SAF-RC-149
300 Area D4 Waste Sites – Soil In-Process
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 5/5/15
INITIAL/DATE

COMMENTS:

SDG JP0944 SAF-RC-149

Rad only Chem only ☑ Rad & Chem

☑ Complete Partial

Sample Location: 316-3, west deep zone, in-process

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 70 *Pages*

Report No.: 65475

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.
JP0944	RC-149	J1V614	J5D200420-1	M6MK91AF	9M6MK910	5110037
		J1V614	J5D200420-1	M6MK91AD	9M6MK910	5110038
		J1V614	J5D200420-1	M6MK91AA	9M6MK910	5110039
		J1V614	J5D200420-1	M6MK91AC	9M6MK910	5110040
		J1V614	J5D200420-1	M6MK91AE	9M6MK910	5110041
		J1V615	J5D200420-2	M6MLC1AF	9M6MLC10	5110037
		J1V615	J5D200420-2	M6MLC1AD	9M6MLC10	5110038
		J1V615	J5D200420-2	M6MLC1AA	9M6MLC10	5110039
		J1V615	J5D200420-2	M6MLC1AC	9M6MLC10	5110040
		J1V615	J5D200420-2	M6MLC1AE	9M6MLC10	5110041
		J1V616	J5D200420-3	M6MLD1AF	9M6MLD10	5110037
		J1V616	J5D200420-3	M6MLD1AD	9M6MLD10	5110038
		J1V616	J5D200420-3	M6MLD1AA	9M6MLD10	5110039
		J1V616	J5D200420-3	M6MLD1AC	9M6MLD10	5110040
		J1V616	J5D200420-3	M6MLD1AE	9M6MLD10	5110041
		J1V617	J5D200420-4	M6MLE1AF	9M6MLE10	5110037
		J1V617	J5D200420-4	M6MLE1AD	9M6MLE10	5110038
		J1V617	J5D200420-4	M6MLE1AA	9M6MLE10	5110039
		J1V617	J5D200420-4	M6MLE1AC	9M6MLE10	5110040
		J1V617	J5D200420-4	M6MLE1AE	9M6MLE10	5110041
		J1V618	J5D200420-5	M6MLG1AF	9M6MLG10	5110037
		J1V618	J5D200420-5	M6MLG1AD	9M6MLG10	5110038
		J1V618	J5D200420-5	M6MLG1AA	9M6MLG10	5110039
		J1V618	J5D200420-5	M6MLG1AC	9M6MLG10	5110040
		J1V618	J5D200420-5	M6MLG1AE	9M6MLG10	5110041
		J1V619	J5D200420-6	M6MLJ1AF	9M6MLJ10	5110037

Report No.: 65475

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.
JP0944	RC-149	J1V619	J5D200420-6	M6MLJ1AD	9M6MLJ10	5110038
		J1V619	J5D200420-6	M6MLJ1AA	9M6MLJ10	5110039
		J1V619	J5D200420-6	M6MLJ1AC	9M6MLJ10	5110040
		J1V619	J5D200420-6	M6MLJ1AE	9M6MLJ10	5110041
		J1V620	J5D200420-7	M6MLK1AF	9M6MLK10	5110037
		J1V620	J5D200420-7	M6MLK1AD	9M6MLK10	5110038
		J1V620	J5D200420-7	M6MLK1AA	9M6MLK10	5110039
		J1V620	J5D200420-7	M6MLK1AC	9M6MLK10	5110040
		J1V620	J5D200420-7	M6MLK1AE	9M6MLK10	5110041
		J1V621	J5D200420-8	M6MLL1AF	9M6MLL10	5110037
		J1V621	J5D200420-8	M6MLL1AD	9M6MLL10	5110038
		J1V621	J5D200420-8	M6MLL1AA	9M6MLL10	5110039
		J1V621	J5D200420-8	M6MLL1AC	9M6MLL10	5110040
		J1V621	J5D200420-8	M6MLL1AE	9M6MLL10	5110041
		J1V622	J5D200420-9	M6MLM1AF	9M6MLM10	5110037
		J1V622	J5D200420-9	M6MLM1AD	9M6MLM10	5110038
		J1V622	J5D200420-9	M6MLM1AA	9M6MLM10	5110039
		J1V622	J5D200420-9	M6MLM1AC	9M6MLM10	5110040
		J1V622	J5D200420-9	M6MLM1AE	9M6MLM10	5110041
		J1V623	J5D200420-10	M6MLN1AF	9M6MLN10	5110037
		J1V623	J5D200420-10	M6MLN1AD	9M6MLN10	5110038
		J1V623	J5D200420-10	M6MLN1AA	9M6MLN10	5110039
		J1V623	J5D200420-10	M6MLN1AC	9M6MLN10	5110040
		J1V623	J5D200420-10	M6MLN1AE	9M6MLN10	5110041
	RC-149	J1V624	J5D200420-11	M6MLQ1AF	9M6MLQ10	5110037
		J1V624	J5D200420-11	M6MLQ1AD	9M6MLQ10	5110038
		J1V624	J5D200420-11	M6MLQ1AA	9M6MLQ10	5110039
		J1V624	J5D200420-11	M6MLQ1AC	9M6MLQ10	5110040
		J1V624	J5D200420-11	M6MLQ1AE	9M6MLQ10	5110041
		J1V625	J5D200420-12	M6MLR1AF	9M6MLR10	5110037
		J1V625	J5D200420-12	M6MLR1AD	9M6MLR10	5110038
		J1V625	J5D200420-12	M6MLR1AA	9M6MLR10	5110039
		J1V625	J5D200420-12	M6MLR1AC	9M6MLR10	5110040
		J1V625	J5D200420-12	M6MLR1AE	9M6MLR10	5110041

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

April 27, 2015

Attention: Joan Kessner

SAF Number	:	RC-149
Date SDG Closed	:	April 20, 2015
Number of Samples	:	Twelve (12)
Sample Type	:	Soil
SDG Number	:	JP0944
Data Deliverable	:	7– Day / Summary

CASE NARRATIVE

I. Introduction

On April 20, 2015, twelve 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
J1V614	M6MK9	SOIL	4/20/15
J1V615	M6MLC	SOIL	4/20/15
J1V616	M6MLD	SOIL	4/20/15
J1V617	M6MLE	SOIL	4/20/15
J1V618	M6MLG	SOIL	4/20/15
J1V619	M6MLJ	SOIL	4/20/15
J1V620	M6MLK	SOIL	4/20/15
J1V621	M6MLL	SOIL	4/20/15
J1V622	M6MLM	SOIL	4/20/15
J1V623	M6MLN	SOIL	4/20/15
J1V624	M6MLQ	SOIL	4/20/15
J1V625	M6MLR	SOIL	4/20/15

II. Sample Receipt

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

III. Analytical Results/Methodology

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

The requested analyses were:

Gamma Spectroscopy
Iodine-129 by method RL-GAM-002
Liquid Scintillation Counting
Technetium-99 by method RL-LSC-014
Tritium by method RL-LSC-002
Laser Induced Phosphorimetry
Total Uranium by method RL-KPA-003
Chemical Analysis
Hexavalent Chromium by EPA method 7196A

IV. Quality Control

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

QC and sample results are reported in the same units.

V. Comments

Gamma Spectroscopy
Iodine-129 by method RL-GAM-002:
The LCS, batch blank, samples and sample duplicate (J1V619) results are within contractual requirements.

Liquid Scintillation Counting
Technetium-99 by method RL-LSC-014:
The LCS, batch blank, samples, sample duplicate (J1V616) and sample matrix spike (J1V617) results are within contractual requirements.

Tritium by method RL-LSC-002:
The LCS, batch blank, samples and sample duplicate (J1V618) results are within contractual requirements.

Total Uranium
Total Uranium by method RL-KPA-003:
The LCS, batch blank, samples, sample duplicate (J1V614) and sample matrix spike (J1V615) results are within contractual requirements.

Chemical Analysis
Hexavalent Chromium by EPA method 7196A
The LCS, batch blank, samples, sample duplicate (J1V614) and sample matrix spike (J1V614) results are within contractual requirements.

Washington Closure Hanford
April 27, 2015

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

Date: 27-Apr-15

TestAmerica Inc TARL

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

Report No. : 65475

SDG No: JP0944

Batch	Client Id Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
5110041 UTOT_KPA									
J1V614									
	M6MK91AE	TOTAL-URANIUM	1.62E+01 +- 1.9E+00		ug/g		2.65E-01	1.00E+00	
J1V614 DUP									
	M6MK91AK	TOTAL-URANIUM	1.59E+01 +- 1.9E+00		ug/g		2.70E-01	1.00E+00	2.0
J1V615									
	M6MLC1AE	TOTAL-URANIUM	6.48E+00 +- 7.6E-01		ug/g		2.75E-01	1.00E+00	
J1V616									
	M6MLD1AE	TOTAL-URANIUM	8.14E+00 +- 9.6E-01		ug/g		2.60E-01	1.00E+00	
J1V617									
	M6MLE1AE	TOTAL-URANIUM	5.20E+00 +- 6.1E-01		ug/g		2.60E-01	1.00E+00	
J1V618									
	M6MLG1AE	TOTAL-URANIUM	4.48E+00 +- 5.3E-01		ug/g		2.65E-01	1.00E+00	
J1V619									
	M6MLJ1AE	TOTAL-URANIUM	9.95E+00 +- 1.2E+00		ug/g		2.65E-01	1.00E+00	
J1V620									
	M6MLK1AE	TOTAL-URANIUM	2.12E+00 +- 2.5E-01		ug/g		2.70E-01	1.00E+00	
J1V621									
	M6MLL1AE	TOTAL-URANIUM	3.10E+00 +- 3.6E-01		ug/g		2.70E-01	1.00E+00	
J1V622									
	M6MLM1AE	TOTAL-URANIUM	3.04E+00 +- 3.6E-01		ug/g		2.70E-01	1.00E+00	
J1V623									
	M6MLN1AE	TOTAL-URANIUM	1.57E+01 +- 1.8E+00		ug/g		2.60E-01	1.00E+00	
J1V624									
	M6MLQ1AE	TOTAL-URANIUM	2.03E+01 +- 2.4E+00		ug/g		2.65E-01	1.00E+00	
J1V625									
	M6MLR1AE	TOTAL-URANIUM	5.58E+01 +- 6.6E+00		ug/g		2.70E-01	1.00E+00	
5110037 AXTB									
J1V614									
	M6MK91AF	I129	-1.98E-02 +- 5.5E-02	U	pCi/g		9.57E-02	1.00E+00	
J1V615									
	M6MLC1AF	I129	6.01E-02 +- 5.4E-02	U	pCi/g		1.04E-01	1.00E+00	
J1V616									
	M6MLD1AF	I129	4.38E-02 +- 6.4E-02	U	pCi/g		1.19E-01	1.00E+00	
J1V617									
	M6MLE1AF	I129	4.42E-02 +- 6.1E-02	U	pCi/g		1.14E-01	1.00E+00	
J1V618									
	M6MLG1AF	I129	-3.15E-02 +- 5.6E-02	U	pCi/g		9.48E-02	1.00E+00	
J1V619									
	M6MLJ1AF	I129	-1.09E-02 +- 5.2E-02	U	pCi/g		9.16E-02	1.00E+00	

TestAmerica Inc

rptTALRchSaSummary2 V5.3.6.8 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: 27-Apr-15

