SAF-RC-148
300 Area D4 Waste Sites – Soil Full Protocol
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

No distribution required KW 7/5/16
INITIAL/DATE

COMMENTS:

SDG JP1046 **SAF-RC-148**

Rad only Chem only ☑ Rad & Chem

☑ Complete Partial

Sample Location: 300-288:2 WSA2

Analytical Data Package Prepared For

Washington Closure Hanford

Radiochemical Analysis By

TestAmerica Inc

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

Assigned Laboratory Code: TARL

Data Package Contains 65 *Pages*

Report No.: 68830

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.
JP1046	RC-148	J1V915	J6F200409-1	M8R1G1AC	9M8R1G10	6173017
		J1V915	J6F200409-1	M8R1G1AA	9M8R1G10	6173018
		J1V916	J6F200409-2	M8R1H1AC	9M8R1H10	6173017
		J1V916	J6F200409-2	M8R1H1AA	9M8R1H10	6173018
		J1V917	J6F200409-3	M8R1J1AC	9M8R1J10	6173017
		J1V917	J6F200409-3	M8R1J1AA	9M8R1J10	6173018
		J1V918	J6F200409-4	M8R1K1AC	9M8R1K10	6173017
		J1V918	J6F200409-4	M8R1K1AA	9M8R1K10	6173018
		J1V919	J6F200409-5	M8R1L1AC	9M8R1L10	6173017
		J1V919	J6F200409-5	M8R1L1AA	9M8R1L10	6173018
		J1V920	J6F200409-6	M8R1M1AC	9M8R1M10	6173017
		J1V920	J6F200409-6	M8R1M1AA	9M8R1M10	6173018
		J1V921	J6F200409-7	M8R1N1AC	9M8R1N10	6173017
		J1V921	J6F200409-7	M8R1N1AA	9M8R1N10	6173018
		J1V922	J6F200409-8	M8R1P1AC	9M8R1P10	6173017
		J1V922	J6F200409-8	M8R1P1AA	9M8R1P10	6173018
		J1V923	J6F200409-9	M8R1Q1AC	9M8R1Q10	6173017
		J1V923	J6F200409-9	M8R1Q1AA	9M8R1Q10	6173018
		J1V924	J6F200409-10	M8R1R1AC	9M8R1R10	6173017
		J1V924	J6F200409-10	M8R1R1AA	9M8R1R10	6173018
	RC-148	J1V925	J6F200409-11	M8R1T1AC	9M8R1T10	6173017
		J1V925	J6F200409-11	M8R1T1AA	9M8R1T10	6173018
		J1V926	J6F200409-12	M8R1V1AC	9M8R1V10	6173017
		J1V926	J6F200409-12	M8R1V1AA	9M8R1V10	6173018
		J1V927	J6F200409-13	M8R1W1AC	9M8R1W10	6173017
		J1V927	J6F200409-13	M8R1W1AA	9M8R1W10	6173018

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

June 24, 2016

Attention: Joan Kessner

SAF Number	:	RC-148
Date SDG Closed	:	June 20, 2016
Number of Samples	:	Thirteen (13)
Sample Type	:	Soil
SDG Number	:	JP1046
Data Deliverable	:	7– Day / Summary

CASE NARRATIVE

I. Introduction

On June 20, 2016, 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:

WCH ID#	TARL ID#	MATRIX	DATE OF RECEIPT
J1V915	M8R1G	SOIL	6/20/16
J1V916	M8R1H	SOIL	6/20/16
J1V917	M8R1J	SOIL	6/20/16
J1V918	M8R1K	SOIL	6/20/16
J1V919	M8R1L	SOIL	6/20/16
J1V920	M8R1M	SOIL	6/20/16
J1V921	M8R1N	SOIL	6/20/16
J1V922	M8R1P	SOIL	6/20/16
J1V923	M8R1Q	SOIL	6/20/16
J1V924	M8R1R	SOIL	6/20/16
J1V925	M8R1T	SOIL	6/20/16
J1V926	M8R1V	SOIL	6/20/16
J1V927	M8R1W	SOIL	6/20/16

II. Sample Receipt

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

III. Analytical Results/Methodology

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

The requested analyses were:

Alpha Spectroscopy
Uranium 234, 235 and 238 by method RL-ALP-015
Gamma Spectroscopy
Gamma Spec by method RL-GAM-001

IV. Quality Control

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

QC and sample results are reported in the same units.

V. Comments

Alpha Spectroscopy
Uranium 234, 235 and 238 by method RL-ALP-015:
The LCS, batch blank, samples and sample duplicate (J1V916) results are within contractual requirements.

Gamma Spectroscopy
Gamma Spec by method RL-GAM-001:
The CRDL was not met for some of the analytes. Except as noted, the LCS, batch blank, samples and sample duplicate (J1V915) results are within contractual requirements.

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

Reviewed and approved:

Rhonda Wagar
Project Manager

Drinking Water Method Cross References

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

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

Uncertainty Estimation

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

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

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

Report Definitions

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

Sample Results Summary

TestAmerica Inc TARL

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

Date: 24-Jun-16

Report No. : 68830

SDG No: JP1046

Batch	Client Id Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
6173018 UISO_IE_PLATE_AEA									
J1V915									
	M8R1G1AA	U-234	2.21E-01 +- 1.3E-01		pCi/g	76%	5.77E-02	1.00E+00	
		U-235	1.71E-02 +- 3.4E-02	U	pCi/g	76%	5.77E-02	1.00E+00	
		U-238	2.04E-01 +- 1.2E-01		pCi/g	76%	5.77E-02	1.00E+00	
J1V916									
	M8R1H1AA	U-234	6.40E-01 +- 2.3E-01		pCi/g	92%	5.16E-02	1.00E+00	
		U-235	1.53E-02 +- 3.1E-02	U	pCi/g	92%	5.16E-02	1.00E+00	
		U-238	7.01E-01 +- 2.4E-01		pCi/g	92%	5.16E-02	1.00E+00	
J1V916 DUP									
	M8R1H1AD	U-234	3.74E-01 +- 1.7E-01		pCi/g	86%	5.28E-02	1.00E+00	52.4
		U-235	0.00E+00 +- 3.1E-02	U	pCi/g	86%	5.28E-02	1.00E+00	200.0
		U-238	2.50E-01 +- 1.3E-01		pCi/g	86%	5.28E-02	1.00E+00	94.9
J1V917									
	M8R1J1AA	U-234	1.68E-01 +- 9.8E-02		pCi/g	101%	4.72E-02	1.00E+00	
		U-235	1.19E-02 +- 2.6E-02	U	pCi/g	101%	4.72E-02	1.00E+00	
		U-238	2.07E-01 +- 1.1E-01		pCi/g	101%	4.36E-02	1.00E+00	
J1V918									
	M8R1K1AA	U-234	1.79E-01 +- 1.1E-01		pCi/g	76%	6.69E-02	1.00E+00	
		U-235	1.52E-02 +- 3.3E-02	U	pCi/g	76%	6.04E-02	1.00E+00	
		U-238	1.61E-01 +- 1.1E-01		pCi/g	76%	7.41E-02	1.00E+00	
J1V919									
	M8R1L1AA	U-234	3.37E-01 +- 1.5E-01		pCi/g	96%	6.88E-02	1.00E+00	
		U-235	1.40E-02 +- 3.0E-02	U	pCi/g	96%	6.88E-02	1.00E+00	
		U-238	4.02E-01 +- 1.7E-01		pCi/g	96%	6.88E-02	1.00E+00	
J1V920									
	M8R1M1AA	U-234	2.08E-01 +- 1.2E-01		pCi/g	78%	7.86E-02	1.00E+00	
		U-235	0.00E+00 +- 3.4E-02	U	pCi/g	78%	7.86E-02	1.00E+00	
		U-238	2.89E-01 +- 1.5E-01		pCi/g	78%	7.86E-02	1.00E+00	
J1V921									
	M8R1N1AA	U-234	1.11E-01 +- 8.7E-02		pCi/g	82%	5.39E-02	1.00E+00	
		U-235	1.53E-02 +- 3.2E-02	U	pCi/g	82%	5.39E-02	1.00E+00	
		U-238	1.11E-01 +- 8.7E-02		pCi/g	82%	5.39E-02	1.00E+00	
J1V922									
	M8R1P1AA	U-234	4.09E-01 +- 1.9E-01		pCi/g	76%	6.54E-02	1.00E+00	
		U-235	-1.43E-03 +- 3.6E-02	U	pCi/g	76%	6.54E-02	1.00E+00	
		U-238	1.96E-01 +- 1.2E-01		pCi/g	76%	6.04E-02	1.00E+00	
J1V923									
	M8R1Q1AA	U-234	2.78E-01 +- 1.5E-01		pCi/g	75%	5.87E-02	1.00E+00	

TestAmerica Inc

rptTALRchSaSummary2 V5.5.1
A2002

RPD - Relative Percent Difference.

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

Sample Results Summary

Date: 24-Jun-16

TestAmerica Inc TARL

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

Report No. : 68830 **SDG No:** JP1046

Batch	Client Id Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
6173018 UISO_IE_PLATE_AEA									
J1V923									
	M8R1Q1AA	U-235	0.00E+00 +- 3.5E-02	U	pCi/g	75%	5.87E-02	1.00E+00	
		U-238	3.46E-01 +- 1.7E-01		pCi/g	75%	5.87E-02	1.00E+00	
J1V924									
	M8R1R1AA	U-234	1.93E-01 +- 1.1E-01		pCi/g	95%	6.21E-02	1.00E+00	
		U-235	-5.26E-04 +- 2.6E-02	U	pCi/g	95%	4.45E-02	1.00E+00	
		U-238	1.55E-01 +- 9.5E-02		pCi/g	95%	5.72E-02	1.00E+00	
J1V925									
	M8R1T1AA	U-234	5.31E-01 +- 2.5E-01		pCi/g	54%	8.18E-02	1.00E+00	
		U-235	-9.67E-04 +- 4.8E-02	U	pCi/g	54%	8.18E-02	1.00E+00	
		U-238	2.41E-01 +- 1.6E-01		pCi/g	54%	8.18E-02	1.00E+00	
J1V926									
	M8R1V1AA	U-234	3.50E-01 +- 1.6E-01		pCi/g	86%	5.68E-02	1.00E+00	
		U-235	0.00E+00 +- 2.9E-02	U	pCi/g	86%	4.96E-02	1.00E+00	
		U-238	3.94E-01 +- 1.7E-01		pCi/g	86%	5.68E-02	1.00E+00	
J1V927									
	M8R1W1AA	U-234	1.99E-01 +- 1.2E-01		pCi/g	83%	5.64E-02	1.00E+00	
		U-235	0.00E+00 +- 3.1E-02	U	pCi/g	83%	5.21E-02	1.00E+00	
		U-238	2.77E-01 +- 1.4E-01		pCi/g	83%	5.21E-02	1.00E+00	
6173017 GAMMA_GS									
J1V915									
	M8R1G1AC	AMERICIUM 241	3.92E-02 +- 6.3E-02	U	pCi/g		1.11E-01		
		CE-144	4.13E-03 +- 9.6E-02	U	pCi/g		1.66E-01		
		CO-60	-1.11E-02 +- 2.2E-02	U	pCi/g		3.72E-02	5.00E-02	
		CS-134	4.64E-02 +- 2.5E-02	U	pCi/g		4.68E-02		
		CS-137	-1.09E-02 +- 2.1E-02	U	pCi/g		3.60E-02	1.00E-01	
		EU-152	3.70E-04 +- 5.4E-02	U	pCi/g		9.06E-02	1.00E-01	
		EU-154	2.74E-02 +- 6.6E-02	U	pCi/g		1.22E-01	1.00E-01	
		EU-155	4.13E-02 +- 5.1E-02	U	pCi/g		8.75E-02	1.00E-01	
		K-40	1.05E+01 +- 1.5E+00		pCi/g		2.91E-01		
		RA-226	4.46E-01 +- 1.1E-01		pCi/g		6.56E-02		
		RA-228	6.57E-01 +- 2.0E-01	U	pCi/g		2.73E-01		
		RU-106	-3.04E-02 +- 1.7E-01	U	pCi/g		2.88E-01		
		SB-125	-2.03E-02 +- 5.0E-02	U	pCi/g		8.37E-02		
		U-235	-4.77E-03 +- 1.0E-01	U	pCi/g		1.69E-01	1.00E+00	
		U-238	8.84E-01 +- 6.0E-01	U	pCi/g		1.04E+00		
		ZN-65	-7.07E-02 +- 5.5E-02	U	pCi/g		8.60E-02		
J1V915 DUP									

TestAmerica Inc

rptTALRchSaSummary2 V5.5.1 A2002

RPD - Relative Percent Difference.

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

Sample Results Summary

TestAmerica Inc TARL

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

Date: 24-Jun-16

Report No. : 68830

SDG No: JP1046

Batch	Client Id Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
6173017 GAMMA_GS									
J1V915 DUP									
	M8R1G1AD	AMERICIUM 241	-2.83E-03 +- 1.6E-02	U	pCi/g		2.63E-02		231.2
		CE-144	1.27E-02 +- 4.8E-02	U	pCi/g		8.09E-02		101.8
		CO-60	-9.76E-03 +- 1.4E-02	U	pCi/g		2.25E-02	5.00E-02	-12.7
		CS-134	2.72E-03 +- 1.6E-02	U	pCi/g		2.75E-02		177.8
		CS-137	-2.18E-02 +- 1.3E-02	U	pCi/g		2.01E-02	1.00E-01	-66.8
		EU-152	-1.66E-02 +- 2.9E-02	U	pCi/g		4.77E-02	1.00E-01	-209.1
		EU-154	4.45E-02 +- 5.0E-02	U	pCi/g		9.37E-02	1.00E-01	47.8
		EU-155	1.34E-02 +- 2.3E-02	U	pCi/g		3.97E-02	1.00E-01	102.1
		K-40	1.02E+01 +- 1.3E+00		pCi/g		2.45E-01		3.0
		RA-226	3.11E-01 +- 6.7E-02		pCi/g		3.71E-02		35.6
		RA-228	6.52E-01 +- 1.3E-01		pCi/g		8.02E-02		0.7
		RU-106	-6.05E-02 +- 9.7E-02	U	pCi/g		1.62E-01		-66.2
		SB-125	1.20E-02 +- 2.7E-02	U	pCi/g		4.84E-02		-781.8
		U-235	2.39E-02 +- 4.9E-02	U	pCi/g		8.30E-02	1.00E+00	299.9
		U-238	4.55E-01 +- 3.0E-01		pCi/g		2.49E-01		64.2
		ZN-65	-1.23E-02 +- 4.2E-02	U	pCi/g		5.96E-02		-140.8
J1V916									
	M8R1H1AC	AMERICIUM 241	-7.97E-02 +- 7.7E-02	U	pCi/g		1.25E-01		
		CE-144	-1.74E-01 +- 1.1E-01	U	pCi/g		1.67E-01		
		CO-60	-4.79E-03 +- 1.4E-02	U	pCi/g		2.48E-02	5.00E-02	
		CS-134	2.64E-02 +- 1.6E-02	U	pCi/g		3.06E-02		
		CS-137	1.07E-02 +- 1.6E-02	U	pCi/g		2.84E-02	1.00E-01	
		EU-152	-7.51E-02 +- 1.4E-01	U	pCi/g		7.44E-02	1.00E-01	
		EU-154	1.07E-02 +- 5.0E-02	U	pCi/g		8.82E-02	1.00E-01	
		EU-155	-3.08E-02 +- 5.6E-02	U	pCi/g		9.15E-02	1.00E-01	
		K-40	9.94E+00 +- 1.3E+00		pCi/g		2.22E-01		
		RA-226	3.90E-01 +- 8.1E-02		pCi/g		4.93E-02		
		RA-228	3.12E-01 +- 1.0E-01		pCi/g		8.86E-02		
		RU-106	3.69E-02 +- 1.3E-01	U	pCi/g		2.25E-01		
		SB-125	-3.18E-02 +- 4.3E-02	U	pCi/g		6.95E-02		
		U-235	3.11E-02 +- 1.0E-01	U	pCi/g		1.78E-01	1.00E+00	
		U-238	1.27E-01 +- 6.4E-01	U	pCi/g		1.08E+00		
		ZN-65	-6.24E-02 +- 4.0E-02	U	pCi/g		6.28E-02		
J1V917									
	M8R1J1AC	AMERICIUM 241	-1.13E-03 +- 1.4E-02	U	pCi/g		2.46E-02		
		CE-144	-2.88E-02 +- 4.5E-02	U	pCi/g		7.59E-02		

TestAmerica Inc

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Sample Results Summary

TestAmerica Inc TARL

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

Date: 24-Jun-16

Report No. : 68830

SDG No: JP1046

Batch	Client Id Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
6173017 GAMMA_GS									
J1V917									
	M8R1J1AC	CO-60	5.82E-03 +- 1.2E-02	U	pCi/g		2.28E-02	5.00E-02	
		CS-134	1.76E-02 +- 1.4E-02	U	pCi/g		2.66E-02		
		CS-137	-7.24E-03 +- 1.1E-02	U	pCi/g		1.89E-02	1.00E-01	
		EU-152	-1.35E-02 +- 2.6E-02	U	pCi/g		4.24E-02	1.00E-01	
		EU-154	-7.41E-03 +- 4.4E-02	U	pCi/g		7.49E-02	1.00E-01	
		EU-155	3.90E-02 +- 2.3E-02	U	pCi/g		4.08E-02	1.00E-01	
		K-40	1.03E+01 +- 1.3E+00		pCi/g		1.90E-01		
		RA-226	3.12E-01 +- 5.8E-02		pCi/g		3.39E-02		
		RA-228	5.77E-01 +- 1.3E-01		pCi/g		6.81E-02		
		RU-106	3.52E-02 +- 8.7E-02	U	pCi/g		1.58E-01		
		SB-125	-1.47E-02 +- 2.4E-02	U	pCi/g		4.01E-02		
		U-235	1.49E-02 +- 4.6E-02	U	pCi/g		7.98E-02	1.00E+00	
		U-238	2.58E-01 +- 2.1E-01		pCi/g		2.47E-01		
		ZN-65	3.34E-02 +- 3.2E-02	U	pCi/g		5.34E-02		
J1V918									
	M8R1K1AC	AMERICIUM 241	3.87E-03 +- 1.3E-02	U	pCi/g		2.26E-02		
		CE-144	-1.39E-02 +- 3.9E-02	U	pCi/g		6.76E-02		
		CO-60	2.03E-03 +- 1.1E-02	U	pCi/g		1.98E-02	5.00E-02	
		CS-134	2.52E-02 +- 1.9E-02	U	pCi/g		2.49E-02		
		CS-137	-1.19E-02 +- 1.0E-02	U	pCi/g		1.60E-02	1.00E-01	
		EU-152	1.22E-02 +- 2.3E-02	U	pCi/g		3.95E-02	1.00E-01	
		EU-154	2.57E-02 +- 3.8E-02	U	pCi/g		7.12E-02	1.00E-01	
		EU-155	1.56E-02 +- 2.2E-02	U	pCi/g		3.65E-02	1.00E-01	
		K-40	9.18E+00 +- 1.1E+00		pCi/g		1.52E-01		
		RA-226	3.62E-01 +- 5.9E-02		pCi/g		3.01E-02		
		RA-228	4.81E-01 +- 9.8E-02		pCi/g		6.84E-02		
		RU-106	2.06E-02 +- 8.8E-02	U	pCi/g		1.54E-01		
		SB-125	-1.45E-02 +- 2.2E-02	U	pCi/g		3.72E-02		
		U-235	1.38E-02 +- 4.1E-02	U	pCi/g		7.24E-02	1.00E+00	
		U-238	3.85E-01 +- 2.3E-01		pCi/g		2.18E-01		
		ZN-65	7.91E-03 +- 2.8E-02	U	pCi/g		4.31E-02		
J1V919									
	M8R1L1AC	AMERICIUM 241	3.39E-03 +- 1.6E-02	U	pCi/g		2.69E-02		
		CE-144	8.87E-03 +- 4.6E-02	U	pCi/g		7.82E-02		
		CO-60	-1.44E-03 +- 1.4E-02	U	pCi/g		2.46E-02	5.00E-02	
		CS-134	2.42E-02 +- 1.5E-02	U	pCi/g		2.82E-02		

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Sample Results Summary

TestAmerica Inc TARL

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

Date: 24-Jun-16

Report No. : 68830

SDG No: JP1046

Batch	Client Id Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
6173017 GAMMA_GS									
J1V919									
	M8R1L1AC	CS-137	-6.12E-03 +- 1.3E-02	U	pCi/g		2.11E-02	1.00E-01	
		EU-152	-1.55E-02 +- 2.7E-02	U	pCi/g		4.52E-02	1.00E-01	
		EU-154	-6.39E-03 +- 4.9E-02	U	pCi/g		8.54E-02	1.00E-01	
		EU-155	3.75E-02 +- 2.6E-02	U	pCi/g		3.83E-02	1.00E-01	
		K-40	1.17E+01 +- 1.4E+00		pCi/g		2.69E-01		
		RA-226	3.62E-01 +- 7.5E-02		pCi/g		3.68E-02		
		RA-228	4.29E-01 +- 1.2E-01		pCi/g		9.13E-02		
		RU-106	5.75E-02 +- 9.8E-02	U	pCi/g		1.78E-01		
		SB-125	-3.69E-03 +- 2.5E-02	U	pCi/g		4.39E-02		
		U-235	-3.59E-02 +- 5.1E-02	U	pCi/g		8.12E-02	1.00E+00	
		U-238	4.80E-01 +- 2.1E-01		pCi/g		2.59E-01		
		ZN-65	-4.05E-03 +- 3.9E-02	U	pCi/g		5.64E-02		
J1V920									
	M8R1M1AC	AMERICIUM 241	1.19E-02 +- 1.5E-02	U	pCi/g		2.66E-02		
		CE-144	-2.64E-02 +- 4.4E-02	U	pCi/g		7.53E-02		
		CO-60	6.93E-03 +- 1.3E-02	U	pCi/g		2.46E-02	5.00E-02	
		CS-134	2.91E-02 +- 1.4E-02	U	pCi/g		2.79E-02		
		CS-137	-3.73E-03 +- 1.3E-02	U	pCi/g		2.18E-02	1.00E-01	
		EU-152	-3.17E-02 +- 2.6E-02	U	pCi/g		4.03E-02	1.00E-01	
		EU-154	-2.05E-02 +- 4.2E-02	U	pCi/g		7.18E-02	1.00E-01	
		EU-155	4.30E-02 +- 2.4E-02	U	pCi/g		4.10E-02	1.00E-01	
		K-40	1.12E+01 +- 1.4E+00		pCi/g		1.61E-01		
		RA-226	3.46E-01 +- 6.2E-02		pCi/g		3.56E-02		
		RA-228	5.19E-01 +- 1.2E-01		pCi/g		7.85E-02		
		RU-106	-4.18E-02 +- 9.4E-02	U	pCi/g		1.57E-01		
		SB-125	9.41E-05 +- 2.6E-02	U	pCi/g		4.56E-02		
		U-235	4.74E-02 +- 4.7E-02	U	pCi/g		8.35E-02	1.00E+00	
		U-238	4.05E-01 +- 2.4E-01		pCi/g		2.57E-01		
		ZN-65	-8.08E-02 +- 3.5E-02	U	pCi/g		4.88E-02		
J1V921									
	M8R1N1AC	AMERICIUM 241	-2.51E-03 +- 9.0E-02	U	pCi/g		1.57E-01		
		CE-144	-2.88E-03 +- 6.2E-02	U	pCi/g		1.08E-01		
		CO-60	-3.79E-03 +- 1.4E-02	U	pCi/g		2.39E-02	5.00E-02	
		CS-134	2.15E-02 +- 1.5E-02	U	pCi/g		2.73E-02		
		CS-137	-1.00E-02 +- 1.2E-02	U	pCi/g		1.94E-02	1.00E-01	
		EU-152	2.89E-02 +- 3.2E-02	U	pCi/g		5.66E-02	1.00E-01	

TestAmerica Inc

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Sample Results Summary

TestAmerica Inc TARL

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

Date: 24-Jun-16

Report No. : 68830

SDG No: JP1046

Batch	Client Id Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
6173017 GAMMA_GS									
J1V921									
	M8R1N1AC	EU-154	2.00E-02 +- 4.3E-02	U	pCi/g		7.88E-02	1.00E-01	
		EU-155	6.96E-02 +- 4.0E-02	U	pCi/g		6.93E-02	1.00E-01	
		K-40	1.39E+01 +- 1.7E+00		pCi/g		1.87E-01		
		RA-226	3.57E-01 +- 6.3E-02		pCi/g		3.99E-02		
		RA-228	6.61E-01 +- 1.2E-01		pCi/g		8.01E-02		
		RU-106	6.43E-03 +- 1.0E-01	U	pCi/g		1.76E-01		
		SB-125	3.37E-02 +- 3.0E-02	U	pCi/g		5.47E-02		
		U-235	2.43E-03 +- 6.6E-02	U	pCi/g		1.13E-01	1.00E+00	
		U-238	-2.94E-02 +- 6.7E-01	U	pCi/g		1.16E+00		
		ZN-65	4.34E-02 +- 3.6E-02	U	pCi/g		5.93E-02		
J1V922									
	M8R1P1AC	AMERICIUM 241	1.43E-03 +- 5.2E-02	U	pCi/g		8.99E-02		
		CE-144	-2.28E-02 +- 8.4E-02	U	pCi/g		1.44E-01		
		CO-60	-1.29E-02 +- 1.6E-02	U	pCi/g		2.66E-02	5.00E-02	
		CS-134	1.16E-02 +- 2.1E-02	U	pCi/g		3.71E-02		
		CS-137	2.59E-03 +- 1.8E-02	U	pCi/g		3.19E-02	1.00E-01	
		EU-152	4.76E-02 +- 4.7E-02	U	pCi/g		8.53E-02	1.00E-01	
		EU-154	6.53E-02 +- 5.9E-02	U	pCi/g		1.14E-01	1.00E-01	
		EU-155	4.14E-02 +- 4.4E-02	U	pCi/g		7.61E-02	1.00E-01	
		K-40	9.26E+00 +- 1.3E+00		pCi/g		2.82E-01		
		RA-226	3.07E-01 +- 8.3E-02	U	pCi/g		1.11E-01		
		RA-228	5.94E-01 +- 1.6E-01		pCi/g		1.19E-01		
		RU-106	2.60E-02 +- 1.4E-01	U	pCi/g		2.54E-01		
		SB-125	1.47E-02 +- 4.5E-02	U	pCi/g		7.86E-02		
		U-235	-1.31E-02 +- 9.3E-02	U	pCi/g		1.53E-01	1.00E+00	
		U-238	5.46E-01 +- 5.1E-01	U	pCi/g		8.79E-01		
		ZN-65	-5.59E-02 +- 4.8E-02	U	pCi/g		7.67E-02		
J1V923									
	M8R1Q1AC	AMERICIUM 241	1.47E-02 +- 7.3E-02	U	pCi/g		1.22E-01		
		CE-144	-1.34E-01 +- 1.0E-01	U	pCi/g		1.63E-01		
		CO-60	-4.45E-04 +- 1.3E-02	U	pCi/g		2.30E-02	5.00E-02	
		CS-134	2.16E-02 +- 1.8E-02	U	pCi/g		3.21E-02		
		CS-137	-2.08E-03 +- 1.5E-02	U	pCi/g		2.52E-02	1.00E-01	
		EU-152	-1.13E-01 +- 1.5E-01	U	pCi/g		7.66E-02	1.00E-01	
		EU-154	-3.44E-03 +- 5.0E-02	U	pCi/g		8.73E-02	1.00E-01	
		EU-155	-2.88E-02 +- 5.3E-02	U	pCi/g		8.77E-02	1.00E-01	

TestAmerica Inc

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Sample Results Summary

TestAmerica Inc TARL

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

Date: 24-Jun-16

Report No. : 68830

SDG No: JP1046

Batch	Client Id Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
6173017 GAMMA_GS									
J1V923									
	M8R1Q1AC	K-40	9.59E+00 +- 1.2E+00		pCi/g		2.07E-01		
		RA-226	3.56E-01 +- 6.9E-02	U	pCi/g		9.14E-02		
		RA-228	1.75E-01 +- 9.9E-02		pCi/g		9.98E-02		
		RU-106	-6.70E-03 +- 1.2E-01	U	pCi/g		2.15E-01		
		SB-125	1.63E-02 +- 3.9E-02	U	pCi/g		6.81E-02		
		U-235	2.48E-02 +- 1.0E-01	U	pCi/g		1.70E-01	1.00E+00	
		U-238	7.73E-01 +- 6.4E-01	U	pCi/g		1.07E+00		
		ZN-65	-2.97E-02 +- 4.2E-02	U	pCi/g		7.04E-02		
J1V924									
	M8R1R1AC	AMERICIUM 241	8.35E-04 +- 1.7E-02	U	pCi/g		2.87E-02		
		CE-144	-2.22E-03 +- 5.2E-02	U	pCi/g		8.49E-02		
		CO-60	8.87E-03 +- 1.2E-02	U	pCi/g		2.27E-02	5.00E-02	
		CS-134	3.72E-02 +- 2.7E-02	U	pCi/g		2.90E-02		
		CS-137	-6.15E-03 +- 1.2E-02	U	pCi/g		2.06E-02	1.00E-01	
		EU-152	-3.21E-03 +- 2.7E-02	U	pCi/g		4.67E-02	1.00E-01	
		EU-154	9.24E-03 +- 4.2E-02	U	pCi/g		7.48E-02	1.00E-01	
		EU-155	3.77E-02 +- 2.6E-02	U	pCi/g		4.38E-02	1.00E-01	
		K-40	1.13E+01 +- 1.4E+00		pCi/g		2.22E-01		
		RA-226	3.92E-01 +- 7.7E-02		pCi/g		3.82E-02		
		RA-228	6.45E-01 +- 1.3E-01		pCi/g		7.49E-02		
		RU-106	9.24E-02 +- 1.0E-01	U	pCi/g		1.84E-01		
		SB-125	-1.59E-02 +- 2.8E-02	U	pCi/g		4.60E-02		
		U-235	4.94E-02 +- 5.2E-02	U	pCi/g		9.16E-02	1.00E+00	
		U-238	4.19E-01 +- 2.4E-01		pCi/g		2.85E-01		
		ZN-65	2.97E-02 +- 3.5E-02	U	pCi/g		5.62E-02		
J1V925									
	M8R1T1AC	AMERICIUM 241	7.89E-03 +- 1.4E-02	U	pCi/g		2.43E-02		
		CE-144	-5.11E-02 +- 4.4E-02	U	pCi/g		7.21E-02		
		CO-60	4.39E-03 +- 1.2E-02	U	pCi/g		2.24E-02	5.00E-02	
		CS-134	1.02E-02 +- 1.3E-02	U	pCi/g		2.32E-02		
		CS-137	-6.71E-04 +- 1.1E-02	U	pCi/g		1.89E-02	1.00E-01	
		EU-152	1.84E-02 +- 2.4E-02	U	pCi/g		4.18E-02	1.00E-01	
		EU-154	-9.40E-03 +- 3.9E-02	U	pCi/g		6.61E-02	1.00E-01	
		EU-155	2.98E-02 +- 2.1E-02	U	pCi/g		3.81E-02	1.00E-01	
		K-40	1.04E+01 +- 1.3E+00		pCi/g		1.76E-01		
		RA-226	3.23E-01 +- 5.9E-02		pCi/g		3.27E-02		

TestAmerica Inc

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Sample Results Summary

TestAmerica Inc TARL

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

Date: 24-Jun-16

Report No. : 68830

SDG No: JP1046

Batch	Client Id Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
6173017 GAMMA_GS									
J1V925									
	M8R1T1AC	RA-228	5.81E-01 +- 1.1E-01		pCi/g		7.61E-02		
		RU-106	2.95E-02 +- 8.7E-02	U	pCi/g		1.57E-01		
		SB-125	-4.17E-04 +- 2.2E-02	U	pCi/g		3.83E-02		
		U-235	5.42E-03 +- 4.5E-02	U	pCi/g		7.65E-02	1.00E+00	
		U-238	3.29E-01 +- 1.8E-01		pCi/g		2.48E-01		
		ZN-65	-4.99E-03 +- 2.9E-02	U	pCi/g		4.26E-02		
J1V926									
	M8R1V1AC	AMERICIUM 241	4.07E-03 +- 1.8E-02	U	pCi/g		3.08E-02		
		CE-144	1.33E-02 +- 5.7E-02	U	pCi/g		9.45E-02		
		CO-60	-6.71E-03 +- 1.4E-02	U	pCi/g		2.28E-02	5.00E-02	
		CS-134	3.23E-02 +- 1.7E-02	U	pCi/g		3.19E-02		
		CS-137	-1.63E-02 +- 1.3E-02	U	pCi/g		2.08E-02	1.00E-01	
		EU-152	-2.55E-02 +- 3.0E-02	U	pCi/g		4.87E-02	1.00E-01	
		EU-154	-7.40E-03 +- 4.4E-02	U	pCi/g		7.57E-02	1.00E-01	
		EU-155	2.97E-02 +- 2.7E-02	U	pCi/g		4.68E-02	1.00E-01	
		K-40	1.24E+01 +- 1.5E+00		pCi/g		1.77E-01		
		RA-226	3.97E-01 +- 8.3E-02		pCi/g		3.91E-02		
		RA-228	7.00E-01 +- 1.4E-01		pCi/g		8.79E-02		
		RU-106	1.98E-02 +- 1.0E-01	U	pCi/g		1.82E-01		
		SB-125	-8.05E-03 +- 2.8E-02	U	pCi/g		4.77E-02		
		U-235	3.13E-02 +- 5.5E-02	U	pCi/g		9.50E-02	1.00E+00	
		U-238	5.75E-01 +- 3.2E-01		pCi/g		3.07E-01		
		ZN-65	-2.77E-02 +- 3.7E-02	U	pCi/g		4.97E-02		
J1V927									
	M8R1W1AC	AMERICIUM 241	-6.38E-04 +- 8.1E-02	U	pCi/g		1.36E-01		
		CE-144	-1.32E-01 +- 1.1E-01	U	pCi/g		1.68E-01		
		CO-60	3.62E-03 +- 1.5E-02	U	pCi/g		2.69E-02	5.00E-02	
		CS-134	2.23E-02 +- 1.9E-02	U	pCi/g		3.35E-02		
		CS-137	4.99E-03 +- 1.6E-02	U	pCi/g		2.79E-02	1.00E-01	
		EU-152	3.32E-02 +- 1.2E-01	U	pCi/g		7.49E-02	1.00E-01	
		EU-154	-7.05E-02 +- 5.1E-02	U	pCi/g		7.91E-02	1.00E-01	
		EU-155	1.43E-02 +- 5.8E-02	U	pCi/g		9.63E-02	1.00E-01	
		K-40	1.28E+01 +- 1.6E+00		pCi/g		1.76E-01		
		RA-226	4.26E-01 +- 8.0E-02		pCi/g		5.19E-02		
		RA-228	7.33E-01 +- 1.3E-01		pCi/g		1.02E-01		
		RU-106	4.25E-02 +- 1.3E-01	U	pCi/g		2.28E-01		

TestAmerica Inc

rptTALRchSaSummary2 V5.5.1 A2002

RPD - Relative Percent Difference.

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

Sample Results Summary

Date: 24-Jun-16

TestAmerica Inc TARL

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

Report No. : 68830 **SDG No:** JP1046

Batch	Client Id Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
6173017	GAMMA_GS								
	J1V927								
	M8R1W1AC	SB-125	1.49E-02 +- 4.2E-02	U	pCi/g		7.25E-02		
		U-235	6.92E-02 +- 1.0E-01	U	pCi/g		1.79E-01	1.00E+00	
		U-238	5.64E-01 +- 7.1E-01	U	pCi/g		1.19E+00		
		ZN-65	2.71E-02 +- 4.2E-02	U	pCi/g		6.43E-02		

No. of Results: 266

TestAmerica Inc

rptTAL_RchSaSummary2 V5.5.1
A2002

RPD - Relative Percent Difference.

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

QC Results Summary

Date: 24-Jun-16

TestAmerica Inc TARL

Ordered by Method, Batch No, QC Type,.

