Sludge W = Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Thane Wt=Wipe L=Liquid V=Vegetation X=Other		
David D. Rice		7-6-11 1530		Jen Russell		7-6-11 1530										
Jen Russell		7-6-11 1630		A. Freier		7-6-11 1630										
A. Freier		7-7-11		Jen Russell		7-7-11										
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time										
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time										
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time										
LABORATORY SECTION		Received By				Title				Date/Time						
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By				Date/Time						

TestAmerica Laboratories, Inc.

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<b>Washington Closure Hanford</b>				<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>						RC-217-003		Page 2 of 2				
Collector D. Rice				Company Contact Jen Russell		Telephone No. (509) 380-8093		Project Coordinator KESSNER, JH		Price Code JR 4/27/11 <del>8E</del> 8C		Data Turnaround JR 4/27/11 <b>21 Days</b> 15/15				
Project Designation 100F Remaining Sites Remediation - Soil-Full Protocol				Sampling Location 100-F-48 VER (EXCAVATION)				SAF No. RC-217								
Ice Chest No. NA				Field Logbook No. EL-1651-01		COA R00F482000		Method of Shipment Hand Deliver								
Shipped To TestAmerica Incorporated, Richland				Offsite Property No. NA				Bill of Lading/Air Bill No. NA								
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b> None  Special Handling and/or Storage Cool 4C  <div style="border: 1px solid black; border-radius: 50%; width: 80px; height: 80px; display: flex; align-items: center; justify-content: center; margin: 10px auto;">                     REVIEWED BY <i>[Signature]</i> DATE 7-2-11                 </div>				Preservation		Cool 4C	Cool 4C	Freeze	Cool 4C	Cool 4C	Cool 4C	None	None			
				Type of Container		G/P	G	Gs*	aG	aG	aG	G/P	G/P			
				No. of Container(s)		1	1	5	1	1	1	1	0			
				Volume		60mL	120mL	40mL	120mL	120mL	120mL	120mL	60mL			
<b>SAMPLE ANALYSIS</b>				See item (1) in Special Instructions.		TPH-Diesel Range - WTPH-D +	VOA - 5035/8260 (TCL)	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081	Isotopic Uranium	Isotopic Thorium				
Sample No.		Matrix *	Sample Date	Sample Time												
J1JWP1		SOIL	7-6-11	1115							X	X	MKQMT 11			
J1JWP2		SOIL	7-6-11	1130							X	X	MKQMT 12			
J1JWP3		SOIL	7-6-11	0900							X	X	MKQMT DUP			
<b>CHAIN OF POSSESSION</b>				<b>Sign/Print Names</b>				<b>SPECIAL INSTRUCTIONS</b>								
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		(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)						<b>Matrix *</b> S=Soil SE=Sediment SO=Solid SL=Sludge W = Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Time W=Wipe L=Liquid V=Vegetation X=Other		
David O. Rice		7-6-11 1530		Jen Russell		7-6-11 1530										
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time										
Jen Russell		7-6-11 1630		A. Freer		7-6-11 1630										
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time										
A. Freer		7-7-11 1545		Lucas Velazquez		7-7-11										
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time										
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time										
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time										
<b>LABORATORY SECTION</b>		Received By				Title				Date/Time						
<b>FINAL SAMPLE DISPOSITION</b>		Disposal Method				Disposed By				Date/Time						

**Sample Check-in List**

Date/Time Received: 7/7/11 @ 1545 GM Screen Result: (Airlock) .06 Initials HC  
 (Sample Receiving) .07 Initials HC  
 Client: WCH SDG #: J02262 NA [ ] SAF #: RC-217 NA [ ]

Lot Number: J1G080407  
 Chain of Custody # RC-217-003  
 Shipping Container ID: Hand delivered NA [ ]

Samples received inside shipping container/cooler/box Yes  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   
 2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal   
 3. Cooler temperature: 20 °C on ICE NA [ ]  
 4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry

Item 5 through 16 for samples. Initial appropriate response.  
 5. Chain of Custody record present? Yes  No [ ]  
 6. Number of samples received (Each sample may contain multiple bottles): 13 Samples @ 2 per  
 7. Containers received: 26 x 120 mL; 26 x 60 mL

8. Sample holding times exceeded? NA [ ] Yes [ ] No   
 9. Samples have:  
 tape hazard labels  
 custody seals  appropriate sample labels

10. Matrix:  A (FLT, Wipe, Solid, Soil)  I (Water)  J1G080407  
 S (Air, Niosh 7400)  T (Biological, Ni-63)

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

12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA   
 (If acidification is necessary, then document sample ID, initial pH, amount of HNO<sub>3</sub> added and pH after addition on table overleaf)  
 RPL ID # of preservative used : \_\_\_\_\_

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

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



7/11/2011 1:23:49 PM

### Sample Preparation/Analysis

Balance Id:1120373922

127642, Washington Closure Hanford LLC  
Bechtel Hanford, Inc.

9R Thiso Prp PRP003/PRP005, Sep ALP005(ALP016)  
S1 Thorium-228,230,232 by Alpha Spec  
5I CLIENT: HANFORD

Pipet #: \_\_\_\_\_

AnalyDueDate: 07/22/2011

Sep1 DT/Tm Tech:

Batch: 1189077 SOIL pCi/g PM, Quote: RW2, 27038  
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,SannohS

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MKQLR-1-AC J1G080407-1-SAMP 07/06/2011 08:20	1.02g,in		THTC21206 06/23/11,pd 06/08/11,r	50 min				
2 MKQL2-1-AC J1G080407-2-SAMP 07/06/2011 08:40	1.01g,in		THTC21207 06/23/11,pd 06/08/11,r					
3 MKQL2-1-AD-X J1G080407-2-DUP 07/06/2011 08:40	1.00g,in		THTC21208 06/23/11,pd 06/08/11,r					
4 MKQL5-1-AC J1G080407-3-SAMP 07/06/2011 09:00	1.00g,in		THTC21209 06/23/11,pd 06/08/11,r					
5 MKQL8-1-AC J1G080407-4-SAMP 07/06/2011 09:30	1.02g,in		THTC21210 06/23/11,pd 06/08/11,r					
6 MKQMC-1-AC J1G080407-5-SAMP 07/06/2011 09:45	0.99g,in		THTC21211 06/23/11,pd 06/08/11,r					
7 MKQMD-1-AC J1G080407-6-SAMP 07/06/2011 10:00	1.04g,in		THTC21212 06/23/11,pd 06/08/11,r					

TestAmerica Laboratories, Inc. 1728 177 176 171 174 171 172

7/11/2011 1:23:50 PM

### Sample Preparation/Analysis

Balance Id:1120373922

127642, Washington Closure Hanford LLC  
Bechtel Hanford, Inc.

9R Thlso Prp PRP003/PRP005, Sep ALP005(ALP016)  
S1 Thorium-228,230,232 by Alpha Spec  
SI CLIENT: HANFORD

Pipet #: \_\_\_\_\_

AnalyDueDate: 07/22/2011

Sep1 DT/Tm Tech:

Batch: 1189077 SOIL

pCi/g

PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,SannohS



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 MKQME-1-AC J1G080407-7-SAMP 07/06/2011 10:15	1.03g,in	1.03g,in	THTC21213 06/23/11,pd 06/08/11,r	SP min				
AmtRec: 1X60MLAG;1X120MLP #Containers: 2 Scr. Alpha: Beta:								
9 MKQMH-1-AC J1G080407-8-SAMP 07/06/2011 10:30	1.00g,in	1.00g,in	THTC21214 06/23/11,pd 06/08/11,r					
AmtRec: 1X60MLAG;1X120MLP #Containers: 2 Scr. Alpha: Beta:								
10 MKQMM-1-AC J1G080407-9-SAMP 07/06/2011 10:45	1.00g,in	1.00g,in	THTC21215 06/23/11,pd 06/08/11,r					
AmtRec: 1X60MLAG;1X120MLP #Containers: 2 Scr. Alpha: Beta:								
11 MKQMQ-1-AC J1G080407-10-SAMP 07/06/2011 11:00	1.02g,in	1.02g,in	THTC21216 06/23/11,pd 06/08/11,r					
AmtRec: 1X60MLAG;1X120MLP #Containers: 2 Scr. Alpha: Beta:								
12 MKQMT-1-AC J1G080407-11-SAMP 07/06/2011 11:15	1.01g,in	1.01g,in	THTC21217 06/23/11,pd 06/08/11,r					
AmtRec: 1X60MLAG;1X120MLP #Containers: 2 Scr. Alpha: Beta:								
13 MKQM0-1-AC J1G080407-12-SAMP 07/06/2011 11:30	1.03g,in	1.03g,in	THTC21218 06/23/11,pd 06/08/11,r					
AmtRec: 1X60MLAG;1X120MLP #Containers: 2 Scr. Alpha: Beta:								
14 MKQM4-1-AC J1G080407-13-SAMP 07/06/2011 09:00	1.02g,in	1.02g,in	THTC21219 06/23/11,pd 06/08/11,r					
AmtRec: 1X60MLAG;1X120MLP #Containers: 2 Scr. Alpha: Beta:								

TestAmerica Laboratories, Inc.

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7/11/2011 1:23:51 PM

### Sample Preparation/Analysis

Balance Id:1120373922

9R Thlso Prp PRP003/PRP005, Sep ALP005(ALP016)

Pipet #: \_\_\_\_\_

S1 Thorium-228,230,232 by Alpha Spec

5I CLIENT: HANFORD

AnalyDueDate: 07/22/2011

Sep1 DT/Tm Tech:

Batch: 1189077

pCi/g

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,SannoHS



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
15 MKQRV-1-AA-B J1G080000-77-BLK 07/08/2011 11:01 pd		1.03g,in	THTC21220 06/23/11,pd 06/08/11					
				<i>50 min</i>				
				AmtRec:	#Containers: 1	Scr:	Alpha:	Beta:
16 MKQRV-1-AC-C J1G080000-77-LCS 07/08/2011 11:01 pd		0.99g,in	THSI2796 06/23/11,pd 06/08/11					
				AmtRec:	#Containers: 1	Scr:	Alpha:	Beta:

Comments:

All Clients for Batch:

127642, Washington Closure Hanford LLC

Bechtel Hanford, Inc.

, RW2, 27038

MKQLRIAC-SAMP Constituent List:

Th-228	RDL:1	pCi/g	LCL:	UCL:	RPD:	Th-230	RDL:1	pCi/g	LCL:70	UCL:130	RPD:35
Th-232	RDL:1	pCi/g	LCL:	UCL:	RPD:	Th-234	RDL:	pCi/g	LCL:20	UCL:105	RPD:35
MKQRV1AA-BLK:											
Th-228	RDL:1	pCi/g	LCL:	UCL:	RPD:	Th-230	RDL:1	pCi/g	LCL:	UCL:	RPD:
Th-232	RDL:1	pCi/g	LCL:	UCL:	RPD:	Th-234	RDL:	pCi/g	LCL:20	UCL:105	RPD:35
MKQRV1AC-LCS:											
Th-230	RDL:1	pCi/g	LCL:70	UCL:130	RPD:35	Th-234	RDL:	pCi/g	LCL:20	UCL:105	RPD:35

MKQLRIAC-SAMP Calc Info:

Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
MKQRV1AA-BLK:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
MKQRV1AC-LCS:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

TestAmerica Laboratories, Inc. 23 39

# ICOC Fraction Transfer/Status Report

ByDate: 7/18/2010, 7/23/2011, Batch: '1189077', User: \*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
1189077				
AC	Rev1C	SannohS	7/11/2011 11:56:50	
SC		MaucierS	IsBatched 7/8/2011 11:02:34 AM	ICOC_RADCALC v4.8.49
SC		SannohS	InPrep 7/11/2011 11:56:50 AM	RL-PRP-003 REVISION 1
SC		BouslaughP	Prep1C 7/12/2011 9:59:58 AM	RL-PRP-003 REVISION 1
SC		HoganH	Sep1C 7/13/2011 2:49:21 PM	ALP-001 REVISION
SC		LuksicS	Sep2C 7/15/2011 5:39:24 PM	RL-ALP-016 REVISION 1
SC		DawkinsO	InCnt1 7/15/2011 5:40:47 PM	RL-CI-008 REVISION 1
SC		DawkinsO	CalcC 7/17/2011 10:56:13 AM	RL-CI-008 REVISION 1
SC		nortonj	Rev1C 7/18/2011 2:18:57 PM	RL-DR-001 Rev 2
AC		BouslaughP	7/12/2011 9:59:58	
AC		HoganH	7/13/2011 2:49:21 PM	
AC		LuksicS	7/15/2011 5:39:24 PM	
AC		DawkinsO	7/15/2011 5:40:47 PM	
AC		DawkinsO	7/17/2011 10:56:13	
AC		nortonj	7/18/2011 2:18:57 PM	

AC: Accepting Entry; SC: Status Change

TestAmerica Richland  
Richland Wa.

Page 1

Grp Rec Cnt: 7  
ICOCFractions v4.8.44

7/11/2011 11:52:21 AM

### Sample Preparation/Analysis

Balance Id:1120373922

127642, Washington Closure Hanford LLC  
Bechtel Hanford, Inc.

7S Ulso Prp PRP003/PRP005, Sep ALP009(ALP015)  
SR Uranium-234,235,238 by Alpha Spec  
5I CLIENT: HANFORD

Pipet #: \_\_\_\_\_

AnalyDueDate: 07/22/2011

Sep1 DT/Tm Tech:

Batch: 1189076 SOIL pCi/g  
SEQ Batch, Test: None All Tests: 1189076 7SSR, 1189077 9RS1,

PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

Prep Tech: ,SannoHS



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
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1 MKQLR-1-AA	1.02g,in	UITC26706						
J1G080407-1-SAMP			06/14/11,pd 06/15/11,r					
07/06/2011 08:20		AmtRec: 1X60MLAG;1X120MLP	#Containers: 2			Scr:	Alpha:	Beta:

*50 minutes*

2 MKQLR-1-AD-X	1.01g,in	UITC26707						
J1G080407-1-DUP			06/14/11,pd 06/15/11,r					
07/06/2011 08:20		AmtRec: 1X60MLAG;1X120MLP	#Containers: 2			Scr:	Alpha:	Beta:

3 MKQL2-1-AA	1.00g,in	UITC26708						
J1G080407-2-SAMP			06/14/11,pd 06/15/11,r					
07/06/2011 08:40		AmtRec: 1X60MLAG;1X120MLP	#Containers: 2			Scr:	Alpha:	Beta:

4 MKQL5-1-AA	1.00g,in	UITC26709						
J1G080407-3-SAMP			06/14/11,pd 06/15/11,r					
07/06/2011 09:00		AmtRec: 1X60MLAG;1X120MLP	#Containers: 2			Scr:	Alpha:	Beta:

5 MKQL8-1-AA	1.01g,in	UITC26710						
J1G080407-4-SAMP			06/14/11,pd 06/15/11,r					
07/06/2011 09:30		AmtRec: 1X60MLAG;1X120MLP	#Containers: 2			Scr:	Alpha:	Beta:

6 MKQMC-1-AA	1.01g,in	UITC26711						
J1G080407-5-SAMP			06/14/11,pd 06/15/11,r					
07/06/2011 09:45		AmtRec: 1X60MLAG;1X120MLP	#Containers: 2			Scr:	Alpha:	Beta:

7 MKQMD-1-AA	1.02g,in	UITC26712						
J1G080407-6-SAMP			06/14/11,pd 06/15/11,r					
07/06/2011 10:00		AmtRec: 1X60MLAG;1X120MLP	#Containers: 2			Scr:	Alpha:	Beta:

TestAmerica Laboratories, Inc.

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7/11/2011 11:52:23 AM

### Sample Preparation/Analysis

Balance Id:1120373922

127642, Washington Closure Hanford LLC  
Bechtel Hanford, Inc.

7S Uiso Prp PRP003/PRP005, Sep ALP009(ALP015)  
SR Uranium-234,235,238 by Alpha Spec  
SI CLIENT: HANFORD

Pipet #:

AnalyDueDate: 07/22/2011

Sep1 DT/Tm Tech:

Batch: 1189076 SOIL pCi/g  
SEQ Batch, Test: None

PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

Prep Tech: ,SannohS



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 MKQME-1-AA J1G080407-7-SAMP 07/06/2011 10:15		1.01g,in	UITS26713 06/14/11,pd 06/15/01 r					
9 MKQMH-1-AA J1G080407-8-SAMP 07/06/2011 10:30		1.03g,in	UITS26714 06/14/11,pd 06/15/01 r					
10 MKQMM-1-AA J1G080407-9-SAMP 07/06/2011 10:45		1.03g,in	UITS26715 06/14/11,pd 06/15/01 r					
11 MKQMQ-1-AA J1G080407-10-SAMP 07/06/2011 11:00		1.00g,in	UITS26716 06/14/11,pd 06/15/01 r					
12 MKQMT-1-AA J1G080407-11-SAMP 07/06/2011 11:15		1.00g,in	UITS26717 06/14/11,pd 06/15/01 r					
13 MKQM0-1-AA J1G080407-12-SAMP 07/06/2011 11:30		1.00g,in	UITS26718 06/14/11,pd 06/15/01 r					
14 MKQM4-1-AA J1G080407-13-SAMP 07/06/2011 09:00		1.04g,in	UITS26719 06/14/11,pd 06/15/01 r					

*50 minutes*

TestAmerica LABORATORIES, Inc.  
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7/11/2011 11:52:24 AM

### Sample Preparation/Analysis

Balance Id:1120373922

7S Ulso Prp PRP003/PRP005, Sep ALP009(ALP015)  
SR Uranium-234,235,238 by Alpha Spec  
5I CLIENT: HANFORD

Pipet #: \_\_\_\_\_

AnalyDueDate: 07/22/2011

Sep1 DT/Tm Tech:

Batch: 1189076  
SEQ Batch, Test: None

pCi/g

Sep2 DT/Tm Tech:

Prep Tech: ,SannohS



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
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15 MKQRQ-1-AA-B		1.01g,in	UITC26720					
J1G080000-76-BLK			06/14/11,pd					
07/08/2011 11:01 pd		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:

*SO*

16 MKQRQ-1-AC-C		1.01g,in	UISH1319					
J1G080000-76-LCS			03/03/11,pd					
07/08/2011 11:01 pd		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:

#### Comments:

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

#### MKQLR1AA-SAMP Constituent List:

U-232	RDL:	pCi/g	LCL:20	UCL:105	RPD:35	U-234	RDL:1	pCi/g	LCL:	UCL:	RPD:
U-235	RDL:1	pCi/g	LCL:	UCL:	RPD:	U-238	RDL:1	pCi/g	LCL:	UCL:	RPD:
MKQRQ1AA-BLK:											
U-232	RDL:	pCi/g	LCL:20	UCL:105	RPD:35	U-234	RDL:1	pCi/g	LCL:	UCL:	RPD:
U-235	RDL:1	pCi/g	LCL:	UCL:	RPD:	U-238	RDL:1	pCi/g	LCL:	UCL:	RPD:
MKQRQ1AC-LCS:											
U-232	RDL:	pCi/g	LCL:20	UCL:105	RPD:35	Uranium	RDL:	pCi/g	LCL:70	UCL:130	RPD:35

#### MKQLR1AA-SAMP Calc Info:

Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
MKQRQ1AA-BLK:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
MKQRQ1AC-LCS:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

TestAmerica Laboratories, Inc.

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7/15/2011 11:54:17 AM

# ICOC Fraction Transfer/Status Report

ByDate: 7/15/2010, 7/20/2011, Batch: '1189076', User: \*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
1189076				
AC	Rev1C	SannohS	7/11/2011 10:20:40	
SC		MauceriS	IsBatched 7/8/2011 11:02:30 AM	ICOC_RADCALC v4.8.49
SC		SannohS	InPrep 7/11/2011 10:20:40 AM	RL-PRP-003 REVISION 1
SC		BouslaughP	Prep1C 7/12/2011 9:59:53 AM	RL-PRP-003 REVISION 1
SC		HoganH	Sep1C 7/13/2011 11:23:05 AM	RL-APL-004 REVISION
SC		HoganH	Sep2C 7/14/2011 2:57:45 PM	RL-ALP-015 REVISION 1
SC		DawkinsO	InCnt1 7/14/2011 4:39:44 PM	RL-CI-008 REVISION 1
SC		DawkinsO	CalcC 7/14/2011 11:39:54 PM	RL-CI-008 REVISION 1
SC		nortonj	Rev1C 7/15/2011 11:53:35 AM	RL-DR-001 Rev 2
AC		BouslaughP	7/12/2011 9:59:53	
AC		HoganH	7/13/2011 11:23:05	
AC		HoganH	7/14/2011 2:57:45 PM	
AC		DawkinsO	7/14/2011 4:39:44 PM	
AC		DawkinsO	7/14/2011 11:39:54	
AC		nortonj	7/15/2011 11:53:35	

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

## ANALYTICAL REPORT

Job Number: 280-17784-1  
SDG Number: J01162  
Job Description: SAF# RC-217

For:  
Washington Closure Hanford  
2620 Fermi Avenue  
Richland, WA 99354  
Attention: Joan H Kessner



Approved for release.  
Kae E Yoder  
Project Manager II  
7/25/2011 2:34 PM

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Kae E Yoder  
Project Manager II  
kae.yoder@testamericainc.com  
07/25/2011

The test results in this report relate only to the samples in this report and meet all requirements of NELAP, 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: 280-17784-1

SDG #: J01162

SAF#: RC-217

Date SDG Closed: July 8, 2011

Data Deliverable: 15 Day / Summary

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>ANALYSES REQUESTED</u>	<u>ANALYSES PERFORMED</u>
J1JWN1	280-17784-1	6010/7471/WTPH-D+/8260/8270A/ 8082/8081	6010B/7471A/NWTPH-Dx/8260B/8270C/ 8082/8081A
J1JWN2	280-17784-2	6010/7471/WTPH-D+/8260/8270A/ 8082/8081	6010B/7471A/NWTPH-Dx/8260B/8270C/ 8082/8081A
J1JWN3	280-17784-3	6010/7471/WTPH-D+/8260/8270A/ 8082/8081	6010B/7471A/NWTPH-Dx/8260B/8270C/ 8082/8081A
J1JWN4	280-17784-4	6010/7471/WTPH-D+/8260/8270A/ 8082/8081	6010B/7471A/NWTPH-Dx/8260B/8270C/ 8082/8081A
J1JWN5	280-17784-5	6010/7471/WTPH-D+/8260/8270A/ 8082/8081	6010B/7471A/NWTPH-Dx/8260B/8270C/ 8082/8081A
J1JWN6	280-17784-6	6010/7471/WTPH-D+/8260/8270A/ 8082/8081	6010B/7471A/NWTPH-Dx/8260B/8270C/ 8082/8081A
J1JWN7	280-17784-7	6010/7471/WTPH-D+/8260/8270A/ 8082/8081	6010B/7471A/NWTPH-Dx/8260B/8270C/ 8082/8081A
J1JWN8	280-17784-8	6010/7471/WTPH-D+/8260/8270A/ 8082/8081	6010B/7471A/NWTPH-Dx/8260B/8270C/ 8082/8081A
J1JWN9	280-17784-9	6010/7471/WTPH-D+/8260/8270A/ 8082/8081	6010B/7471A/NWTPH-Dx/8260B/8270C/ 8082/8081A
J1JWP0	280-17784-10	6010/7471/WTPH-D+/8260/8270A/ 8082/8081	6010B/7471A/NWTPH-Dx/8260B/8270C/ 8082/8081A
J1JWP1	280-17784-11	6010/7471/WTPH-D+/8260/8270A/ 8082/8081	6010B/7471A/NWTPH-Dx/8260B/8270C/ 8082/8081A
J1JWP2	280-17784-12	6010/7471/WTPH-D+/8260/8270A/ 8082/8081	6010B/7471A/NWTPH-Dx/8260B/8270C/ 8082/8081A
J1JWP3	280-17784-13	6010/7471/WTPH-D+/8260/8270A/ 8082/8081	6010B/7471A/NWTPH-Dx/8260B/8270C/ 8082/8081A
J1K405	280-17784-14	6010/7471	6010B/7471A

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 7/8/2011; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 2.3 C, 2.6 C, 0.4 C and 0.3 C.

It can be noted that the coolers received at temperatures of 0.4 C and 0.3 C contained the 5035/8260B VOA samples.

#### **GC/MS VOLATILES - SW846 8260B**

Surrogate 4-Bromofluorobenzene was recovered outside the control limits, biased high, in sample J1JWN1. This is an indicator that data may be biased high. As no detectable concentrations of analytes associated with surrogate 4-Bromofluorobenzene are present at levels greater than the reporting limits in the sample, corrective action is deemed unnecessary.

Sample J1JWN6 exhibited surrogate recoveries outside the control limits, biased high, and internal standard 1,4-Dichlorobenzene-d4 was recovered at less than 50%. The sample was reanalyzed with similar results, indicating matrix interference as the cause for the surrogate recovery and internal standard outliers. The original analysis data are reported.

Low levels of Carbon disulfide are present in the method blank associated with batch 280-75667. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary. Associated sample results present above the MDL and/or RL have been flagged with a "B".

The MS/MSD performed on sample J1JWN5 in analysis batch 280-76282 exhibited spike compound recoveries outside the control limits, and the associated sample results have been flagged "T". The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

The MS aliquot of the MS/MSD performed on sample J1JWN7 in analysis batch 280-76612 exhibited a percent recovery outside the control limits for Ethylbenzene, and the associated sample result has been flagged "T". In addition, RPD limits were exceeded. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

#### **GC/MS SEMIVOLATILES - SW846 8270C**

Compounds Benzo(b)fluoranthene and Benzo(k)fluoranthene were unresolved in samples J1JWN2 and J1JWN6 due to matrix interferences. It can be noted that these compounds were adequately resolved in associated standards, indicating the instrument is achieving separation. The combined peak was reported as Benzo(b)fluoranthene, while Benzo(k)fluoranthene was reported as undetected even though it may be present. Associated results have been flagged with a "K".

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to the presence of interfering, non-target compounds, sample J1JWN6 had to be analyzed at a dilution, and the associated results have been flagged with a "D". The reporting limits have been adjusted relative to the dilution required. The laboratory noted that analysis at a less diluted concentration would jeopardize the integrity of the instrument.

Surrogate recoveries have been "D" flagged in sample J1JWN6, as the recoveries obtained are calculated from a diluted sample and are not considered reliable.

Surrogate Terphenyl-d14 was recovered outside the control limits, biased high, in samples J1JWN8 and J1JWP2. This is an indicator that data may be biased high. As no detectable concentrations are present in the samples, corrective action is deemed unnecessary.

Low levels of Phenol are present in the method blank associated with batch 280-75733. Because the concentration in the method blank is not present at a level greater than the reporting limit, 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**

The organic prep laboratory noted that a Florisil clean-up was performed on the samples presented in this report to reduce matrix interferences.

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to the nature of the sample matrix, samples J1JWN2, J1JWN6 and J1JWN9 had to be analyzed at dilutions, and the associated results have been flagged with a "D". The reporting limits have been adjusted relative to the dilutions required.

Surrogate recoveries have been "D" flagged in samples J1JWN2, J1JWN6 and J1JWN9, as the recoveries obtained are calculated from diluted samples and are not considered reliable.

The RPD between the primary and confirmation columns exceeded 40% for analytes in samples J1JWN3, J1JWN6 and J1JWP3. The lower of the two values have been reported, as matrix interference is evident. Associated results have been flagged with an "X".

The MS/MSD performed on sample J1JWN4 exhibited RPD data outside the control limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

**GC SEMIVOLATILES - SW846 8082 - PCBs**

The laboratory noted that a Sulfuric Acid clean-up was performed on the samples presented in this report to reduce matrix interferences.

The RPD between the primary and confirmation columns exceeded 25% for Aroclor 1260 in sample J1JWN2. The result has been flagged with a "P".

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to high constituent concentration, sample J1JWN6 had to be analyzed at a dilution, and the associated results have been flagged with a "D". The reporting limits have been adjusted relative to the dilution required.

Surrogate recoveries have been "D" flagged in sample J1JWN6, as the recoveries obtained are calculated from a diluted sample and are not considered reliable.

Aroclor 1260 and surrogate Decachlorobiphenyl recovered above the upper control limit on the confirmation column in a Continuing Calibration Verification (CCV) standard. The samples associated with this CCV were non-detects or less than the reporting limit for the affected analytes; therefore, corrective action is deemed unnecessary. The primary column was in control for the CCV.

No other anomalies were encountered.

**GC SEMIVOLATILES - NWTPH-Dx - DRO**

Low levels of C10-C28 are present in the method blank associated with batch 280-75750. Because the concentration in the method blank is not present at a level greater than the reporting limit, 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.

**TOTAL METALS - SW846 6010B/7471A**

Serial dilution of a digestate in batch 280-75869 indicates that physical and chemical interferences are present for Cobalt. Results have been flagged with an "X".

Silicon was recovered outside the control limits, biased low, in the LCS associated with batch 280-75869, and the associated sample results have been flagged "N". Silicon is a poor performer and has a history of reacting inconsistently. Data are reported as is.

It can be noted that the sample amount was greater than four times the spike amount for Aluminum, Iron and Manganese in the Matrix Spike performed on sample J1JWN1; therefore, control limits are not applicable.

Silicon was recovered outside the control limits in the Matrix Spike performed on sample J1JWN1, 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.

## DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	T	MS, MSD: Recovery exceeds upper or lower control limits.
	*	MS/MSD RPD exceeded the control limit
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	*	Surrogate exceeds the control limit
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.
	K	Benzo (b&k) fluoranthene are unresolved due to matrix, result is reported as Benzo(b)fluoranthene.
	J	Indicates an Estimated Value for TICs
	N	Presumptive evidence of material.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
	*	Surrogate exceeds the control limit

## DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Lab Section	Qualifier	Description
GC Semi VOA		
	B	Analyte was found in the associated method blank as well as in the sample.
	U	Analyzed for but not detected.
	X	More than 40% difference between columns, lower result reported.
	*	MS/MSD RPD exceeded the control limit
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	D	The reported value is from a dilution.
	P	This flag is used for an aroclor target analyte where there is greater than 25% difference for detected concentrations between the two GC columns
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.

## METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Description	Lab Location	Method	Preparation Method
<b>Matrix: Solid</b>			
Volatile Organic Compounds (GC/MS) Closed System Purge and Trap	TAL DEN	SW846 8260B	SW846 5035
Semivolatile Organic Compounds (GC/MS) Ultrasonic Extraction	TAL DEN	SW846 8270C	SW846 3550C
Organochlorine Pesticides (GC) Ultrasonic Extraction	TAL DEN	SW846 8081A	SW846 3550C
Polychlorinated Biphenyls (PCBs) by Gas Chromatography Ultrasonic Extraction	TAL DEN	SW846 8082	SW846 3550C
Northwest - Semi-Volatile Petroleum Products (GC) Ultrasonic Extraction	TAL DEN	NWTPH NWTPH-Dx	SW846 3550C
Metals (ICP) Preparation, Metals	TAL DEN	SW846 6010B	SW846 3050B
Mercury (CVAA) Preparation, Mercury	TAL DEN	SW846 7471A	SW846 7471A
ASTM D-2216	TAL DEN	ASTM D-2216	

**Lab References:**

TAL DEN = TestAmerica Denver

**Method References:**

ASTM = ASTM International

NWTPH = Northwest Total Petroleum Hydrocarbon

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

## METHOD / ANALYST SUMMARY

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

<b>Method</b>	<b>Analyst</b>	<b>Analyst ID</b>
SW846 8260B	Jablonski, Kayla A	KAJ
SW846 8260B	Reinhardt, Jason	JR
SW846 8270C	Hoffman, Michael G	MGH
SW846 8081A	Wells, David	DW
SW846 8082	Jackson, Todd D	TDJ
NWTPH NWTPH-Dx	Pavlakovich, Adam M	AMP
SW846 6010B	Harre, John K	JKH
SW846 7471A	Niman, Katie M	KMN
ASTM D-2216	Berry III, Paul B	PBB

## SAMPLE SUMMARY

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
280-17784-1	J1JWN1	Solid	07/06/2011 0820	07/08/2011 0900
280-17784-2	J1JWN2	Solid	07/06/2011 0840	07/08/2011 0900
280-17784-3	J1JWN3	Solid	07/06/2011 0900	07/08/2011 0900
280-17784-4	J1JWN4	Solid	07/06/2011 0930	07/08/2011 0900
280-17784-5	J1JWN5	Solid	07/06/2011 0945	07/08/2011 0900
280-17784-6	J1JWN6	Solid	07/06/2011 1000	07/08/2011 0900
280-17784-7	J1JWN7	Solid	07/06/2011 1015	07/08/2011 0900
280-17784-8	J1JWN8	Solid	07/06/2011 1030	07/08/2011 0900
280-17784-9	J1JWN9	Solid	07/06/2011 1045	07/08/2011 0900
280-17784-10	J1JWP0	Solid	07/06/2011 1100	07/08/2011 0900
280-17784-11	J1JWP1	Solid	07/06/2011 1115	07/08/2011 0900
280-17784-12	J1JWP2	Solid	07/06/2011 1130	07/08/2011 0900
280-17784-13FD	J1JWP3	Solid	07/06/2011 0900	07/08/2011 0900
280-17784-14EB	J1K405	Solid	07/06/2011 1400	07/08/2011 0900

# SAMPLE RESULTS

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN1

Lab Sample ID: 280-17784-1

Date Sampled: 07/06/2011 0820

Client Matrix: Solid

% Moisture: 0.4

Date Received: 07/08/2011 0900

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	280-76282	Instrument ID:	MSV_J
Prep Method:	5035	Prep Batch:	280-75667	Lab File ID:	J7914.D
Dilution:	1.0			Initial Weight/Volume:	4.008 g
Analysis Date:	07/12/2011 0054			Final Weight/Volume:	5 mL
Prep Date:	07/08/2011 1120				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		29		6.7	25
Benzene		0.59	U	0.59	6.3
Bromodichloromethane		0.28	U	0.28	6.3
Bromoform		0.29	U	0.29	6.3
Bromomethane		0.63	U	0.63	13
2-Butanone (MEK)		5.4	J	2.3	13
Carbon disulfide		0.53	U	0.53	6.3
Carbon tetrachloride		0.79	U	0.79	6.3
Chlorobenzene		0.68	U	0.68	6.3
Dibromochloromethane		0.71	U	0.71	6.3
Chloroethane		1.1	U	1.1	13
Chloroform		0.36	U	0.36	6.3
Chloromethane		0.96	U	0.96	13
1,1-Dichloroethane		0.26	U	0.26	6.3
1,2-Dichloroethane		0.88	U	0.88	6.3
1,1-Dichloroethene		0.74	U	0.74	6.3
1,2-Dichloroethene, Total		0.49	U	0.49	6.3
1,2-Dichloropropane		0.69	U	0.69	6.3
cis-1,3-Dichloropropene		1.6	U	1.6	6.3
trans-1,3-Dichloropropene		0.84	U	0.84	6.3
Ethylbenzene		2.1	J	0.84	6.3
2-Hexanone		6.1	U	6.1	25
Methylene Chloride		1.7	J	0.94	6.3
4-Methyl-2-pentanone (MIBK)		5.5	U	5.5	13
Styrene		0.79	U	0.79	6.3
1,1,2,2-Tetrachloroethane		0.76	U	0.76	6.3
Tetrachloroethene		0.74	U	0.74	6.3
Toluene		0.86	U	0.86	6.3
1,1,1-Trichloroethane		0.65	U	0.65	6.3
1,1,2-Trichloroethane		1.1	U	1.1	6.3
Trichloroethene		0.29	U	0.29	6.3
Vinyl chloride		1.7	U	1.7	6.3
Xylenes, Total		2.3	J	0.76	6.3
Surrogate		%Rec	Qualifier	Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)		105		58 - 140	
Toluene-d8 (Surr)		117		80 - 126	
4-Bromofluorobenzene (Surr)		131	*	76 - 127	
Dibromofluoromethane (Surr)		111		75 - 121	

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN1

Lab Sample ID: 280-17784-1

Date Sampled: 07/06/2011 0820

Client Matrix: Solid

% Moisture: 0.4

Date Received: 07/08/2011 0900

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**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method: 8260B

Analysis Batch: 280-76282

Instrument ID: MSV\_J

Prep Method: 5035

Prep Batch: 280-75667

Lab File ID: J7914.D

Dilution: 1.0

Initial Weight/Volume: 4.008 g

Analysis Date: 07/12/2011 0054

Final Weight/Volume: 5 mL

Prep Date: 07/08/2011 1120

**Tentatively Identified Compounds**

Number TIC's Found: 0

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

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN2

Lab Sample ID: 280-17784-2

Date Sampled: 07/06/2011 0840

Client Matrix: Solid

% Moisture: 0.4

Date Received: 07/08/2011 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-76282	Instrument ID:	MSV_J
Prep Method:	5035	Prep Batch:	280-75667	Lab File ID:	J7915.D
Dilution:	1.0			Initial Weight/Volume:	4.506 g
Analysis Date:	07/12/2011 0116			Final Weight/Volume:	5 mL
Prep Date:	07/08/2011 1120				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		15	J	6.0	22
Benzene		0.52	U	0.52	5.6
Bromodichloromethane		0.25	U	0.25	5.6
Bromoform		0.26	U	0.26	5.6
Bromomethane		0.56	U	0.56	11
2-Butanone (MEK)		2.5	J	2.0	11
Carbon disulfide		0.47	U	0.47	5.6
Carbon tetrachloride		0.70	U	0.70	5.6
Chlorobenzene		0.60	U	0.60	5.6
Dibromochloromethane		0.64	U	0.64	5.6
Chloroethane		0.99	U	0.99	11
Chloroform		0.32	U	0.32	5.6
Chloromethane		0.86	U	0.86	11
1,1-Dichloroethane		0.23	U	0.23	5.6
1,2-Dichloroethane		0.78	U	0.78	5.6
1,1-Dichloroethene		0.66	J	0.66	5.6
1,2-Dichloroethene, Total		0.43	U	0.43	5.6
1,2-Dichloropropane		0.61	U	0.61	5.6
cis-1,3-Dichloropropene		1.4	U	1.4	5.6
trans-1,3-Dichloropropene		0.75	U	0.75	5.6
Ethylbenzene		0.75	U	0.75	5.6
2-Hexanone		5.4	U	5.4	22
Methylene Chloride		1.1	J	0.84	5.6
4-Methyl-2-pentanone (MIBK)		4.9	U	4.9	11
Styrene		0.70	U	0.70	5.6
1,1,2,2-Tetrachloroethane		0.68	U	0.68	5.6
Tetrachloroethene		0.66	U	0.66	5.6
Toluene		0.77	U	0.77	5.6
1,1,1-Trichloroethane		0.58	U	0.58	5.6
1,1,2-Trichloroethane		0.98	U	0.98	5.6
Trichloroethene		0.26	U	0.26	5.6
Vinyl chloride		1.5	U	1.5	5.6
Xylenes, Total		0.68	U	0.68	5.6

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	88		58 - 140
Toluene-d8 (Surr)	97		80 - 126
4-Bromofluorobenzene (Surr)	97		76 - 127
Dibromofluoromethane (Surr)	94		75 - 121

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

Client Sample ID: J1JWN2

Lab Sample ID: 280-17784-2

Date Sampled: 07/06/2011 0840

Client Matrix: Solid

% Moisture: 0.4

Date Received: 07/08/2011 0900

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**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method: 8260B

Analysis Batch: 280-76282

Instrument ID: MSV\_J

Prep Method: 5035

Prep Batch: 280-75667

Lab File ID: J7915.D

Dilution: 1.0

Initial Weight/Volume: 4.506 g

Analysis Date: 07/12/2011 0116

Final Weight/Volume: 5 mL

Prep Date: 07/08/2011 1120

**Tentatively Identified Compounds**

Number TIC's Found: 0

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

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN3

Lab Sample ID: 280-17784-3

Date Sampled: 07/06/2011 0900

Client Matrix: Solid

% Moisture: 0.8

Date Received: 07/08/2011 0900

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	280-76282	Instrument ID:	MSV_J
Prep Method:	5035	Prep Batch:	280-75667	Lab File ID:	J7916.D
Dilution:	1.0			Initial Weight/Volume:	4.808 g
Analysis Date:	07/12/2011 0139			Final Weight/Volume:	5 mL
Prep Date:	07/08/2011 1120				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		72		5.6	21
Benzene		0.49	U	0.49	5.2
Bromodichloromethane		0.23	U	0.23	5.2
Bromoform		0.24	U	0.24	5.2
Bromomethane		0.52	U	0.52	10
2-Butanone (MEK)		7.5	J	1.9	10
Carbon disulfide		0.44	U	0.44	5.2
Carbon tetrachloride		0.66	U	0.66	5.2
Chlorobenzene		0.57	U	0.57	5.2
Dibromochloromethane		0.60	U	0.60	5.2
Chloroethane		0.93	U	0.93	10
Chloroform		0.30	U	0.30	5.2
Chloromethane		0.81	U	0.81	10
1,1-Dichloroethane		0.22	U	0.22	5.2
1,2-Dichloroethane		0.73	U	0.73	5.2
1,1-Dichloroethene		0.62	U	0.62	5.2
1,2-Dichloroethene, Total		0.41	U	0.41	5.2
1,2-Dichloropropane		0.58	U	0.58	5.2
cis-1,3-Dichloropropene		1.4	U	1.4	5.2
trans-1,3-Dichloropropene		0.70	U	0.70	5.2
Ethylbenzene		0.76	J	0.70	5.2
2-Hexanone		5.1	U	5.1	21
Methylene Chloride		4.4	J	0.79	5.2
4-Methyl-2-pentanone (MIBK)		4.6	U	4.6	10
Styrene		0.66	U	0.66	5.2
1,1,2,2-Tetrachloroethane		0.64	U	0.64	5.2
Tetrachloroethene		0.62	U	0.62	5.2
Toluene		0.72	U	0.72	5.2
1,1,1-Trichloroethane		0.55	U	0.55	5.2
1,1,2-Trichloroethane		0.92	U	0.92	5.2
Trichloroethene		0.24	U	0.24	5.2
Vinyl chloride		1.4	U	1.4	5.2
Xylenes, Total		0.64	U	0.64	5.2

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		58 - 140
Toluene-d8 (Surr)	109		80 - 126
4-Bromofluorobenzene (Surr)	112		76 - 127
Dibromofluoromethane (Surr)	101		75 - 121

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN3

Lab Sample ID: 280-17784-3

Date Sampled: 07/06/2011 0900

Client Matrix: Solid

% Moisture: 0.8

Date Received: 07/08/2011 0900

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**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method: 8260B

Analysis Batch: 280-76282

Instrument ID: MSV\_J

Prep Method: 5035

Prep Batch: 280-75667

Lab File ID: J7916.D

Dilution: 1.0

Initial Weight/Volume: 4.808 g

Analysis Date: 07/12/2011 0139

Final Weight/Volume: 5 mL

Prep Date: 07/08/2011 1120

**Tentatively Identified Compounds**

Number TIC's Found: 0

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

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN4

Lab Sample ID: 280-17784-4

Date Sampled: 07/06/2011 0930

Client Matrix: Solid

% Moisture: 0.6

Date Received: 07/08/2011 0900

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B	Analysis Batch: 280-76282	Instrument ID: MSV_J
Prep Method: 5035	Prep Batch: 280-75667	Lab File ID: J7917.D
Dilution: 1.0		Initial Weight/Volume: 4.639 g
Analysis Date: 07/12/2011 0202		Final Weight/Volume: 5 mL
Prep Date: 07/08/2011 1120		

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		11	J	5.8	22
Benzene		0.51	U	0.51	5.4
Bromodichloromethane		0.24	U	0.24	5.4
Bromoform		0.25	U	0.25	5.4
Bromomethane		0.54	U	0.54	11
2-Butanone (MEK)		2.9	J	2.0	11
Carbon disulfide		0.46	U	0.46	5.4
Carbon tetrachloride		0.68	U	0.68	5.4
Chlorobenzene		0.59	U	0.59	5.4
Dibromochloromethane		0.62	U	0.62	5.4
Chloroethane		0.97	U	0.97	11
Chloroform		0.31	U	0.31	5.4
Chloromethane		0.83	U	0.83	11
1,1-Dichloroethane		0.23	U	0.23	5.4
1,2-Dichloroethane		0.76	U	0.76	5.4
1,1-Dichloroethene		0.64	U	0.64	5.4
1,2-Dichloroethene, Total		0.42	U	0.42	5.4
1,2-Dichloropropane		0.60	U	0.60	5.4
cis-1,3-Dichloropropene		1.4	U	1.4	5.4
trans-1,3-Dichloropropene		0.73	U	0.73	5.4
Ethylbenzene		1.1	J	0.73	5.4
2-Hexanone		5.3	U	5.3	22
Methylene Chloride		0.81	U	0.81	5.4
4-Methyl-2-pentanone (MIBK)		4.7	U	4.7	11
Styrene		0.68	U	0.68	5.4
1,1,2,2-Tetrachloroethane		0.66	U	0.66	5.4
Tetrachloroethene		0.64	U	0.64	5.4
Toluene		0.75	U	0.75	5.4
1,1,1-Trichloroethane		0.56	U	0.56	5.4
1,1,2-Trichloroethane		0.95	U	0.95	5.4
Trichloroethene		0.25	U	0.25	5.4
Vinyl chloride		1.5	U	1.5	5.4
Xylenes, Total		0.66	U	0.66	5.4

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	91		58 - 140
Toluene-d8 (Surr)	99		80 - 126
4-Bromofluorobenzene (Surr)	98		76 - 127
Dibromofluoromethane (Surr)	96		75 - 121

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN4

Lab Sample ID: 280-17784-4

Date Sampled: 07/06/2011 0930

Client Matrix: Solid

% Moisture: 0.6

Date Received: 07/08/2011 0900

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**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method: 8260B

Analysis Batch: 280-76282

Instrument ID: MSV\_J

Prep Method: 5035

Prep Batch: 280-75667

Lab File ID: J7917.D

Dilution: 1.0

Initial Weight/Volume: 4.639 g

Analysis Date: 07/12/2011 0202

Final Weight/Volume: 5 mL

Prep Date: 07/08/2011 1120

**Tentatively Identified Compounds**

Number TIC's Found: 0

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

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN5

Lab Sample ID: 280-17784-5

Date Sampled: 07/06/2011 0945

Client Matrix: Solid

% Moisture: 0.8

Date Received: 07/08/2011 0900

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B	Analysis Batch: 280-76282	Instrument ID: MSV_J
Prep Method: 5035	Prep Batch: 280-75667	Lab File ID: J7918.D
Dilution: 1.0		Initial Weight/Volume: 4.199 g
Analysis Date: 07/12/2011 0225		Final Weight/Volume: 5 mL
Prep Date: 07/08/2011 1136		

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		6.5	U	6.5	24
Benzene		0.56	U T	0.56	6.0
Bromodichloromethane		0.26	U	0.26	6.0
Bromoform		0.28	U	0.28	6.0
Bromomethane		0.60	U	0.60	12
2-Butanone (MEK)		2.2	U	2.2	12
Carbon disulfide		0.50	U	0.50	6.0
Carbon tetrachloride		0.76	U	0.76	6.0
Chlorobenzene		0.65	U T	0.65	6.0
Dibromochloromethane		0.68	U	0.68	6.0
Chloroethane		1.1	U	1.1	12
Chloroform		0.35	U T	0.35	6.0
Chloromethane		0.92	U	0.92	12
1,1-Dichloroethane		0.25	U T	0.25	6.0
1,2-Dichloroethane		0.84	U	0.84	6.0
1,1-Dichloroethene		0.71	U T	0.71	6.0
1,2-Dichloroethene, Total		0.47	U	0.47	6.0
1,2-Dichloropropane		0.66	U T	0.66	6.0
cis-1,3-Dichloropropene		1.5	U	1.5	6.0
trans-1,3-Dichloropropene		0.80	U	0.80	6.0
Ethylbenzene		0.80	U T	0.80	6.0
2-Hexanone		5.9	U	5.9	24
Methylene Chloride		0.90	U	0.90	6.0
4-Methyl-2-pentanone (MIBK)		5.2	U	5.2	12
Styrene		0.76	U	0.76	6.0
1,1,2,2-Tetrachloroethane		0.73	U	0.73	6.0
Tetrachloroethene		0.71	U T	0.71	6.0
Toluene		0.83	U	0.83	6.0
1,1,1-Trichloroethane		0.62	U	0.62	6.0
1,1,2-Trichloroethane		1.1	U	1.1	6.0
Trichloroethene		0.28	U T	0.28	6.0
Vinyl chloride		1.6	U	1.6	6.0
Xylenes, Total		0.73	U	0.73	6.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	93		58 - 140
Toluene-d8 (Surr)	97		80 - 126
4-Bromofluorobenzene (Surr)	96		76 - 127
Dibromofluoromethane (Surr)	97		75 - 121

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN5

Lab Sample ID: 280-17784-5

Client Matrix: Solid

% Moisture: 0.8

Date Sampled: 07/06/2011 0945

Date Received: 07/08/2011 0900

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**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method: 8260B

Analysis Batch: 280-76282

Instrument ID: MSV\_J

Prep Method: 5035

Prep Batch: 280-75667

Lab File ID: J7918.D

Dilution: 1.0

Initial Weight/Volume: 4.199 g

Analysis Date: 07/12/2011 0225

Final Weight/Volume: 5 mL

Prep Date: 07/08/2011 1136

**Tentatively Identified Compounds**

Number TIC's Found: 0

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

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN6

Lab Sample ID: 280-17784-6

Date Sampled: 07/06/2011 1000

Client Matrix: Solid

% Moisture: 2.6

Date Received: 07/08/2011 0900

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B	Analysis Batch: 280-76282	Instrument ID: MSV_J	
Prep Method: 5035	Prep Batch: 280-75667	Lab File ID: J7921.D	
Dilution: 1.0		Initial Weight/Volume: 2.845 g	
Analysis Date: 07/12/2011 0334		Final Weight/Volume: 5 mL	
Prep Date: 07/08/2011 1136			

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		170		9.7	36
Benzene		0.85	U	0.85	9.0
Bromodichloromethane		0.40	U	0.40	9.0
Bromoform		0.42	U	0.42	9.0
Bromomethane		0.90	U	0.90	18
2-Butanone (MEK)		22		3.3	18
Carbon disulfide		0.76	U	0.76	9.0
Carbon tetrachloride		1.1	U	1.1	9.0
Chlorobenzene		0.97	U	0.97	9.0
Dibromochloromethane		1.0	U	1.0	9.0
Chloroethane		1.6	U	1.6	18
Chloroform		0.52	U	0.52	9.0
Chloromethane		1.4	U	1.4	18
1,1-Dichloroethane		0.38	U	0.38	9.0
1,2-Dichloroethane		1.3	U	1.3	9.0
1,1-Dichloroethene		1.1	U	1.1	9.0
1,2-Dichloroethene, Total		0.70	U	0.70	9.0
1,2-Dichloropropane		0.99	U	0.99	9.0
cis-1,3-Dichloropropene		2.3	U	2.3	9.0
trans-1,3-Dichloropropene		1.2	U	1.2	9.0
Ethylbenzene		1.2	U	1.2	9.0
2-Hexanone		8.8	U	8.8	36
Methylene Chloride		1.4	J	1.4	9.0
4-Methyl-2-pentanone (MIBK)		7.9	U	7.9	18
Styrene		1.1	U	1.1	9.0
1,1,2,2-Tetrachloroethane		1.1	U	1.1	9.0
Tetrachloroethene		1.1	U	1.1	9.0
Toluene		1.2	U	1.2	9.0
1,1,1-Trichloroethane		0.94	U	0.94	9.0
1,1,2-Trichloroethane		1.6	U	1.6	9.0
Trichloroethene		0.42	U	0.42	9.0
Vinyl chloride		2.4	U	2.4	9.0
Xylenes, Total		1.1	U	1.1	9.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		58 - 140
Toluene-d8 (Surr)	143	*	80 - 126
4-Bromofluorobenzene (Surr)	138	*	76 - 127
Dibromofluoromethane (Surr)	105		75 - 121

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN6

Lab Sample ID: 280-17784-6

Date Sampled: 07/06/2011 1000

Client Matrix: Solid

% Moisture: 2.6

Date Received: 07/08/2011 0900

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**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method: 8260B

Analysis Batch: 280-76282

Instrument ID: MSV\_J

Prep Method: 5035

Prep Batch: 280-75667

Lab File ID: J7921.D

Dilution: 1.0

Initial Weight/Volume: 2.845 g

Analysis Date: 07/12/2011 0334

Final Weight/Volume: 5 mL

Prep Date: 07/08/2011 1136

**Tentatively Identified Compounds**

Number TIC's Found: 0

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

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN7

Lab Sample ID: 280-17784-7

Date Sampled: 07/06/2011 1015

Client Matrix: Solid

% Moisture: 0.2

Date Received: 07/08/2011 0900

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	280-76612	Instrument ID:	MSV_J
Prep Method:	5035	Prep Batch:	280-75667	Lab File ID:	J7942.D
Dilution:	1.0			Initial Weight/Volume:	4.537 g
Analysis Date:	07/12/2011 1138			Final Weight/Volume:	5 mL
Prep Date:	07/08/2011 1136				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		5.9	U	5.9	22
Benzene		0.52	U	0.52	5.5
Bromodichloromethane		0.24	U	0.24	5.5
Bromoform		0.25	U	0.25	5.5
Bromomethane		0.55	U	0.55	11
2-Butanone (MEK)		2.0	U	2.0	11
Carbon disulfide		0.46	U	0.46	5.5
Carbon tetrachloride		0.70	U	0.70	5.5
Chlorobenzene		0.60	U	0.60	5.5
Dibromochloromethane		0.63	U	0.63	5.5
Chloroethane		0.98	U	0.98	11
Chloroform		0.32	U	0.32	5.5
Chloromethane		0.85	U	0.85	11
1,1-Dichloroethane		0.23	U	0.23	5.5
1,2-Dichloroethane		0.77	U	0.77	5.5
1,1-Dichloroethene		0.65	U	0.65	5.5
1,2-Dichloroethene, Total		0.43	U	0.43	5.5
1,2-Dichloropropane		0.61	U	0.61	5.5
cis-1,3-Dichloropropene		1.4	U	1.4	5.5
trans-1,3-Dichloropropene		0.74	U	0.74	5.5
Ethylbenzene		1.8	J T	0.74	5.5
2-Hexanone		5.4	U	5.4	22
Methylene Chloride		0.83	U	0.83	5.5
4-Methyl-2-pentanone (MIBK)		4.8	U	4.8	11
Styrene		0.70	U	0.70	5.5
1,1,2,2-Tetrachloroethane		0.67	U	0.67	5.5
Tetrachloroethene		0.65	U	0.65	5.5
Toluene		0.76	U	0.76	5.5
1,1,1-Trichloroethane		0.57	U	0.57	5.5
1,1,2-Trichloroethane		0.97	U	0.97	5.5
Trichloroethene		0.25	U	0.25	5.5
Vinyl chloride		1.5	U	1.5	5.5
Xylenes, Total		2.1	J	0.67	5.5

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	89		58 - 140
Toluene-d8 (Surr)	95		80 - 126
4-Bromofluorobenzene (Surr)	93		76 - 127
Dibromofluoromethane (Surr)	92		75 - 121

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN7

Lab Sample ID: 280-17784-7

Client Matrix: Solid

% Moisture: 0.2

Date Sampled: 07/06/2011 1015

Date Received: 07/08/2011 0900

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**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method: 8260B  
Prep Method: 5035  
Dilution: 1.0  
Analysis Date: 07/12/2011 1138  
Prep Date: 07/08/2011 1136

Analysis Batch: 280-76612  
Prep Batch: 280-75667

Instrument ID: MSV\_J  
Lab File ID: J7942.D  
Initial Weight/Volume: 4.537 g  
Final Weight/Volume: 5 mL

**Tentatively Identified Compounds**

Number TIC's Found: 0

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

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN8

Lab Sample ID: 280-17784-8

Date Sampled: 07/06/2011 1030

Client Matrix: Solid

% Moisture: 0.3

Date Received: 07/08/2011 0900

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	280-76612	Instrument ID:	MSV_J
Prep Method:	5035	Prep Batch:	280-75667	Lab File ID:	J7943.D
Dilution:	1.0			Initial Weight/Volume:	4.791 g
Analysis Date:	07/12/2011 1201			Final Weight/Volume:	5 mL
Prep Date:	07/08/2011 1136				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		5.6	U	5.6	21
Benzene		0.49	U	0.49	5.2
Bromodichloromethane		0.23	U	0.23	5.2
Bromoform		0.24	U	0.24	5.2
Bromomethane		0.52	U	0.52	10
2-Butanone (MEK)		1.9	U	1.9	10
Carbon disulfide		0.44	U	0.44	5.2
Carbon tetrachloride		0.66	U	0.66	5.2
Chlorobenzene		0.56	U	0.56	5.2
Dibromochloromethane		0.60	U	0.60	5.2
Chloroethane		0.93	U	0.93	10
Chloroform		0.30	U	0.30	5.2
Chloromethane		0.81	U	0.81	10
1,1-Dichloroethane		0.22	U	0.22	5.2
1,2-Dichloroethane		0.73	U	0.73	5.2
1,1-Dichloroethene		0.62	U	0.62	5.2
1,2-Dichloroethene, Total		0.41	U	0.41	5.2
1,2-Dichloropropane		0.58	U	0.58	5.2
cis-1,3-Dichloropropene		1.3	U	1.3	5.2
trans-1,3-Dichloropropene		0.70	U	0.70	5.2
Ethylbenzene		1.4	J	0.70	5.2
2-Hexanone		5.1	U	5.1	21
Methylene Chloride		0.78	U	0.78	5.2
4-Methyl-2-pentanone (MIBK)		4.6	U	4.6	10
Styrene		0.66	U	0.66	5.2
1,1,2,2-Tetrachloroethane		0.64	U	0.64	5.2
Tetrachloroethene		0.62	U	0.62	5.2
Toluene		0.72	U	0.72	5.2
1,1,1-Trichloroethane		0.54	U	0.54	5.2
1,1,2-Trichloroethane		0.92	U	0.92	5.2
Trichloroethene		0.24	U	0.24	5.2
Vinyl chloride		1.4	U	1.4	5.2
Xylenes, Total		0.64	U	0.64	5.2

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	91		58 - 140
Toluene-d8 (Surr)	97		80 - 126
4-Bromofluorobenzene (Surr)	96		76 - 127
Dibromofluoromethane (Surr)	96		75 - 121

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN8

Lab Sample ID: 280-17784-8

Date Sampled: 07/06/2011 1030

Client Matrix: Solid

% Moisture: 0.3

Date Received: 07/08/2011 0900

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**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method: 8260B

Analysis Batch: 280-76612

Instrument ID: MSV\_J

Prep Method: 5035

Prep Batch: 280-75667

Lab File ID: J7943.D

Dilution: 1.0

Initial Weight/Volume: 4.791 g

Analysis Date: 07/12/2011 1201

Final Weight/Volume: 5 mL

Prep Date: 07/08/2011 1136

**Tentatively Identified Compounds**

Number TIC's Found: 0

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

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN9

Lab Sample ID: 280-17784-9

Date Sampled: 07/06/2011 1045

Client Matrix: Solid

% Moisture: 0.1

Date Received: 07/08/2011 0900

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	280-76612	Instrument ID:	MSV_J
Prep Method:	5035	Prep Batch:	280-75667	Lab File ID:	J7944.D
Dilution:	1.0			Initial Weight/Volume:	3.749 g
Analysis Date:	07/12/2011 1223			Final Weight/Volume:	5 mL
Prep Date:	07/08/2011 1136				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		51		7.2	27
Benzene		0.63	U	0.63	6.7
Bromodichloromethane		0.29	U	0.29	6.7
Bromoform		0.31	U	0.31	6.7
Bromomethane		0.67	U	0.67	13
2-Butanone (MEK)		7.8	J	2.4	13
Carbon disulfide		0.56	U	0.56	6.7
Carbon tetrachloride		0.84	U	0.84	6.7
Chlorobenzene		0.72	U	0.72	6.7
Dibromochloromethane		0.76	U	0.76	6.7
Chloroethane		1.2	U	1.2	13
Chloroform		0.39	U	0.39	6.7
Chloromethane		1.0	U	1.0	13
1,1-Dichloroethane		0.28	U	0.28	6.7
1,2-Dichloroethane		0.93	U	0.93	6.7
1,1-Dichloroethene		0.92	J	0.79	6.7
1,2-Dichloroethene, Total		0.52	U	0.52	6.7
1,2-Dichloropropane		0.73	U	0.73	6.7
cis-1,3-Dichloropropene		1.7	U	1.7	6.7
trans-1,3-Dichloropropene		0.89	U	0.89	6.7
Ethylbenzene		1.7	J	0.89	6.7
2-Hexanone		6.5	U	6.5	27
Methylene Chloride		1.9	J	1.0	6.7
4-Methyl-2-pentanone (MIBK)		5.8	U	5.8	13
Styrene		0.84	U	0.84	6.7
1,1,2,2-Tetrachloroethane		0.81	U	0.81	6.7
Tetrachloroethene		0.79	U	0.79	6.7
Toluene		0.92	U	0.92	6.7
1,1,1-Trichloroethane		0.69	U	0.69	6.7
1,1,2-Trichloroethane		1.2	U	1.2	6.7
Trichloroethene		0.31	U	0.31	6.7
Vinyl chloride		1.8	U	1.8	6.7
Xylenes, Total		2.2	J	0.81	6.7

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99		58 - 140
Toluene-d8 (Surr)	114		80 - 126
4-Bromofluorobenzene (Surr)	124		76 - 127
Dibromofluoromethane (Surr)	102		75 - 121

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN9

Lab Sample ID: 280-17784-9

Date Sampled: 07/06/2011 1045

Client Matrix: Solid

% Moisture: 0.1

Date Received: 07/08/2011 0900

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**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method: 8260B

Analysis Batch: 280-76612

Instrument ID: MSV\_J

Prep Method: 5035

Prep Batch: 280-75667

Lab File ID: J7944.D

Dilution: 1.0

Initial Weight/Volume: 3.749 g

Analysis Date: 07/12/2011 1223

Final Weight/Volume: 5 mL

Prep Date: 07/08/2011 1136

**Tentatively Identified Compounds**

Number TIC's Found: 0

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

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP0

Lab Sample ID: 280-17784-10

Date Sampled: 07/06/2011 1100

Client Matrix: Solid

% Moisture: 0.1

Date Received: 07/08/2011 0900

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	280-76612	Instrument ID:	MSV_J
Prep Method:	5035	Prep Batch:	280-75667	Lab File ID:	J7945.D
Dilution:	1.0			Initial Weight/Volume:	4.473 g
Analysis Date:	07/12/2011 1246			Final Weight/Volume:	5 mL
Prep Date:	07/08/2011 1136				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		14	J	6.0	22
Benzene		0.53	U	0.53	5.6
Bromodichloromethane		0.25	U	0.25	5.6
Bromoform		0.26	U	0.26	5.6
Bromomethane		0.56	U	0.56	11
2-Butanone (MEK)		2.3	J	2.0	11
Carbon disulfide		0.47	U	0.47	5.6
Carbon tetrachloride		0.70	U	0.70	5.6
Chlorobenzene		0.60	U	0.60	5.6
Dibromochloromethane		0.64	U	0.64	5.6
Chloroethane		1.0	U	1.0	11
Chloroform		0.32	U	0.32	5.6
Chloromethane		0.86	U	0.86	11
1,1-Dichloroethane		0.23	U	0.23	5.6
1,2-Dichloroethane		0.78	U	0.78	5.6
1,1-Dichloroethene		0.66	U	0.66	5.6
1,2-Dichloroethene, Total		0.44	U	0.44	5.6
1,2-Dichloropropane		0.62	U	0.62	5.6
cis-1,3-Dichloropropene		1.4	U	1.4	5.6
trans-1,3-Dichloropropene		0.75	U	0.75	5.6
Ethylbenzene		1.6	J	0.75	5.6
2-Hexanone		5.5	U	5.5	22
Methylene Chloride		0.84	U	0.84	5.6
4-Methyl-2-pentanone (MIBK)		4.9	U	4.9	11
Styrene		0.70	U	0.70	5.6
1,1,2,2-Tetrachloroethane		0.68	U	0.68	5.6
Tetrachloroethene		0.66	U	0.66	5.6
Toluene		0.77	U	0.77	5.6
1,1,1-Trichloroethane		0.58	U	0.58	5.6
1,1,2-Trichloroethane		0.98	U	0.98	5.6
Trichloroethene		0.26	U	0.26	5.6
Vinyl chloride		1.5	U	1.5	5.6
Xylenes, Total		1.9	J	0.68	5.6

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	93		58 - 140
Toluene-d8 (Surr)	97		80 - 126
4-Bromofluorobenzene (Surr)	97		76 - 127
Dibromofluoromethane (Surr)	96		75 - 121

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP0

Lab Sample ID: 280-17784-10

Date Sampled: 07/06/2011 1100

Client Matrix: Solid

% Moisture: 0.1

Date Received: 07/08/2011 0900

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**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method: 8260B

Analysis Batch: 280-76612

Instrument ID: MSV\_J

Prep Method: 5035

Prep Batch: 280-75667

Lab File ID: J7945.D

Dilution: 1.0

Initial Weight/Volume: 4.473 g

Analysis Date: 07/12/2011 1246

Final Weight/Volume: 5 mL

Prep Date: 07/08/2011 1136

**Tentatively Identified Compounds**

Number TIC's Found: 0

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

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP1

Lab Sample ID: 280-17784-11

Date Sampled: 07/06/2011 1115

Client Matrix: Solid

% Moisture: 0.0

Date Received: 07/08/2011 0900

### 8260B Volatile Organic Compounds (GC/MS)

Analysis Method: 8260B	Analysis Batch: 280-76612	Instrument ID: MSV_J
Prep Method: 5035	Prep Batch: 280-75667	Lab File ID: J7946.D
Dilution: 1.0		Initial Weight/Volume: 4.123 g
Analysis Date: 07/12/2011 1309		Final Weight/Volume: 5 mL
Prep Date: 07/08/2011 1136		

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		6.5	U	6.5	24
Benzene		0.57	U	0.57	6.1
Bromodichloromethane		0.27	U	0.27	6.1
Bromoform		0.28	U	0.28	6.1
Bromomethane		0.61	U	0.61	12
2-Butanone (MEK)		2.2	U	2.2	12
Carbon disulfide		0.51	U	0.51	6.1
Carbon tetrachloride		0.76	U	0.76	6.1
Chlorobenzene		0.65	U	0.65	6.1
Dibromochloromethane		0.69	U	0.69	6.1
Chloroethane		1.1	U	1.1	12
Chloroform		0.35	U	0.35	6.1
Chloromethane		0.93	U	0.93	12
1,1-Dichloroethane		0.25	U	0.25	6.1
1,2-Dichloroethane		0.85	U	0.85	6.1
1,1-Dichloroethene		0.72	U	0.72	6.1
1,2-Dichloroethene, Total		0.47	U	0.47	6.1
1,2-Dichloropropane		0.67	U	0.67	6.1
cis-1,3-Dichloropropene		1.6	U	1.6	6.1
trans-1,3-Dichloropropene		0.81	U	0.81	6.1
Ethylbenzene		0.96	J	0.81	6.1
2-Hexanone		5.9	U	5.9	24
Methylene Chloride		0.91	U	0.91	6.1
4-Methyl-2-pentanone (MIBK)		5.3	U	5.3	12
Styrene		0.76	U	0.76	6.1
1,1,2,2-Tetrachloroethane		0.74	U	0.74	6.1
Tetrachloroethene		0.72	U	0.72	6.1
Toluene		0.84	U	0.84	6.1
1,1,1-Trichloroethane		0.63	U	0.63	6.1
1,1,2-Trichloroethane		1.1	U	1.1	6.1
Trichloroethene		0.28	U	0.28	6.1
Vinyl chloride		1.6	U	1.6	6.1
Xylenes, Total		0.74	U	0.74	6.1

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92		58 - 140
Toluene-d8 (Surr)	97		80 - 126
4-Bromofluorobenzene (Surr)	96		76 - 127
Dibromofluoromethane (Surr)	96		75 - 121

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP1

Lab Sample ID: 280-17784-11

Date Sampled: 07/06/2011 1115

Client Matrix: Solid

% Moisture: 0.0

Date Received: 07/08/2011 0900

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**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method: 8260B