TestAmerica Inc TARL

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

Report No. : 65475 **SDG No:** JP0944

Batch	Client Id Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
5110037 AXTB									
J1V619 DUP									
	M6MLJ1AG	I129	6.92E-03 +- 5.2E-02	U	pCi/g		9.36E-02	1.00E+00	-891.2
J1V620									
	M6MLK1AF	I129	1.36E-02 +- 4.6E-02	U	pCi/g		8.50E-02	1.00E+00	
J1V621									
	M6MLL1AF	I129	9.46E-03 +- 5.7E-02	U	pCi/g		1.04E-01	1.00E+00	
J1V622									
	M6MLM1AF	I129	2.28E-02 +- 5.0E-02	U	pCi/g		9.21E-02	1.00E+00	
J1V623									
	M6MLN1AF	I129	-3.46E-02 +- 5.2E-02	U	pCi/g		8.77E-02	1.00E+00	
J1V624									
	M6MLQ1AF	I129	-1.87E-03 +- 8.5E-02	U	pCi/g		1.50E-01	1.00E+00	
J1V625									
	M6MLR1AF	I129	-1.75E-03 +- 7.9E-02	U	pCi/g		1.40E-01	1.00E+00	
5110038 TRITIUM_DIST_LSC									
J1V614									
	M6MK91AD	H-3	1.97E-01 +- 7.9E-02		pCi/g	100%	1.53E-01	4.00E+02	
J1V615									
	M6MLC1AD	H-3	6.08E-02 +- 6.4E-02	U	pCi/g	100%	1.42E-01	4.00E+02	
J1V616									
	M6MLD1AD	H-3	3.94E-03 +- 4.5E-02	U	pCi/g	100%	1.07E-01	4.00E+02	
J1V617									
	M6MLE1AD	H-3	2.03E-02 +- 4.4E-02	U	pCi/g	100%	1.03E-01	4.00E+02	
J1V618									
	M6MLG1AD	H-3	5.10E-02 +- 4.5E-02	U	pCi/g	100%	9.85E-02	4.00E+02	
J1V618 DUP									
	M6MLG1AG	H-3	4.87E-02 +- 4.4E-02	U	pCi/g	100%	9.66E-02	4.00E+02	4.6
J1V619									
	M6MLJ1AD	H-3	3.24E-02 +- 4.8E-02	U	pCi/g	100%	1.10E-01	4.00E+02	
J1V620									
	M6MLK1AD	H-3	6.68E-02 +- 7.2E-02	U	pCi/g	100%	1.60E-01	4.00E+02	
J1V621									
	M6MLL1AD	H-3	-1.07E-02 +- 4.4E-02	U	pCi/g	100%	1.07E-01	4.00E+02	
J1V622									
	M6MLM1AD	H-3	1.00E-01 +- 5.6E-02	U	pCi/g	100%	1.16E-01	4.00E+02	
J1V623									
	M6MLN1AD	H-3	5.56E-02 +- 6.3E-02	U	pCi/g	100%	1.40E-01	4.00E+02	
J1V624									
	M6MLQ1AD	H-3	2.70E-02 +- 5.5E-02	U	pCi/g	100%	1.28E-01	4.00E+02	

TestAmerica Inc

rptTALRchSaSummary2 V5.3.6.8 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: 27-Apr-15

TestAmerica Inc TARL

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

Report No. : 65475

SDG No: JP0944

Batch	Client Id Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
5110038 TRITIUM_DIST_LSC									
	J1V625								
	M6MLR1AD	H-3	6.08E-02 +- 6.4E-02	U	pCi/g	100%	1.43E-01	4.00E+02	
5110039 7196_CR6									
	J1V614								
	M6MK91AA	HEXCHROME	2.52E-01 +- 0.0E+00		mg/kg	N/A	1.55E-01	1.55E-01	
	M6MK91AH	HEXCHROME	2.75E-01 +- 0.0E+00		mg/kg	N/A	1.55E-01	1.55E-01	8.7
	J1V615								
	M6MLC1AA	HEXCHROME	1.55E-01 +- 0.0E+00	U	mg/kg	N/A	1.55E-01	1.55E-01	
	J1V616								
	M6MLD1AA	HEXCHROME	1.77E-01 +- 0.0E+00		mg/kg	N/A	1.55E-01	1.55E-01	
	J1V617								
	M6MLE1AA	HEXCHROME	1.73E-01 +- 0.0E+00		mg/kg	N/A	1.55E-01	1.55E-01	
	J1V618								
	M6MLG1AA	HEXCHROME	1.55E-01 +- 0.0E+00	U	mg/kg	N/A	1.55E-01	1.55E-01	
	J1V619								
	M6MLJ1AA	HEXCHROME	1.76E-01 +- 0.0E+00		mg/kg	N/A	1.55E-01	1.55E-01	
	J1V620								
	M6MLK1AA	HEXCHROME	2.12E-01 +- 0.0E+00		mg/kg	N/A	1.55E-01	1.55E-01	
	J1V621								
	M6MLL1AA	HEXCHROME	1.55E-01 +- 0.0E+00	U	mg/kg	N/A	1.55E-01	1.55E-01	
	J1V622								
	M6MLM1AA	HEXCHROME	2.68E-01 +- 0.0E+00		mg/kg	N/A	1.55E-01	1.55E-01	
	J1V623								
	M6MLN1AA	HEXCHROME	1.55E-01 +- 0.0E+00	U	mg/kg	N/A	1.55E-01	1.55E-01	
	J1V624								
	M6MLQ1AA	HEXCHROME	3.97E-01 +- 0.0E+00		mg/kg	N/A	1.55E-01	1.55E-01	
	J1V625								
	M6MLR1AA	HEXCHROME	5.21E-01 +- 0.0E+00		mg/kg	N/A	1.55E-01	1.55E-01	
5110040 TC99_ETVDSK_LSC									
	J1V614								
	M6MK91AC	Tc-99	2.65E-01 +- 2.6E-01	U	pCi/g	100%	5.82E-01	1.50E+01	
	J1V615								
	M6MLC1AC	Tc-99	-2.80E-02 +- 2.5E-01	U	pCi/g	100%	5.79E-01	1.50E+01	
	J1V616								
	M6MLD1AC	Tc-99	1.26E-01 +- 2.6E-01	U	pCi/g	100%	5.86E-01	1.50E+01	
	J1V616 DUP								
	M6MLD1AG	Tc-99	-3.04E-02 +- 2.5E-01	U	pCi/g	100%	5.82E-01	1.50E+01	327.4
	J1V617								
	M6MLE1AC	Tc-99	1.11E-01 +- 2.6E-01	U	pCi/g	100%	5.88E-01	1.50E+01	

TestAmerica Inc

rptTALRchSaSummary2 V5.3.6.8 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: 27-Apr-15

TestAmerica Inc TARL

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

Report No. : 65475

SDG No: JP0944

Batch	Client Id Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
5110040 TC99_ETVDSK_LSC									
	J1V618								
	M6MLG1AC	Tc-99	3.14E-01 +- 2.6E-01	U	pCi/g	100%	5.76E-01	1.50E+01	
	J1V619								
	M6MLJ1AC	Tc-99	4.34E-01 +- 2.7E-01	U	pCi/g	100%	5.94E-01	1.50E+01	
	J1V620								
	M6MLK1AC	Tc-99	2.55E-01 +- 2.6E-01	U	pCi/g	100%	5.79E-01	1.50E+01	
	J1V621								
	M6MLL1AC	Tc-99	7.47E-02 +- 2.6E-01	U	pCi/g	100%	5.83E-01	1.50E+01	
	J1V622								
	M6MLM1AC	Tc-99	2.08E-01 +- 2.6E-01	U	pCi/g	100%	5.82E-01	1.50E+01	
	J1V623								
	M6MLN1AC	Tc-99	2.18E-01 +- 2.6E-01	U	pCi/g	100%	5.75E-01	1.50E+01	
	J1V624								
	M6MLQ1AC	Tc-99	5.10E-01 +- 2.7E-01	U	pCi/g	100%	5.96E-01	1.50E+01	
	J1V625								
	M6MLR1AC	Tc-99	3.83E-01 +- 2.7E-01	U	pCi/g	100%	5.85E-01	1.50E+01	

No. of Results: 65

TestAmerica Inc

rptTALRchSaSummary2 V5.3.6.8 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: 27-Apr-15

TestAmerica Inc TARL

Ordered by Method, Batch No, QC Type,.

Report No. : 65475

SDG No.: JP0944

Batch Work Order	Parameter	Result +- CSU (2 s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDL
UTOT_KPA								
5110041 BLANK QC,								
M6MME1AA	TOTAL-URANIUM	1.01E-02 +- 1.0E-03	U	ug/g				2.55E-01
5110041 LCS,								
M6MME1AD	TOTAL-URANIUM	1.63E+01 +- 1.9E+00		ug/g		86%	-0.1	2.60E-01
M6MME1AC	TOTAL-URANIUM	5.21E+00 +- 6.1E-01		ug/g		89%	-0.1	2.65E-01
5110041 MATRIX SPIKE, J1V615								
M6MLC1AG	TOTAL-URANIUM	1.69E+01 +- 2.9E+00		ug/g				2.70E-01
AXTB								
5110037 BLANK QC,								
M6ML91AA	I129	-6.99E-04 +- 1.2E-02	U	pCi/g				2.18E-02
5110037 LCS,								
M6ML91AC	I129	2.20E+01 +- 2.7E+00		pCi/g		111%	0.1	2.12E-01
TRITIUM_DIST_LSC								
5110038 BLANK QC,								
M6MMA1AA	H-3	-4.39E-03 +- 5.4E-02	U	pCi/g	100%			1.32E-01
5110038 LCS,								
M6MMA1AC	H-3	5.77E-01 +- 1.0E-01		pCi/g	100%	97%	0.0	1.50E-01
7196_CR6								
5110039 MATRIX SPIKE, J1V614								
M6MK91AG	HEXCHROME	2.94E+01 +- 0.0E+00		mg/kg	N/A	88%	-0.1	1.55E-01
5110039 LCS,								
M6MMC1AC	HEXCHROME	1.85E+01 +- 0.0E+00		mg/kg	N/A	93%	-0.1	1.55E-01
5110039 BLANK QC,								
M6MMC1AA	HEXCHROME	1.55E-01 +- 0.0E+00	U	mg/kg	N/A			1.55E-01
TC99_ETVDSK_LSC								
5110040 BLANK QC,								
M6MMD1AA	Tc-99	2.78E-01 +- 2.6E-01	U	pCi/g	100%			5.88E-01
5110040 LCS,								
M6MMD1AC	Tc-99	2.50E+01 +- 9.2E-01		pCi/g	100%	74%	-0.3	5.90E-01
5110040 MATRIX SPIKE, J1V617								
M6MLE1AG	Tc-99	1.69E+02 +- 4.2E+00		pCi/g	100%	75%	-0.3	5.79E-01

No. of Results: 14

TestAmerica Inc
rptSTLRchQcSummary V5.3.6.8
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: 27-Apr-15

Lab Name:	**TestAmerica Inc**	**SDG:**	JP0944	**Collection Date:**	4/16/2015 12:43:00 PM
Lot-Sample No.:	**J5D200420-1**	**Report No. :**	65475	**Received Date:**	4/20/2015 10:50:00 AM
Client Sample ID:	**J1V614**	**COC No. :**	RC-149-149	**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: 5110037	AXTB			**Work Order:**	M6MK91AF		**Report DB ID:**	9M6MK910				
I129	**-1.98E-02**	U	5.5E-02	5.5E-02	9.57E-02	pCi/g		*-0.21*	4/21/15 07:41 a		50.9	LEP5$1
						4.80E-02	1.00E+00	*-0.72*			g	
Batch: 5110038	TRITIUM_DIST_LSC			**Work Order:**	M6MK91AD		**Report DB ID:**	9M6MK910				
H-3	**1.97E-01**		7.5E-02	7.9E-02	1.53E-01	pCi/g	100%	*(1.3)*	4/24/15 01:00 p		44.9	LSC4
						6.94E-02	4.00E+02	*(5.)*			g	
Batch: 5110039	7196_CR6			**Work Order:**	M6MK91AA		**Report DB ID:**	9M6MK910				
HEXCHROME	**2.52E-01**			0.0E+00	1.55E-01	mg/kg	N/A	*(1.6)*	4/22/15 03:48 p		2.4991	
							1.55E-01	*N/A*			g	
Batch: 5110040	TC99_ETVDSK_LSC			**Work Order:**	M6MK91AC		**Report DB ID:**	9M6MK910				
Tc-99	**2.65E-01**	U	2.5E-01	2.6E-01	5.82E-01	pCi/g	100%	*0.45*	4/24/15 07:10 p		2.01	LSC9
						2.79E-01	1.50E+01	*(2.)*			g	
Batch: 5110041	UTOT_KPA			**Work Order:**	M6MK91AE		**Report DB ID:**	9M6MK910				
TOTAL-URANIUM	**1.62E+01**		0.0E+00	1.9E+00	2.65E-01	ug/g		*(61.3)*	4/25/15 07:51 a		0.52	KPAW3
						9.36E-02	1.00E+00	*(17.)*			ML	

No. of Results: 5 **Comments:**

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: 27-Apr-15

Lab Name: TestAmerica Inc
Lot-Sample No.: J5D200420-2
Client Sample ID: J1V615

SDG: JP0944
Report No. : 65475
COC No. : RC-149-149

Collection Date: 4/16/2015 12:52:00 PM
Received Date: 4/20/2015 10:50:00 AM
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: 5110037	AXTB			**Work Order:**	M6MLC1AF		**Report DB ID:**	9M6MLC10				
I129	6.01E-02	U	5.4E-02	5.4E-02	1.04E-01	pCi/g		*0.58*	4/21/15 11:48 a		49.6	LEP5$1
						5.24E-02	1.00E+00	*(2.2)*			g	
Batch: 5110038	TRITIUM_DIST_LSC			**Work Order:**	M6MLC1AD		**Report DB ID:**	9M6MLC10				
H-3	6.08E-02	U	6.0E-02	6.4E-02	1.42E-01	pCi/g	100%	*0.43*	4/24/15 01:23 p		44.8	LSC4
						6.40E-02	4.00E+02	*(1.9)*			g	
Batch: 5110039	7196_CR6			**Work Order:**	M6MLC1AA		**Report DB ID:**	9M6MLC10				
HEXCHROME	1.55E-01	U		0.0E+00	1.55E-01	mg/kg	N/A	*1.*	4/22/15 03:48 p		2.5085	
							1.55E-01	*N/A*			g	
Batch: 5110040	TC99_ETVDSK_LSC			**Work Order:**	M6MLC1AC		**Report DB ID:**	9M6MLC10				
Tc-99	-2.80E-02	U	2.4E-01	2.5E-01	5.79E-01	pCi/g	100%	*-0.05*	4/24/15 08:12 p		2.03	LSC9
						2.77E-01	1.50E+01	*-0.22*			g	
Batch: 5110041	UTOT_KPA			**Work Order:**	M6MLC1AE		**Report DB ID:**	9M6MLC10				
TOTAL-URANIUM	6.48E+00		0.0E+00	7.6E-01	2.75E-01	ug/g		*(23.5)*	4/25/15 08:01 a		0.5	KPAW3
						9.74E-02	1.00E+00	*(17.)*			ML	