Report No. : 68830

SDG No.: JP1046

Batch Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDL
UISO_IE_PLATE_AEA								
6173018 BLANK QC,								
M8R201AA	U-234	-6.35E-04 +- 3.2E-02	U	pCi/g	86%			5.37E-02
	U-235	-6.35E-04 +- 3.2E-02	U	pCi/g	86%			5.37E-02
	U-238	-1.90E-03 +- 3.2E-02	U	pCi/g	86%			6.14E-02
6173018 LCS,								
M8R201AC	U-234	3.51E+00 +- 7.9E-01		pCi/g	84%	108%	0.1	5.33E-02
	U-238	3.20E+00 +- 7.3E-01		pCi/g	84%	94%	-0.1	5.33E-02
GAMMA_GS								
6173017 BLANK QC,								
M8R2W1AA	AMERICIUM 241	2.65E-03 +- 4.0E-02	U	pCi/g				7.00E-02
	CE-144	-1.71E-02 +- 5.7E-02	U	pCi/g				9.89E-02
	CO-60	1.18E-03 +- 1.5E-02	U	pCi/g				2.87E-02
	CS-134	2.61E-03 +- 1.7E-02	U	pCi/g				2.75E-02
	CS-137	4.07E-03 +- 1.5E-02	U	pCi/g				2.71E-02
	EU-152	8.49E-03 +- 3.9E-02	U	pCi/g				6.94E-02
	EU-154	5.32E-03 +- 4.0E-02	U	pCi/g				7.61E-02
	EU-155	-3.31E-04 +- 3.1E-02	U	pCi/g				5.27E-02
	K-40	-4.01E-01 +- 3.5E-01	U	pCi/g				7.02E-01
	RA-226	5.88E-02 +- 5.1E-02	U	pCi/g				7.55E-02
	RA-228	1.82E-02 +- 7.8E-02	U	pCi/g				1.33E-01
	RU-106	-4.82E-02 +- 1.2E-01	U	pCi/g				1.99E-01
	SB-125	7.79E-04 +- 3.2E-02	U	pCi/g				5.74E-02
	U-235	-6.86E-03 +- 6.9E-02	U	pCi/g				1.11E-01
	U-238	-2.80E-01 +- 4.1E-01	U	pCi/g				6.47E-01
	ZN-65	-2.79E-02 +- 3.4E-02	U	pCi/g				5.63E-02
6173017 LCS,								
M8R2W1AC	CS-137	9.56E-01 +- 1.2E-01		pCi/g		99%	0.0	2.18E-02
	RA-226	9.29E-01 +- 1.3E-01		pCi/g		82%	-0.2	3.59E-02
	RA-228	4.20E-01 +- 1.2E-01		pCi/g		84%	-0.2	6.36E-02
	U-238	9.64E-01 +- 1.2E-01		pCi/g		80%	-0.2	3.55E-02

No. of Results: 25

TestAmerica Inc
rptSTLRchQcSummary V5.5.1 A2002

Bias - (Result/Expected)-1 as defined by ANSI N13.30.
U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name: TestAmerica Inc
Lot-Sample No.: J6F200409-1
Client Sample ID: J1V915

SDG: JP1046
Report No. : 68830
COC No. : RC-148-225

Collection Date: 6/16/2016 11:02:00 AM
Received Date: 6/20/2016 3:45:00 PM
Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6173017	GAMMA_GS			**Work Order:**	M8R1G1AC		**Report DB ID:**	9M8R1G10				
AMERICIUM 241	3.92E-02	U	6.3E-02	6.3E-02	1.11E-01	pCi/g		*0.35*	6/21/16 12:31 p		339.4	GER7$1
								(1.3)			g	
CE-144	4.13E-03	U	9.6E-02	9.6E-02	1.66E-01	pCi/g		*0.02*	6/21/16 12:31 p		339.4	GER7$1
								0.09			g	
CO-60	-1.11E-02	U	2.2E-02	2.2E-02	3.72E-02	pCi/g		*-0.3*	6/21/16 12:31 p		339.4	GER7$1
							5.00E-02	*-1.*			g	
CS-134	4.64E-02	U	2.5E-02	2.5E-02	4.68E-02	pCi/g		*0.99*	6/21/16 12:31 p		339.4	GER7$1
								(3.7)			g	
CS-137	-1.09E-02	U	2.1E-02	2.1E-02	3.60E-02	pCi/g		*-0.3*	6/21/16 12:31 p		339.4	GER7$1
							1.00E-01	*-(1.)*			g	
EU-152	3.70E-04	U	5.4E-02	5.4E-02	9.06E-02	pCi/g		*0.*	6/21/16 12:31 p		339.4	GER7$1
							1.00E-01	*0.01*			g	
EU-154	2.74E-02	U	6.6E-02	6.6E-02	1.22E-01	pCi/g		*0.22*	6/21/16 12:31 p		339.4	GER7$1
							1.00E-01	*0.83*			g	
EU-155	4.13E-02	U	5.1E-02	5.1E-02	8.75E-02	pCi/g		*0.47*	6/21/16 12:31 p		339.4	GER7$1
							1.00E-01	*(1.6)*			g	
K-40	1.05E+01		1.5E+00	1.5E+00	2.91E-01	pCi/g		*(36.3)*	6/21/16 12:31 p		339.4	GER7$1
								(13.9)			g	
RA-226	4.46E-01		1.1E-01	1.1E-01	6.56E-02	pCi/g		*(6.8)*	6/21/16 12:31 p		339.4	GER7$1
								(8.4)			g	

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

FORM I

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name: TestAmerica Inc
Lot-Sample No.: J6F200409-1
Client Sample ID: J1V915

SDG: JP1046
Report No. : 68830
COC No. : RC-148-225

Collection Date: 6/16/2016 11:02:00 AM
Received Date: 6/20/2016 3:45:00 PM
Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
RA-228	6.57E-01	U	2.0E-01	2.0E-01	2.73E-01	pCi/g		(2.4)	6/21/16 12:31 p		339.4	GER7$1
								(6.7)			g	
RU-106	-3.04E-02	U	1.7E-01	1.7E-01	2.88E-01	pCi/g		-0.11	6/21/16 12:31 p		339.4	GER7$1
								-0.36			g	
SB-125	-2.03E-02	U	5.0E-02	5.0E-02	8.37E-02	pCi/g		-0.24	6/21/16 12:31 p		339.4	GER7$1
								-0.81			g	
U-235	-4.77E-03	U	1.0E-01	1.0E-01	1.69E-01	pCi/g		-0.03	6/21/16 12:31 p		339.4	GER7$1
							1.00E+00	-0.09			g	
U-238	8.84E-01	U	6.0E-01	6.0E-01	1.04E+00	pCi/g		0.85	6/21/16 12:31 p		339.4	GER7$1
								(2.9)			g	
ZN-65	-7.07E-02	U	5.5E-02	5.5E-02	8.60E-02	pCi/g		-0.82	6/21/16 12:31 p		339.4	GER7$1
								-(2.6)			g	
Batch: 6173018	UISO_IE_PLATE_AEA			**Work Order:**	M8R1G1AA		**Report DB ID:**	9M8R1G10				
U-234	2.21E-01		1.2E-01	1.3E-01	5.77E-02	pCi/g	76%	(3.8)	6/23/16 09:24 p		1.03	ALP404
						1.22E-02	1.00E+00	(3.4)			g	
U-235	1.71E-02	U	3.4E-02	3.4E-02	5.77E-02	pCi/g	76%	0.3	6/23/16 09:24 p		1.03	ALP404
						1.22E-02	1.00E+00	0.99			g	
U-238	2.04E-01		1.2E-01	1.2E-01	5.77E-02	pCi/g	76%	(3.5)	6/23/16 09:24 p		1.03	ALP404
						1.22E-02	1.00E+00	(3.3)			g	

Ratio U-234/238 = 1.1

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

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name:	TestAmerica Inc	**SDG:**	JP1046	**Collection Date:**	6/16/2016 11:45:00 AM
Lot-Sample No.:	J6F200409-2	**Report No. :**	68830	**Received Date:**	6/20/2016 3:45:00 PM
Client Sample ID:	J1V916	**COC No. :**	RC-148-225	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6173017	GAMMA_GS			**Work Order:**	M8R1H1AC		**Report DB ID:**	9M8R1H10				
AMERICIUM 241	-7.97E-02	U	7.7E-02	7.7E-02	1.25E-01	pCi/g		-0.64	6/21/16 12:31 p		363.7	GER10$1
								-(2.1)			g	
CE-144	-1.74E-01	U	1.1E-01	1.1E-01	1.67E-01	pCi/g		-(1.)	6/21/16 12:31 p		363.7	GER10$1
								-(3.3)			g	
CO-60	-4.79E-03	U	1.4E-02	1.4E-02	2.48E-02	pCi/g		-0.19	6/21/16 12:31 p		363.7	GER10$1
							5.00E-02	-0.66			g	
CS-134	2.64E-02	U	1.6E-02	1.6E-02	3.06E-02	pCi/g		0.86	6/21/16 12:31 p		363.7	GER10$1
								(3.2)			g	
CS-137	1.07E-02	U	1.6E-02	1.6E-02	2.84E-02	pCi/g		0.38	6/21/16 12:31 p		363.7	GER10$1
							1.00E-01	(1.3)			g	
EU-152	-7.51E-02	U	1.4E-01	1.4E-01	7.44E-02	pCi/g		-(1.)	6/21/16 12:31 p		363.7	GER10$1
							1.00E-01	-(1.1)			g	
EU-154	1.07E-02	U	5.0E-02	5.0E-02	8.82E-02	pCi/g		0.12	6/21/16 12:31 p		363.7	GER10$1
							1.00E-01	0.43			g	
EU-155	-3.08E-02	U	5.6E-02	5.6E-02	9.15E-02	pCi/g		-0.34	6/21/16 12:31 p		363.7	GER10$1
							1.00E-01	-(1.1)			g	
K-40	9.94E+00		1.3E+00	1.3E+00	2.22E-01	pCi/g		(44.7)	6/21/16 12:31 p		363.7	GER10$1
								(15.5)			g	
RA-226	3.90E-01		8.1E-02	8.1E-02	4.93E-02	pCi/g		(7.9)	6/21/16 12:31 p		363.7	GER10$1
								(9.6)			g	

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

FORM I

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name: TestAmerica Inc
Lot-Sample No.: J6F200409-2
Client Sample ID: J1V916

SDG: JP1046
Report No. : 68830
COC No. : RC-148-225

Collection Date: 6/16/2016 11:45:00 AM
Received Date: 6/20/2016 3:45:00 PM
Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
RA-228	3.12E-01		1.0E-01	1.0E-01	8.86E-02	pCi/g		(3.5)	6/21/16 12:31 p		363.7	GER10$1
								(6.)			g	
RU-106	3.69E-02	U	1.3E-01	1.3E-01	2.25E-01	pCi/g		0.16	6/21/16 12:31 p		363.7	GER10$1
								0.57			g	
SB-125	-3.18E-02	U	4.3E-02	4.3E-02	6.95E-02	pCi/g		-0.46	6/21/16 12:31 p		363.7	GER10$1
								-(1.5)			g	
U-235	3.11E-02	U	1.0E-01	1.0E-01	1.78E-01	pCi/g		0.18	6/21/16 12:31 p		363.7	GER10$1
							1.00E+00	0.6			g	
U-238	1.27E-01	U	6.4E-01	6.4E-01	1.08E+00	pCi/g		0.12	6/21/16 12:31 p		363.7	GER10$1
								0.39			g	
ZN-65	-6.24E-02	U	4.0E-02	4.0E-02	6.28E-02	pCi/g		-0.99	6/21/16 12:31 p		363.7	GER10$1
								-(3.1)			g	
Batch: 6173018	UISO_IE_PLATE_AEA			**Work Order:**	M8R1H1AA		**Report DB ID:**	9M8R1H10				
U-234	6.40E-01		2.0E-01	2.3E-01	5.16E-02	pCi/g	92%	(12.4)	6/23/16 09:24 p		0.99	ALP407
						1.09E-02	1.00E+00	(5.6)			g	
U-235	1.53E-02	U	3.1E-02	3.1E-02	5.16E-02	pCi/g	92%	0.3	6/23/16 09:24 p		0.99	ALP407
						1.09E-02	1.00E+00	1.			g	
U-238	7.01E-01		2.1E-01	2.4E-01	5.16E-02	pCi/g	92%	(13.6)	6/23/16 09:24 p		0.99	ALP407
						1.09E-02	1.00E+00	(5.8)			g	

Ratio U-234/238 = 0.9

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

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

FORM I

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name:	**TestAmerica Inc**	**SDG:**	JP1046	**Collection Date:**	6/16/2016 11:15:00 AM
Lot-Sample No.:	**J6F200409-3**	**Report No. :**	68830	**Received Date:**	6/20/2016 3:45:00 PM
Client Sample ID:	**J1V917**	**COC No. :**	RC-148-225	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6173017	GAMMA_GS			**Work Order:**	M8R1J1AC		**Report DB ID:**	9M8R1J10				
AMERICIUM 241	**-1.13E-03**	U	1.4E-02	1.4E-02	2.46E-02	pCi/g		*-0.05*	6/21/16 12:32 p		361.5	GER17$1
								-0.16			g	
CE-144	**-2.88E-02**	U	4.5E-02	4.5E-02	7.59E-02	pCi/g		*-0.38*	6/21/16 12:32 p		361.5	GER17$1
								-(1.3)			g	
CO-60	**5.82E-03**	U	1.2E-02	1.2E-02	2.28E-02	pCi/g		*0.26*	6/21/16 12:32 p		361.5	GER17$1
							5.00E-02	*0.98*			g	
CS-134	**1.76E-02**	U	1.4E-02	1.4E-02	2.66E-02	pCi/g		*0.66*	6/21/16 12:32 p		361.5	GER17$1
								(2.5)			g	
CS-137	**-7.24E-03**	U	1.1E-02	1.1E-02	1.89E-02	pCi/g		*-0.38*	6/21/16 12:32 p		361.5	GER17$1
							1.00E-01	*-(1.3)*			g	
EU-152	**-1.35E-02**	U	2.6E-02	2.6E-02	4.24E-02	pCi/g		*-0.32*	6/21/16 12:32 p		361.5	GER17$1
							1.00E-01	*-(1.)*			g	
EU-154	**-7.41E-03**	U	4.4E-02	4.4E-02	7.49E-02	pCi/g		*-0.1*	6/21/16 12:32 p		361.5	GER17$1
							1.00E-01	*-0.34*			g	
EU-155	**3.90E-02**	U	2.3E-02	2.3E-02	4.08E-02	pCi/g		*0.96*	6/21/16 12:32 p		361.5	GER17$1
							1.00E-01	*(3.5)*			g	
K-40	**1.03E+01**		1.3E+00	1.3E+00	1.90E-01	pCi/g		*(54.1)*	6/21/16 12:32 p		361.5	GER17$1
								(16.3)			g	
RA-226	**3.12E-01**		5.8E-02	5.8E-02	3.39E-02	pCi/g		*(9.2)*	6/21/16 12:32 p		361.5	GER17$1
								(10.7)			g	

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

FORM I

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name:	TestAmerica Inc	**SDG:**	JP1046	**Collection Date:**	6/16/2016 11:15:00 AM
Lot-Sample No.:	J6F200409-3	**Report No. :**	68830	**Received Date:**	6/20/2016 3:45:00 PM
Client Sample ID:	J1V917	**COC No. :**	RC-148-225	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
RA-228	5.77E-01		1.3E-01	1.3E-01	6.81E-02	pCi/g		(8.5)	6/21/16 12:32 p		361.5	GER17$1
								(9.1)			g	
RU-106	3.52E-02	U	8.7E-02	8.7E-02	1.58E-01	pCi/g		0.22	6/21/16 12:32 p		361.5	GER17$1
								0.81			g	
SB-125	-1.47E-02	U	2.4E-02	2.4E-02	4.01E-02	pCi/g		-0.37	6/21/16 12:32 p		361.5	GER17$1
								-(1.2)			g	
U-235	1.49E-02	U	4.6E-02	4.6E-02	7.98E-02	pCi/g		0.19	6/21/16 12:32 p		361.5	GER17$1
							1.00E+00	0.64			g	
U-238	2.58E-01		2.1E-01	2.1E-01	2.47E-01	pCi/g		(1.)	6/21/16 12:32 p		361.5	GER17$1
								(2.4)			g	
ZN-65	3.34E-02	U	3.2E-02	3.2E-02	5.34E-02	pCi/g		0.63	6/21/16 12:32 p		361.5	GER17$1
								(2.1)			g	
Batch: 6173018	UISO_IE_PLATE_AEA			**Work Order:**	M8R1J1AA		**Report DB ID:**	9M8R1J10				
U-234	1.68E-01		9.4E-02	9.8E-02	4.72E-02	pCi/g	101%	(3.6)	6/23/16 09:25 p		1.07	ALP413
						1.09E-02	1.00E+00	(3.4)			g	
U-235	1.19E-02	U	2.6E-02	2.6E-02	4.72E-02	pCi/g	101%	0.25	6/23/16 09:25 p		1.07	ALP413
						1.09E-02	1.00E+00	0.92			g	
U-238	2.07E-01		1.0E-01	1.1E-01	4.36E-02	pCi/g	101%	(4.7)	6/23/16 09:25 p		1.07	ALP413
						9.29E-03	1.00E+00	(3.8)			g	

Ratio U-234/238 = 0.8

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

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

FORM I

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name:	TestAmerica Inc	**SDG:**	JP1046	**Collection Date:**	6/16/2016 11:57:00 AM
Lot-Sample No.:	J6F200409-4	**Report No. :**	68830	**Received Date:**	6/20/2016 3:45:00 PM
Client Sample ID:	J1V918	**COC No. :**	RC-148-225	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6173017	GAMMA_GS			**Work Order:**	M8R1K1AC		**Report DB ID:**	9M8R1K10				
AMERICIUM 241	**3.87E-03**	U	1.3E-02	1.3E-02	2.26E-02	pCi/g		*0.17*	6/21/16 12:34 p		400.4	GER18$1
								0.6			g	
CE-144	**-1.39E-02**	U	3.9E-02	3.9E-02	6.76E-02	pCi/g		*-0.21*	6/21/16 12:34 p		400.4	GER18$1
								-0.7			g	
CO-60	**2.03E-03**	U	1.1E-02	1.1E-02	1.98E-02	pCi/g		*0.1*	6/21/16 12:34 p		400.4	GER18$1
							5.00E-02	*0.38*			g	
CS-134	**2.52E-02**	U	1.9E-02	1.9E-02	2.49E-02	pCi/g		*(1.)*	6/21/16 12:34 p		400.4	GER18$1
								(2.7)			g	
CS-137	**-1.19E-02**	U	1.0E-02	1.0E-02	1.60E-02	pCi/g		*-0.74*	6/21/16 12:34 p		400.4	GER18$1
							1.00E-01	*-(2.3)*			g	
EU-152	**1.22E-02**	U	2.3E-02	2.3E-02	3.95E-02	pCi/g		*0.31*	6/21/16 12:34 p		400.4	GER18$1
							1.00E-01	*(1.1)*			g	
EU-154	**2.57E-02**	U	3.8E-02	3.8E-02	7.12E-02	pCi/g		*0.36*	6/21/16 12:34 p		400.4	GER18$1
							1.00E-01	*(1.4)*			g	
EU-155	**1.56E-02**	U	2.2E-02	2.2E-02	3.65E-02	pCi/g		*0.43*	6/21/16 12:34 p		400.4	GER18$1
							1.00E-01	*(1.4)*			g	
K-40	**9.18E+00**		1.1E+00	1.1E+00	1.52E-01	pCi/g		*(60.3)*	6/21/16 12:34 p		400.4	GER18$1
								(16.3)			g	
RA-226	**3.62E-01**		5.9E-02	5.9E-02	3.01E-02	pCi/g		*(12.)*	6/21/16 12:34 p		400.4	GER18$1
								(12.2)			g	

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

FORM I

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name: TestAmerica Inc
Lot-Sample No.: J6F200409-4
Client Sample ID: J1V918

SDG: JP1046
Report No. : 68830
COC No. : RC-148-225

Collection Date: 6/16/2016 11:57:00 AM
Received Date: 6/20/2016 3:45:00 PM
Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
RA-228	4.81E-01		9.8E-02	9.8E-02	6.84E-02	pCi/g		(7.) (9.8)	6/21/16 12:34 p		400.4 g	GER18$1
RU-106	2.06E-02	U	8.8E-02	8.8E-02	1.54E-01	pCi/g		0.13 0.47	6/21/16 12:34 p		400.4 g	GER18$1
SB-125	-1.45E-02	U	2.2E-02	2.2E-02	3.72E-02	pCi/g		-0.39 -(1.3)	6/21/16 12:34 p		400.4 g	GER18$1
U-235	1.38E-02	U	4.1E-02	4.1E-02	7.24E-02	pCi/g	1.00E+00	0.19 0.66	6/21/16 12:34 p		400.4 g	GER18$1
U-238	3.85E-01		2.3E-01	2.3E-01	2.18E-01	pCi/g		(1.8) (3.4)	6/21/16 12:34 p		400.4 g	GER18$1
ZN-65	7.91E-03	U	2.8E-02	2.8E-02	4.31E-02	pCi/g		0.18 0.57	6/21/16 12:34 p		400.4 g	GER18$1
Batch: 6173018	UISO_IE_PLATE_AEA			**Work Order:**	M8R1K1AA		**Report DB ID:**	9M8R1K10				
U-234	1.79E-01		1.1E-01	1.1E-01	6.69E-02	pCi/g 1.69E-02	76% 1.00E+00	(2.7) (3.1)	6/23/16 09:26 p		1.07 g	ALP414
U-235	1.52E-02	U	3.3E-02	3.3E-02	6.04E-02	pCi/g 1.39E-02	76% 1.00E+00	0.25 0.92	6/23/16 09:26 p		1.07 g	ALP414
U-238	1.61E-01		1.0E-01	1.1E-01	7.41E-02	pCi/g 2.04E-02	76% 1.00E+00	(2.2) (3.)	6/23/16 09:26 p		1.07 g	ALP414

Ratio U-234/238 = 1.1

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

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

FORM I

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name: TestAmerica Inc
Lot-Sample No.: J6F200409-5
Client Sample ID: J1V919

SDG: JP1046
Report No. : 68830
COC No. : RC-148-225

Collection Date: 6/16/2016 12:38:00 PM
Received Date: 6/20/2016 3:45:00 PM
Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6173017	GAMMA_GS			**Work Order:**	M8R1L1AC		**Report DB ID:**	9M8R1L10				
AMERICIUM 241	3.39E-03	U	1.6E-02	1.6E-02	2.69E-02	pCi/g		*0.13*	6/21/16 12:43 p		359.1	GER16$1
								0.43			g	
CE-144	8.87E-03	U	4.6E-02	4.6E-02	7.82E-02	pCi/g		*0.11*	6/21/16 12:43 p		359.1	GER16$1
								0.38			g	
CO-60	-1.44E-03	U	1.4E-02	1.4E-02	2.46E-02	pCi/g		*-0.06*	6/21/16 12:43 p		359.1	GER16$1
							5.00E-02	*-0.21*			g	
CS-134	2.42E-02	U	1.5E-02	1.5E-02	2.82E-02	pCi/g		*0.86*	6/21/16 12:43 p		359.1	GER16$1
								(3.3)			g	
CS-137	-6.12E-03	U	1.3E-02	1.3E-02	2.11E-02	pCi/g		*-0.29*	6/21/16 12:43 p		359.1	GER16$1
							1.00E-01	*-0.97*			g	
EU-152	-1.55E-02	U	2.7E-02	2.7E-02	4.52E-02	pCi/g		*-0.34*	6/21/16 12:43 p		359.1	GER16$1
							1.00E-01	*-(1.1)*			g	
EU-154	-6.39E-03	U	4.9E-02	4.9E-02	8.54E-02	pCi/g		*-0.07*	6/21/16 12:43 p		359.1	GER16$1
							1.00E-01	*-0.26*			g	
EU-155	3.75E-02	U	2.6E-02	2.6E-02	3.83E-02	pCi/g		*0.98*	6/21/16 12:43 p		359.1	GER16$1
							1.00E-01	*(2.9)*			g	
K-40	1.17E+01		1.4E+00	1.4E+00	2.69E-01	pCi/g		*(43.4)*	6/21/16 12:43 p		359.1	GER16$1
								(16.4)			g	
RA-226	3.62E-01		7.5E-02	7.5E-02	3.68E-02	pCi/g		*(9.8)*	6/21/16 12:43 p		359.1	GER16$1
								(9.7)			g	

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name: TestAmerica Inc
Lot-Sample No.: J6F200409-5
Client Sample ID: J1V919

SDG: JP1046
Report No. : 68830
COC No. : RC-148-225

Collection Date: 6/16/2016 12:38:00 PM
Received Date: 6/20/2016 3:45:00 PM
Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
RA-228	4.29E-01		1.2E-01	1.2E-01	9.13E-02	pCi/g		(4.7)	6/21/16 12:43 p		359.1	GER16$1
								(7.2)			g	
RU-106	5.75E-02	U	9.8E-02	9.8E-02	1.78E-01	pCi/g		0.32	6/21/16 12:43 p		359.1	GER16$1
								(1.2)			g	
SB-125	-3.69E-03	U	2.5E-02	2.5E-02	4.39E-02	pCi/g		-0.08	6/21/16 12:43 p		359.1	GER16$1
								-0.29			g	
U-235	-3.59E-02	U	5.1E-02	5.1E-02	8.12E-02	pCi/g		-0.44	6/21/16 12:43 p		359.1	GER16$1
							1.00E+00	-(1.4)			g	
U-238	4.80E-01		2.1E-01	2.1E-01	2.59E-01	pCi/g		(1.9)	6/21/16 12:43 p		359.1	GER16$1
								(4.5)			g	
ZN-65	-4.05E-03	U	3.9E-02	3.9E-02	5.64E-02	pCi/g		-0.07	6/21/16 12:43 p		359.1	GER16$1
								-0.21			g	
Batch: 6173018	UISO_IE_PLATE_AEA			**Work Order:**	M8R1L1AA		**Report DB ID:**	9M8R1L10				
U-234	3.37E-01		1.4E-01	1.5E-01	6.88E-02	pCi/g	96%	(4.9)	6/23/16 09:27 p		0.99	ALP419
						2.71E-02	1.00E+00	(4.5)			g	
U-235	1.40E-02	U	3.0E-02	3.0E-02	6.88E-02	pCi/g	96%	0.2	6/23/16 09:27 p		0.99	ALP419
						2.71E-02	1.00E+00	0.95			g	
U-238	4.02E-01		1.5E-01	1.7E-01	6.88E-02	pCi/g	96%	(5.8)	6/23/16 09:27 p		0.99	ALP419
						2.71E-02	1.00E+00	(4.8)			g	

Ratio U-234/238 = 0.8

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

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name:	TestAmerica Inc	**SDG:**	JP1046	**Collection Date:**	6/16/2016 12:25:00 PM
Lot-Sample No.:	J6F200409-6	**Report No. :**	68830	**Received Date:**	6/20/2016 3:45:00 PM
Client Sample ID:	J1V920	**COC No. :**	RC-148-225	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6173017	GAMMA_GS			**Work Order:**	M8R1M1AC		**Report DB ID:**	9M8R1M10				
AMERICIUM 241	1.19E-02	U	1.5E-02	1.5E-02	2.66E-02	pCi/g		*0.45*	6/21/16 04:43 p		349.0	GER18$1
								(1.6)			g	
CE-144	-2.64E-02	U	4.4E-02	4.4E-02	7.53E-02	pCi/g		*-0.35*	6/21/16 04:43 p		349.0	GER18$1
								-(1.2)			g	
CO-60	6.93E-03	U	1.3E-02	1.3E-02	2.46E-02	pCi/g		*0.28*	6/21/16 04:43 p		349.0	GER18$1
							5.00E-02	*(1.1)*			g	
CS-134	2.91E-02	U	1.4E-02	1.4E-02	2.79E-02	pCi/g		*(1.)*	6/21/16 04:43 p		349.0	GER18$1
								(4.1)			g	
CS-137	-3.73E-03	U	1.3E-02	1.3E-02	2.18E-02	pCi/g		*-0.17*	6/21/16 04:43 p		349.0	GER18$1
							1.00E-01	*-0.57*			g	
EU-152	-3.17E-02	U	2.6E-02	2.6E-02	4.03E-02	pCi/g		*-0.79*	6/21/16 04:43 p		349.0	GER18$1
							1.00E-01	*-(2.5)*			g	
EU-154	-2.05E-02	U	4.2E-02	4.2E-02	7.18E-02	pCi/g		*-0.29*	6/21/16 04:43 p		349.0	GER18$1
							1.00E-01	*-0.98*			g	
EU-155	4.30E-02	U	2.4E-02	2.4E-02	4.10E-02	pCi/g		*(1.1)*	6/21/16 04:43 p		349.0	GER18$1
							1.00E-01	*(3.6)*			g	
K-40	1.12E+01		1.4E+00	1.4E+00	1.61E-01	pCi/g		*(69.7)*	6/21/16 04:43 p		349.0	GER18$1
								(16.5)			g	
RA-226	3.46E-01		6.2E-02	6.2E-02	3.56E-02	pCi/g		*(9.7)*	6/21/16 04:43 p		349.0	GER18$1
								(11.2)			g	

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name: TestAmerica Inc
Lot-Sample No.: J6F200409-6
Client Sample ID: J1V920

SDG: JP1046
Report No. : 68830
COC No. : RC-148-225

Collection Date: 6/16/2016 12:25:00 PM
Received Date: 6/20/2016 3:45:00 PM
Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
RA-228	5.19E-01		1.2E-01	1.2E-01	7.85E-02	pCi/g		(6.6) (8.5)	6/21/16 04:43 p		349.0 g	GER18$1
RU-106	-4.18E-02	U	9.4E-02	9.4E-02	1.57E-01	pCi/g		-0.27 -0.89	6/21/16 04:43 p		349.0 g	GER18$1
SB-125	9.41E-05	U	2.6E-02	2.6E-02	4.56E-02	pCi/g		0. 0.01	6/21/16 04:43 p		349.0 g	GER18$1
U-235	4.74E-02	U	4.7E-02	4.7E-02	8.35E-02	pCi/g	1.00E+00	0.57 (2.)	6/21/16 04:43 p		349.0 g	GER18$1
U-238	4.05E-01		2.4E-01	2.4E-01	2.57E-01	pCi/g		(1.6) (3.4)	6/21/16 04:43 p		349.0 g	GER18$1
ZN-65	-8.08E-02	U	3.5E-02	3.5E-02	4.88E-02	pCi/g		-(1.7) -(4.6)	6/21/16 04:43 p		349.0 g	GER18$1
Batch: 6173018	UISO_IE_PLATE_AEA			**Work Order:**	M8R1M1AA		**Report DB ID:**	9M8R1M10				
U-234	2.08E-01		1.2E-01	1.2E-01	7.86E-02	pCi/g 3.10E-02	78% 1.00E+00	(2.7) (3.4)	6/23/16 09:27 p		1.01 g	ALP421
U-235	0.00E+00	U	0.0E+00	3.4E-02	7.86E-02	pCi/g 3.10E-02	78% 1.00E+00	0. 0.	6/23/16 09:27 p		1.01 g	ALP421
U-238	2.89E-01		1.4E-01	1.5E-01	7.86E-02	pCi/g 3.10E-02	78% 1.00E+00	(3.7) (3.9)	6/23/16 09:27 p		1.01 g	ALP421

Ratio U-234/238 = 0.7

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

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

FORM I

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name:	TestAmerica Inc	**SDG:**	JP1046	**Collection Date:**	6/16/2016 12:15:00 PM
Lot-Sample No.:	J6F200409-7	**Report No. :**	68830	**Received Date:**	6/20/2016 3:45:00 PM
Client Sample ID:	J1V921	**COC No. :**	RC-148-225	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6173017	GAMMA_GS			**Work Order:**	M8R1N1AC		**Report DB ID:**	9M8R1N10				
AMERICIUM 241	-2.51E-03	U	9.0E-02	9.0E-02	1.57E-01	pCi/g		-0.02	6/21/16 04:43 p		362.9	GER11$1
								-0.06			g	
CE-144	-2.88E-03	U	6.2E-02	6.2E-02	1.08E-01	pCi/g		-0.03	6/21/16 04:43 p		362.9	GER11$1
								-0.09			g	
CO-60	-3.79E-03	U	1.4E-02	1.4E-02	2.39E-02	pCi/g		-0.16	6/21/16 04:43 p		362.9	GER11$1
							5.00E-02	-0.55			g	
CS-134	2.15E-02	U	1.5E-02	1.5E-02	2.73E-02	pCi/g		0.79	6/21/16 04:43 p		362.9	GER11$1
								(3.)			g	
CS-137	-1.00E-02	U	1.2E-02	1.2E-02	1.94E-02	pCi/g		-0.52	6/21/16 04:43 p		362.9	GER11$1
							1.00E-01	-(1.7)			g	
EU-152	2.89E-02	U	3.2E-02	3.2E-02	5.66E-02	pCi/g		0.51	6/21/16 04:43 p		362.9	GER11$1
							1.00E-01	(1.8)			g	
EU-154	2.00E-02	U	4.3E-02	4.3E-02	7.88E-02	pCi/g		0.25	6/21/16 04:43 p		362.9	GER11$1
							1.00E-01	0.93			g	
EU-155	6.96E-02	U	4.0E-02	4.0E-02	6.93E-02	pCi/g		(1.)	6/21/16 04:43 p		362.9	GER11$1
							1.00E-01	(3.5)			g	
K-40	1.39E+01		1.7E+00	1.7E+00	1.87E-01	pCi/g		(74.3)	6/21/16 04:43 p		362.9	GER11$1
								(16.2)			g	
RA-226	3.57E-01		6.3E-02	6.3E-02	3.99E-02	pCi/g		(8.9)	6/21/16 04:43 p		362.9	GER11$1
								(11.3)			g	

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

FORM I

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name: TestAmerica Inc
Lot-Sample No.: J6F200409-7
Client Sample ID: J1V921

SDG: JP1046
Report No. : 68830
COC No. : RC-148-225

Collection Date: 6/16/2016 12:15:00 PM
Received Date: 6/20/2016 3:45:00 PM
Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
RA-228	6.61E-01		1.2E-01	1.2E-01	8.01E-02	pCi/g		(8.3)	6/21/16 04:43 p		362.9	GER11$1
								(10.8)			g	
RU-106	6.43E-03	U	1.0E-01	1.0E-01	1.76E-01	pCi/g		0.04	6/21/16 04:43 p		362.9	GER11$1
								0.13			g	
SB-125	3.37E-02	U	3.0E-02	3.0E-02	5.47E-02	pCi/g		0.62	6/21/16 04:43 p		362.9	GER11$1
								(2.2)			g	
U-235	2.43E-03	U	6.6E-02	6.6E-02	1.13E-01	pCi/g		0.02	6/21/16 04:43 p		362.9	GER11$1
							1.00E+00	0.07			g	
U-238	-2.94E-02	U	6.7E-01	6.7E-01	1.16E+00	pCi/g		-0.03	6/21/16 04:43 p		362.9	GER11$1
								-0.09			g	
ZN-65	4.34E-02	U	3.6E-02	3.6E-02	5.93E-02	pCi/g		0.73	6/21/16 04:43 p		362.9	GER11$1
								(2.4)			g	
Batch: 6173018	UISO_IE_PLATE_AEA			**Work Order:**	M8R1N1AA		**Report DB ID:**	9M8R1N10				
U-234	1.11E-01		8.4E-02	8.7E-02	5.39E-02	pCi/g	82%	(2.1)	6/23/16 09:28 p		1.02	ALP422
						1.14E-02	1.00E+00	(2.6)			g	
U-235	1.53E-02	U	3.2E-02	3.2E-02	5.39E-02	pCi/g	82%	0.28	6/23/16 09:28 p		1.02	ALP422
						1.14E-02	1.00E+00	0.96			g	
U-238	1.11E-01		8.4E-02	8.7E-02	5.39E-02	pCi/g	82%	(2.1)	6/23/16 09:28 p		1.02	ALP422
						1.14E-02	1.00E+00	(2.6)			g	

Ratio U-234/238 = 1.0

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

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

FORM I

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name:	TestAmerica Inc	**SDG:**	JP1046	**Collection Date:**	6/16/2016 12:57:00 PM
Lot-Sample No.:	J6F200409-8	**Report No. :**	68830	**Received Date:**	6/20/2016 3:45:00 PM
Client Sample ID:	J1V922	**COC No. :**	RC-148-225	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6173017	GAMMA_GS			**Work Order:**	M8R1P1AC		**Report DB ID:**	9M8R1P10				
AMERICIUM 241	**1.43E-03**	U	5.2E-02	5.2E-02	8.99E-02	pCi/g		*0.02*	6/21/16 04:44 p		405.1	GER7$1
								0.06			g	
CE-144	**-2.28E-02**	U	8.4E-02	8.4E-02	1.44E-01	pCi/g		*-0.16*	6/21/16 04:44 p		405.1	GER7$1
								-0.54			g	
CO-60	**-1.29E-02**	U	1.6E-02	1.6E-02	2.66E-02	pCi/g		*-0.49*	6/21/16 04:44 p		405.1	GER7$1
							5.00E-02	*-(1.6)*			g	
CS-134	**1.16E-02**	U	2.1E-02	2.1E-02	3.71E-02	pCi/g		*0.31*	6/21/16 04:44 p		405.1	GER7$1
								(1.1)			g	
CS-137	**2.59E-03**	U	1.8E-02	1.8E-02	3.19E-02	pCi/g		*0.08*	6/21/16 04:44 p		405.1	GER7$1
							1.00E-01	*0.29*			g	
EU-152	**4.76E-02**	U	4.7E-02	4.7E-02	8.53E-02	pCi/g		*0.56*	6/21/16 04:44 p		405.1	GER7$1
							1.00E-01	*(2.)*			g	
EU-154	**6.53E-02**	U	5.9E-02	5.9E-02	1.14E-01	pCi/g		*0.57*	6/21/16 04:44 p		405.1	GER7$1
							1.00E-01	*(2.2)*			g	
EU-155	**4.14E-02**	U	4.4E-02	4.4E-02	7.61E-02	pCi/g		*0.54*	6/21/16 04:44 p		405.1	GER7$1
							1.00E-01	*(1.9)*			g	
K-40	**9.26E+00**		1.3E+00	1.3E+00	2.82E-01	pCi/g		*(32.9)*	6/21/16 04:44 p		405.1	GER7$1
								(14.)			g	
RA-226	**3.07E-01**	U	8.3E-02	8.3E-02	1.11E-01	pCi/g		*(2.8)*	6/21/16 04:44 p		405.1	GER7$1
								(7.4)			g	

TestAmerica Inc
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V5.5.1 A2002

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FORM I

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name: TestAmerica Inc
Lot-Sample No.: J6F200409-8
Client Sample ID: J1V922