Analysis Batch: 280-76612

Instrument ID: MSV\_J

Prep Method: 5035

Prep Batch: 280-75667

Lab File ID: J7946.D

Dilution: 1.0

Initial Weight/Volume: 4.123 g

Analysis Date: 07/12/2011 1309

Final Weight/Volume: 5 mL

Prep Date: 07/08/2011 1136

**Tentatively Identified Compounds**

Number TIC's Found: 0

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

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP2

Lab Sample ID: 280-17784-12

Date Sampled: 07/06/2011 1130

Client Matrix: Solid

% Moisture: 0.0

Date Received: 07/08/2011 0900

**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method:	8260B	Analysis Batch:	280-76612	Instrument ID:	MSV_J
Prep Method:	5035	Prep Batch:	280-75667	Lab File ID:	J7947.D
Dilution:	1.0			Initial Weight/Volume:	4.453 g
Analysis Date:	07/12/2011 1332			Final Weight/Volume:	5 mL
Prep Date:	07/08/2011 1136				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		7.8	J	6.0	22
Benzene		0.53	U	0.53	5.6
Bromodichloromethane		0.25	U	0.25	5.6
Bromoform		0.26	U	0.26	5.6
Bromomethane		0.56	U	0.56	11
2-Butanone (MEK)		2.1	U	2.1	11
Carbon disulfide		0.47	U	0.47	5.6
Carbon tetrachloride		0.71	U	0.71	5.6
Chlorobenzene		0.61	U	0.61	5.6
Dibromochloromethane		0.64	U	0.64	5.6
Chloroethane		1.0	U	1.0	11
Chloroform		0.33	U	0.33	5.6
Chloromethane		0.86	U	0.86	11
1,1-Dichloroethane		0.24	U	0.24	5.6
1,2-Dichloroethane		0.79	U	0.79	5.6
1,1-Dichloroethene		0.66	U	0.66	5.6
1,2-Dichloroethene, Total		0.44	U	0.44	5.6
1,2-Dichloropropane		0.62	U	0.62	5.6
cis-1,3-Dichloropropene		1.4	U	1.4	5.6
trans-1,3-Dichloropropene		0.75	U	0.75	5.6
Ethylbenzene		0.95	J	0.75	5.6
2-Hexanone		5.5	U	5.5	22
Methylene Chloride		0.84	U	0.84	5.6
4-Methyl-2-pentanone (MIBK)		4.9	U	4.9	11
Styrene		0.71	U	0.71	5.6
1,1,2,2-Tetrachloroethane		0.68	U	0.68	5.6
Tetrachloroethene		0.66	U	0.66	5.6
Toluene		0.77	U	0.77	5.6
1,1,1-Trichloroethane		0.58	U	0.58	5.6
1,1,2-Trichloroethane		0.99	U	0.99	5.6
Trichloroethene		0.26	U	0.26	5.6
Vinyl chloride		1.5	U	1.5	5.6
Xylenes, Total		0.68	U	0.68	5.6

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92		58 - 140
Toluene-d8 (Surr)	97		80 - 126
4-Bromofluorobenzene (Surr)	96		76 - 127
Dibromofluoromethane (Surr)	96		75 - 121

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP2

Lab Sample ID: 280-17784-12

Date Sampled: 07/06/2011 1130

Client Matrix: Solid

% Moisture: 0.0

Date Received: 07/08/2011 0900

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**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method: 8260B

Analysis Batch: 280-76612

Instrument ID: MSV\_J

Prep Method: 5035

Prep Batch: 280-75667

Lab File ID: J7947.D

Dilution: 1.0

Initial Weight/Volume: 4.453 g

Analysis Date: 07/12/2011 1332

Final Weight/Volume: 5 mL

Prep Date: 07/08/2011 1136

**Tentatively Identified Compounds**

Number TIC's Found: 0

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

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP3

Lab Sample ID: 280-17784-13FD

Date Sampled: 07/06/2011 0900

Client Matrix: Solid

% Moisture: 0.3

Date Received: 07/08/2011 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-76612	Instrument ID:	MSV_J
Prep Method:	5035	Prep Batch:	280-75667	Lab File ID:	J7948.D
Dilution:	1.0			Initial Weight/Volume:	3.659 g
Analysis Date:	07/12/2011 1354			Final Weight/Volume:	5 mL
Prep Date:	07/08/2011 1136				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		77		7.4	27
Benzene		0.64	U	0.64	6.9
Bromodichloromethane		0.30	U	0.30	6.9
Bromoform		0.32	U	0.32	6.9
Bromomethane		0.69	U	0.69	14
2-Butanone (MEK)		9.8	J	2.5	14
Carbon disulfide		0.58	U	0.58	6.9
Carbon tetrachloride		0.86	U	0.86	6.9
Chlorobenzene		0.74	U	0.74	6.9
Dibromochloromethane		0.78	U	0.78	6.9
Chloroethane		1.2	U	1.2	14
Chloroform		0.40	U	0.40	6.9
Chloromethane		1.1	U	1.1	14
1,1-Dichloroethane		0.29	U	0.29	6.9
1,2-Dichloroethane		0.96	U	0.96	6.9
1,1-Dichloroethene		1.3	J	0.81	6.9
1,2-Dichloroethene, Total		0.53	U	0.53	6.9
1,2-Dichloropropane		0.75	U	0.75	6.9
cis-1,3-Dichloropropene		1.8	U	1.8	6.9
trans-1,3-Dichloropropene		0.92	U	0.92	6.9
Ethylbenzene		1.1	J	0.92	6.9
2-Hexanone		6.7	U	6.7	27
Methylene Chloride		1.4	J	1.0	6.9
4-Methyl-2-pentanone (MIBK)		6.0	U	6.0	14
Styrene		0.86	U	0.86	6.9
1,1,2,2-Tetrachloroethane		0.84	U	0.84	6.9
Tetrachloroethene		0.81	U	0.81	6.9
Toluene		0.95	U	0.95	6.9
1,1,1-Trichloroethane		0.71	U	0.71	6.9
1,1,2-Trichloroethane		1.2	U	1.2	6.9
Trichloroethene		0.32	U	0.32	6.9
Vinyl chloride		1.8	U	1.8	6.9
Xylenes, Total		0.84	U	0.84	6.9

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92		58 - 140
Toluene-d8 (Surr)	106		80 - 126
4-Bromofluorobenzene (Surr)	114		76 - 127
Dibromofluoromethane (Surr)	98		75 - 121

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP3

Lab Sample ID: 280-17784-13FD

Date Sampled: 07/06/2011 0900

Client Matrix: Solid

% Moisture: 0.3

Date Received: 07/08/2011 0900

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**8260B Volatile Organic Compounds (GC/MS)**

Analysis Method: 8260B

Analysis Batch: 280-76612

Instrument ID: MSV\_J

Prep Method: 5035

Prep Batch: 280-75667

Lab File ID: J7948.D

Dilution: 1.0

Initial Weight/Volume: 3.659 g

Analysis Date: 07/12/2011 1354

Final Weight/Volume: 5 mL

Prep Date: 07/08/2011 1136

**Tentatively Identified Compounds**

Number TIC's Found: 0

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

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN1

Lab Sample ID: 280-17784-1

Date Sampled: 07/06/2011 0820

Client Matrix: Solid

% Moisture: 0.4

Date Received: 07/08/2011 0900

### 8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5122.D
Dilution:	1.0			Initial Weight/Volume:	31.4 g
Analysis Date:	07/11/2011 1414			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		9.9	U	9.9	320
Acenaphthylene		16	U	16	320
Anthracene		16	U	16	320
Benzo[a]anthracene		19	U	19	320
Benzo[a]pyrene		19	U	19	320
Benzo[b]fluoranthene		25	U	25	320
Benzo[ghi]perylene		15	U	15	320
Benzo[k]fluoranthene		38	U	38	320
Bis(2-chloroethoxy)methane		22	U	22	320
Bis(2-chloroethyl)ether		16	U	16	320
bis (2-chloroisopropyl) ether		22	U	22	320
Bis(2-ethylhexyl) phthalate		44	U	44	320
4-Bromophenyl phenyl ether		18	U	18	320
Butyl benzyl phthalate		41	U	41	320
Carbazole		35	U	35	320
4-Chloroaniline		79	U	79	320
4-Chloro-3-methylphenol		63	U	63	320
2-Chloronaphthalene		9.6	U	9.6	320
2-Chlorophenol		20	U	20	320
4-Chlorophenyl phenyl ether		20	U	20	320
Chrysene		26	U	26	320
Dibenz(a,h)anthracene		18	U	18	320
Dibenzofuran		19	U	19	320
1,2-Dichlorobenzene		21	U	21	320
1,3-Dichlorobenzene		12	U	12	320
1,4-Dichlorobenzene		13	U	13	320
3,3'-Dichlorobenzidine		86	U	86	630
2,4-Dichlorophenol		9.6	U	9.6	320
Diethyl phthalate		25	U	25	320
2,4-Dimethylphenol		63	U	63	320
Dimethyl phthalate		22	U	22	320
Di-n-butyl phthalate		28	U	28	320
4,6-Dinitro-2-methylphenol		320	U	320	630
2,4-Dinitrophenol		320	U	320	790
2,4-Dinitrotoluene		63	U	63	320
2,6-Dinitrotoluene		27	U	27	320
Di-n-octyl phthalate		14	U	14	320
Fluoranthene		35	U	35	320
Fluorene		17	U	17	320
Hexachlorobenzene		28	U	28	320
Hexachlorobutadiene		9.6	U	9.6	320
Hexachlorocyclopentadiene		48	U	48	320
Hexachloroethane		20	U	20	320
Indeno[1,2,3-cd]pyrene		21	U	21	320
Isophorone		16	U	16	320
2-Methylnaphthalene		18	U	18	320

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN1

Lab Sample ID: 280-17784-1

Date Sampled: 07/06/2011 0820

Client Matrix: Solid

% Moisture: 0.4

Date Received: 07/08/2011 0900

**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5122.D
Dilution:	1.0			Initial Weight/Volume:	31.4 g
Analysis Date:	07/11/2011 1414			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		12	U	12	320
3 & 4 Methylphenol		32	U	32	320
Naphthalene		30	U	30	320
2-Nitroaniline		48	U	48	320
3-Nitroaniline		70	U	70	320
4-Nitroaniline		70	U	70	320
Nitrobenzene		21	U	21	320
2-Nitrophenol		9.6	U	9.6	320
4-Nitrophenol		93	U	93	630
N-Nitrosodi-n-propylamine		30	U	30	320
N-Nitrosodiphenylamine		20	U	20	320
Pentachlorophenol		320	U	320	630
Phenanthrene		16	U	16	320
Phenol		21	J B	17	320
Pyrene		12	U	12	320
1,2,4-Trichlorobenzene		27	U	27	320
2,4,5-Trichlorophenol		9.6	U	9.6	320
2,4,6-Trichlorophenol		9.6	U	9.6	320

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	83		50 - 120
2-Fluorophenol	88		53 - 120
Nitrobenzene-d5	81		50 - 120
Phenol-d5	90		52 - 120
Terphenyl-d14	112		55 - 120
2,4,6-Tribromophenol	89		51 - 120

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN1

Lab Sample ID: 280-17784-1

Date Sampled: 07/06/2011 0820

Client Matrix: Solid

% Moisture: 0.4

Date Received: 07/08/2011 0900

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**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method: 8270C

Analysis Batch: 280-76164

Instrument ID: MSS\_D

Prep Method: 3550C

Prep Batch: 280-75733

Lab File ID: D5122.D

Dilution: 1.0

Initial Weight/Volume: 31.4 g

Analysis Date: 07/11/2011 1414

Final Weight/Volume: 1000 uL

Prep Date: 07/08/2011 1607

Injection Volume: 0.5 uL

**Tentatively Identified Compounds**

Number TIC's Found: 1

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	2.60	3700	N J

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN2

Lab Sample ID: 280-17784-2

Date Sampled: 07/06/2011 0840

Client Matrix: Solid

% Moisture: 0.4

Date Received: 07/08/2011 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5123.D
Dilution:	1.0			Initial Weight/Volume:	32.6 g
Analysis Date:	07/11/2011 1433			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		22	J	9.5	300
Acenaphthylene		17	J	16	300
Anthracene		160	J	16	300
Benzo[a]anthracene		630		18	300
Benzo[a]pyrene		480		18	300
Benzo[b]fluoranthene		720	K	24	300
Benzo[ghi]perylene		210	J	15	300
Benzo[k]fluoranthene		37	U K	37	300
Bis(2-chloroethoxy)methane		21	U	21	300
Bis(2-chloroethyl)ether		15	U	15	300
bis (2-chloroisopropyl) ether		21	U	21	300
Bis(2-ethylhexyl) phthalate		43	U	43	300
4-Bromophenyl phenyl ether		18	U	18	300
Butyl benzyl phthalate		40	U	40	300
Carbazole		33	U	33	300
4-Chloroaniline		76	U	76	300
4-Chloro-3-methylphenol		61	U	61	300
2-Chloronaphthalene		9.2	U	9.2	300
2-Chlorophenol		19	U	19	300
4-Chlorophenyl phenyl ether		19	U	19	300
Chrysene		650		25	300
Dibenz(a,h)anthracene		140	J	18	300
Dibenzofuran		18	U	18	300
1,2-Dichlorobenzene		20	U	20	300
1,3-Dichlorobenzene		11	U	11	300
1,4-Dichlorobenzene		13	U	13	300
3,3'-Dichlorobenzidine		83	U	83	610
2,4-Dichlorophenol		9.2	U	9.2	300
Diethyl phthalate		24	U	24	300
2,4-Dimethylphenol		61	U	61	300
Dimethyl phthalate		28	J	21	300
Di-n-butyl phthalate		27	U	27	300
4,6-Dinitro-2-methylphenol		300	U	300	610
2,4-Dinitrophenol		310	U	310	760
2,4-Dinitrotoluene		61	U	61	300
2,6-Dinitrotoluene		26	U	26	300
Di-n-octyl phthalate		13	U	13	300
Fluoranthene		1400		33	300
Fluorene		31	J	17	300
Hexachlorobenzene		27	U	27	300
Hexachlorobutadiene		9.2	U	9.2	300
Hexachlorocyclopentadiene		46	U	46	300
Hexachloroethane		20	U	20	300
Indeno[1,2,3-cd]pyrene		200	J	20	300
Isophorone		16	U	16	300
2-Methylnaphthalene		18	U	18	300

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN2

Lab Sample ID: 280-17784-2

Date Sampled: 07/06/2011 0840

Client Matrix: Solid

% Moisture: 0.4

Date Received: 07/08/2011 0900

**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5123.D
Dilution:	1.0			Initial Weight/Volume:	32.6 g
Analysis Date:	07/11/2011 1433			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		12	U	12	300
3 & 4 Methylphenol		30	U	30	300
Naphthalene		29	U	29	300
2-Nitroaniline		46	U	46	300
3-Nitroaniline		67	U	67	300
4-Nitroaniline		67	U	67	300
Nitrobenzene		20	U	20	300
2-Nitrophenol		9.2	U	9.2	300
4-Nitrophenol		90	U	90	610
N-Nitrosodi-n-propylamine		29	U	29	300
N-Nitrosodiphenylamine		19	U	19	300
Pentachlorophenol		300	U	300	610
Phenanthrene		670		16	300
Phenol		21	JB	17	300
Pyrene		1500		11	300
1,2,4-Trichlorobenzene		26	U	26	300
2,4,5-Trichlorophenol		9.2	U	9.2	300
2,4,6-Trichlorophenol		9.2	U	9.2	300

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	99		50 - 120
2-Fluorophenol	90		53 - 120
Nitrobenzene-d5	86		50 - 120
Phenol-d5	100		52 - 120
Terphenyl-d14	118		55 - 120
2,4,6-Tribromophenol	99		51 - 120

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN2

Lab Sample ID: 280-17784-2

Date Sampled: 07/06/2011 0840

Client Matrix: Solid

% Moisture: 0.4

Date Received: 07/08/2011 0900

**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method: 8270C

Analysis Batch: 280-76164

Instrument ID: MSS\_D

Prep Method: 3550C

Prep Batch: 280-75733

Lab File ID: D5123.D

Dilution: 1.0

Initial Weight/Volume: 32.6 g

Analysis Date: 07/11/2011 1433

Final Weight/Volume: 1000 uL

Prep Date: 07/08/2011 1607

Injection Volume: 0.5 uL

**Tentatively Identified Compounds**

Number TIC's Found: 6

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	2.60	3400	N J
613-12-7	Anthracene, 2-methyl-	8.38	130	N J
	Unknown	8.45	270	N J
243-42-5	Benzo[b]naphtho[2,3-d]furan	9.10	160	N J
	Unknown	10.82	140	N J
192-97-2	Benzo[e]pyrene	11.34	270	N J

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN3

Lab Sample ID: 280-17784-3

Date Sampled: 07/06/2011 0900

Client Matrix: Solid

% Moisture: 0.8

Date Received: 07/08/2011 0900

**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5124.D
Dilution:	1.0			Initial Weight/Volume:	31.7 g
Analysis Date:	07/11/2011 1452			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		9.8	U	9.8	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		78	U	78	310
4-Chloro-3-methylphenol		63	U	63	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		86	U	86	630
2,4-Dichlorophenol		9.5	U	9.5	310
Diethyl phthalate		25	U	25	310
2,4-Dimethylphenol		63	U	63	310
Dimethyl phthalate		22	U	22	310
Di-n-butyl phthalate		28	U	28	310
4,6-Dinitro-2-methylphenol		310	U	310	630
2,4-Dinitrophenol		320	U	320	790
2,4-Dinitrotoluene		63	U	63	310
2,6-Dinitrotoluene		27	U	27	310
Di-n-octyl phthalate		14	U	14	310
Fluoranthene		34	U	34	310
Fluorene		17	U	17	310
Hexachlorobenzene		28	U	28	310
Hexachlorobutadiene		9.5	U	9.5	310
Hexachlorocyclopentadiene		48	U	48	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

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN3

Lab Sample ID: 280-17784-3

Date Sampled: 07/06/2011 0900

Client Matrix: Solid

% Moisture: 0.8

Date Received: 07/08/2011 0900

**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5124.D
Dilution:	1.0			Initial Weight/Volume:	31.7 g
Analysis Date:	07/11/2011 1452			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			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		30	U	30	310
2-Nitroaniline		48	U	48	310
3-Nitroaniline		70	U	70	310
4-Nitroaniline		69	U	69	310
Nitrobenzene		21	U	21	310
2-Nitrophenol		9.5	U	9.5	310
4-Nitrophenol		93	U	93	630
N-Nitrosodi-n-propylamine		30	U	30	310
N-Nitrosodiphenylamine		20	U	20	310
Pentachlorophenol		310	U	310	630
Phenanthrene		16	U	16	310
Phenol		20	JB	17	310
Pyrene		12	U	12	310
1,2,4-Trichlorobenzene		27	U	27	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	84		50 - 120
2-Fluorophenol	81		53 - 120
Nitrobenzene-d5	74		50 - 120
Phenol-d5	87		52 - 120
Terphenyl-d14	113		55 - 120
2,4,6-Tribromophenol	89		51 - 120

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

Client Sample ID: J1JWN3

Lab Sample ID: 280-17784-3

Date Sampled: 07/06/2011 0900

Client Matrix: Solid

% Moisture: 0.8

Date Received: 07/08/2011 0900

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**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method: 8270C

Analysis Batch: 280-76164

Instrument ID: MSS\_D

Prep Method: 3550C

Prep Batch: 280-75733

Lab File ID: D5124.D

Dilution: 1.0

Initial Weight/Volume: 31.7 g

Analysis Date: 07/11/2011 1452

Final Weight/Volume: 1000 uL

Prep Date: 07/08/2011 1607

Injection Volume: 0.5 uL

**Tentatively Identified Compounds**

Number TIC's Found: 1

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	2.60	3200	N J

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN4

Lab Sample ID: 280-17784-4

Date Sampled: 07/06/2011 0930

Client Matrix: Solid

% Moisture: 0.6

Date Received: 07/08/2011 0900

**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5125.D
Dilution:	1.0			Initial Weight/Volume:	31.5 g
Analysis Date:	07/11/2011 1511			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		9.9	U	9.9	320
Acenaphthylene		16	U	16	320
Anthracene		16	U	16	320
Benzo[a]anthracene		19	U	19	320
Benzo[a]pyrene		19	U	19	320
Benzo[b]fluoranthene		25	U	25	320
Benzo[ghi]perylene		15	U	15	320
Benzo[k]fluoranthene		38	U	38	320
Bis(2-chloroethoxy)methane		22	U	22	320
Bis(2-chloroethyl)ether		16	U	16	320
bis (2-chloroisopropyl) ether		22	U	22	320
Bis(2-ethylhexyl) phthalate		44	U	44	320
4-Bromophenyl phenyl ether		18	U	18	320
Butyl benzyl phthalate		41	U	41	320
Carbazole		34	U	34	320
4-Chloroaniline		78	U	78	320
4-Chloro-3-methylphenol		63	U	63	320
2-Chloronaphthalene		9.6	U	9.6	320
2-Chlorophenol		20	U	20	320
4-Chlorophenyl phenyl ether		20	U	20	320
Chrysene		26	U	26	320
Dibenz(a,h)anthracene		18	U	18	320
Dibenzofuran		19	U	19	320
1,2-Dichlorobenzene		21	U	21	320
1,3-Dichlorobenzene		11	U	11	320
1,4-Dichlorobenzene		13	U	13	320
3,3'-Dichlorobenzidine		86	U	86	630
2,4-Dichlorophenol		9.6	U	9.6	320
Diethyl phthalate		25	U	25	320
2,4-Dimethylphenol		63	U	63	320
Dimethyl phthalate		22	U	22	320
Di-n-butyl phthalate		28	U	28	320
4,6-Dinitro-2-methylphenol		320	U	320	630
2,4-Dinitrophenol		320	U	320	790
2,4-Dinitrotoluene		63	U	63	320
2,6-Dinitrotoluene		27	U	27	320
Di-n-octyl phthalate		14	U	14	320
Fluoranthene		34	U	34	320
Fluorene		17	U	17	320
Hexachlorobenzene		28	U	28	320
Hexachlorobutadiene		9.6	U	9.6	320
Hexachlorocyclopentadiene		48	U	48	320
Hexachloroethane		20	U	20	320
Indeno[1,2,3-cd]pyrene		21	U	21	320
Isophorone		16	U	16	320
2-Methylnaphthalene		18	U	18	320

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN4

Lab Sample ID: 280-17784-4

Date Sampled: 07/06/2011 0930

Client Matrix: Solid

% Moisture: 0.6

Date Received: 07/08/2011 0900

**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5125.D
Dilution:	1.0			Initial Weight/Volume:	31.5 g
Analysis Date:	07/11/2011 1511			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		12	U	12	320
3 & 4 Methylphenol		32	U	32	320
Naphthalene		30	U	30	320
2-Nitroaniline		48	U	48	320
3-Nitroaniline		70	U	70	320
4-Nitroaniline		69	U	69	320
Nitrobenzene		21	U	21	320
2-Nitrophenol		9.6	U	9.6	320
4-Nitrophenol		93	U	93	630
N-Nitrosodi-n-propylamine		30	U	30	320
N-Nitrosodiphenylamine		20	U	20	320
Pentachlorophenol		320	U	320	630
Phenanthrene		16	U	16	320
Phenol		21	J B	17	320
Pyrene		16	J	12	320
1,2,4-Trichlorobenzene		27	U	27	320
2,4,5-Trichlorophenol		9.6	U	9.6	320
2,4,6-Trichlorophenol		9.6	U	9.6	320

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	86		50 - 120
2-Fluorophenol	91		53 - 120
Nitrobenzene-d5	85		50 - 120
Phenol-d5	93		52 - 120
Terphenyl-d14	112		55 - 120
2,4,6-Tribromophenol	91		51 - 120

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN4

Lab Sample ID: 280-17784-4

Date Sampled: 07/06/2011 0930

Client Matrix: Solid

% Moisture: 0.6

Date Received: 07/08/2011 0900

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**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method: 8270C

Analysis Batch: 280-76164

Instrument ID: MSS\_D

Prep Method: 3550C

Prep Batch: 280-75733

Lab File ID: D5125.D

Dilution: 1.0

Initial Weight/Volume: 31.5 g

Analysis Date: 07/11/2011 1511

Final Weight/Volume: 1000 uL

Prep Date: 07/08/2011 1607

Injection Volume: 0.5 uL

**Tentatively Identified Compounds**

Number TIC's Found: 1

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	2.60	3500	N J

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN5

Lab Sample ID: 280-17784-5

Date Sampled: 07/06/2011 0945

Client Matrix: Solid

% Moisture: 0.8

Date Received: 07/08/2011 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5126.D
Dilution:	1.0			Initial Weight/Volume:	32.3 g
Analysis Date:	07/11/2011 1530			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		9.6	U	9.6	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		37	U	37	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		43	U	43	310
4-Bromophenyl phenyl ether		18	U	18	310
Butyl benzyl phthalate		40	U	40	310
Carbazole		34	U	34	310
4-Chloroaniline		77	U	77	310
4-Chloro-3-methylphenol		62	U	62	310
2-Chloronaphthalene		9.4	U	9.4	310
2-Chlorophenol		20	U	20	310
4-Chlorophenyl phenyl ether		20	U	20	310
Chrysene		25	U	25	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		84	U	84	620
2,4-Dichlorophenol		9.4	U	9.4	310
Diethyl phthalate		24	U	24	310
2,4-Dimethylphenol		62	U	62	310
Dimethyl phthalate		22	U	22	310
Di-n-butyl phthalate		27	U	27	310
4,6-Dinitro-2-methylphenol		310	U	310	620
2,4-Dinitrophenol		310	U	310	770
2,4-Dinitrotoluene		62	U	62	310
2,6-Dinitrotoluene		26	U	26	310
Di-n-octyl phthalate		13	U	13	310
Fluoranthene		34	U	34	310
Fluorene		17	U	17	310
Hexachlorobenzene		27	U	27	310
Hexachlorobutadiene		9.4	U	9.4	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

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN5

Lab Sample ID: 280-17784-5

Date Sampled: 07/06/2011 0945

Client Matrix: Solid

% Moisture: 0.8

Date Received: 07/08/2011 0900

### 8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5126.D
Dilution:	1.0			Initial Weight/Volume:	32.3 g
Analysis Date:	07/11/2011 1530			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			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		68	U	68	310
4-Nitroaniline		68	U	68	310
Nitrobenzene		21	U	21	310
2-Nitrophenol		9.4	U	9.4	310
4-Nitrophenol		91	U	91	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		20	J B	17	310
Pyrene		11	U	11	310
1,2,4-Trichlorobenzene		26	U	26	310
2,4,5-Trichlorophenol		9.4	U	9.4	310
2,4,6-Trichlorophenol		9.4	U	9.4	310

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	85		50 - 120
2-Fluorophenol	81		53 - 120
Nitrobenzene-d5	76		50 - 120
Phenol-d5	91		52 - 120
Terphenyl-d14	111		55 - 120
2,4,6-Tribromophenol	89		51 - 120

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN5

Lab Sample ID: 280-17784-5

Date Sampled: 07/06/2011 0945

Client Matrix: Solid

% Moisture: 0.8

Date Received: 07/08/2011 0900

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**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method: 8270C

Analysis Batch: 280-76164

Instrument ID: MSS\_D

Prep Method: 3550C

Prep Batch: 280-75733

Lab File ID: D5126.D

Dilution: 1.0

Initial Weight/Volume: 32.3 g

Analysis Date: 07/11/2011 1530

Final Weight/Volume: 1000 uL

Prep Date: 07/08/2011 1607

Injection Volume: 0.5 uL

**Tentatively Identified Compounds**

Number TIC's Found: 1

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	2.61	2900	N J

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN6

Lab Sample ID: 280-17784-6

Date Sampled: 07/06/2011 1000

Client Matrix: Solid

% Moisture: 2.6

Date Received: 07/08/2011 0900

### 8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5141.D
Dilution:	4.0			Initial Weight/Volume:	30.5 g
Analysis Date:	07/11/2011 2013			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		42	UD	42	1300
Acenaphthylene		69	UD	69	1300
Anthracene		69	UD	69	1300
Benzo[a]anthracene		81	UD	81	1300
Benzo[a]pyrene		81	UD	81	1300
Benzo[b]fluoranthene		120	JKD	110	1300
Benzo[ghi]perylene		65	UD	65	1300
Benzo[k]fluoranthene		160	UKD	160	1300
Bis(2-chloroethoxy)methane		93	UD	93	1300
Bis(2-chloroethyl)ether		67	UD	67	1300
bis (2-chloroisopropyl) ether		93	UD	93	1300
Bis(2-ethylhexyl) phthalate		190	UD	190	1300
4-Bromophenyl phenyl ether		77	UD	77	1300
Butyl benzyl phthalate		170	UD	170	1300
Carbazole		150	UD	150	1300
4-Chloroaniline		330	UD	330	1300
4-Chloro-3-methylphenol		270	UD	270	1300
2-Chloronaphthalene		40	UD	40	1300
2-Chlorophenol		85	UD	85	1300
4-Chlorophenyl phenyl ether		85	UD	85	1300
Chrysene		140	JD	110	1300
Dibenz(a,h)anthracene		77	UD	77	1300
Dibenzofuran		81	UD	81	1300
1,2-Dichlorobenzene		89	UD	89	1300
1,3-Dichlorobenzene		48	UD	48	1300
1,4-Dichlorobenzene		55	UD	55	1300
3,3'-Dichlorobenzidine		360	UD	360	2700
2,4-Dichlorophenol		40	UD	40	1300
Diethyl phthalate		110	UD	110	1300
2,4-Dimethylphenol		270	UD	270	1300
Dimethyl phthalate		93	UD	93	1300
Di-n-butyl phthalate		120	UD	120	1300
4,6-Dinitro-2-methylphenol		1300	UD	1300	2700
2,4-Dinitrophenol		1300	UD	1300	3300
2,4-Dinitrotoluene		270	UD	270	1300
2,6-Dinitrotoluene		110	UD	110	1300
Di-n-octyl phthalate		58	UD	58	1300
Fluoranthene		150	UD	150	1300
Fluorene		73	UD	73	1300
Hexachlorobenzene		120	UD	120	1300
Hexachlorobutadiene		40	UD	40	1300
Hexachlorocyclopentadiene		200	UD	200	1300
Hexachloroethane		86	UD	86	1300
Indeno[1,2,3-cd]pyrene		89	UD	89	1300
Isophorone		69	UD	69	1300
2-Methylnaphthalene		200	JD	77	1300

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN6

Lab Sample ID: 280-17784-6

Date Sampled: 07/06/2011 1000

Client Matrix: Solid

% Moisture: 2.6

Date Received: 07/08/2011 0900

**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5141.D
Dilution:	4.0			Initial Weight/Volume:	30.5 g
Analysis Date:	07/11/2011 2013			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		53	UD	53	1300
3 & 4 Methylphenol		130	UD	130	1300
Naphthalene		130	UD	130	1300
2-Nitroaniline		200	UD	200	1300
3-Nitroaniline		290	UD	290	1300
4-Nitroaniline		290	UD	290	1300
Nitrobenzene		89	UD	89	1300
2-Nitrophenol		40	UD	40	1300
4-Nitrophenol		390	UD	390	2700
N-Nitrosodi-n-propylamine		130	UD	130	1300
N-Nitrosodiphenylamine		85	UD	85	1300
Pentachlorophenol		1300	UD	1300	2700
Phenanthrene		120	JD	69	1300
Phenol		73	UD	73	1300
Pyrene		100	JD	49	1300
1,2,4-Trichlorobenzene		110	UD	110	1300
2,4,5-Trichlorophenol		40	UD	40	1300
2,4,6-Trichlorophenol		40	UD	40	1300

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	85	D	50 - 120
2-Fluorophenol	87	D	53 - 120
Nitrobenzene-d5	88	D	50 - 120
Phenol-d5	92	D	52 - 120
Terphenyl-d14	91	D	55 - 120
2,4,6-Tribromophenol	81	D	51 - 120

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN6

Lab Sample ID: 280-17784-6

Date Sampled: 07/06/2011 1000

Client Matrix: Solid

% Moisture: 2.6

Date Received: 07/08/2011 0900

**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method: 8270C

Analysis Batch: 280-76164

Instrument ID: MSS\_D

Prep Method: 3550C

Prep Batch: 280-75733

Lab File ID: D5141.D

Dilution: 4.0

Initial Weight/Volume: 30.5 g

Analysis Date: 07/11/2011 2013

Final Weight/Volume: 1000 uL

Prep Date: 07/08/2011 1607

Injection Volume: 0.5 uL

**Tentatively Identified Compounds****Number TIC's Found: 8**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	2.60	3300	N J
90-12-0	1-Methylnaphthalene	5.89	180	N J
581-42-0	Naphthalene, 2,6-dimethyl-	6.47	1300	N J
2131-42-2	Naphthalene, 1,4,6-trimethyl-	7.08	1400	N J
2245-38-7	Naphthalene, 1,6,7-trimethyl-	7.19	840	N J
1921-70-6	Pentadecane, 2,6,10,14-tetramethyl-	7.44	1500	N J
483-78-3	Naphthalene, 1,6-dimethyl-4-(1-methylethyl)-	7.48	2300	N J
490-65-3	Naphthalene, 1-methyl-7-(1-methylethyl)-	7.74	580	N J

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN7

Lab Sample ID: 280-17784-7

Date Sampled: 07/06/2011 1015

Client Matrix: Solid

% Moisture: 0.2

Date Received: 07/08/2011 0900

### 8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5142.D
Dilution:	1.0			Initial Weight/Volume:	31.6 g
Analysis Date:	07/11/2011 2031			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		9.8	U	9.8	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		78	U	78	310
4-Chloro-3-methylphenol		63	U	63	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		86	U	86	630
2,4-Dichlorophenol		9.5	U	9.5	310
Diethyl phthalate		25	U	25	310
2,4-Dimethylphenol		63	U	63	310
Dimethyl phthalate		22	U	22	310
Di-n-butyl phthalate		28	U	28	310
4,6-Dinitro-2-methylphenol		310	U	310	630
2,4-Dinitrophenol		320	U	320	790
2,4-Dinitrotoluene		63	U	63	310
2,6-Dinitrotoluene		27	U	27	310
Di-n-octyl phthalate		14	U	14	310
Fluoranthene		34	U	34	310
Fluorene		17	U	17	310
Hexachlorobenzene		28	U	28	310
Hexachlorobutadiene		9.5	U	9.5	310
Hexachlorocyclopentadiene		48	U	48	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