No. of Results: 5 **Comments:**

TestAmerica Inc
rptSTLRchSample
V5.3.6.8 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: 27-Apr-15

Lab Name:	TestAmerica Inc	**SDG:**	JP0944	**Collection Date:**	4/16/2015 1:25:00 PM
Lot-Sample No.:	J5D200420-3	**Report No. :**	65475	**Received Date:**	4/20/2015 10:50:00 AM
Client Sample ID:	J1V616	**COC No. :**	RC-149-149	**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: 5110037	AXTB			**Work Order:**	M6MLD1AF		**Report DB ID:**	9M6MLD10				
I129	**4.38E-02**	U	6.4E-02	6.4E-02	1.19E-01	pCi/g		*0.37*	4/21/15 05:02 p		44.7	LEP5$1
						5.99E-02	1.00E+00	*(1.4)*			g	
Batch: 5110038	TRITIUM_DIST_LSC			**Work Order:**	M6MLD1AD		**Report DB ID:**	9M6MLD10				
H-3	**3.94E-03**	U	4.2E-02	4.5E-02	1.07E-01	pCi/g	100%	*0.04*	4/24/15 01:46 p		50.1	LSC4
						4.86E-02	4.00E+02	*0.18*			g	
Batch: 5110039	7196_CR6			**Work Order:**	M6MLD1AA		**Report DB ID:**	9M6MLD10				
HEXCHROME	**1.77E-01**			0.0E+00	1.55E-01	mg/kg	N/A	*(1.1)*	4/22/15 03:48 p		2.5022	
							1.55E-01	*N/A*			g	
Batch: 5110040	TC99_ETVDSK_LSC			**Work Order:**	M6MLD1AC		**Report DB ID:**	9M6MLD10				
Tc-99	**1.26E-01**	U	2.4E-01	2.6E-01	5.86E-01	pCi/g	100%	*0.21*	4/24/15 09:14 p		2.0	LSC9
						2.81E-01	1.50E+01	*0.97*			g	
Batch: 5110041	UTOT_KPA			**Work Order:**	M6MLD1AE		**Report DB ID:**	9M6MLD10				
TOTAL-URANIUM	**8.14E+00**		0.0E+00	9.6E-01	2.60E-01	ug/g		*(31.4)*	4/25/15 08:10 a		0.53	KPAW3
						9.19E-02	1.00E+00	*(17.)*			ML	

No. of Results: 5 **Comments:**

TestAmerica Inc
rptSTLRchSample
V5.3.6.8 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: 27-Apr-15

Lab Name:	**TestAmerica Inc**	**SDG:**	JP0944	**Collection Date:**	4/16/2015 1:36:00 PM
Lot-Sample No.:	**J5D200420-4**	**Report No. :**	65475	**Received Date:**	4/20/2015 10:50:00 AM
Client Sample ID:	**J1V617**	**COC No. :**	RC-149-149	**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: 5110037	AXTB			**Work Order:**	M6MLE1AF		**Report DB ID:**	9M6MLE10				
I129	**4.42E-02**	U	6.1E-02	6.1E-02	1.14E-01	pCi/g		*0.39*	4/21/15 08:28 p		45.0	LEP5$1
						5.72E-02	1.00E+00	*(1.5)*			g	
Batch: 5110038	TRITIUM_DIST_LSC			**Work Order:**	M6MLE1AD		**Report DB ID:**	9M6MLE10				
H-3	**2.03E-02**	U	4.2E-02	4.4E-02	1.03E-01	pCi/g	100%	*0.2*	4/24/15 02:09 p		48.1	LSC4
						4.64E-02	4.00E+02	*0.92*			g	
Batch: 5110039	7196_CR6			**Work Order:**	M6MLE1AA		**Report DB ID:**	9M6MLE10				
HEXCHROME	**1.73E-01**			0.0E+00	1.55E-01	mg/kg	N/A	*(1.1)*	4/22/15 03:48 p		2.5021	
							1.55E-01	*N/A*			g	
Batch: 5110040	TC99_ETVDSK_LSC			**Work Order:**	M6MLE1AC		**Report DB ID:**	9M6MLE10				
Tc-99	**1.11E-01**	U	2.4E-01	2.6E-01	5.88E-01	pCi/g	100%	*0.19*	4/24/15 11:18 p		2.0	LSC9
						2.82E-01	1.50E+01	*0.86*			g	
Batch: 5110041	UTOT_KPA			**Work Order:**	M6MLE1AE		**Report DB ID:**	9M6MLE10				
TOTAL-URANIUM	**5.20E+00**		0.0E+00	6.1E-01	2.60E-01	ug/g		*(20.)*	4/25/15 08:19 a		0.53	KPAW3
						9.19E-02	1.00E+00	*(17.)*			ML	

No. of Results: 5 **Comments:**

TestAmerica Inc
rptSTLRchSample
V5.3.6.8 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: 27-Apr-15

Lab Name:	**TestAmerica Inc**	**SDG:**	JP0944	**Collection Date:**	4/16/2015 1:46:00 PM
Lot-Sample No.:	**J5D200420-5**	**Report No. :**	65475	**Received Date:**	4/20/2015 10:50:00 AM
Client Sample ID:	**J1V618**	**COC No. :**	RC-149-149	**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: 5110037	AXTB			**Work Order:**	M6MLG1AF		**Report DB ID:**	9M6MLG10				
I129	**-3.15E-02**	U	5.6E-02	5.6E-02	9.48E-02	pCi/g		*-0.33*	4/21/15 11:56 p		46.6	LEP5$1
						4.76E-02	1.00E+00	*-(1.1)*			g	
Batch: 5110038	TRITIUM_DIST_LSC			**Work Order:**	M6MLG1AD		**Report DB ID:**	9M6MLG10				
H-3	**5.10E-02**	U	4.3E-02	4.5E-02	9.85E-02	pCi/g	100%	*0.52*	4/24/15 02:32 p		52.4	LSC4
						4.46E-02	4.00E+02	*(2.3)*			g	
Batch: 5110039	7196_CR6			**Work Order:**	M6MLG1AA		**Report DB ID:**	9M6MLG10				
HEXCHROME	**1.55E-01**	U		0.0E+00	1.55E-01	mg/kg	N/A	*1.*	4/22/15 03:48 p		2.5171	
							1.55E-01	*N/A*			g	
Batch: 5110040	TC99_ETVDSK_LSC			**Work Order:**	M6MLG1AC		**Report DB ID:**	9M6MLG10				
Tc-99	**3.14E-01**	U	2.5E-01	2.6E-01	5.76E-01	pCi/g	100%	*0.54*	4/25/15 01:22 a		2.03	LSC9
						2.76E-01	1.50E+01	*(2.4)*			g	
Batch: 5110041	UTOT_KPA			**Work Order:**	M6MLG1AE		**Report DB ID:**	9M6MLG10				
TOTAL-URANIUM	**4.48E+00**		0.0E+00	5.3E-01	2.65E-01	ug/g		*(16.9)*	4/25/15 08:23 a		0.52	KPAW3
						9.36E-02	1.00E+00	*(17.)*			ML	

No. of Results: 5 **Comments:**

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: 27-Apr-15

Lab Name:	**TestAmerica Inc**	**SDG:**	JP0944	**Collection Date:**	4/16/2015 2:00:00 PM
Lot-Sample No.:	**J5D200420-6**	**Report No. :**	65475	**Received Date:**	4/20/2015 10:50:00 AM
Client Sample ID:	**J1V619**	**COC No. :**	RC-149-149	**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: 5110037	AXTB			**Work Order:**	M6MLJ1AF		**Report DB ID:**	9M6MLJ10				
I129	**-1.09E-02**	U	5.2E-02	5.2E-02	9.16E-02	pCi/g		*-0.12*	4/22/15 07:07 a		49.1	LEP5$1
						4.60E-02	1.00E+00	*-0.42*			g	
Batch: 5110038	TRITIUM_DIST_LSC			**Work Order:**	M6MLJ1AD		**Report DB ID:**	9M6MLJ10				
H-3	**3.24E-02**	U	4.5E-02	4.8E-02	1.10E-01	pCi/g	100%	*0.3*	4/24/15 03:17 p		47.4	LSC4
						4.95E-02	4.00E+02	*(1.3)*			g	
Batch: 5110039	7196_CR6			**Work Order:**	M6MLJ1AA		**Report DB ID:**	9M6MLJ10				
HEXCHROME	**1.76E-01**			0.0E+00	1.55E-01	mg/kg	N/A	*(1.1)*	4/22/15 03:48 p		2.5033	
							1.55E-01	*N/A*			g	
Batch: 5110040	TC99_ETVDSK_LSC			**Work Order:**	M6MLJ1AC		**Report DB ID:**	9M6MLJ10				
Tc-99	**4.34E-01**	U	2.6E-01	2.7E-01	5.94E-01	pCi/g	100%	*0.73*	4/25/15 02:24 a		2.03	LSC9
						2.85E-01	1.50E+01	*(3.2)*			g	
Batch: 5110041	UTOT_KPA			**Work Order:**	M6MLJ1AE		**Report DB ID:**	9M6MLJ10				
TOTAL-URANIUM	**9.95E+00**		0.0E+00	1.2E+00	2.65E-01	ug/g		*(37.6)*	4/25/15 08:30 a		0.52	KPAW3
						9.36E-02	1.00E+00	*(17.)*			ML	

No. of Results: 5 **Comments:**

TestAmerica Inc
rptSTLRchSample
V5.3.6.8 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: 27-Apr-15

Lab Name:	**TestAmerica Inc**	**SDG:**	JP0944	**Collection Date:**	4/16/2015 2:12:00 PM
Lot-Sample No.:	**J5D200420-7**	**Report No. :**	65475	**Received Date:**	4/20/2015 10:50:00 AM
Client Sample ID:	**J1V620**	**COC No. :**	RC-149-149	**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: 5110037	AXTB			**Work Order:**	M6MLK1AF		**Report DB ID:**	9M6MLK10				
I129	**1.36E-02**	U	4.6E-02	4.6E-02	8.50E-02	pCi/g		*0.16*	4/24/15 07:10 a		55.8	LEP5$1
						4.27E-02	1.00E+00	*0.59*			g	
Batch: 5110038	TRITIUM_DIST_LSC			**Work Order:**	M6MLK1AD		**Report DB ID:**	9M6MLK10				
H-3	**6.68E-02**	U	6.8E-02	7.2E-02	1.60E-01	pCi/g	100%	*0.42*	4/24/15 03:40 p		44.1	LSC4
						7.24E-02	4.00E+02	*(1.9)*			g	
Batch: 5110039	7196_CR6			**Work Order:**	M6MLK1AA		**Report DB ID:**	9M6MLK10				
HEXCHROME	**2.12E-01**			0.0E+00	1.55E-01	mg/kg	N/A	*(1.4)*	4/22/15 03:48 p		2.5136	
							1.55E-01	*N/A*			g	
Batch: 5110040	TC99_ETVDSK_LSC			**Work Order:**	M6MLK1AC		**Report DB ID:**	9M6MLK10				
Tc-99	**2.55E-01**	U	2.5E-01	2.6E-01	5.79E-01	pCi/g	100%	*0.44*	4/25/15 03:26 a		2.02	LSC9
						2.77E-01	1.50E+01	*(2.)*			g	
Batch: 5110041	UTOT_KPA			**Work Order:**	M6MLK1AE		**Report DB ID:**	9M6MLK10				
TOTAL-URANIUM	**2.12E+00**		0.0E+00	2.5E-01	2.70E-01	ug/g		*(7.8)*	4/25/15 08:32 a		0.51	KPAW3
						9.55E-02	1.00E+00	*(17.)*			ML	

No. of Results: 5 **Comments:**

TestAmerica Inc
rptSTLRchSample
V5.3.6.8 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: 27-Apr-15