SDG: JP1046
Report No. : 68830
COC No. : RC-148-225

Collection Date: 6/16/2016 12:57:00 PM
Received Date: 6/20/2016 3:45:00 PM
Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
RA-228	5.94E-01		1.6E-01	1.6E-01	1.19E-01	pCi/g		(5.) (7.6)	6/21/16 04:44 p		405.1 g	GER7$1
RU-106	2.60E-02	U	1.4E-01	1.4E-01	2.54E-01	pCi/g		0.1 0.36	6/21/16 04:44 p		405.1 g	GER7$1
SB-125	1.47E-02	U	4.5E-02	4.5E-02	7.86E-02	pCi/g		0.19 0.65	6/21/16 04:44 p		405.1 g	GER7$1
U-235	-1.31E-02	U	9.3E-02	9.3E-02	1.53E-01	pCi/g	1.00E+00	-0.09 -0.28	6/21/16 04:44 p		405.1 g	GER7$1
U-238	5.46E-01	U	5.1E-01	5.1E-01	8.79E-01	pCi/g		0.62 (2.1)	6/21/16 04:44 p		405.1 g	GER7$1
ZN-65	-5.59E-02	U	4.8E-02	4.8E-02	7.67E-02	pCi/g		-0.73 -(2.3)	6/21/16 04:44 p		405.1 g	GER7$1
Batch: 6173018	UISO_IE_PLATE_AEA			**Work Order:**	M8R1P1AA		**Report DB ID:**	9M8R1P10				
U-234	4.09E-01		1.7E-01	1.9E-01	6.54E-02	pCi/g 1.50E-02	76% 1.00E+00	(6.3) (4.4)	6/23/16 09:29 p		0.98 g	ALP423
U-235	-1.43E-03	U	3.6E-02	3.6E-02	6.54E-02	pCi/g 1.50E-02	76% 1.00E+00	-0.02 -0.08	6/23/16 09:29 p		0.98 g	ALP423
U-238	1.96E-01		1.2E-01	1.2E-01	6.04E-02	pCi/g 1.28E-02	76% 1.00E+00	(3.3) (3.2)	6/23/16 09:29 p		0.98 g	ALP423

Ratio U-234/238 = 2.1

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

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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FORM I

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name:	**TestAmerica Inc**	**SDG:**	JP1046	**Collection Date:**	6/16/2016 1:05:00 PM
Lot-Sample No.:	**J6F200409-9**	**Report No. :**	68830	**Received Date:**	6/20/2016 3:45:00 PM
Client Sample ID:	**J1V923**	**COC No. :**	RC-148-225	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6173017	GAMMA_GS			**Work Order:**	M8R1Q1AC		**Report DB ID:**	9M8R1Q10				
AMERICIUM 241	**1.47E-02**	U	7.3E-02	7.3E-02	1.22E-01	pCi/g		*0.12*	6/21/16 04:44 p		375.7	GER10$1
								0.4			g	
CE-144	**-1.34E-01**	U	1.0E-01	1.0E-01	1.63E-01	pCi/g		*-0.82*	6/21/16 04:44 p		375.7	GER10$1
								-(2.6)			g	
CO-60	**-4.45E-04**	U	1.3E-02	1.3E-02	2.30E-02	pCi/g		*-0.02*	6/21/16 04:44 p		375.7	GER10$1
							5.00E-02	*-0.07*			g	
CS-134	**2.16E-02**	U	1.8E-02	1.8E-02	3.21E-02	pCi/g		*0.67*	6/21/16 04:44 p		375.7	GER10$1
								(2.4)			g	
CS-137	**-2.08E-03**	U	1.5E-02	1.5E-02	2.52E-02	pCi/g		*-0.08*	6/21/16 04:44 p		375.7	GER10$1
							1.00E-01	*-0.28*			g	
EU-152	**-1.13E-01**	U	1.5E-01	1.5E-01	7.66E-02	pCi/g		*-(1.5)*	6/21/16 04:44 p		375.7	GER10$1
							1.00E-01	*-(1.5)*			g	
EU-154	**-3.44E-03**	U	5.0E-02	5.0E-02	8.73E-02	pCi/g		*-0.04*	6/21/16 04:44 p		375.7	GER10$1
							1.00E-01	*-0.14*			g	
EU-155	**-2.88E-02**	U	5.3E-02	5.3E-02	8.77E-02	pCi/g		*-0.33*	6/21/16 04:44 p		375.7	GER10$1
							1.00E-01	*-(1.1)*			g	
K-40	**9.59E+00**		1.2E+00	1.2E+00	2.07E-01	pCi/g		*(46.4)*	6/21/16 04:44 p		375.7	GER10$1
								(15.5)			g	
RA-226	**3.56E-01**	U	6.9E-02	6.9E-02	9.14E-02	pCi/g		*(3.9)*	6/21/16 04:44 p		375.7	GER10$1
								(10.3)			g	

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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FORM I

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name: TestAmerica Inc
Lot-Sample No.: J6F200409-9
Client Sample ID: J1V923

SDG: JP1046
Report No. : 68830
COC No. : RC-148-225

Collection Date: 6/16/2016 1:05:00 PM
Received Date: 6/20/2016 3:45:00 PM
Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
RA-228	1.75E-01		9.9E-02	9.9E-02	9.98E-02	pCi/g		(1.8) (3.5)	6/21/16 04:44 p		375.7 g	GER10$1
RU-106	-6.70E-03	U	1.2E-01	1.2E-01	2.15E-01	pCi/g		-0.03 -0.11	6/21/16 04:44 p		375.7 g	GER10$1
SB-125	1.63E-02	U	3.9E-02	3.9E-02	6.81E-02	pCi/g		0.24 0.83	6/21/16 04:44 p		375.7 g	GER10$1
U-235	2.48E-02	U	1.0E-01	1.0E-01	1.70E-01	pCi/g	1.00E+00	0.15 0.5	6/21/16 04:44 p		375.7 g	GER10$1
U-238	7.73E-01	U	6.4E-01	6.4E-01	1.07E+00	pCi/g		0.72 (2.4)	6/21/16 04:44 p		375.7 g	GER10$1
ZN-65	-2.97E-02	U	4.2E-02	4.2E-02	7.04E-02	pCi/g		-0.42 -(1.4)	6/21/16 04:44 p		375.7 g	GER10$1
Batch: 6173018	UISO_IE_PLATE_AEA			**Work Order:** M8R1Q1AA			**Report DB ID:** 9M8R1Q10					
U-234	2.78E-01		1.4E-01	1.5E-01	5.87E-02	pCi/g 1.24E-02	75% 1.00E+00	(4.7) (3.8)	6/23/16 09:29 p		0.98 g	ALP424
U-235	0.00E+00	U	0.0E+00	3.5E-02	5.87E-02	pCi/g 1.24E-02	75% 1.00E+00	0. 0.	6/23/16 09:29 p		0.98 g	ALP424
U-238	3.46E-01		1.6E-01	1.7E-01	5.87E-02	pCi/g 1.24E-02	75% 1.00E+00	(5.9) (4.1)	6/23/16 09:29 p		0.98 g	ALP424

Ratio U-234/238 = 0.8

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

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name: TestAmerica Inc
Lot-Sample No.: J6F200409-10
Client Sample ID: J1V924

SDG: JP1046
Report No. : 68830
COC No. : RC-148-225

Collection Date: 6/16/2016 10:30:00 AM
Received Date: 6/20/2016 3:45:00 PM
Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6173017	GAMMA_GS			**Work Order:**	M8R1R1AC		**Report DB ID:**	9M8R1R10				
AMERICIUM 241	8.35E-04	U	1.7E-02	1.7E-02	2.87E-02	pCi/g		0.03	6/21/16 04:44 p		396.3	GER19$1
								0.1			g	
CE-144	-2.22E-03	U	5.2E-02	5.2E-02	8.49E-02	pCi/g		-0.03	6/21/16 04:44 p		396.3	GER19$1
								-0.09			g	
CO-60	8.87E-03	U	1.2E-02	1.2E-02	2.27E-02	pCi/g		0.39	6/21/16 04:44 p		396.3	GER19$1
							5.00E-02	(1.5)			g	
CS-134	3.72E-02	U	2.7E-02	2.7E-02	2.90E-02	pCi/g		(1.3)	6/21/16 04:44 p		396.3	GER19$1
								(2.7)			g	
CS-137	-6.15E-03	U	1.2E-02	1.2E-02	2.06E-02	pCi/g		-0.3	6/21/16 04:44 p		396.3	GER19$1
							1.00E-01	-0.99			g	
EU-152	-3.21E-03	U	2.7E-02	2.7E-02	4.67E-02	pCi/g		-0.07	6/21/16 04:44 p		396.3	GER19$1
							1.00E-01	-0.24			g	
EU-154	9.24E-03	U	4.2E-02	4.2E-02	7.48E-02	pCi/g		0.12	6/21/16 04:44 p		396.3	GER19$1
							1.00E-01	0.44			g	
EU-155	3.77E-02	U	2.6E-02	2.6E-02	4.38E-02	pCi/g		0.86	6/21/16 04:44 p		396.3	GER19$1
							1.00E-01	(3.)			g	
K-40	1.13E+01		1.4E+00	1.4E+00	2.22E-01	pCi/g		(50.8)	6/21/16 04:44 p		396.3	GER19$1
								(16.3)			g	
RA-226	3.92E-01		7.7E-02	7.7E-02	3.82E-02	pCi/g		(10.3)	6/21/16 04:44 p		396.3	GER19$1
								(10.2)			g	

TestAmerica Inc
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V5.5.1 A2002

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

FORM I

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name: TestAmerica Inc
Lot-Sample No.: J6F200409-10
Client Sample ID: J1V924

SDG: JP1046
Report No. : 68830
COC No. : RC-148-225

Collection Date: 6/16/2016 10:30:00 AM
Received Date: 6/20/2016 3:45:00 PM
Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
RA-228	6.45E-01		1.3E-01	1.3E-01	7.49E-02	pCi/g		(8.6)	6/21/16 04:44 p		396.3	GER19$1
								(10.3)			g	
RU-106	9.24E-02	U	1.0E-01	1.0E-01	1.84E-01	pCi/g		0.5	6/21/16 04:44 p		396.3	GER19$1
								(1.8)			g	
SB-125	-1.59E-02	U	2.8E-02	2.8E-02	4.60E-02	pCi/g		-0.35	6/21/16 04:44 p		396.3	GER19$1
								-(1.1)			g	
U-235	4.94E-02	U	5.2E-02	5.2E-02	9.16E-02	pCi/g		0.54	6/21/16 04:44 p		396.3	GER19$1
							1.00E+00	(1.9)			g	
U-238	4.19E-01		2.4E-01	2.4E-01	2.85E-01	pCi/g		(1.5)	6/21/16 04:44 p		396.3	GER19$1
								(3.5)			g	
ZN-65	2.97E-02	U	3.5E-02	3.5E-02	5.62E-02	pCi/g		0.53	6/21/16 04:44 p		396.3	GER19$1
								(1.7)			g	
Batch: 6173018	UISO_IE_PLATE_AEA			**Work Order:**	M8R1R1AA		**Report DB ID:**	9M8R1R10				
U-234	1.93E-01		1.0E-01	1.1E-01	6.21E-02	pCi/g	95%	(3.1)	6/23/16 09:30 p		1.03	ALP427
						1.77E-02	1.00E+00	(3.6)			g	
U-235	-5.26E-04	U	2.6E-02	2.6E-02	4.45E-02	pCi/g	95%	-0.01	6/23/16 09:30 p		1.03	ALP427
						9.42E-03	1.00E+00	-0.04			g	
U-238	1.55E-01		9.1E-02	9.5E-02	5.72E-02	pCi/g	95%	(2.7)	6/23/16 09:30 p		1.03	ALP427
						1.54E-02	1.00E+00	(3.3)			g	

Ratio U-234/238 = 1.2

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

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

FORM I

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name:	TestAmerica Inc	**SDG:**	JP1046	**Collection Date:**	6/16/2016 1:33:00 PM
Lot-Sample No.:	J6F200409-11	**Report No. :**	68830	**Received Date:**	6/20/2016 3:45:00 PM
Client Sample ID:	J1V925	**COC No. :**	RC-148-225	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6173017	GAMMA_GS			**Work Order:**	M8R1T1AC		**Report DB ID:**	9M8R1T10				
AMERICIUM 241	**7.89E-03**	U	1.4E-02	1.4E-02	2.43E-02	pCi/g		*0.33*	6/21/16 04:45 p		390.1	GER17$1
								(1.1)			g	
CE-144	**-5.11E-02**	U	4.4E-02	4.4E-02	7.21E-02	pCi/g		*-0.71*	6/21/16 04:45 p		390.1	GER17$1
								-(2.3)			g	
CO-60	**4.39E-03**	U	1.2E-02	1.2E-02	2.24E-02	pCi/g		*0.2*	6/21/16 04:45 p		390.1	GER17$1
							5.00E-02	*0.73*			g	
CS-134	**1.02E-02**	U	1.3E-02	1.3E-02	2.32E-02	pCi/g		*0.44*	6/21/16 04:45 p		390.1	GER17$1
								(1.6)			g	
CS-137	**-6.71E-04**	U	1.1E-02	1.1E-02	1.89E-02	pCi/g		*-0.04*	6/21/16 04:45 p		390.1	GER17$1
							1.00E-01	*-0.12*			g	
EU-152	**1.84E-02**	U	2.4E-02	2.4E-02	4.18E-02	pCi/g		*0.44*	6/21/16 04:45 p		390.1	GER17$1
							1.00E-01	*(1.6)*			g	
EU-154	**-9.40E-03**	U	3.9E-02	3.9E-02	6.61E-02	pCi/g		*-0.14*	6/21/16 04:45 p		390.1	GER17$1
							1.00E-01	*-0.49*			g	
EU-155	**2.98E-02**	U	2.1E-02	2.1E-02	3.81E-02	pCi/g		*0.78*	6/21/16 04:45 p		390.1	GER17$1
							1.00E-01	*(2.8)*			g	
K-40	**1.04E+01**		1.3E+00	1.3E+00	1.76E-01	pCi/g		*(59.1)*	6/21/16 04:45 p		390.1	GER17$1
								(16.5)			g	
RA-226	**3.23E-01**		5.9E-02	5.9E-02	3.27E-02	pCi/g		*(9.9)*	6/21/16 04:45 p		390.1	GER17$1
								(11.)			g	

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

FORM I

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name:	**TestAmerica Inc**	**SDG:**	JP1046	**Collection Date:**	6/16/2016 1:33:00 PM
Lot-Sample No.:	**J6F200409-11**	**Report No. :**	68830	**Received Date:**	6/20/2016 3:45:00 PM
Client Sample ID:	**J1V925**	**COC No. :**	RC-148-225	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
RA-228	**5.81E-01**		1.1E-01	1.1E-01	7.61E-02	pCi/g		*(7.6)*	6/21/16 04:45 p		390.1	GER17$1
								(10.9)			g	
RU-106	**2.95E-02**	U	8.7E-02	8.7E-02	1.57E-01	pCi/g		*0.19*	6/21/16 04:45 p		390.1	GER17$1
								0.68			g	
SB-125	**-4.17E-04**	U	2.2E-02	2.2E-02	3.83E-02	pCi/g		*-0.01*	6/21/16 04:45 p		390.1	GER17$1
								-0.04			g	
U-235	**5.42E-03**	U	4.5E-02	4.5E-02	7.65E-02	pCi/g		*0.07*	6/21/16 04:45 p		390.1	GER17$1
							1.00E+00	*0.24*			g	
U-238	**3.29E-01**		1.8E-01	1.8E-01	2.48E-01	pCi/g		*(1.3)*	6/21/16 04:45 p		390.1	GER17$1
								(3.7)			g	
ZN-65	**-4.99E-03**	U	2.9E-02	2.9E-02	4.26E-02	pCi/g		*-0.12*	6/21/16 04:45 p		390.1	GER17$1
								-0.34			g	
Batch: 6173018	UISO_IE_PLATE_AEA			**Work Order:**	M8R1T1AA		**Report DB ID:**	9M8R1T10				
U-234	**5.31E-01**		2.3E-01	2.5E-01	8.18E-02	pCi/g	54%	*(6.5)*	6/23/16 09:31 p		1.0	ALP431
						1.73E-02	1.00E+00	*(4.2)*			g	
U-235	**-9.67E-04**	U	4.8E-02	4.8E-02	8.18E-02	pCi/g	54%	*-0.01*	6/23/16 09:31 p		1.0	ALP431
						1.73E-02	1.00E+00	*-0.04*			g	
U-238	**2.41E-01**		1.5E-01	1.6E-01	8.18E-02	pCi/g	54%	*(2.9)*	6/23/16 09:31 p		1.0	ALP431
						1.73E-02	1.00E+00	*(3.)*			g	

Ratio U-234/238 = 2.2

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

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

FORM I

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name: TestAmerica Inc
Lot-Sample No.: J6F200409-12
Client Sample ID: J1V926

SDG: JP1046
Report No. : 68830
COC No. : RC-148-225

Collection Date: 6/16/2016 1:24:00 PM
Received Date: 6/20/2016 3:45:00 PM
Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6173017	GAMMA_GS			**Work Order:**	M8R1V1AC		**Report DB ID:**	9M8R1V10				
AMERICIUM 241	**4.07E-03**	U	1.8E-02	1.8E-02	3.08E-02	pCi/g		*0.13*	6/21/16 08:16 p		372.7	GER19$1
								0.44			g	
CE-144	**1.33E-02**	U	5.7E-02	5.7E-02	9.45E-02	pCi/g		*0.14*	6/21/16 08:16 p		372.7	GER19$1
								0.47			g	
CO-60	**-6.71E-03**	U	1.4E-02	1.4E-02	2.28E-02	pCi/g		*-0.29*	6/21/16 08:16 p		372.7	GER19$1
							5.00E-02	*-0.99*			g	
CS-134	**3.23E-02**	U	1.7E-02	1.7E-02	3.19E-02	pCi/g		*(1.)*	6/21/16 08:16 p		372.7	GER19$1
								(3.8)			g	
CS-137	**-1.63E-02**	U	1.3E-02	1.3E-02	2.08E-02	pCi/g		*-0.79*	6/21/16 08:16 p		372.7	GER19$1
							1.00E-01	*-(2.4)*			g	
EU-152	**-2.55E-02**	U	3.0E-02	3.0E-02	4.87E-02	pCi/g		*-0.52*	6/21/16 08:16 p		372.7	GER19$1
							1.00E-01	*-(1.7)*			g	
EU-154	**-7.40E-03**	U	4.4E-02	4.4E-02	7.57E-02	pCi/g		*-0.1*	6/21/16 08:16 p		372.7	GER19$1
							1.00E-01	*-0.34*			g	
EU-155	**2.97E-02**	U	2.7E-02	2.7E-02	4.68E-02	pCi/g		*0.63*	6/21/16 08:16 p		372.7	GER19$1
							1.00E-01	*(2.2)*			g	
K-40	**1.24E+01**		1.5E+00	1.5E+00	1.77E-01	pCi/g		*(69.8)*	6/21/16 08:16 p		372.7	GER19$1
								(16.6)			g	
RA-226	**3.97E-01**		8.3E-02	8.3E-02	3.91E-02	pCi/g		*(10.2)*	6/21/16 08:16 p		372.7	GER19$1
								(9.6)			g	

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name: TestAmerica Inc
Lot-Sample No.: J6F200409-12
Client Sample ID: J1V926

SDG: JP1046
Report No. : 68830
COC No. : RC-148-225

Collection Date: 6/16/2016 1:24:00 PM
Received Date: 6/20/2016 3:45:00 PM
Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
RA-228	7.00E-01		1.4E-01	1.4E-01	8.79E-02	pCi/g		(8.) (9.9)	6/21/16 08:16 p		372.7 g	GER19$1
RU-106	1.98E-02	U	1.0E-01	1.0E-01	1.82E-01	pCi/g		0.11 0.38	6/21/16 08:16 p		372.7 g	GER19$1
SB-125	-8.05E-03	U	2.8E-02	2.8E-02	4.77E-02	pCi/g		-0.17 -0.57	6/21/16 08:16 p		372.7 g	GER19$1
U-235	3.13E-02	U	5.5E-02	5.5E-02	9.50E-02	pCi/g	1.00E+00	0.33 (1.1)	6/21/16 08:16 p		372.7 g	GER19$1
U-238	5.75E-01		3.2E-01	3.2E-01	3.07E-01	pCi/g		(1.9) (3.7)	6/21/16 08:16 p		372.7 g	GER19$1
ZN-65	-2.77E-02	U	3.7E-02	3.7E-02	4.97E-02	pCi/g		-0.56 -(1.5)	6/21/16 08:16 p		372.7 g	GER19$1
Batch: 6173018	UISO_IE_PLATE_AEA			**Work Order:**	M8R1V1AA		**Report DB ID:**	9M8R1V10				
U-234	3.50E-01		1.4E-01	1.6E-01	5.68E-02	pCi/g 1.38E-02	86% 1.00E+00	(6.2) (4.5)	6/23/16 09:31 p		0.99 g	ALP432
U-235	0.00E+00	U	0.0E+00	2.9E-02	4.96E-02	pCi/g 1.05E-02	86% 1.00E+00	0. 0.	6/23/16 09:31 p		0.99 g	ALP432
U-238	3.94E-01		1.5E-01	1.7E-01	5.68E-02	pCi/g 1.38E-02	86% 1.00E+00	(6.9) (4.7)	6/23/16 09:31 p		0.99 g	ALP432

Ratio U-234/238 = 0.9

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

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name:	TestAmerica Inc	**SDG:**	JP1046	**Collection Date:**	6/16/2016 10:30:00 AM
Lot-Sample No.:	J6F200409-13	**Report No. :**	68830	**Received Date:**	6/20/2016 3:45:00 PM
Client Sample ID:	J1V927	**COC No. :**	RC-148-225	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6173017	GAMMA_GS			**Work Order:**	M8R1W1AC		**Report DB ID:**	9M8R1W10				
AMERICIUM 241	**-6.38E-04**	U	8.1E-02	8.1E-02	1.36E-01	pCi/g		*0.*	6/21/16 08:17 p		398.8	GER10$1
								-0.02			g	
CE-144	**-1.32E-01**	U	1.1E-01	1.1E-01	1.68E-01	pCi/g		*-0.79*	6/21/16 08:17 p		398.8	GER10$1
								-(2.5)			g	
CO-60	**3.62E-03**	U	1.5E-02	1.5E-02	2.69E-02	pCi/g		*0.13*	6/21/16 08:17 p		398.8	GER10$1
							5.00E-02	*0.48*			g	
CS-134	**2.23E-02**	U	1.9E-02	1.9E-02	3.35E-02	pCi/g		*0.67*	6/21/16 08:17 p		398.8	GER10$1
								(2.4)			g	
CS-137	**4.99E-03**	U	1.6E-02	1.6E-02	2.79E-02	pCi/g		*0.18*	6/21/16 08:17 p		398.8	GER10$1
							1.00E-01	*0.62*			g	
EU-152	**3.32E-02**	U	1.2E-01	1.2E-01	7.49E-02	pCi/g		*0.44*	6/21/16 08:17 p		398.8	GER10$1
							1.00E-01	*0.58*			g	
EU-154	**-7.05E-02**	U	5.1E-02	5.1E-02	7.91E-02	pCi/g		*-0.89*	6/21/16 08:17 p		398.8	GER10$1
							1.00E-01	*-(2.8)*			g	
EU-155	**1.43E-02**	U	5.8E-02	5.8E-02	9.63E-02	pCi/g		*0.15*	6/21/16 08:17 p		398.8	GER10$1
							1.00E-01	*0.5*			g	
K-40	**1.28E+01**		1.6E+00	1.6E+00	1.76E-01	pCi/g		*(72.5)*	6/21/16 08:17 p		398.8	GER10$1
								(16.)			g	
RA-226	**4.26E-01**		8.0E-02	8.0E-02	5.19E-02	pCi/g		*(8.2)*	6/21/16 08:17 p		398.8	GER10$1
								(10.6)			g	

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

FORM I

SAMPLE RESULTS

Date: 24-Jun-16

Lab Name:	TestAmerica Inc	**SDG:**	JP1046	**Collection Date:**	6/16/2016 10:30:00 AM
Lot-Sample No.:	J6F200409-13	**Report No. :**	68830	**Received Date:**	6/20/2016 3:45:00 PM
Client Sample ID:	J1V927	**COC No. :**	RC-148-225	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
RA-228	7.33E-01		1.3E-01	1.3E-01	1.02E-01	pCi/g		(7.2)	6/21/16 08:17 p		398.8	GER10$1
								(11.6)			g	
RU-106	4.25E-02	U	1.3E-01	1.3E-01	2.28E-01	pCi/g		0.19	6/21/16 08:17 p		398.8	GER10$1
								0.65			g	
SB-125	1.49E-02	U	4.2E-02	4.2E-02	7.25E-02	pCi/g		0.21	6/21/16 08:17 p		398.8	GER10$1
								0.7			g	
U-235	6.92E-02	U	1.0E-01	1.0E-01	1.79E-01	pCi/g		0.39	6/21/16 08:17 p		398.8	GER10$1
							1.00E+00	(1.3)			g	
U-238	5.64E-01	U	7.1E-01	7.1E-01	1.19E+00	pCi/g		0.47	6/21/16 08:17 p		398.8	GER10$1
								(1.6)			g	
ZN-65	2.71E-02	U	4.2E-02	4.2E-02	6.43E-02	pCi/g		0.42	6/21/16 08:17 p		398.8	GER10$1
								(1.3)			g	
Batch: 6173018	UISO_IE_PLATE_AEA			**Work Order:**	M8R1W1AA		**Report DB ID:**	9M8R1W10				
U-234	1.99E-01		1.1E-01	1.2E-01	5.64E-02	pCi/g	83%	(3.5)	6/23/16 09:32 p		1.03	ALP433
						1.29E-02	1.00E+00	(3.4)			g	
U-235	0.00E+00	U	0.0E+00	3.1E-02	5.21E-02	pCi/g	83%	0.	6/23/16 09:32 p		1.03	ALP433
						1.10E-02	1.00E+00	0.			g	
U-238	2.77E-01		1.3E-01	1.4E-01	5.21E-02	pCi/g	83%	(5.3)	6/23/16 09:32 p		1.03	ALP433
						1.10E-02	1.00E+00	(4.)			g	

Ratio U-234/238 = 0.7

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

TestAmerica Inc
rptSTLRchSample
V5.5.1 A2002

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

FORM II

Date: 24-Jun-16

DUPLICATE RESULTS

Lab Name:	**TestAmerica Inc**	**SDG:**	JP1046	**Collection Date:**	6/16/2016 11:02:00 AM
Lot-Sample No.:	**J6F200409-1**	**Report No. :**	68830	**Received Date:**	6/20/2016 3:45:00 PM
Client Sample ID:	**J1V915 DUP**	**COC No. :**	RC-148-225	**Matrix:**	SOIL

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6173017	GAMMA_GS			**Work Order:**	M8R1G1AD	**Report DB ID:**	M8R1G1DR		**Orig Sa DB ID:** 9M8R1G10			
AMERICIUM 241	-2.83E-03	U	1.6E-02	1.6E-02	2.63E-02	pCi/g		-0.11	6/21/16 04:42 p		339.4	GER16$1
	3.92E-02	U	**RPD**	**231.2**				-0.35			g	
CE-144	1.27E-02	U	4.8E-02	4.8E-02	8.09E-02	pCi/g		0.16	6/21/16 04:42 p		339.4	GER16$1
	4.13E-03	U	**RPD**	**101.8**				0.53			g	
CO-60	-9.76E-03	U	1.4E-02	1.4E-02	2.25E-02	pCi/g		-0.43	6/21/16 04:42 p		339.4	GER16$1
	-1.11E-02	U	**RPD**	**-12.7**		5.00E-02		-(1.4)			g	
CS-134	2.72E-03	U	1.6E-02	1.6E-02	2.75E-02	pCi/g		0.1	6/21/16 04:42 p		339.4	GER16$1
	4.64E-02	U	**RPD**	**177.8**				0.35			g	
CS-137	-2.18E-02	U	1.3E-02	1.3E-02	2.01E-02	pCi/g		-(1.1)	6/21/16 04:42 p		339.4	GER16$1
	-1.09E-02	U	**RPD**	**-66.8**		1.00E-01		-(3.2)			g	
EU-152	-1.66E-02	U	2.9E-02	2.9E-02	4.77E-02	pCi/g		-0.35	6/21/16 04:42 p		339.4	GER16$1
	3.70E-04	U	**RPD**	**-209.1**		1.00E-01		-(1.2)			g	
EU-154	4.45E-02	U	5.0E-02	5.0E-02	9.37E-02	pCi/g		0.48	6/21/16 04:42 p		339.4	GER16$1
	2.74E-02	U	**RPD**	**47.8**		1.00E-01		(1.8)			g	
EU-155	1.34E-02	U	2.3E-02	2.3E-02	3.97E-02	pCi/g		0.34	6/21/16 04:42 p		339.4	GER16$1
	4.13E-02	U	**RPD**	**102.1**		1.00E-01		(1.2)			g	
K-40	1.02E+01		1.3E+00	1.3E+00	2.45E-01	pCi/g		(41.8)	6/21/16 04:42 p		339.4	GER16$1
	1.05E+01		**RPD**	**3.0**				(16.1)			g	
RA-226	3.11E-01		6.7E-02	6.7E-02	3.71E-02	pCi/g		(8.4)	6/21/16 04:42 p		339.4	GER16$1
	4.46E-01		**RPD**	**35.6**				(9.2)			g	
RA-228	6.52E-01		1.3E-01	1.3E-01	8.02E-02	pCi/g		(8.1)	6/21/16 04:42 p		339.4	GER16$1
	6.57E-01	U	**RPD**	**0.7**				(10.1)			g	

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

FORM II

Date: 24-Jun-16

DUPLICATE RESULTS

Lab Name:	**TestAmerica Inc**	**SDG:**	JP1046	**Collection Date:**	6/16/2016 11:02:00 AM
Lot-Sample No.:	**J6F200409-1**	**Report No. :**	68830	**Received Date:**	6/20/2016 3:45:00 PM
Client Sample ID:	**J1V915 DUP**	**COC No. :**	RC-148-225	**Matrix:**	SOIL

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
RU-106	-6.05E-02	U	9.7E-02	9.7E-02	1.62E-01	pCi/g		-0.37	6/21/16 04:42 p		339.4	GER16$1
	-3.04E-02	U	**RPD**	**-66.2**				-(1.2)			g	
SB-125	1.20E-02	U	2.7E-02	2.7E-02	4.84E-02	pCi/g		0.25	6/21/16 04:42 p		339.4	GER16$1
	-2.03E-02	U	**RPD**	**-781.8**				0.89			g	
U-235	2.39E-02	U	4.9E-02	4.9E-02	8.30E-02	pCi/g		0.29	6/21/16 04:42 p		339.4	GER16$1
	-4.77E-03	U	**RPD**	**299.9**		1.00E+00		0.97			g	
U-238	4.55E-01		3.0E-01	3.0E-01	2.49E-01	pCi/g		(1.8)	6/21/16 04:42 p		339.4	GER16$1
	8.84E-01	U	**RPD**	**64.2**				(3.1)			g	
ZN-65	-1.23E-02	U	4.2E-02	4.2E-02	5.96E-02	pCi/g		-0.21	6/21/16 04:42 p		339.4	GER16$1
	-7.07E-02	U	**RPD**	**-140.8**				-0.58			g	

No. of Results: 16 **Comments:**

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

FORM II

Date: 24-Jun-16

DUPLICATE RESULTS

Lab Name:	**TestAmerica Inc**	**SDG:**	JP1046	**Collection Date:**	6/24/2016
Lot-Sample No.:	**J6F200409-2**	**Report No. :**	68830	**Received Date:**	6/20/2016 3:45:00 PM
Client Sample ID:	**J1V916 DUP**	**COC No. :**	RC-148-225	**Matrix:**	SOIL

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6173018	UISO_IE_PLATE_AEA			**Work Order:** M8R1H1AD		**Report DB ID:** M8R1H1DR			**Orig Sa DB ID:** 9M8R1H10			
U-234	3.74E-01		1.5E-01	1.7E-01	5.28E-02	pCi/g	86%	(7.1)	6/23/16 09:25 p		0.99	ALP408
	6.40E-01		**RPD**	**52.4**		1.00E+00		(4.5)			g	
U-235	0.00E+00	U	0.0E+00	3.1E-02	5.28E-02	pCi/g	86%	0.	6/23/16 09:25 p		0.99	ALP408
	1.53E-02	U	**RPD**	**200.0**		1.00E+00		0.			g	
U-238	2.50E-01		1.2E-01	1.3E-01	5.28E-02	pCi/g	86%	(4.7)	6/23/16 09:25 p		0.99	ALP408
	7.01E-01		**RPD**	**94.9**		1.00E+00		(3.8)			g	

Ratio U-234/238 = 1.5 *Alpha Spec Result Sum = 6.2E-01*

No. of Results: 3 **Comments:**

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

FORM II

BLANK RESULTS

Date: 24-Jun-16

Lab Name: TestAmerica Inc

Matrix: SOIL

SDG: JP1046

Report No. : 68830

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Lc	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6173018	UISO_IE_PLATE_AEA			**Work Order:**	M8R201AA		**Report DB ID:**	M8R201AB				
U-234	-6.35E-04	U	3.2E-02	3.2E-02	5.37E-02	pCi/g	86%	-0.01	6/23/16 09:33 p		1.0	ALP435
					1.14E-02	1.00E+00		-0.04			g	
U-235	-6.35E-04	U	3.2E-02	3.2E-02	5.37E-02	pCi/g	86%	-0.01	6/23/16 09:33 p		1.0	ALP435
					1.14E-02	1.00E+00		-0.04			g	
U-238	-1.90E-03	U	3.2E-02	3.2E-02	6.14E-02	pCi/g	86%	-0.03	6/23/16 09:33 p		1.0	ALP435
					1.49E-02	1.00E+00		-0.12			g	
							Ratio U-234/238 = 0.3					
Batch: 6173017	GAMMA_GS			**Work Order:**	M8R2W1AA		**Report DB ID:**	M8R2W1AB				
AMERICIUM 241	2.65E-03	U	4.0E-02	4.0E-02	7.00E-02	pCi/g		0.04	6/21/16 08:17 p		348.0	GER7$1
								0.13			g	
CE-144	-1.71E-02	U	5.7E-02	5.7E-02	9.89E-02	pCi/g		-0.17	6/21/16 08:17 p		348.0	GER7$1
								-0.6			g	
CO-60	1.18E-03	U	1.5E-02	1.5E-02	2.87E-02	pCi/g		0.04	6/21/16 08:17 p		348.0	GER7$1
						5.00E-02		0.15			g	
CS-134	2.61E-03	U	1.7E-02	1.7E-02	2.75E-02	pCi/g		0.09	6/21/16 08:17 p		348.0	GER7$1
								0.31			g	
CS-137	4.07E-03	U	1.5E-02	1.5E-02	2.71E-02	pCi/g		0.15	6/21/16 08:17 p		348.0	GER7$1
						1.00E-01		0.55			g	
EU-152	8.49E-03	U	3.9E-02	3.9E-02	6.94E-02	pCi/g		0.12	6/21/16 08:17 p		348.0	GER7$1
						1.00E-01		0.44			g	
EU-154	5.32E-03	U	4.0E-02	4.0E-02	7.61E-02	pCi/g		0.07	6/21/16 08:17 p		348.0	GER7$1
						1.00E-01		0.26			g	
EU-155	-3.31E-04	U	3.1E-02	3.1E-02	5.27E-02	pCi/g		-0.01	6/21/16 08:17 p		348.0	GER7$1
						1.00E-01		-0.02			g	

TestAmerica Inc
rptSTLRchBlank
V5.5.1 A2002

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

FORM II

BLANK RESULTS

Date: 24-Jun-16

Lab Name: TestAmerica Inc

Matrix: SOIL

SDG: JP1046

Report No. : 68830

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Lc	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
K-40	-4.01E-01	U	3.5E-01	3.5E-01	7.02E-01	pCi/g		-0.57	6/21/16 08:17 p		348.0	GER7$1
								-(2.3)			g	
RA-226	5.88E-02	U	5.1E-02	5.1E-02	7.55E-02	pCi/g		0.78	6/21/16 08:17 p		348.0	GER7$1
								(2.3)			g	
RA-228	1.82E-02	U	7.8E-02	7.8E-02	1.33E-01	pCi/g		0.14	6/21/16 08:17 p		348.0	GER7$1
								0.47			g	
RU-106	-4.82E-02	U	1.2E-01	1.2E-01	1.99E-01	pCi/g		-0.24	6/21/16 08:17 p		348.0	GER7$1
								-0.82			g	
SB-125	7.79E-04	U	3.2E-02	3.2E-02	5.74E-02	pCi/g		0.01	6/21/16 08:17 p		348.0	GER7$1
								0.05			g	
U-235	-6.86E-03	U	6.9E-02	6.9E-02	1.11E-01	pCi/g		-0.06	6/21/16 08:17 p		348.0	GER7$1
						1.00E+00		-0.2			g	
U-238	-2.80E-01	U	4.1E-01	4.1E-01	6.47E-01	pCi/g		-0.43	6/21/16 08:17 p		348.0	GER7$1
								-(1.4)			g	
ZN-65	-2.79E-02	U	3.4E-02	3.4E-02	5.63E-02	pCi/g		-0.5	6/21/16 08:17 p		348.0	GER7$1
								-(1.6)			g	

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

TestAmerica Inc
rptSTLRchBlank
V5.5.1 A2002

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

FORM II

LCS RESULTS

Date: 24-Jun-16

Lab Name: TestAmerica Inc

Matrix: SOIL

SDG: JP1046

Report No. : 68830

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 6173018	UISO_IE_PLATE_AEA			**Work Order:**	M8R201AC		**Report DB ID:**	M8R201CC					
U-234	3.51E+00		4.7E-01	7.9E-01	5.33E-02	pCi/g	84%	3.25E+00	1.7E-02	108%	6/23/16 09:33 p	1.0	ALP436
							Rec Limits:	70	130	0.1		g	
U-238	3.20E+00		4.5E-01	7.3E-01	5.33E-02	pCi/g	84%	3.40E+00	1.8E-02	94%	6/23/16 09:33 p	1.0	ALP436
							Rec Limits:	70	130	-0.1		g	
Batch: 6173017	GAMMA_GS			**Work Order:**	M8R2W1AC		**Report DB ID:**	M8R2W1CS					
CS-137	9.56E-01		1.2E-01	1.2E-01	2.18E-02	pCi/g		9.62E-01	9.9E-03	99%	6/21/16 08:18 p	350.1	GER18$1
							Rec Limits:	70	130	0.0		g	
RA-226	9.29E-01		1.3E-01	1.3E-01	3.59E-02	pCi/g		1.14E+00	1.2E-02	82%	6/21/16 08:18 p	350.1	GER18$1
							Rec Limits:	70	130	-0.2		g	
RA-228	4.20E-01		1.2E-01	1.2E-01	6.36E-02	pCi/g		5.01E-01	5.2E-03	84%	6/21/16 08:18 p	350.1	GER18$1
							Rec Limits:	70	130	-0.2		g	
U-238	9.64E-01		1.2E-01	1.2E-01	3.55E-02	pCi/g		1.20E+00	1.2E-02	80%	6/21/16 08:18 p	350.1	GER18$1
							Rec Limits:	70	130	-0.2		g	