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN7

Lab Sample ID: 280-17784-7

Date Sampled: 07/06/2011 1015

Client Matrix: Solid

% Moisture: 0.2

Date Received: 07/08/2011 0900

**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5142.D
Dilution:	1.0			Initial Weight/Volume:	31.6 g
Analysis Date:	07/11/2011 2031			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			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		30	U	30	310
2-Nitroaniline		48	U	48	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	630
N-Nitrosodi-n-propylamine		30	U	30	310
N-Nitrosodiphenylamine		20	U	20	310
Pentachlorophenol		310	U	310	630
Phenanthrene		16	U	16	310
Phenol		17	J B	17	310
Pyrene		12	U	12	310
1,2,4-Trichlorobenzene		27	U	27	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	85		50 - 120
2-Fluorophenol	92		53 - 120
Nitrobenzene-d5	87		50 - 120
Phenol-d5	94		52 - 120
Terphenyl-d14	115		55 - 120
2,4,6-Tribromophenol	87		51 - 120

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN7

Lab Sample ID: 280-17784-7

Date Sampled: 07/06/2011 1015

Client Matrix: Solid

% Moisture: 0.2

Date Received: 07/08/2011 0900

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**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method: 8270C

Analysis Batch: 280-76164

Instrument ID: MSS\_D

Prep Method: 3550C

Prep Batch: 280-75733

Lab File ID: D5142.D

Dilution: 1.0

Initial Weight/Volume: 31.6 g

Analysis Date: 07/11/2011 2031

Final Weight/Volume: 1000 uL

Prep Date: 07/08/2011 1607

Injection Volume: 0.5 uL

**Tentatively Identified Compounds**

**Number TIC's Found: 1**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	2.60	3800	N J

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN8

Lab Sample ID: 280-17784-8

Date Sampled: 07/06/2011 1030

Client Matrix: Solid

% Moisture: 0.3

Date Received: 07/08/2011 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5143.D
Dilution:	1.0			Initial Weight/Volume:	31.1 g
Analysis Date:	07/11/2011 2050			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	320
Acenaphthylene		16	U	16	320
Anthracene		16	U	16	320
Benzo[a]anthracene		19	U	19	320
Benzo[a]pyrene		19	U	19	320
Benzo[b]fluoranthene		25	U	25	320
Benzo[ghi]perylene		15	U	15	320
Benzo[k]fluoranthene		39	U	39	320
Bis(2-chloroethoxy)methane		22	U	22	320
Bis(2-chloroethyl)ether		16	U	16	320
bis (2-chloroisopropyl) ether		22	U	22	320
Bis(2-ethylhexyl) phthalate		44	U	44	320
4-Bromophenyl phenyl ether		18	U	18	320
Butyl benzyl phthalate		42	U	42	320
Carbazole		35	U	35	320
4-Chloroaniline		79	U	79	320
4-Chloro-3-methylphenol		64	U	64	320
2-Chloronaphthalene		9.7	U	9.7	320
2-Chlorophenol		20	U	20	320
4-Chlorophenyl phenyl ether		20	U	20	320
Chrysene		26	U	26	320
Dibenz(a,h)anthracene		18	U	18	320
Dibenzofuran		19	U	19	320
1,2-Dichlorobenzene		21	U	21	320
1,3-Dichlorobenzene		12	U	12	320
1,4-Dichlorobenzene		13	U	13	320
3,3'-Dichlorobenzidine		87	U	87	640
2,4-Dichlorophenol		9.7	U	9.7	320
Diethyl phthalate		25	U	25	320
2,4-Dimethylphenol		64	U	64	320
Dimethyl phthalate		22	U	22	320
Di-n-butyl phthalate		28	U	28	320
4,6-Dinitro-2-methylphenol		320	U	320	640
2,4-Dinitrophenol		320	U	320	800
2,4-Dinitrotoluene		64	U	64	320
2,6-Dinitrotoluene		27	U	27	320
Di-n-octyl phthalate		14	U	14	320
Fluoranthene		35	U	35	320
Fluorene		17	U	17	320
Hexachlorobenzene		28	U	28	320
Hexachlorobutadiene		9.7	U	9.7	320
Hexachlorocyclopentadiene		48	U	48	320
Hexachloroethane		21	U	21	320
Indeno[1,2,3-cd]pyrene		21	U	21	320
Isophorone		16	U	16	320
2-Methylnaphthalene		18	U	18	320

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN8

Lab Sample ID: 280-17784-8

Date Sampled: 07/06/2011 1030

Client Matrix: Solid

% Moisture: 0.3

Date Received: 07/08/2011 0900

**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5143.D
Dilution:	1.0			Initial Weight/Volume:	31.1 g
Analysis Date:	07/11/2011 2050			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		13	U	13	320
3 & 4 Methylphenol		32	U	32	320
Naphthalene		30	U	30	320
2-Nitroaniline		48	U	48	320
3-Nitroaniline		71	U	71	320
4-Nitroaniline		70	U	70	320
Nitrobenzene		21	U	21	320
2-Nitrophenol		9.7	U	9.7	320
4-Nitrophenol		94	U	94	640
N-Nitrosodi-n-propylamine		30	U	30	320
N-Nitrosodiphenylamine		20	U	20	320
Pentachlorophenol		320	U	320	640
Phenanthrene		16	U	16	320
Phenol		17	U	17	320
Pyrene		12	U	12	320
1,2,4-Trichlorobenzene		27	U	27	320
2,4,5-Trichlorophenol		9.7	U	9.7	320
2,4,6-Trichlorophenol		9.7	U	9.7	320

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	91		50 - 120
2-Fluorophenol	97		53 - 120
Nitrobenzene-d5	92		50 - 120
Phenol-d5	101		52 - 120
Terphenyl-d14	125	*	55 - 120
2,4,6-Tribromophenol	91		51 - 120

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

Client Sample ID: J1JWN8

Lab Sample ID: 280-17784-8

Date Sampled: 07/06/2011 1030

Client Matrix: Solid

% Moisture: 0.3

Date Received: 07/08/2011 0900

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**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method: 8270C

Analysis Batch: 280-76164

Instrument ID: MSS\_D

Prep Method: 3550C

Prep Batch: 280-75733

Lab File ID: D5143.D

Dilution: 1.0

Initial Weight/Volume: 31.1 g

Analysis Date: 07/11/2011 2050

Final Weight/Volume: 1000 uL

Prep Date: 07/08/2011 1607

Injection Volume: 0.5 uL

**Tentatively Identified Compounds**

Number TIC's Found: 1

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	2.61	4000	N J

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN9

Lab Sample ID: 280-17784-9

Date Sampled: 07/06/2011 1045

Client Matrix: Solid

% Moisture: 0.1

Date Received: 07/08/2011 0900

## 8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5144.D
Dilution:	1.0			Initial Weight/Volume:	31.1 g
Analysis Date:	07/11/2011 2109			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		9.9	U	9.9	320
Acenaphthylene		16	U	16	320
Anthracene		16	U	16	320
Benzo[a]anthracene		19	U	19	320
Benzo[a]pyrene		19	U	19	320
Benzo[b]fluoranthene		25	U	25	320
Benzo[ghi]perylene		15	U	15	320
Benzo[k]fluoranthene		39	U	39	320
Bis(2-chloroethoxy)methane		22	U	22	320
Bis(2-chloroethyl)ether		16	U	16	320
bis (2-chloroisopropyl) ether		22	U	22	320
Bis(2-ethylhexyl) phthalate		44	U	44	320
4-Bromophenyl phenyl ether		18	U	18	320
Butyl benzyl phthalate		42	U	42	320
Carbazole		35	U	35	320
4-Chloroaniline		79	U	79	320
4-Chloro-3-methylphenol		64	U	64	320
2-Chloronaphthalene		9.7	U	9.7	320
2-Chlorophenol		20	U	20	320
4-Chlorophenyl phenyl ether		20	U	20	320
Chrysene		52	J	26	320
Dibenz(a,h)anthracene		18	U	18	320
Dibenzofuran		19	U	19	320
1,2-Dichlorobenzene		21	U	21	320
1,3-Dichlorobenzene		12	U	12	320
1,4-Dichlorobenzene		13	U	13	320
3,3'-Dichlorobenzidine		87	U	87	640
2,4-Dichlorophenol		9.7	U	9.7	320
Diethyl phthalate		25	U	25	320
2,4-Dimethylphenol		64	U	64	320
Dimethyl phthalate		22	U	22	320
Di-n-butyl phthalate		28	U	28	320
4,6-Dinitro-2-methylphenol		320	U	320	640
2,4-Dinitrophenol		320	U	320	800
2,4-Dinitrotoluene		64	U	64	320
2,6-Dinitrotoluene		27	U	27	320
Di-n-octyl phthalate		14	U	14	320
Fluoranthene		35	U	35	320
Fluorene		17	U	17	320
Hexachlorobenzene		28	U	28	320
Hexachlorobutadiene		9.7	U	9.7	320
Hexachlorocyclopentadiene		48	U	48	320
Hexachloroethane		21	U	21	320
Indeno[1,2,3-cd]pyrene		21	U	21	320
Isophorone		16	U	16	320
2-Methylnaphthalene		21	J	18	320

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN9

Lab Sample ID: 280-17784-9

Date Sampled: 07/06/2011 1045

Client Matrix: Solid

% Moisture: 0.1

Date Received: 07/08/2011 0900

**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5144.D
Dilution:	1.0			Initial Weight/Volume:	31.1 g
Analysis Date:	07/11/2011 2109			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		13	U	13	320
3 & 4 Methylphenol		32	U	32	320
Naphthalene		30	U	30	320
2-Nitroaniline		48	U	48	320
3-Nitroaniline		71	U	71	320
4-Nitroaniline		70	U	70	320
Nitrobenzene		21	U	21	320
2-Nitrophenol		9.7	U	9.7	320
4-Nitrophenol		94	U	94	640
N-Nitrosodi-n-propylamine		30	U	30	320
N-Nitrosodiphenylamine		20	U	20	320
Pentachlorophenol		320	U	320	640
Phenanthrene		26	J	16	320
Phenol		17	U	17	320
Pyrene		37	J	12	320
1,2,4-Trichlorobenzene		27	U	27	320
2,4,5-Trichlorophenol		9.7	U	9.7	320
2,4,6-Trichlorophenol		9.7	U	9.7	320

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	99		50 - 120
2-Fluorophenol	96		53 - 120
Nitrobenzene-d5	91		50 - 120
Phenol-d5	105		52 - 120
Terphenyl-d14	115		55 - 120
2,4,6-Tribromophenol	95		51 - 120

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

Client Sample ID: J1JWN9

Lab Sample ID: 280-17784-9  
Client Matrix: Solid

% Moisture: 0.1

Date Sampled: 07/06/2011 1045  
Date Received: 07/08/2011 0900

**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5144.D
Dilution:	1.0			Initial Weight/Volume:	31.1 g
Analysis Date:	07/11/2011 2109			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

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

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	2.61	3100	N J
614-68-6	Benzene, 1-isocyanato-2-methyl-	4.24	130	N J
106-49-0	p-Aminotoluene	4.31	140	N J
90-12-0	1-Methylnaphthalene	5.89	19	N J
2131-42-2	Naphthalene, 1,4,6-trimethyl-	7.08	150	N J
483-78-3	Naphthalene, 1,6-dimethyl-4-(1-methyleth	7.48	200	N J

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP0

Lab Sample ID: 280-17784-10

Date Sampled: 07/06/2011 1100

Client Matrix: Solid

% Moisture: 0.1

Date Received: 07/08/2011 0900

### 8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method: 8270C	Analysis Batch: 280-76164	Instrument ID: MSS_D
Prep Method: 3550C	Prep Batch: 280-75733	Lab File ID: D5145.D
Dilution: 1.0		Initial Weight/Volume: 31.3 g
Analysis Date: 07/11/2011 2128		Final Weight/Volume: 1000 uL
Prep Date: 07/08/2011 1607		Injection Volume: 0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		9.9	U	9.9	320
Acenaphthylene		16	U	16	320
Anthracene		16	U	16	320
Benzo[a]anthracene		19	U	19	320
Benzo[a]pyrene		19	U	19	320
Benzo[b]fluoranthene		25	U	25	320
Benzo[ghi]perylene		15	U	15	320
Benzo[k]fluoranthene		38	U	38	320
Bis(2-chloroethoxy)methane		22	U	22	320
Bis(2-chloroethyl)ether		16	U	16	320
bis (2-chloroisopropyl) ether		22	U	22	320
Bis(2-ethylhexyl) phthalate		44	U	44	320
4-Bromophenyl phenyl ether		18	U	18	320
Butyl benzyl phthalate		41	U	41	320
Carbazole		35	U	35	320
4-Chloroaniline		79	U	79	320
4-Chloro-3-methylphenol		63	U	63	320
2-Chloronaphthalene		9.6	U	9.6	320
2-Chlorophenol		20	U	20	320
4-Chlorophenyl phenyl ether		20	U	20	320
Chrysene		26	U	26	320
Dibenz(a,h)anthracene		18	U	18	320
Dibenzofuran		19	U	19	320
1,2-Dichlorobenzene		21	U	21	320
1,3-Dichlorobenzene		12	U	12	320
1,4-Dichlorobenzene		13	U	13	320
3,3'-Dichlorobenzidine		86	U	86	630
2,4-Dichlorophenol		9.6	U	9.6	320
Diethyl phthalate		25	U	25	320
2,4-Dimethylphenol		63	U	63	320
Dimethyl phthalate		22	U	22	320
Di-n-butyl phthalate		28	U	28	320
4,6-Dinitro-2-methylphenol		320	U	320	630
2,4-Dinitrophenol		320	U	320	790
2,4-Dinitrotoluene		63	U	63	320
2,6-Dinitrotoluene		27	U	27	320
Di-n-octyl phthalate		14	U	14	320
Fluoranthene		35	U	35	320
Fluorene		17	U	17	320
Hexachlorobenzene		28	U	28	320
Hexachlorobutadiene		9.6	U	9.6	320
Hexachlorocyclopentadiene		48	U	48	320
Hexachloroethane		20	U	20	320
Indeno[1,2,3-cd]pyrene		21	U	21	320
Isophorone		16	U	16	320
2-Methylnaphthalene		18	U	18	320

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP0

Lab Sample ID: 280-17784-10

Date Sampled: 07/06/2011 1100

Client Matrix: Solid

% Moisture: 0.1

Date Received: 07/08/2011 0900

**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5145.D
Dilution:	1.0			Initial Weight/Volume:	31.3 g
Analysis Date:	07/11/2011 2128			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		12	U	12	320
3 & 4 Methylphenol		32	U	32	320
Naphthalene		30	U	30	320
2-Nitroaniline		48	U	48	320
3-Nitroaniline		70	U	70	320
4-Nitroaniline		70	U	70	320
Nitrobenzene		21	U	21	320
2-Nitrophenol		9.6	U	9.6	320
4-Nitrophenol		93	U	93	630
N-Nitrosodi-n-propylamine		30	U	30	320
N-Nitrosodiphenylamine		20	U	20	320
Pentachlorophenol		320	U	320	630
Phenanthrene		16	U	16	320
Phenol		17	U	17	320
Pyrene		12	U	12	320
1,2,4-Trichlorobenzene		27	U	27	320
2,4,5-Trichlorophenol		9.6	U	9.6	320
2,4,6-Trichlorophenol		9.6	U	9.6	320

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	82		50 - 120
2-Fluorophenol	91		53 - 120
Nitrobenzene-d5	86		50 - 120
Phenol-d5	93		52 - 120
Terphenyl-d14	107		55 - 120
2,4,6-Tribromophenol	84		51 - 120

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

**Client Sample ID:** J1JWP0

Lab Sample ID: 280-17784-10

Date Sampled: 07/06/2011 1100

Client Matrix: Solid

% Moisture: 0.1

Date Received: 07/08/2011 0900

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**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method: 8270C

Analysis Batch: 280-76164

Instrument ID: MSS\_D

Prep Method: 3550C

Prep Batch: 280-75733

Lab File ID: D5145.D

Dilution: 1.0

Initial Weight/Volume: 31.3 g

Analysis Date: 07/11/2011 2128

Final Weight/Volume: 1000 uL

Prep Date: 07/08/2011 1607

Injection Volume: 0.5 uL

**Tentatively Identified Compounds**

**Number TIC's Found: 1**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	2.60	3300	N J

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP1

Lab Sample ID: 280-17784-11

Date Sampled: 07/06/2011 1115

Client Matrix: Solid

% Moisture: 0.0

Date Received: 07/08/2011 0900

### 8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5146.D
Dilution:	1.0			Initial Weight/Volume:	32.7 g
Analysis Date:	07/11/2011 2147			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		9.4	U	9.4	300
Acenaphthylene		16	U	16	300
Anthracene		16	U	16	300
Benzo[a]anthracene		18	U	18	300
Benzo[a]pyrene		18	U	18	300
Benzo[b]fluoranthene		24	U	24	300
Benzo[ghi]perylene		15	U	15	300
Benzo[k]fluoranthene		37	U	37	300
Bis(2-chloroethoxy)methane		21	U	21	300
Bis(2-chloroethyl)ether		15	U	15	300
bis (2-chloroisopropyl) ether		21	U	21	300
Bis(2-ethylhexyl) phthalate		42	U	42	300
4-Bromophenyl phenyl ether		17	U	17	300
Butyl benzyl phthalate		39	U	39	300
Carbazole		33	U	33	300
4-Chloroaniline		75	U	75	300
4-Chloro-3-methylphenol		61	U	61	300
2-Chloronaphthalene		9.2	U	9.2	300
2-Chlorophenol		19	U	19	300
4-Chlorophenyl phenyl ether		19	U	19	300
Chrysene		25	U	25	300
Dibenz(a,h)anthracene		17	U	17	300
Dibenzofuran		18	U	18	300
1,2-Dichlorobenzene		20	U	20	300
1,3-Dichlorobenzene		11	U	11	300
1,4-Dichlorobenzene		12	U	12	300
3,3'-Dichlorobenzidine		83	U	83	610
2,4-Dichlorophenol		9.2	U	9.2	300
Diethyl phthalate		24	U	24	300
2,4-Dimethylphenol		61	U	61	300
Dimethyl phthalate		21	U	21	300
Di-n-butyl phthalate		27	U	27	300
4,6-Dinitro-2-methylphenol		300	U	300	610
2,4-Dinitrophenol		310	U	310	760
2,4-Dinitrotoluene		61	U	61	300
2,6-Dinitrotoluene		26	U	26	300
Di-n-octyl phthalate		13	U	13	300
Fluoranthene		33	U	33	300
Fluorene		17	U	17	300
Hexachlorobenzene		27	U	27	300
Hexachlorobutadiene		9.2	U	9.2	300
Hexachlorocyclopentadiene		46	U	46	300
Hexachloroethane		20	U	20	300
Indeno[1,2,3-cd]pyrene		20	U	20	300
Isophorone		16	U	16	300
2-Methylnaphthalene		17	U	17	300

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP1

Lab Sample ID: 280-17784-11

Date Sampled: 07/06/2011 1115

Client Matrix: Solid

% Moisture: 0.0

Date Received: 07/08/2011 0900

**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5146.D
Dilution:	1.0			Initial Weight/Volume:	32.7 g
Analysis Date:	07/11/2011 2147			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		12	U	12	300
3 & 4 Methylphenol		30	U	30	300
Naphthalene		28	U	28	300
2-Nitroaniline		46	U	46	300
3-Nitroaniline		67	U	67	300
4-Nitroaniline		67	U	67	300
Nitrobenzene		20	U	20	300
2-Nitrophenol		9.2	U	9.2	300
4-Nitrophenol		89	U	89	610
N-Nitrosodi-n-propylamine		28	U	28	300
N-Nitrosodiphenylamine		19	U	19	300
Pentachlorophenol		300	U	300	610
Phenanthrene		16	U	16	300
Phenol		17	U	17	300
Pyrene		11	U	11	300
1,2,4-Trichlorobenzene		26	U	26	300
2,4,5-Trichlorophenol		9.2	U	9.2	300
2,4,6-Trichlorophenol		9.2	U	9.2	300

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	76		50 - 120
2-Fluorophenol	81		53 - 120
Nitrobenzene-d5	76		50 - 120
Phenol-d5	84		52 - 120
Terphenyl-d14	112		55 - 120
2,4,6-Tribromophenol	82		51 - 120

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP1

Lab Sample ID: 280-17784-11

Date Sampled: 07/06/2011 1115

Client Matrix: Solid

% Moisture: 0.0

Date Received: 07/08/2011 0900

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**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method: 8270C

Analysis Batch: 280-76164

Instrument ID: MSS\_D

Prep Method: 3550C

Prep Batch: 280-75733

Lab File ID: D5146.D

Dilution: 1.0

Initial Weight/Volume: 32.7 g

Analysis Date: 07/11/2011 2147

Final Weight/Volume: 1000 uL

Prep Date: 07/08/2011 1607

Injection Volume: 0.5 uL

**Tentatively Identified Compounds**

Number TIC's Found: 1

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	2.61	3000	N J

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP2

Lab Sample ID: 280-17784-12

Date Sampled: 07/06/2011 1130

Client Matrix: Solid

% Moisture: 0.0

Date Received: 07/08/2011 0900

### 8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method: 8270C	Analysis Batch: 280-76164	Instrument ID: MSS_D	
Prep Method: 3550C	Prep Batch: 280-75733	Lab File ID: D5147.D	
Dilution: 1.0		Initial Weight/Volume: 31.5 g	
Analysis Date: 07/11/2011 2205		Final Weight/Volume: 1000 uL	
Prep Date: 07/08/2011 1607		Injection Volume: 0.5 uL	

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		9.8	U	9.8	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		78	U	78	310
4-Chloro-3-methylphenol		63	U	63	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		86	U	86	630
2,4-Dichlorophenol		9.5	U	9.5	310
Diethyl phthalate		25	U	25	310
2,4-Dimethylphenol		63	U	63	310
Dimethyl phthalate		22	U	22	310
Di-n-butyl phthalate		28	U	28	310
4,6-Dinitro-2-methylphenol		310	U	310	630
2,4-Dinitrophenol		320	U	320	790
2,4-Dinitrotoluene		63	U	63	310
2,6-Dinitrotoluene		27	U	27	310
Di-n-octyl phthalate		14	U	14	310
Fluoranthene		34	U	34	310
Fluorene		17	U	17	310
Hexachlorobenzene		28	U	28	310
Hexachlorobutadiene		9.5	U	9.5	310
Hexachlorocyclopentadiene		48	U	48	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

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP2

Lab Sample ID: 280-17784-12

Date Sampled: 07/06/2011 1130

Client Matrix: Solid

% Moisture: 0.0

Date Received: 07/08/2011 0900

### 8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5147.D
Dilution:	1.0			Initial Weight/Volume:	31.5 g
Analysis Date:	07/11/2011 2205			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			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		30	U	30	310
2-Nitroaniline		48	U	48	310
3-Nitroaniline		70	U	70	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	630
N-Nitrosodi-n-propylamine		30	U	30	310
N-Nitrosodiphenylamine		20	U	20	310
Pentachlorophenol		310	U	310	630
Phenanthrene		16	U	16	310
Phenol		17	U	17	310
Pyrene		12	U	12	310
1,2,4-Trichlorobenzene		27	U	27	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	95		50 - 120
2-Fluorophenol	100		53 - 120
Nitrobenzene-d5	95		50 - 120
Phenol-d5	102		52 - 120
Terphenyl-d14	127	*	55 - 120
2,4,6-Tribromophenol	94		51 - 120

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

Client Sample ID: J1JWP2

Lab Sample ID: 280-17784-12  
Client Matrix: Solid

% Moisture: 0.0

Date Sampled: 07/06/2011 1130  
Date Received: 07/08/2011 0900

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**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5147.D
Dilution:	1.0			Initial Weight/Volume:	31.5 g
Analysis Date:	07/11/2011 2205			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

**Tentatively Identified Compounds**

Number TIC's Found: 1

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	2.60	4100	N J

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP3

Lab Sample ID: 280-17784-13FD

Date Sampled: 07/06/2011 0900

Client Matrix: Solid

% Moisture: 0.3

Date Received: 07/08/2011 0900

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5127.D
Dilution:	1.0			Initial Weight/Volume:	31.5 g
Analysis Date:	07/11/2011 1549			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		9.8	U	9.8	320
Acenaphthylene		16	U	16	320
Anthracene		16	U	16	320
Benzo[a]anthracene		19	U	19	320
Benzo[a]pyrene		19	U	19	320
Benzo[b]fluoranthene		25	U	25	320
Benzo[ghi]perylene		15	U	15	320
Benzo[k]fluoranthene		38	U	38	320
Bis(2-chloroethoxy)methane		22	U	22	320
Bis(2-chloroethyl)ether		16	U	16	320
bis (2-chloroisopropyl) ether		22	U	22	320
Bis(2-ethylhexyl) phthalate		44	U	44	320
4-Bromophenyl phenyl ether		18	U	18	320
Butyl benzyl phthalate		41	U	41	320
Carbazole		34	U	34	320
4-Chloroaniline		78	U	78	320
4-Chloro-3-methylphenol		63	U	63	320
2-Chloronaphthalene		9.6	U	9.6	320
2-Chlorophenol		20	U	20	320
4-Chlorophenyl phenyl ether		20	U	20	320
Chrysene		26	U	26	320
Dibenz(a,h)anthracene		18	U	18	320
Dibenzofuran		19	U	19	320
1,2-Dichlorobenzene		21	U	21	320
1,3-Dichlorobenzene		11	U	11	320
1,4-Dichlorobenzene		13	U	13	320
3,3'-Dichlorobenzidine		86	U	86	630
2,4-Dichlorophenol		9.6	U	9.6	320
Diethyl phthalate		25	U	25	320
2,4-Dimethylphenol		63	U	63	320
Dimethyl phthalate		22	U	22	320
Di-n-butyl phthalate		28	U	28	320
4,6-Dinitro-2-methylphenol		320	U	320	630
2,4-Dinitrophenol		320	U	320	790
2,4-Dinitrotoluene		63	U	63	320
2,6-Dinitrotoluene		27	U	27	320
Di-n-octyl phthalate		14	U	14	320
Fluoranthene		34	U	34	320
Fluorene		17	U	17	320
Hexachlorobenzene		28	U	28	320
Hexachlorobutadiene		9.6	U	9.6	320
Hexachlorocyclopentadiene		48	U	48	320
Hexachloroethane		20	U	20	320
Indeno[1,2,3-cd]pyrene		21	U	21	320
Isophorone		16	U	16	320
2-Methylnaphthalene		18	U	18	320

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP3

Lab Sample ID: 280-17784-13FD

Date Sampled: 07/06/2011 0900

Client Matrix: Solid

% Moisture: 0.3

Date Received: 07/08/2011 0900

**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method:	8270C	Analysis Batch:	280-76164	Instrument ID:	MSS_D
Prep Method:	3550C	Prep Batch:	280-75733	Lab File ID:	D5127.D
Dilution:	1.0			Initial Weight/Volume:	31.5 g
Analysis Date:	07/11/2011 1549			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 1607			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		12	U	12	320
3 & 4 Methylphenol		32	U	32	320
Naphthalene		30	U	30	320
2-Nitroaniline		48	U	48	320
3-Nitroaniline		70	U	70	320
4-Nitroaniline		69	U	69	320
Nitrobenzene		21	U	21	320
2-Nitrophenol		9.6	U	9.6	320
4-Nitrophenol		93	U	93	630
N-Nitrosodi-n-propylamine		30	U	30	320
N-Nitrosodiphenylamine		20	U	20	320
Pentachlorophenol		320	U	320	630
Phenanthrene		16	U	16	320
Phenol		17	U	17	320
Pyrene		12	U	12	320
1,2,4-Trichlorobenzene		27	U	27	320
2,4,5-Trichlorophenol		9.6	U	9.6	320
2,4,6-Trichlorophenol		9.6	U	9.6	320

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	87		50 - 120
2-Fluorophenol	93		53 - 120
Nitrobenzene-d5	86		50 - 120
Phenol-d5	94		52 - 120
Terphenyl-d14	115		55 - 120
2,4,6-Tribromophenol	89		51 - 120

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

Client Sample ID: J1JWP3

Lab Sample ID: 280-17784-13FD  
Client Matrix: Solid

% Moisture: 0.3

Date Sampled: 07/06/2011 0900  
Date Received: 07/08/2011 0900

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**8270C Semivolatile Organic Compounds (GC/MS)**

Analysis Method: 8270C  
Prep Method: 3550C  
Dilution: 1.0  
Analysis Date: 07/11/2011 1549  
Prep Date: 07/08/2011 1607

Analysis Batch: 280-76164  
Prep Batch: 280-75733

Instrument ID: MSS\_D  
Lab File ID: D5127.D  
Initial Weight/Volume: 31.5 g  
Final Weight/Volume: 1000 uL  
Injection Volume: 0.5 uL

**Tentatively Identified Compounds**

Number TIC's Found: 1

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	2.60	3900	N J

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

Client Sample ID: J1JWN1

Lab Sample ID: 280-17784-1

Date Sampled: 07/06/2011 0820

Client Matrix: Solid

% Moisture: 0.4

Date Received: 07/08/2011 0900

**8081A Organochlorine Pesticides (GC)**

Analysis Method:	8081A	Analysis Batch:	280-76609	Instrument ID:	GCS_P1
Prep Method:	3550C	Prep Batch:	280-75971	Initial Weight/Volume:	30.7 g
Dilution:	1.0			Final Weight/Volume:	10000 uL
Analysis Date:	07/14/2011 0307			Injection Volume:	1 uL
Prep Date:	07/11/2011 1340			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		0.23	U	0.23	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		0.65	U	0.65	1.6
delta-BHC		0.39	U	0.39	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		0.44	U	0.44	3.2
alpha-Chlordane		0.32	U	0.32	1.7
Dieldrin		0.21	U	0.21	1.7
Toxaphene		15	U	15	160
Surrogate		%Rec	Qualifier	Acceptance Limits	
Tetrachloro-m-xylene		90		59 - 115	
Decachlorobiphenyl		97		63 - 124	

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN2

Lab Sample ID: 280-17784-2

Date Sampled: 07/06/2011 0840

Client Matrix: Solid

% Moisture: 0.4

Date Received: 07/08/2011 0900

**8081A Organochlorine Pesticides (GC)**

Analysis Method:	8081A	Analysis Batch:	280-76609	Instrument ID:	GCS_P1
Prep Method:	3550C	Prep Batch:	280-75971	Initial Weight/Volume:	30.6 g
Dilution:	10			Final Weight/Volume:	10000 uL
Analysis Date:	07/14/2011 0128			Injection Volume:	1 uL
Prep Date:	07/11/2011 1340			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		5.4	UD	5.4	17
4,4'-DDE		2.3	UD	2.3	17
4,4'-DDT		5.8	UD	5.8	17
Aldrin		2.5	UD	2.5	16
alpha-BHC		2.1	UD	2.1	16
beta-BHC		6.5	UD	6.5	16
delta-BHC		3.9	UD	3.9	16
gamma-BHC (Lindane)		4.6	UD	4.6	16
Heptachlor		2.1	UD	2.1	16
Heptachlor epoxide		4.2	UD	4.2	16
Endosulfan I		1.7	UD	1.7	16
Endosulfan II		2.8	UD	2.8	17
Endosulfan sulfate		2.7	UD	2.7	17
Endrin		3.0	UD	3.0	17
Endrin aldehyde		1.7	UD	1.7	17
Endrin ketone		4.8	UD	4.8	17
gamma-Chlordane		2.6	UD	2.6	17
Methoxychlor		4.4	UD	4.4	32
alpha-Chlordane		3.2	UD	3.2	17
Dieldrin		2.1	UD	2.1	17
Toxaphene		160	UD	160	1600
Surrogate		%Rec	Qualifier	Acceptance Limits	
Tetrachloro-m-xylene		84	D	59 - 115	
Decachlorobiphenyl		115	D	63 - 124	

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN3

Lab Sample ID: 280-17784-3

Date Sampled: 07/06/2011 0900

Client Matrix: Solid

% Moisture: 0.8

Date Received: 07/08/2011 0900

**8081A Organochlorine Pesticides (GC)**

Analysis Method:	8081A	Analysis Batch:	280-76609	Instrument ID:	GCS_P1
Prep Method:	3550C	Prep Batch:	280-75971	Initial Weight/Volume:	30.4 g
Dilution:	1.0			Final Weight/Volume:	10000 uL
Analysis Date:	07/14/2011 0324			Injection Volume:	1 uL
Prep Date:	07/11/2011 1340			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		2.4	X	0.59	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		0.18	U	0.18	1.6
Endosulfan II		0.29	U	0.29	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		0.49	U	0.49	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
<b>Surrogate</b>		<b>%Rec</b>	<b>Qualifier</b>	<b>Acceptance Limits</b>	
Tetrachloro-m-xylene		90		59 - 115	
Decachlorobiphenyl		96		63 - 124	

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN4

Lab Sample ID: 280-17784-4

Date Sampled: 07/06/2011 0930

Client Matrix: Solid

% Moisture: 0.6

Date Received: 07/08/2011 0900

**8081A Organochlorine Pesticides (GC)**

Analysis Method:	8081A	Analysis Batch:	280-76609	Instrument ID:	GCS_P1
Prep Method:	3550C	Prep Batch:	280-75971	Initial Weight/Volume:	30.7 g
Dilution:	1.0			Final Weight/Volume:	10000 uL
Analysis Date:	07/14/2011 0340			Injection Volume:	1 uL
Prep Date:	07/11/2011 1340			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		0.23	U	0.23	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		0.65	U	0.65	1.6
delta-BHC		0.39	U	0.39	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		0.44	U	0.44	3.2
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		86		59 - 115	
Decachlorobiphenyl		93		63 - 124	

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN5

Lab Sample ID: 280-17784-5

Date Sampled: 07/06/2011 0945

Client Matrix: Solid

% Moisture: 0.8

Date Received: 07/08/2011 0900

**8081A Organochlorine Pesticides (GC)**

Analysis Method:	8081A	Analysis Batch:	280-76609	Instrument ID:	GCS_P1
Prep Method:	3550C	Prep Batch:	280-75971	Initial Weight/Volume:	30.2 g
Dilution:	1.0			Final Weight/Volume:	10000 uL
Analysis Date:	07/13/2011 2243			Injection Volume:	1 uL
Prep Date:	07/11/2011 1340			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		0.21	U	0.21	1.7
beta-BHC		0.67	U	0.67	1.7
delta-BHC		0.40	U	0.40	1.7
gamma-BHC (Lindane)		0.46	U	0.46	1.7
Heptachlor		0.21	U	0.21	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		0.32	U	0.32	1.7
Dieldrin		0.21	U	0.21	1.7
Toxaphene		16	U	16	170
Surrogate		%Rec	Qualifier	Acceptance Limits	
Tetrachloro-m-xylene		86		59 - 115	
Decachlorobiphenyl		96		63 - 124	