Lab Name:	**TestAmerica Inc**	**SDG:**	JP0944	**Collection Date:**	4/16/2015 2:20:00 PM
Lot-Sample No.:	**J5D200420-8**	**Report No. :**	65475	**Received Date:**	4/20/2015 10:50:00 AM
Client Sample ID:	**J1V621**	**COC No. :**	RC-149-149	**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: 5110037	AXTB			**Work Order:**	M6MLL1AF		**Report DB ID:**	9M6MLL10				
I129	**9.46E-03**	U	5.7E-02	5.7E-02	1.04E-01	pCi/g		*0.09*	4/24/15 10:38 a		45.2	LEP5$1
						5.24E-02	1.00E+00	*0.33*			g	
Batch: 5110038	TRITIUM_DIST_LSC			**Work Order:**	M6MLL1AD		**Report DB ID:**	9M6MLL10				
H-3	**-1.07E-02**	U	4.1E-02	4.4E-02	1.07E-01	pCi/g	100%	*-0.1*	4/24/15 04:03 p		48.3	LSC4
						4.85E-02	4.00E+02	*-0.49*			g	
Batch: 5110039	7196_CR6			**Work Order:**	M6MLL1AA		**Report DB ID:**	9M6MLL10				
HEXCHROME	**1.55E-01**	U		0.0E+00	1.55E-01	mg/kg	N/A	*1.*	4/22/15 03:48 p		2.5075	
							1.55E-01	*N/A*			g	
Batch: 5110040	TC99_ETVDSK_LSC			**Work Order:**	M6MLL1AC		**Report DB ID:**	9M6MLL10				
Tc-99	**7.47E-02**	U	2.4E-01	2.6E-01	5.83E-01	pCi/g	100%	*0.13*	4/25/15 04:28 a		2.01	LSC9
						2.79E-01	1.50E+01	*0.58*			g	
Batch: 5110041	UTOT_KPA			**Work Order:**	M6MLL1AE		**Report DB ID:**	9M6MLL10				
TOTAL-URANIUM	**3.10E+00**		0.0E+00	3.6E-01	2.70E-01	ug/g		*(11.5)*	4/25/15 08:37 a		0.51	KPAW3
						9.55E-02	1.00E+00	*(17.)*			ML	

No. of Results: 5 **Comments:**

TestAmerica Inc
rptSTLRchSample
V5.3.6.8 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: 27-Apr-15

Lab Name:	**TestAmerica Inc**	**SDG:**	JP0944	**Collection Date:**	4/16/2015 2:32:00 PM
Lot-Sample No.:	**J5D200420-9**	**Report No. :**	65475	**Received Date:**	4/20/2015 10:50:00 AM
Client Sample ID:	**J1V622**	**COC No. :**	RC-149-149	**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: 5110037	AXTB			**Work Order:**	M6MLM1AF		**Report DB ID:**	9M6MLM10				
I129	**2.28E-02**	U	5.0E-02	5.0E-02	9.21E-02	pCi/g		*0.25*	4/24/15 04:48 p		53.7	LEP5$1
						4.62E-02	1.00E+00	*0.92*			g	
Batch: 5110038	TRITIUM_DIST_LSC			**Work Order:**	M6MLM1AD		**Report DB ID:**	9M6MLM10				
H-3	**1.00E-01**	U	5.3E-02	5.6E-02	1.16E-01	pCi/g	100%	*0.86*	4/24/15 04:26 p		51.1	LSC4
						5.26E-02	4.00E+02	*(3.6)*			g	
Batch: 5110039	7196_CR6			**Work Order:**	M6MLM1AA		**Report DB ID:**	9M6MLM10				
HEXCHROME	**2.68E-01**			0.0E+00	1.55E-01	mg/kg	N/A	*(1.7)*	4/22/15 03:48 p		2.4995	
							1.55E-01	*N/A*			g	
Batch: 5110040	TC99_ETVDSK_LSC			**Work Order:**	M6MLM1AC		**Report DB ID:**	9M6MLM10				
Tc-99	**2.08E-01**	U	2.5E-01	2.6E-01	5.82E-01	pCi/g	100%	*0.36*	4/25/15 05:30 a		2.01	LSC9
						2.79E-01	1.50E+01	*(1.6)*			g	
Batch: 5110041	UTOT_KPA			**Work Order:**	M6MLM1AE		**Report DB ID:**	9M6MLM10				
TOTAL-URANIUM	**3.04E+00**		0.0E+00	3.6E-01	2.70E-01	ug/g		*(11.3)*	4/25/15 08:40 a		0.51	KPAW3
						9.55E-02	1.00E+00	*(17.)*			ML	

No. of Results: 5 **Comments:**

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: 27-Apr-15

Lab Name:	**TestAmerica Inc**	**SDG:**	JP0944	**Collection Date:**	4/16/2015 2:45:00 PM
Lot-Sample No.:	**J5D200420-10**	**Report No. :**	65475	**Received Date:**	4/20/2015 10:50:00 AM
Client Sample ID:	**J1V623**	**COC No. :**	RC-149-149	**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: 5110037	AXTB			**Work Order:**	M6MLN1AF		**Report DB ID:**	9M6MLN10				
I129	**-3.46E-02**	U	5.2E-02	5.2E-02	8.77E-02	pCi/g		*-0.4*	4/25/15 10:26 a		52.3	LEP5$1
						4.40E-02	1.00E+00	*-(1.3)*			g	
Batch: 5110038	TRITIUM_DIST_LSC			**Work Order:**	M6MLN1AD		**Report DB ID:**	9M6MLN10				
H-3	**5.56E-02**	U	5.9E-02	6.3E-02	1.40E-01	pCi/g	100%	*0.4*	4/24/15 04:49 p		38.1	LSC4
						6.31E-02	4.00E+02	*(1.8)*			g	
Batch: 5110039	7196_CR6			**Work Order:**	M6MLN1AA		**Report DB ID:**	9M6MLN10				
HEXCHROME	**1.55E-01**	U		0.0E+00	1.55E-01	mg/kg	N/A	*1.*	4/22/15 03:48 p		2.5058	
							1.55E-01	*N/A*			g	
Batch: 5110040	TC99_ETVDSK_LSC			**Work Order:**	M6MLN1AC		**Report DB ID:**	9M6MLN10				
Tc-99	**2.18E-01**	U	2.4E-01	2.6E-01	5.75E-01	pCi/g	100%	*0.38*	4/25/15 07:33 a		2.02	LSC9
						2.76E-01	1.50E+01	*(1.7)*			g	
Batch: 5110041	UTOT_KPA			**Work Order:**	M6MLN1AE		**Report DB ID:**	9M6MLN10				
TOTAL-URANIUM	**1.57E+01**		0.0E+00	1.8E+00	2.60E-01	ug/g		*(60.5)*	4/25/15 08:46 a		0.53	KPAW3
						9.19E-02	1.00E+00	*(17.)*			ML	

No. of Results: 5 **Comments:**

TestAmerica Inc
rptSTLRchSample
V5.3.6.8 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: 27-Apr-15

Lab Name:	**TestAmerica Inc**	**SDG:**	JP0944	**Collection Date:**	4/16/2015 1:02:00 PM
Lot-Sample No.:	**J5D200420-11**	**Report No. :**	65475	**Received Date:**	4/20/2015 10:50:00 AM
Client Sample ID:	**J1V624**	**COC No. :**	RC-149-149	**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: 5110037	AXTB			**Work Order:**	M6MLQ1AF		**Report DB ID:**	9M6MLQ10				
I129	**-1.87E-03**	U	8.5E-02	8.5E-02	1.50E-01	pCi/g		*-0.01*	4/25/15 06:59 a		39.1	LEP5$1
						7.52E-02	1.00E+00	*-0.04*			g	
Batch: 5110038	TRITIUM_DIST_LSC			**Work Order:**	M6MLQ1AD		**Report DB ID:**	9M6MLQ10				
H-3	**2.70E-02**	U	5.2E-02	5.5E-02	1.28E-01	pCi/g	100%	*0.21*	4/24/15 05:35 p		47.8	LSC4
						5.79E-02	4.00E+02	*0.97*			g	
Batch: 5110039	7196_CR6			**Work Order:**	M6MLQ1AA		**Report DB ID:**	9M6MLQ10				
HEXCHROME	**3.97E-01**			0.0E+00	1.55E-01	mg/kg	N/A	*(2.6)*	4/22/15 03:48 p		2.5085	
							1.55E-01	*N/A*			g	
Batch: 5110040	TC99_ETVDSK_LSC			**Work Order:**	M6MLQ1AC		**Report DB ID:**	9M6MLQ10				
Tc-99	**5.10E-01**	U	2.6E-01	2.7E-01	5.96E-01	pCi/g	100%	*0.86*	4/25/15 08:35 a		2.01	LSC9
						2.86E-01	1.50E+01	*(3.7)*			g	
Batch: 5110041	UTOT_KPA			**Work Order:**	M6MLQ1AE		**Report DB ID:**	9M6MLQ10				
TOTAL-URANIUM	**2.03E+01**		0.0E+00	2.4E+00	2.65E-01	ug/g		*(76.7)*	4/25/15 08:52 a		0.52	KPAW3
						9.36E-02	1.00E+00	*(17.)*			ML	

No. of Results: 5 **Comments:**

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: 27-Apr-15

Lab Name:	**TestAmerica Inc**	**SDG:**	JP0944	**Collection Date:**	4/16/2015 1:14:00 PM
Lot-Sample No.:	**J5D200420-12**	**Report No. :**	65475	**Received Date:**	4/20/2015 10:50:00 AM
Client Sample ID:	**J1V625**	**COC No. :**	RC-149-149	**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: 5110037	AXTB			**Work Order:**	M6MLR1AF		**Report DB ID:**	9M6MLR10				
I129	**-1.75E-03**	U	7.9E-02	7.9E-02	1.40E-01	pCi/g		*-0.01*	4/25/15 06:59 a		42.0	LEP5$1
						7.00E-02	1.00E+00	*-0.04*			g	
Batch: 5110038	TRITIUM_DIST_LSC			**Work Order:**	M6MLR1AD		**Report DB ID:**	9M6MLR10				
H-3	**6.08E-02**	U	6.1E-02	6.4E-02	1.43E-01	pCi/g	100%	*0.43*	4/24/15 05:58 p		46.8	LSC4
						6.46E-02	4.00E+02	*(1.9)*			g	
Batch: 5110039	7196_CR6			**Work Order:**	M6MLR1AA		**Report DB ID:**	9M6MLR10				
HEXCHROME	**5.21E-01**			0.0E+00	1.55E-01	mg/kg	N/A	*(3.4)*	4/22/15 03:48 p		2.5174	
							1.55E-01	*N/A*			g	
Batch: 5110040	TC99_ETVDSK_LSC			**Work Order:**	M6MLR1AC		**Report DB ID:**	9M6MLR10				
Tc-99	**3.83E-01**	U	2.5E-01	2.7E-01	5.85E-01	pCi/g	100%	*0.65*	4/25/15 09:37 a		2.03	LSC9
						2.81E-01	1.50E+01	*(2.9)*			g	
Batch: 5110041	UTOT_KPA			**Work Order:**	M6MLR1AE		**Report DB ID:**	9M6MLR10				
TOTAL-URANIUM	**5.58E+01**		0.0E+00	6.6E+00	2.70E-01	ug/g		*(206.8)*	4/25/15 09:03 a		0.51	KPAW3
						9.55E-02	1.00E+00	*(17.)*			ML	

No. of Results: 5 **Comments:**

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: 27-Apr-15

DUPLICATE RESULTS

Lab Name:	**TestAmerica Inc**	**SDG:**	JP0944	**Collection Date:**	4/16/2015 12:43:00 PM
Lot-Sample No.:	**J5D200420-1**	**Report No. :**	65475	**Received Date:**	4/20/2015 10:50:00 AM
Client Sample ID:	**J1V614**	**COC No. :**	RC-149-149	**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: 5110039	7196_CR6			**Work Order:**	M6MK91AH	**Report DB ID:**	M6MK91ER		**Orig Sa DB ID:** 9M6MK910			
HEXCHROME	2.75E-01			0.0E+00	1.55E-01	mg/kg	N/A	(1.8)	4/22/15 03:48 p		2.5075	
	2.52E-01		**RPD**	**8.7**		1.55E-01		N/A			g	

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

TestAmerica Inc **RPD - Relative Percent Difference.**

rptSTLRchDupV5.3.6.8 A2002 **MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.**

FORM II

Date: 27-Apr-15

DUPLICATE RESULTS

Lab Name:	**TestAmerica Inc**	**SDG:**	JP0944	**Collection Date:**	4/16/2015 12:43:00 PM
Lot-Sample No.:	**J5D200420-1**	**Report No. :**	65475	**Received Date:**	4/20/2015 10:50:00 AM
Client Sample ID:	**J1V614 DUP**	**COC No. :**	RC-149-149	**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: 5110041	UTOT_KPA			**Work Order:**	M6MK91AK	**Report DB ID:**		M6MK91KR	**Orig Sa DB ID:**	9M6MK910		
TOTAL-URANIUM	1.59E+01		0.0E+00	1.9E+00	2.70E-01	ug/g		(58.9)	4/25/15 07:56 a		0.51	KPAW3
	1.62E+01		**RPD**	**2.0**		1.00E+00		(17.)			ML	