No. of Results: 6 **Comments:**

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

6/24/2016 12:41:43 PM

Lot No., Due Date: J6F200409; 06/27/2016
Client, Site: 127642; S00W235B00 HANFORD
QC Batch No., Method Test: 6173018; RUISO UIso by ALP
SDG, Matrix: JP1046; SOIL

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

6.0 Comments on any No response:

First Level [signature] **Date** 6/24/16

TestAmerica Richland
QAS_RADCALCv4.9.4

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 617308

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

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

Second Level Review: [signature] Date: 6/21/16

DR-001, Rev. 01, 10/30/2013

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

6/24/2016 12:09:21 PM

Lot No., Due Date: J6F200409; 06/27/2016
Client, Site: 127642; S00W235B00 HANFORD
QC Batch No., Method Test: 6173017; RGAMMA Gamma by GER
SDG, Matrix: JP1046; SOIL

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

6.0 Comments on any No response:

First Level [signature] Date 6/24/16

TestAmerica Richland
QAS_RADCALCv4.9.4

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 617317

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

Comments on any "No" response:

Second Level Review: [signature] Date: 6/24/16

DR-001, Rev. 01, 10/30/2013

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-32954**
NCM Initiated By: Lisa Antonson
Date Opened: 06/24/2016
Date Closed:

Classification: **Anomaly**
Status: **QAREVIEW**
Production Area: Counting
Tests: Gamma by GER
Lot #'s (Sample #'s): J6F200409 (1,10,11,12,13,2,3,4,5,6,7,8,9),
QC Batches: 6173017,

Nonconformance: MDA not met
Subcategory: Data accepted

Problem Description / Root Cause

Name	Date	Description
Lisa Antonson	06/24/2016	MDA exceeds CRDL for Eu-154 for samples M8R1G1AC and M8R1P

Corrective Action

Name	Date	Corrective Action
Lisa Antonson	06/24/2016	None

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position

Date Printed: 6/24/2016

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-148-225	Page 1 of 3

Collector: ETHERINGTON, TW	Company Contact: Joan Kessner	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 8B	Data Turnaround: 7 DAY		
Project Designation: 300 Area D4 Waste Sites	Sampling Location: 300-288:2 WSA2		SAF No.: RC-148
Ice Chest No.: ERC-02-007	Field Logbook No.: EL-1663-08	COA: 0328822000 w TRE 6-20-16	Method of Shipment: Local Delivery
Shipped To: TestAmerica Richland	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: N/A

Other Labs Shipped To: TestAmerica Denver

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

Cool as required for preservation

Preservation	None	None										
Type of Container	G/P	G/P										
No. of Container(s)	1	1										
Volume	1000mL	60mL										
Sample Analysis	See item (2) in Special Instructions	Isotopic Uranium										

Sample No.	Matrix	Sample Date	Sample Time										
J1V915 M8R1G	SOIL	6-16-16	1102	✓	✓								
J1V916 M8R1H	SOIL	6-16-16	1145	✓	✓								
J1V917 M8R1J	SOIL	6-16-16	1115	✓	✓								
J1V918 M8R1K	SOIL	6-16-16	1157	✓	✓								
J1V919 M8R1L	SOIL	6-16-16	1238	✓	✓								

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
T. ETHERINGTON	6-16-16 1410	T.R. Edmundson / J.R. Edmundson	6-16-16 1410
T.R. Edmundson / J.R. Edmundson	6-16-16 1500	1060 #1	6-16-16 1500
1060 #1	6-20-16 1030	T.R. Edmundson / J.R. Edmundson	6-20-16 1030
TRE WCH / T.R. Edmundson / J.R. Edmundson	6-20-16 1545	Bock / J. Bock, TARL	6-20-16 / 1545

FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

SPECIAL INSTRUCTIONS

(2) Gamma Spec (Client List) {Americium-241, Antimony-125, Cerium-144, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238, Zinc-65}

J6F200409

Due 6-27-16

J6F200409

REVIEWED BY KWpastels DATE 6-20-16

JP1046

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-148-225	Page 2 of 3

Collector	Company Contact	Telephone No.	Project Coordinator	Price Code	Data Turnaround
ETHERINGTON, TW	Joan Kessner	375-4688	KESSNER, JH	8B	7DAY

Project Designation	Sampling Location	SAF No.
300 Area D4 Waste Sites	300-288:2 WSA2	RC-148

Ice Chest No.	Field Logbook No.	COA	Method of Shipment
ERC-02-007	EL-1663-08	0328822000 w TRR 6-20-16	Local Delivery

Shipped To	Offsite Property No.	Bill of Lading/Air Bill No.
TestAmerica Richland	N/A	N/A

Other Labs Shipped To: TestAmerica Denver

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

Cool as required for preservation

Preservation	None	None									
Type of Container	G/P	G/P									
No. of Container(s)	1	1									
Volume	1000mL	60mL									
Sample Analysis	See item (2) in Special Instructions	Isotopic Uranium									

Sample No.	Matrix	Sample Date	Sample Time										
J1V920 m8R1m	SOIL	6-16-16	1225	✓	✓								
J1V921 m8R1N	SOIL	6-16-16	1215	✓	✓								
J1V922 m8R1P	SOIL	6-16-16	1257	✓	✓								
J1V923 m8R1Q	SOIL	6-16-16	1305	✓	✓								
J1V924 m8R1R	SOIL	6-16-16	1030	✓	✓								

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
T. ETHERINGTON	6-16-16 1410	T.R. Edmundson	6-16-16 1410
T.R. Edmundson	6-16-16 1500	1060 #1	6-16-16 1500
1060 #1	6-20-16 1030	T.R. Edmundson	6-20-16 1030
T.R. Edmundson	6-20-16 1545	Jack J. Bock 6-21-16 rec.	6-20-16 1545 TALR

FINAL SAMPLE DISPOSITION: Disposal Method | Disposed By | Date/Time

SPECIAL INSTRUCTIONS

(2) Gamma Spec (Client List) {Americium-241, Antimony-125, Cerium-144, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238, Zinc-65}

J6F200409

JP1046

REVIEWED BY KW per tel DATE 6-20-16

WCH-EE-011

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-148-225

Collector: ETHERINGTON, TW	Company Contact: Joan Kessner	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 8B	Data Turnaround: 7 DAY		
Project Designation: 300 Area D4 Waste Sites	Sampling Location: 300-288:2 WSA2		SAF No.: RC-148
Ice Chest No.: ERC-02-007	Field Logbook No.: EL-1663-08	COA: W TRE 6-20-16 0328822000	Method of Shipment: Local Delivery
Shipped To: TestAmerica Richland	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: N/A

Other Labs Shipped To: TestAmerica Denver

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

Cool as required for preservation

Preservation	None	None										
Type of Container	G/P	G/P										
No. of Container(s)	1	1										
Volume	1000mL	60mL										
Sample Analysis	See item (2) in Special Instructions	Isotopic Uranium										

Sample No.	Matrix	Sample Date	Sample Time										
J1V925 M8R1T	SOIL	6-16-16	1333	✓	✓								
J1V926 M8R1V	SOIL	6-16-16	1324	✓	✓								
J1V927 M8R1W	SOIL	6-16-16	1030	✓	✓								

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
T. ETHERINGTON	6-16-16 1410	T.R. Edmundson / J.R. Edmundson	6-16-16 1410
T.R. Edmundson / J.R. Edmundson	6-16-16 1500	1060 #1	6-16-16 1500
1060 #1	6-20-16 1030	T.R. Edmundson / J.R. Edmundson	6-20-16 1030
T.R. Edmundson / J.R. Edmundson (WCH)	6-20-16 1545	Bock J. Bock (6-21-16) TALR rec. 6-20-16	1545

FINAL SAMPLE DISPOSITION: Disposal Method | Disposed By | Date/Time

SPECIAL INSTRUCTIONS

(2) Gamma Spec (Client List) {Americium-241, Antimony-125, Cerium-144, Cesium-134, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Radium-226, Radium-228, Ruthenium-106, Uranium-235, Uranium-238, Zinc-65}

Jof 200409

REVIEWED BY Kwpeschke DATE 6-20-16

JP1046

WCH-EE-011

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 6-20-16 / 1545 Container GM Screen Result: (Airlock) 0 cpm Initials [B]
Sample GM Screen Result (Sample Receiving) 0 cpm Initials [B]

Client: WCH SDG #: JP1044 SAF #: RC-148 NA [ ]

Lot Number: JLF200409

Chain of Custody # RC-148-225

Shipping Container ID or Air Bill Number : _____ NA [B]

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

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [B] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 13
7. Containers received: 13 x 60 mLAG, 13 x 4p
8. Sample holding times exceeded? NA [ ] Yes [ ] No [B]
9. Samples have: ____tape ____hazard labels [B] custody seals [B] appropriate sample labels
10. Matrix: [B] A (FLT, Wipe, Solid, Soil) ____I (Water) ____S (Air, Niosh 7400) ____T (Biological, Ni-63)
11. Samples:
    [B] 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 [B]
    (If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO_3 added and pH after addition on table)
13. Were any anomalies identified in sample receipt? Yes [ ] No [B]
14. Description of anomalies (include sample numbers): NA [B] _____
15. Sample Location, Sample Collector Listed on COC? * Yes [B] No [ ]
    *For documentation only. No corrective action needed.
16. Additional Information: N/A

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

Sample Check-in List completed by Sample Custodian:
Signature: _____ Date: 6-20-16

Client Notification needed? Yes [ ] No [X] Date: _____
By: _____
Person contacted: _____

[X] No action necessary; process as is

Project Manager _____ Date 6/21/16

6/21/2016 11:30:40 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
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 06/27/2016

Sep1 DT/Tm Tech:

Batch: 6173018 **SOIL** **pCi/g** **PM, Quote: RW2, 27038**

SEQ Batch, Test: None All Tests: 6173017 AXTA, 6173018 7SSR,

Sep2 DT/Tm Tech:

Prep Tech: RichardsonB

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 **M8R1G-1-AA** J6F200409-1-SAMP 06/16/2016 11:02			1.03g,in	1.03g	UITC33865 05/27/16,pd 06/15/01,r				100	404	6/23/16 0700 2223		
			AmtRec: 1X60MLAG;1XLP		#Containers: 2				Scr:	Alpha:		Beta:	
2 **M8R1H-1-AA** J6F200409-2-SAMP 06/16/2016 11:45			0.99g,in	0.99g	UITC33866 05/27/16,pd 06/15/01,r					407			
			AmtRec: 1X60MLAG;1XLP		#Containers: 2				Scr:	Alpha:		Beta:	
3 **M8R1H-1-AD-X** J6F200409-2-DUP 06/16/2016 11:45			0.99g,in	0.99g	UITC33867 05/27/16,pd 06/15/01,r					408			
			AmtRec: 1X60MLAG;1XLP		#Containers: 2				Scr:	Alpha:		Beta:	
4 **M8R1J-1-AA** J6F200409-3-SAMP 06/16/2016 11:15			1.07g,in	1.07g	UITC33868 05/27/16,pd 06/15/01,r					413			
			AmtRec: 1X60MLAG;1XLP		#Containers: 2				Scr:	Alpha:		Beta:	
5 **M8R1K-1-AA** J6F200409-4-SAMP 06/16/2016 11:57			1.07g,in	1.07g	UITC33869 05/27/16,pd 06/15/01,r					414			
			AmtRec: 1X60MLAG;1XLP		#Containers: 2				Scr:	Alpha:		Beta:	
6 **M8R1L-1-AA** J6F200409-5-SAMP 06/16/2016 12:38			0.99g,in	0.99g	UITC33870 05/27/16,pd 06/15/01,r					419			
			AmtRec: 1X60MLAG;1XLP		#Containers: 2				Scr:	Alpha:		Beta:	
7 **M8R1M-1-AA** J6F200409-6-SAMP 06/16/2016 12:25			1.01g,in	1.01g	UITC33871 05/27/16,pd 06/15/01,r					421			
			AmtRec: 1X60MLAG;1XLP		#Containers: 2				Scr:	Alpha:		Beta:	

TestAmerica Richland Wa. Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

Page 1

ISV - Insufficient Volume for Analysis

WO Cnt: 7

Prep_SamplePrep v4.8.69

6/21/2016 11:30:42 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
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 06/27/2016

Sep1 DT/Tm Tech:

Batch: 6173018 SOIL pCi/g PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,RichardsonB

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 M8R1N-1-AA			1.02g,in	1.02g	UITC33872								
J6F200409-7-SAMP					05/27/16,pd 06/15/01,r					422	6/23/16 0000 2223		
06/16/2016 12:15			AmtRec: 1X60MLAG;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
9 M8R1P-1-AA			0.98g,in	0.98g	UITC33873								
J6F200409-8-SAMP					05/27/16,pd 06/15/01,r					423			
06/16/2016 12:57			AmtRec: 1X60MLAG;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
10 M8R1Q-1-AA			0.98g,in	0.98g	UITC33874								
J6F200409-9-SAMP					05/27/16,pd 06/15/01,r					424			
06/16/2016 13:05			AmtRec: 1X60MLAG;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
11 M8R1R-1-AA			1.03g,in	1.03g	UITC33875								
J6F200409-10-SAMP					05/27/16,pd 06/15/01,r					427			
06/16/2016 10:30			AmtRec: 1X60MLAG;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
12 M8R1T-1-AA			1.00g,in	1.00g	UITC33876								
J6F200409-11-SAMP					05/27/16,pd 06/15/01,r					431			
06/16/2016 13:33			AmtRec: 1X60MLAG;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
13 M8R1V-1-AA			0.99g,in	0.99g	UITC33877								
J6F200409-12-SAMP					05/27/16,pd 06/15/01,r					432			
06/16/2016 13:24			AmtRec: 1X60MLAG;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
14 M8R1W-1-AA			1.03g,in	1.03g	UITC33878								
J6F200409-13-SAMP					05/27/16,pd 06/15/01,r					433			
06/16/2016 10:30			AmtRec: 1X60MLAG;1XLP		#Containers: 2				Scr:		Alpha:		Beta:

6/21/2016 11:30:43 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: 06/27/2016

Sep1 DT/Tm Tech:

Batch: 6173018 pCi/g

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,RichardsonB

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
15 M8R20-1-AA-B J6F210000-18-BLK 06/21/2016 11:29 pd			1.00g,in AmtRec:	1.00g #Containers: 1	UITC33879 05/27/16,pd 06/15/01,r					Scr:	435 Alpha:	6/23/16 2223 Beta:	
16 M8R20-1-AC-C J6F210000-18-LCS 06/21/2016 11:30 pd			1.00g,in AmtRec:	1.00g #Containers: 1	UISH2104 05/04/16,pd 06/15/01,r					Scr:	436 Alpha:	0 Beta:	

6/24/2016 12:40:44 PM

ICOC Fraction Transfer/Status Report

ByDate: 6/25/2015, 6/29/2016, Batch: '6173018', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			SOPs,Reagents,Comments
6173018						
AC		**Rev1C**	**CarnesM**	6/23/2016 6:56:18		
SC			wagarr	IsBatched	6/21/2016 7:08:46 AM	ICOC_RADCALC v4.9.0
SC			CarnesM	Sep1C	6/23/2016 6:56:18 AM	RL-ALP-004 REVISION 7
SC			CarnesM	Sep2C	6/23/2016 2:46:01 PM	RL-ALP-015 REVISION 6
SC			DawkinsO	InCnt1	6/23/2016 4:56:41 PM	RL-CI-008 REVISION 6
SC			DawkinsO	CalcC	6/24/2016 3:58:49 AM	RL-CI-008 REVISION 6
SC			antonsonl	Rev1C	6/24/2016 12:39:26 PM	RL-DR-001 Rev 7
AC			**CarnesM**	6/23/2016 2:46:01 PM		
AC			**DawkinsO**	6/23/2016 4:56:41 PM		
AC			**DawkinsO**	6/24/2016 3:58:49		
AC			**antonsonl**	6/24/2016 12:39:26		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 5

ICOCFractions v4.9.4

6/21/2016 10:01:48 AM

Sample Preparation/Analysis

Balance Id:J79104,1120421763,,

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

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

Pipet #: _____

AnalyDueDate: 06/27/2016

Sep1 DT/Tm Tech:

Batch: 6173017 SOIL pCi/g PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: 6173017 AXTA, 6173018 7SSR,

Prep Tech: RichardsonB

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 M8R1G-1-AC J6F200409-1-SAMP 06/16/2016 11:02			339.40g,in 2035.00g,fi	339.40g AmtRec: 1X60MLAG;1XLP	#Containers: 2			5200	200	G7	1554	6/21/16	Scr: Alpha: Beta:
2 M8R1G-1-AD X J6F200409-1-DUP 06/16/2016 11:02				AmtRec: 1X60MLAG;1XLP	#Containers: 2					G16	2002	6/21/1600	Scr: Alpha: Beta:
3 M8R1H-1-AC J6F200409-2-SAMP 06/16/2016 11:45			363.70g,in 2053.10g,fi	363.70g AmtRec: 1X60MLAG;1XLP	#Containers: 2					G10	1554	6/21/16	Scr: Alpha: Beta:
4 M8R1J-1-AC J6F200409-3-SAMP 06/16/2016 11:15			361.50g,in 2047.90g,fi	361.50g AmtRec: 1X60MLAG;1XLP	#Containers: 2					G17			Scr: Alpha: Beta:
5 M8R1K-1-AC J6F200409-4-SAMP 06/16/2016 11:57			400.40g,in 2195.00g,fi	400.40g AmtRec: 1X60MLAG;1XLP	#Containers: 2					G18			Scr: Alpha: Beta:
6 M8R1L-1-AC J6F200409-5-SAMP 06/16/2016 12:38			359.10g,in 2091.90g,fi	359.10g AmtRec: 1X60MLAG;1XLP	#Containers: 2					G16	1603		Scr: Alpha: Beta:
7 M8R1M-1-AC J6F200409-6-SAMP 06/16/2016 12:25			349.00g,in 2073.70g,fi	349.00g AmtRec: 1X60MLAG;1XLP	#Containers: 2					G18	2003	6/21/1600	Scr: Alpha: Beta:

6/21/2016 10:01:50 AM

Sample Preparation/Analysis

Balance Id:J79104,J79104,J79104,J79104,J7

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

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

Pipet #: _____

AnalyDueDate: 06/27/2016

Sep1 DT/Tm Tech:

Batch: 6173017 SOIL pCi/g PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,RichardsonB

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 M8R1N-1-AC J6F200409-7-SAMP 06/16/2016 12:15			362.90g,in 1803.00g,fi AmtRec: 1X60MLAG;1XLP	362.90g #Containers: 2				5200	Scr:	G11	2003	6/21/1600 Alpha:	Beta:
9 M8R1P-1-AC J6F200409-8-SAMP 06/16/2016 12:57			405.10g,in 2073.10g,fi AmtRec: 1X60MLAG;1XLP	405.10g #Containers: 2					Scr:	G7	2004	6/21/1600 Alpha:	Beta:
10 M8R1Q-1-AC J6F200409-9-SAMP 06/16/2016 13:05			375.70g,in 2104.00g,fi AmtRec: 1X60MLAG;1XLP	375.70g #Containers: 2					Scr:	G10	2004	6/21/1600 Alpha:	Beta:
11 M8R1R-1-AC J6F200409-10-SAMP 06/16/2016 10:30			396.30g,in 1980.50g,fi AmtRec: 1X60MLAG;1XLP	396.30g #Containers: 2					Scr:	G19	2004	6/21/1600 Alpha:	Beta:
12 M8R1T-1-AC J6F200409-11-SAMP 06/16/2016 13:33			390.10g,in 2144.60g,fi AmtRec: 1X60MLAG;1XLP	390.10g #Containers: 2					Scr:	G17	2005	6/21/1600 Alpha:	Beta:
13 M8R1V-1-AC J6F200409-12-SAMP 06/16/2016 13:24			372.70g,in 1622.70g,fi AmtRec: 1X60MLAG;1XLP	372.70g #Containers: 2					Scr:	G19	2337	6/21/1600 Alpha:	Beta:
14 M8R1W-1-AC J6F200409-13-SAMP 06/16/2016 10:30			398.80g,in 2121.40g,fi AmtRec: 1X60MLAG;1XLP	398.80g #Containers: 2					Scr:	G10	2337	6/21/1600 Alpha:	Beta:

6/21/2016 10:01:52 AM

Sample Preparation/Analysis

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

Balance Id:1120373922,,

Pipet #: _____

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: RichardsonB

AnalyDueDate: 06/27/2016

Batch: 6173017 **pCi/g**
SEQ Batch, Test: None

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
15 M8R2W-1-AA-B J6F210000-17-BLK 06/21/2016 07:07 pd			348.00g,in AmtRec:	348.00g #Containers: 1	OSBK			5200			Scr:	Alpha:	Beta:
16 M8R2W-1-AC-C J6F210000-17-LCS 06/21/2016 07:07 pd			350.10g,in AmtRec:	350.10g #Containers: 1	QC20009 08/04/09,pd 09/01/09,r						Scr:	Alpha:	Beta:

G7 2338 6/21/16 KP

G8 2338 6/21/16 KP

TestAmerica Richland Wa.

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 3
pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: **16**
Prep_SamplePrep v4.8.69

6/21/2016 10:01:52 AM

Sample Preparation/Analysis

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

Balance Id:1120373922,,

Pipet #: _____

AnalyDueDate: 06/27/2016

Sep1 DT/Tm Tech:

Batch: 6173017 pCi/g
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: RichardsonB

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

Comments: please recount for Dup 6-21-16 BK

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

M8R1G1AC-SAMP Constituent List:

Co-60	RDL:5.00E-02	pCi/g	LCL:	UCL:	RPD:	Cs-137	RDL:1.00E-01	pCi/g	LCL:70	UCL:130	RPD:35
Cs-137DA	RDL:1.00E-01	pCi/g	LCL:70	UCL:130	RPD:35	Eu-152	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:
Eu-154	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:	Eu-155	RDL:1.00E-01	pCi/g	LCL:	UCL:	RPD:
K-40	RDL:	pCi/g	LCL:	UCL:	RPD:						

M8R2W1AA-BLK:

M8R2W1AC-LCS:

M8R1G1AC-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M8R2W1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M8R2W1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

6/24/2016 12:07:33 PM

ICOC Fraction Transfer/Status Report

ByDate: 6/25/2015, 6/29/2016, Batch: '6173017', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			SOPs,Reagents,Comments
6173017						
AC		**Rev1C**	**RichardsonB**	6/21/2016 7:35:42		
SC			wagarr	IsBatched	6/21/2016 7:08:46 AM	ICOC_RADCALC v4.9.0
SC			RichardsonB	InPrep	6/21/2016 7:35:42 AM	RL-PRP-003 REV6
SC			RichardsonB	Prep2C	6/21/2016 10:11:40 AM	RL-GAM-001 REV6
SC			WoodT	InCnt1	6/21/2016 10:42:41 AM	RL-CI-007 REVISION 5
SC			WoodT	CalcC	6/22/2016 2:42:56 PM	RL-CI-007 REVISION 5
SC			antonsonl	Rev1C	6/24/2016 12:05:40 PM	RL-DR-001 Rev 7
AC			**RichardsonB**	6/21/2016 10:11:40		
AC			**WoodT**	6/21/2016 10:42:41		
AC			**WoodT**	6/22/2016 2:42:56 PM		
AC			**antonsonl**	6/24/2016 12:05:40		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 5

ICOCFractions v4.9.4

ANALYTICAL REPORT

Job Number: 280-84742-1

SDG Number: JP1046

Job Description: SAF# RC-148

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

Attention: Joan H Kessner

Approved for release.
Kae E Yoder
Senior Project Manager
6/30/2016 7:38 PM

Kae E Yoder, Senior Project Manager
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0190
kae.yoder@testamericainc.com
06/30/2016

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

The Lab Certification ID# is 4025.

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

Job Number: 280-84742-1

SDG #: JP1046
SAF#: RC-148

Date SDG Closed: June 22, 2016
Data Deliverable: 7 Day / Summary

CLIENT ID	LAB ID	ANALYSES REQUESTED	ANALYSES PERFORMED
J1V915	280-84742-1	6010/7471/8082/WTPH-D+/9045/8270	6010B/6020/7471A/8082/NWTPH-Dx/9045C/8270C
J1V916	280-84742-2	6010/7471/8082/WTPH-D+/9045/8270	6010B/6020/7471A/8082/NWTPH-Dx/9045C/8270C
J1V917	280-84742-3	6010/7471/8082/WTPH-D+/9045/8270	6010B/6020/7471A/8082/NWTPH-Dx/9045C/8270C
J1V918	280-84742-4	6010/7471/8082/WTPH-D+/9045/8270	6010B/6020/7471A/8082/NWTPH-Dx/9045C/8270C
J1V919	280-84742-5	6010/7471/8082/WTPH-D+/9045/8270	6010B/6020/7471A/8082/NWTPH-Dx/9045C/8270C
J1V920	280-84742-6	6010/7471/8082/WTPH-D+/9045/8270	6010B/6020/7471A/8082/NWTPH-Dx/9045C/8270C
J1V921	280-84742-7	6010/7471/8082/WTPH-D+/9045/8270	6010B/6020/7471A/8082/NWTPH-Dx/9045C/8270C
J1V922	280-84742-8	6010/7471/8082/WTPH-D+/9045/8270	6010B/6020/7471A/8082/NWTPH-Dx/9045C/8270C
J1V923	280-84742-9	6010/7471/8082/WTPH-D+/9045/8270	6010B/6020/7471A/8082/NWTPH-Dx/9045C/8270C
J1V924	280-84742-10	6010/7471/8082/WTPH-D+/9045/8270	6010B/6020/7471A/8082/NWTPH-Dx/9045C/8270C
J1V925	280-84742-11	6010/7471/8082/WTPH-D+/9045/8270	6010B/6020/7471A/8082/NWTPH-Dx/9045C/8270C
J1V926	280-84742-12	6010/7471/8082/WTPH-D+/9045/8270	6010B/6020/7471A/8082/NWTPH-Dx/9045C/8270C
J1V927	280-84742-13	6010/7471/8082/WTPH-D+/9045/8270	6010B/6020/7471A/8082/NWTPH-Dx/9045C/8270C

The Uranium 6020 method substitution noted above, as agreed to by all parties, has no technical impact on the data.

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

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

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

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 6/21/2016 at 9:35 AM and 5:35 PM, due to a FedEx delay. The samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 0.3º C, 1.0º C, 1.2º C and 1.6º C.

GC/MS SEMIVOLATILES - SW846 8270C
The MS aliquot of the MS/MSD performed on sample J1V916 exhibited the percent recovery outside the control limits for 2,4-Dinitrophenol, and the associated sample result has been flagged "T". 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.

No anomalies were encountered.

GC SEMIVOLATILES - NWTPH-Dx - DRO
Low levels of C10-C36 and C10-C28 are present in the method blank associated with batch 280-331870. Because the concentrations in the method blank are not present at levels greater than half 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/6020/7471A
Serial dilution of a digestate in batch 280-330795 indicates that physical and chemical interferences are present for several elements. Results have been flagged with an “X”.

Iron, a common laboratory contaminant, is present at a level greater than the reporting limit in the method blank associated with batch 280-330795. As the associated sample amounts are greater than twenty times the method blank concentration, corrective action is deemed unnecessary.

Low levels of Aluminum are present at a level greater than half the reporting limit in the method blank associated with batch 280-330795. As the associated sample amounts are greater than twenty times the method blank concentration, corrective action is deemed unnecessary.

Low levels of Barium, Calcium, Copper, Magnesium, Manganese, Strontium, Tin and Uranium are present in the method blanks associated with batches 280-330795 and 280-330796, respectively. Because the concentrations in the method blanks are not present at levels greater than half the reporting limit, corrective action is deemed unnecessary.

It can be noted that the sample amount was greater than four times the spike amount for Aluminum, Iron and Manganese in the Matrix Spike performed on sample J1V916; therefore, control limits are not applicable.

The Matrix Spike performed on sample J1V916 exhibited percent recoveries outside the control limits for Boron, Zinc, Tin and Selenium, and the associated sample results have been flagged “N”. There is no indication that the analytical system was operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

The duplicate analysis of sample J1V916 exhibited RPD data outside the control limits for Cadmium, Molybdenum, Strontium, Antimony and Uranium, and the associated sample results have been flagged “M”. There is no indication that the analytical systems were operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

GENERAL CHEMISTRY - SW846 9045C - PH
SU = standard units

No anomalies were encountered.

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	U	Analyzed for but not detected.
	J	Indicates an Estimated Value for TICs
	T	MS, MSD: Recovery exceeds upper or lower control limits.
	N	Presumptive evidence of material.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	B	Analyte was found in the associated method blank as well as in the sample.
	U	Analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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 greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	N	Recovery exceeds upper or lower control limits
	M	Sample duplicate precision not met.
	X	Serial dilution in the analytical batch indicates that physical and chemical interferences are present.
General Chemistry		
	U	Analyzed for but not detected.

SAMPLE SUMMARY

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-84742-1	J1V915	Solid	06/16/2016 1102	06/21/2016 0935
280-84742-2	J1V916	Solid	06/16/2016 1145	06/21/2016 0935
280-84742-3	J1V917	Solid	06/16/2016 1115	06/21/2016 0935
280-84742-4	J1V918	Solid	06/16/2016 1157	06/21/2016 0935
280-84742-5	J1V919	Solid	06/16/2016 1238	06/21/2016 0935
280-84742-6	J1V920	Solid	06/16/2016 1225	06/21/2016 0935
280-84742-7	J1V921	Solid	06/16/2016 1215	06/21/2016 0935
280-84742-8	J1V922	Solid	06/16/2016 1257	06/21/2016 1735
280-84742-9	J1V923	Solid	06/16/2016 1305	06/21/2016 1735
280-84742-10	J1V924	Solid	06/16/2016 1030	06/21/2016 1735
280-84742-11	J1V925	Solid	06/16/2016 1333	06/21/2016 1735
280-84742-12	J1V926	Solid	06/16/2016 1324	06/21/2016 1735
280-84742-13	J1V927	Solid	06/16/2016 1030	06/21/2016 1735

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Semivolatile Organic Compounds (GC/MS)	TAL DEN	SW846 8270C	
Ultrasonic Extraction	TAL DEN		SW846 3550C
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL DEN	SW846 8082	
Ultrasonic Extraction	TAL DEN		SW846 3550C
Northwest - Semi-Volatile Petroleum Products (GC)	TAL DEN	NWTPH NWTPH-Dx	
Ultrasonic Extraction	TAL DEN		SW846 3550C
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Metals	TAL DEN		SW846 3050B
Metals (ICP/MS)	TAL DEN	SW846 6020	
Preparation, Metals	TAL DEN		SW846 3050B
Mercury (CVAA)	TAL DEN	SW846 7471A	
Preparation, Mercury	TAL DEN		SW846 7471A
pH	TAL DEN	SW846 9045C	
Deionized Water Leaching Procedure	TAL DEN		ASTM DI Leach
ASTM D-2216	TAL DEN	ASTM D-2216	

Lab References:

TAL DEN = TestAmerica Denver

Method References:

ASTM = ASTM International

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: 280-84742-1
Sdg Number: JP1046

Method	Analyst	Analyst ID
SW846 8270C	Hoefler, Alexandra F	AFH
SW846 8082	Jackson, Todd D	TDJ
NWTPH NWTPH-Dx	Moore, Tegan E	TEM
SW846 6010B	Rhoades, Chris R	CRR
SW846 6020	Mooney, Joseph C	JM
SW846 7471A	Henning, Christopher D	CDH
SW846 9045C	Withers, William T	WTW
ASTM D-2216	Uge, Ikem E	IEU

SAMPLE RESULTS

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V915

Lab Sample ID: 280-84742-1
Client Matrix: Solid
% Moisture: 1.4

Date Sampled: 06/16/2016 1102
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16118.D
Dilution:	1.0			Initial Weight/Volume:	32.4 g
Analysis Date:	06/28/2016 1730			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		9.7	U	9.7	310
Acenaphthylene		16	U	16	310
Anthracene		16	U	16	310
Benzo[a]anthracene		19	U	19	310
Benzo[a]pyrene		19	U	19	310
Benzo[b]fluoranthene		25	U	25	310
Benzo[ghi]perylene		15	U	15	310
Benzo[k]fluoranthene		38	U	38	310
Bis(2-chloroethoxy)methane		22	U	22	310
Bis(2-chloroethyl)ether		16	U	16	310
bis (2-chloroisopropyl) ether		22	U	22	310
Bis(2-ethylhexyl) phthalate		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		85	U	85	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		14	U	14	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

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V915

Lab Sample ID: 280-84742-1
Client Matrix: Solid
% Moisture: 1.4

Date Sampled: 06/16/2016 1102
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16118.D
Dilution:	1.0			Initial Weight/Volume:	32.4 g
Analysis Date:	06/28/2016 1730			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		12	U	12	310
3 & 4 Methylphenol		31	U	31	310
Naphthalene		29	U	29	310
2-Nitroaniline		47	U	47	310
3-Nitroaniline		69	U	69	310
4-Nitroaniline		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		17	U	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
Tributyl phosphate		54	U	54	1500

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	75		33 - 135
2-Fluorophenol	77		39 - 135
Nitrobenzene-d5	74		32 - 135
Phenol-d5	78		39 - 135
Terphenyl-d14	94		30 - 135
2,4,6-Tribromophenol	59		24 - 135

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V915

Lab Sample ID: 280-84742-1
Client Matrix: Solid
% Moisture: 1.4

Date Sampled: 06/16/2016 1102
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16118.D
Dilution:	1.0			Initial Weight/Volume:	32.4 g
Analysis Date:	06/28/2016 1730			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

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

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	1.70	510	N J
	Unknown	1.88	260	N J
	Unknown	3.28	3000	N J
108-38-3	Benzene, 1,3-dimethyl-	3.61	310	N J

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V916

Lab Sample ID: 280-84742-2
Client Matrix: Solid
% Moisture: 1.5

Date Sampled: 06/16/2016 1145
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16119.D
Dilution:	1.0			Initial Weight/Volume:	32.7 g
Analysis Date:	06/28/2016 1759			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			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		24	U	24	310
Benzo[ghi]perylene		15	U	15	310
Benzo[k]fluoranthene		37	U	37	310
Bis(2-chloroethoxy)methane		21	U	21	310
Bis(2-chloroethyl)ether		15	U	15	310
bis (2-chloroisopropyl) ether		21	U	21	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		76	U	76	310
4-Chloro-3-methylphenol		61	U	61	310
2-Chloronaphthalene		9.3	U	9.3	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		20	U	20	310
1,3-Dichlorobenzene		11	U	11	310
1,4-Dichlorobenzene		13	U	13	310
3,3'-Dichlorobenzidine		84	U	84	610
2,4-Dichlorophenol		9.3	U	9.3	310
Diethyl phthalate		24	U	24	310
2,4-Dimethylphenol		61	U	61	310
Dimethyl phthalate		21	U	21	310
Di-n-butyl phthalate		27	U	27	310
4,6-Dinitro-2-methylphenol		310	U	310	610
2,4-Dinitrophenol		310	U	310	770
2,4-Dinitrotoluene		61	U	61	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		9.3	U	9.3	310
Hexachlorocyclopentadiene		47	U	47	310
Hexachloroethane		20	U	20	310
Indeno[1,2,3-cd]pyrene		20	U	20	310
Isophorone		16	U	16	310
2-Methylnaphthalene		18	U	18	310

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V916

Lab Sample ID: 280-84742-2
Client Matrix: Solid
% Moisture: 1.5

Date Sampled: 06/16/2016 1145
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16119.D
Dilution:	1.0			Initial Weight/Volume:	32.7 g
Analysis Date:	06/28/2016 1759			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			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		20	U	20	310
2-Nitrophenol		9.3	U	9.3	310
4-Nitrophenol		90	U	90	610
N-Nitrosodi-n-propylamine		29	U	29	310
N-Nitrosodiphenylamine		20	U	20	310
Pentachlorophenol		310	U	310	610
Phenanthrene		16	U	16	310
Phenol		17	U	17	310
Pyrene		11	U	11	310
1,2,4-Trichlorobenzene		26	U	26	310
2,4,5-Trichlorophenol		9.3	U	9.3	310
2,4,6-Trichlorophenol		9.3	U	9.3	310
Tributyl phosphate		54	U	54	1500

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	79		33 - 135
2-Fluorophenol	83		39 - 135
Nitrobenzene-d5	81		32 - 135
Phenol-d5	82		39 - 135
Terphenyl-d14	97		30 - 135
2,4,6-Tribromophenol	60		24 - 135

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V916

Lab Sample ID: 280-84742-2
Client Matrix: Solid
% Moisture: 1.5

Date Sampled: 06/16/2016 1145
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16119.D
Dilution:	1.0			Initial Weight/Volume:	32.7 g
Analysis Date:	06/28/2016 1759			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found: 3**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	1.70	580	N J
	Unknown	1.88	310	N J
	Unknown	3.28	3600	N J