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN6

Lab Sample ID: 280-17784-6

Date Sampled: 07/06/2011 1000

Client Matrix: Solid

% Moisture: 2.6

Date Received: 07/08/2011 0900

**8081A Organochlorine Pesticides (GC)**

Analysis Method:	8081A	Analysis Batch:	280-76609	Instrument ID:	GCS_P1
Prep Method:	3550C	Prep Batch:	280-75971	Initial Weight/Volume:	31.0 g
Dilution:	10			Final Weight/Volume:	10000 uL
Analysis Date:	07/14/2011 0145			Injection Volume:	1 uL
Prep Date:	07/11/2011 1340			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		5.4	UD	5.4	17
4,4'-DDE		2.4	UD	2.4	17
4,4'-DDT		5.9	UD	5.9	17
Aldrin		2.5	UD	2.5	16
alpha-BHC		2.1	UD	2.1	16
beta-BHC		6.6	UD	6.6	16
delta-BHC		4.0	UD	4.0	16
gamma-BHC (Lindane)		4.6	UD	4.6	16
Heptachlor		2.1	UD	2.1	16
Heptachlor epoxide		4.2	UD	4.2	16
Endosulfan I		1.7	UD	1.7	16
Endosulfan II		2.9	UD	2.9	17
Endosulfan sulfate		4.2	JXD	2.7	17
Endrin		3.0	UD	3.0	17
Endrin aldehyde		1.7	UD	1.7	17
Endrin ketone		4.9	UD	4.9	17
gamma-Chlordane		2.6	UD	2.6	17
Methoxychlor		13	JXD	4.5	33
alpha-Chlordane		3.2	UD	3.2	17
Dieldrin		2.1	UD	2.1	17
Toxaphene		160	UD	160	1600

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	122	D	59 - 115
Decachlorobiphenyl	100	D	63 - 124

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN7

Lab Sample ID: 280-17784-7

Date Sampled: 07/06/2011 1015

Client Matrix: Solid

% Moisture: 0.2

Date Received: 07/08/2011 0900

**8081A Organochlorine Pesticides (GC)**

Analysis Method:	8081A	Analysis Batch:	280-76609	Instrument ID:	GCS_P1
Prep Method:	3550C	Prep Batch:	280-75971	Initial Weight/Volume:	30.1 g
Dilution:	1.0			Final Weight/Volume:	10000 uL
Analysis Date:	07/13/2011 2259			Injection Volume:	1 uL
Prep Date:	07/11/2011 1340			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	1.6
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		0.43	U	0.43	1.6
Endosulfan I		0.18	U	0.18	1.6
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		0.32	U	0.32	1.7
Dieldrin		0.21	U	0.21	1.7
Toxaphene		16	U	16	160
<hr/>					
Surrogate		%Rec	Qualifier	Acceptance Limits	
Tetrachloro-m-xylene		87		59 - 115	
Decachlorobiphenyl		99		63 - 124	

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN8

Lab Sample ID: 280-17784-8

Date Sampled: 07/06/2011 1030

Client Matrix: Solid

% Moisture: 0.3

Date Received: 07/08/2011 0900

**8081A Organochlorine Pesticides (GC)**

Analysis Method:	8081A	Analysis Batch:	280-76609	Instrument ID:	GCS_P1
Prep Method:	3550C	Prep Batch:	280-75971	Initial Weight/Volume:	30.0 g
Dilution:	1.0			Final Weight/Volume:	10000 uL
Analysis Date:	07/13/2011 2316			Injection Volume:	1 uL
Prep Date:	07/11/2011 1340			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		0.21	U	0.21	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		0.21	U	0.21	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		0.32	U	0.32	1.7
Dieldrin		0.21	U	0.21	1.7
Toxaphene		16	U	16	170

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	87		59 - 115
Decachlorobiphenyl	97		63 - 124

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN9

Lab Sample ID: 280-17784-9

Date Sampled: 07/06/2011 1045

Client Matrix: Solid

% Moisture: 0.1

Date Received: 07/08/2011 0900

**8081A Organochlorine Pesticides (GC)**

Analysis Method:	8081A	Analysis Batch:	280-76609	Instrument ID:	GCS_P1
Prep Method:	3550C	Prep Batch:	280-75971	Initial Weight/Volume:	30.2 g
Dilution:	10			Final Weight/Volume:	10000 uL
Analysis Date:	07/14/2011 0201			Injection Volume:	1 uL
Prep Date:	07/11/2011 1340			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		5.4	UD	5.4	17
4,4'-DDE		2.4	UD	2.4	17
4,4'-DDT		5.9	UD	5.9	17
Aldrin		2.5	UD	2.5	16
alpha-BHC		2.1	UD	2.1	16
beta-BHC		6.6	UD	6.6	16
delta-BHC		4.0	UD	4.0	16
gamma-BHC (Lindane)		4.6	UD	4.6	16
Heptachlor		2.1	UD	2.1	16
Heptachlor epoxide		4.2	UD	4.2	16
Endosulfan I		1.8	UD	1.8	16
Endosulfan II		2.9	UD	2.9	17
Endosulfan sulfate		2.7	UD	2.7	17
Endrin		3.0	UD	3.0	17
Endrin aldehyde		1.7	UD	1.7	17
Endrin ketone		4.9	UD	4.9	17
gamma-Chlordane		2.6	UD	2.6	17
Methoxychlor		4.5	UD	4.5	33
alpha-Chlordane		3.2	UD	3.2	17
Dieldrin		2.3	JD	2.1	17
Toxaphene		160	UD	160	1600

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	90	D	59 - 115
Decachlorobiphenyl	64	D	63 - 124

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP0

Lab Sample ID: 280-17784-10

Date Sampled: 07/06/2011 1100

Client Matrix: Solid

% Moisture: 0.1

Date Received: 07/08/2011 0900

### 8081A Organochlorine Pesticides (GC)

Analysis Method: 8081A	Analysis Batch: 280-76609	Instrument ID: GCS_P1	
Prep Method: 3550C	Prep Batch: 280-75971	Initial Weight/Volume: 30.6 g	
Dilution: 1.0		Final Weight/Volume: 10000 uL	
Analysis Date: 07/13/2011 2332		Injection Volume: 1 uL	
Prep Date: 07/11/2011 1340		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		0.23	U	0.23	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		0.65	U	0.65	1.6
delta-BHC		0.39	U	0.39	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		0.44	U	0.44	3.2
alpha-Chlordane		0.32	U	0.32	1.7
Dieldrin		0.21	U	0.21	1.7
Toxaphene		15	U	15	160
Surrogate		%Rec	Qualifier	Acceptance Limits	
Tetrachloro-m-xylene		92		59 - 115	
Decachlorobiphenyl		98		63 - 124	

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP1

Lab Sample ID: 280-17784-11

Date Sampled: 07/06/2011 1115

Client Matrix: Solid

% Moisture: 0.0

Date Received: 07/08/2011 0900

### 8081A Organochlorine Pesticides (GC)

Analysis Method:	8081A	Analysis Batch:	280-76609	Instrument ID:	GCS_P1
Prep Method:	3550C	Prep Batch:	280-75971	Initial Weight/Volume:	30.8 g
Dilution:	1.0			Final Weight/Volume:	10000 uL
Analysis Date:	07/13/2011 2349			Injection Volume:	1 uL
Prep Date:	07/11/2011 1340			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		0.53	U	0.53	1.7
4,4'-DDE		0.23	U	0.23	1.7
4,4'-DDT		0.57	U	0.57	1.7
Aldrin		0.24	U	0.24	1.6
alpha-BHC		0.21	U	0.21	1.6
beta-BHC		0.65	U	0.65	1.6
delta-BHC		0.39	U	0.39	1.6
gamma-BHC (Lindane)		0.45	U	0.45	1.6
Heptachlor		0.21	U	0.21	1.6
Heptachlor epoxide		0.41	U	0.41	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		0.44	U	0.44	3.2
alpha-Chlordane		0.31	U	0.31	1.7
Dieldrin		0.20	U	0.20	1.7
Toxaphene		15	U	15	160
Surrogate		%Rec	Qualifier	Acceptance Limits	
Tetrachloro-m-xylene		90		59 - 115	
Decachlorobiphenyl		99		63 - 124	

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP2

Lab Sample ID: 280-17784-12

Date Sampled: 07/06/2011 1130

Client Matrix: Solid

% Moisture: 0.0

Date Received: 07/08/2011 0900

### 8081A Organochlorine Pesticides (GC)

Analysis Method: 8081A	Analysis Batch: 280-76609	Instrument ID: GCS_P1
Prep Method: 3550C	Prep Batch: 280-75971	Initial Weight/Volume: 30.6 g
Dilution: 1.0		Final Weight/Volume: 10000 uL
Analysis Date: 07/14/2011 0111		Injection Volume: 1 uL
Prep Date: 07/11/2011 1340		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		0.23	U	0.23	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		0.65	U	0.65	1.6
delta-BHC		0.39	U	0.39	1.6
gamma-BHC (Lindane)		0.45	U	0.45	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		0.44	U	0.44	3.2
alpha-Chlordane		0.32	U	0.32	1.7
Dieldrin		0.21	U	0.21	1.7
Toxaphene		15	U	15	160

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	91		59 - 115
Decachlorobiphenyl	100		63 - 124

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: **J1JWP3**

Lab Sample ID: 280-17784-13FD

Date Sampled: 07/06/2011 0900

Client Matrix: Solid

% Moisture: 0.3

Date Received: 07/08/2011 0900

### 8081A Organochlorine Pesticides (GC)

Analysis Method:	8081A	Analysis Batch:	280-76609	Instrument ID:	GCS_P1
Prep Method:	3550C	Prep Batch:	280-75971	Initial Weight/Volume:	31.2 g
Dilution:	1.0			Final Weight/Volume:	10000 uL
Analysis Date:	07/14/2011 0430			Injection Volume:	1 uL
Prep Date:	07/11/2011 1340			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		0.53	U	0.53	1.6
4,4'-DDE		0.23	U	0.23	1.6
4,4'-DDT		0.74	JX	0.57	1.6
Aldrin		0.24	U	0.24	1.6
alpha-BHC		0.21	U	0.21	1.6
beta-BHC		0.64	U	0.64	1.6
delta-BHC		0.39	U	0.39	1.6
gamma-BHC (Lindane)		0.45	U	0.45	1.6
Heptachlor		0.21	U	0.21	1.6
Heptachlor epoxide		0.41	U	0.41	1.6
Endosulfan I		0.17	U	0.17	1.6
Endosulfan II		0.28	U	0.28	1.6
Endosulfan sulfate		0.27	U	0.27	1.6
Endrin		0.30	U	0.30	1.6
Endrin aldehyde		0.16	U	0.16	1.6
Endrin ketone		0.47	U	0.47	1.6
gamma-Chlordane		0.26	U	0.26	1.6
Methoxychlor		0.43	U	0.43	3.2
alpha-Chlordane		0.31	U	0.31	1.6
Dieldrin		0.20	U	0.20	1.6
Toxaphene		15	U	15	160

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	88		59 - 115
Decachlorobiphenyl	92		63 - 124

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN1

Lab Sample ID: 280-17784-1

Date Sampled: 07/06/2011 0820

Client Matrix: Solid

% Moisture: 0.4

Date Received: 07/08/2011 0900

**8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography**

Analysis Method:	8082	Analysis Batch:	280-76713	Instrument ID:	GCS_W
Prep Method:	3550C	Prep Batch:	280-75746	Initial Weight/Volume:	31.5 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	07/14/2011 1404			Injection Volume:	1 uL
Prep Date:	07/08/2011 1724			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.6	U	2.6	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		2.8	J	2.5	9.6

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	88		59 - 130
Tetrachloro-m-xylene	92		53 - 128

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN2

Lab Sample ID: 280-17784-2

Date Sampled: 07/06/2011 0840

Client Matrix: Solid

% Moisture: 0.4

Date Received: 07/08/2011 0900

**8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography**

Analysis Method:	8082	Analysis Batch:	280-76713	Instrument ID:	GCS_W
Prep Method:	3550C	Prep Batch:	280-75746	Initial Weight/Volume:	30.2 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	07/14/2011 1435			Injection Volume:	1 uL
Prep Date:	07/08/2011 1724			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	16
Aroclor 1232		2.0	U	2.0	10
Aroclor 1242		4.6	U	4.6	10
Aroclor 1248		4.6	U	4.6	10
Aroclor 1254		2.6	U	2.6	10
Aroclor 1260		4.0	JP	2.6	10
Surrogate		%Rec	Qualifier	Acceptance Limits	
Decachlorobiphenyl		75		59 - 130	
Tetrachloro-m-xylene		78		53 - 128	

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN3

Lab Sample ID: 280-17784-3

Date Sampled: 07/06/2011 0900

Client Matrix: Solid

% Moisture: 0.8

Date Received: 07/08/2011 0900

**8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography**

Analysis Method:	8082	Analysis Batch:	280-76713	Instrument ID:	GCS_W
Prep Method:	3550C	Prep Batch:	280-75746	Initial Weight/Volume:	30.8 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	07/14/2011 1507			Injection Volume:	1 uL
Prep Date:	07/08/2011 1724			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	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		2.6	U	2.6	9.8
Aroclor 1260		93		2.6	9.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	74		59 - 130
Tetrachloro-m-xylene	94		53 - 128

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN4

Lab Sample ID: 280-17784-4

Date Sampled: 07/06/2011 0930

Client Matrix: Solid

% Moisture: 0.6

Date Received: 07/08/2011 0900

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-76713	Instrument ID:	GCS_W
Prep Method:	3550C	Prep Batch:	280-75746	Initial Weight/Volume:	30.9 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	07/14/2011 1539			Injection Volume:	1 uL
Prep Date:	07/08/2011 1724			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.7	U	2.7	9.8
Aroclor 1221		7.8	U	7.8	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	Qualifier	Acceptance Limits	
Decachlorobiphenyl		84		59 - 130	
Tetrachloro-m-xylene		87		53 - 128	

### Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN5

Lab Sample ID: 280-17784-5

Date Sampled: 07/06/2011 0945

Client Matrix: Solid

% Moisture: 0.8

Date Received: 07/08/2011 0900

#### 8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-76713	Instrument ID:	GCS_W
Prep Method:	3550C	Prep Batch:	280-75746	Initial Weight/Volume:	31.0 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	07/14/2011 1611			Injection Volume:	1 uL
Prep Date:	07/08/2011 1724			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.7	U	2.7	9.8
Aroclor 1221		7.8	U	7.8	16
Aroclor 1232		2.0	U	2.0	9.8
Aroclor 1242		4.5	U	4.5	9.8
Aroclor 1248		4.5	U	4.5	9.8
Aroclor 1254		2.5	U	2.5	9.8
Aroclor 1260		2.5	U	2.5	9.8
Surrogate		%Rec	Qualifier	Acceptance Limits	
Decachlorobiphenyl		89		59 - 130	
Tetrachloro-m-xylene		88		53 - 128	

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN6

Lab Sample ID: 280-17784-6

Date Sampled: 07/06/2011 1000

Client Matrix: Solid

% Moisture: 2.6

Date Received: 07/08/2011 0900

**8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography**

Analysis Method:	8082	Analysis Batch:	280-77002	Instrument ID:	GCS_W
Prep Method:	3550C	Prep Batch:	280-75746	Initial Weight/Volume:	30.7 g
Dilution:	40			Final Weight/Volume:	5000 uL
Analysis Date:	07/16/2011 1605			Injection Volume:	1 uL
Prep Date:	07/08/2011 1724			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		110	U D	110	400
Aroclor 1221		320	U D	320	660
Aroclor 1232		80	U D	80	400
Aroclor 1242		190	U D	190	400
Aroclor 1248		190	U D	190	400
Aroclor 1254		100	U D	100	400
Aroclor 1260		3400	D	100	400
Surrogate		%Rec	Qualifier	Acceptance Limits	
Decachlorobiphenyl		137	D	59 - 130	
Tetrachloro-m-xylene		0	D	53 - 128	

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN7

Lab Sample ID: 280-17784-7

Date Sampled: 07/06/2011 1015

Client Matrix: Solid

% Moisture: 0.2

Date Received: 07/08/2011 0900

**8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography**

Analysis Method:	8082	Analysis Batch:	280-76713	Instrument ID:	GCS_W
Prep Method:	3550C	Prep Batch:	280-75746	Initial Weight/Volume:	30.8 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	07/14/2011 1715			Injection Volume:	1 uL
Prep Date:	07/08/2011 1724			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.7	U	2.7	9.8
Aroclor 1221		7.8	U	7.8	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	Qualifier	Acceptance Limits	
Decachlorobiphenyl		70		59 - 130	
Tetrachloro-m-xylene		87		53 - 128	

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN8

Lab Sample ID: 280-17784-8

Date Sampled: 07/06/2011 1030

Client Matrix: Solid

% Moisture: 0.3

Date Received: 07/08/2011 0900

**8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography**

Analysis Method:	8082	Analysis Batch:	280-76713	Instrument ID:	GCS_W
Prep Method:	3550C	Prep Batch:	280-75746	Initial Weight/Volume:	30.8 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	07/14/2011 1850			Injection Volume:	1 uL
Prep Date:	07/08/2011 1724			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.7	U	2.7	9.8
Aroclor 1221		7.8	U	7.8	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	Qualifier	Acceptance Limits	
Decachlorobiphenyl		85		59 - 130	
Tetrachloro-m-xylene		92		53 - 128	

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN9

Lab Sample ID: 280-17784-9

Date Sampled: 07/06/2011 1045

Client Matrix: Solid

% Moisture: 0.1

Date Received: 07/08/2011 0900

**8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography**

Analysis Method:	8082	Analysis Batch:	280-76713	Instrument ID:	GCS_W
Prep Method:	3550C	Prep Batch:	280-75746	Initial Weight/Volume:	30.0 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	07/14/2011 1922			Injection Volume:	1 uL
Prep Date:	07/08/2011 1724			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		5.1	J	2.6	10
Aroclor 1260		2.6	U	2.6	10

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

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP0

Lab Sample ID: 280-17784-10

Date Sampled: 07/06/2011 1100

Client Matrix: Solid

% Moisture: 0.1

Date Received: 07/08/2011 0900

**8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography**

Analysis Method:	8082	Analysis Batch:	280-76713	Instrument ID:	GCS_W
Prep Method:	3550C	Prep Batch:	280-75746	Initial Weight/Volume:	31.2 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	07/14/2011 1954			Injection Volume:	1 uL
Prep Date:	07/08/2011 1724			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	68		59 - 130
Tetrachloro-m-xylene	87		53 - 128

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP1

Lab Sample ID: 280-17784-11

Date Sampled: 07/06/2011 1115

Client Matrix: Solid

% Moisture: 0.0

Date Received: 07/08/2011 0900

**8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography**

Analysis Method:	8082	Analysis Batch:	280-76713	Instrument ID:	GCS_W
Prep Method:	3550C	Prep Batch:	280-75746	Initial Weight/Volume:	32.6 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	07/14/2011 2129			Injection Volume:	1 uL
Prep Date:	07/08/2011 1724			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.5	U	2.5	9.2
Aroclor 1221		7.4	U	7.4	15
Aroclor 1232		1.8	U	1.8	9.2
Aroclor 1242		4.3	U	4.3	9.2
Aroclor 1248		4.3	U	4.3	9.2
Aroclor 1254		2.4	U	2.4	9.2
Aroclor 1260		2.4	U	2.4	9.2
Surrogate		%Rec	Qualifier	Acceptance Limits	
Decachlorobiphenyl		83		59 - 130	
Tetrachloro-m-xylene		88		53 - 128	

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP2

Lab Sample ID: 280-17784-12

Date Sampled: 07/06/2011 1130

Client Matrix: Solid

% Moisture: 0.0

Date Received: 07/08/2011 0900

**8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography**

Analysis Method:	8082	Analysis Batch:	280-76713	Instrument ID:	GCS_W
Prep Method:	3550C	Prep Batch:	280-75746	Initial Weight/Volume:	31.5 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	07/14/2011 2201			Injection Volume:	1 uL
Prep Date:	07/08/2011 1724			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.6	U	2.6	9.5
Aroclor 1221		7.6	U	7.6	16
Aroclor 1232		1.9	U	1.9	9.5
Aroclor 1242		4.4	U	4.4	9.5
Aroclor 1248		4.4	U	4.4	9.5
Aroclor 1254		2.5	U	2.5	9.5
Aroclor 1260		2.5	U	2.5	9.5
Surrogate		%Rec	Qualifier	Acceptance Limits	
Decachlorobiphenyl		97		59 - 130	
Tetrachloro-m-xylene		99		53 - 128	

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP3

Lab Sample ID: 280-17784-13FD

Date Sampled: 07/06/2011 0900

Client Matrix: Solid

% Moisture: 0.3

Date Received: 07/08/2011 0900

**8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography**

Analysis Method:	8082	Analysis Batch:	280-77002	Instrument ID:	GCS_W
Prep Method:	3550C	Prep Batch:	280-75746	Initial Weight/Volume:	32.0 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	07/16/2011 1637			Injection Volume:	1 uL
Prep Date:	07/08/2011 1724			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.6	U	2.6	9.4
Aroclor 1221		7.5	U	7.5	16
Aroclor 1232		1.9	U	1.9	9.4
Aroclor 1242		4.4	U	4.4	9.4
Aroclor 1248		4.4	U	4.4	9.4
Aroclor 1254		2.4	U	2.4	9.4
Aroclor 1260		30		2.4	9.4

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	84		59 - 130
Tetrachloro-m-xylene	89		53 - 128

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN1

Lab Sample ID: 280-17784-1

Date Sampled: 07/06/2011 0820

Client Matrix: Solid

% Moisture: 0.4

Date Received: 07/08/2011 0900

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-76794	Instrument ID:	GCS_U2
Prep Method:	3550C	Prep Batch:	280-75750	Lab File ID:	023F2301.D
Dilution:	1.0			Initial Weight/Volume:	30.8 g
Analysis Date:	07/15/2011 0037			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 2320			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		4600		970	3900
C10-C28		1400	J B	660	3900

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	103		49 - 115

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN2

Lab Sample ID: 280-17784-2

Date Sampled: 07/06/2011 0840

Client Matrix: Solid

% Moisture: 0.4

Date Received: 07/08/2011 0900

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-76794	Instrument ID:	GCS_U2
Prep Method:	3550C	Prep Batch:	280-75750	Lab File ID:	024F2401.D
Dilution:	1.0			Initial Weight/Volume:	30.6 g
Analysis Date:	07/15/2011 0109			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 2320			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		100000		980	3900
C10-C28		31000	B	670	3900

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	90		49 - 115

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN3

Lab Sample ID: 280-17784-3

Date Sampled: 07/06/2011 0900

Client Matrix: Solid

% Moisture: 0.8

Date Received: 07/08/2011 0900

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-76794	Instrument ID:	GCS_U2
Prep Method:	3550C	Prep Batch:	280-75750	Lab File ID:	025F2501.D
Dilution:	1.0			Initial Weight/Volume:	30.2 g
Analysis Date:	07/15/2011 0142			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 2320			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		15000		1000	4000
C10-C28		2900	J B	680	4000

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	107		49 - 115

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN4

Lab Sample ID: 280-17784-4

Date Sampled: 07/06/2011 0930

Client Matrix: Solid

% Moisture: 0.6

Date Received: 07/08/2011 0900

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-76794	Instrument ID:	GCS_U2
Prep Method:	3550C	Prep Batch:	280-75750	Lab File ID:	027F2701.D
Dilution:	1.0			Initial Weight/Volume:	30.5 g
Analysis Date:	07/15/2011 0247			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 2320			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		4300		990	4000
C10-C28		1000	J B	670	4000

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	107		49 - 115

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN5

Lab Sample ID: 280-17784-5

Date Sampled: 07/06/2011 0945

Client Matrix: Solid

% Moisture: 0.8

Date Received: 07/08/2011 0900

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-76794	Instrument ID:	GCS_U2
Prep Method:	3550C	Prep Batch:	280-75750	Lab File ID:	028F2801.D
Dilution:	1.0			Initial Weight/Volume:	32.4 g
Analysis Date:	07/15/2011 0320			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 2320			Injection Volume:	1 uL

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Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		1500	J	930	3700
C10-C28		740	J B	630	3700

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Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	95		49 - 115

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN6

Lab Sample ID: 280-17784-6

Date Sampled: 07/06/2011 1000

Client Matrix: Solid

% Moisture: 2.6

Date Received: 07/08/2011 0900

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-76794	Instrument ID:	GCS_U2
Prep Method:	3550C	Prep Batch:	280-75750	Lab File ID:	029F2901.D
Dilution:	1.0			Initial Weight/Volume:	30.6 g
Analysis Date:	07/15/2011 0352			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 2320			Injection Volume:	1 uL

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Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		850000		1000	4000
C10-C28		220000	B	680	4000

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Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	110		49 - 115

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN7

Lab Sample ID: 280-17784-7

Date Sampled: 07/06/2011 1015

Client Matrix: Solid

% Moisture: 0.2

Date Received: 07/08/2011 0900

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-76794	Instrument ID:	GCS_U2
Prep Method:	3550C	Prep Batch:	280-75750	Lab File ID:	030F3001.D
Dilution:	1.0			Initial Weight/Volume:	32.1 g
Analysis Date:	07/15/2011 0425			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 2320			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		4000		930	3700
C10-C28		880	J B	640	3700
Surrogate		%Rec	Qualifier	Acceptance Limits	
o-Terphenyl		102		49 - 115	

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN8

Lab Sample ID: 280-17784-8

Date Sampled: 07/06/2011 1030

Client Matrix: Solid

% Moisture: 0.3

Date Received: 07/08/2011 0900

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-76794	Instrument ID:	GCS_U2
Prep Method:	3550C	Prep Batch:	280-75750	Lab File ID:	031F3101.D
Dilution:	1.0			Initial Weight/Volume:	31.0 g
Analysis Date:	07/15/2011 0457			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 2320			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		2200	J	970	3900
C10-C28		1200	J B	660	3900
Surrogate		%Rec	Qualifier	Acceptance Limits	
o-Terphenyl		97		49 - 115	

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN9

Lab Sample ID: 280-17784-9

Client Matrix: Solid

% Moisture: 0.1

Date Sampled: 07/06/2011 1045

Date Received: 07/08/2011 0900

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-76794	Instrument ID:	GCS_U2
Prep Method:	3550C	Prep Batch:	280-75750	Lab File ID:	032F3201.D
Dilution:	1.0			Initial Weight/Volume:	30.3 g
Analysis Date:	07/15/2011 0529			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 2320			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		140000		990	4000
C10-C28		41000	B	670	4000

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	71		49 - 115

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP0

Lab Sample ID: 280-17784-10

Date Sampled: 07/06/2011 1100

Client Matrix: Solid

% Moisture: 0.1

Date Received: 07/08/2011 0900

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-76794	Instrument ID:	GCS_U2
Prep Method:	3550C	Prep Batch:	280-75750	Lab File ID:	033F3301.D
Dilution:	1.0			Initial Weight/Volume:	31.8 g
Analysis Date:	07/15/2011 0602			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 2320			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		5600		940	3800
C10-C28		860	J B	640	3800
Surrogate		%Rec	Qualifier	Acceptance Limits	
o-Terphenyl		94		49 - 115	

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP1

Lab Sample ID: 280-17784-11

Date Sampled: 07/06/2011 1115

Client Matrix: Solid

% Moisture: 0.0

Date Received: 07/08/2011 0900

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-76794	Instrument ID:	GCS_U2
Prep Method:	3550C	Prep Batch:	280-75750	Lab File ID:	034F3401.D
Dilution:	1.0			Initial Weight/Volume:	32.2 g
Analysis Date:	07/15/2011 0634			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 2320			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		1500	J	930	3700
C10-C28		890	J B	630	3700

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	104		49 - 115

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP2

Lab Sample ID: 280-17784-12

Date Sampled: 07/06/2011 1130

Client Matrix: Solid

% Moisture: 0.0

Date Received: 07/08/2011 0900

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-76794	Instrument ID:	GCS_U2
Prep Method:	3550C	Prep Batch:	280-75750	Lab File ID:	038F3801.D
Dilution:	1.0			Initial Weight/Volume:	31.8 g
Analysis Date:	07/15/2011 0845			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 2320			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		1300	J	940	3800
C10-C28		670	J B	640	3800

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	102		49 - 115

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP3

Lab Sample ID: 280-17784-13FD

Date Sampled: 07/06/2011 0900

Client Matrix: Solid

% Moisture: 0.3

Date Received: 07/08/2011 0900

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-76794	Instrument ID:	GCS_U2
Prep Method:	3550C	Prep Batch:	280-75750	Lab File ID:	039F3901.D
Dilution:	1.0			Initial Weight/Volume:	31.1 g
Analysis Date:	07/15/2011 0917			Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 2320			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		6700		960	3900
C10-C28		1800	J B	660	3900

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	104		49 - 115

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN1

Lab Sample ID: 280-17784-1

Date Sampled: 07/06/2011 0820

Client Matrix: Solid

% Moisture: 0.4

Date Received: 07/08/2011 0900

### 6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-77011	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-75869	Lab File ID:	25A4071511.asc
Dilution:	1.0			Initial Weight/Volume:	1.11 g
Analysis Date:	07/15/2011 1924			Final Weight/Volume:	100 mL
Prep Date:	07/15/2011 0730				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		7210		1.4	4.5
Antimony		0.52	B	0.34	1.4
Arsenic		1.8		0.60	1.8
Barium		67.9		0.069	0.90
Beryllium		0.12	B	0.030	0.45
Boron		2.4		0.89	1.8
Cadmium		0.064	B	0.037	0.45
Calcium		4010		12.8	45.2
Chromium		9.8		0.052	0.90
Cobalt		6.1	X	0.090	0.90
Copper		10.6		0.20	0.90
Iron		14900		3.4	4.5
Lead		5.2		0.24	0.72
Magnesium		3660		3.3	18.1
Manganese		254		0.090	0.90
Molybdenum		0.24	U	0.24	1.8
Nickel		10.1		0.11	3.6
Potassium		1190		37.1	271
Selenium		0.78	U	0.78	1.2
Silicon		386	N	5.1	9.0
Silver		0.14	U	0.14	0.90
Sodium		247		53.4	109
Vanadium		36.2		0.085	1.8
Zinc		34.4		0.36	0.90

### 7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-77004	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-75866	Lab File ID:	110715TA.txt
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	07/15/2011 1801			Final Weight/Volume:	50 mL
Prep Date:	07/15/2011 1435				

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

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN2

Lab Sample ID: 280-17784-2

Date Sampled: 07/06/2011 0840

Client Matrix: Solid

% Moisture: 0.4

Date Received: 07/08/2011 0900

**6010B Metals (ICP)**

Analysis Method: 6010B

Analysis Batch: 280-77011

Instrument ID: MT\_025

Prep Method: 3050B

Prep Batch: 280-75869

Lab File ID: 25A4071511.asc

Dilution: 1.0

Initial Weight/Volume: 1.15 g

Analysis Date: 07/15/2011 1933

Final Weight/Volume: 100 mL

Prep Date: 07/15/2011 0730

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6910		1.4	4.4
Antimony		0.33	U	0.33	1.3
Arsenic		2.3		0.58	1.7
Barium		56.8		0.066	0.87
Beryllium		0.14	B	0.029	0.44
Boron		2.2		0.86	1.7
Cadmium		0.080	B	0.036	0.44
Calcium		4500		12.3	43.7
Chromium		11.2		0.051	0.87
Cobalt		5.7	X	0.087	0.87
Copper		12.5		0.19	0.87
Iron		14200		3.3	4.4
Lead		5.5		0.24	0.70
Magnesium		3770		3.2	17.5
Manganese		244		0.087	0.87
Molybdenum		0.23	U	0.23	1.7
Nickel		10.5		0.11	3.5
Potassium		1140		35.8	262
Selenium		0.75	U	0.75	1.1
Silicon		278	N	4.9	8.7
Silver		0.14	U	0.14	0.87
Sodium		214		51.5	105
Vanadium		33.7		0.082	1.7
Zinc		38.6		0.35	0.87

**7471A Mercury (CVAA)**

Analysis Method: 7471A

Analysis Batch: 280-77004

Instrument ID: MT\_034

Prep Method: 7471A

Prep Batch: 280-75866

Lab File ID: 110715TA.txt

Dilution: 1.0

Initial Weight/Volume: 0.69 g

Analysis Date: 07/15/2011 1807

Final Weight/Volume: 50 mL

Prep Date: 07/15/2011 1435

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0089	B	0.0048	0.015

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

**Client Sample ID:** J1JWN3

Lab Sample ID: 280-17784-3

Date Sampled: 07/06/2011 0900

Client Matrix: Solid

% Moisture: 0.8

Date Received: 07/08/2011 0900

### 6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-77011	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-75869	Lab File ID:	25A4071511.asc
Dilution:	1.0			Initial Weight/Volume:	1.12 g
Analysis Date:	07/15/2011 1936			Final Weight/Volume:	100 mL
Prep Date:	07/15/2011 0730				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		8150		1.4	4.5
Antimony		0.34	U	0.34	1.3
Arsenic		2.4		0.59	1.8
Barium		98.8		0.068	0.90
Beryllium		0.18	B	0.030	0.45
Boron		6.1		0.88	1.8
Cadmium		0.10	B	0.037	0.45
Calcium		5100		12.7	45.0
Chromium		9.8		0.052	0.90
Cobalt		6.5	X	0.090	0.90
Copper		11.9		0.20	0.90
Iron		14800		3.4	4.5
Lead		6.6		0.24	0.72
Magnesium		4070		3.3	18.0
Manganese		274		0.090	0.90
Molybdenum		0.23	U	0.23	1.8
Nickel		11.5		0.11	3.6
Potassium		1480		36.9	270
Selenium		0.77	U	0.77	1.2
Silicon		297	N	5.1	9.0
Silver		0.14	U	0.14	0.90
Sodium		261		53.1	108
Vanadium		33.0		0.085	1.8
Zinc		43.3		0.36	0.90

### 7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-77004	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-75866	Lab File ID:	110715TA.txt
Dilution:	1.0			Initial Weight/Volume:	0.64 g
Analysis Date:	07/15/2011 1814			Final Weight/Volume:	50 mL
Prep Date:	07/15/2011 1435				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.070		0.0052	0.016