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

TestAmerica Inc **RPD** - Relative Percent Difference.

rptSTLRchDupV5.3.6.8 A2002 **MDC|MDA,Lc** - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

FORM II

Date: 27-Apr-15

DUPLICATE RESULTS

Lab Name:	**TestAmerica Inc**	**SDG:**	JP0944	**Collection Date:**	4/16/2015 1:25:00 PM
Lot-Sample No.:	**J5D200420-3**	**Report No. :**	65475	**Received Date:**	4/20/2015 10:50:00 AM
Client Sample ID:	**J1V616 DUP**	**COC No. :**	RC-149-149	**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: 5110040	TC99_ETVDSK_LSC			**Work Order:**	M6MLD1AG	**Report DB ID:**	M6MLD1GR		**Orig Sa DB ID:** 9M6MLD10			
Tc-99	-3.04E-02	U	2.4E-01	2.5E-01	5.82E-01	pCi/g	100%	-0.05	4/24/15 10:16 p		2.01	LSC9
	1.26E-01	U	**RPD**	**327.4**		1.50E+01		-0.24			g	

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

TestAmerica Inc
rptSTLRchDupV5.
3.6.8 A2002

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

FORM II

Date: 27-Apr-15

DUPLICATE RESULTS

Lab Name:	**TestAmerica Inc**	**SDG:**	JP0944	**Collection Date:**	4/16/2015 1:46:00 PM
Lot-Sample No.:	**J5D200420-5**	**Report No. :**	65475	**Received Date:**	4/20/2015 10:50:00 AM
Client Sample ID:	**J1V618 DUP**	**COC No. :**	RC-149-149	**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: 5110038	TRITIUM_DIST_LSC			**Work Order:**	M6MLG1AG	**Report DB ID:**	M6MLG1GR		**Orig Sa DB ID:** 9M6MLG10			
H-3	4.87E-02	U	4.2E-02	4.4E-02	9.66E-02	pCi/g	100%	0.5	4/24/15 02:55 p		54.3	LSC4
	5.10E-02	U	**RPD**	**4.6**		4.00E+02		(2.2)			g	

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

TestAmerica Inc
rptSTLRchDupV5.
3.6.8 A2002

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

FORM II

Date: 27-Apr-15

DUPLICATE RESULTS

Lab Name:	**TestAmerica Inc**	**SDG:**	JP0944	**Collection Date:**	4/16/2015 2:00:00 PM
Lot-Sample No.:	**J5D200420-6**	**Report No. :**	65475	**Received Date:**	4/20/2015 10:50:00 AM
Client Sample ID:	**J1V619 DUP**	**COC No. :**	RC-149-149	**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: 5110037 AXTB				**Work Order:** M6MLJ1AG		**Report DB ID:** M6MLJ1GR			**Orig Sa DB ID:** 9M6MLJ10			
I129	6.92E-03	U	5.2E-02	5.2E-02	9.36E-02	pCi/g		0.07	4/22/15 10:30 a		49.8	LEP5$1
	-1.09E-02	U	**RPD**	**-891.2**		1.00E+00		0.27			g	

No. of Results: 1 **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

BLANK RESULTS

Date: 27-Apr-15

Lab Name: TestAmerica Inc

Matrix: SOIL

SDG: JP0944

Report No. : 65475

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: 5110039	7196_CR6			**Work Order:**	M6MMC1AA		**Report DB ID:**	M6MMC1AB				
HEXCHROME	1.55E-01	U		0.0E+00	1.55E-01	mg/kg	N/A	1.	4/22/15 03:48 p		2.5	
						1.55E-01		N/A			g	
Batch: 5110041	UTOT_KPA			**Work Order:**	M6MME1AA		**Report DB ID:**	M6MME1AB				
TOTAL-URANIUM	1.01E-02	U	0.0E+00	1.0E-03	2.55E-01	ug/g		0.04	4/25/15 09:05 a		0.54	KPAW3
					9.02E-02	1.00E+00		(19.4)			ML	
Batch: 5110040	TC99_ETVDSK_LSC			**Work Order:**	M6MMD1AA		**Report DB ID:**	M6MMD1AB				
Tc-99	2.78E-01	U	2.5E-01	2.6E-01	5.88E-01	pCi/g	100%	0.47	4/25/15 10:39 a		2.01	LSC9
					2.82E-01	1.50E+01		(2.1)			g	
Batch: 5110038	TRITIUM_DIST_LSC			**Work Order:**	M6MMA1AA		**Report DB ID:**	M6MMA1AB				
H-3	-4.39E-03	U	5.1E-02	5.4E-02	1.32E-01	pCi/g	100%	-0.03	4/24/15 06:21 p		51.5	LSC4
					5.97E-02	4.00E+02		-0.16			g	
Batch: 5110037	AXTB			**Work Order:**	M6ML91AA		**Report DB ID:**	M6ML91AB				
I129	-6.99E-04	U	1.2E-02	1.2E-02	2.18E-02	pCi/g		-0.03	4/25/15 01:55 p		50.0	LEP5$1
					1.10E-02	1.00E+00		-0.12			g	

No. of Results: 5 **Comments:**

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: 27-Apr-15

Lab Name: TestAmerica Inc

Matrix: SOIL

SDG: JP0944

Report No. : 65475

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: 5110039	7196_CR6			**Work Order:**	M6MMC1AC		**Report DB ID:**	M6MMC1AS					
HEXCHROME	1.85E+01			0.0E+00	1.55E-01	mg/kg	N/A	2.00E+01		93%	4/22/15 03:48 p	2.5	
							Rec Limits:	80	120	-0.1		g	
Batch: 5110041	UTOT_KPA			**Work Order:**	M6MME1AC		**Report DB ID:**	M6MME1CS					
TOTAL-URANIUM	5.21E+00		0.0E+00	6.1E-01	2.65E-01	ug/g		5.85E+00	3.0E-02	89%	4/25/15 09:08 a	0.52	KPAW3
							Rec Limits:	70	130	-0.1		ML	
Batch: 5110041	UTOT_KPA			**Work Order:**	M6MME1AD		**Report DB ID:**	M6MME1DS					
TOTAL-URANIUM	1.63E+01		0.0E+00	1.9E+00	2.60E-01	ug/g		1.89E+01	1.0E-01	86%	4/25/15 09:14 a	0.53	KPAW3
							Rec Limits:	70	130	-0.1		ML	
Batch: 5110040	TC99_ETVDSK_LSC			**Work Order:**	M6MMD1AC		**Report DB ID:**	M6MMD1CS					
Tc-99	2.50E+01		7.1E-01	9.2E-01	5.90E-01	pCi/g	100%	3.36E+01	3.5E-01	74%	4/25/15 11:41 a	2.01	LSC9
							Rec Limits:	70	130	-0.3		g	
Batch: 5110038	TRITIUM_DIST_LSC			**Work Order:**	M6MMA1AC		**Report DB ID:**	M6MMA1CS					
H-3	5.77E-01		9.8E-02	1.0E-01	1.50E-01	pCi/g	100%	5.94E-01	1.8E-02	97%	4/24/15 06:43 p	49.5	LSC4
							Rec Limits:	70	130	0.0		g	
Batch: 5110037	AXTB			**Work Order:**	M6ML91AC		**Report DB ID:**	M6ML91CS					
I129	2.20E+01		2.7E+00	2.7E+00	2.12E-01	pCi/g		1.98E+01	1.9E-01	111%	4/25/15 05:18 p	64.95	LEP5$1
							Rec Limits:	70	130	0.1		g	

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

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

rptSTLRchLcs
V5.3.6.8 A2002

FORM II

MATRIX SPIKE RESULTS

Date: 27-Apr-15

Lab Name: TestAmerica Inc **SDG:** JP0944

Lot-Sample No.: J5D200420-1, J1V614 **Report No. :** 65475 **Matrix:** SOIL

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	CSU (2 s)	MDC|MDA	Rpt Unit	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 5110039	**Work Order:** M6MK91AG			**Report DB ID:** M6MK91CW			**Orig Sa DB ID:** 9M6MK910					
HEXCHROME	2.94E+01			0.0E+00	1.55E-01	mg/kg	N/A	87.98%	3.34E+01	4/22/15 03:48 p	2.5071	7196_CR6
	2.52E-01										g	

Number of Results: 1

Comments:

TestAmerica Inc
rptSTLRchMs
V5.3.6.8 A2002

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

FORM II

MATRIX SPIKE RESULTS

Date: 27-Apr-15

Lab Name: TestAmerica Inc **SDG:** JP0944

Lot-Sample No.: J5D200420-2, J1V615 **Report No. :** 65475 **Matrix:** SOIL

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	CSU (2 s)	MDC|MDA	Rpt Unit	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 5110041	**Work Order:** M6MLC1AG			**Report DB ID:** M6MLC1GW			**Orig Sa DB ID:** 9M6MLC10					
TOTAL-URANIUM	1.69E+01		0.0E+00	2.9E+00	2.70E-01	ug/g			0.00E+00	4/25/15 08:05 a	0.51	UTOT_KPA
	6.48E+00										ML	KPAW3

Number of Results: 1

Comments:

TestAmerica Inc
rptSTLRchMs
V5.3.6.8 A2002

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

FORM II

MATRIX SPIKE RESULTS

Date: 27-Apr-15

Lab Name: TestAmerica Inc **SDG:** JP0944

Lot-Sample No.: J5D200420-4, J1V617 **Report No. :** 65475 **Matrix:** SOIL

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	CSU (2 s)	MDC|MDA	Rpt Unit	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 5110040	**Work Order:** M6MLE1AG			**Report DB ID:** M6MLE1GW			**Orig Sa DB ID:** 9M6MLE10					
Tc-99	1.69E+02		1.7E+00	4.2E+00	5.79E-01	pCi/g	100%	74.89%	2.26E+02	4/25/15 12:20 a	2.01	TC99_ETVDSK_LSC
	1.11E-01								1.3E+00		g	LSC9

Number of Results: 1

Comments:

TestAmerica Inc
rptSTLRchMs
V5.3.6.8 A2002

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

4/27/2015 11:17:36 AM

Lot No., Due Date: J5D200420; 04/27/2015
Client, Site: 127642; S00W235B00 HANFORD
QC Batch No., Method Test: 5110037; RGAMLEPS Gamma by LEPS
SDG, Matrix: JP0944; 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 Thomas DMEYS **Date** 4/27/14

TestAmerica Richland
QAS_RADCALCv4.8.68.1

Page 1

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 511 0037

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: CRDL = 1 Opt/g

Second Level Review: [signature] Date: 4/27/15

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

4/27/2015 9:07:01 AM

Lot No., Due Date: J5D200420; 04/27/2015
Client, Site: 127642; S00W235B00 HANFORD
QC Batch No., Method Test: 5110040; RTC99 Tc-99 by LSC
SDG, Matrix: JP0944; SOIL

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

6.0 Comments on any No response:

First Level _____ **Date** 4/27/15

TestAmerica Richland
QAS_RADCALCv4.8.68.1

Page 1

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 5110040

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: CRα = 15pCi/g

Second Level Review: [signature] Date: 4/27/15

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

4/27/2015 10:08:36 AM

Lot No., Due Date: J5D200420; 04/27/2015
Client, Site: 127642; S00W235B00 HANFORD
QC Batch No., Method Test: 5110038; RTRITIUM H-3 by LSC
SDG, Matrix: JP0944; SOIL

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

6.0 Comments on any No response:

First Level [signature] **Date** 4/27/14

TestAmerica Richland
QAS_RADCALCv4.8.68.1

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 5110038

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: CRDL = 400pCi/g

Second Level Review: Rhonda Wilson Date: 4/27/15

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

CHEMISTRY, First/Second Level Review

4/27/2015 10:42:41 AM

Lot No., Due Date: J5D200420; 04/27/2015
Client, Site: 127642; S00W235B00 HANFORD
QC Batch No., Method Test: 5110041; RUNAT UNat by KPA
SDG, Matrix: JP0944; SOIL

1.0 Initial Calibration

1.1	Performed at required frequency with required number of levels?	Yes No N/A 2nd
1.2	Correlation coefficient within QC limits?	Yes No N/A 2nd
1.3	Initial calibration verification (ICV) analyzed immediately after calibr. and results within QC limits of +/- 10% at 0.75 ppm?	Yes No N/A 2nd
1.4	ICB analyzed immediately after ICV and concentration of all parameters +/- report limit from zero? RL per RadCalc.	Yes No N/A 2nd