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V917

Lab Sample ID: 280-84742-3
Client Matrix: Solid
% Moisture: 0.0

Date Sampled: 06/16/2016 1115
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16120.D
Dilution:	1.0			Initial Weight/Volume:	32.0 g
Analysis Date:	06/28/2016 1827			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		9.7	U	9.7	310
Acenaphthylene		16	U	16	310
Anthracene		16	U	16	310
Benzo[a]anthracene		19	U	19	310
Benzo[a]pyrene		19	U	19	310
Benzo[b]fluoranthene		25	U	25	310
Benzo[ghi]perylene		15	U	15	310
Benzo[k]fluoranthene		38	U	38	310
Bis(2-chloroethoxy)methane		22	U	22	310
Bis(2-chloroethyl)ether		16	U	16	310
bis (2-chloroisopropyl) ether		22	U	22	310
Bis(2-ethylhexyl) phthalate		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 T	310	770
2,4-Dinitrotoluene		62	U	62	310
2,6-Dinitrotoluene		26	U	26	310
Di-n-octyl phthalate		14	U	14	310
Fluoranthene		34	U	34	310
Fluorene		17	U	17	310
Hexachlorobenzene		27	U	27	310
Hexachlorobutadiene		9.4	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

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V917

Lab Sample ID: 280-84742-3
Client Matrix: Solid
% Moisture: 0.0

Date Sampled: 06/16/2016 1115
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16120.D
Dilution:	1.0			Initial Weight/Volume:	32.0 g
Analysis Date:	06/28/2016 1827			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			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		17	U	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
Tributyl phosphate		54	U	54	1500

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	81		33 - 135
2-Fluorophenol	82		39 - 135
Nitrobenzene-d5	79		32 - 135
Phenol-d5	82		39 - 135
Terphenyl-d14	100		30 - 135
2,4,6-Tribromophenol	59		24 - 135

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V917

Lab Sample ID: 280-84742-3
Client Matrix: Solid
% Moisture: 0.0

Date Sampled: 06/16/2016 1115
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16120.D
Dilution:	1.0			Initial Weight/Volume:	32.0 g
Analysis Date:	06/28/2016 1827			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found: 3**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	1.70	570	N J
	Unknown	1.88	270	N J
	Unknown	3.28	3300	N J

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V918**

Lab Sample ID: 280-84742-4
Client Matrix: Solid
% Moisture: 1.4

Date Sampled: 06/16/2016 1157
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16123.D
Dilution:	1.0			Initial Weight/Volume:	32.0 g
Analysis Date:	06/28/2016 1953			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			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	780
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

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V918

Lab Sample ID: 280-84742-4
Client Matrix: Solid
% Moisture: 1.4

Date Sampled: 06/16/2016 1157
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16123.D
Dilution:	1.0			Initial Weight/Volume:	32.0 g
Analysis Date:	06/28/2016 1953			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			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		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		29	U	29	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
Tributyl phosphate		55	U	55	1500

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	73		33 - 135
2-Fluorophenol	74		39 - 135
Nitrobenzene-d5	72		32 - 135
Phenol-d5	74		39 - 135
Terphenyl-d14	96		30 - 135
2,4,6-Tribromophenol	55		24 - 135

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V918

Lab Sample ID: 280-84742-4
Client Matrix: Solid
% Moisture: 1.4

Date Sampled: 06/16/2016 1157
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16123.D
Dilution:	1.0			Initial Weight/Volume:	32.0 g
Analysis Date:	06/28/2016 1953			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found: 3**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	1.70	530	N J
	Unknown	1.88	240	N J
	Unknown	3.28	3100	N J

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V919

Lab Sample ID: 280-84742-5
Client Matrix: Solid
% Moisture: 1.8

Date Sampled: 06/16/2016 1238
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16124.D
Dilution:	1.0			Initial Weight/Volume:	31.5 g
Analysis Date:	06/28/2016 2022			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			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		16	U	16	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		45	U	45	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

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V919

Lab Sample ID: 280-84742-5
Client Matrix: Solid
% Moisture: 1.8

Date Sampled: 06/16/2016 1238
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16124.D
Dilution:	1.0			Initial Weight/Volume:	31.5 g
Analysis Date:	06/28/2016 2022			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			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
Tributyl phosphate		56	U	56	1600

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	75		33 - 135
2-Fluorophenol	80		39 - 135
Nitrobenzene-d5	78		32 - 135
Phenol-d5	80		39 - 135
Terphenyl-d14	92		30 - 135
2,4,6-Tribromophenol	57		24 - 135

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V919

Lab Sample ID: 280-84742-5
Client Matrix: Solid
% Moisture: 1.8

Date Sampled: 06/16/2016 1238
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16124.D
Dilution:	1.0			Initial Weight/Volume:	31.5 g
Analysis Date:	06/28/2016 2022			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found: 3**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	1.70	580	N J
	Unknown	1.88	300	N J
	Unknown	3.28	3400	N J

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V920

Lab Sample ID: 280-84742-6
Client Matrix: Solid
% Moisture: 1.3

Date Sampled: 06/16/2016 1225
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16125.D
Dilution:	1.0			Initial Weight/Volume:	32.5 g
Analysis Date:	06/28/2016 2050			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			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

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V920

Lab Sample ID: 280-84742-6
Client Matrix: Solid
% Moisture: 1.3

Date Sampled: 06/16/2016 1225
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16125.D
Dilution:	1.0			Initial Weight/Volume:	32.5 g
Analysis Date:	06/28/2016 2050			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			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		17	U	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
Tributyl phosphate		54	U	54	1500

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	76		33 - 135
2-Fluorophenol	76		39 - 135
Nitrobenzene-d5	76		32 - 135
Phenol-d5	78		39 - 135
Terphenyl-d14	92		30 - 135
2,4,6-Tribromophenol	60		24 - 135

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V920

Lab Sample ID: 280-84742-6
Client Matrix: Solid
% Moisture: 1.3

Date Sampled: 06/16/2016 1225
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16125.D
Dilution:	1.0			Initial Weight/Volume:	32.5 g
Analysis Date:	06/28/2016 2050			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

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

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	1.70	640	N J
994-05-8	Butane, 2-methoxy-2-methyl-	1.88	340	N J
	Unknown	3.28	3200	N J
301-02-0	9-Octadecenamide, (Z)-	16.22	130	N J

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V921

Lab Sample ID: 280-84742-7
Client Matrix: Solid
% Moisture: 0.5

Date Sampled: 06/16/2016 1215
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16126.D
Dilution:	1.0			Initial Weight/Volume:	30.4 g
Analysis Date:	06/28/2016 2119			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

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

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V921

Lab Sample ID: 280-84742-7
Client Matrix: Solid
% Moisture: 0.5

Date Sampled: 06/16/2016 1215
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16126.D
Dilution:	1.0			Initial Weight/Volume:	30.4 g
Analysis Date:	06/28/2016 2119			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		13	U	13	330
3 & 4 Methylphenol		33	U	33	330
Naphthalene		31	U	31	330
2-Nitroaniline		50	U	50	330
3-Nitroaniline		72	U	72	330
4-Nitroaniline		72	U	72	330
Nitrobenzene		22	U	22	330
2-Nitrophenol		9.9	U	9.9	330
4-Nitrophenol		96	U	96	650
N-Nitrosodi-n-propylamine		31	U	31	330
N-Nitrosodiphenylamine		21	U	21	330
Pentachlorophenol		330	U	330	650
Phenanthrene		17	U	17	330
Phenol		18	U	18	330
Pyrene		12	U	12	330
1,2,4-Trichlorobenzene		28	U	28	330
2,4,5-Trichlorophenol		9.9	U	9.9	330
2,4,6-Trichlorophenol		9.9	U	9.9	330
Tributyl phosphate		57	U	57	1600

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	73		33 - 135
2-Fluorophenol	76		39 - 135
Nitrobenzene-d5	73		32 - 135
Phenol-d5	76		39 - 135
Terphenyl-d14	93		30 - 135
2,4,6-Tribromophenol	64		24 - 135

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V921

Lab Sample ID: 280-84742-7
Client Matrix: Solid
% Moisture: 0.5

Date Sampled: 06/16/2016 1215
Date Received: 06/21/2016 0935

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16126.D
Dilution:	1.0			Initial Weight/Volume:	30.4 g
Analysis Date:	06/28/2016 2119			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found: 5**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	1.70	510	N J
814-78-8	3-Buten-2-one, 3-methyl-	1.84	140	N J
	Unknown	1.88	290	N J
	Unknown	2.85	160	N J
	Unknown	3.28	2900	N J

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V922

Lab Sample ID: 280-84742-8
Client Matrix: Solid
% Moisture: 25.1

Date Sampled: 06/16/2016 1257
Date Received: 06/21/2016 1735

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16127.D
Dilution:	1.0			Initial Weight/Volume:	33.0 g
Analysis Date:	06/28/2016 2148			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		13	U	13	400
Acenaphthylene		21	U	21	400
Anthracene		21	U	21	400
Benzo[a]anthracene		24	U	24	400
Benzo[a]pyrene		24	U	24	400
Benzo[b]fluoranthene		32	U	32	400
Benzo[ghi]perylene		19	U	19	400
Benzo[k]fluoranthene		49	U	49	400
Bis(2-chloroethoxy)methane		28	U	28	400
Bis(2-chloroethyl)ether		20	U	20	400
bis (2-chloroisopropyl) ether		28	U	28	400
Bis(2-ethylhexyl) phthalate		56	U	56	400
4-Bromophenyl phenyl ether		23	U	23	400
Butyl benzyl phthalate		52	U	52	400
Carbazole		44	U	44	400
4-Chloroaniline		99	U	99	400
4-Chloro-3-methylphenol		80	U	80	400
2-Chloronaphthalene		12	U	12	400
2-Chlorophenol		25	U	25	400
4-Chlorophenyl phenyl ether		25	U	25	400
Chrysene		33	U	33	400
Dibenz(a,h)anthracene		23	U	23	400
Dibenzofuran		24	U	24	400
1,2-Dichlorobenzene		27	U	27	400
1,3-Dichlorobenzene		15	U	15	400
1,4-Dichlorobenzene		17	U	17	400
3,3'-Dichlorobenzidine		110	U	110	800
2,4-Dichlorophenol		12	U	12	400
Diethyl phthalate		32	U	32	400
2,4-Dimethylphenol		80	U	80	400
Dimethyl phthalate		28	U	28	400
Di-n-butyl phthalate		35	U	35	400
4,6-Dinitro-2-methylphenol		400	U	400	800
2,4-Dinitrophenol		400	U	400	1000
2,4-Dinitrotoluene		80	U	80	400
2,6-Dinitrotoluene		34	U	34	400
Di-n-octyl phthalate		17	U	17	400
Fluoranthene		44	U	44	400
Fluorene		22	U	22	400
Hexachlorobenzene		35	U	35	400
Hexachlorobutadiene		12	U	12	400
Hexachlorocyclopentadiene		61	U	61	400
Hexachloroethane		26	U	26	400
Indeno[1,2,3-cd]pyrene		27	U	27	400
Isophorone		21	U	21	400
2-Methylnaphthalene		23	U	23	400

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V922

Lab Sample ID: 280-84742-8
Client Matrix: Solid
% Moisture: 25.1

Date Sampled: 06/16/2016 1257
Date Received: 06/21/2016 1735

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16127.D
Dilution:	1.0			Initial Weight/Volume:	33.0 g
Analysis Date:	06/28/2016 2148			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		16	U	16	400
3 & 4 Methylphenol		40	U	40	400
Naphthalene		38	U	38	400
2-Nitroaniline		61	U	61	400
3-Nitroaniline		89	U	89	400
4-Nitroaniline		88	U	88	400
Nitrobenzene		27	U	27	400
2-Nitrophenol		12	U	12	400
4-Nitrophenol		120	U	120	800
N-Nitrosodi-n-propylamine		38	U	38	400
N-Nitrosodiphenylamine		25	U	25	400
Pentachlorophenol		400	U	400	800
Phenanthrene		21	U	21	400
Phenol		22	U	22	400
Pyrene		15	U	15	400
1,2,4-Trichlorobenzene		34	U	34	400
2,4,5-Trichlorophenol		12	U	12	400
2,4,6-Trichlorophenol		12	U	12	400
Tributyl phosphate		70	U	70	1900

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	78		33 - 135
2-Fluorophenol	79		39 - 135
Nitrobenzene-d5	78		32 - 135
Phenol-d5	78		39 - 135
Terphenyl-d14	96		30 - 135
2,4,6-Tribromophenol	62		24 - 135

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V922

Lab Sample ID: 280-84742-8
Client Matrix: Solid
% Moisture: 25.1

Date Sampled: 06/16/2016 1257
Date Received: 06/21/2016 1735

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16127.D
Dilution:	1.0			Initial Weight/Volume:	33.0 g
Analysis Date:	06/28/2016 2148			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

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

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	1.70	760	N J
994-05-8	Butane, 2-methoxy-2-methyl-	1.88	380	N J
	Unknown	3.28	4200	N J
	Unknown	16.21	200	N J

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V923**

Lab Sample ID: 280-84742-9
Client Matrix: Solid
% Moisture: 1.3

Date Sampled: 06/16/2016 1305
Date Received: 06/21/2016 1735

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16128.D
Dilution:	1.0			Initial Weight/Volume:	31.6 g
Analysis Date:	06/28/2016 2216			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			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		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	790
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		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

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V923

Lab Sample ID: 280-84742-9
Client Matrix: Solid
% Moisture: 1.3

Date Sampled: 06/16/2016 1305
Date Received: 06/21/2016 1735

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16128.D
Dilution:	1.0			Initial Weight/Volume:	31.6 g
Analysis Date:	06/28/2016 2216			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			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		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	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		9.6	U	9.6	320
2,4,6-Trichlorophenol		9.6	U	9.6	320
Tributyl phosphate		56	U	56	1500

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	81		33 - 135
2-Fluorophenol	83		39 - 135
Nitrobenzene-d5	82		32 - 135
Phenol-d5	82		39 - 135
Terphenyl-d14	99		30 - 135
2,4,6-Tribromophenol	60		24 - 135

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V923

Lab Sample ID: 280-84742-9
Client Matrix: Solid
% Moisture: 1.3

Date Sampled: 06/16/2016 1305
Date Received: 06/21/2016 1735

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16128.D
Dilution:	1.0			Initial Weight/Volume:	31.6 g
Analysis Date:	06/28/2016 2216			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found: 3**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	1.70	610	N J
	Unknown	1.88	280	N J
	Unknown	3.28	3400	N J

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V924

Lab Sample ID: 280-84742-10
Client Matrix: Solid
% Moisture: 3.7

Date Sampled: 06/16/2016 1030
Date Received: 06/21/2016 1735

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16129.D
Dilution:	1.0			Initial Weight/Volume:	31.6 g
Analysis Date:	06/28/2016 2245			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	330
Acenaphthylene		17	U	17	330
Anthracene		17	U	17	330
Benzo[a]anthracene		20	U	20	330
Benzo[a]pyrene		20	U	20	330
Benzo[b]fluoranthene		26	U	26	330
Benzo[ghi]perylene		16	U	16	330
Benzo[k]fluoranthene		39	U	39	330
Bis(2-chloroethoxy)methane		23	U	23	330
Bis(2-chloroethyl)ether		16	U	16	330
bis (2-chloroisopropyl) ether		23	U	23	330
Bis(2-ethylhexyl) phthalate		45	U	45	330
4-Bromophenyl phenyl ether		19	U	19	330
Butyl benzyl phthalate		42	U	42	330
Carbazole		35	U	35	330
4-Chloroaniline		81	U	81	330
4-Chloro-3-methylphenol		65	U	65	330
2-Chloronaphthalene		9.9	U	9.9	330
2-Chlorophenol		21	U	21	330
4-Chlorophenyl phenyl ether		21	U	21	330
Chrysene		27	U	27	330
Dibenz(a,h)anthracene		19	U	19	330
Dibenzofuran		20	U	20	330
1,2-Dichlorobenzene		22	U	22	330
1,3-Dichlorobenzene		12	U	12	330
1,4-Dichlorobenzene		13	U	13	330
3,3'-Dichlorobenzidine		89	U	89	650
2,4-Dichlorophenol		9.9	U	9.9	330
Diethyl phthalate		26	U	26	330
2,4-Dimethylphenol		65	U	65	330
Dimethyl phthalate		23	U	23	330
Di-n-butyl phthalate		29	U	29	330
4,6-Dinitro-2-methylphenol		330	U	330	650
2,4-Dinitrophenol		330	U	330	810
2,4-Dinitrotoluene		65	U	65	330
2,6-Dinitrotoluene		28	U	28	330
Di-n-octyl phthalate		14	U	14	330
Fluoranthene		35	U	35	330
Fluorene		18	U	18	330
Hexachlorobenzene		29	U	29	330
Hexachlorobutadiene		9.9	U	9.9	330
Hexachlorocyclopentadiene		49	U	49	330
Hexachloroethane		21	U	21	330
Indeno[1,2,3-cd]pyrene		22	U	22	330
Isophorone		17	U	17	330
2-Methylnaphthalene		19	U	19	330

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V924

Lab Sample ID: 280-84742-10
Client Matrix: Solid
% Moisture: 3.7

Date Sampled: 06/16/2016 1030
Date Received: 06/21/2016 1735

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16129.D
Dilution:	1.0			Initial Weight/Volume:	31.6 g
Analysis Date:	06/28/2016 2245			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		13	U	13	330
3 & 4 Methylphenol		33	U	33	330
Naphthalene		31	U	31	330
2-Nitroaniline		49	U	49	330
3-Nitroaniline		72	U	72	330
4-Nitroaniline		71	U	71	330
Nitrobenzene		22	U	22	330
2-Nitrophenol		9.9	U	9.9	330
4-Nitrophenol		96	U	96	650
N-Nitrosodi-n-propylamine		31	U	31	330
N-Nitrosodiphenylamine		21	U	21	330
Pentachlorophenol		330	U	330	650
Phenanthrene		17	U	17	330
Phenol		18	U	18	330
Pyrene		12	U	12	330
1,2,4-Trichlorobenzene		28	U	28	330
2,4,5-Trichlorophenol		9.9	U	9.9	330
2,4,6-Trichlorophenol		9.9	U	9.9	330
Tributyl phosphate		57	U	57	1600

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	77		33 - 135
2-Fluorophenol	85		39 - 135
Nitrobenzene-d5	78		32 - 135
Phenol-d5	83		39 - 135
Terphenyl-d14	96		30 - 135
2,4,6-Tribromophenol	63		24 - 135

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V924

Lab Sample ID: 280-84742-10
Client Matrix: Solid
% Moisture: 3.7

Date Sampled: 06/16/2016 1030
Date Received: 06/21/2016 1735

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16129.D
Dilution:	1.0			Initial Weight/Volume:	31.6 g
Analysis Date:	06/28/2016 2245			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found: 3**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	1.70	570	N J
	Unknown	1.88	290	N J
	Unknown	3.28	3500	N J

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V925

Lab Sample ID: 280-84742-11
Client Matrix: Solid
% Moisture: 2.0

Date Sampled: 06/16/2016 1333
Date Received: 06/21/2016 1735

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16130.D
Dilution:	1.0			Initial Weight/Volume:	31.1 g
Analysis Date:	06/28/2016 2313			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	320
Acenaphthylene		17	U	17	320
Anthracene		17	U	17	320
Benzo[a]anthracene		20	U	20	320
Benzo[a]pyrene		20	U	20	320
Benzo[b]fluoranthene		26	U	26	320
Benzo[ghi]perylene		16	U	16	320
Benzo[k]fluoranthene		39	U	39	320
Bis(2-chloroethoxy)methane		23	U	23	320
Bis(2-chloroethyl)ether		16	U	16	320
bis (2-chloroisopropyl) ether		23	U	23	320
Bis(2-ethylhexyl) phthalate		45	U	45	320
4-Bromophenyl phenyl ether		19	U	19	320
Butyl benzyl phthalate		42	U	42	320
Carbazole		35	U	35	320
4-Chloroaniline		81	U	81	320
4-Chloro-3-methylphenol		65	U	65	320
2-Chloronaphthalene		9.8	U	9.8	320
2-Chlorophenol		21	U	21	320
4-Chlorophenyl phenyl ether		21	U	21	320
Chrysene		27	U	27	320
Dibenz(a,h)anthracene		19	U	19	320
Dibenzofuran		20	U	20	320
1,2-Dichlorobenzene		22	U	22	320
1,3-Dichlorobenzene		12	U	12	320
1,4-Dichlorobenzene		13	U	13	320
3,3'-Dichlorobenzidine		89	U	89	650
2,4-Dichlorophenol		9.8	U	9.8	320
Diethyl phthalate		26	U	26	320
2,4-Dimethylphenol		65	U	65	320
Dimethyl phthalate		23	U	23	320
Di-n-butyl phthalate		29	U	29	320
4,6-Dinitro-2-methylphenol		320	U	320	650
2,4-Dinitrophenol		330	U	330	810
2,4-Dinitrotoluene		65	U	65	320
2,6-Dinitrotoluene		28	U	28	320
Di-n-octyl phthalate		14	U	14	320
Fluoranthene		35	U	35	320
Fluorene		18	U	18	320
Hexachlorobenzene		29	U	29	320
Hexachlorobutadiene		9.8	U	9.8	320
Hexachlorocyclopentadiene		49	U	49	320
Hexachloroethane		21	U	21	320
Indeno[1,2,3-cd]pyrene		22	U	22	320
Isophorone		17	U	17	320
2-Methylnaphthalene		19	U	19	320

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V925

Lab Sample ID: 280-84742-11
Client Matrix: Solid
% Moisture: 2.0

Date Sampled: 06/16/2016 1333
Date Received: 06/21/2016 1735

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16130.D
Dilution:	1.0			Initial Weight/Volume:	31.1 g
Analysis Date:	06/28/2016 2313			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			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		31	U	31	320
2-Nitroaniline		49	U	49	320
3-Nitroaniline		72	U	72	320
4-Nitroaniline		71	U	71	320
Nitrobenzene		22	U	22	320
2-Nitrophenol		9.8	U	9.8	320
4-Nitrophenol		96	U	96	650
N-Nitrosodi-n-propylamine		31	U	31	320
N-Nitrosodiphenylamine		21	U	21	320
Pentachlorophenol		320	U	320	650
Phenanthrene		17	U	17	320
Phenol		18	U	18	320
Pyrene		12	U	12	320
1,2,4-Trichlorobenzene		28	U	28	320
2,4,5-Trichlorophenol		9.8	U	9.8	320
2,4,6-Trichlorophenol		9.8	U	9.8	320
Tributyl phosphate		57	U	57	1600

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	81		33 - 135
2-Fluorophenol	84		39 - 135
Nitrobenzene-d5	81		32 - 135
Phenol-d5	84		39 - 135
Terphenyl-d14	98		30 - 135
2,4,6-Tribromophenol	62		24 - 135

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V925

Lab Sample ID: 280-84742-11
Client Matrix: Solid
% Moisture: 2.0

Date Sampled: 06/16/2016 1333
Date Received: 06/21/2016 1735

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16130.D
Dilution:	1.0			Initial Weight/Volume:	31.1 g
Analysis Date:	06/28/2016 2313			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found: 3**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	1.70	540	N J
	Unknown	1.88	290	N J
	Unknown	3.28	3700	N J

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V926

Lab Sample ID: 280-84742-12
Client Matrix: Solid
% Moisture: 3.5

Date Sampled: 06/16/2016 1324
Date Received: 06/21/2016 1735

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16131.D
Dilution:	1.0			Initial Weight/Volume:	32.4 g
Analysis Date:	06/28/2016 2342			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			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

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V926

Lab Sample ID: 280-84742-12
Client Matrix: Solid
% Moisture: 3.5

Date Sampled: 06/16/2016 1324
Date Received: 06/21/2016 1735

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16131.D
Dilution:	1.0			Initial Weight/Volume:	32.4 g
Analysis Date:	06/28/2016 2342			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			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		13	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
Tributyl phosphate		55	U	55	1500

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	86		33 - 135
2-Fluorophenol	85		39 - 135
Nitrobenzene-d5	80		32 - 135
Phenol-d5	87		39 - 135
Terphenyl-d14	98		30 - 135
2,4,6-Tribromophenol	70		24 - 135

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V926

Lab Sample ID: 280-84742-12
Client Matrix: Solid
% Moisture: 3.5

Date Sampled: 06/16/2016 1324
Date Received: 06/21/2016 1735

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16131.D
Dilution:	1.0			Initial Weight/Volume:	32.4 g
Analysis Date:	06/28/2016 2342			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found: 7**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	1.70	600	N J
814-78-8	3-Buten-2-one, 3-methyl-	1.84	200	N J
	Unknown	1.88	300	N J
	Unknown	2.85	200	N J
	Unknown	3.28	3300	N J
544-76-3	Hexadecane	8.24	42	J N
483-78-3	Naphthalene, 1,6-dimethyl-4-(1-methyleth	8.74	260	N J

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V927

Lab Sample ID: 280-84742-13
Client Matrix: Solid
% Moisture: 5.6

Date Sampled: 06/16/2016 1030
Date Received: 06/21/2016 1735

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16132.D
Dilution:	1.0			Initial Weight/Volume:	32.0 g
Analysis Date:	06/29/2016 0010			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	330
Acenaphthylene		17	U	17	330
Anthracene		17	U	17	330
Benzo[a]anthracene		20	U	20	330
Benzo[a]pyrene		20	U	20	330
Benzo[b]fluoranthene		26	U	26	330
Benzo[ghi]perylene		16	U	16	330
Benzo[k]fluoranthene		40	U	40	330
Bis(2-chloroethoxy)methane		23	U	23	330
Bis(2-chloroethyl)ether		16	U	16	330
bis (2-chloroisopropyl) ether		23	U	23	330
Bis(2-ethylhexyl) phthalate		46	U	46	330
4-Bromophenyl phenyl ether		19	U	19	330
Butyl benzyl phthalate		43	U	43	330
Carbazole		36	U	36	330
4-Chloroaniline		81	U	81	330
4-Chloro-3-methylphenol		66	U	66	330
2-Chloronaphthalene		9.9	U	9.9	330
2-Chlorophenol		21	U	21	330
4-Chlorophenyl phenyl ether		21	U	21	330
Chrysene		27	U	27	330
Dibenz(a,h)anthracene		19	U	19	330
Dibenzofuran		20	U	20	330
1,2-Dichlorobenzene		22	U	22	330
1,3-Dichlorobenzene		12	U	12	330
1,4-Dichlorobenzene		14	U	14	330
3,3'-Dichlorobenzidine		89	U	89	660
2,4-Dichlorophenol		9.9	U	9.9	330
Diethyl phthalate		26	U	26	330
2,4-Dimethylphenol		66	U	66	330
Dimethyl phthalate		23	U	23	330
Di-n-butyl phthalate		29	U	29	330
4,6-Dinitro-2-methylphenol		330	U	330	660
2,4-Dinitrophenol		330	U	330	820
2,4-Dinitrotoluene		66	U	66	330
2,6-Dinitrotoluene		28	U	28	330
Di-n-octyl phthalate		14	U	14	330
Fluoranthene		36	U	36	330
Fluorene		18	U	18	330
Hexachlorobenzene		29	U	29	330
Hexachlorobutadiene		9.9	U	9.9	330
Hexachlorocyclopentadiene		50	U	50	330
Hexachloroethane		21	U	21	330
Indeno[1,2,3-cd]pyrene		22	U	22	330
Isophorone		17	U	17	330
2-Methylnaphthalene		19	U	19	330

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V927

Lab Sample ID: 280-84742-13
Client Matrix: Solid
% Moisture: 5.6

Date Sampled: 06/16/2016 1030
Date Received: 06/21/2016 1735

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16132.D
Dilution:	1.0			Initial Weight/Volume:	32.0 g
Analysis Date:	06/29/2016 0010			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		13	U	13	330
3 & 4 Methylphenol		33	U	33	330
Naphthalene		31	U	31	330
2-Nitroaniline		50	U	50	330
3-Nitroaniline		72	U	72	330
4-Nitroaniline		72	U	72	330
Nitrobenzene		22	U	22	330
2-Nitrophenol		9.9	U	9.9	330
4-Nitrophenol		96	U	96	660
N-Nitrosodi-n-propylamine		31	U	31	330
N-Nitrosodiphenylamine		21	U	21	330
Pentachlorophenol		330	U	330	660
Phenanthrene		17	U	17	330
Phenol		18	U	18	330
Pyrene		12	U	12	330
1,2,4-Trichlorobenzene		28	U	28	330
2,4,5-Trichlorophenol		9.9	U	9.9	330
2,4,6-Trichlorophenol		9.9	U	9.9	330
Tributyl phosphate		57	U	57	1600

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	77		33 - 135
2-Fluorophenol	78		39 - 135
Nitrobenzene-d5	76		32 - 135
Phenol-d5	81		39 - 135
Terphenyl-d14	94		30 - 135
2,4,6-Tribromophenol	67		24 - 135

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V927

Lab Sample ID: 280-84742-13
Client Matrix: Solid
% Moisture: 5.6

Date Sampled: 06/16/2016 1030
Date Received: 06/21/2016 1735

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Prep Method:	3550C	Prep Batch:	280-331025	Lab File ID:	B2-16132.D
Dilution:	1.0			Initial Weight/Volume:	32.0 g
Analysis Date:	06/29/2016 0010			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found: 3**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	1.70	580	N J
	Unknown	1.88	270	N J
	Unknown	3.28	3500	N J

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V915

Lab Sample ID: 280-84742-1
Client Matrix: Solid
% Moisture: 1.4

Date Sampled: 06/16/2016 1102
Date Received: 06/21/2016 0935

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-331407	Instrument ID:	SGC_P3
Prep Method:	3550C	Prep Batch:	280-330922	Initial Weight/Volume:	30.3 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	06/27/2016 1540			Injection Volume:	1 uL
Prep Date:	06/22/2016 1520			Result Type:	PRIMARY

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

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	101		59 - 130
Tetrachloro-m-xylene	98		53 - 128

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V916

Lab Sample ID: 280-84742-2
Client Matrix: Solid
% Moisture: 1.5

Date Sampled: 06/16/2016 1145
Date Received: 06/21/2016 0935

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-331407	Instrument ID:	SGC_P3
Prep Method:	3550C	Prep Batch:	280-330922	Initial Weight/Volume:	33.0 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	06/27/2016 1602			Injection Volume:	1 uL
Prep Date:	06/22/2016 1520			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.6	U	2.6	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	99		59 - 130
Tetrachloro-m-xylene	103		53 - 128

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V917**

Lab Sample ID: 280-84742-3
Client Matrix: Solid
% Moisture: 0.0

Date Sampled: 06/16/2016 1115
Date Received: 06/21/2016 0935

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-331407	Instrument ID:	SGC_P3
Prep Method:	3550C	Prep Batch:	280-330922	Initial Weight/Volume:	31.0 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	06/27/2016 1624			Injection Volume:	1 uL
Prep Date:	06/22/2016 1520			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	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	Qualifier	Acceptance Limits
Decachlorobiphenyl	103		59 - 130
Tetrachloro-m-xylene	98		53 - 128

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V918

Lab Sample ID: 280-84742-4
Client Matrix: Solid
% Moisture: 1.4

Date Sampled: 06/16/2016 1157
Date Received: 06/21/2016 0935

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-331407	Instrument ID:	SGC_P3
Prep Method:	3550C	Prep Batch:	280-330922	Initial Weight/Volume:	32.0 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	06/27/2016 1646			Injection Volume:	1 uL
Prep Date:	06/22/2016 1520			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	105		59 - 130
Tetrachloro-m-xylene	105		53 - 128

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V919**

Lab Sample ID: 280-84742-5
Client Matrix: Solid
% Moisture: 1.8

Date Sampled: 06/16/2016 1238
Date Received: 06/21/2016 0935

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-331407	Instrument ID:	SGC_P3
Prep Method:	3550C	Prep Batch:	280-330922	Initial Weight/Volume:	31.1 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	06/27/2016 1707			Injection Volume:	1 uL
Prep Date:	06/22/2016 1520			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		2.6	U	2.6	9.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	117		59 - 130
Tetrachloro-m-xylene	101		53 - 128

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V920

Lab Sample ID: 280-84742-6
Client Matrix: Solid
% Moisture: 1.3

Date Sampled: 06/16/2016 1225
Date Received: 06/21/2016 0935

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-331407	Instrument ID:	SGC_P3
Prep Method:	3550C	Prep Batch:	280-330922	Initial Weight/Volume:	31.8 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	06/27/2016 1812			Injection Volume:	1 uL
Prep Date:	06/22/2016 1520			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		2.5	U	2.5	9.6

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	99		59 - 130
Tetrachloro-m-xylene	98		53 - 128

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V921**

Lab Sample ID: 280-84742-7
Client Matrix: Solid
% Moisture: 0.5

Date Sampled: 06/16/2016 1215
Date Received: 06/21/2016 0935

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-331407	Instrument ID:	SGC_P3
Prep Method:	3550C	Prep Batch:	280-330922	Initial Weight/Volume:	30.9 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	06/27/2016 1834			Injection Volume:	1 uL
Prep Date:	06/22/2016 1520			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	94		59 - 130
Tetrachloro-m-xylene	98		53 - 128

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V922

Lab Sample ID: 280-84742-8
Client Matrix: Solid
% Moisture: 25.1

Date Sampled: 06/16/2016 1257
Date Received: 06/21/2016 1735

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-331407	Instrument ID:	SGC_P3
Prep Method:	3550C	Prep Batch:	280-330922	Initial Weight/Volume:	30.8 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	06/27/2016 1856			Injection Volume:	1 uL
Prep Date:	06/22/2016 1520			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		3.6	U	3.6	13
Aroclor 1221		10	U	10	21
Aroclor 1232		2.6	U	2.6	13
Aroclor 1242		6.1	U	6.1	13
Aroclor 1248		6.1	U	6.1	13
Aroclor 1254		3.4	U	3.4	13
Aroclor 1260		3.4	U	3.4	13

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	101		59 - 130
Tetrachloro-m-xylene	103		53 - 128

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V923**

Lab Sample ID: 280-84742-9
Client Matrix: Solid
% Moisture: 1.3

Date Sampled: 06/16/2016 1305
Date Received: 06/21/2016 1735

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-331407	Instrument ID:	SGC_P3
Prep Method:	3550C	Prep Batch:	280-330922	Initial Weight/Volume:	30.4 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	06/27/2016 1918			Injection Volume:	1 uL
Prep Date:	06/22/2016 1520			Result Type:	PRIMARY

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

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	101		59 - 130
Tetrachloro-m-xylene	100		53 - 128

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V924

Lab Sample ID: 280-84742-10
Client Matrix: Solid
% Moisture: 3.7

Date Sampled: 06/16/2016 1030
Date Received: 06/21/2016 1735

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-331407	Instrument ID:	SGC_P3
Prep Method:	3550C	Prep Batch:	280-330922	Initial Weight/Volume:	30.8 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	06/27/2016 1939			Injection Volume:	1 uL
Prep Date:	06/22/2016 1520			Result Type:	PRIMARY

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

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	96		59 - 130
Tetrachloro-m-xylene	98		53 - 128

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V925**

Lab Sample ID: 280-84742-11
Client Matrix: Solid
% Moisture: 2.0

Date Sampled: 06/16/2016 1333
Date Received: 06/21/2016 1735

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-331407	Instrument ID:	SGC_P3
Prep Method:	3550C	Prep Batch:	280-330922	Initial Weight/Volume:	30.1 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	06/27/2016 2001			Injection Volume:	1 uL
Prep Date:	06/22/2016 1520			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.8	U	2.8	10
Aroclor 1221		8.2	U	8.2	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		4.4	J	2.6	10
Aroclor 1260		2.6	U	2.6	10

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	94		59 - 130
Tetrachloro-m-xylene	100		53 - 128

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V926

Lab Sample ID: 280-84742-12
Client Matrix: Solid
% Moisture: 3.5

Date Sampled: 06/16/2016 1324
Date Received: 06/21/2016 1735

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-331407	Instrument ID:	SGC_P3
Prep Method:	3550C	Prep Batch:	280-330922	Initial Weight/Volume:	30.6 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	06/27/2016 2023			Injection Volume:	1 uL
Prep Date:	06/22/2016 1520			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.8	U	2.8	10
Aroclor 1221		8.1	U	8.1	17
Aroclor 1232		2.0	U	2.0	10
Aroclor 1242		4.7	U	4.7	10
Aroclor 1248		4.7	U	4.7	10
Aroclor 1254		2.6	U	2.6	10
Aroclor 1260		51		2.6	10

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	85		59 - 130
Tetrachloro-m-xylene	101		53 - 128

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V927**

Lab Sample ID: 280-84742-13
Client Matrix: Solid
% Moisture: 5.6

Date Sampled: 06/16/2016 1030
Date Received: 06/21/2016 1735

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-331407	Instrument ID:	SGC_P3
Prep Method:	3550C	Prep Batch:	280-330922	Initial Weight/Volume:	31.3 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	06/27/2016 2044			Injection Volume:	1 uL
Prep Date:	06/22/2016 1520			Result Type:	PRIMARY

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

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	88		59 - 130
Tetrachloro-m-xylene	98		53 - 128

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V915**

Lab Sample ID: 280-84742-1
Client Matrix: Solid
% Moisture: 1.4

Date Sampled: 06/16/2016 1102
Date Received: 06/21/2016 0935

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-332038	Instrument ID:	SGC_U2a
Prep Method:	3550C	Prep Batch:	280-331870	Lab File ID:	008F0601.D
Dilution:	1.0			Initial Weight/Volume:	30.4 g
Analysis Date:	06/30/2016 1056			Final Weight/Volume:	1 mL
Prep Date:	06/29/2016 1655			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		1800	J B	1000	4000
C10-C28		1000	J B	680	4000

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	89		49 - 115

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V916

Lab Sample ID: 280-84742-2
Client Matrix: Solid
% Moisture: 1.5

Date Sampled: 06/16/2016 1145
Date Received: 06/21/2016 0935

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-332038	Instrument ID:	SGC_U2a
Prep Method:	3550C	Prep Batch:	280-331870	Lab File ID:	009F0701.D
Dilution:	1.0			Initial Weight/Volume:	31.4 g
Analysis Date:	06/30/2016 1121			Final Weight/Volume:	1 mL
Prep Date:	06/29/2016 1655			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		2500	J B	970	3900
C10-C28		1500	J B	660	3900