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN4

Lab Sample ID: 280-17784-4

Date Sampled: 07/06/2011 0930

Client Matrix: Solid

% Moisture: 0.6

Date Received: 07/08/2011 0900

**6010B Metals (ICP)**

Analysis Method:	6010B	Analysis Batch:	280-77011	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-75869	Lab File ID:	25A4071511.asc
Dilution:	1.0			Initial Weight/Volume:	1.15 g
Analysis Date:	07/15/2011 1938			Final Weight/Volume:	100 mL
Prep Date:	07/15/2011 0730				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		7330		1.4	4.4
Antimony		0.33	U	0.33	1.3
Arsenic		2.3		0.58	1.7
Barium		55.4		0.066	0.87
Beryllium		0.13	B	0.029	0.44
Boron		1.6	B	0.86	1.7
Cadmium		0.060	B	0.036	0.44
Calcium		4180		12.3	43.7
Chromium		11.5		0.051	0.87
Cobalt		6.1	X	0.087	0.87
Copper		12.0		0.19	0.87
Iron		15200		3.3	4.4
Lead		4.1		0.24	0.70
Magnesium		3940		3.2	17.5
Manganese		254		0.087	0.87
Molybdenum		0.23	U	0.23	1.7
Nickel		10.8		0.11	3.5
Potassium		1470		35.9	262
Selenium		0.75	U	0.75	1.1
Silicon		399	N	5.0	8.7
Silver		0.14	U	0.14	0.87
Sodium		227		51.6	105
Vanadium		36.2		0.082	1.7
Zinc		33.9		0.35	0.87

**7471A Mercury (CVAA)**

Analysis Method:	7471A	Analysis Batch:	280-77004	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-75866	Lab File ID:	110715TA.txt
Dilution:	1.0			Initial Weight/Volume:	0.65 g
Analysis Date:	07/15/2011 1817			Final Weight/Volume:	50 mL
Prep Date:	07/15/2011 1435				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0051	U	0.0051	0.016

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN5

Lab Sample ID: 280-17784-5

Date Sampled: 07/06/2011 0945

Client Matrix: Solid

% Moisture: 0.8

Date Received: 07/08/2011 0900

**6010B Metals (ICP)**

Analysis Method:	6010B	Analysis Batch:	280-77011	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-75869	Lab File ID:	25A4071511.asc
Dilution:	1.0			Initial Weight/Volume:	1.07 g
Analysis Date:	07/15/2011 1940			Final Weight/Volume:	100 mL
Prep Date:	07/15/2011 0730				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		7860		1.5	4.7
Antimony		0.36	U	0.36	1.4
Arsenic		1.9		0.62	1.9
Barium		61.8		0.072	0.94
Beryllium		0.13	B	0.031	0.47
Boron		1.2	B	0.92	1.9
Cadmium		0.069	B	0.039	0.47
Calcium		3920		13.3	47.1
Chromium		10.8		0.055	0.94
Cobalt		6.6	X	0.094	0.94
Copper		11.3		0.20	0.94
Iron		16300		3.6	4.7
Lead		3.8		0.25	0.75
Magnesium		3870		3.5	18.9
Manganese		268		0.094	0.94
Molybdenum		0.25	U	0.25	1.9
Nickel		10.5		0.12	3.8
Potassium		1370		38.6	283
Selenium		0.81	U	0.81	1.2
Silicon		328	N	5.3	9.4
Silver		0.15	U	0.15	0.94
Sodium		220		55.6	113
Vanadium		38.8		0.089	1.9
Zinc		36.0		0.38	0.94

**7471A Mercury (CVAA)**

Analysis Method:	7471A	Analysis Batch:	280-77004	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-75866	Lab File ID:	110715TA.txt
Dilution:	1.0			Initial Weight/Volume:	0.63 g
Analysis Date:	07/15/2011 1819			Final Weight/Volume:	50 mL
Prep Date:	07/15/2011 1435				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0053	U	0.0053	0.016

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

Client Sample ID: J1JWN6

Lab Sample ID: 280-17784-6

Date Sampled: 07/06/2011 1000

Client Matrix: Solid

% Moisture: 2.6

Date Received: 07/08/2011 0900

### 6010B Metals (ICP)

Analysis Method: 6010B	Analysis Batch: 280-77011	Instrument ID: MT_025	
Prep Method: 3050B	Prep Batch: 280-75869	Lab File ID: 25A4071511.asc	
Dilution: 1.0		Initial Weight/Volume: 1.17 g	
Analysis Date: 07/15/2011 1952		Final Weight/Volume: 100 mL	
Prep Date: 07/15/2011 0730			

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		8930		1.4	4.4
Antimony		0.33	U	0.33	1.3
Arsenic		3.8		0.58	1.8
Barium		128		0.067	0.88
Beryllium		0.23	B	0.029	0.44
Boron		10.6		0.86	1.8
Cadmium		0.21	B	0.036	0.44
Calcium		9320		12.4	43.9
Chromium		14.3		0.051	0.88
Cobalt		7.0	X	0.088	0.88
Copper		20.1		0.19	0.88
Iron		15900		3.3	4.4
Lead		23.2		0.24	0.70
Magnesium		4940		3.2	17.6
Manganese		323		0.088	0.88
Molybdenum		0.25	B	0.23	1.8
Nickel		13.3		0.11	3.5
Potassium		1570		36.0	263
Selenium		0.75	U	0.75	1.1
Silicon		323	N	5.0	8.8
Silver		0.14	U	0.14	0.88
Sodium		290		51.8	105
Vanadium		34.8		0.083	1.8
Zinc		72.7		0.35	0.88

### 7471A Mercury (CVAA)

Analysis Method: 7471A	Analysis Batch: 280-77004	Instrument ID: MT_034	
Prep Method: 7471A	Prep Batch: 280-75866	Lab File ID: 110715TA.txt	
Dilution: 1.0		Initial Weight/Volume: 0.64 g	
Analysis Date: 07/15/2011 1821		Final Weight/Volume: 50 mL	
Prep Date: 07/15/2011 1435			

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.55		0.0053	0.016

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN7

Lab Sample ID: 280-17784-7

Date Sampled: 07/06/2011 1015

Client Matrix: Solid

% Moisture: 0.2

Date Received: 07/08/2011 0900

**6010B Metals (ICP)**

Analysis Method:	6010B	Analysis Batch:	280-77011	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-75869	Lab File ID:	25A4071511.asc
Dilution:	1.0			Initial Weight/Volume:	1.11 g
Analysis Date:	07/15/2011 1954			Final Weight/Volume:	100 mL
Prep Date:	07/15/2011 0730				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5750		1.4	4.5
Antimony		0.34	U	0.34	1.4
Arsenic		2.2		0.60	1.8
Barium		40.3		0.069	0.90
Beryllium		0.081	B	0.030	0.45
Boron		0.89	U	0.89	1.8
Cadmium		0.049	B	0.037	0.45
Calcium		3750		12.7	45.2
Chromium		13.2		0.052	0.90
Cobalt		5.8	X	0.090	0.90
Copper		13.4		0.20	0.90
Iron		15900		3.4	4.5
Lead		3.1		0.24	0.72
Magnesium		3800		3.3	18.1
Manganese		236		0.090	0.90
Molybdenum		0.23	U	0.23	1.8
Nickel		11.1		0.11	3.6
Potassium		705		37.0	271
Selenium		0.78	U	0.78	1.2
Silicon		217	N	5.1	9.0
Silver		0.14	U	0.14	0.90
Sodium		168		53.3	108
Vanadium		41.8		0.085	1.8
Zinc		32.1		0.36	0.90

**7471A Mercury (CVAA)**

Analysis Method:	7471A	Analysis Batch:	280-77004	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-75866	Lab File ID:	110715TA.txt
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Analysis Date:	07/15/2011 1824			Final Weight/Volume:	50 mL
Prep Date:	07/15/2011 1435				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0054	U	0.0054	0.016

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN8

Lab Sample ID: 280-17784-8

Date Sampled: 07/06/2011 1030

Client Matrix: Solid

% Moisture: 0.3

Date Received: 07/08/2011 0900

**6010B Metals (ICP)**

Analysis Method: 6010B                      Analysis Batch: 280-77011                      Instrument ID: MT\_025  
Prep Method: 3050B                      Prep Batch: 280-75869                      Lab File ID: 25A4071511.asc  
Dilution: 1.0                      Initial Weight/Volume: 1.12 g  
Analysis Date: 07/15/2011 1956                      Final Weight/Volume: 100 mL  
Prep Date: 07/15/2011 0730

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6460		1.4	4.5
Antimony		0.34	U	0.34	1.3
Arsenic		2.0		0.59	1.8
Barium		41.1		0.068	0.90
Beryllium		0.10	B	0.030	0.45
Boron		0.88	U	0.88	1.8
Cadmium		0.059	B	0.037	0.45
Calcium		6170		12.6	44.8
Chromium		12.0		0.052	0.90
Cobalt		6.1	X	0.090	0.90
Copper		12.3		0.19	0.90
Iron		15100		3.4	4.5
Lead		3.1		0.24	0.72
Magnesium		4150		3.3	17.9
Manganese		243		0.090	0.90
Molybdenum		0.23	U	0.23	1.8
Nickel		11.8		0.11	3.6
Potassium		805		36.7	269
Selenium		0.77	U	0.77	1.2
Silicon		320	N	5.1	9.0
Silver		0.14	U	0.14	0.90
Sodium		198		52.8	107
Vanadium		38.8		0.084	1.8
Zinc		31.4		0.36	0.90

**7471A Mercury (CVAA)**

Analysis Method: 7471A                      Analysis Batch: 280-77004                      Instrument ID: MT\_034  
Prep Method: 7471A                      Prep Batch: 280-75866                      Lab File ID: 110715TA.txt  
Dilution: 1.0                      Initial Weight/Volume: 0.69 g  
Analysis Date: 07/15/2011 1826                      Final Weight/Volume: 50 mL  
Prep Date: 07/15/2011 1435

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0048	U	0.0048	0.015

## Analytical Data

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWN9

Lab Sample ID: 280-17784-9

Date Sampled: 07/06/2011 1045

Client Matrix: Solid

% Moisture: 0.1

Date Received: 07/08/2011 0900

### 6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-77011	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-75869	Lab File ID:	25A4071511.asc
Dilution:	1.0			Initial Weight/Volume:	1.03 g
Analysis Date:	07/15/2011 1958			Final Weight/Volume:	100 mL
Prep Date:	07/15/2011 0730				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6780		1.5	4.9
Antimony		0.37	U	0.37	1.5
Arsenic		2.5		0.64	1.9
Barium		68.3		0.074	0.97
Beryllium		0.11	B	0.032	0.49
Boron		3.0		0.95	1.9
Cadmium		0.087	B	0.040	0.49
Calcium		6570		13.7	48.6
Chromium		11.6		0.056	0.97
Cobalt		6.0	X	0.097	0.97
Copper		12.9		0.21	0.97
Iron		14300		3.7	4.9
Lead		5.7		0.26	0.78
Magnesium		4090		3.6	19.4
Manganese		248		0.097	0.97
Molybdenum		0.25	U	0.25	1.9
Nickel		11.2		0.12	3.9
Potassium		1100		39.9	292
Selenium		0.84	U	0.84	1.3
Silicon		258	N	5.5	9.7
Silver		0.16	U	0.16	0.97
Sodium		212		57.4	117
Vanadium		34.8		0.091	1.9
Zinc		39.3		0.39	0.97

### 7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-77004	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-75866	Lab File ID:	110715TA.txt
Dilution:	1.0			Initial Weight/Volume:	0.65 g
Analysis Date:	07/15/2011 1828			Final Weight/Volume:	50 mL
Prep Date:	07/15/2011 1435				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.043		0.0051	0.016

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP0

Lab Sample ID: 280-17784-10

Date Sampled: 07/06/2011 1100

Client Matrix: Solid

% Moisture: 0.1

Date Received: 07/08/2011 0900

**6010B Metals (ICP)**

Analysis Method:	6010B	Analysis Batch:	280-77011	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-75869	Lab File ID:	25A4071511.asc
Dilution:	1.0			Initial Weight/Volume:	1.15 g
Analysis Date:	07/15/2011 2001			Final Weight/Volume:	100 mL
Prep Date:	07/15/2011 0730				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5780		1.3	4.4
Antimony		0.33	U	0.33	1.3
Arsenic		1.9		0.57	1.7
Barium		37.5		0.066	0.87
Beryllium		0.090	B	0.029	0.44
Boron		3.3		0.85	1.7
Cadmium		0.061	B	0.036	0.44
Calcium		7140		12.3	43.5
Chromium		13.1		0.050	0.87
Cobalt		5.7	X	0.087	0.87
Copper		11.6		0.19	0.87
Iron		14800		3.3	4.4
Lead		2.8		0.23	0.70
Magnesium		4080		3.2	17.4
Manganese		242		0.087	0.87
Molybdenum		0.23	U	0.23	1.7
Nickel		11.2		0.11	3.5
Potassium		759		35.7	261
Selenium		0.75	U	0.75	1.1
Silicon		234	N	4.9	8.7
Silver		0.14	U	0.14	0.87
Sodium		192		51.3	104
Vanadium		39.1		0.082	1.7
Zinc		29.2		0.35	0.87

**7471A Mercury (CVAA)**

Analysis Method:	7471A	Analysis Batch:	280-77004	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-75866	Lab File ID:	110715TA.txt
Dilution:	1.0			Initial Weight/Volume:	0.61 g
Analysis Date:	07/15/2011 1831			Final Weight/Volume:	50 mL
Prep Date:	07/15/2011 1435				

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

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP1

Lab Sample ID: 280-17784-11

Date Sampled: 07/06/2011 1115

Client Matrix: Solid

% Moisture: 0.0

Date Received: 07/08/2011 0900

**6010B Metals (ICP)**

Analysis Method: 6010B

Analysis Batch: 280-77011

Instrument ID: MT\_025

Prep Method: 3050B

Prep Batch: 280-75869

Lab File ID: 25A4071511.asc

Dilution: 1.0

Initial Weight/Volume: 1.08 g

Analysis Date: 07/15/2011 2003

Final Weight/Volume: 100 mL

Prep Date: 07/15/2011 0730

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5070		1.4	4.6
Antimony		0.35	U	0.35	1.4
Arsenic		1.5	B	0.61	1.9
Barium		28.9		0.070	0.93
Beryllium		0.038	B	0.031	0.46
Boron		0.91	U	0.91	1.9
Cadmium		0.041	B	0.038	0.46
Calcium		4810		13.1	46.3
Chromium		10.2		0.054	0.93
Cobalt		5.1	X	0.093	0.93
Copper		10.7		0.20	0.93
Iron		11900		3.5	4.6
Lead		2.3		0.25	0.74
Magnesium		3750		3.4	18.5
Manganese		200		0.093	0.93
Molybdenum		0.24	U	0.24	1.9
Nickel		10.2		0.11	3.7
Potassium		597		38.0	278
Selenium		0.80	U	0.80	1.2
Silicon		143	N	5.2	9.3
Silver		0.15	U	0.15	0.93
Sodium		183		54.6	111
Vanadium		33.8		0.087	1.9
Zinc		27.1		0.37	0.93

**7471A Mercury (CVAA)**

Analysis Method: 7471A

Analysis Batch: 280-77004

Instrument ID: MT\_034

Prep Method: 7471A

Prep Batch: 280-75866

Lab File ID: 110715TA.txt

Dilution: 1.0

Initial Weight/Volume: 0.67 g

Analysis Date: 07/15/2011 1833

Final Weight/Volume: 50 mL

Prep Date: 07/15/2011 1435

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0050	U	0.0050	0.015

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP2

Lab Sample ID: 280-17784-12

Date Sampled: 07/06/2011 1130

Client Matrix: Solid

% Moisture: 0.0

Date Received: 07/08/2011 0900

**6010B Metals (ICP)**

Analysis Method:	6010B	Analysis Batch:	280-77011	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-75869	Lab File ID:	25A4071511.asc
Dilution:	1.0			Initial Weight/Volume:	1.15 g
Analysis Date:	07/15/2011 2005			Final Weight/Volume:	100 mL
Prep Date:	07/15/2011 0730				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5320		1.3	4.3
Antimony		0.33	U	0.33	1.3
Arsenic		1.7		0.57	1.7
Barium		29.0		0.066	0.87
Beryllium		0.037	B	0.029	0.43
Boron		0.85	U	0.85	1.7
Cadmium		0.043	B	0.036	0.43
Calcium		5030		12.3	43.5
Chromium		8.6		0.050	0.87
Cobalt		5.3	X	0.087	0.87
Copper		9.9		0.19	0.87
Iron		12700		3.3	4.3
Lead		2.3		0.23	0.70
Magnesium		3750		3.2	17.4
Manganese		210		0.087	0.87
Molybdenum		0.23	U	0.23	1.7
Nickel		9.4		0.11	3.5
Potassium		666		35.7	261
Selenium		0.75	U	0.75	1.1
Silicon		187	N	4.9	8.7
Silver		0.14	U	0.14	0.87
Sodium		211		51.3	104
Vanadium		34.6		0.082	1.7
Zinc		28.9		0.35	0.87

**7471A Mercury (CVAA)**

Analysis Method:	7471A	Analysis Batch:	280-77004	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-75866	Lab File ID:	110715TA.txt
Dilution:	1.0			Initial Weight/Volume:	0.64 g
Analysis Date:	07/15/2011 1836			Final Weight/Volume:	50 mL
Prep Date:	07/15/2011 1435				

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

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1JWP3

Lab Sample ID: 280-17784-13FD

Date Sampled: 07/06/2011 0900

Client Matrix: Solid

% Moisture: 0.3

Date Received: 07/08/2011 0900

**6010B Metals (ICP)**

Analysis Method: 6010B

Analysis Batch: 280-77011

Instrument ID: MT\_025

Prep Method: 3050B

Prep Batch: 280-75869

Lab File ID: 25A4071511.asc

Dilution: 1.0

Initial Weight/Volume: 1.04 g

Analysis Date: 07/15/2011 2007

Final Weight/Volume: 100 mL

Prep Date: 07/15/2011 0730

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		8890		1.5	4.8
Antimony		0.37	U	0.37	1.4
Arsenic		2.5		0.64	1.9
Barium		85.8		0.073	0.96
Beryllium		0.19	B	0.032	0.48
Boron		3.0		0.95	1.9
Cadmium		0.088	B	0.040	0.48
Calcium		4570		13.6	48.2
Chromium		11.4		0.056	0.96
Cobalt		6.6	X	0.096	0.96
Copper		12.2		0.21	0.96
Iron		15700		3.7	4.8
Lead		6.3		0.26	0.77
Magnesium		4000		3.6	19.3
Manganese		284		0.096	0.96
Molybdenum		0.25	U	0.25	1.9
Nickel		10.9		0.12	3.9
Potassium		1590		39.6	289
Selenium		0.83	U	0.83	1.3
Silicon		427	N	5.5	9.6
Silver		0.15	U	0.15	0.96
Sodium		245		56.9	116
Vanadium		33.5		0.091	1.9
Zinc		39.2		0.38	0.96

**7471A Mercury (CVAA)**

Analysis Method: 7471A

Analysis Batch: 280-77004

Instrument ID: MT\_034

Prep Method: 7471A

Prep Batch: 280-75866

Lab File ID: 110715TA.txt

Dilution: 1.0

Initial Weight/Volume: 0.69 g

Analysis Date: 07/15/2011 1843

Final Weight/Volume: 50 mL

Prep Date: 07/15/2011 1435

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.028		0.0048	0.015

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

Client Sample ID: J1K405

Lab Sample ID: 280-17784-14EB

Date Sampled: 07/06/2011 1400

Client Matrix: Solid

% Moisture: 0.0

Date Received: 07/08/2011 0900

**6010B Metals (ICP)**

Analysis Method:	6010B	Analysis Batch:	280-77011	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-75869	Lab File ID:	25A4071511.asc
Dilution:	1.0			Initial Weight/Volume:	1.01 g
Analysis Date:	07/15/2011 2010			Final Weight/Volume:	100 mL
Prep Date:	07/15/2011 0730				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		246		1.5	5.0
Antimony		0.38	U	0.38	1.5
Arsenic		0.65	U	0.65	2.0
Barium		2.2		0.075	0.99
Beryllium		0.036	B	0.033	0.50
Boron		0.97	U	0.97	2.0
Cadmium		0.041	U	0.041	0.50
Calcium		42.3	B	14.0	49.5
Chromium		0.17	B	0.057	0.99
Cobalt		0.13	B X	0.099	0.99
Copper		0.21	U	0.21	0.99
Iron		546		3.8	5.0
Lead		0.40	B	0.27	0.79
Magnesium		27.0		3.7	19.8
Manganese		6.2		0.099	0.99
Molybdenum		0.26	U	0.26	2.0
Nickel		0.14	B	0.12	4.0
Potassium		51.4	B	40.6	297
Selenium		0.85	U	0.85	1.3
Silicon		144	N	5.6	9.9
Silver		0.16	U	0.16	0.99
Sodium		58.4	U	58.4	119
Vanadium		0.44	B	0.093	2.0
Zinc		0.91	B	0.39	0.99

**7471A Mercury (CVAA)**

Analysis Method:	7471A	Analysis Batch:	280-77004	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-75866	Lab File ID:	110715TA.txt
Dilution:	1.0			Initial Weight/Volume:	0.67 g
Analysis Date:	07/15/2011 1845			Final Weight/Volume:	50 mL
Prep Date:	07/15/2011 1435				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0050	U	0.0050	0.015

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

---

**General Chemistry**

Client Sample ID: J1JWN1

Lab Sample ID: 280-17784-1

Client Matrix: Solid

Date Sampled: 07/06/2011 0820

Date Received: 07/08/2011 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	0.38		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-75711		Analysis Date: 07/08/2011 1400		DryWt Corrected: N			

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

---

**General Chemistry**

Client Sample ID: J1JWN2

Lab Sample ID: 280-17784-2

Client Matrix: Solid

Date Sampled: 07/06/2011 0840

Date Received: 07/08/2011 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	0.41		%	0.10	0.10	1.0	D-2216
	Analysis Batch: 280-75711		Analysis Date: 07/08/2011 1400				DryWt Corrected: N

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

---

**General Chemistry**

Client Sample ID: J1JWN3

Lab Sample ID: 280-17784-3

Client Matrix: Solid

Date Sampled: 07/06/2011 0900

Date Received: 07/08/2011 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	0.79		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-75711      Analysis Date: 07/08/2011 1400      DryWt Corrected: N

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

---

**General Chemistry**

**Client Sample ID:** J1JWN4

Lab Sample ID: 280-17784-4

Client Matrix: Solid

Date Sampled: 07/06/2011 0930

Date Received: 07/08/2011 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	0.60		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-75711		Analysis Date: 07/08/2011 1400		DryWt Corrected: N			

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

---

**General Chemistry**

Client Sample ID: J1JWN5

Lab Sample ID: 280-17784-5

Client Matrix: Solid

Date Sampled: 07/06/2011 0945

Date Received: 07/08/2011 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	0.84		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-75711

Analysis Date: 07/08/2011 1400

DryWt Corrected: N

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

---

**General Chemistry**

Client Sample ID: J1JWN6

Lab Sample ID: 280-17784-6

Client Matrix: Solid

Date Sampled: 07/06/2011 1000

Date Received: 07/08/2011 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	2.6		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-75711		Analysis Date: 07/08/2011 1400		DryWt Corrected: N			

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

---

**General Chemistry**

Client Sample ID: J1JWN7

Lab Sample ID: 280-17784-7

Date Sampled: 07/06/2011 1015

Client Matrix: Solid

Date Received: 07/08/2011 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	0.25		%	0.10	0.10	1.0	D-2216
	Analysis Batch: 280-75711		Analysis Date: 07/08/2011 1400				DryWt Corrected: N

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

---

**General Chemistry**

Client Sample ID: J1JWN8

Lab Sample ID: 280-17784-8

Date Sampled: 07/06/2011 1030

Client Matrix: Solid

Date Received: 07/08/2011 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	0.26		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-75711		Analysis Date: 07/08/2011 1400		DryWt Corrected: N			

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

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**General Chemistry**

Client Sample ID: **J1JWN9**

Lab Sample ID: 280-17784-9

Client Matrix: Solid

Date Sampled: 07/06/2011 1045

Date Received: 07/08/2011 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	0.13		%	0.10	0.10	1.0	D-2216
	Analysis Batch: 280-75711		Analysis Date: 07/08/2011 1400				DryWt Corrected: N

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

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**General Chemistry**

Client Sample ID: J1JWP0

Lab Sample ID: 280-17784-10

Client Matrix: Solid

Date Sampled: 07/08/2011 1100

Date Received: 07/08/2011 0900

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

Analysis Batch: 280-75711      Analysis Date: 07/08/2011 1400      DryWt Corrected: N

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

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**General Chemistry**

Client Sample ID: J1JWP1

Lab Sample ID: 280-17784-11

Date Sampled: 07/06/2011 1115

Client Matrix: Solid

Date Received: 07/08/2011 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	0.10	U	%	0.10	0.10	1.0	D-2216
	Analysis Batch: 280-75711		Analysis Date: 07/08/2011 1400				DryWt Corrected: N

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

---

**General Chemistry**

Client Sample ID: J1JWP2

Lab Sample ID: 280-17784-12

Date Sampled: 07/06/2011 1130

Client Matrix: Solid

Date Received: 07/08/2011 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	0.10	U	%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-75711		Analysis Date: 07/08/2011 1400				DryWt Corrected: N	

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

---

**General Chemistry**

Client Sample ID: J1JWP3

Lab Sample ID: 280-17784-13FD

Client Matrix: Solid

Date Sampled: 07/06/2011 0900

Date Received: 07/08/2011 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	0.32		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-75711      Analysis Date: 07/08/2011 1400      DryWt Corrected: N

**Analytical Data**

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

---

**General Chemistry**

Client Sample ID: J1K405

Lab Sample ID: 280-17784-14EB

Date Sampled: 07/06/2011 1400

Client Matrix: Solid

Date Received: 07/08/2011 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	0.10	U	%	0.10	0.10	1.0	D-2216
	Analysis Batch: 280-75711		Analysis Date: 07/08/2011 1400				DryWT Corrected: N

# QUALITY CONTROL RESULTS

## Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Prep Batch: 280-75667</b>					
LCS 280-75667/3-A	Lab Control Sample	T	Solid	5035	
MB 280-75667/2-A	Method Blank	T	Solid	5035	
280-17784-1	J1JWN1	T	Solid	5035	
280-17784-2	J1JWN2	T	Solid	5035	
280-17784-3	J1JWN3	T	Solid	5035	
280-17784-4	J1JWN4	T	Solid	5035	
280-17784-5	J1JWN5	T	Solid	5035	
280-17784-5MS	Matrix Spike	T	Solid	5035	
280-17784-5MSD	Matrix Spike Duplicate	T	Solid	5035	
280-17784-6	J1JWN6	T	Solid	5035	
280-17784-7	J1JWN7	T	Solid	5035	
280-17784-7MS	Matrix Spike	T	Solid	5035	
280-17784-7MSD	Matrix Spike Duplicate	T	Solid	5035	
280-17784-8	J1JWN8	T	Solid	5035	
280-17784-9	J1JWN9	T	Solid	5035	
280-17784-10	J1JWP0	T	Solid	5035	
280-17784-11	J1JWP1	T	Solid	5035	
280-17784-12	J1JWP2	T	Solid	5035	
280-17784-13FD	J1JWP3	T	Solid	5035	
<b>Analysis Batch:280-76282</b>					
LCS 280-75667/3-A	Lab Control Sample	T	Solid	8260B	280-75667
MB 280-75667/2-A	Method Blank	T	Solid	8260B	280-75667
280-17784-1	J1JWN1	T	Solid	8260B	280-75667
280-17784-2	J1JWN2	T	Solid	8260B	280-75667
280-17784-3	J1JWN3	T	Solid	8260B	280-75667
280-17784-4	J1JWN4	T	Solid	8260B	280-75667
280-17784-5	J1JWN5	T	Solid	8260B	280-75667
280-17784-5MS	Matrix Spike	T	Solid	8260B	280-75667
280-17784-5MSD	Matrix Spike Duplicate	T	Solid	8260B	280-75667
280-17784-6	J1JWN6	T	Solid	8260B	280-75667
<b>Analysis Batch:280-76612</b>					
LCS 280-75667/3-A	Lab Control Sample	T	Solid	8260B	280-75667
280-17784-7	J1JWN7	T	Solid	8260B	280-75667
280-17784-7MS	Matrix Spike	T	Solid	8260B	280-75667
280-17784-7MSD	Matrix Spike Duplicate	T	Solid	8260B	280-75667
280-17784-8	J1JWN8	T	Solid	8260B	280-75667
280-17784-9	J1JWN9	T	Solid	8260B	280-75667
280-17784-10	J1JWP0	T	Solid	8260B	280-75667
280-17784-11	J1JWP1	T	Solid	8260B	280-75667
280-17784-12	J1JWP2	T	Solid	8260B	280-75667
280-17784-13FD	J1JWP3	T	Solid	8260B	280-75667

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## Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Report Basis</b>					
T = Total					
<b>GC/MS Semi VOA</b>					
<b>Prep Batch: 280-75733</b>					
LCS 280-75733/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-75733/1-A	Method Blank	T	Solid	3550C	
280-17784-1	J1JWN1	T	Solid	3550C	
280-17784-2	J1JWN2	T	Solid	3550C	
280-17784-3	J1JWN3	T	Solid	3550C	
280-17784-4	J1JWN4	T	Solid	3550C	
280-17784-5	J1JWN5	T	Solid	3550C	
280-17784-6	J1JWN6	T	Solid	3550C	
280-17784-7	J1JWN7	T	Solid	3550C	
280-17784-8	J1JWN8	T	Solid	3550C	
280-17784-9	J1JWN9	T	Solid	3550C	
280-17784-10	J1JWP0	T	Solid	3550C	
280-17784-11	J1JWP1	T	Solid	3550C	
280-17784-12	J1JWP2	T	Solid	3550C	
280-17784-13FD	J1JWP3	T	Solid	3550C	
280-17784-13MS	Matrix Spike	T	Solid	3550C	
280-17784-13MSD	Matrix Spike Duplicate	T	Solid	3550C	
<b>Analysis Batch:280-76164</b>					
LCS 280-75733/2-A	Lab Control Sample	T	Solid	8270C	280-75733
MB 280-75733/1-A	Method Blank	T	Solid	8270C	280-75733
280-17784-1	J1JWN1	T	Solid	8270C	280-75733
280-17784-2	J1JWN2	T	Solid	8270C	280-75733
280-17784-3	J1JWN3	T	Solid	8270C	280-75733
280-17784-4	J1JWN4	T	Solid	8270C	280-75733
280-17784-5	J1JWN5	T	Solid	8270C	280-75733
280-17784-6	J1JWN6	T	Solid	8270C	280-75733
280-17784-7	J1JWN7	T	Solid	8270C	280-75733
280-17784-8	J1JWN8	T	Solid	8270C	280-75733
280-17784-9	J1JWN9	T	Solid	8270C	280-75733
280-17784-10	J1JWP0	T	Solid	8270C	280-75733
280-17784-11	J1JWP1	T	Solid	8270C	280-75733
280-17784-12	J1JWP2	T	Solid	8270C	280-75733
280-17784-13FD	J1JWP3	T	Solid	8270C	280-75733
280-17784-13MS	Matrix Spike	T	Solid	8270C	280-75733
280-17784-13MSD	Matrix Spike Duplicate	T	Solid	8270C	280-75733

**Report Basis**

T = Total

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## Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
<b>GC Semi VOA</b>					
<b>Prep Batch: 280-75746</b>					
LCS 280-75746/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-75746/1-A	Method Blank	T	Solid	3550C	
280-17784-1	J1JWN1	T	Solid	3550C	
280-17784-2	J1JWN2	T	Solid	3550C	
280-17784-3	J1JWN3	T	Solid	3550C	
280-17784-4	J1JWN4	T	Solid	3550C	
280-17784-5	J1JWN5	T	Solid	3550C	
280-17784-6	J1JWN6	T	Solid	3550C	
280-17784-7	J1JWN7	T	Solid	3550C	
280-17784-8	J1JWN8	T	Solid	3550C	
280-17784-9	J1JWN9	T	Solid	3550C	
280-17784-10	J1JWP0	T	Solid	3550C	
280-17784-10MS	Matrix Spike	T	Solid	3550C	
280-17784-10MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-17784-11	J1JWP1	T	Solid	3550C	
280-17784-12	J1JWP2	T	Solid	3550C	
280-17784-13FD	J1JWP3	T	Solid	3550C	
<b>Prep Batch: 280-75750</b>					
LCS 280-75750/2-A	Lab Control Sample	T	Solid	3550C	
LCSD 280-75750/3-A	Lab Control Sample Duplicate	T	Solid	3550C	
MB 280-75750/1-A	Method Blank	T	Solid	3550C	
280-17784-1	J1JWN1	T	Solid	3550C	
280-17784-2	J1JWN2	T	Solid	3550C	
280-17784-3	J1JWN3	T	Solid	3550C	
280-17784-4	J1JWN4	T	Solid	3550C	
280-17784-5	J1JWN5	T	Solid	3550C	
280-17784-6	J1JWN6	T	Solid	3550C	
280-17784-7	J1JWN7	T	Solid	3550C	
280-17784-8	J1JWN8	T	Solid	3550C	
280-17784-9	J1JWN9	T	Solid	3550C	
280-17784-10	J1JWP0	T	Solid	3550C	
280-17784-11	J1JWP1	T	Solid	3550C	
280-17784-11MS	Matrix Spike	T	Solid	3550C	
280-17784-11MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-17784-12	J1JWP2	T	Solid	3550C	
280-17784-13FD	J1JWP3	T	Solid	3550C	

## Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC Semi VOA</b>					
<b>Prep Batch: 280-75971</b>					
LCS 280-75971/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-75971/1-A	Method Blank	T	Solid	3550C	
280-17784-1	J1JWN1	T	Solid	3550C	
280-17784-2	J1JWN2	T	Solid	3550C	
280-17784-3	J1JWN3	T	Solid	3550C	
280-17784-4	J1JWN4	T	Solid	3550C	
280-17784-4MS	Matrix Spike	T	Solid	3550C	
280-17784-4MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-17784-5	J1JWN5	T	Solid	3550C	
280-17784-6	J1JWN6	T	Solid	3550C	
280-17784-7	J1JWN7	T	Solid	3550C	
280-17784-8	J1JWN8	T	Solid	3550C	
280-17784-9	J1JWN9	T	Solid	3550C	
280-17784-10	J1JWP0	T	Solid	3550C	
280-17784-11	J1JWP1	T	Solid	3550C	
280-17784-12	J1JWP2	T	Solid	3550C	
280-17784-13FD	J1JWP3	T	Solid	3550C	
<b>Analysis Batch: 280-76609</b>					
LCS 280-75971/2-A	Lab Control Sample	T	Solid	8081A	280-75971
MB 280-75971/1-A	Method Blank	T	Solid	8081A	280-75971
280-17784-1	J1JWN1	T	Solid	8081A	280-75971
280-17784-2	J1JWN2	T	Solid	8081A	280-75971
280-17784-3	J1JWN3	T	Solid	8081A	280-75971
280-17784-4	J1JWN4	T	Solid	8081A	280-75971
280-17784-4MS	Matrix Spike	T	Solid	8081A	280-75971
280-17784-4MSD	Matrix Spike Duplicate	T	Solid	8081A	280-75971
280-17784-5	J1JWN5	T	Solid	8081A	280-75971
280-17784-6	J1JWN6	T	Solid	8081A	280-75971
280-17784-7	J1JWN7	T	Solid	8081A	280-75971
280-17784-8	J1JWN8	T	Solid	8081A	280-75971
280-17784-9	J1JWN9	T	Solid	8081A	280-75971
280-17784-10	J1JWP0	T	Solid	8081A	280-75971
280-17784-11	J1JWP1	T	Solid	8081A	280-75971
280-17784-12	J1JWP2	T	Solid	8081A	280-75971
280-17784-13FD	J1JWP3	T	Solid	8081A	280-75971

## Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC Semi VOA</b>					
<b>Analysis Batch:280-76713</b>					
LCS 280-75746/2-A	Lab Control Sample	T	Solid	8082	280-75746
MB 280-75746/1-A	Method Blank	T	Solid	8082	280-75746
280-17784-1	J1JWN1	T	Solid	8082	280-75746
280-17784-2	J1JWN2	T	Solid	8082	280-75746
280-17784-3	J1JWN3	T	Solid	8082	280-75746
280-17784-4	J1JWN4	T	Solid	8082	280-75746
280-17784-5	J1JWN5	T	Solid	8082	280-75746
280-17784-7	J1JWN7	T	Solid	8082	280-75746
280-17784-8	J1JWN8	T	Solid	8082	280-75746
280-17784-9	J1JWN9	T	Solid	8082	280-75746
280-17784-10	J1JWP0	T	Solid	8082	280-75746
280-17784-10MS	Matrix Spike	T	Solid	8082	280-75746
280-17784-10MSD	Matrix Spike Duplicate	T	Solid	8082	280-75746
280-17784-11	J1JWP1	T	Solid	8082	280-75746
280-17784-12	J1JWP2	T	Solid	8082	280-75746
<b>Analysis Batch:280-76794</b>					
LCS 280-75750/2-A	Lab Control Sample	T	Solid	NWTPH-Dx	280-75750
LCSD 280-75750/3-A	Lab Control Sample Duplicate	T	Solid	NWTPH-Dx	280-75750
MB 280-75750/1-A	Method Blank	T	Solid	NWTPH-Dx	280-75750
280-17784-1	J1JWN1	T	Solid	NWTPH-Dx	280-75750
280-17784-2	J1JWN2	T	Solid	NWTPH-Dx	280-75750
280-17784-3	J1JWN3	T	Solid	NWTPH-Dx	280-75750
280-17784-4	J1JWN4	T	Solid	NWTPH-Dx	280-75750
280-17784-5	J1JWN5	T	Solid	NWTPH-Dx	280-75750
280-17784-6	J1JWN6	T	Solid	NWTPH-Dx	280-75750
280-17784-7	J1JWN7	T	Solid	NWTPH-Dx	280-75750
280-17784-8	J1JWN8	T	Solid	NWTPH-Dx	280-75750
280-17784-9	J1JWN9	T	Solid	NWTPH-Dx	280-75750
280-17784-10	J1JWP0	T	Solid	NWTPH-Dx	280-75750
280-17784-11	J1JWP1	T	Solid	NWTPH-Dx	280-75750
280-17784-11MS	Matrix Spike	T	Solid	NWTPH-Dx	280-75750
280-17784-11MSD	Matrix Spike Duplicate	T	Solid	NWTPH-Dx	280-75750
280-17784-12	J1JWP2	T	Solid	NWTPH-Dx	280-75750
280-17784-13FD	J1JWP3	T	Solid	NWTPH-Dx	280-75750
<b>Analysis Batch:280-77002</b>					
280-17784-6	J1JWN6	T	Solid	8082	280-75746
280-17784-13FD	J1JWP3	T	Solid	8082	280-75746

**Report Basis**

T = Total

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## Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Prep Batch: 280-75866</b>					
LCS 280-75866/2-A	Lab Control Sample	T	Solid	7471A	
MB 280-75866/1-A	Method Blank	T	Solid	7471A	
280-17784-1	J1JWN1	T	Solid	7471A	
280-17784-1DU	Duplicate	T	Solid	7471A	
280-17784-1MS	Matrix Spike	T	Solid	7471A	
280-17784-2	J1JWN2	T	Solid	7471A	
280-17784-3	J1JWN3	T	Solid	7471A	
280-17784-4	J1JWN4	T	Solid	7471A	
280-17784-5	J1JWN5	T	Solid	7471A	
280-17784-6	J1JWN6	T	Solid	7471A	
280-17784-7	J1JWN7	T	Solid	7471A	
280-17784-8	J1JWN8	T	Solid	7471A	
280-17784-9	J1JWN9	T	Solid	7471A	
280-17784-10	J1JWP0	T	Solid	7471A	
280-17784-11	J1JWP1	T	Solid	7471A	
280-17784-12	J1JWP2	T	Solid	7471A	
280-17784-13FD	J1JWP3	T	Solid	7471A	
280-17784-14EB	J1K405	T	Solid	7471A	
<b>Prep Batch: 280-75869</b>					
LCS 280-75869/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-75869/1-A	Method Blank	T	Solid	3050B	
280-17784-1	J1JWN1	T	Solid	3050B	
280-17784-1DU	Duplicate	T	Solid	3050B	
280-17784-1MS	Matrix Spike	T	Solid	3050B	
280-17784-2	J1JWN2	T	Solid	3050B	
280-17784-3	J1JWN3	T	Solid	3050B	
280-17784-4	J1JWN4	T	Solid	3050B	
280-17784-5	J1JWN5	T	Solid	3050B	
280-17784-6	J1JWN6	T	Solid	3050B	
280-17784-7	J1JWN7	T	Solid	3050B	
280-17784-8	J1JWN8	T	Solid	3050B	
280-17784-9	J1JWN9	T	Solid	3050B	
280-17784-10	J1JWP0	T	Solid	3050B	
280-17784-11	J1JWP1	T	Solid	3050B	
280-17784-12	J1JWP2	T	Solid	3050B	
280-17784-13FD	J1JWP3	T	Solid	3050B	
280-17784-14EB	J1K405	T	Solid	3050B	

## Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Analysis Batch:280-77004</b>					
LCS 280-75866/2-A	Lab Control Sample	T	Solid	7471A	280-75866
MB 280-75866/1-A	Method Blank	T	Solid	7471A	280-75866
280-17784-1	J1JWN1	T	Solid	7471A	280-75866
280-17784-1DU	Duplicate	T	Solid	7471A	280-75866
280-17784-1MS	Matrix Spike	T	Solid	7471A	280-75866
280-17784-2	J1JWN2	T	Solid	7471A	280-75866
280-17784-3	J1JWN3	T	Solid	7471A	280-75866
280-17784-4	J1JWN4	T	Solid	7471A	280-75866
280-17784-5	J1JWN5	T	Solid	7471A	280-75866
280-17784-6	J1JWN6	T	Solid	7471A	280-75866
280-17784-7	J1JWN7	T	Solid	7471A	280-75866
280-17784-8	J1JWN8	T	Solid	7471A	280-75866
280-17784-9	J1JWN9	T	Solid	7471A	280-75866
280-17784-10	J1JWP0	T	Solid	7471A	280-75866
280-17784-11	J1JWP1	T	Solid	7471A	280-75866
280-17784-12	J1JWP2	T	Solid	7471A	280-75866
280-17784-13FD	J1JWP3	T	Solid	7471A	280-75866
280-17784-14EB	J1K405	T	Solid	7471A	280-75866
<b>Analysis Batch:280-77011</b>					
LCS 280-75869/2-A	Lab Control Sample	T	Solid	6010B	280-75869
MB 280-75869/1-A	Method Blank	T	Solid	6010B	280-75869
280-17784-1	J1JWN1	T	Solid	6010B	280-75869
280-17784-1DU	Duplicate	T	Solid	6010B	280-75869
280-17784-1MS	Matrix Spike	T	Solid	6010B	280-75869
280-17784-2	J1JWN2	T	Solid	6010B	280-75869
280-17784-3	J1JWN3	T	Solid	6010B	280-75869
280-17784-4	J1JWN4	T	Solid	6010B	280-75869
280-17784-5	J1JWN5	T	Solid	6010B	280-75869
280-17784-6	J1JWN6	T	Solid	6010B	280-75869
280-17784-7	J1JWN7	T	Solid	6010B	280-75869
280-17784-8	J1JWN8	T	Solid	6010B	280-75869
280-17784-9	J1JWN9	T	Solid	6010B	280-75869
280-17784-10	J1JWP0	T	Solid	6010B	280-75869
280-17784-11	J1JWP1	T	Solid	6010B	280-75869
280-17784-12	J1JWP2	T	Solid	6010B	280-75869
280-17784-13FD	J1JWP3	T	Solid	6010B	280-75869
280-17784-14EB	J1K405	T	Solid	6010B	280-75869

**Report Basis**

T = Total

## Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-75711</b>					
280-17784-1	J1JWN1	T	Solid	D-2216	
280-17784-1DU	Duplicate	T	Solid	D-2216	
280-17784-2	J1JWN2	T	Solid	D-2216	
280-17784-3	J1JWN3	T	Solid	D-2216	
280-17784-4	J1JWN4	T	Solid	D-2216	
280-17784-5	J1JWN5	T	Solid	D-2216	
280-17784-6	J1JWN6	T	Solid	D-2216	
280-17784-7	J1JWN7	T	Solid	D-2216	
280-17784-8	J1JWN8	T	Solid	D-2216	
280-17784-9	J1JWN9	T	Solid	D-2216	
280-17784-10	J1JWP0	T	Solid	D-2216	
280-17784-11	J1JWP1	T	Solid	D-2216	
280-17784-12	J1JWP2	T	Solid	D-2216	
280-17784-13FD	J1JWP3	T	Solid	D-2216	
280-17784-14EB	J1K405	T	Solid	D-2216	

#### Report Basis

T = Total

**Quality Control Results**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Method Blank - Batch: 280-75667**

**Method: 8260B  
Preparation: 5035**

Lab Sample ID: MB 280-75667/2-A  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/11/2011 2129  
Prep Date: 07/08/2011 1120  
Leach Date: N/A

Analysis Batch: 280-76282  
Prep Batch: 280-75667  
Leach Batch: N/A  
Units: ug/Kg

Instrument ID: MSV\_J  
Lab File ID: J7905.D  
Initial Weight/Volume: 5.002 g  
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	5.4	U	5.4	20
Benzene	0.47	U	0.47	5.0
Bromodichloromethane	0.22	U	0.22	5.0
Bromoform	0.23	U	0.23	5.0
Bromomethane	0.50	U	0.50	10
2-Butanone (MEK)	1.8	U	1.8	10
Carbon disulfide	0.752	J	0.42	5.0
Carbon tetrachloride	0.63	U	0.63	5.0
Chlorobenzene	0.54	U	0.54	5.0
Dibromochloromethane	0.57	U	0.57	5.0
Chloroethane	0.89	U	0.89	10
Chloroform	0.29	U	0.29	5.0
Chloromethane	0.77	U	0.77	10
1,3-Dichlorobenzene	0.48	U	0.48	5.0
1,1-Dichloroethane	0.21	U	0.21	5.0
1,2-Dichloroethane	0.70	U	0.70	5.0
trans-1,2-Dichloroethene	0.39	U	0.39	2.5
1,1-Dichloroethene	0.59	U	0.59	5.0
1,2-Dichloroethene, Total	0.39	U	0.39	5.0
1,2-Dichloropropane	0.55	U	0.55	5.0
cis-1,3-Dichloropropene	1.3	U	1.3	5.0
trans-1,3-Dichloropropene	0.67	U	0.67	5.0
Ethylbenzene	0.67	U	0.67	5.0
2-Hexanone	4.9	U	4.9	20
Methylene Chloride	0.75	U	0.75	5.0
4-Methyl-2-pentanone (MIBK)	4.4	U	4.4	10
Styrene	0.63	U	0.63	5.0
1,1,2,2-Tetrachloroethane	0.61	U	0.61	5.0
Tetrachloroethene	0.59	U	0.59	5.0
Toluene	0.69	U	0.69	5.0
1,1,1-Trichloroethane	0.52	U	0.52	5.0
1,1,2-Trichloroethane	0.88	U	0.88	5.0
Trichloroethene	0.23	U	0.23	5.0
Vinyl chloride	1.3	U	1.3	5.0
Xylenes, Total	0.61	U	0.61	5.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	91	58 - 140
Toluene-d8 (Surr)	99	80 - 126
4-Bromofluorobenzene (Surr)	99	76 - 127
Dibromofluoromethane (Surr)	97	75 - 121

**Quality Control Results**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Method Blank TICs- Batch: 280-75667**

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

**Quality Control Results**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Lab Control Sample - Batch: 280-75667**

**Method: 8260B**  
**Preparation: 5035**

Lab Sample ID:	LCS 280-75667/3-A	Analysis Batch:	280-76282	Instrument ID:	MSV_J
Client Matrix:	Solid	Prep Batch:	280-75667	Lab File ID:	J7901.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	07/11/2011 1959	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	07/08/2011 1120				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	50.0	54.0	108	76 - 120	
Bromodichloromethane	50.0	53.7	107	74 - 125	
Carbon tetrachloride	50.0	58.2	116	69 - 147	
Chlorobenzene	50.0	52.8	106	74 - 120	
Chloroform	50.0	53.7	107	77 - 125	
1,3-Dichlorobenzene	50.0	58.0	116	74 - 120	
1,1-Dichloroethane	50.0	52.8	106	74 - 120	
trans-1,2-Dichloroethene	50.0	57.7	115	80 - 127	
1,1-Dichloroethene	50.0	61.4	123	77 - 143	
1,2-Dichloropropane	50.0	52.2	104	74 - 120	
Ethylbenzene	50.0	53.5	107	78 - 120	
Methylene Chloride	50.0	56.3	113	76 - 137	
Tetrachloroethene	50.0	56.9	114	71 - 120	
Toluene	50.0	56.1	112	72 - 120	
1,1,1-Trichloroethane	50.0	55.1	110	67 - 143	
Trichloroethene	50.0	57.2	114	78 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	107	58 - 140
Toluene-d8 (Surr)	120	80 - 126
4-Bromofluorobenzene (Surr)	109	76 - 127
Dibromofluoromethane (Surr)	110	75 - 121

**Lab Control Sample - Batch: 280-75667**

**Method: 8260B**  
**Preparation: 5035**

Lab Sample ID:	LCS 280-75667/3-A	Analysis Batch:	280-76612	Instrument ID:	MSV_J
Client Matrix:	Solid	Prep Batch:	280-75667	Lab File ID:	J7934.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	07/12/2011 0836	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	07/08/2011 1120				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	50.0	46.2	92	76 - 120	
Bromodichloromethane	50.0	47.2	94	74 - 125	
Carbon tetrachloride	50.0	50.1	100	69 - 147	
Chlorobenzene	50.0	47.3	95	74 - 120	
Chloroform	50.0	46.7	93	77 - 125	
1,3-Dichlorobenzene	50.0	46.3	93	74 - 120	

**Quality Control Results**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Lab Control Sample - Batch: 280-75667**

**Method: 8260B  
Preparation: 5035**

Lab Sample ID: LCS 280-75667/3-A  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/12/2011 0836  
Prep Date: 07/08/2011 1120  
Leach Date: N/A

Analysis Batch: 280-76612  
Prep Batch: 280-75667  
Leach Batch: N/A  
Units: ug/Kg

Instrument ID: MSV\_J  
Lab File ID: J7934.D  
Initial Weight/Volume: 5 g  
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethane	50.0	45.2	90	74 - 120	
trans-1,2-Dichloroethene	50.0	49.7	99	80 - 127	
1,1-Dichloroethene	50.0	52.0	104	77 - 143	
1,2-Dichloropropane	50.0	45.4	91	74 - 120	
Ethylbenzene	50.0	45.3	91	78 - 120	
Methylene Chloride	50.0	49.0	98	76 - 137	
Tetrachloroethene	50.0	49.8	100	71 - 120	
Toluene	50.0	47.9	96	72 - 120	
1,1,1-Trichloroethane	50.0	47.6	95	67 - 143	
Trichloroethene	50.0	49.1	98	78 - 120	
<b>Surrogate</b>		<b>% Rec</b>		<b>Acceptance Limits</b>	
1,2-Dichloroethane-d4 (Surr)		97		58 - 140	
Toluene-d8 (Surr)		109		80 - 126	
4-Bromofluorobenzene (Surr)		97		76 - 127	
Dibromofluoromethane (Surr)		98		75 - 121	

## Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Matrix Spike/**

**Matrix Spike Duplicate Recovery Report - Batch: 280-75667**

**Method: 8260B**

**Preparation: 5035**

MS Lab Sample ID: 280-17784-5  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/12/2011 0248  
Prep Date: 07/08/2011 1136  
Leach Date: N/A

Analysis Batch: 280-76282  
Prep Batch: 280-75667  
Leach Batch: N/A

Instrument ID: MSV\_J  
Lab File ID: J7919.D  
Initial Weight/Volume: 4.702 g  
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 280-17784-5  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/12/2011 0311  
Prep Date: 07/08/2011 1136  
Leach Date: N/A

Analysis Batch: 280-76282  
Prep Batch: 280-75667  
Leach Batch: N/A

Instrument ID: MSV\_J  
Lab File ID: J7920.D  
Initial Weight/Volume: 4.599 g  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Benzene	76	70	76 - 120	6	20		T
Bromodichloromethane	83	77	74 - 125	5	20		
Carbon tetrachloride	77	69	69 - 147	8	20		
Chlorobenzene	75	71	74 - 120	3	20		T
Chloroform	78	72	77 - 125	6	20		T
1,3-Dichlorobenzene	78	67	74 - 120	13	20		T
1,1-Dichloroethane	75	70	74 - 120	6	20		T
trans-1,2-Dichloroethene	77	71	80 - 127	6	20	T	T
1,1-Dichloroethene	81	73	77 - 143	8	20		T
1,2-Dichloropropane	79	73	74 - 120	6	20		T
Ethylbenzene	73	66	78 - 120	7	20	T	T
Methylene Chloride	83	77	76 - 137	6	21		
Tetrachloroethene	70	64	71 - 120	6	20	T	T
Toluene	78	72	72 - 120	6	20		
1,1,1-Trichloroethane	74	68	67 - 143	6	20		
Trichloroethene	82	74	78 - 120	8	20		T
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
1,2-Dichloroethane-d4 (Surr)	94		89	58 - 140			
Toluene-d8 (Surr)	96		96	80 - 126			
4-Bromofluorobenzene (Surr)	90		85	76 - 127			
Dibromofluoromethane (Surr)	93		88	75 - 121			

**Quality Control Results**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-75667**

**Method: 8260B  
Preparation: 5035**

MS Lab Sample ID: 280-17784-7  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/12/2011 1417  
Prep Date: 07/08/2011 1136  
Leach Date: N/A

Analysis Batch: 280-76612  
Prep Batch: 280-75667  
Leach Batch: N/A

Instrument ID: MSV\_J  
Lab File ID: J7949.D  
Initial Weight/Volume: 4.64 g  
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 280-17784-7  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/12/2011 1440  
Prep Date: 07/08/2011 1136  
Leach Date: N/A

Analysis Batch: 280-76612  
Prep Batch: 280-75667  
Leach Batch: N/A

Instrument ID: MSV\_J  
Lab File ID: J7950.D  
Initial Weight/Volume: 4.336 g  
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Benzene	80	98	76 - 120	26	20		*
Bromodichloromethane	87	103	74 - 125	23	20		*
Carbon tetrachloride	83	101	69 - 147	27	20		*
Chlorobenzene	80	96	74 - 120	25	20		*
Chloroform	83	99	77 - 125	24	20		*
1,3-Dichlorobenzene	83	100	74 - 120	25	20		*
1,1-Dichloroethane	79	96	74 - 120	26	20		*
trans-1,2-Dichloroethene	81	99	80 - 127	27	20		*
1,1-Dichloroethene	85	103	77 - 143	26	20		*
1,2-Dichloropropane	83	99	74 - 120	25	20		*
Ethylbenzene	76	93	78 - 120	26	20	T	*
Methylene Chloride	84	104	76 - 137	28	21		*
Tetrachloroethene	77	93	71 - 120	26	20		*
Toluene	83	101	72 - 120	26	20		*
1,1,1-Trichloroethane	80	98	67 - 143	27	20		*
Trichloroethene	84	101	78 - 120	26	20		*
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
1,2-Dichloroethane-d4 (Surr)	93		105	58 - 140			
Toluene-d8 (Surr)	95		109	80 - 126			
4-Bromofluorobenzene (Surr)	88		101	76 - 127			
Dibromofluoromethane (Surr)	93		106	75 - 121			

## Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Method Blank - Batch: 280-75733**

**Method: 8270C**  
**Preparation: 3550C**

Lab Sample ID: MB 280-75733/1-A  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/11/2011 1221  
Prep Date: 07/08/2011 1607  
Leach Date: N/A

Analysis Batch: 280-76164  
Prep Batch: 280-75733  
Leach Batch: N/A  
Units: ug/Kg

Instrument ID: MSS\_D  
Lab File ID: D5116.D  
Initial Weight/Volume: 31.1 g  
Final Weight/Volume: 1000 uL  
Injection Volume: 0.5 uL

Analyte	Result	Qual	MDL	RL
Acenaphthene	9.9	U	9.9	320
Acenaphthylene	16	U	16	320
Anthracene	16	U	16	320
Benzo[a]anthracene	19	U	19	320
Benzo[a]pyrene	19	U	19	320
Benzo[b]fluoranthene	25	U	25	320
Benzo[ghi]perylene	15	U	15	320
Benzo[k]fluoranthene	39	U	39	320
Bis(2-chloroethoxy)methane	22	U	22	320
Bis(2-chloroethyl)ether	16	U	16	320
bis (2-chloroisopropyl) ether	22	U	22	320
Bis(2-ethylhexyl) phthalate	44	U	44	320
4-Bromophenyl phenyl ether	18	U	18	320
Butyl benzyl phthalate	41	U	41	320
Carbazole	35	U	35	320
4-Chloroaniline	79	U	79	320
4-Chloro-3-methylphenol	64	U	64	320
2-Chloronaphthalene	9.6	U	9.6	320
2-Chlorophenol	20	U	20	320
4-Chlorophenyl phenyl ether	20	U	20	320
Chrysene	26	U	26	320
Dibenz(a,h)anthracene	18	U	18	320
Dibenzofuran	19	U	19	320
1,2-Dichlorobenzene	21	U	21	320
1,3-Dichlorobenzene	12	U	12	320
1,4-Dichlorobenzene	13	U	13	320
3,3'-Dichlorobenzidine	87	U	87	640
2,4-Dichlorophenol	9.6	U	9.6	320
Diethyl phthalate	25	U	25	320
2,4-Dimethylphenol	64	U	64	320
Dimethyl phthalate	22	U	22	320
Di-n-butyl phthalate	28	U	28	320
4,6-Dinitro-2-methylphenol	320	U	320	640
2,4-Dinitrophenol	320	U	320	800
2,4-Dinitrotoluene	64	U	64	320
2,6-Dinitrotoluene	27	U	27	320
Di-n-octyl phthalate	14	U	14	320
Fluoranthene	35	U	35	320
Fluorene	17	U	17	320
Hexachlorobenzene	28	U	28	320
Hexachlorobutadiene	9.6	U	9.6	320
Hexachlorocyclopentadiene	48	U	48	320
Hexachloroethane	21	U	21	320
Indeno[1,2,3-cd]pyrene	21	U	21	320
Isophorone	16	U	16	320

**Quality Control Results**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Method Blank - Batch: 280-75733**

**Method: 8270C**  
**Preparation: 3550C**

Lab Sample ID: MB 280-75733/1-A  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/11/2011 1221  
Prep Date: 07/08/2011 1607  
Leach Date: N/A

Analysis Batch: 280-76164  
Prep Batch: 280-75733  
Leach Batch: N/A  
Units: ug/Kg

Instrument ID: MSS\_D  
Lab File ID: D5116.D  
Initial Weight/Volume: 31.1 g  
Final Weight/Volume: 1000 uL  
Injection Volume: 0.5 uL

Analyte	Result	Qual	MDL	RL
2-Methylnaphthalene	18	U	18	320
2-Methylphenol	13	U	13	320
3 & 4 Methylphenol	32	U	32	320
Naphthalene	30	U	30	320
2-Nitroaniline	48	U	48	320
3-Nitroaniline	70	U	70	320
4-Nitroaniline	70	U	70	320
Nitrobenzene	21	U	21	320
2-Nitrophenol	9.6	U	9.6	320
4-Nitrophenol	94	U	94	640
N-Nitrosodi-n-propylamine	30	U	30	320
N-Nitrosodiphenylamine	20	U	20	320
Pentachlorophenol	320	U	320	640
Phenanthrene	16	U	16	320
Phenol	20.6	J	17	320
Pyrene	12	U	12	320
1,2,4-Trichlorobenzene	27	U	27	320
2,4,5-Trichlorophenol	9.6	U	9.6	320
2,4,6-Trichlorophenol	9.6	U	9.6	320

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	86	50 - 120
2-Fluorophenol	94	53 - 120
Nitrobenzene-d5	90	50 - 120
Phenol-d5	92	52 - 120
Terphenyl-d14	112	55 - 120
2,4,6-Tribromophenol	89	51 - 120

**Method Blank TICs- Batch: 280-75733**

Cas Number	Analyte	RT	Est. Result	Qual
	Unknown	2.60	3630	N J

**Quality Control Results**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Lab Control Sample - Batch: 280-75733**

**Method: 8270C  
Preparation: 3550C**

Lab Sample ID: LCS 280-75733/2-A  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/11/2011 1240  
Prep Date: 07/08/2011 1607  
Leach Date: N/A

Analysis Batch: 280-76164  
Prep Batch: 280-75733  
Leach Batch: N/A  
Units: ug/Kg

Instrument ID: MSS\_D  
Lab File ID: D5117.D  
Initial Weight/Volume: 31.5 g  
Final Weight/Volume: 1000 uL  
Injection Volume: 0.5 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	2540	2260	89	52 - 120	
Anthracene	2540	2620	103	57 - 120	
Carbazole	2540	2510	99	54 - 120	
4-Chloro-3-methylphenol	2540	2370	93	57 - 120	
2-Chlorophenol	2540	2160	85	53 - 120	
1,4-Dichlorobenzene	2540	2010	79	46 - 120	
2,4-Dinitrotoluene	2540	2430	96	53 - 120	
2-Methylnaphthalene	2540	2110	83	55 - 120	
2-Methylphenol	2540	2230	88	51 - 120	
4-Nitrophenol	2540	2470	97	41 - 120	
N-Nitrosodi-n-propylamine	2540	2410	95	51 - 120	
Pentachlorophenol	2540	1940	76	30 - 120	
Phenol	2540	2330	92	54 - 120	
Pyrene	2540	2620	103	50 - 120	
1,2,4-Trichlorobenzene	2540	1810	71	50 - 120	
2,4,6-Trichlorophenol	2540	2160	85	50 - 120	
Surrogate			% Rec	Acceptance Limits	
2-Fluorobiphenyl			91	50 - 120	
2-Fluorophenol			99	53 - 120	
Nitrobenzene-d5			91	50 - 120	
Phenol-d5			101	52 - 120	
Terphenyl-d14			109	55 - 120	
2,4,6-Tribromophenol			98	51 - 120	

## Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

**Matrix Spike/**

**Matrix Spike Duplicate Recovery Report - Batch: 280-75733**

**Method: 8270C**

**Preparation: 3550C**

MS Lab Sample ID: 280-17784-13  
 Client Matrix: Solid  
 Dilution: 1.0  
 Analysis Date: 07/11/2011 1608  
 Prep Date: 07/08/2011 1607  
 Leach Date: N/A

Analysis Batch: 280-76164  
 Prep Batch: 280-75733  
 Leach Batch: N/A

Instrument ID: MSS\_D  
 Lab File ID: D5128.D  
 Initial Weight/Volume: 31.8 g  
 Final Weight/Volume: 1000 uL  
 Injection Volume: 0.5 uL

MSD Lab Sample ID: 280-17784-13  
 Client Matrix: Solid  
 Dilution: 1.0  
 Analysis Date: 07/11/2011 1626  
 Prep Date: 07/08/2011 1607  
 Leach Date: N/A

Analysis Batch: 280-76164  
 Prep Batch: 280-75733  
 Leach Batch: N/A

Instrument ID: MSS\_D  
 Lab File ID: D5129.D  
 Initial Weight/Volume: 30.4 g  
 Final Weight/Volume: 1000 uL  
 Injection Volume: 0.5 uL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Acenaphthene	86	85	52 - 120	3	30		
Anthracene	97	99	57 - 120	7	30		
Carbazole	93	96	54 - 120	7	30		
4-Chloro-3-methylphenol	91	90	57 - 120	3	30		
2-Chlorophenol	77	74	53 - 120	1	30		
1,4-Dichlorobenzene	70	70	46 - 120	5	30		
2,4-Dinitrotoluene	89	89	53 - 120	5	30		
2-Methylnaphthalene	79	76	55 - 120	0	30		
2-Methylphenol	84	80	51 - 120	0	30		
4-Nitrophenol	89	87	41 - 120	2	30		
N-Nitrosodi-n-propylamine	89	87	51 - 120	2	30		
Pentachlorophenol	69	72	30 - 120	8	30		
Phenol	85	82	54 - 120	0	30		
Pyrene	100	102	50 - 120	7	38		
1,2,4-Trichlorobenzene	65	63	50 - 120	3	30		
2,4,6-Trichlorophenol	82	82	50 - 120	4	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl	89	85	50 - 120
2-Fluorophenol	89	88	53 - 120
Nitrobenzene-d5	85	83	50 - 120
Phenol-d5	92	89	52 - 120
Terphenyl-d14	104	105	55 - 120
2,4,6-Tribromophenol	92	93	51 - 120

**Quality Control Results**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Method Blank - Batch: 280-75971**

**Method: 8081A**  
**Preparation: 3550C**

Lab Sample ID: MB 280-75971/1-A  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/14/2011 0005  
Prep Date: 07/11/2011 1340  
Leach Date: N/A

Analysis Batch: 280-76609  
Prep Batch: 280-75971  
Leach Batch: N/A  
Units: ug/Kg

Instrument ID: GCS\_P1  
Lab File ID: 029F2901.D  
Initial Weight/Volume: 31.3 g  
Final Weight/Volume: 10000 uL  
Injection Volume: 1 uL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	0.52	U	0.52	1.6
4,4'-DDE	0.23	U	0.23	1.6
4,4'-DDT	0.57	U	0.57	1.6
Aldrin	0.24	U	0.24	1.6
alpha-BHC	0.21	U	0.21	1.6
beta-BHC	0.64	U	0.64	1.6
delta-BHC	0.38	U	0.38	1.6
gamma-BHC (Lindane)	0.44	U	0.44	1.6
Heptachlor	0.21	U	0.21	1.6
Heptachlor epoxide	0.41	U	0.41	1.6
Endosulfan I	0.17	U	0.17	1.6
Endosulfan II	0.28	U	0.28	1.6
Endosulfan sulfate	0.26	U	0.26	1.6
Endrin	0.29	U	0.29	1.6
Endrin aldehyde	0.16	U	0.16	1.6
Endrin ketone	0.47	U	0.47	1.6
gamma-Chlordane	0.25	U	0.25	1.6
Methoxychlor	0.43	U	0.43	3.2
alpha-Chlordane	0.31	U	0.31	1.6
Dieldrin	0.20	U	0.20	1.6
Toxaphene	15	U	15	160

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	86	59 - 115
Decachlorobiphenyl	99	63 - 124

**Quality Control Results**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Lab Control Sample - Batch: 280-75971**

**Method: 8081A**  
**Preparation: 3550C**

Lab Sample ID: LCS 280-75971/2-A  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/13/2011 2226  
Prep Date: 07/11/2011 1340  
Leach Date: N/A

Analysis Batch: 280-76609  
Prep Batch: 280-75971  
Leach Batch: N/A  
Units: ug/Kg

Instrument ID: GCS\_P1  
Lab File ID: 023F2301.D  
Initial Weight/Volume: 30.0 g  
Final Weight/Volume: 10000 uL  
Injection Volume: 1 uL  
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	16.7	14.4	87	57 - 118	
4,4'-DDE	16.7	14.4	86	61 - 115	
4,4'-DDT	16.7	13.4	80	53 - 125	
Aldrin	16.7	13.7	82	60 - 115	
alpha-BHC	16.7	14.1	85	54 - 115	
beta-BHC	16.7	14.3	86	58 - 115	
delta-BHC	16.7	14.0	84	62 - 115	
gamma-BHC (Lindane)	16.7	14.2	85	59 - 115	
Heptachlor	16.7	14.4	87	61 - 115	
Heptachlor epoxide	16.7	14.5	87	62 - 112	
Endosulfan I	16.7	14.2	85	55 - 115	
Endosulfan II	16.7	14.5	87	60 - 115	
Endosulfan sulfate	16.7	14.7	88	58 - 118	
Endrin	16.7	16.9	101	61 - 121	
Endrin aldehyde	16.7	13.0	78	54 - 115	
Endrin ketone	16.7	13.5	81	61 - 118	
gamma-Chlordane	16.7	14.4	86	60 - 115	
Methoxychlor	16.7	14.7	88	52 - 123	
alpha-Chlordane	16.7	13.9	83	60 - 115	
Dieldrin	16.7	14.7	88	63 - 117	
Surrogate		% Rec		Acceptance Limits	
Tetrachloro-m-xylene		84		59 - 115	
Decachlorobiphenyl		94		63 - 124	

## Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Matrix Spike/**

**Matrix Spike Duplicate Recovery Report - Batch: 280-75971**

**Method: 8081A**

**Preparation: 3550C**

MS Lab Sample ID: 280-17784-4  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/14/2011 0357  
Prep Date: 07/11/2011 1340  
Leach Date: N/A