2.0 Continuing Calibration

2.1	CCV analyzed at required frequency and all parameters within QC limits or +/- 10% at 0.7500 ppm?	Yes No N/A 2nd
2.2	CCB analyzed at required frequency and all results +/- reporting limit from zero?	Yes No N/A 2nd

3.0 Sample Analysis

3.1	Were any samples with concentration above the linear range diluted and reanalyzed?	Yes No N/A 2nd
3.2	Were all sample holding times met?	Yes No N/A 2nd

4.0 QC Samples

4.1	All results for the preparation blank < reporting limits?	Yes No N/A 2nd
4.2	MS or MS/MSD recoveries within 25% at 1 ppm and within 20% RPD (for MSD)?	Yes No N/A 2nd
4.3	LCS precent recovery within 20% at 1 ppm and 20% RPD (for LCSD)?	Yes No N/A 2nd
4.4	"ICP Only: Sample and DUP within 35% RPD?"	Yes No N/A 2nd
4.5	ICP only: One serial dilution performed and within 10% of parent per SDG?	Yes No N/A 2nd
4.6	ICP only: RLV run per batch and within 20% of current values?	Yes No N/A 2nd
4.7	ICP only: ICSA,ICSAB analyzed at the required frequencies and within 20% of values per dilution record?	Yes No N/A 2nd

5.0 Other

5.1	Are all nonconformances included and noted?	Yes No N/A 2nd
5.2	Is the correct date and time of analysis shown?	Yes No N/A 2nd
5.3	Did the analyst sign and date the digestion log for the analytical run?	Yes No N/A 2nd
5.4	Correct methodology used?	Yes No N/A 2nd
5.5	Transcriptions checked?	Yes No N/A 2nd
5.6	Calculations checked at minimum frequency?	Yes No N/A 2nd
5.7	Units checked?	Yes No N/A 2nd
5.8	Verified that appropriate data transferred to ReportDB?	Yes No N/A 2nd

6.0 Comments on any 'No' response:

RW 4/27/15

First Level _____ Date 4/27/15 Second _____ Date 4/27/15

TestAmerica Richland
QAS_RADCALCv4.8.66.3

Page 1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Richland Laboratory
Data Review Check List
Hexavalent Chromium

Batch Number(s):	5110039	Lab Sample Numbers or SDG:	JP0944

Method/Test/Parameter: Cr+6 ☐ RL-WC-008(Aqueous) ☐ RL-WC-003(Aqueous) ☒ RL-WC-004(Solid)

Review Item	Yes (✓)	No (✓)	N/A (✓)	2nd Level Review (✓)
A. Initial Calibration 1. Performed at required frequency with required number of levels?	✓			✓
2. Correlation coefficient greater than 0.97?	✓			✓
3. Initial calibration verification (ICV) analyzed immediately after calibration and results within 10% of expected?	✓			✓
4. Initial calibration blank (ICB) analyzed immediately after ICV and concentrations of all parameters ≤ reporting limit?	✓			✓
B. Continuing Calibration 1. CCV analyzed at required frequency and all parameters within 10% of expected?	✓			✓
2. CCB analyzed at required frequency and all results ≤ reporting limit?	✓			✓
C. Sample Analysis 1. Were any samples with concentrations above the linear range diluted and reanalyzed?			✓	✓
2. Were all sample holding times met?	✓			✓
D. QC Samples 1. All results for the preparation blank below limits?	✓			✓
2. LCS percent recovery within 85-115%	✓			✓
3. $PbCrO_4$ percent recovery within 75-125%?	✓			✓
4. Sample and Duplicate within 20% (aqueous) or 35% (solid) RPD?	✓			✓
5. MS or MS/MSD recoveries within 85-115% (aqueous) or 75-125% (solid)?	✓			✓
6. On MS failure, PDMS within 85-115%?			✓	✓
E. Other 1. Are all nonconformances included and noted?			✓	✓
2. Is the correct date and time of analysis shown?	✓			✓
3. Did the analyst sign and date the front page of the analytical run?	✓			✓
4. Correct methodology used?	✓			✓
5. Transcriptions checked?	✓			✓
6. Calculations checked at minimum frequency?	✓			✓
7. Units checked?	✓			✓

Comments on any "No" response or list NCM number:

Analyst I. Salefu Date 4/23/15 2nd Review [signature] Date 4/23/15

CG-231 Rev 2 10/14

Washington Closure Hanford — CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-149-149

Collector: B. Jackson	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: 316-3, west deep zone, in-process		SAF No.: RC-149
Ice Chest No.: AFS-08-001	Field Logbook No.: EL-1663-08	COA: R316032600	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

RCF 38931

POSSIBLE SAMPLE HAZARDS/REMARKS

potentially radioactive < D.O.T. limits 4/16/15 cmB

Special Handling and/or Storage

cooling as required

Preservation	Cool 4C	None									
Type of Container	G/P	G/P									
No. of Container(s)	1	1									
Volume	250mL	1000mL									
Sample Analysis	Chromium Hex - 7196	Iodine-129; Technetium-99; Total Uranium; Tritium - H3									

Sample No.	Matrix	Sample Date	Sample Time										
J1V614 m6mK9	SOIL	4-16-15	1243	✓	✓								
J1V615 m6mLC	SOIL	4-16-15	1252	✓	✓								
J1V616 m6mLD	SOIL	4-16-15	1325	✓	✓								
J1V617 m6mLE	SOIL	4-16-15	1336	✓	✓								
J1V618 m6mLG	SOIL	4-16-15	1346	✓	✓								

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
W.H. Jackson, Jr.	4-16-15 1510	(WCH) DWSHEA DWSHEA	4/16/15 1510
DWSHEA DWSHEA	4/16/15 1610	C. Bingham	4-16-15 1610
C. Bingham	4-16-15 1615	1060 Battelle, fridge #2A	4-16-15 1615
1060 Battelle, fridge #2A	4-20-15 0730	C. Bingham	4-20-15 0730
C. Bingham WCH	4-20-15 1050	TALL	4-20-15 1050

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

SPECIAL INSTRUCTIONS

J5D200420

Due 4-27-15

J5D200420

REVIEWED BY K. Wood/Vinemail DATE 4-20-15

SOG.

JP0944

WCH-EE-011

Washington Closure Hanford — CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-149-149 | Page 2 of 3

Collector: B. Jackson	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: 316-3, west deep zone, in-process		SAF No.: RC-149
Ice Chest No.: AFS-08-001	Field Logbook No.: EL-1663-08	COA: R316032600	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

RCF 38931

POSSIBLE SAMPLE HAZARDS/REMARKS
potentially radioactive < D.O.T. Limits 4/16/15 cmB

Special Handling and/or Storage
cooling as required

Preservation	Cool 4C	None									
Type of Container	G/P	G/P									
No. of Container(s)	1	1									
Volume	250mL	1000mL									
Sample Analysis	Chromium Hex - 7196	Iodine-129; Technetium-99; Total Uranium; Tritium - H3									

Sample No.	Matrix	Sample Date	Sample Time									
J1V619 m6mLJ	SOIL	4-16-15	1400	✓	✓							
J1V620 m6mLK	SOIL	4-16-15 DWS 4/16/15	~~1414~~ 1412	✓	✓							
J1V621 m6mLL	SOIL	4-16-15	1420	✓	✓							
J1V622 m6mLM	SOIL	4-16-15	1432	✓	✓							
J1V623 m6mLN	SOIL	4-16-15	1445	✓	✓							

CHAIN OF POSSESSION	Sign/Print Names	Date/Time
Relinquished By/Removed From: W.A. Jackson, Jr.	Received By/Stored In: WCH Dwshea DWSHEA	4-16-15 1510 / 4/16/15 1510
Relinquished By/Removed From: DWSHEA DWSHEA	Received By/Stored In: C. Bingham	4/16/15 1610 / 4-16-15 1610
Relinquished By/Removed From: C. Bingham	Received By/Stored In: 1060 Battelle, fridge #2A	4-16-15 1615 / 4-16-15 1615
Relinquished By/Removed From: 1060 Battelle, fridge #2A	Received By/Stored In: C. Bingham	4-20-15 0730 / 4-20-15 0730
Relinquished By/Removed From: C. Bingham WCH	Received By/Stored In: Jack J. Bock TAL	4-20-15 1050 / 4-20-15 1050
Relinquished By/Removed From	Received By/Stored In	
Relinquished By/Removed From	Received By/Stored In	

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

SPECIAL INSTRUCTIONS

JS0200420
Due 4-27-15

REVIEWED BY K. Woodworth DATE 4-20-15

SDG: JP0944

WCH-EE-011

Washington Closure Hanford — CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-149-149 | Page 3 of 3

Collector: B. Jackson	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: 316-3, west deep zone, in-process		SAF No.: RC-149
Ice Chest No.: AFS-08-001	Field Logbook No.: EL-1663-08	COA: R316032600	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

RCF 38942

POSSIBLE SAMPLE HAZARDS/REMARKS
potentially radioactive < D.O.T. Limits 4/16/15 CMB

Special Handling and/or Storage
cooling as required

Preservation	Cool 4C	None										
Type of Container	G/P	G/P										
No. of Container(s)	1	1										
Volume	250mL	1000mL										
Sample Analysis	Chromium Hex - 7196	Iodine-129; Technetium-99 Total Uranium; Tritium - H3										

Sample No.	Matrix	Sample Date	Sample Time										
J1V624 mLomLQ	SOIL	4-16-15	1302	✓	✓								
J1V625 mLomLR	SOIL	4-16-15	1314	✓	✓								
J1V626 TRE 4-16-15	SOIL												
J1V627	SOIL												
J1V628	SOIL												

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Sign/Print Names	Date/Time
Relinquished By/Removed From: NSH W.F. JACKSON, JR.		4-16-15/1510	Received By/Stored In: WCH DWSHEA		4/16/15 1510
Relinquished By/Removed From: DWSHEA		4/16/15 1610	Received By/Stored In: C. Bingham		4-16-15 1610
Relinquished By/Removed From: C. Bingham		4-16-15 1615	Received By/Stored In: 1060 Battelle, fridge #2A		4-16-15 1615
Relinquished By/Removed From: 1060 Battelle, fridge #2A		4-20-15 0730	Received By/Stored In: C. Bingham		4-20-15 0730
Relinquished By/Removed From: C. Bingham WCH		4-20-15 1050	Received By/Stored In: BACKTALK		4-20-15/1050
Relinquished By/Removed From		Date/Time	Received By/Stored In		Date/Time
Relinquished By/Removed From		Date/Time	Received By/Stored In		Date/Time

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

SPECIAL INSTRUCTIONS

JSD200420
Due 4-27-15

REVIEWED BY K. Wood Vincent DATE 4-20-15

JP0944

WCH-EE-011

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 4/20/15/1050 Container GM Screen Result: (Airlock) 150 cpm Initials[J]
Sample GM Screen Result (Sample Receiving) 20 cpm Initials[B]

Client: WCH SDG #: JP0944 SAF #: RC-149 NA [ ]

Lot Number: J5D200420

Chain of Custody # RC-149-149

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 [B] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [B] No [ ] No Custody Seal [ ]
3. Cooler temperature: 6.9 °C Ice NA [ ]
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): 12
7. Containers received: 12 x 250 mLp; 12 x Lp
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 [ ] No [B]
    *For documentation only. No corrective action needed.
16. Additional Information: N/A

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

Sample Check-in List completed by Sample Custodian:
Signature: [signature] Date: 4-20-15

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

[X] No action necessary; process as is

Project Manager [signature] Date 4/20/15

4/21/2015 6:02:14 AM

Sample Preparation/Analysis

Balance Id:1120421763,,

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

AX Gamma Prp PRP003/GAM001
TB Gamma by LEPD
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 04/27/2015

Sep1 DT/Tm Tech:

Batch: 5110037 SOIL pCi/g PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: 5110037 AXTB, 5110038 ATS6, 5110039 DWEA, 5110040 ANS5, 5110041 7ZSS,

Prep Tech: ,WoodT

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 M6MK9-1-AF J5D200420-1-SAMP 04/16/2015 12:43			50.90g,in AmtRec: 1X250MLP;1XLP	50.90g #Containers: 2				159	2020 Scr:	L5 Alpha:	1101	4/21/15 JS Beta:	
2 M6MLC-1-AF J5D200420-2-SAMP 04/16/2015 12:52			49.60g,in AmtRec: 1X250MLP;1XLP	49.60g #Containers: 2					Scr:	L5 Alpha:	1508	4/21/15 JS Beta:	
3 M6MLD-1-AF J5D200420-3-SAMP 04/16/2015 13:25			44.70g,in AmtRec: 1X250MLP;1XLP	44.70g #Containers: 2					L5 2022 Scr:	Alpha:		4/21/15 Q Beta:	
4 M6MLE-1-AF J5D200420-4-SAMP 04/16/2015 13:36			45.00g,in AmtRec: 1X250MLP;1XLP	45.00g #Containers: 2					L5 2347 Scr:	Alpha:		4/21/15 Q Beta:	
5 M6MLG-1-AF J5D200420-5-SAMP 04/16/2015 13:46			46.60g,in AmtRec: 1X250MLP;1XLP	46.60g #Containers: 2					L5 0316 Scr:	Alpha:		Beta:	
6 M6MLJ-1-AF J5D200420-6-SAMP 04/16/2015 14:00			49.10g,in AmtRec: 1X250MLP;1XLP	49.10g #Containers: 2					L5 Scr:	1027 Alpha:		4/22/15 JS Beta:	
7 M6MLJ-1-AG-X J5D200420-6-DUP 04/16/2015 14:00			49.80g,in AmtRec: 1X250MLP;1XLP	49.80g #Containers: 2					L5 Scr:	1350 Alpha:		4/22/15 JS Beta:	

4/21/2015 6:02:19 AM

Sample Preparation/Analysis

Balance Id:1120421763,,

127642, Washington Closure Hanford LLC
Bechtel Hanford, Inc.