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	91		49 - 115

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V917**

Lab Sample ID: 280-84742-3
Client Matrix: Solid
% Moisture: 0.0

Date Sampled: 06/16/2016 1115
Date Received: 06/21/2016 0935

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-332038	Instrument ID:	SGC_U2a
Prep Method:	3550C	Prep Batch:	280-331870	Lab File ID:	010F0801.D
Dilution:	1.0			Initial Weight/Volume:	30.3 g
Analysis Date:	06/30/2016 1145			Final Weight/Volume:	1 mL
Prep Date:	06/29/2016 1655			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		1700	J B	990	4000
C10-C28		970	J B	670	4000

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	89		49 - 115

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V918**

Lab Sample ID: 280-84742-4
Client Matrix: Solid
% Moisture: 1.4

Date Sampled: 06/16/2016 1157
Date Received: 06/21/2016 0935

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-332038	Instrument ID:	SGC_U2a
Prep Method:	3550C	Prep Batch:	280-331870	Lab File ID:	013F1101.D
Dilution:	1.0			Initial Weight/Volume:	32.2 g
Analysis Date:	06/30/2016 1259			Final Weight/Volume:	1 mL
Prep Date:	06/29/2016 1655			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		2100	J B	940	3800
C10-C28		1400	J B	640	3800

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	91		49 - 115

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V919

Lab Sample ID: 280-84742-5
Client Matrix: Solid
% Moisture: 1.8

Date Sampled: 06/16/2016 1238
Date Received: 06/21/2016 0935

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-332038	Instrument ID:	SGC_U2a
Prep Method:	3550C	Prep Batch:	280-331870	Lab File ID:	014F1201.D
Dilution:	1.0			Initial Weight/Volume:	32.4 g
Analysis Date:	06/30/2016 1324			Final Weight/Volume:	1 mL
Prep Date:	06/29/2016 1655			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		3300	J B	940	3800
C10-C28		1800	J B	640	3800

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	92		49 - 115

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V920**

Lab Sample ID: 280-84742-6
Client Matrix: Solid
% Moisture: 1.3

Date Sampled: 06/16/2016 1225
Date Received: 06/21/2016 0935

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-332038	Instrument ID:	SGC_U2a
Prep Method:	3550C	Prep Batch:	280-331870	Lab File ID:	016F1401.D
Dilution:	1.0			Initial Weight/Volume:	31.3 g
Analysis Date:	06/30/2016 1413			Final Weight/Volume:	1 mL
Prep Date:	06/29/2016 1655			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		2700	J B	970	3900
C10-C28		1700	J B	660	3900

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	92		49 - 115

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V921**

Lab Sample ID: 280-84742-7
Client Matrix: Solid
% Moisture: 0.5

Date Sampled: 06/16/2016 1215
Date Received: 06/21/2016 0935

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-332038	Instrument ID:	SGC_U2a
Prep Method:	3550C	Prep Batch:	280-331870	Lab File ID:	017F1501.D
Dilution:	1.0			Initial Weight/Volume:	30.8 g
Analysis Date:	06/30/2016 1437			Final Weight/Volume:	1 mL
Prep Date:	06/29/2016 1655			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		4000	B	980	3900
C10-C28		1900	J B	660	3900

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	89		49 - 115

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V922

Lab Sample ID: 280-84742-8
Client Matrix: Solid
% Moisture: 25.1

Date Sampled: 06/16/2016 1257
Date Received: 06/21/2016 1735

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-332038	Instrument ID:	SGC_U2a
Prep Method:	3550C	Prep Batch:	280-331870	Lab File ID:	018F1601.D
Dilution:	1.0			Initial Weight/Volume:	32.0 g
Analysis Date:	06/30/2016 1502			Final Weight/Volume:	1 mL
Prep Date:	06/29/2016 1655			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		3400	J B	1200	5000
C10-C28		2000	J B	850	5000

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	92		49 - 115

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V923**

Lab Sample ID: 280-84742-9
Client Matrix: Solid
% Moisture: 1.3

Date Sampled: 06/16/2016 1305
Date Received: 06/21/2016 1735

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-332038	Instrument ID:	SGC_U2a
Prep Method:	3550C	Prep Batch:	280-331870	Lab File ID:	019F1701.D
Dilution:	1.0			Initial Weight/Volume:	31.7 g
Analysis Date:	06/30/2016 1527			Final Weight/Volume:	1 mL
Prep Date:	06/29/2016 1655			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		2600	J B	960	3800
C10-C28		1800	J B	650	3800

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	92		49 - 115

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V924**

Lab Sample ID: 280-84742-10
Client Matrix: Solid
% Moisture: 3.7

Date Sampled: 06/16/2016 1030
Date Received: 06/21/2016 1735

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-332038	Instrument ID:	SGC_U2a
Prep Method:	3550C	Prep Batch:	280-331870	Lab File ID:	020F1801.D
Dilution:	1.0			Initial Weight/Volume:	31.9 g
Analysis Date:	06/30/2016 1551			Final Weight/Volume:	1 mL
Prep Date:	06/29/2016 1655			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		4500	B	970	3900
C10-C28		1900	J B	660	3900

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	93		49 - 115

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V925

Lab Sample ID: 280-84742-11
Client Matrix: Solid
% Moisture: 2.0

Date Sampled: 06/16/2016 1333
Date Received: 06/21/2016 1735

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-332038	Instrument ID:	SGC_U2a
Prep Method:	3550C	Prep Batch:	280-331870	Lab File ID:	021F1901.D
Dilution:	1.0			Initial Weight/Volume:	30.5 g
Analysis Date:	06/30/2016 1616			Final Weight/Volume:	1 mL
Prep Date:	06/29/2016 1655			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		8500	B	1000	4000
C10-C28		3300	J B	680	4000

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

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V926**

Lab Sample ID: 280-84742-12
Client Matrix: Solid
% Moisture: 3.5

Date Sampled: 06/16/2016 1324
Date Received: 06/21/2016 1735

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-332038	Instrument ID:	SGC_U2a
Prep Method:	3550C	Prep Batch:	280-331870	Lab File ID:	022F2001.D
Dilution:	1.0			Initial Weight/Volume:	31.2 g
Analysis Date:	06/30/2016 1641			Final Weight/Volume:	1 mL
Prep Date:	06/29/2016 1655			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		65000	B	990	4000
C10-C28		23000	B	680	4000

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	105		49 - 115

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V927**

Lab Sample ID: 280-84742-13
Client Matrix: Solid
% Moisture: 5.6

Date Sampled: 06/16/2016 1030
Date Received: 06/21/2016 1735

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-332038	Instrument ID:	SGC_U2a
Prep Method:	3550C	Prep Batch:	280-331870	Lab File ID:	023F2101.D
Dilution:	1.0			Initial Weight/Volume:	30.3 g
Analysis Date:	06/30/2016 1705			Final Weight/Volume:	1 mL
Prep Date:	06/29/2016 1655			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		7300	B	1000	4200
C10-C28		2200	J B	710	4200

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	96		49 - 115

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V915**

Lab Sample ID: 280-84742-1
Client Matrix: Solid
% Moisture: 1.4

Date Sampled: 06/16/2016 1102
Date Received: 06/21/2016 0935

6010B Metals (ICP)

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 0534
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331009
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25D062216.asc
Initial Weight/Volume: 1.368 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		1.1		0.49	0.74
Barium		49.1	X	0.056	0.37
Beryllium		0.16		0.024	0.15
Boron		0.73	U	0.73	1.5
Cadmium		0.17		0.030	0.15
Calcium		4950	X	10.5	37.1
Chromium		5.2	X	0.043	0.15
Iron		24700	X	2.8	3.7
Lithium		4.0		0.67	1.9
Manganese		245	X	0.074	0.74
Molybdenum		0.52	B	0.19	1.5
Nickel		7.5	X	0.091	3.0
Silicon		152		4.2	7.4
Strontium		15.8	X	0.027	0.74
Zinc		41.5	X	0.30	0.74
Zirconium		22.9	X	0.26	1.9

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 1547
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331153
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25C062316.asc
Initial Weight/Volume: 1.368 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Potassium		548		30.4	222
Silver		0.12	U	0.12	0.15
Sodium		309		43.7	88.9

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/25/2016 2035
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331350
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25c062516.asc
Initial Weight/Volume: 1.368 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		3570	X	1.1	3.7
Antimony		0.50		0.28	0.44
Cobalt		7.4	X	0.074	0.74
Copper		12.6		0.16	0.74
Lead		2.0		0.20	0.37
Magnesium		3460		2.7	14.8
Selenium		0.64	U	0.64	0.74
Tin		0.68	U	0.68	7.4
Vanadium		64.9		0.070	1.5

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V915**

Lab Sample ID: 280-84742-1
Client Matrix: Solid
% Moisture: 1.4

Date Sampled: 06/16/2016 1102
Date Received: 06/21/2016 0935

6010B Metals (ICP)

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-331065	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-330796	Lab File ID:	298SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.294 g
Analysis Date:	06/23/2016 0953			Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		0.41		0.0012	0.078

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-331158	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-330933	Lab File ID:	160623ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.51 g
Analysis Date:	06/23/2016 1953			Final Weight/Volume:	50 mL
Prep Date:	06/23/2016 1155				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0066	U	0.0066	0.020

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V916

Lab Sample ID: 280-84742-2
Client Matrix: Solid
% Moisture: 1.5

Date Sampled: 06/16/2016 1145
Date Received: 06/21/2016 0935

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-331009	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-330795	Lab File ID:	25D062216.asc
Dilution:	1.0			Initial Weight/Volume:	1.142 g
Analysis Date:	06/23/2016 0537			Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		2.2		0.59	0.89
Barium		90.1	X	0.068	0.44
Beryllium		0.22		0.029	0.18
Boron		3.3	N	0.87	1.8
Cadmium		0.21	M	0.036	0.18
Calcium		5160	X	12.5	44.4
Chromium		3.8	X	0.052	0.18
Iron		28300	X	3.4	4.4
Lithium		4.0		0.81	2.2
Manganese		277	X	0.089	0.89
Molybdenum		0.37	B M	0.23	1.8
Nickel		6.6	X	0.11	3.6
Silicon		169		5.0	8.9
Silver		0.14	U	0.14	0.18
Strontium		38.4	X M	0.032	0.89
Zinc		48.1	N X	0.35	0.89
Zirconium		27.3	X	0.31	2.2

Analysis Method:	6010B	Analysis Batch:	280-331153	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-330795	Lab File ID:	25C062316.asc
Dilution:	1.0			Initial Weight/Volume:	1.142 g
Analysis Date:	06/23/2016 1550			Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Cobalt		8.2	X	0.089	0.89
Copper		13.7		0.19	0.89
Lead		3.3		0.24	0.44
Magnesium		3790		3.3	17.8
Potassium		602		36.4	267
Sodium		319		52.4	107
Tin		0.81	U N	0.81	8.9
Vanadium		76.3		0.084	1.8

Analysis Method:	6010B	Analysis Batch:	280-331350	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-330795	Lab File ID:	25c062516.asc
Dilution:	1.0			Initial Weight/Volume:	1.142 g
Analysis Date:	06/25/2016 2004			Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		3940	X	1.4	4.4
Antimony		0.74	M	0.34	0.53
Selenium		0.76	U N	0.76	0.89

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V916**

Lab Sample ID: 280-84742-2
Client Matrix: Solid
% Moisture: 1.5

Date Sampled: 06/16/2016 1145
Date Received: 06/21/2016 0935

6010B Metals (ICP)

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-331065	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-330796	Lab File ID:	299SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.360 g
Analysis Date:	06/23/2016 0957			Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		0.49	M	0.0012	0.075

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-331158	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-330933	Lab File ID:	160623ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.53 g
Analysis Date:	06/23/2016 2005			Final Weight/Volume:	50 mL
Prep Date:	06/23/2016 1155				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0064	U	0.0064	0.020

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V917**

Lab Sample ID: 280-84742-3
Client Matrix: Solid
% Moisture: 0.0

Date Sampled: 06/16/2016 1115
Date Received: 06/21/2016 0935

6010B Metals (ICP)

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 0547
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331009
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25D062216.asc
Initial Weight/Volume: 1.285 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		0.30	U	0.30	0.47
Arsenic		1.6		0.51	0.78
Barium		46.3	X	0.059	0.39
Beryllium		0.14	B	0.026	0.16
Boron		0.76	U	0.76	1.6
Cadmium		0.13	B	0.032	0.16
Calcium		4700	X	11.0	38.9
Chromium		3.6	X	0.045	0.16
Cobalt		5.5	X	0.078	0.78
Copper		11.5		0.17	0.78
Iron		20000	X	3.0	3.9
Lead		2.0		0.21	0.39
Lithium		4.2		0.71	1.9
Magnesium		2950		2.9	15.6
Manganese		206	X	0.078	0.78
Molybdenum		0.20	B	0.20	1.6
Nickel		5.9	X	0.096	3.1
Silicon		121		4.4	7.8
Silver		0.12	U	0.12	0.16
Strontium		16.4	X	0.028	0.78
Tin		0.71	U	0.71	7.8
Vanadium		51.5		0.073	1.6
Zinc		33.3	X	0.31	0.78
Zirconium		21.1	X	0.28	1.9

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 1600
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331153
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25C062316.asc
Initial Weight/Volume: 1.285 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Potassium		632		31.9	233
Sodium		252		45.9	93.4

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/25/2016 2040
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331350
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25c062516.asc
Initial Weight/Volume: 1.285 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4210	X	1.2	3.9
Selenium		0.67	U	0.67	0.78

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V917**

Lab Sample ID: 280-84742-3
Client Matrix: Solid
% Moisture: 0.0

Date Sampled: 06/16/2016 1115
Date Received: 06/21/2016 0935

6010B Metals (ICP)

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-331065	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-330796	Lab File ID:	304SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.199 g
Analysis Date:	06/23/2016 1015			Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		0.41		0.0013	0.083

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-331158	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-330933	Lab File ID:	160623ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.52 g
Analysis Date:	06/23/2016 2008			Final Weight/Volume:	50 mL
Prep Date:	06/23/2016 1155				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0064	U	0.0064	0.020

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V918**

Lab Sample ID: 280-84742-4
Client Matrix: Solid
% Moisture: 1.4

Date Sampled: 06/16/2016 1157
Date Received: 06/21/2016 0935

6010B Metals (ICP)

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 0550
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331009
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25D062216.asc
Initial Weight/Volume: 1.487 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		0.26	U	0.26	0.41
Arsenic		1.2		0.45	0.68
Barium		54.7	X	0.052	0.34
Beryllium		0.15		0.023	0.14
Boron		3.7		0.67	1.4
Cadmium		0.15		0.028	0.14
Calcium		4060	X	9.6	34.1
Chromium		4.4	X	0.040	0.14
Iron		21200	X	2.6	3.4
Lithium		4.3		0.62	1.7
Manganese		216	X	0.068	0.68
Molybdenum		0.18	U	0.18	1.4
Nickel		6.0	X	0.084	2.7
Silicon		111		3.9	6.8
Strontium		20.2	X	0.025	0.68
Tin		0.62	U	0.62	6.8
Zinc		35.1	X	0.27	0.68
Zirconium		20.4	X	0.24	1.7

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 1603
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331153
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25C062316.asc
Initial Weight/Volume: 1.487 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Cobalt		6.5	X	0.068	0.68
Copper		11.4		0.15	0.68
Lead		1.7		0.18	0.34
Magnesium		3490		2.5	13.6
Potassium		490		28.0	205
Silver		0.11	U	0.11	0.14
Sodium		286		40.2	81.8
Vanadium		53.2		0.064	1.4

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/25/2016 2043
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331350
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25c062516.asc
Initial Weight/Volume: 1.487 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		3480	X	1.1	3.4
Selenium		0.59	U	0.59	0.68

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V918**

Lab Sample ID: 280-84742-4
Client Matrix: Solid
% Moisture: 1.4

Date Sampled: 06/16/2016 1157
Date Received: 06/21/2016 0935

6010B Metals (ICP)

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-331065	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-330796	Lab File ID:	305SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.167 g
Analysis Date:	06/23/2016 1019			Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		0.35		0.0014	0.087

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-331158	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-330933	Lab File ID:	160623ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.53 g
Analysis Date:	06/23/2016 2010			Final Weight/Volume:	50 mL
Prep Date:	06/23/2016 1155				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0063	U	0.0063	0.020

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V919**

Lab Sample ID: 280-84742-5
Client Matrix: Solid
% Moisture: 1.8

Date Sampled: 06/16/2016 1238
Date Received: 06/21/2016 0935

6010B Metals (ICP)

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 0552
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331009
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25D062216.asc
Initial Weight/Volume: 1.166 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		0.33	U	0.33	0.52
Arsenic		2.0		0.58	0.87
Barium		48.5	X	0.066	0.44
Beryllium		0.15	B	0.029	0.17
Boron		0.86	U	0.86	1.7
Cadmium		0.16	B	0.036	0.17
Calcium		4660	X	12.3	43.6
Chromium		6.3	X	0.051	0.17
Cobalt		5.4	X	0.087	0.87
Copper		11.6		0.19	0.87
Iron		20500	X	3.3	4.4
Lead		2.3		0.24	0.44
Lithium		5.3		0.79	2.2
Magnesium		3570		3.2	17.5
Manganese		221	X	0.087	0.87
Molybdenum		0.23	U	0.23	1.7
Nickel		8.6	X	0.11	3.5
Silicon		143		4.9	8.7
Silver		0.14	U	0.14	0.17
Strontium		24.5	X	0.031	0.87
Tin		0.80	U	0.80	8.7
Vanadium		48.9		0.082	1.7
Zinc		34.9	X	0.35	0.87
Zirconium		18.2	X	0.31	2.2

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 1605
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331153
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25C062316.asc
Initial Weight/Volume: 1.166 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Potassium		696		35.8	262
Sodium		233		51.5	105

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/25/2016 2046
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331350
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25c062516.asc
Initial Weight/Volume: 1.166 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4790	X	1.4	4.4
Selenium		0.75	U	0.75	0.87

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V919**

Lab Sample ID: 280-84742-5
Client Matrix: Solid
% Moisture: 1.8

Date Sampled: 06/16/2016 1238
Date Received: 06/21/2016 0935

6010B Metals (ICP)

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-331065	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-330796	Lab File ID:	308SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.158 g
Analysis Date:	06/23/2016 1030			Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		0.35		0.0014	0.088

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-331158	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-330933	Lab File ID:	160623ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.58 g
Analysis Date:	06/23/2016 2013			Final Weight/Volume:	50 mL
Prep Date:	06/23/2016 1155				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0058	U	0.0058	0.018

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V920**

Lab Sample ID: 280-84742-6
Client Matrix: Solid
% Moisture: 1.3

Date Sampled: 06/16/2016 1225
Date Received: 06/21/2016 0935

6010B Metals (ICP)

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 0605
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331009
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25D062216.asc
Initial Weight/Volume: 1.366 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		2.2		0.49	0.74
Barium		65.4	X	0.056	0.37
Beryllium		0.19		0.024	0.15
Boron		0.73	U	0.73	1.5
Cadmium		0.18		0.030	0.15
Calcium		5190	X	10.5	37.1
Chromium		7.0	X	0.043	0.15
Iron		25900	X	2.8	3.7
Lithium		5.1		0.68	1.9
Manganese		261	X	0.074	0.74
Molybdenum		0.21	B	0.19	1.5
Nickel		11.8	X	0.091	3.0
Silicon		193		4.2	7.4
Strontium		24.0	X	0.027	0.74
Zinc		42.4	X	0.30	0.74
Zirconium		24.8	X	0.26	1.9

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 1618
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331153
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25C062316.asc
Initial Weight/Volume: 1.366 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Potassium		722		30.4	223
Silver		0.12	U	0.12	0.15
Sodium		342		43.8	89.0

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/25/2016 2048
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331350
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25c062516.asc
Initial Weight/Volume: 1.366 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4490	X	1.1	3.7
Antimony		0.38	B	0.28	0.45
Cobalt		7.4	X	0.074	0.74
Copper		13.4		0.16	0.74
Lead		2.5		0.20	0.37
Magnesium		4180		2.7	14.8
Selenium		0.64	U	0.64	0.74
Tin		0.68	U	0.68	7.4
Vanadium		65.1		0.070	1.5

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V920**

Lab Sample ID: 280-84742-6
Client Matrix: Solid
% Moisture: 1.3

Date Sampled: 06/16/2016 1225
Date Received: 06/21/2016 0935

6010B Metals (ICP)

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-331065	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-330796	Lab File ID:	309SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.445 g
Analysis Date:	06/23/2016 1034			Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		0.35		0.0011	0.070

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-331158	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-330933	Lab File ID:	160623ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.57 g
Analysis Date:	06/23/2016 2015			Final Weight/Volume:	50 mL
Prep Date:	06/23/2016 1155				

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

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V921**

Lab Sample ID: 280-84742-7
Client Matrix: Solid
% Moisture: 0.5

Date Sampled: 06/16/2016 1215
Date Received: 06/21/2016 0935

6010B Metals (ICP)

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 0608
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331009
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25D062216.asc
Initial Weight/Volume: 1.471 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		10.4		0.45	0.68
Barium		48.9	X	0.052	0.34
Beryllium		0.18		0.023	0.14
Boron		0.67	U	0.67	1.4
Cadmium		0.14		0.028	0.14
Calcium		4720	X	9.6	34.2
Chromium		8.2	X	0.040	0.14
Cobalt		4.9	X	0.068	0.68
Copper		10.9		0.15	0.68
Iron		18500	X	2.6	3.4
Lead		3.2		0.18	0.34
Lithium		6.4		0.62	1.7
Magnesium		3360		2.5	13.7
Manganese		219	X	0.068	0.68
Molybdenum		0.61	B	0.18	1.4
Nickel		7.8	X	0.084	2.7
Silicon		226		3.9	6.8
Silver		0.11	U	0.11	0.14
Strontium		22.2	X	0.025	0.68
Tin		0.62	U	0.62	6.8
Vanadium		38.8		0.064	1.4
Zinc		32.3	X	0.27	0.68
Zirconium		14.5	X	0.24	1.7

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 1621
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331153
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25C062316.asc
Initial Weight/Volume: 1.471 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Potassium		845		28.0	205
Sodium		174		40.3	82.0

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/25/2016 2104
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331350
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25c062516.asc
Initial Weight/Volume: 1.471 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4750	X	1.1	3.4
Antimony		0.27	B	0.26	0.41
Selenium		0.59	U	0.59	0.68

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V921**

Lab Sample ID: 280-84742-7
Client Matrix: Solid
% Moisture: 0.5

Date Sampled: 06/16/2016 1215
Date Received: 06/21/2016 0935

6010B Metals (ICP)

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-331065	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-330796	Lab File ID:	310SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.106 g
Analysis Date:	06/23/2016 1038			Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		0.36		0.0014	0.091

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-331158	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-330933	Lab File ID:	160623ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.53 g
Analysis Date:	06/23/2016 2018			Final Weight/Volume:	50 mL
Prep Date:	06/23/2016 1155				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0063	U	0.0063	0.019

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V922

Lab Sample ID: 280-84742-8
Client Matrix: Solid
% Moisture: 25.1

Date Sampled: 06/16/2016 1257
Date Received: 06/21/2016 1735

6010B Metals (ICP)

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 0610
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331009
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25D062216.asc
Initial Weight/Volume: 1.180 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		2.0		0.75	1.1
Barium		93.2	X	0.086	0.57
Beryllium		0.24		0.037	0.23
Boron		3.2		1.1	2.3
Cadmium		0.21	B	0.046	0.23
Calcium		7050	X	16.0	56.6
Chromium		5.2	X	0.066	0.23
Cobalt		8.9	X	0.11	1.1
Copper		17.1		0.25	1.1
Iron		32800	X	4.3	5.7
Lead		3.1		0.31	0.57
Lithium		6.3		1.0	2.8
Magnesium		4400		4.2	22.6
Manganese		346	X	0.11	1.1
Molybdenum		0.29	U	0.29	2.3
Nickel		8.3	X	0.14	4.5
Silicon		207		6.4	11.3
Silver		0.18	U	0.18	0.23
Strontium		35.3	X	0.041	1.1
Tin		1.0	U	1.0	11.3
Vanadium		80.7		0.11	2.3
Zinc		54.6	X	0.45	1.1
Zirconium		34.9	X	0.40	2.8

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 1623
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331153
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25C062316.asc
Initial Weight/Volume: 1.180 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Potassium		909		46.4	339
Sodium		493		66.8	136

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/25/2016 2106
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331350
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25c062516.asc
Initial Weight/Volume: 1.180 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6260	X	1.8	5.7
Antimony		0.62	B	0.43	0.68
Selenium		0.97	U	0.97	1.1

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V922**

Lab Sample ID: 280-84742-8
Client Matrix: Solid
% Moisture: 25.1

Date Sampled: 06/16/2016 1257
Date Received: 06/21/2016 1735

6010B Metals (ICP)

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-331065	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-330796	Lab File ID:	311SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.137 g
Analysis Date:	06/23/2016 1042			Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		0.52		0.0018	0.12

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-331158	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-330933	Lab File ID:	160623ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.56 g
Analysis Date:	06/23/2016 2020			Final Weight/Volume:	50 mL
Prep Date:	06/23/2016 1155				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0079	U	0.0079	0.024

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V923

Lab Sample ID: 280-84742-9
Client Matrix: Solid
% Moisture: 1.3

Date Sampled: 06/16/2016 1305
Date Received: 06/21/2016 1735

6010B Metals (ICP)

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 0613
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331009
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25D062216.asc
Initial Weight/Volume: 1.355 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		1.8		0.49	0.75
Barium		71.5	X	0.057	0.37
Beryllium		0.17		0.025	0.15
Boron		1.6		0.73	1.5
Cadmium		0.21		0.031	0.15
Calcium		4420	X	10.5	37.4
Chromium		5.5	X	0.043	0.15
Cobalt		6.5	X	0.075	0.75
Copper		13.4		0.16	0.75
Iron		22700	X	2.8	3.7
Lead		2.5		0.20	0.37
Lithium		5.3		0.68	1.9
Magnesium		3520		2.8	15.0
Manganese		231	X	0.075	0.75
Molybdenum		0.19	U	0.19	1.5
Nickel		6.8	X	0.092	3.0
Silicon		129		4.2	7.5
Silver		0.12	U	0.12	0.15
Strontium		25.8	X	0.027	0.75
Tin		0.68	U	0.68	7.5
Vanadium		54.8		0.070	1.5
Zinc		39.9	X	0.30	0.75
Zirconium		21.7	X	0.26	1.9

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 1626
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331153
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25C062316.asc
Initial Weight/Volume: 1.355 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Potassium		606		30.7	224
Sodium		292		44.1	89.8

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/25/2016 2109
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331350
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25c062516.asc
Initial Weight/Volume: 1.355 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4230	X	1.2	3.7
Antimony		0.63		0.28	0.45
Selenium		0.64	U	0.64	0.75

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V923**

Lab Sample ID: 280-84742-9
Client Matrix: Solid
% Moisture: 1.3

Date Sampled: 06/16/2016 1305
Date Received: 06/21/2016 1735

6010B Metals (ICP)

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-331065	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-330796	Lab File ID:	312SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.493 g
Analysis Date:	06/23/2016 1045			Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		0.44		0.0011	0.068

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-331158	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-330933	Lab File ID:	160623ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.54 g
Analysis Date:	06/23/2016 2023			Final Weight/Volume:	50 mL
Prep Date:	06/23/2016 1155				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0062	U	0.0062	0.019

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V924

Lab Sample ID: 280-84742-10
Client Matrix: Solid
% Moisture: 3.7

Date Sampled: 06/16/2016 1030
Date Received: 06/21/2016 1735

6010B Metals (ICP)

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 0616
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331009
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25D062216.asc
Initial Weight/Volume: 1.231 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		2.5		0.56	0.84
Barium		61.9	X	0.064	0.42
Beryllium		0.22		0.028	0.17
Boron		0.83	U	0.83	1.7
Cadmium		0.19		0.035	0.17
Calcium		4400	X	11.9	42.2
Chromium		6.5	X	0.049	0.17
Cobalt		6.8	X	0.084	0.84
Copper		12.1		0.18	0.84
Iron		22900	X	3.2	4.2
Lead		4.3		0.23	0.42
Lithium		6.1		0.77	2.1
Magnesium		3700		3.1	16.9
Manganese		273	X	0.084	0.84
Molybdenum		0.22	U	0.22	1.7
Nickel		8.1	X	0.10	3.4
Silicon		206		4.8	8.4
Silver		0.13	U	0.13	0.17
Strontium		19.6	X	0.030	0.84
Tin		0.77	U	0.77	8.4
Vanadium		50.7		0.079	1.7
Zinc		39.6	X	0.34	0.84
Zirconium		22.1	X	0.30	2.1

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 1629
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331153
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25C062316.asc
Initial Weight/Volume: 1.231 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Potassium		977		34.6	253
Sodium		275		49.8	101

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/25/2016 2112
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331350
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25c062516.asc
Initial Weight/Volume: 1.231 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5840	X	1.3	4.2
Antimony		0.32	B	0.32	0.51
Selenium		0.73	U	0.73	0.84

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V924**

Lab Sample ID: 280-84742-10
Client Matrix: Solid
% Moisture: 3.7

Date Sampled: 06/16/2016 1030
Date Received: 06/21/2016 1735

6010B Metals (ICP)

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-331065	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-330796	Lab File ID:	313SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.343 g
Analysis Date:	06/23/2016 1049			Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		0.46		0.0012	0.077

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-331158	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-330933	Lab File ID:	160623ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.55 g
Analysis Date:	06/23/2016 2025			Final Weight/Volume:	50 mL
Prep Date:	06/23/2016 1155				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0080	B	0.0063	0.019

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V925**

Lab Sample ID: 280-84742-11
Client Matrix: Solid
% Moisture: 2.0

Date Sampled: 06/16/2016 1333
Date Received: 06/21/2016 1735

6010B Metals (ICP)

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 0618
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331009
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25D062216.asc
Initial Weight/Volume: 1.132 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		1.6		0.60	0.90
Barium		37.1	X	0.069	0.45
Beryllium		0.11	B	0.030	0.18
Boron		0.88	U	0.88	1.8
Cadmium		0.12	B	0.037	0.18
Calcium		3920	X	12.7	45.1
Chromium		4.6	X	0.052	0.18
Cobalt		4.8	X	0.090	0.90
Copper		9.0		0.20	0.90
Iron		17900	X	3.4	4.5
Lead		1.9		0.24	0.45
Lithium		3.8		0.82	2.3
Magnesium		2710		3.3	18.0
Manganese		196	X	0.090	0.90
Molybdenum		0.23	U	0.23	1.8
Nickel		5.7	X	0.11	3.6
Silicon		156		5.1	9.0
Silver		0.14	U	0.14	0.18
Strontium		15.7	X	0.032	0.90
Tin		0.82	U	0.82	9.0
Vanadium		44.3		0.085	1.8
Zinc		30.7	X	0.36	0.90
Zirconium		16.1	X	0.32	2.3

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 1631
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331153
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25C062316.asc
Initial Weight/Volume: 1.132 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Potassium		590		37.0	271
Sodium		208		53.2	108

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/25/2016 2114
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331350
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25c062516.asc
Initial Weight/Volume: 1.132 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		3880	X	1.4	4.5
Antimony		0.51	B	0.34	0.54
Selenium		0.78	U	0.78	0.90

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V925**

Lab Sample ID: 280-84742-11
Client Matrix: Solid
% Moisture: 2.0

Date Sampled: 06/16/2016 1333
Date Received: 06/21/2016 1735

6010B Metals (ICP)

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-331065	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-330796	Lab File ID:	314SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.207 g
Analysis Date:	06/23/2016 1053			Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		0.48		0.0013	0.085

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-331158	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-330933	Lab File ID:	160623ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.54 g
Analysis Date:	06/23/2016 2028			Final Weight/Volume:	50 mL
Prep Date:	06/23/2016 1155				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0063	U	0.0063	0.019

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: J1V926

Lab Sample ID: 280-84742-12
Client Matrix: Solid
% Moisture: 3.5

Date Sampled: 06/16/2016 1324
Date Received: 06/21/2016 1735

6010B Metals (ICP)

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 0621
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331009
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25D062216.asc
Initial Weight/Volume: 1.387 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		2.9		0.49	0.75
Barium		71.3	X	0.057	0.37
Beryllium		0.22		0.025	0.15
Boron		1.0	B	0.73	1.5
Cadmium		0.19		0.031	0.15
Calcium		5020	X	10.5	37.3
Chromium		9.7	X	0.043	0.15
Cobalt		5.5	X	0.075	0.75
Copper		13.0		0.16	0.75
Iron		21500	X	2.8	3.7
Lead		6.2		0.20	0.37
Lithium		7.3		0.68	1.9
Magnesium		4020		2.8	14.9
Manganese		271	X	0.075	0.75
Molybdenum		0.19	U	0.19	1.5
Nickel		10.0	X	0.092	3.0
Silicon		272		4.2	7.5
Strontium		24.1	X	0.027	0.75
Tin		0.68	U	0.68	7.5
Vanadium		46.9		0.070	1.5
Zinc		45.0	X	0.30	0.75
Zirconium		19.8	X	0.26	1.9

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 1634
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331153
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25C062316.asc
Initial Weight/Volume: 1.387 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Potassium		1100		30.6	224
Silver		0.12	U	0.12	0.15
Sodium		207		44.1	89.6

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/25/2016 2117
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331350
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25c062516.asc
Initial Weight/Volume: 1.387 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5960	X	1.2	3.7
Antimony		0.43	B	0.28	0.45
Selenium		0.64	U	0.64	0.75

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V926**

Lab Sample ID: 280-84742-12
Client Matrix: Solid
% Moisture: 3.5

Date Sampled: 06/16/2016 1324
Date Received: 06/21/2016 1735

6010B Metals (ICP)

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-331065	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-330796	Lab File ID:	315SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.176 g
Analysis Date:	06/23/2016 1056			Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		0.70		0.0014	0.088

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-331158	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-330933	Lab File ID:	160623ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.52 g
Analysis Date:	06/23/2016 2035			Final Weight/Volume:	50 mL
Prep Date:	06/23/2016 1155				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.023		0.0066	0.020

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V927**

Lab Sample ID: 280-84742-13
Client Matrix: Solid
% Moisture: 5.6

Date Sampled: 06/16/2016 1030
Date Received: 06/21/2016 1735

6010B Metals (ICP)

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 0624
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331009
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25D062216.asc
Initial Weight/Volume: 1.185 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		3.5		0.59	0.89
Barium		66.9	X	0.068	0.45
Beryllium		0.24		0.029	0.18
Boron		0.88	U	0.88	1.8
Cadmium		0.20		0.037	0.18
Calcium		4690	X	12.6	44.7
Chromium		7.2	X	0.052	0.18
Cobalt		7.3	X	0.089	0.89
Copper		14.0		0.19	0.89
Iron		26200	X	3.4	4.5
Lead		5.0		0.24	0.45
Lithium		6.8		0.81	2.2
Magnesium		4260		3.3	17.9
Manganese		313	X	0.089	0.89
Molybdenum		0.23	U	0.23	1.8
Nickel		8.9	X	0.11	3.6
Silicon		257		5.1	8.9
Silver		0.14	U	0.14	0.18
Strontium		21.2	X	0.032	0.89
Tin		0.82	U	0.82	8.9
Vanadium		57.5		0.084	1.8
Zinc		44.4	X	0.36	0.89
Zirconium		24.0	X	0.32	2.2

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/23/2016 1637
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331153
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25C062316.asc
Initial Weight/Volume: 1.185 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Potassium		1020		36.6	268
Sodium		280		52.7	107

Analysis Method: 6010B
Prep Method: 3050B
Dilution: 1.0
Analysis Date: 06/25/2016 2119
Prep Date: 06/22/2016 1430

Analysis Batch: 280-331350
Prep Batch: 280-330795

Instrument ID: MT_025
Lab File ID: 25c062516.asc
Initial Weight/Volume: 1.185 g
Final Weight/Volume: 100 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6160	X	1.4	4.5
Antimony		0.60		0.34	0.54
Selenium		0.77	U	0.77	0.89

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Client Sample ID: **J1V927**

Lab Sample ID: 280-84742-13
Client Matrix: Solid
% Moisture: 5.6

Date Sampled: 06/16/2016 1030
Date Received: 06/21/2016 1735

6010B Metals (ICP)

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-331065	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-330796	Lab File ID:	316SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.133 g
Analysis Date:	06/23/2016 1100			Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		0.46		0.0015	0.093

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-331158	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-330933	Lab File ID:	160623ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.55 g
Analysis Date:	06/23/2016 2038			Final Weight/Volume:	50 mL
Prep Date:	06/23/2016 1155				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0077	B	0.0064	0.020

General Chemistry

Client Sample ID: **J1V915**

Lab Sample ID: 280-84742-1
Client Matrix: Solid

Date Sampled: 06/16/2016 1102
Date Received: 06/21/2016 0935

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH adj. to 25 deg C-Soluble	9.17		SU	0.100	0.100	1.0	9045C
Analysis Batch: 280-331100	Analysis Date: 06/23/2016 1541						DryWt Corrected: N
Percent Moisture	1.4		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-330890	Analysis Date: 06/22/2016 1110						DryWt Corrected: N

General Chemistry

Client Sample ID: J1V916

Lab Sample ID: 280-84742-2
Client Matrix: Solid

Date Sampled: 06/16/2016 1145
Date Received: 06/21/2016 0935

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH adj. to 25 deg C-Soluble	8.45		SU	0.100	0.100	1.0	9045C
Analysis Batch: 280-331100	Analysis Date: 06/23/2016 1541						DryWt Corrected: N
Percent Moisture	1.5		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-330890	Analysis Date: 06/22/2016 1110						DryWt Corrected: N

General Chemistry

Client Sample ID: J1V917

Lab Sample ID: 280-84742-3
Client Matrix: Solid

Date Sampled: 06/16/2016 1115
Date Received: 06/21/2016 0935

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH adj. to 25 deg C-Soluble	9.18		SU	0.100	0.100	1.0	9045C
Analysis Batch: 280-331100	Analysis Date: 06/23/2016 1541					DryWt Corrected: N	
Percent Moisture	0.10	U	%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-330890	Analysis Date: 06/22/2016 1110					DryWt Corrected: N	