Analysis Batch: 280-76609  
Prep Batch: 280-75971  
Leach Batch: N/A

Instrument ID: GCS\_P1  
Lab File ID: 043F4301.D  
Initial Weight/Volume: 30.6 g  
Final Weight/Volume: 10000 uL  
Injection Volume: 1 uL  
Column ID: PRIMARY

MSD Lab Sample ID: 280-17784-4  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/14/2011 0413  
Prep Date: 07/11/2011 1340  
Leach Date: N/A

Analysis Batch: 280-76609  
Prep Batch: 280-75971  
Leach Batch: N/A

Instrument ID: GCS\_P1  
Lab File ID: 044F4401.D  
Initial Weight/Volume: 31.0 g  
Final Weight/Volume: 10000 uL  
Injection Volume: 1 uL  
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
4,4'-DDD	84	77	57 - 118	10	20		
4,4'-DDE	83	81	61 - 115	4	15		
4,4'-DDT	80	72	53 - 125	12	29		
Aldrin	84	83	60 - 115	2	50		
alpha-BHC	86	84	54 - 115	3	17		
beta-BHC	83	73	58 - 115	14	17		
delta-BHC	84	68	62 - 115	22	19		*
gamma-BHC (Lindane)	86	84	59 - 115	4	24		
Heptachlor	89	88	61 - 115	2	18		
Heptachlor epoxide	88	86	62 - 112	4	18		
Endosulfan I	86	83	55 - 115	5	26		
Endosulfan II	86	69	60 - 115	23	20		*
Endosulfan sulfate	80	60	58 - 118	31	22		*
Endrin	101	97	61 - 121	5	30		
Endrin aldehyde	79	63	54 - 115	24	29		
Endrin ketone	76	62	61 - 118	21	20		*
gamma-Chlordane	85	84	60 - 115	3	21		
Methoxychlor	84	64	52 - 123	28	23		*
alpha-Chlordane	83	82	60 - 115	2	18		
Dieldrin	88	85	63 - 117	5	25		
Surrogate		MS % Rec	MSD % Rec	Acceptance Limits			
Tetrachloro-m-xylene		87	85	59 - 115			
Decachlorobiphenyl		93	93	63 - 124			

**Quality Control Results**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Method Blank - Batch: 280-75746**

**Method: 8082**  
**Preparation: 3550C**

Lab Sample ID: MB 280-75746/1-A  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/14/2011 1300  
Prep Date: 07/08/2011 1724  
Leach Date: N/A

Analysis Batch: 280-76713  
Prep Batch: 280-75746  
Leach Batch: N/A  
Units: ug/Kg

Instrument ID: GCS\_W  
Lab File ID: 004F0401.D  
Initial Weight/Volume: 30.8 g  
Final Weight/Volume: 5000 uL  
Injection Volume: 1 uL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	2.7	U	2.7	9.7
Aroclor 1221	7.8	U	7.8	16
Aroclor 1232	1.9	U	1.9	9.7
Aroclor 1242	4.5	U	4.5	9.7
Aroclor 1248	4.5	U	4.5	9.7
Aroclor 1254	2.5	U	2.5	9.7
Aroclor 1260	2.5	U	2.5	9.7

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	97	59 - 130
Tetrachloro-m-xylene	92	53 - 128

**Lab Control Sample - Batch: 280-75746**

**Method: 8082**  
**Preparation: 3550C**

Lab Sample ID: LCS 280-75746/2-A  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/14/2011 1332  
Prep Date: 07/08/2011 1724  
Leach Date: N/A

Analysis Batch: 280-76713  
Prep Batch: 280-75746  
Leach Batch: N/A  
Units: ug/Kg

Instrument ID: GCS\_W  
Lab File ID: 005F0501.D  
Initial Weight/Volume: 30.3 g  
Final Weight/Volume: 5000 uL  
Injection Volume: 1 uL  
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	33.0	34.7	105	54 - 132	
Aroclor 1260	33.0	35.8	108	62 - 129	

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	95	59 - 130
Tetrachloro-m-xylene	91	53 - 128

**Quality Control Results**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Matrix Spike/**

**Matrix Spike Duplicate Recovery Report - Batch: 280-75746**

**Method: 8082**

**Preparation: 3550C**

MS Lab Sample ID: 280-17784-10  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/14/2011 2026  
Prep Date: 07/08/2011 1724  
Leach Date: N/A

Analysis Batch: 280-76713  
Prep Batch: 280-75746  
Leach Batch: N/A

Instrument ID: GCS\_W  
Lab File ID: 018F1801.D  
Initial Weight/Volume: 32.7 g  
Final Weight/Volume: 5000 uL  
Injection Volume: 1 uL  
Column ID: PRIMARY

MSD Lab Sample ID: 280-17784-10  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/14/2011 2057  
Prep Date: 07/08/2011 1724  
Leach Date: N/A

Analysis Batch: 280-76713  
Prep Batch: 280-75746  
Leach Batch: N/A

Instrument ID: GCS\_W  
Lab File ID: 019F1901.D  
Initial Weight/Volume: 32.6 g  
Final Weight/Volume: 5000 uL  
Injection Volume: 1 uL  
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Aroclor 1016	108	109	54 - 132	1	26		
Aroclor 1260	107	103	62 - 129	3	26		
Surrogate		MS % Rec	MSD % Rec			Acceptance Limits	
Decachlorobiphenyl		80	85			59 - 130	
Tetrachloro-m-xylene		89	89			53 - 128	

**Quality Control Results**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Method Blank - Batch: 280-75750**

**Method: NWTPH-Dx  
Preparation: 3550C**

Lab Sample ID:	MB 280-75750/1-A	Analysis Batch:	280-76794	Instrument ID:	GCS_U2
Client Matrix:	Solid	Prep Batch:	280-75750	Lab File ID:	040F4001.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.2 g
Analysis Date:	07/15/2011 0950	Units:	ug/Kg	Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 2320			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
C10-C36	990	U	990	4000
C10-C28	681	J	670	4000
Surrogate	% Rec		Acceptance Limits	
o-Terphenyl	98		49 - 115	

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-75750**

**Method: NWTPH-Dx  
Preparation: 3550C**

LCS Lab Sample ID:	LCS 280-75750/2-A	Analysis Batch:	280-76794	Instrument ID:	GCS_U2
Client Matrix:	Solid	Prep Batch:	280-75750	Lab File ID:	021F2101.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.3 g
Analysis Date:	07/14/2011 2331	Units:	ug/Kg	Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 2320			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-75750/3-A	Analysis Batch:	280-76794	Instrument ID:	GCS_U2
Client Matrix:	Solid	Prep Batch:	280-75750	Lab File ID:	022F2201.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.9 g
Analysis Date:	07/15/2011 0004	Units:	ug/Kg	Final Weight/Volume:	1000 uL
Prep Date:	07/08/2011 2320			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
C10-C36	78	94	57 - 115	17	23		
C10-C28	77	93	53 - 115	17	23		
Surrogate	LCS % Rec		LCSD % Rec	Acceptance Limits			
o-Terphenyl	97		101	49 - 115			

**Quality Control Results**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-75750**

**Method: NWTPH-Dx  
Preparation: 3550C**

MS Lab Sample ID: 280-17784-11  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/15/2011 0707  
Prep Date: 07/08/2011 2320  
Leach Date: N/A

Analysis Batch: 280-76794  
Prep Batch: 280-75750  
Leach Batch: N/A

Instrument ID: GCS\_U2  
Lab File ID: 035F3501.D  
Initial Weight/Volume: 31.0 g  
Final Weight/Volume: 1000 uL  
Injection Volume: 1 uL

MSD Lab Sample ID: 280-17784-11  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/15/2011 0739  
Prep Date: 07/08/2011 2320  
Leach Date: N/A

Analysis Batch: 280-76794  
Prep Batch: 280-75750  
Leach Batch: N/A

Instrument ID: GCS\_U2  
Lab File ID: 036F3601.D  
Initial Weight/Volume: 31.1 g  
Final Weight/Volume: 1000 uL  
Injection Volume: 1 uL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
C10-C36	75	83	57 - 115	10	23		
C10-C28	75	84	56 - 115	10	23		
Surrogate		MS % Rec	MSD % Rec			Acceptance Limits	
o-Terphenyl		95	95			49 - 115	

**Quality Control Results**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Method Blank - Batch: 280-75869**

**Method: 6010B**  
**Preparation: 3050B**

Lab Sample ID: MB 280-75869/1-A  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/15/2011 1920  
Prep Date: 07/15/2011 0730  
Leach Date: N/A

Analysis Batch: 280-77011  
Prep Batch: 280-75869  
Leach Batch: N/A  
Units: mg/Kg

Instrument ID: MT\_025  
Lab File ID: 25A4071511.asc  
Initial Weight/Volume: 1 g  
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDL	RL
Aluminum	1.6	U	1.6	5.0
Antimony	0.38	U	0.38	1.5
Arsenic	0.66	U	0.66	2.0
Barium	0.076	U	0.076	1.0
Beryllium	0.033	U	0.033	0.50
Boron	0.98	U	0.98	2.0
Cadmium	0.041	U	0.041	0.50
Calcium	14.1	U	14.1	50.0
Chromium	0.058	U	0.058	1.0
Cobalt	0.10	U	0.10	1.0
Copper	0.22	U	0.22	1.0
Iron	3.8	U	3.8	5.0
Lead	0.27	U	0.27	0.80
Magnesium	3.7	U	3.7	20.0
Manganese	0.10	U	0.10	1.0
Molybdenum	0.26	U	0.26	2.0
Nickel	0.12	U	0.12	4.0
Potassium	41.0	U	41.0	300
Selenium	0.86	U	0.86	1.3
Silicon	5.7	U	5.7	10.0
Silver	0.16	U	0.16	1.0
Sodium	59.0	U	59.0	120
Vanadium	0.094	U	0.094	2.0
Zinc	0.40	U	0.40	1.0

## Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-17784-1

Sdg Number: J01162

**Lab Control Sample - Batch: 280-75869**

**Method: 6010B**

**Preparation: 3050B**

Lab Sample ID: LCS 280-75869/2-A  
 Client Matrix: Solid  
 Dilution: 1.0  
 Analysis Date: 07/15/2011 1922  
 Prep Date: 07/15/2011 0730  
 Leach Date: N/A

Analysis Batch: 280-77011  
 Prep Batch: 280-75869  
 Leach Batch: N/A  
 Units: mg/Kg

Instrument ID: MT\_025  
 Lab File ID: 25A4071511.asc  
 Initial Weight/Volume: 1 g  
 Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	191.6	96	82 - 116	
Antimony	50.0	47.52	95	82 - 110	
Arsenic	100	89.02	89	85 - 110	
Barium	200	180.6	90	87 - 112	
Beryllium	5.00	4.47	89	84 - 114	
Boron	100	95.19	95	81 - 110	
Cadmium	10.0	9.76	98	87 - 110	
Calcium	5000	4517	90	82 - 114	
Chromium	20.0	18.67	93	84 - 114	
Cobalt	50.0	46.51	93	87 - 110	
Copper	25.0	22.07	88	88 - 110	
Iron	100	86.82	87	87 - 120	
Lead	50.0	44.73	89	86 - 110	
Magnesium	5000	4539	91	90 - 110	
Manganese	50.0	44.63	89	88 - 110	
Molybdenum	100	93.10	93	86 - 110	
Nickel	50.0	46.43	93	87 - 110	
Potassium	5000	4776	96	89 - 110	
Selenium	200	182.4	91	83 - 110	
Silicon	1000	85.09	9	10 - 70	N
Silver	5.00	4.49	90	87 - 114	
Sodium	5000	5012	100	90 - 112	
Vanadium	50.0	44.96	90	88 - 110	
Zinc	50.0	46.26	93	76 - 114	

**Quality Control Results**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Matrix Spike - Batch: 280-75869**

**Method: 6010B  
Preparation: 3050B**

Lab Sample ID:	280-17784-1	Analysis Batch:	280-77011	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-75869	Lab File ID:	25A4071511.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	07/15/2011 1929	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	07/15/2011 0730				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	7210	201	9864	1324	50 - 200	4
Antimony	0.52 B	50.2	27.74	54	20 - 200	
Arsenic	1.8	100	89.13	87	76 - 111	
Barium	67.9	201	258.0	95	52 - 159	
Beryllium	0.12 B	5.02	4.53	88	72 - 105	
Boron	2.4	100	94.09	91	75 - 107	
Cadmium	0.064 B	10.0	9.61	95	40 - 130	
Calcium	4010	5020	9611	112	43 - 165	
Chromium	9.8	20.1	30.16	101	70 - 200	
Cobalt	6.1	50.2	51.70	91	72 - 106	
Copper	10.6	25.1	33.15	90	37 - 187	
Iron	14900	100	16830	1927	70 - 200	4
Lead	5.2	50.2	49.00	87	70 - 200	
Magnesium	3660	5020	8732	101	64 - 145	
Manganese	254	50.2	325.6	143	40 - 200	4
Molybdenum	0.24 U	100	89.10	89	75 - 103	
Nickel	10.1	50.2	55.63	91	61 - 126	
Potassium	1190	5020	6130	98	56 - 172	
Selenium	0.78 U	201	176.0	88	76 - 104	
Silicon	386	1000	503.1	12	20 - 200	N
Silver	0.14 U	5.02	4.41	88	75 - 141	
Sodium	247	5020	5332	101	78 - 111	
Vanadium	36.2	50.2	86.68	101	50 - 169	
Zinc	34.4	50.2	81.52	94	70 - 200	

## Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Duplicate - Batch: 280-75869**

**Method: 6010B**  
**Preparation: 3050B**

Lab Sample ID: 280-17784-1  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/15/2011 1931  
Prep Date: 07/15/2011 0730  
Leach Date: N/A

Analysis Batch: 280-77011  
Prep Batch: 280-75869  
Leach Batch: N/A  
Units: mg/Kg

Instrument ID: MT\_025  
Lab File ID: 25A4071511.asc  
Initial Weight/Volume: 1.12 g  
Final Weight/Volume: 100 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Aluminum	7210	7655	6	40	
Antimony	0.52 B	0.357	37	40	B
Arsenic	1.8	2.19	21	30	
Barium	67.9	83.52	21	30	
Beryllium	0.12 B	0.127	6	30	B
Boron	2.4	3.23	28	30	
Cadmium	0.064 B	0.0780	19	30	B
Calcium	4010	4208	5	30	
Chromium	9.8	9.97	1	40	
Cobalt	6.1	6.45	5	30	
Copper	10.6	11.39	8	30	
Iron	14900	15960	7	40	
Lead	5.2	5.66	8	40	
Magnesium	3660	3802	4	30	
Manganese	254	265.5	5	40	
Molybdenum	0.24 U	0.237	NC	30	B
Nickel	10.1	9.84	3	30	
Potassium	1190	1264	6	40	
Selenium	0.78 U	0.77	NC	30	U
Silicon	386	314.8	20	40	N
Silver	0.14 U	0.14	NC	30	U
Sodium	247	231.9	6	30	
Vanadium	36.2	39.31	8	30	
Zinc	34.4	35.75	4	40	

**Quality Control Results**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Method Blank - Batch: 280-75866**

**Method: 7471A**  
**Preparation: 7471A**

Lab Sample ID:	MB 280-75866/1-A	Analysis Batch:	280-77004	Instrument ID:	MT_034
Client Matrix:	Solid	Prep Batch:	280-75866	Lab File ID:	110715TA.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.6 g
Analysis Date:	07/15/2011 1756	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	07/15/2011 1435				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.0055	U	0.0055	0.017

**Lab Control Sample - Batch: 280-75866**

**Method: 7471A**  
**Preparation: 7471A**

Lab Sample ID:	LCS 280-75866/2-A	Analysis Batch:	280-77004	Instrument ID:	MT_034
Client Matrix:	Solid	Prep Batch:	280-75866	Lab File ID:	110715TA.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.6 g
Analysis Date:	07/15/2011 1758	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	07/15/2011 1435				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.417	0.437	105	87 - 111	

**Matrix Spike - Batch: 280-75866**

**Method: 7471A**  
**Preparation: 7471A**

Lab Sample ID:	280-17784-1	Analysis Batch:	280-77004	Instrument ID:	MT_034
Client Matrix:	Solid	Prep Batch:	280-75866	Lab File ID:	110715TA.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.63 g
Analysis Date:	07/15/2011 1805	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	07/15/2011 1435				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.0054 U	0.398	0.402	101	87 - 111	

**Quality Control Results**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Duplicate - Batch: 280-75866**

**Method: 7471A**  
**Preparation: 7471A**

Lab Sample ID: 280-17784-1  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/15/2011 1803  
Prep Date: 07/15/2011 1435  
Leach Date: N/A

Analysis Batch: 280-77004  
Prep Batch: 280-75866  
Leach Batch: N/A  
Units: mg/Kg

Instrument ID: MT\_034  
Lab File ID: 110715TA.txt  
Initial Weight/Volume: 0.68 g  
Final Weight/Volume: 50 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Mercury	0.0054 U	0.00546	NC	20	B

**Quality Control Results**

Client: Washington Closure Hanford

Job Number: 280-17784-1  
Sdg Number: J01162

**Duplicate - Batch: 280-75711**

**Method: D-2216**  
**Preparation: N/A**

Lab Sample ID: 280-17784-1  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 07/08/2011 1400  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-75711  
Prep Batch: N/A  
Leach Batch: N/A  
Units: %

Instrument ID: No Equipment  
Lab File ID: N/A  
Initial Weight/Volume:  
Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	0.38	0.40	5	20	

2-3, 2-6, 2-4, 2-3

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						RC-217-003		Page 1 of 2		
Collector D. Rice		Company Contact Jen Russell		Telephone No. (509) 380-8093		Project Coordinator KESSNER, JH		Price Code JR 6/27/11 8L 8C		Data Turnaround 15 Days 21 Days JR 6/27/11		
Project Designation 100F Remaining Sites Remediation - Soil-Full Protocol		Sampling Location 100-F-48 VER (EXCAVATION)				SAF No. RC-217						
Ice Chest No. WCH-11-059		Field Logbook No. EL-1651-01		COA R00F482000		Method of Shipment FedEx						
Shipped To TestAmerica Incorporated, Richland <u>Denver</u>		Offsite Property No. NA				Bill of Lading/Air Bill No. 79 72 8030 6295						
POSSIBLE SAMPLE HAZARDS/REMARKS None				Preservation	Cool 4C	Cool 4C	Freeze	Cool 4C	Cool 4C	Cool 4C	None	None
Special Handling and/or Storage Cool 4C				Type of Container	G/P	G	Gs*	aG	aG	aG	G/P	G/P
				No. of Container(s)	1	1	5	1	0	0	1	0
				Volume	60mL	120mL	40mL	120mL 500mL	120mL	120mL	60mL 120mL	60mL
SAMPLE ANALYSIS				See item (1) in Special Instructions.	TPH-Diesel Range - WTPH-D +	VOA - 5035/8260 (TCL) *	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081	Isotopic Uranium	Isotopic Thorium	
Sample No.	Matrix*	Sample Date	Sample Time									EX
J1JWN1	SOIL	7/6/11	0820	X	X	X	X	X	X			1
J1JWN2	SOIL	7/6/11	0840	X	X	X	X	X	X			2
J1JWN3	SOIL	7/6/11	0900	X	X	X	X	X	X			3
J1JWN4	SOIL	7/6/11	0930	X	X	X	X	X	X			4
J1JWN5	SOIL	7/6/11	0945	X	X	X	X	X	X			5
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS				Matrix*
Relinquished By/Removed From David A. Rice		Date/Time 7-6-11 1530		Received By/Stored In Jen Russell		Date/Time 7-6-11 1530		(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)  *freeze upon receipt AZ 7-6-4 SDG J01162  VOA Samples Frozen Upon Collection				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
Relinquished By/Removed From Jen Russell		Date/Time 7-6-11 1630		Received By/Stored In A. Freier A. Janin		Date/Time 7-6-11 1630						
Relinquished By/Removed From A. Freier A. Janin		Date/Time 10CH 1060, #1 7-7-11		Received By/Stored In Fed Ex		Date/Time						
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time						
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time						
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time						
LABORATORY SECTION		Received By		Title				Date/Time				
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By				Date/Time				

Page 1 of 185



Collector D. Rice	Company Contact Jen Russell	Telephone No. (509) 380-8093	Project Coordinator KESSNER, JH	Price Code <del>8L</del> JR 4/27/11 8C	Data Turnaround <b>21 Days</b> 15/15
Project Designation 100F Remaining Sites Remediation - Soil-Full Protocol	Sampling Location 100-F-48 VER (EXCAVATION)	SAF No. RC-217			
Ice Chest No. WCH-11-059	Field Logbook No. EL-1651-01	COA R00F482000	Method of Shipment FedEx		
Shipped To TestAmerica Incorporated, Richland <u>Denver</u>	Offsite Property No. NA	Bill of Lading/Air Bill No. <b>7972 8030 6295</b>			

POSSIBLE SAMPLE HAZARDS/REMARKS  None  Special Handling and/or Storage Cool 4C	Preservation	Cool 4C	Cool 4C	Freeze	Cool 4C	Cool 4C	Cool 4C	None	None		
	Type of Container	G/P	G	Gs*	wG	aG	aG	G/P	G/P		
	No. of Container(s)	1	1	5	1	0	0	0	0		
	Volume	60mL	120mL	40mL	120mL 50mL	120mL	120mL	60mL 120mL	60mL		

SAMPLE ANALYSIS				See item (1) in Special Instructions.	TPH-Diesel Range - WTPH-D +	VOA - 5035/8260 (TCL) *	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081	Isotopic Uranium	Isotopic Thorium
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Sample No.	Matrix *	Sample Date	Sample Time									EX
J1JWN6	SOIL	7-6-11	1000	X	X	X	X	X	X			6
J1JWN7	SOIL	7-6-11	1015	X	X	X	X	X	X			7
J1JWN8	SOIL	7-6-11	1030	X	X	X	X	X	X			8
J1JWN9	SOIL	7-6-11	1045	X	X	X	X	X	X			9
J1JWP0	SOIL	7-6-11	1100	X	X	X	X	X	X			10

<b>CHAIN OF POSSESSION</b>				<b>Sign/Print Names</b>				<b>SPECIAL INSTRUCTIONS</b>				<b>Matrix *</b>
Relinquished By/Removed From David D. Rice	Date/Time 7-6-11 1530	Received By/Stored In Jen Russell, Lu Russell	Date/Time 7-6-11 1530	(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)  * freeze upon receipt A7 7-6-11 SD6 50162  Voa Samples Frozen Upon Collection				S=Soil SE=Sediment SO=Solid SP=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Trash WI=Wipe L=Liquid V=Vegetation X=Other				
Relinquished By/Removed From Jen Russell, Lu Russell	Date/Time 7-6-11 1630	Received By/Stored In A. Freer, A. Freer	Date/Time 7-6-11 1630									
Relinquished By/Removed From A. Freer, A. Freer	Date/Time 7-7-11	Received By/Stored In Fed Ex	Date/Time									
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time									
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time									

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

Washington Closure Hanford			CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST							RC-217-003		Page 2 of 2		
Collector D. Rice			Company Contact Jen Russell			Telephone No. (509) 380-8093		Project Coordinator KESSNER, JH		Price Code JR 6/27/11 SL 8C		Data Turnaround JR 6/27/11 21 Days 15/15		
Project Designation 100F Remaining Sites Remediation - Soil-Full Protocol			Sampling Location 100-F-48 VER (EXCAVATION)				SAF No. RC-217							
Ice Chest No. WCH-11-059			Field Logbook No. EL-1651-01		COA R00F482000		Method of Shipment FedEx							
Shipped To TestAmerica Incorporated, Richland <u>Denver</u>			Offsite Property No. NA				Bill of Lading/Air Bill No. 7972 8030 6295							
POSSIBLE SAMPLE HAZARDS/REMARKS  None  Special Handling and/or Storage Cool 4C				Preservation	Cool 4C	Cool 4C	Freeze	Cool 4C	Cool 4C	Cool 4C	None	None		
				Type of Container	G/P	G	Gs*	aG	aG	aG	G/P	G/P		
				No. of Container(s)	1	1	5	1	0	0	1	0		
				Volume	60mL	120mL	40mL	120mL 50mL JR 6/27/11	120mL	120mL	60mL 120mL JR 6/27/11	60mL		
SAMPLE ANALYSIS				See item (1) in Special Instructions.	TPH-Diesel Range - WTPH-D +	VOA - 5035/8260 (TCL)	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081	Isotopic Uranium	Isotopic Thorium			
				Sample No.	Matrix *	Sample Date	Sample Time							
J1JWP1	SOIL	7-6-11	1115	X	X	X	X	X	X			11		
J1JWP2	SOIL	7-6-11	1130	X	X	X	X	X	X			12		
J1JWP3	SOIL	7-6-11	0900	X	X	X	X	X	X			DUP		
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS					Matrix *	
Relinquished By/Removed From David D. Rice		Date/Time 7-6-11 1530		Received By/Stored In Jen Russell/Jen Russell		Date/Time 7-6-11 1530		(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)  * freeze upon receipt A# 7-6-4 SDG J6/162  Voa Samples Frozen Upon Collection					S=Soil SE=Sediment SO=Solid SP=Sludge W = Water O=Oil A=Air DS=Dryn Solids DL=Dryn Liquids T=Tissue WI=Wipe L=Liquid V=Vegetation X=Other	
Relinquished By/Removed From Jen Russell/Jen Russell		Date/Time 7-6-11 1630		Received By/Stored In A. Freier A. Freier		Date/Time 7-6-11								
Relinquished By/Removed From A. Freier A. Freier		Date/Time WCH 1060, #1 7-7-11		Received By/Stored In Fed Ex		Date/Time								
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time								
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time								
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time								
LABORATORY SECTION		Received By		Title				Date/Time						
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By				Date/Time						

Page 1 of 2



2-3, 2-6, 9-4, 0-3

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-217-006		Page 1 of 1		
Collector D. Rice		Company Contact Jen Russell		Telephone No. (509) 380-8093		Project Coordinator KESSNER, JH		Price Code -8L		
Project Designation 100F Remaining Sites Remediation - Soil-Full Protocol		Sampling Location 100-F-48 VER (EXCAVATION)		SAF No. RC-217		JR 6/30/11 8C		JR 6/30/11 Data Turnaround 21 Days 15/15		
Ice Chest No. WCH-11-059		Field Logbook No. EL-1651-01		COA R00F482000		Method of Shipment FedEx				
Shipped To TestAmerica Incorporated, Richland (Denver)		Offsite Property No. NA		Bill of Lading/Air Bill No. 7972 8030 6295						
POSSIBLE SAMPLE HAZARDS/REMARKS None					Preservation Cool 4C					
Special Handling and/or Storage Cool 4C					Type of Container G/P					
					No. of Container(s) 1					
					Volume 60mL					
SAMPLE ANALYSIS					See item (1) in Special Instructions.					
Sample No.	Matrix *	Sample Date	Sample Time							
J1K405	SOIL	7-6-11	1240D	X					EB	
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS					
Relinquished By/Removed From David D. Rice		Date/Time 7-6-11 1530		Received By/Stored In Jen Russell		Date/Time 7-6-11 1530		(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)  SDG 501162 		Matrix *
Relinquished By/Removed From Jen Russell		Date/Time 7-6-11 1630		Received By/Stored In A. Freier		Date/Time 7-6-11 1630				S=Soil SE=Substrate SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue Wl=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From A. Freier		Date/Time 10/6/11 7-7-11		Received By/Stored In FedEx		Date/Time 7/8/11 900				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
LABORATORY SECTION	Received By		Title					Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method		Disposed By					Date/Time		

Page 100 of 105

Analytical Due:

Report Due: 7/25/11 (Revised TAT)

**Sample Check-in List**

Date/Time Received: 7/8/11 900 GM Screen Result 12 microR/hr

Client: Washington Closure Hanford SDG #: J01162 NA [ ] SAF #: RC-217 NA [ ]

Job Number: 17784 Chain of Custody # RC-217 <sup>003, 006</sup> ~~603, 606~~

Shipping Container ID: ERC-02-467 WCH-11-058 Air Bill # 797289306295  
ERC-02-009 WCH-11-659

1. Custody Seals on shipping container intact? NA [ ] Yes [ ] No [ ] 7972 8030 6516
2. Custody Seals dated and signed? NA [ ] Yes [ ] No [ ] 7972 8030 6591
3. Chain of Custody record present? NA [ ] Yes [ ] No [ ] 7972 8030 6722
4. Cooler Temperature °C: 2.3, 2.6, 0.4, 0.3 NA [ ]
5. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ] X
6. Number of samples in shipping container: 14
7. Sample holding times exceeded? NA [ ] Yes [ ] No [ ] X
8. Samples have:
  - Tape
  - Custody Seals
  - Hazard Labels
  - Appropriate Sample Labels
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<sub>3</sub> Added \_\_\_\_\_
11. Sample Location, Sample Collector Listed? \*  
\*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [ ] X
13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian: \_\_\_\_\_ Date: 7/8/11

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person Contacted \_\_\_\_\_

[ ] No action necessary; process as is.

Project Manager [Signature] Date 7/11/11

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

Origin ID: PSCA



J11201104290225

RICHLAND, WA 99354

Ship Date: 07JUL11  
 ActWgt: 45.0 LB  
 CAD: 8897843/NET3180

Delivery Address Bar Code



SHIP TO: (303) 736-0100  
**Sample Receiving**  
**Test America Denver**  
**4955 YARROW ST**

BILL SENDER

Ref #  
 Invoice #  
 PO #  
 Dept #

ARVADA, CO 80002

1 of 4

FRI - 08 JUL A1  
**PRIORITY OVERNIGHT**

TRK# 7972 8030 6295

0201

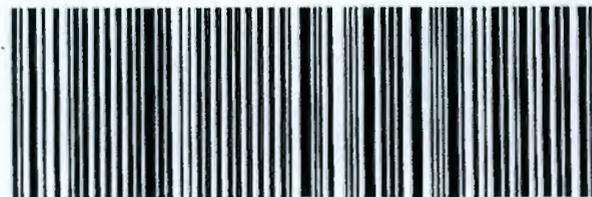
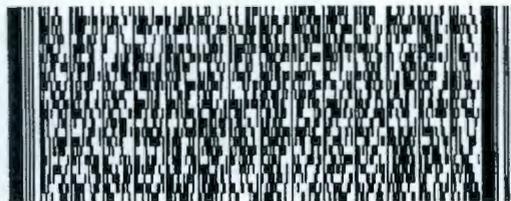
## MASTER ##

80002

CO-US

DEN

**XH WHHA**



50FG2/F558/F5E4

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From: (509) 375-4640  
WCH MAILROOM  
WASHINGTON CLOSURE HANFORD  
2620 FERMI AVE  
RICHLAND, WA 99354

Origin ID: PSCA



Ship Date: 07JUL11  
ActWgt: 45.0 LB  
CAD: 8897843/NET3180

Delivery Address Bar Code



SHIP TO: (303) 736-0100  
Sample Receiving  
Test America Denver  
4955 YARROW ST

BILL SENDER

Ref #  
Invoice #  
PO #  
Dept #

ARVADA, CO 80002

2 of 4

FRI - 08 JUL A1  
PRIORITY OVERNIGHT

MPS# 7972 8030 6516

0263

Mstr# 7972 8030 6295

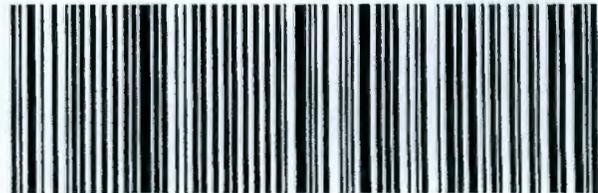
0281

80002

CO-US

DEN

**XH WHHA**



50FG2/F556/FSF4

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From: (509) 375-4640  
WCH MAILROOM  
WASHINGTON CLOSURE HANFORD  
2620 FERMI AVE  
  
RICHLAND, WA 99354

Origin ID: PSCA



J11201104290225

Ship Date: 07JUL11  
ActWgt: 80.0 LB  
CAD: 8897843/NET3180

Delivery Address Bar Code



SHIP TO: (303) 736-0100  
**Sample Recieving**  
**Test America Denver**  
**4955 YARROW ST**

BILL SENDER

Ref #  
Invoice #  
PO #  
Dept #

ARVADA, CO 80002

3 of 4

FRI - 08 JUL A1  
PRIORITY OVERNIGHT

MPS# 7972 8030 6571

0263

Mstr# 7972 8030 6295

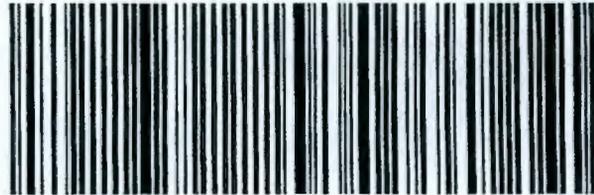
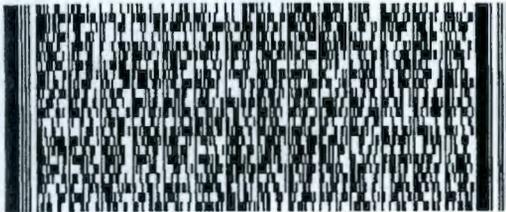
0201

80002

CO-US

DEN

**XH WHHA**



50FG2/F556/FSF4

**After printing this label:**

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

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

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

From: (509) 375-4640      Origin ID: PSCA  
WCH MAILROOM  
WASHINGTON CLOSURE HANFORD  
2620 FERMI AVE  
  
RICHLAND, WA 99354



J11201104290225

Ship Date: 07JUL11  
ActWgt: 76.0 LB  
CAD: 8897843/INET3180

Delivery Address Bar Code



SHIP TO: (303) 736-0100  
**Sample Receiving**  
**Test America Denver**  
**4955 YARROW ST**

BILL SENDER

Ref #  
Invoice #  
PO #  
Dept #

ARVADA, CO 80002

4 of 4

FRI - 08 JUL A1  
PRIORITY OVERNIGHT

MPS# 7972 8030 6722

0263

Mstr# 7972 8030 6295

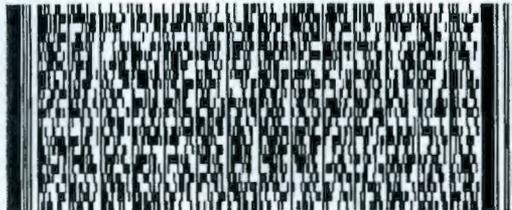
0201

80002

CO-US

DEN

**XH WHHA**



50FG2/F556/F5F4

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