AX Gamma Prp PRP003/GAM001
TB Gamma by LEPD
01 STANDARD TEST SET

Pipet #: _____

AnalyDueDate: 04/27/2015

Sep1 DT/Tm Tech:

Batch: 5110037 SOIL pCi/g PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,WoodT

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 M6MLK-1-AF J5D200420-7-SAMP 04/16/2015 14:12			55.80g,in AmtRec: 1X250MLP;1XLP	55.80g #Containers: 2				189	200	L5 Scr:	1030 Alpha:	4/24/15 JB Beta:	
9 M6MLL-1-AF J5D200420-8-SAMP 04/16/2015 14:20			45.20g,in AmtRec: 1X250MLP;1XLP	45.20g #Containers: 2						L5 Scr:	1358 Alpha:	4/24/15 JB Beta:	
10 M6MLM-1-AF J5D200420-9-SAMP 04/16/2015 14:32			53.70g,in AmtRec: 1X250MLP;1XLP	53.70g #Containers: 2						L5 Scr:	2008 Alpha:	4/24/15 [illegible] Beta:	
11 M6MLN-1-AF J5D200420-10-SAMP 04/16/2015 14:45			52.30g,in AmtRec: 1X250MLP;1XLP	52.30g #Containers: 2						~~L5~~ ~~0110~~ ~~4/25/15 JB~~ L5 Scr:	1346 Alpha:	4/25/15 JB Beta:	
12 M6MLQ-1-AF J5D200420-11-SAMP 04/16/2015 13:02			39.10g,in AmtRec: 1X250MLP;1XLP	39.10g #Containers: 2						~~L5~~ ~~1019~~ ~~3/25/15 JB~~ ~~4/25/15~~ L5 Scr:	0110 Alpha:	4/24/15 Beta:	
13 M6MLR-1-AF J5D200420-12-SAMP 04/16/2015 13:14			42.00g,in AmtRec: 1X250MLP;1XLP	42.00g #Containers: 2						L5 Scr:	1019 Alpha:	~~3/25/15 JB~~ ~~4/25/15 JB~~ 4/25/15 JB Beta:	
14 M6ML9-1-AA-B J5D200000-37-BLK 04/21/2015 05:02 pd			50.00g,in AmtRec:	50.00g #Containers: 1				189		L5 Scr:	1715 Alpha:	4/25/15 JB Beta:	

4/21/2015 6:02:23 AM

Sample Preparation/Analysis

AX Gamma Prp PRP003/GAM001
TB Gamma by LEPD
01 STANDARD TEST SET

Balance Id:1120421763,,

Pipet #: _____

AnalyDueDate: 04/27/2015

Sep1 DT/Tm Tech:

Batch: 5110037 pCi/g

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: WoodT

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 M6ML9-1-AC-C			64.95g,in	64.95g	CAL922			159	200	15	2038	4/25/15 JK	
J5D200000-37-LCS					03/01/85,pd 03/01/85,r								
04/20/2015 13:04 pd			AmtRec:	#Containers: 1					Scr:	Alpha:			Beta:

4/21/2015 6:02:24 AM

Sample Preparation/Analysis

AX Gamma Prp PRP003/GAM001
TB Gamma by LEPD
01 STANDARD TEST SET

Balance Id:1120421763,,

Pipet #: _____

AnalyDueDate: 04/27/2015

Sep1 DT/Tm Tech:

Batch: 5110037 pCi/g

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: WoodT

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:

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

M6MK91AF-SAMP Constituent List:

I-129	RDL:1	pCi/g	LCL:	UCL:	RPD:	Pb-210	RDL:1	pCi/g	LCL:	UCL:	RPD:

M6ML91AA-BLK:

I-129	RDL:1	pCi/g	LCL:	UCL:	RPD:	Pb-210	RDL:1	pCi/g	LCL:	UCL:	RPD:

M6ML91AC-LCS:

M6MK91AF-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M6ML91AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M6ML91AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

4/27/2015 10:51:42 AM

ICOC Fraction Transfer/Status Report

ByDate: 4/27/2014, 5/2/2015, Batch: '5110037', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			SOPs,Reagents,Comments
5110037						
AC		**Rev1C**	**WoodT**	4/21/2015 6:02:49		
SC			campbellsc	IsBatched	4/20/2015 1:06:44 PM	ICOC_RADCALC v4.9.0
SC			WoodT	Prep1C	4/21/2015 6:02:49 AM	RL-GAM-001 REVISION 5
SC			BullJ	InCnt1	4/21/2015 7:32:59 AM	RL-CI-007 REVISION 5
SC			BullJ	CalcC	4/27/2015 8:28:09 AM	RL-CI-007 REVISION 5
SC			carnesj	Rev1C	4/27/2015 10:46:02 AM	RL-DR-001 Rev 7
AC			**BullJ**	4/21/2015 7:32:59		
AC			**BullJ**	4/27/2015 8:28:09		
AC			**carnesj**	4/27/2015 10:46:02		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 4

ICOCFractions

4/22/2015 1:26:00 PM

Sample Preparation/Analysis

Balance Id:1120373922,,

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

AN Tc-99 Prp/Sep PRP003/LSC01 4 RW 4/27/15
S5 Technetium-99 by Liquid Scint
5I CLIENT: HANFORD

PRIORITY

Pipet #: _____

AnalyDueDate: 04/27/2015

Sep1 DT/Tm Tech:

Batch: 5110040 SOIL pCi/g PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: 5110037 AXTB, 5110038 ATS6, 5110039 DWEA, 5110040 ANS5, 5110041 7ZSS,

Prep Tech: ,GarciaA

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 **M6MK9-1-AC** J5D200420-1-SAMP 04/16/2015 12:43			2.01g,in	2.01g	AmtRec: 1X250MLP;1XLP #Containers: 2				Scr:		Alpha:		Beta:
2 **M6MLC-1-AC** J5D200420-2-SAMP 04/16/2015 12:52			2.03g,in	2.03g	AmtRec: 1X250MLP;1XLP #Containers: 2				Scr:		Alpha:		Beta:
3 **M6MLD-1-AC** J5D200420-3-SAMP 04/16/2015 13:25			2.00g,in	2.00g	AmtRec: 1X250MLP;1XLP #Containers: 2				Scr:		Alpha:		Beta:
4 **M6MLD-1-AG-X** J5D200420-3-DUP 04/16/2015 13:25			2.01g,in	2.01g	AmtRec: 1X250MLP;1XLP #Containers: 2				Scr:		Alpha:		Beta:
5 **M6MLE-1-AC** J5D200420-4-SAMP 04/16/2015 13:36			2.00g,in	2.00g	AmtRec: 1X250MLP;1XLP #Containers: 2				Scr:		Alpha:		Beta:
6 **M6MLE-1-AG-S** J5D200420-4-MS 04/16/2015 13:36			2.01g,in	2.01g	TCSG3654 04/01/15,pd 09/01/96,r AmtRec: 1X250MLP;1XLP #Containers: 2				Scr:		Alpha:		Beta:
7 **M6MLG-1-AC** J5D200420-5-SAMP 04/16/2015 13:46			2.03g,in	2.03g	AmtRec: 1X250MLP;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

4/22/2015 1:26:02 PM

Sample Preparation/Analysis

Balance Id:1120373922,,

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

AN Tc-99 Prp/Sep PRP003/LSC01~~3~~4 RW 4/27/15
S5 Technetium-99 by Liquid Scint
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 04/27/2015

Sep1 DT/Tm Tech:

Batch: 5110040 SOIL pCi/g PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,GarciaA

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 **M6MLJ-1-AC**			2.03g,in	2.03g									
J5D200420-6-SAMP													
04/16/2015 14:00			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
9 **M6MLK-1-AC**			2.02g,in	2.02g									
J5D200420-7-SAMP													
04/16/2015 14:12			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
10 **M6MLL-1-AC**			2.01g,in	2.01g									
J5D200420-8-SAMP													
04/16/2015 14:20			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
11 **M6MLM-1-AC**			2.01g,in	2.01g									
J5D200420-9-SAMP													
04/16/2015 14:32			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
12 **M6MLN-1-AC**			2.02g,in	2.02g									
J5D200420-10-SAMP													
04/16/2015 14:45			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
13 **M6MLQ-1-AC**			2.01g,in	2.01g									
J5D200420-11-SAMP													
04/16/2015 13:02			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
14 **M6MLR-1-AC**			2.03g,in	2.03g									
J5D200420-12-SAMP													
04/16/2015 13:14			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:

4/22/2015 1:26:03 PM

Sample Preparation/Analysis

AN Tc-99 Prp/Sep PRP003/LSC0184
S5 Technetium-99 by Liquid Scint RW 4/27/15
5I CLIENT: HANFORD

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

AnalyDueDate: 04/27/2015

Batch: 5110040 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 M6MMD-1-AA-B J5D200000-40-BLK 04/21/2015 19:01 pd			2.01g,in AmtRec:	2.01g #Containers: 1					Scr:		Alpha:		Beta:
16 M6MMD-1-AC-C J5D200000-40-LCS 04/21/2015 19:01 pd			2.01g,in AmtRec:	2.01g #Containers: 1	TCSE3087 04/17/15,pd 07/01/05,r				Scr:		Alpha:		Beta:
17 M6MMD-1-AD-B J5D200000-40-BLK 04/20/2015 13:04 pd			AmtRec:	#Containers: 1					Scr:		Alpha:		Beta:
18 M6MMD-1-AE-B J5D200000-40-BLK 04/20/2015 13:04 pd			AmtRec:	#Containers: 1					Scr:		Alpha:		Beta:

4/22/2015 1:26:04 PM

Sample Preparation/Analysis

AN Tc-99 Prp/Sep PRP003/LSC01~~8~~ 4
S5 Technetium-99 by Liquid Scint RW 4/27/15
5I CLIENT: HANFORD

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

AnalyDueDate: 04/27/2015

Batch: 5110040 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:

Comments: M6MMD-BLK S-15-00005,P-14-00842

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

M6MK91AC-SAMP Constituent List:
Tc-99 RDL:15 pCi/g LCL:70 UCL:130 RPD:35
M6MLE1AG-MS:

M6MMD1AA-BLK:
Tc-99 RDL:15 pCi/g LCL: UCL: RPD:
M6MMD1AC-LCS:
Tc-99 RDL:15 pCi/g LCL:70 UCL:130 RPD:35
M6MMD1AD-BLK:
Tc-99 RDL:15 pCi/g LCL: UCL: RPD:
M6MMD1AE-BLK:
Tc-99 RDL:15 pCi/g LCL: UCL: RPD:

M6MK91AC-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M6MLE1AG-MS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M6MMD1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M6MMD1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M6MMD1AD-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M6MMD1AE-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

4/27/2015 8:52:21 AM

ICOC Fraction Transfer/Status Report

ByDate: 4/27/2014, 5/2/2015, Batch: '5110040', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			SOPs,Reagents,Comments
5110040						
AC		**Rev1C**	**WoodT**	4/22/2015 11:01:35		
SC			campbellsc	IsBatched	4/20/2015 1:06:50 PM	ICOC_RADCALC v4.9.0
SC			WoodT	Prep1C	4/22/2015 11:01:35 AM	RL-PRP-003 REVISION 5
SC			GarciaA	Prep1C	4/22/2015 1:24:58 PM	RL-PRP-003 REVISION 5
SC			JorgensonD	Sep2C	4/24/2015 11:15:15 AM	RL-LSC-014 REVISION 3
SC			BullJ	InCnt1	4/24/2015 11:27:43 AM	RL-CI-005 REVISION 3
SC			BullJ	CalcC	4/25/2015 1:58:15 PM	RL-CI-005 REVISION 3
SC			McginnisT	Rev1C	4/27/2015 8:44:32 AM	RL-DR-001 Rev 7
AC			**GarciaA**	4/22/2015 1:24:58 PM		
AC			**JorgensonD**	4/24/2015 11:15:15		
AC			**BullJ**	4/24/2015 11:27:43		
AC			**BullJ**	4/25/2015 1:58:15 PM		
AC			**McginnisT**	4/27/2015 8:44:32		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 6