General Chemistry

Client Sample ID: J1V918

Lab Sample ID: 280-84742-4
Client Matrix: Solid

Date Sampled: 06/16/2016 1157
Date Received: 06/21/2016 0935

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH adj. to 25 deg C-Soluble	8.69		SU	0.100	0.100	1.0	9045C
Analysis Batch: 280-331100	Analysis Date: 06/23/2016 1541						DryWt Corrected: N
Percent Moisture	1.4		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-330890	Analysis Date: 06/22/2016 1110						DryWt Corrected: N

General Chemistry

Client Sample ID: J1V919

Lab Sample ID: 280-84742-5
Client Matrix: Solid

Date Sampled: 06/16/2016 1238
Date Received: 06/21/2016 0935

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH adj. to 25 deg C-Soluble	9.30		SU	0.100	0.100	1.0	9045C
Analysis Batch: 280-331100	Analysis Date: 06/23/2016 1541						DryWt Corrected: N
Percent Moisture	1.8		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-330890	Analysis Date: 06/22/2016 1110						DryWt Corrected: N

General Chemistry

Client Sample ID: J1V920

Lab Sample ID: 280-84742-6
Client Matrix: Solid

Date Sampled: 06/16/2016 1225
Date Received: 06/21/2016 0935

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH adj. to 25 deg C-Soluble	9.34		SU	0.100	0.100	1.0	9045C
Analysis Batch: 280-331100	Analysis Date: 06/23/2016 1541						DryWt Corrected: N
Percent Moisture	1.3		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-330890	Analysis Date: 06/22/2016 1110						DryWt Corrected: N

General Chemistry

Client Sample ID: J1V921

Lab Sample ID: 280-84742-7
Client Matrix: Solid

Date Sampled: 06/16/2016 1215
Date Received: 06/21/2016 0935

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH adj. to 25 deg C-Soluble	8.87		SU	0.100	0.100	1.0	9045C
Analysis Batch: 280-331100	Analysis Date: 06/23/2016 1541						DryWt Corrected: N
Percent Moisture	0.52		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-330890	Analysis Date: 06/22/2016 1110						DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

General Chemistry

Client Sample ID: J1V922

Lab Sample ID: 280-84742-8
Client Matrix: Solid

Date Sampled: 06/16/2016 1257
Date Received: 06/21/2016 1735

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH adj. to 25 deg C-Soluble	8.84		SU	0.100	0.100	1.0	9045C
Analysis Batch: 280-331100	Analysis Date: 06/23/2016 1541						DryWt Corrected: N
Percent Moisture	25.1		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-330890	Analysis Date: 06/22/2016 1110						DryWt Corrected: N

General Chemistry

Client Sample ID: J1V923

Lab Sample ID: 280-84742-9
Client Matrix: Solid

Date Sampled: 06/16/2016 1305
Date Received: 06/21/2016 1735

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH adj. to 25 deg C-Soluble	9.07		SU	0.100	0.100	1.0	9045C
Analysis Batch: 280-331100	Analysis Date: 06/23/2016 1541					DryWt Corrected: N	
Percent Moisture	1.3		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-330890	Analysis Date: 06/22/2016 1110					DryWt Corrected: N	

General Chemistry

Client Sample ID: J1V924

Lab Sample ID: 280-84742-10
Client Matrix: Solid

Date Sampled: 06/16/2016 1030
Date Received: 06/21/2016 1735

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH adj. to 25 deg C-Soluble	8.51		SU	0.100	0.100	1.0	9045C
Analysis Batch: 280-331100	Analysis Date: 06/23/2016 1541						DryWt Corrected: N
Percent Moisture	3.7		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-330890	Analysis Date: 06/22/2016 1110						DryWt Corrected: N

General Chemistry

Client Sample ID: J1V925

Lab Sample ID: 280-84742-11
Client Matrix: Solid

Date Sampled: 06/16/2016 1333
Date Received: 06/21/2016 1735

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH adj. to 25 deg C-Soluble	9.20		SU	0.100	0.100	1.0	9045C
Analysis Batch: 280-331100	Analysis Date: 06/23/2016 1541						DryWt Corrected: N
Percent Moisture	2.0		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-330890	Analysis Date: 06/22/2016 1110						DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

General Chemistry

Client Sample ID: **J1V926**

Lab Sample ID: 280-84742-12
Client Matrix: Solid

Date Sampled: 06/16/2016 1324
Date Received: 06/21/2016 1735

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH adj. to 25 deg C-Soluble	8.81		SU	0.100	0.100	1.0	9045C
Analysis Batch: 280-331100	Analysis Date: 06/23/2016 1541						DryWt Corrected: N
Percent Moisture	3.5		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-330890	Analysis Date: 06/22/2016 1110						DryWt Corrected: N

General Chemistry

Client Sample ID: J1V927

Lab Sample ID: 280-84742-13
Client Matrix: Solid

Date Sampled: 06/16/2016 1030
Date Received: 06/21/2016 1735

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH adj. to 25 deg C-Soluble	8.62		SU	0.100	0.100	1.0	9045C
Analysis Batch: 280-331100	Analysis Date: 06/23/2016 1541						DryWt Corrected: N
Percent Moisture	5.6		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-330890	Analysis Date: 06/22/2016 1110						DryWt Corrected: N

QUALITY CONTROL RESULTS

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
280-84742-1	J1V915	75	77	74	78	94	59
280-84742-2	J1V916	79	83	81	82	97	60
280-84742-3	J1V917	81	82	79	82	100	59
280-84742-4	J1V918	73	74	72	74	96	55
280-84742-5	J1V919	75	80	78	80	92	57
280-84742-6	J1V920	76	76	76	78	92	60
280-84742-7	J1V921	73	76	73	76	93	64
280-84742-8	J1V922	78	79	78	78	96	62
280-84742-9	J1V923	81	83	82	82	99	60
280-84742-10	J1V924	77	85	78	83	96	63
280-84742-11	J1V925	81	84	81	84	98	62
280-84742-12	J1V926	86	85	80	87	98	70
280-84742-13	J1V927	77	78	76	81	94	67
MB 280-331025/1-A		82	83	79	83	93	60
LCS 280-331025/2-A		80	83	82	82	92	74
280-84742-3 MS	J1V917 MS	73	75	78	74	90	71
280-84742-3 MSD	J1V917 MSD	81	83	83	82	94	74

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl	33-135
2FP = 2-Fluorophenol	39-135
NBZ = Nitrobenzene-d5	32-135
PHL = Phenol-d5	39-135
TPH = Terphenyl-d14	30-135
TBP = 2,4,6-Tribromophenol	24-135

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Surrogate Recovery Report

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCB1 %Rec	TCX1 %Rec
280-84742-1	J1V915	101	98
280-84742-2	J1V916	99	103
280-84742-3	J1V917	103	98
280-84742-4	J1V918	105	105
280-84742-5	J1V919	117	101
280-84742-6	J1V920	99	98
280-84742-7	J1V921	94	98
280-84742-8	J1V922	101	103
280-84742-9	J1V923	101	100
280-84742-10	J1V924	96	98
280-84742-11	J1V925	94	100
280-84742-12	J1V926	85	101
280-84742-13	J1V927	88	98
MB 280-330922/1-A		104	108
LCS 280-330922/2-A		105	107
280-84742-5 MS	J1V919 MS	104	100
280-84742-5 MSD	J1V919 MSD	98	103

Surrogate	Acceptance Limits
DCB = Decachlorobiphenyl	59-130
TCX = Tetrachloro-m-xylene	53-128

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Surrogate Recovery Report

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

Client Matrix: Solid

Lab Sample ID	Client Sample ID	OTPH %Rec
280-84742-1	J1V915	89
280-84742-2	J1V916	91
280-84742-3	J1V917	89
280-84742-4	J1V918	91
280-84742-5	J1V919	92
280-84742-6	J1V920	92
280-84742-7	J1V921	89
280-84742-8	J1V922	92
280-84742-9	J1V923	92
280-84742-10	J1V924	93
280-84742-11	J1V925	95
280-84742-12	J1V926	105
280-84742-13	J1V927	96
MB 280-331870/1-A		89
LCS 280-331870/2-A		96
LCSD 280-331870/3-A		94
280-84742-3 MS	J1V917 MS	96
280-84742-3 MSD	J1V917 MSD	95

Surrogate	Acceptance Limits
OTPH = o-Terphenyl	49-115

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Method Blank - Batch: 280-331025

Method: 8270C
Preparation: 3550C

Lab Sample ID:	MB 280-331025/1-A	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Client Matrix:	Solid	Prep Batch:	280-331025	Lab File ID:	B2-16116.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/28/2016 1632	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acenaphthene	10	U	10	330
Acenaphthylene	17	U	17	330
Anthracene	17	U	17	330
Benzo[a]anthracene	20	U	20	330
Benzo[a]pyrene	20	U	20	330
Benzo[b]fluoranthene	26	U	26	330
Benzo[ghi]perylene	16	U	16	330
Benzo[k]fluoranthene	40	U	40	330
Bis(2-chloroethoxy)methane	23	U	23	330
Bis(2-chloroethyl)ether	17	U	17	330
bis (2-chloroisopropyl) ether	23	U	23	330
Bis(2-ethylhexyl) phthalate	46	U	46	330
4-Bromophenyl phenyl ether	19	U	19	330
Butyl benzyl phthalate	43	U	43	330
Carbazole	36	U	36	330
4-Chloroaniline	82	U	82	330
4-Chloro-3-methylphenol	66	U	66	330
2-Chloronaphthalene	10	U	10	330
2-Chlorophenol	21	U	21	330
4-Chlorophenyl phenyl ether	21	U	21	330
Chrysene	27	U	27	330
Dibenz(a,h)anthracene	19	U	19	330
Dibenzofuran	20	U	20	330
1,2-Dichlorobenzene	22	U	22	330
1,3-Dichlorobenzene	12	U	12	330
1,4-Dichlorobenzene	14	U	14	330
3,3'-Dichlorobenzidine	90	U	90	660
2,4-Dichlorophenol	10	U	10	330
Diethyl phthalate	26	U	26	330
2,4-Dimethylphenol	66	U	66	330
Dimethyl phthalate	23	U	23	330
Di-n-butyl phthalate	29	U	29	330
4,6-Dinitro-2-methylphenol	330	U	330	660
2,4-Dinitrophenol	330	U	330	830
2,4-Dinitrotoluene	66	U	66	330
2,6-Dinitrotoluene	28	U	28	330
Di-n-octyl phthalate	14	U	14	330
Fluoranthene	36	U	36	330
Fluorene	18	U	18	330
Hexachlorobenzene	29	U	29	330
Hexachlorobutadiene	10	U	10	330
Hexachlorocyclopentadiene	50	U	50	330
Hexachloroethane	21	U	21	330
Indeno[1,2,3-cd]pyrene	22	U	22	330
Isophorone	17	U	17	330

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Method Blank - Batch: 280-331025

Method: 8270C
Preparation: 3550C

Lab Sample ID:	MB 280-331025/1-A	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Client Matrix:	Solid	Prep Batch:	280-331025	Lab File ID:	B2-16116.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/28/2016 1632	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
2-Methylnaphthalene	19	U	19	330
2-Methylphenol	13	U	13	330
3 & 4 Methylphenol	33	U	33	330
Naphthalene	31	U	31	330
2-Nitroaniline	50	U	50	330
3-Nitroaniline	73	U	73	330
4-Nitroaniline	73	U	73	330
Nitrobenzene	22	U	22	330
2-Nitrophenol	10	U	10	330
4-Nitrophenol	97	U	97	660
N-Nitrosodi-n-propylamine	31	U	31	330
N-Nitrosodiphenylamine	21	U	21	330
Pentachlorophenol	330	U	330	660
Phenanthrene	17	U	17	330
Phenol	18	U	18	330
Pyrene	12	U	12	330
1,2,4-Trichlorobenzene	28	U	28	330
2,4,5-Trichlorophenol	10	U	10	330
2,4,6-Trichlorophenol	10	U	10	330
Tributyl phosphate	58	U	58	1600

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	82	33 - 135
2-Fluorophenol	83	39 - 135
Nitrobenzene-d5	79	32 - 135
Phenol-d5	83	39 - 135
Terphenyl-d14	93	30 - 135
2,4,6-Tribromophenol	60	24 - 135

Method Blank TICs- Batch: 280-331025

Cas Number	Analyte	RT	Est. Result (ug/	Qual
	Unknown	1.70	865	N J
	Unknown	1.88	311	N J
	Unknown	3.28	3700	N J

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Lab Control Sample - Batch: 280-331025

Method: 8270C
Preparation: 3550C

Lab Sample ID:	LCS 280-331025/2-A	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Client Matrix:	Solid	Prep Batch:	280-331025	Lab File ID:	B2-16117.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/28/2016 1701	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	2670	2160	81	55 - 135	
Acenaphthylene	2670	2110	79	57 - 135	
Anthracene	2670	2370	89	56 - 135	
Benzo[a]anthracene	2670	2310	87	54 - 135	
Benzo[a]pyrene	2670	2320	87	54 - 135	
Benzo[b]fluoranthene	2670	2410	91	54 - 135	
Benzo[ghi]perylene	2670	2320	87	55 - 135	
Benzo[k]fluoranthene	2670	2460	92	54 - 135	
Bis(2-chloroethoxy)methane	2670	2080	78	47 - 135	
Bis(2-chloroethyl)ether	2670	2130	80	42 - 135	
bis (2-chloroisopropyl) ether	2670	2480	93	36 - 135	
Bis(2-ethylhexyl) phthalate	2670	2340	88	49 - 135	
4-Bromophenyl phenyl ether	2670	2200	82	57 - 135	
Butyl benzyl phthalate	2670	2460	92	49 - 135	
Carbazole	2670	2410	90	56 - 135	
4-Chloroaniline	2670	1590	60	28 - 135	
4-Chloro-3-methylphenol	2670	2410	90	55 - 135	
2-Chloronaphthalene	2670	2040	76	53 - 135	
2-Chlorophenol	2670	2100	79	47 - 135	
4-Chlorophenyl phenyl ether	2670	2090	78	57 - 135	
Chrysene	2670	2350	88	55 - 135	
Dibenz(a,h)anthracene	2670	2360	88	50 - 135	
Dibenzofuran	2670	2180	82	57 - 135	
1,2-Dichlorobenzene	2670	1990	74	48 - 135	
1,3-Dichlorobenzene	2670	1950	73	47 - 135	
1,4-Dichlorobenzene	2670	1960	74	47 - 135	
3,3'-Dichlorobenzidine	2670	1590	60	30 - 135	
2,4-Dichlorophenol	2670	2020	76	54 - 135	
Diethyl phthalate	2670	2460	92	57 - 135	
2,4-Dimethylphenol	2670	2240	84	51 - 135	
Dimethyl phthalate	2670	2290	86	56 - 135	
Di-n-butyl phthalate	2670	2420	91	53 - 135	
4,6-Dinitro-2-methylphenol	5330	3990	75	50 - 135	
2,4-Dinitrophenol	5330	2900	54	39 - 135	
2,4-Dinitrotoluene	2670	2360	89	59 - 135	
2,6-Dinitrotoluene	2670	2240	84	58 - 135	
Di-n-octyl phthalate	2670	2230	84	46 - 135	
Fluoranthene	2670	2310	87	57 - 135	
Fluorene	2670	2240	84	57 - 135	
Hexachlorobenzene	2670	2130	80	57 - 135	
Hexachlorobutadiene	2670	1930	72	47 - 135	
Hexachlorocyclopentadiene	2670	1530	57	35 - 135	
Hexachloroethane	2670	1940	73	45 - 135	
Indeno[1,2,3-cd]pyrene	2670	2120	79	50 - 135	
Isophorone	2670	2130	80	49 - 135	
2-Methylnaphthalene	2670	2100	79	55 - 135	

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Lab Control Sample - Batch: 280-331025

Method: 8270C
Preparation: 3550C

Lab Sample ID:	LCS 280-331025/2-A	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Client Matrix:	Solid	Prep Batch:	280-331025	Lab File ID:	B2-16117.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/28/2016 1701	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
2-Methylphenol	2670	2170	81	47 - 135	
3 & 4 Methylphenol	2670	2220	83	47 - 135	
Naphthalene	2670	2090	78	50 - 135	
2-Nitroaniline	2670	2560	96	47 - 135	
3-Nitroaniline	2670	2000	75	39 - 135	
4-Nitroaniline	2670	2200	83	50 - 135	
Nitrobenzene	2670	2300	86	45 - 135	
2-Nitrophenol	2670	2000	75	48 - 135	
4-Nitrophenol	5330	5610	105	52 - 135	
N-Nitrosodi-n-propylamine	2670	2290	86	42 - 135	
N-Nitrosodiphenylamine	2670	2380	89	50 - 135	
Pentachlorophenol	5330	3520	66	37 - 135	
Phenanthrene	2670	2360	89	57 - 135	
Phenol	2670	2230	83	45 - 135	
Pyrene	2670	2460	92	55 - 135	
1,2,4-Trichlorobenzene	2670	1900	71	49 - 135	
2,4,5-Trichlorophenol	2670	2150	81	55 - 135	
2,4,6-Trichlorophenol	2670	2070	78	55 - 135	
Tributyl phosphate	1330	1270	95	30 - 150	J

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	80	33 - 135
2-Fluorophenol	83	39 - 135
Nitrobenzene-d5	82	32 - 135
Phenol-d5	82	39 - 135
Terphenyl-d14	92	30 - 135
2,4,6-Tribromophenol	74	24 - 135

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-331025

Method: 8270C
Preparation: 3550C

MS Lab Sample ID:	280-84742-3	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Client Matrix:	Solid	Prep Batch:	280-331025	Lab File ID:	B2-16121.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	32.5 g
Analysis Date:	06/28/2016 1856			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-84742-3	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Client Matrix:	Solid	Prep Batch:	280-331025	Lab File ID:	B2-16122.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.0 g
Analysis Date:	06/28/2016 1925			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	76	83	55 - 135	17	30		
Acenaphthylene	74	81	57 - 135	17	30		
Anthracene	84	89	56 - 135	14	30		
Benzo[a]anthracene	85	89	54 - 135	13	30		
Benzo[a]pyrene	85	90	54 - 135	14	30		
Benzo[b]fluoranthene	87	93	54 - 135	15	30		
Benzo[ghi]perylene	85	89	55 - 135	13	30		
Benzo[k]fluoranthene	90	96	54 - 135	14	30		
Bis(2-chloroethoxy)methane	73	78	47 - 135	14	30		
Bis(2-chloroethyl)ether	74	81	42 - 135	18	30		
bis (2-chloroisopropyl) ether	84	93	36 - 135	18	30		
Bis(2-ethylhexyl) phthalate	87	91	49 - 135	13	30		
4-Bromophenyl phenyl ether	75	82	57 - 135	17	30		
Butyl benzyl phthalate	90	95	49 - 135	13	30		
Carbazole	85	90	56 - 135	14	30		
4-Chloroaniline	55	60	28 - 135	17	30		
4-Chloro-3-methylphenol	85	88	55 - 135	12	30		
2-Chloronaphthalene	71	78	53 - 135	18	30		
2-Chlorophenol	70	78	47 - 135	19	30		
4-Chlorophenyl phenyl ether	76	82	57 - 135	16	30		
Chrysene	86	89	55 - 135	11	30		
Dibenz(a,h)anthracene	85	91	50 - 135	15	30		
Dibenzofuran	78	84	57 - 135	15	30		
1,2-Dichlorobenzene	68	74	48 - 135	16	30		
1,3-Dichlorobenzene	67	72	47 - 135	15	30		
1,4-Dichlorobenzene	68	73	47 - 135	15	30		
3,3'-Dichlorobenzidine	56	62	30 - 135	17	30		
2,4-Dichlorophenol	71	76	54 - 135	14	30		
Diethyl phthalate	89	94	57 - 135	14	30		
2,4-Dimethylphenol	76	81	51 - 135	14	30		
Dimethyl phthalate	83	87	56 - 135	13	30		
Di-n-butyl phthalate	88	93	53 - 135	14	30		
4,6-Dinitro-2-methylphenol	59	66	50 - 135	19	30		

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-331025

Method: 8270C
Preparation: 3550C

MS Lab Sample ID:	280-84742-3	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Client Matrix:	Solid	Prep Batch:	280-331025	Lab File ID:	B2-16121.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	32.5 g
Analysis Date:	06/28/2016 1856			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-84742-3	Analysis Batch:	280-331716	Instrument ID:	SMS_B2
Client Matrix:	Solid	Prep Batch:	280-331025	Lab File ID:	B2-16122.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.0 g
Analysis Date:	06/28/2016 1925			Final Weight/Volume:	1 mL
Prep Date:	06/23/2016 1242			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,4-Dinitrophenol	36	42	39 - 135	23	30	T	
2,4-Dinitrotoluene	87	91	59 - 135	13	30		
2,6-Dinitrotoluene	81	87	58 - 135	15	30		
Di-n-octyl phthalate	82	87	46 - 135	14	30		
Fluoranthene	82	87	57 - 135	14	30		
Fluorene	80	86	57 - 135	16	30		
Hexachlorobenzene	75	78	57 - 135	13	30		
Hexachlorobutadiene	68	72	47 - 135	14	30		
Hexachlorocyclopentadiene	52	60	35 - 135	22	30		
Hexachloroethane	67	72	45 - 135	16	30		
Indeno[1,2,3-cd]pyrene	75	79	50 - 135	14	30		
Isophorone	75	79	49 - 135	14	30		
2-Methylnaphthalene	74	78	55 - 135	13	30		
2-Methylphenol	74	81	47 - 135	17	30		
3 & 4 Methylphenol	73	83	47 - 135	21	30		
Naphthalene	73	76	50 - 135	12	30		
2-Nitroaniline	92	100	47 - 135	16	30		
3-Nitroaniline	74	80	39 - 135	15	30		
4-Nitroaniline	79	83	50 - 135	13	30		
Nitrobenzene	80	84	45 - 135	13	30		
2-Nitrophenol	70	75	48 - 135	15	30		
4-Nitrophenol	102	108	52 - 135	13	30		
N-Nitrosodi-n-propylamine	78	86	42 - 135	18	30		
N-Nitrosodiphenylamine	83	92	50 - 135	18	30		
Pentachlorophenol	58	61	37 - 135	13	30		
Phenanthrene	84	90	57 - 135	14	30		
Phenol	76	82	45 - 135	16	30		
Pyrene	89	95	55 - 135	14	30		
1,2,4-Trichlorobenzene	68	71	49 - 135	12	30		
2,4,5-Trichlorophenol	76	82	55 - 135	16	30		
2,4,6-Trichlorophenol	72	80	55 - 135	20	30		
Tributyl phosphate	93	102	30 - 150	18	50	J	J

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl	73	81	33 - 135
2-Fluorophenol	75	83	39 - 135
Nitrobenzene-d5	78	83	32 - 135
Phenol-d5	74	82	39 - 135
Terphenyl-d14	90	94	30 - 135
2,4,6-Tribromophenol	71	74	24 - 135

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-331025

Method: 8270C
Preparation: 3550C

MS Lab Sample ID:	280-84742-3	Units:	ug/Kg	MSD Lab Sample ID:	280-84742-3
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/28/2016 1856			Analysis Date:	06/28/2016 1925
Prep Date:	06/23/2016 1242			Prep Date:	06/23/2016 1242
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual
Acenaphthene	9.7	U	2460	2670	1870		2210
Acenaphthylene	16	U	2460	2670	1810		2160
Anthracene	16	U	2460	2670	2060		2380
Benzo[a]anthracene	19	U	2460	2670	2080		2370
Benzo[a]pyrene	19	U	2460	2670	2080		2390
Benzo[b]fluoranthene	25	U	2460	2670	2140		2480
Benzo[ghi]perylene	15	U	2460	2670	2090		2390
Benzo[k]fluoranthene	38	U	2460	2670	2220		2550
Bis(2-chloroethoxy)methane	22	U	2460	2670	1800		2080
Bis(2-chloroethyl)ether	16	U	2460	2670	1820		2170
bis (2-chloroisopropyl) ether	22	U	2460	2670	2070		2470
Bis(2-ethylhexyl) phthalate	43	U	2460	2670	2150		2440
4-Bromophenyl phenyl ether	18	U	2460	2670	1850		2200
Butyl benzyl phthalate	40	U	2460	2670	2220		2540
Carbazole	34	U	2460	2670	2090		2410
4-Chloroaniline	77	U	2460	2670	1350		1590
4-Chloro-3-methylphenol	62	U	2460	2670	2090		2360
2-Chloronaphthalene	9.4	U	2460	2670	1750		2090
2-Chlorophenol	20	U	2460	2670	1720		2080
4-Chlorophenyl phenyl ether	20	U	2460	2670	1880		2190
Chrysene	25	U	2460	2670	2120		2380
Dibenz(a,h)anthracene	18	U	2460	2670	2100		2420
Dibenzofuran	19	U	2460	2670	1910		2230
1,2-Dichlorobenzene	21	U	2460	2670	1680		1980
1,3-Dichlorobenzene	11	U	2460	2670	1650		1920
1,4-Dichlorobenzene	13	U	2460	2670	1670		1950
3,3'-Dichlorobenzidine	84	U	2460	2670	1380		1640
2,4-Dichlorophenol	9.4	U	2460	2670	1750		2020
Diethyl phthalate	24	U	2460	2670	2180		2500
2,4-Dimethylphenol	62	U	2460	2670	1870		2150
Dimethyl phthalate	22	U	2460	2670	2050		2330
Di-n-butyl phthalate	27	U	2460	2670	2160		2480
4,6-Dinitro-2-methylphenol	310	U	4920	5330	2880		3500
2,4-Dinitrophenol	310	U	4920	5330	1780	T	2250
2,4-Dinitrotoluene	62	U	2460	2670	2140		2430
2,6-Dinitrotoluene	26	U	2460	2670	2000		2320
Di-n-octyl phthalate	14	U	2460	2670	2010		2310
Fluoranthene	34	U	2460	2670	2030		2320
Fluorene	17	U	2460	2670	1970		2300
Hexachlorobenzene	27	U	2460	2670	1840		2090
Hexachlorobutadiene	9.4	U	2460	2670	1680		1930
Hexachlorocyclopentadiene	47	U	2460	2670	1270		1600
Hexachloroethane	20	U	2460	2670	1650		1930

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-331025

Method: 8270C
Preparation: 3550C

MS Lab Sample ID:	280-84742-3	Units:	ug/Kg	MSD Lab Sample ID:	280-84742-3
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/28/2016 1856			Analysis Date:	06/28/2016 1925
Prep Date:	06/23/2016 1242			Prep Date:	06/23/2016 1242
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Indeno[1,2,3-cd]pyrene	21	U	2460	2670	1840		2110	
Isophorone	16	U	2460	2670	1840		2110	
2-Methylnaphthalene	18	U	2460	2670	1810		2070	
2-Methylphenol	12	U	2460	2670	1830		2170	
3 & 4 Methylphenol	31	U	2460	2670	1800		2210	
Naphthalene	29	U	2460	2670	1800		2030	
2-Nitroaniline	47	U	2460	2670	2260		2660	
3-Nitroaniline	68	U	2460	2670	1830		2130	
4-Nitroaniline	68	U	2460	2670	1950		2210	
Nitrobenzene	21	U	2460	2670	1970		2240	
2-Nitrophenol	9.4	U	2460	2670	1730		2000	
4-Nitrophenol	91	U	4920	5330	5010		5740	
N-Nitrosodi-n-propylamine	29	U	2460	2670	1910		2280	
N-Nitrosodiphenylamine	20	U	2460	2670	2050		2450	
Pentachlorophenol	310	U	4920	5330	2850		3240	
Phenanthrene	16	U	2460	2670	2080		2400	
Phenol	17	U	2460	2670	1860		2190	
Pyrene	11	U	2460	2670	2200		2540	
1,2,4-Trichlorobenzene	26	U	2460	2670	1680		1880	
2,4,5-Trichlorophenol	9.4	U	2460	2670	1860		2180	
2,4,6-Trichlorophenol	9.4	U	2460	2670	1760		2140	
Tributyl phosphate	54	U	1230	1330	1140	J	1370	J

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Method Blank - Batch: 280-330922

Method: 8082
Preparation: 3550C

Lab Sample ID:	MB 280-330922/1-A	Analysis Batch:	280-331407	Instrument ID:	SGC_P3
Client Matrix:	Solid	Prep Batch:	280-330922	Lab File ID:	06271618.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/27/2016 1457	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2016 1520			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	2.8	U	2.8	10
Aroclor 1221	8.0	U	8.0	17
Aroclor 1232	2.0	U	2.0	10
Aroclor 1242	4.7	U	4.7	10
Aroclor 1248	4.7	U	4.7	10
Aroclor 1254	2.6	U	2.6	10
Aroclor 1260	2.6	U	2.6	10

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	104	59 - 130
Tetrachloro-m-xylene	108	53 - 128

Lab Control Sample - Batch: 280-330922

Method: 8082
Preparation: 3550C

Lab Sample ID:	LCS 280-330922/2-A	Analysis Batch:	280-331407	Instrument ID:	SGC_P3
Client Matrix:	Solid	Prep Batch:	280-330922	Lab File ID:	06271619.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/27/2016 1519	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/22/2016 1520			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	33.3	37.3	112	54 - 132	
Aroclor 1260	33.3	38.6	116	62 - 129	

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	105	59 - 130
Tetrachloro-m-xylene	107	53 - 128

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-330922

Method: 8082
Preparation: 3550C

MS Lab Sample ID:	280-84742-5	Analysis Batch:	280-331407	Instrument ID:	SGC_P3
Client Matrix:	Solid	Prep Batch:	280-330922	Lab File ID:	06271625.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.4 g
Analysis Date:	06/27/2016 1729			Final Weight/Volume:	5 mL
Prep Date:	06/22/2016 1520			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	280-84742-5	Analysis Batch:	280-331407	Instrument ID:	SGC_P3
Client Matrix:	Solid	Prep Batch:	280-330922	Lab File ID:	06271626.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.0 g
Analysis Date:	06/27/2016 1751			Final Weight/Volume:	5 mL
Prep Date:	06/22/2016 1520			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aroclor 1016	111	112	54 - 132	2	26		
Aroclor 1260	116	112	62 - 129	2	26		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Decachlorobiphenyl	104	98	59 - 130
Tetrachloro-m-xylene	100	103	53 - 128

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-330922

Method: 8082
Preparation: 3550C

MS Lab Sample ID:	280-84742-5	Units:	ug/Kg	MSD Lab Sample ID:	280-84742-5
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/27/2016 1729			Analysis Date:	06/27/2016 1751
Prep Date:	06/22/2016 1520			Prep Date:	06/22/2016 1520
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Aroclor 1016	2.7	U	33.5	33.9	37.3	37.9
Aroclor 1260	2.6	U	33.5	33.9	38.7	38.1

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Method Blank - Batch: 280-331870

Method: NWTPH-Dx
Preparation: 3550C

Lab Sample ID:	MB 280-331870/1-A	Analysis Batch:	280-332038	Instrument ID:	SGC_U2a
Client Matrix:	Solid	Prep Batch:	280-331870	Lab File ID:	005F0301.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/30/2016 0943	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	06/29/2016 1655			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
C10-C36	1760	J	1000	4000
C10-C28	726	J	680	4000

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	89	49 - 115

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-331870

Method: NWTPH-Dx
Preparation: 3550C

LCS Lab Sample ID:	LCS 280-331870/2-A	Analysis Batch:	280-332038	Instrument ID:	SGC_U2a
Client Matrix:	Solid	Prep Batch:	280-331870	Lab File ID:	006F0401.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/30/2016 1007	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	06/29/2016 1655			Injection Volume:	1 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-331870/3-A	Analysis Batch:	280-332038	Instrument ID:	SGC_U2a
Client Matrix:	Solid	Prep Batch:	280-331870	Lab File ID:	007F0501.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 g
Analysis Date:	06/30/2016 1032	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	06/29/2016 1655			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
C10-C36	94	89	57 - 115	6	23		
C10-C28	94	89	53 - 115	6	23		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
o-Terphenyl	96	94	49 - 115

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-331870

Method: NWTPH-Dx
Preparation: 3550C

LCS Lab Sample ID:	LCS 280-331870/2-A	Units: ug/Kg		LCSD Lab Sample ID:	LCSD 280-331870/3-A
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/30/2016 1007			Analysis Date:	06/30/2016 1032
Prep Date:	06/29/2016 1655			Prep Date:	06/29/2016 1655
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
C10-C36	66700	66700	62800	59000
C10-C28	66700	66700	62500	59000

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-331870

Method: NWTPH-Dx
Preparation: 3550C

MS Lab Sample ID:	280-84742-3	Analysis Batch:	280-332038	Instrument ID:	SGC_U2a
Client Matrix:	Solid	Prep Batch:	280-331870	Lab File ID:	011F0901.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.4 g
Analysis Date:	06/30/2016 1210			Final Weight/Volume:	1 mL
Prep Date:	06/29/2016 1655			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-84742-3	Analysis Batch:	280-332038	Instrument ID:	SGC_U2a
Client Matrix:	Solid	Prep Batch:	280-331870	Lab File ID:	012F1001.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.7 g
Analysis Date:	06/30/2016 1235			Final Weight/Volume:	1 mL
Prep Date:	06/29/2016 1655			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
C10-C36	91	91	57 - 115	4	23		
C10-C28	91	92	56 - 115	3	23		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
o-Terphenyl	96	95	49 - 115

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-331870

Method: NWTPH-Dx
Preparation: 3550C

MS Lab Sample ID:	280-84742-3	Units: ug/Kg	
Client Matrix:	Solid		
Dilution:	1.0		
Analysis Date:	06/30/2016 1210		
Prep Date:	06/29/2016 1655		
Leach Date:	N/A		

MSD Lab Sample ID:	280-84742-3
Client Matrix:	Solid
Dilution:	1.0
Analysis Date:	06/30/2016 1235
Prep Date:	06/29/2016 1655
Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
C10-C36	1700	J	65800	63100	61300	58800
C10-C28	970	J	65800	63100	61100	59000

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Method Blank - Batch: 280-330795

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 280-330795/1-A	Analysis Batch:	280-331009	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-330795	Lab File ID:	25D062216.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	06/23/2016 0529	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Antimony	0.38	U	0.38	0.60
Arsenic	0.66	U	0.66	1.0
Barium	0.179	B	0.076	0.50
Beryllium	0.033	U	0.033	0.20
Boron	0.98	U	0.98	2.0
Cadmium	0.041	U	0.041	0.20
Calcium	18.39	B	14.1	50.0
Chromium	0.058	U	0.058	0.20
Cobalt	0.10	U	0.10	1.0
Copper	0.436	B	0.22	1.0
Iron	9.37		3.8	5.0
Lead	0.27	U	0.27	0.50
Lithium	0.91	U	0.91	2.5
Magnesium	6.12	B	3.7	20.0
Manganese	0.109	B	0.10	1.0
Molybdenum	0.26	U	0.26	2.0
Nickel	0.12	U	0.12	4.0
Silicon	5.7	U	5.7	10.0
Silver	0.16	U	0.16	0.20
Strontium	0.0680	B	0.036	1.0
Tin	1.21	B	0.91	10.0
Vanadium	0.094	U	0.094	2.0
Zinc	0.40	U	0.40	1.0
Zirconium	0.35	U	0.35	2.5

Method Blank - Batch: 280-330795

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 280-330795/1-A	Analysis Batch:	280-331153	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-330795	Lab File ID:	25C062316.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	06/23/2016 1542	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Potassium	41.0	U	41.0	300
Sodium	59.0	U	59.0	120

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Method Blank - Batch: 280-330795

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 280-330795/1-A	Analysis Batch:	280-331350	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-330795	Lab File ID:	25c062516.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	06/25/2016 1959	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	2.62	B	1.6	5.0
Selenium	0.86	U	0.86	1.0

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Lab Control Sample - Batch: 280-330795

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 280-330795/2-A	Analysis Batch:	280-331009	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-330795	Lab File ID:	25D062216.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	06/23/2016 0532	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	50.0	50.46	101	82 - 110	
Arsenic	100	107.0	107	85 - 110	
Barium	200	210.6	105	87 - 112	
Beryllium	5.00	5.19	104	84 - 114	
Boron	100	94.96	95	80 - 120	
Cadmium	10.0	9.78	98	87 - 110	
Calcium	5000	5008	100	82 - 114	
Chromium	20.0	20.53	103	84 - 114	
Cobalt	50.0	48.63	97	87 - 110	
Copper	25.0	25.35	101	88 - 110	
Iron	100	93.10	93	87 - 120	
Lead	50.0	50.54	101	86 - 110	
Lithium	100	106.5	107	90 - 110	
Magnesium	5000	4727	95	90 - 110	
Manganese	50.0	45.83	92	88 - 110	
Molybdenum	100	103.3	103	86 - 110	
Nickel	50.0	49.28	99	87 - 110	
Silicon	1000	148.7	15	10 - 70	
Silver	5.00	4.96	99	87 - 114	
Strontium	100	108.0	108	89 - 110	
Tin	200	199.1	100	84 - 110	
Vanadium	50.0	47.20	94	88 - 110	
Zinc	50.0	50.26	101	76 - 114	
Zirconium	50.0	49.89	100	90 - 110	

Lab Control Sample - Batch: 280-330795

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 280-330795/2-A	Analysis Batch:	280-331153	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-330795	Lab File ID:	25C062316.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	06/23/2016 1545	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Potassium	5000	5013	100	89 - 110	
Sodium	5000	5126	103	90 - 112	

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Lab Control Sample - Batch: 280-330795

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 280-330795/2-A	Analysis Batch:	280-331350	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-330795	Lab File ID:	25c062516.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	06/25/2016 2002	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	180.9	90	82 - 116	
Selenium	200	188.6	94	83 - 110	

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Matrix Spike - Batch: 280-330795

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-84742-2	Analysis Batch:	280-331009	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-330795	Lab File ID:	25D062216.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.254 g
Analysis Date:	06/23/2016 0542	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	2.2		81.0	68.82	82	76 - 111	
Barium	90.1		162	210.4	74	52 - 159	
Beryllium	0.22		4.05	3.57	83	72 - 105	
Boron	3.3		81.0	60.81	71	80 - 120	N
Cadmium	0.21		8.10	6.59	79	40 - 130	
Calcium	5160		4050	9419	105	43 - 165	
Chromium	3.8		16.2	17.75	86	70 - 200	
Iron	28300		81.0	24240	-5070	70 - 200	4
Lithium	4.0		81.0	73.01	85	84 - 109	
Manganese	277		40.5	284.5	19	40 - 200	4
Molybdenum	0.37	B	81.0	65.02	80	75 - 103	
Nickel	6.6		40.5	36.64	74	61 - 126	
Silicon	169		810	414.9	30	20 - 200	
Silver	0.14	U	4.05	3.10	77	75 - 141	
Strontium	38.4		81.0	104.4	82	81 - 125	
Zinc	48.1		40.5	71.46	58	70 - 200	N
Zirconium	27.3		40.5	58.50	77	75 - 125	

Matrix Spike - Batch: 280-330795

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-84742-2	Analysis Batch:	280-331153	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-330795	Lab File ID:	25C062316.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.254 g
Analysis Date:	06/23/2016 1555	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Cobalt	8.2		40.5	38.94	76	72 - 106	
Copper	13.7		20.2	27.65	69	37 - 187	
Lead	3.3		40.5	33.30	74	70 - 200	
Magnesium	3790		4050	6887	76	64 - 145	
Potassium	602		4050	3882	81	56 - 172	
Sodium	319		4050	4037	92	78 - 111	
Tin	0.81	U	162	110.0	68	77 - 126	N
Vanadium	76.3		40.5	101.9	63	50 - 169	

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Matrix Spike - Batch: 280-330795

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-84742-2	Analysis Batch:	280-331350	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-330795	Lab File ID:	25c062516.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.254 g
Analysis Date:	06/25/2016 2009	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	3940		162	4582	399	50 - 200	4
Antimony	0.74		40.5	23.13	55	20 - 200	
Selenium	0.76	U	162	120.0	74	76 - 104	N

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Duplicate - Batch: 280-330795

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-84742-2	Analysis Batch:	280-331009	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-330795	Lab File ID:	25D062216.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.274 g
Analysis Date:	06/23/2016 0545	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Arsenic	2.2		1.83	16	30	
Barium	90.1		75.02	18	30	
Beryllium	0.22		0.168	25	30	
Boron	3.3		2.46	28	30	
Cadmium	0.21		0.150	32	30	B M
Calcium	5160		4240	20	30	
Chromium	3.8		3.13	20	40	
Iron	28300		21940	25	40	
Lithium	4.0		3.61	11	30	
Manganese	277		211.0	27	40	
Molybdenum	0.37	B	0.529	35	30	B M
Nickel	6.6		5.24	23	30	
Silicon	169		125.4	29	40	
Silver	0.14	U	0.13	NC	30	U
Strontium	38.4		28.14	31	30	M
Zinc	48.1		38.28	23	40	
Zirconium	27.3		21.48	24	30	

Duplicate - Batch: 280-330795

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-84742-2	Analysis Batch:	280-331153	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-330795	Lab File ID:	25C062316.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.274 g
Analysis Date:	06/23/2016 1557	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Cobalt	8.2		6.69	21	30	
Copper	13.7		12.34	10	30	
Lead	3.3		2.66	21	40	
Magnesium	3790		3045	22	30	
Potassium	602		535.3	12	40	
Sodium	319		309.1	3	30	
Tin	0.81	U	0.73	NC	30	U
Vanadium	76.3		61.67	21	30	

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Duplicate - Batch: 280-330795

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-84742-2	Analysis Batch:	280-331350	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-330795	Lab File ID:	25c062516.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.274 g
Analysis Date:	06/25/2016 2012	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	3940		3805	3	40	
Antimony	0.74		0.431	52	40	B M
Selenium	0.76	U	0.69	NC	30	U

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Method Blank - Batch: 280-330796

Method: 6020
Preparation: 3050B

Lab Sample ID:	MB 280-330796/1-A	Analysis Batch:	280-331065	Instrument ID:	MT_078
Client Matrix:	Solid	Prep Batch:	280-330796	Lab File ID:	296_BLK.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	06/23/2016 0946	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Uranium	0.0111	B	0.0016	0.10

Lab Control Sample - Batch: 280-330796

Method: 6020
Preparation: 3050B

Lab Sample ID:	LCS 280-330796/2-A	Analysis Batch:	280-331065	Instrument ID:	MT_078
Client Matrix:	Solid	Prep Batch:	280-330796	Lab File ID:	297LCS.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	06/23/2016 0950	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Uranium	20.0	20.49	102	85 - 123	

Matrix Spike - Batch: 280-330796

Method: 6020
Preparation: 3050B

Lab Sample ID:	280-84742-2	Analysis Batch:	280-331065	Instrument ID:	MT_078
Client Matrix:	Solid	Prep Batch:	280-330796	Lab File ID:	302SMPL.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.079 g
Analysis Date:	06/23/2016 1008	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Uranium	0.49	18.8	20.00	104	85 - 123	

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Duplicate - Batch: 280-330796

Method: 6020
Preparation: 3050B

Lab Sample ID:	280-84742-2	Analysis Batch:	280-331065	Instrument ID:	MT_078
Client Matrix:	Solid	Prep Batch:	280-330796	Lab File ID:	301SMPL.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.401 g
Analysis Date:	06/23/2016 1004	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/22/2016 1430				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Uranium	0.49	0.380	25	20	M

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Method Blank - Batch: 280-330933

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 280-330933/1-A	Analysis Batch:	280-331158	Instrument ID:	MT_034
Client Matrix:	Solid	Prep Batch:	280-330933	Lab File ID:	160623ba.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.6 g
Analysis Date:	06/23/2016 1948	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	06/23/2016 1155				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.0055	U	0.0055	0.017

Lab Control Sample - Batch: 280-330933

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 280-330933/2-A	Analysis Batch:	280-331158	Instrument ID:	MT_034
Client Matrix:	Solid	Prep Batch:	280-330933	Lab File ID:	160623ba.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.6 g
Analysis Date:	06/23/2016 1950	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	06/23/2016 1155				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.417	0.446	107	87 - 111	

Matrix Spike - Batch: 280-330933

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-84742-1	Analysis Batch:	280-331158	Instrument ID:	MT_034
Client Matrix:	Solid	Prep Batch:	280-330933	Lab File ID:	160623ba.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.56 g
Analysis Date:	06/23/2016 1958	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	06/23/2016 1155				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.0066	U	0.453	0.491	108	87 - 111	

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Duplicate - Batch: 280-330933

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-84742-1	Analysis Batch:	280-331158	Instrument ID:	MT_034
Client Matrix:	Solid	Prep Batch:	280-330933	Lab File ID:	160623ba.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.50 g
Analysis Date:	06/23/2016 1955	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	06/23/2016 1155				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.0066	U	0.0067	NC	20	U

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-331100

Method: 9045C
Preparation: N/A

LCS Lab Sample ID:	LCS 280-331085/1-A	Analysis Batch:	280-331100	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	280-331085	Initial Weight/Volume:	1 mL
Analysis Date:	06/23/2016 1541	Units:	SU	Final Weight/Volume:	1 mL
Prep Date:	N/A				
Leach Date:	06/23/2016 1309				

LCSD Lab Sample ID:	LCSD 280-331085/2-A	Analysis Batch:	280-331100	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	280-331085	Initial Weight/Volume:	1 mL
Analysis Date:	06/23/2016 1541	Units:	SU	Final Weight/Volume:	1 mL
Prep Date:	N/A				
Leach Date:	06/23/2016 1309				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
pH adj. to 25 deg C-Soluble	100	100	97 - 103	0	5		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-331100

Method: 9045C
Preparation: N/A

LCS Lab Sample ID:	LCS 280-331085/1-A	Units:	SU
Client Matrix:	Solid		
Dilution:	1.0		
Analysis Date:	06/23/2016 1541		
Prep Date:	N/A		
Leach Date:	06/23/2016 1309		

LCSD Lab Sample ID:	LCSD 280-331085/2-A
Client Matrix:	Solid
Dilution:	1.0
Analysis Date:	06/23/2016 1541
Prep Date:	N/A
Leach Date:	06/23/2016 1309

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
pH adj. to 25 deg C-Soluble	7.00	7.00	7.030	7.010

Duplicate - Batch: 280-331100

Method: 9045C
Preparation: N/A

Lab Sample ID:	280-84742-2	Analysis Batch:	280-331100	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	280-331085	Initial Weight/Volume:	1 mL
Analysis Date:	06/23/2016 1541	Units:	SU	Final Weight/Volume:	1 mL
Prep Date:	N/A				
Leach Date:	06/23/2016 1309				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
pH adj. to 25 deg C-Soluble	8.45	8.430	0.2	5	

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

Duplicate - Batch: 280-330890

Method: D-2216
Preparation: N/A

Lab Sample ID:	280-84742-1	Analysis Batch:	280-330890	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	06/22/2016 1110	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	1.4	1.2	15	20	

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 280-331025					
LCS 280-331025/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-331025/1-A	Method Blank	T	Solid	3550C	
280-84742-1	J1V915	T	Solid	3550C	
280-84742-2	J1V916	T	Solid	3550C	
280-84742-3	J1V917	T	Solid	3550C	
280-84742-3MS	Matrix Spike	T	Solid	3550C	
280-84742-3MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-84742-4	J1V918	T	Solid	3550C	
280-84742-5	J1V919	T	Solid	3550C	
280-84742-6	J1V920	T	Solid	3550C	
280-84742-7	J1V921	T	Solid	3550C	
280-84742-8	J1V922	T	Solid	3550C	
280-84742-9	J1V923	T	Solid	3550C	
280-84742-10	J1V924	T	Solid	3550C	
280-84742-11	J1V925	T	Solid	3550C	
280-84742-12	J1V926	T	Solid	3550C	
280-84742-13	J1V927	T	Solid	3550C	
Analysis Batch:280-331716					
LCS 280-331025/2-A	Lab Control Sample	T	Solid	8270C	280-331025
MB 280-331025/1-A	Method Blank	T	Solid	8270C	280-331025
280-84742-1	J1V915	T	Solid	8270C	280-331025
280-84742-2	J1V916	T	Solid	8270C	280-331025
280-84742-3	J1V917	T	Solid	8270C	280-331025
280-84742-3MS	Matrix Spike	T	Solid	8270C	280-331025
280-84742-3MSD	Matrix Spike Duplicate	T	Solid	8270C	280-331025
280-84742-4	J1V918	T	Solid	8270C	280-331025
280-84742-5	J1V919	T	Solid	8270C	280-331025
280-84742-6	J1V920	T	Solid	8270C	280-331025
280-84742-7	J1V921	T	Solid	8270C	280-331025
280-84742-8	J1V922	T	Solid	8270C	280-331025
280-84742-9	J1V923	T	Solid	8270C	280-331025
280-84742-10	J1V924	T	Solid	8270C	280-331025
280-84742-11	J1V925	T	Solid	8270C	280-331025
280-84742-12	J1V926	T	Solid	8270C	280-331025
280-84742-13	J1V927	T	Solid	8270C	280-331025

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 280-330922					
LCS 280-330922/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-330922/1-A	Method Blank	T	Solid	3550C	
280-84742-1	J1V915	T	Solid	3550C	
280-84742-2	J1V916	T	Solid	3550C	
280-84742-3	J1V917	T	Solid	3550C	
280-84742-4	J1V918	T	Solid	3550C	
280-84742-5	J1V919	T	Solid	3550C	
280-84742-5MS	Matrix Spike	T	Solid	3550C	
280-84742-5MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-84742-6	J1V920	T	Solid	3550C	
280-84742-7	J1V921	T	Solid	3550C	
280-84742-8	J1V922	T	Solid	3550C	
280-84742-9	J1V923	T	Solid	3550C	
280-84742-10	J1V924	T	Solid	3550C	
280-84742-11	J1V925	T	Solid	3550C	
280-84742-12	J1V926	T	Solid	3550C	
280-84742-13	J1V927	T	Solid	3550C	
Analysis Batch:280-331407					
LCS 280-330922/2-A	Lab Control Sample	T	Solid	8082	280-330922
MB 280-330922/1-A	Method Blank	T	Solid	8082	280-330922
280-84742-1	J1V915	T	Solid	8082	280-330922
280-84742-2	J1V916	T	Solid	8082	280-330922
280-84742-3	J1V917	T	Solid	8082	280-330922
280-84742-4	J1V918	T	Solid	8082	280-330922
280-84742-5	J1V919	T	Solid	8082	280-330922
280-84742-5MS	Matrix Spike	T	Solid	8082	280-330922
280-84742-5MSD	Matrix Spike Duplicate	T	Solid	8082	280-330922
280-84742-6	J1V920	T	Solid	8082	280-330922
280-84742-7	J1V921	T	Solid	8082	280-330922
280-84742-8	J1V922	T	Solid	8082	280-330922
280-84742-9	J1V923	T	Solid	8082	280-330922
280-84742-10	J1V924	T	Solid	8082	280-330922
280-84742-11	J1V925	T	Solid	8082	280-330922
280-84742-12	J1V926	T	Solid	8082	280-330922
280-84742-13	J1V927	T	Solid	8082	280-330922

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 280-331870					
LCS 280-331870/2-A	Lab Control Sample	T	Solid	3550C	
LCSD 280-331870/3-A	Lab Control Sample Duplicate	T	Solid	3550C	
MB 280-331870/1-A	Method Blank	T	Solid	3550C	
280-84742-1	J1V915	T	Solid	3550C	
280-84742-2	J1V916	T	Solid	3550C	
280-84742-3	J1V917	T	Solid	3550C	
280-84742-3MS	Matrix Spike	T	Solid	3550C	
280-84742-3MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-84742-4	J1V918	T	Solid	3550C	
280-84742-5	J1V919	T	Solid	3550C	
280-84742-6	J1V920	T	Solid	3550C	
280-84742-7	J1V921	T	Solid	3550C	
280-84742-8	J1V922	T	Solid	3550C	
280-84742-9	J1V923	T	Solid	3550C	
280-84742-10	J1V924	T	Solid	3550C	
280-84742-11	J1V925	T	Solid	3550C	
280-84742-12	J1V926	T	Solid	3550C	
280-84742-13	J1V927	T	Solid	3550C	
Analysis Batch:280-332038					
LCS 280-331870/2-A	Lab Control Sample	T	Solid	NWTPH-Dx	280-331870
LCSD 280-331870/3-A	Lab Control Sample Duplicate	T	Solid	NWTPH-Dx	280-331870
MB 280-331870/1-A	Method Blank	T	Solid	NWTPH-Dx	280-331870
280-84742-1	J1V915	T	Solid	NWTPH-Dx	280-331870
280-84742-2	J1V916	T	Solid	NWTPH-Dx	280-331870
280-84742-3	J1V917	T	Solid	NWTPH-Dx	280-331870
280-84742-3MS	Matrix Spike	T	Solid	NWTPH-Dx	280-331870
280-84742-3MSD	Matrix Spike Duplicate	T	Solid	NWTPH-Dx	280-331870
280-84742-4	J1V918	T	Solid	NWTPH-Dx	280-331870
280-84742-5	J1V919	T	Solid	NWTPH-Dx	280-331870
280-84742-6	J1V920	T	Solid	NWTPH-Dx	280-331870
280-84742-7	J1V921	T	Solid	NWTPH-Dx	280-331870
280-84742-8	J1V922	T	Solid	NWTPH-Dx	280-331870
280-84742-9	J1V923	T	Solid	NWTPH-Dx	280-331870
280-84742-10	J1V924	T	Solid	NWTPH-Dx	280-331870
280-84742-11	J1V925	T	Solid	NWTPH-Dx	280-331870
280-84742-12	J1V926	T	Solid	NWTPH-Dx	280-331870
280-84742-13	J1V927	T	Solid	NWTPH-Dx	280-331870

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-330795					
LCS 280-330795/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-330795/1-A	Method Blank	T	Solid	3050B	
280-84742-1	J1V915	T	Solid	3050B	
280-84742-2	J1V916	T	Solid	3050B	
280-84742-2DU	Duplicate	T	Solid	3050B	
280-84742-2MS	Matrix Spike	T	Solid	3050B	
280-84742-3	J1V917	T	Solid	3050B	
280-84742-4	J1V918	T	Solid	3050B	
280-84742-5	J1V919	T	Solid	3050B	
280-84742-6	J1V920	T	Solid	3050B	
280-84742-7	J1V921	T	Solid	3050B	
280-84742-8	J1V922	T	Solid	3050B	
280-84742-9	J1V923	T	Solid	3050B	
280-84742-10	J1V924	T	Solid	3050B	
280-84742-11	J1V925	T	Solid	3050B	
280-84742-12	J1V926	T	Solid	3050B	
280-84742-13	J1V927	T	Solid	3050B	
Prep Batch: 280-330796					
LCS 280-330796/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-330796/1-A	Method Blank	T	Solid	3050B	
280-84742-1	J1V915	T	Solid	3050B	
280-84742-2	J1V916	T	Solid	3050B	
280-84742-2DU	Duplicate	T	Solid	3050B	
280-84742-2MS	Matrix Spike	T	Solid	3050B	
280-84742-3	J1V917	T	Solid	3050B	
280-84742-4	J1V918	T	Solid	3050B	
280-84742-5	J1V919	T	Solid	3050B	
280-84742-6	J1V920	T	Solid	3050B	
280-84742-7	J1V921	T	Solid	3050B	
280-84742-8	J1V922	T	Solid	3050B	
280-84742-9	J1V923	T	Solid	3050B	
280-84742-10	J1V924	T	Solid	3050B	
280-84742-11	J1V925	T	Solid	3050B	
280-84742-12	J1V926	T	Solid	3050B	
280-84742-13	J1V927	T	Solid	3050B	

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-330933					
LCS 280-330933/2-A	Lab Control Sample	T	Solid	7471A	
MB 280-330933/1-A	Method Blank	T	Solid	7471A	
280-84742-1	J1V915	T	Solid	7471A	
280-84742-1DU	Duplicate	T	Solid	7471A	
280-84742-1MS	Matrix Spike	T	Solid	7471A	
280-84742-2	J1V916	T	Solid	7471A	
280-84742-3	J1V917	T	Solid	7471A	
280-84742-4	J1V918	T	Solid	7471A	
280-84742-5	J1V919	T	Solid	7471A	
280-84742-6	J1V920	T	Solid	7471A	
280-84742-7	J1V921	T	Solid	7471A	
280-84742-8	J1V922	T	Solid	7471A	
280-84742-9	J1V923	T	Solid	7471A	
280-84742-10	J1V924	T	Solid	7471A	
280-84742-11	J1V925	T	Solid	7471A	
280-84742-12	J1V926	T	Solid	7471A	
280-84742-13	J1V927	T	Solid	7471A	
Analysis Batch:280-331009					
LCS 280-330795/2-A	Lab Control Sample	T	Solid	6010B	280-330795
MB 280-330795/1-A	Method Blank	T	Solid	6010B	280-330795
280-84742-1	J1V915	T	Solid	6010B	280-330795
280-84742-2	J1V916	T	Solid	6010B	280-330795
280-84742-2DU	Duplicate	T	Solid	6010B	280-330795
280-84742-2MS	Matrix Spike	T	Solid	6010B	280-330795
280-84742-3	J1V917	T	Solid	6010B	280-330795
280-84742-4	J1V918	T	Solid	6010B	280-330795
280-84742-5	J1V919	T	Solid	6010B	280-330795
280-84742-6	J1V920	T	Solid	6010B	280-330795
280-84742-7	J1V921	T	Solid	6010B	280-330795
280-84742-8	J1V922	T	Solid	6010B	280-330795
280-84742-9	J1V923	T	Solid	6010B	280-330795
280-84742-10	J1V924	T	Solid	6010B	280-330795
280-84742-11	J1V925	T	Solid	6010B	280-330795
280-84742-12	J1V926	T	Solid	6010B	280-330795
280-84742-13	J1V927	T	Solid	6010B	280-330795

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:280-331065					
LCS 280-330796/2-A	Lab Control Sample	T	Solid	6020	280-330796
MB 280-330796/1-A	Method Blank	T	Solid	6020	280-330796
280-84742-1	J1V915	T	Solid	6020	280-330796
280-84742-2	J1V916	T	Solid	6020	280-330796
280-84742-2DU	Duplicate	T	Solid	6020	280-330796
280-84742-2MS	Matrix Spike	T	Solid	6020	280-330796
280-84742-3	J1V917	T	Solid	6020	280-330796
280-84742-4	J1V918	T	Solid	6020	280-330796
280-84742-5	J1V919	T	Solid	6020	280-330796
280-84742-6	J1V920	T	Solid	6020	280-330796
280-84742-7	J1V921	T	Solid	6020	280-330796
280-84742-8	J1V922	T	Solid	6020	280-330796
280-84742-9	J1V923	T	Solid	6020	280-330796
280-84742-10	J1V924	T	Solid	6020	280-330796
280-84742-11	J1V925	T	Solid	6020	280-330796
280-84742-12	J1V926	T	Solid	6020	280-330796
280-84742-13	J1V927	T	Solid	6020	280-330796
Analysis Batch:280-331153					
LCS 280-330795/2-A	Lab Control Sample	T	Solid	6010B	280-330795
MB 280-330795/1-A	Method Blank	T	Solid	6010B	280-330795
280-84742-1	J1V915	T	Solid	6010B	280-330795
280-84742-2	J1V916	T	Solid	6010B	280-330795
280-84742-2DU	Duplicate	T	Solid	6010B	280-330795
280-84742-2MS	Matrix Spike	T	Solid	6010B	280-330795
280-84742-3	J1V917	T	Solid	6010B	280-330795
280-84742-4	J1V918	T	Solid	6010B	280-330795
280-84742-5	J1V919	T	Solid	6010B	280-330795
280-84742-6	J1V920	T	Solid	6010B	280-330795
280-84742-7	J1V921	T	Solid	6010B	280-330795
280-84742-8	J1V922	T	Solid	6010B	280-330795
280-84742-9	J1V923	T	Solid	6010B	280-330795
280-84742-10	J1V924	T	Solid	6010B	280-330795
280-84742-11	J1V925	T	Solid	6010B	280-330795
280-84742-12	J1V926	T	Solid	6010B	280-330795
280-84742-13	J1V927	T	Solid	6010B	280-330795

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:280-331158					
LCS 280-330933/2-A	Lab Control Sample	T	Solid	7471A	280-330933
MB 280-330933/1-A	Method Blank	T	Solid	7471A	280-330933
280-84742-1	J1V915	T	Solid	7471A	280-330933
280-84742-1DU	Duplicate	T	Solid	7471A	280-330933
280-84742-1MS	Matrix Spike	T	Solid	7471A	280-330933
280-84742-2	J1V916	T	Solid	7471A	280-330933
280-84742-3	J1V917	T	Solid	7471A	280-330933
280-84742-4	J1V918	T	Solid	7471A	280-330933
280-84742-5	J1V919	T	Solid	7471A	280-330933
280-84742-6	J1V920	T	Solid	7471A	280-330933
280-84742-7	J1V921	T	Solid	7471A	280-330933
280-84742-8	J1V922	T	Solid	7471A	280-330933
280-84742-9	J1V923	T	Solid	7471A	280-330933
280-84742-10	J1V924	T	Solid	7471A	280-330933
280-84742-11	J1V925	T	Solid	7471A	280-330933
280-84742-12	J1V926	T	Solid	7471A	280-330933
280-84742-13	J1V927	T	Solid	7471A	280-330933
Analysis Batch:280-331350					
LCS 280-330795/2-A	Lab Control Sample	T	Solid	6010B	280-330795
MB 280-330795/1-A	Method Blank	T	Solid	6010B	280-330795
280-84742-1	J1V915	T	Solid	6010B	280-330795
280-84742-2	J1V916	T	Solid	6010B	280-330795
280-84742-2DU	Duplicate	T	Solid	6010B	280-330795
280-84742-2MS	Matrix Spike	T	Solid	6010B	280-330795
280-84742-3	J1V917	T	Solid	6010B	280-330795
280-84742-4	J1V918	T	Solid	6010B	280-330795
280-84742-5	J1V919	T	Solid	6010B	280-330795
280-84742-6	J1V920	T	Solid	6010B	280-330795
280-84742-7	J1V921	T	Solid	6010B	280-330795
280-84742-8	J1V922	T	Solid	6010B	280-330795
280-84742-9	J1V923	T	Solid	6010B	280-330795
280-84742-10	J1V924	T	Solid	6010B	280-330795
280-84742-11	J1V925	T	Solid	6010B	280-330795
280-84742-12	J1V926	T	Solid	6010B	280-330795
280-84742-13	J1V927	T	Solid	6010B	280-330795

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-330890					
280-84742-1	J1V915	T	Solid	D-2216	
280-84742-1DU	Duplicate	T	Solid	D-2216	
280-84742-2	J1V916	T	Solid	D-2216	
280-84742-3	J1V917	T	Solid	D-2216	
280-84742-4	J1V918	T	Solid	D-2216	
280-84742-5	J1V919	T	Solid	D-2216	
280-84742-6	J1V920	T	Solid	D-2216	
280-84742-7	J1V921	T	Solid	D-2216	
280-84742-8	J1V922	T	Solid	D-2216	
280-84742-9	J1V923	T	Solid	D-2216	
280-84742-10	J1V924	T	Solid	D-2216	
280-84742-11	J1V925	T	Solid	D-2216	
280-84742-12	J1V926	T	Solid	D-2216	
280-84742-13	J1V927	T	Solid	D-2216	
Prep Batch: 280-331085					
LCS 280-331085/1-A	Lab Control Sample	S	Solid	DI Leach	
LCSD 280-331085/2-A	Lab Control Sample Duplicate	S	Solid	DI Leach	
280-84742-1	J1V915	S	Solid	DI Leach	
280-84742-2	J1V916	S	Solid	DI Leach	
280-84742-2DU	Duplicate	S	Solid	DI Leach	
280-84742-3	J1V917	S	Solid	DI Leach	
280-84742-4	J1V918	S	Solid	DI Leach	
280-84742-5	J1V919	S	Solid	DI Leach	
280-84742-6	J1V920	S	Solid	DI Leach	
280-84742-7	J1V921	S	Solid	DI Leach	
280-84742-8	J1V922	S	Solid	DI Leach	
280-84742-9	J1V923	S	Solid	DI Leach	
280-84742-10	J1V924	S	Solid	DI Leach	
280-84742-11	J1V925	S	Solid	DI Leach	
280-84742-12	J1V926	S	Solid	DI Leach	
280-84742-13	J1V927	S	Solid	DI Leach	

Client: Washington Closure Hanford

Job Number: 280-84742-1
Sdg Number: JP1046

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-331100					
LCS 280-331085/1-A	Lab Control Sample	S	Solid	9045C	
LCSD 280-331085/2-A	Lab Control Sample Duplicate	S	Solid	9045C	
280-84742-1	J1V915	S	Solid	9045C	
280-84742-2	J1V916	S	Solid	9045C	
280-84742-2DU	Duplicate	S	Solid	9045C	
280-84742-3	J1V917	S	Solid	9045C	
280-84742-4	J1V918	S	Solid	9045C	
280-84742-5	J1V919	S	Solid	9045C	
280-84742-6	J1V920	S	Solid	9045C	
280-84742-7	J1V921	S	Solid	9045C	
280-84742-8	J1V922	S	Solid	9045C	
280-84742-9	J1V923	S	Solid	9045C	
280-84742-10	J1V924	S	Solid	9045C	
280-84742-11	J1V925	S	Solid	9045C	
280-84742-12	J1V926	S	Solid	9045C	
280-84742-13	J1V927	S	Solid	9045C	

Report Basis
S = Soluble
T = Total

Washington Closure Hanford — CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-148-225

Collector ETHERINGTON, TW	**Company Contact** Joan Kessner	**Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH
Price Code 8B	**Data Turnaround** 7DAY		
Project Designation 300 Area D4 Waste Sites	**Sampling Location** 300-288:2 WSA2		**SAF No.** RC-148
Ice Chest No. ERC-96-030	**Field Logbook No.** EL-1663-08	**COA** 0328822000 W TRE 6-20-16	**Method of Shipment** Commercial Carrier
Shipped To TestAmerica Denver	**Offsite Property No.** A131486		**Bill of Lading/Air Bill No.** SEE OSPC

Other Labs Shipped To
TestAmerica Richland

POSSIBLE SAMPLE HAZARDS/REMARKS
N/A

Special Handling and/or Storage
Cool as required for preservation

280-84742 Chain of Custody

Preservation	Cool <=6C	Cool <=6C	Cool <=6C	None	Cool <=6C							
Type of Container	G/P	aG	aG	G/P	aG							
No. of Container(s)	1	1	1	1	1							
Volume	250mL	250mL	125mL	250mL	250mL							
Sample Analysis	See item (1) in Special Instructions	PCBs - 8082	TPH-Diesel Range - WTPH-D +	pH (Soil) - 9045	Semi-VOA - 8270 (TCL); Semi-VOA – 8270 (Add-On Tributyl phosphate)							
Sample No.	**Matrix**	**Sample Date**	**Sample Time**									
J1V915	SOIL	6-16-16	1102	✓	✓	✓	✓	✓				
J1V916	SOIL	6-16-16	1145	✓	✓	✓	✓	✓				
J1V917	SOIL	6-16-16	1115	✓	✓	✓	✓	✓				
J1V918	SOIL	6-16-16	1157	✓	✓	✓	✓	✓				
J1V919	SOIL	6-16-16	1238	✓	✓	✓	✓	✓				

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
T. ETHERINGTON	6-16-16 1410	T.R. Edmundson	6-16-16 1410
T.R. Edmundson	6-16-16 1500	1060#1	6-16-16 1500
1060#1	6-20-16 1030	T.R. Edmundson	6-20-16 1030
T.R. Edmundson WCH	6-20-16 1500	Fed Ex	6-20-16 —
			1735 21Jun16

FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

SPECIAL INSTRUCTIONS

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

1.6, 1.0, 0.3, 1.2 IRS 0.0 21Jun16
Transfer

REVIEWED BY KW per tele DATE 6-20-16

JP1046

WCH-EE-011

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-148-225

Collector: ETHERINGTON, TW	Company Contact: Joan Kessner	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 8B	Data Turnaround: 7 DAY		
Project Designation: 300 Area D4 Waste Sites	Sampling Location: 300-288:2 WSA2		SAF No.: RC-148
Ice Chest No.: ERC-96-030	Field Logbook No.: EL-1663-08	COA: 0328822000 w/ TRE 6-20-16	Method of Shipment: Commercial Carrier
Shipped To: TestAmerica Denver	Offsite Property No.: A131486		Bill of Lading/Air Bill No.: SEE OSPC

Other Labs Shipped To: TestAmerica Richland

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

Cool as required for preservation

Preservation	Cool <=6C	Cool <=6C	Cool <=6C	None	Cool <=6C						
Type of Container	G/P	aG	aG	G/P	aG						
No. of Container(s)	1	1	1	1	1						
Volume	250mL	250mL	125mL	250mL	250mL						
Sample Analysis	See item (1) in Special Instructions	PCBs - 8082	TPH-Diesel Range - WTPH-D +	pH (Soil) - 9045	Semi-VOA - 8270 (TCL); Semi-VOA – 8270 (Add-On Tributyl phosphate)						
Sample No.	**Matrix**	**Sample Date**	**Sample Time**								
J1V920	SOIL	6-16-16	1225	✓	✓	✓	✓	✓			
J1V921	SOIL	6-16-16	1215	✓	✓	✓	✓	✓			
J1V922	SOIL	6-16-16	1257	✓	✓	✓	✓	✓			
J1V923	SOIL	6-16-16	1305	✓	✓	✓	✓	✓			
J1V924	SOIL	6-16-16	1030	✓	✓	✓	✓	✓			

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CHAIN OF POSSESSION

Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
T. ETHERINGTON	6-16-16 1410	T.R. Edmundson / J.R. Edmundson	6-16-16 1410
T.R. Edmundson / J.R. Edmundson	6-16-16 1500	1060 #1	6-16-16 1500
1060 #1	6-20-16 1030	T.R. Edmundson / J.R. Edmundson	6-20-16 1030
T.R. Edmundson / J.R. Edmundson (w/cf)	6-20-16 1500	Fed Ex	6-20-16 —
		A[illegible]	1735 21 Jun 16

FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

SPECIAL INSTRUCTIONS

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

REVIEWED BY Kw per tele DATE 6-20-16

JP1046

WCH-EE-011

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-148-225

Collector ETHERINGTON, TW	**Company Contact** Joan Kessner	**Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH
Project Designation 300 Area D4 Waste Sites	**Sampling Location** 300-288:2 WSA2		**SAF No.** RC-148
Ice Chest No. ERC-96-030	**Field Logbook No.** EL-1663-08	**COA** 0328822000 TRE 6-20-16	**Method of Shipment** Commercial Carrier
Shipped To TestAmerica Denver	**Offsite Property No.** A131486		**Bill of Lading/Air Bill No.** SEE OSPC

Price Code 8B

Data Turnaround 7 DAY

Other Labs Shipped To
TestAmerica Richland

POSSIBLE SAMPLE HAZARDS/REMARKS
N/A

Special Handling and/or Storage
Cool as required for preservation

Preservation	Cool <=6C	Cool <=6C	Cool <=6C	None	Cool <=6C							
Type of Container	G/P	aG	aG	G/P	aG							
No. of Container(s)	1	1	1	1	1							
Volume	250mL	250mL	125mL	250mL	250mL							
Sample Analysis	See item (1) in Special Instructions	PCBs - 8082	TPH-Diesel Range - WTPH-D +	pH (Soil) - 9045	Semi-VOA - 8270 (TCL); Semi-VOA – 8270 (Add-On Tributyl phosphate)							
Sample No.	**Matrix**	**Sample Date**	**Sample Time**									
V925	SOIL	6-16-16	1333	✓	✓	✓	✓	✓				
V926	SOIL	6-16-16	1324	✓	✓	✓	✓	✓				
V927	SOIL	6-16-16	1030	✓	✓	✓	✓	✓				

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
T. ETHERINGTON	6-16-16 1410	T.R. Edmundson / J.R. Edmundson	6-16-16 1410
T.R. Edmundson / J.R. Edmundson	6-16-16 1500	1060 #1	6-16-16 1500
1060 #1	6-20-16 1030	T.R. Edmundson / J.R. Edmundson	6-20-16 1030
T.R. Edmundson / J.R. Edmundson	6-20-16 1500	Fed Ex	6-20-16 —
			1735 21 Jun 16

FINAL SAMPLE DISPOSITION — Disposal Method — Disposed By — Date/Time

SPECIAL INSTRUCTIONS

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

REVIEWED BY Kwperteld DATE 6-20-16

JP1046

WCH-EE-011

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

☆ 90 w/ permission V/TM

Project 28002142
Report Due: 6/29/2016 D.B. 6-22-16
TALs TAT: 5-Day-RUSH

Temp stickers on Back

Sample Check-in List

Date/Time Received: 06/21/16 0935 & 1735 **GM Screen Result** 13 **microR/hr**

Client: Washington Closure Hanford **SDG #:** JP1046 NA[ ] **SAF #:** RC-148 ~~225~~ ST NA [ ]

D.B. 6-22-16 280-84742 **Job Number:** ERL-96-030, TNM-052, ERL-02-404 **Chain of Custody #** ~~RC-148-224~~ ST RC-148-225

Shipping Container ID: ERC-96-030 **Air Bill #** ~~7765-6544-8604~~ ST 7765-6472-3936 2ND 21 Junk ~~7765-6472-3936~~ 776564724126

1. Custody Seals on shipping container intact? NA [ ] Yes [ ] No [ ]
2. Custody Seals dated and signed? NA [ ] Yes [ ] No [ ]
3. Chain of Custody record present? NA [ ] Yes [ ] No [ ]
4. Cooler Temperature °C: 1.6, 1.0, 0.3, 1.2 NA [ ] 5. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 7/6
7. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
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_3 Added** ___
11. Sample Location, Sample Collector Listed? * Yes
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? N Yes [ ] ~~No [ ]~~ SC
13. Description of anomalies (include sample numbers): ~~Missing one cooler~~ (2ND 21 Junk) Delivered 1735 21 Junk

Sample Custodian: Joshua True **Date:** 06/21/16

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on 6-21-16 by D.B. Person Contacted Joan Kessner

[ ] No action necessary; process as is.

Project Manager Darlene Brandy Date 6-22-16

ORIGIN ID:PSCA (509) 376-7492
7162 SHIPPING
US DOE CO WCH
2355 STEVENS DR
RICHLAND, WA 98354
UNITED STATES US

SHIP DATE: 20JUN16
ACTWGT: 75.00 LB
CAD: 105266502/INET3730

BILL THIRD PARTY

TO KAE YODER
TESTAMERICA
4955 YARROW ST.
ARVADA CO 80002
(303) 736-0190
INV: A131486
PO:
REF: 03208W2000
DEPT:

FedEx Express

J1810164205011uv

540J2/30BD/727F

1 of 2

TUE - 21 JUN 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7765 6472 3936
MASTER

XH WHHA

80002
CO-US DEN

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.
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ORIGIN ID:PSCA (509) 376-7492
1162 SHIPPING
US DOE CO WCH
2355 STEVENS DR
RICHLAND, WA 99354
UNITED STATES US

SHIP DATE: 20JUN16
ACTWGT: 84.00 LB
CAD: 105266502/INET3730

BILL THIRD PARTY

TO KAE YODER
TESTAMERICA
4955 YARROW ST.

ARVADA CO 80002
(303) 736-0190
INV: A131486
PO:
REF: 03288W2000
DEPT:

FedEx Express

J16191502060 1ev

540J2/30BD/727F

TUE - 21 JUN 10:30A
PRIORITY OVERNIGHT

2 of 2
MPS# 0263 7765 6472 4120
Mstr# 7765 6472 3936 0201

XH WHHA

80002
CO-US DEN

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