ICOCFractions

4/20/2015 1:04:17 PM

Sample Preparation/Analysis

Balance Id:,,

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

AT H-3 Prp/Sep LSC002
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

PRIORITY

Pipet #: _____

AnalyDueDate: 04/27/2015

Sep1 DT/Tm Tech:

Batch: 5110038 SOIL pCi/g PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 M6MK9-1-AD													
J5D200420-1-SAMP													
04/16/2015 12:43			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
2 M6MLC-1-AD													
J5D200420-2-SAMP													
04/16/2015 12:52			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
3 M6MLD-1-AD													
J5D200420-3-SAMP													
04/16/2015 13:25			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
4 M6MLE-1-AD													
J5D200420-4-SAMP													
04/16/2015 13:36			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
5 M6MLG-1-AD													
J5D200420-5-SAMP													
04/16/2015 13:46			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
6 M6MLG-1-AG-X													
J5D200420-5-DUP													
04/16/2015 13:46			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
7 M6MLJ-1-AD													
J5D200420-6-SAMP													
04/16/2015 14:00			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:

4/20/2015 1:04:18 PM

Sample Preparation/Analysis

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

AT H-3 Prp/Sep LSC002
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Balance Id:,, H16146
Pipet #: 297

AnalyDueDate: 04/27/2015

Sep1 DT/Tm Tech:

Batch: 5110038 SOIL pCi/g PM, Quote: RW2, 27038
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech:

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 M6MLK-1-AD													
J5D200420-7-SAMP													
04/16/2015 14:12			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
9 M6MLL-1-AD													
J5D200420-8-SAMP													
04/16/2015 14:20			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
10 M6MLM-1-AD													
J5D200420-9-SAMP													
04/16/2015 14:32			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
11 M6MLN-1-AD													
J5D200420-10-SAMP													
04/16/2015 14:45			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
12 M6MLQ-1-AD													
J5D200420-11-SAMP													
04/16/2015 13:02			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
13 M6MLR-1-AD													
J5D200420-12-SAMP													
04/16/2015 13:14			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
14 M6MMA-1-AA-B													
J5D200000-38-BLK													
04/20/2015 13:04 pd			AmtRec:		#Containers: 1				Scr:		Alpha:		Beta:

4/20/2015 1:04:19 PM

Sample Preparation/Analysis

AT H-3 Prp/Sep LSC002
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Balance Id:,,

Pipet #: _____

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech:

AnalyDueDate: 04/27/2015

Batch: 5110038 **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 M6MMA-1-AC-C													
J5D200000-38-LCS													
04/20/2015 13:04 pd			AmtRec:	#Containers: 1					Scr:		Alpha:		Beta:
16 M6MMA-1-AD-BN													
J5D200000-38-IBLK													
04/20/2015 13:04 pd			AmtRec:	#Containers: 1					Scr:		Alpha:		Beta:
17 M6MMA-1-AE-BN													
J5D200000-38-IBLK													
04/20/2015 13:04 pd			AmtRec:	#Containers: 1					Scr:		Alpha:		Beta:

4/20/2015 1:04:20 PM

Sample Preparation/Analysis

AT H-3 Prp/Sep LSC002
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

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

AnalyDueDate: 04/27/2015

Batch: 5110038 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:

Comments:

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

M6MK91AD-SAMP Constituent List:

M6MMA1AA-BLK:

M6MMA1AC-LCS:

M6MMA1AD-IBLK:

M6MMA1AE-IBLK:

M6MK91AD-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M6MMA1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M6MMA1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M6MMA1AD-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M6MMA1AE-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

4/27/2015 10:07:51 AM

ICOC Fraction Transfer/Status Report

ByDate: 4/27/2014, 5/2/2015, Batch: '5110038', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			SOPs,Reagents,Comments
5110038						
AC		**Rev1C**	**NortonP**	4/23/2015 3:42:48 PM		
SC			campbellsc	IsBatched	4/20/2015 1:06:47 PM	ICOC_RADCALC v4.9.0
SC			NortonP	Sep1C	4/23/2015 3:42:48 PM	RL-LSC-002 REVISION 6
SC			DawkinsO	InCnt1	4/23/2015 5:18:29 PM	RL-CI-005 REVISION 3
SC			BullJ	CalcC	4/25/2015 1:58:56 PM	RL-CI-005 REVISION 3
SC			McginnisT	Rev1C	4/27/2015 10:06:39 AM	RL-DR-001 Rev 7
AC			**DawkinsO**	4/23/2015 5:18:29 PM		
AC			**BullJ**	4/25/2015 1:58:56 PM		
AC			**McginnisT**	4/27/2015 10:06:39		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 4

ICOCFractions

4/25/2015 7:46:23 AM

Sample Preparation/Analysis

Balance Id:1120421763,1120373922,,

127642, Washington Closure Hanford LLC
Bechtel Hanford, Inc.

7Z Unat_Laser Prp PRP003/PRP005, Sep KPA001
SS Total Uranium by KPA
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 04/27/2015

Sep1 DT/Tm Tech:

Batch: 5110041 SOIL ug/g PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: 5110037 AXTB, 5110038 ATS6, 5110039 DWEA, 5110040 ANS5, 5110041 7ZSS,

Prep Tech: ,JorgensonD

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 M6MK9-1-AE J5D200420-1-SAMP 04/16/2015 12:43			0.52g,in 10.00g,fi	0.52g AmtRec: 1X250MLP;1XLP	#Containers: 2				Scr:		Alpha:		Beta:
2 M6MK9-1-AK-X J5D200420-1-DUP 04/16/2015 12:43			0.51g,in 10.00g,fi	0.51g AmtRec: 1X250MLP;1XLP	#Containers: 2				Scr:		Alpha:		Beta:
3 M6MLC-1-AE J5D200420-2-SAMP 04/16/2015 12:52			0.50g,in 10.00g,fi	0.50g AmtRec: 1X250MLP;1XLP	#Containers: 2				Scr:		Alpha:		Beta:
4 M6MLC-1-AG-S J5D200420-2-MS 04/16/2015 12:52			0.51g,in 10.00g,fi	0.51g AmtRec: 1X250MLP;1XLP	UNSI2366 03/18/15,pd 02/01/86,r #Containers: 2				Scr:		Alpha:		Beta:
5 M6MLD-1-AE J5D200420-3-SAMP 04/16/2015 13:25			0.53g,in 10.00g,fi	0.53g AmtRec: 1X250MLP;1XLP	#Containers: 2				Scr:		Alpha:		Beta:
6 M6MLE-1-AE J5D200420-4-SAMP 04/16/2015 13:36			0.53g,in 10.00g,fi	0.53g AmtRec: 1X250MLP;1XLP	#Containers: 2				Scr:		Alpha:		Beta:
7 M6MLG-1-AE J5D200420-5-SAMP 04/16/2015 13:46			0.52g,in 10.00g,fi	0.52g AmtRec: 1X250MLP;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 ICOC v4.9.0

4/25/2015 7:46:26 AM

Sample Preparation/Analysis

Balance Id:1120421763,1120421763,112042

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

7Z Unat_Laser Prp PRP003/PRP005, Sep KPA001
SS Total Uranium by KPA
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 04/27/2015

Sep1 DT/Tm Tech:

Batch: 5110041 SOIL ug/g PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,JorgensonD

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 **M6MLJ-1-AE** J5D200420-6-SAMP 04/16/2015 14:00			0.52g,in 10.00g,fi	0.52g	AmtRec: 1X250MLP;1XLP	#Containers: 2			Scr:		Alpha:		Beta:
9 **M6MLK-1-AE** J5D200420-7-SAMP 04/16/2015 14:12			0.51g,in 10.00g,fi	0.51g	AmtRec: 1X250MLP;1XLP	#Containers: 2			Scr:		Alpha:		Beta:
10 **M6MLL-1-AE** J5D200420-8-SAMP 04/16/2015 14:20			0.51g,in 10.00g,fi	0.51g	AmtRec: 1X250MLP;1XLP	#Containers: 2			Scr:		Alpha:		Beta:
11 **M6MLM-1-AE** J5D200420-9-SAMP 04/16/2015 14:32			0.51g,in 10.00g,fi	0.51g	AmtRec: 1X250MLP;1XLP	#Containers: 2			Scr:		Alpha:		Beta:
12 **M6MLN-1-AE** J5D200420-10-SAMP 04/16/2015 14:45			0.53g,in 10.00g,fi	0.53g	AmtRec: 1X250MLP;1XLP	#Containers: 2			Scr:		Alpha:		Beta:
13 **M6MLQ-1-AE** J5D200420-11-SAMP 04/16/2015 13:02			0.52g,in 10.00g,fi	0.52g	AmtRec: 1X250MLP;1XLP	#Containers: 2			Scr:		Alpha:		Beta:
14 **M6MLR-1-AE** J5D200420-12-SAMP 04/16/2015 13:14			0.51g,in 10.00g,fi	0.51g	AmtRec: 1X250MLP;1XLP	#Containers: 2			Scr:		Alpha:		Beta:

4/25/2015 7:46:27 AM

Sample Preparation/Analysis

7Z Unat_Laser Prp PRP003/PRP005, Sep KPA001
SS Total Uranium by KPA
5I CLIENT: HANFORD

Balance Id:1120421763,1120421763,112042

Pipet #: _____

AnalyDueDate: 04/27/2015

Sep1 DT/Tm Tech:

Batch: 5110041 ug/g
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: JorgensonD

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 M6MME-1-AA-B J5D200000-41-BLK			0.54g,in 10.00g,fi	0.54g									
04/21/2015 15:15 pd			AmtRec:	#Containers: 1					Scr:		Alpha:		Beta:
16 M6MME-1-AC-C J5D200000-41-LCS			0.52g,in 10.00g,fi	0.52g	UNSH0078 03/18/15,pd 02/01/86,r								
04/21/2015 15:16 pd			AmtRec:	#Containers: 1					Scr:		Alpha:		Beta:
17 M6MME-1-AD-C J5D200000-41-LCS			0.53g,in 10.00g,fi	0.53g	UNSI2365 03/18/15,pd 02/01/86,r								
04/21/2015 15:17 pd			AmtRec:	#Containers: 1					Scr:		Alpha:		Beta:

4/25/2015 7:46:28 AM

Sample Preparation/Analysis

7Z Unat_Laser Prp PRP003/PRP005, Sep KPA001
SS Total Uranium by KPA
5I CLIENT: HANFORD

Balance Id:1120421763,1120421763,112042

Pipet #: _____

AnalyDueDate: 04/27/2015

Sep1 DT/Tm Tech:

Batch: 5110041 ug/g
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: JorgensonD

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: M6MME-BLK DJP-15-00161S-15-00032,S-14-00059,P-15-00180,S-14-00244,,P-15-00132,S-14-00059,S-15-00108,S-15-00108

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

M6MK91AE-SAMP Constituent List:
  Uranium      RDL:1.00E+00    ug/g      LCL:70      UCL:130     RPD:35
M6MLC1AG-MS:

M6MME1AA-BLK:
  Uranium      RDL:1.00E+00    ug/g      LCL:        UCL:        RPD:
M6MME1AC-LCS:
  Uranium      RDL:1           ug/g      LCL:70      UCL:130     RPD:35
M6MME1AD-LCS:
  Uranium      RDL:1           ug/g      LCL:70      UCL:130     RPD:35

M6MK91AE-SAMP Calc Info:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
M6MLC1AG-MS:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
M6MME1AA-BLK:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
M6MME1AC-LCS:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
M6MME1AD-LCS:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```

4/27/2015 10:03:32 AM

ICOC Fraction Transfer/Status Report

ByDate: 4/27/2014, 5/2/2015, Batch: '5110041', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			SOPs,Reagents,Comments
5110041						
AC		**Rev1C**	**WoodT**	4/22/2015 6:34:13		
SC			campbellsc	IsBatched	4/20/2015 1:06:54 PM	ICOC_RADCALC v4.9.0
SC			WoodT	Prep1C	4/22/2015 6:34:13 AM	RL-PRP-003 REVISION 5
SC			WoodT	Prep2C	4/22/2015 6:34:51 AM	RL-KPA-001 REVISION 4
SC			JorgensonD	Sep1C	4/22/2015 4:11:08 PM	RL-ALP-014 REVISION 3
SC			JorgensonD	Prep2C	4/24/2015 2:20:46 PM	RL-KPA-001 REVISION 4
SC			Saliful	Cnt1C	4/25/2015 9:21:59 AM	RL-KPA-003 REVISION 5
SC			nortonj	Rev1C	4/27/2015 10:03:06 AM	RL-DR-001 Rev 7
AC			**WoodT**	4/22/2015 6:34:51		
AC			**JorgensonD**	4/22/2015 4:11:08 PM		
AC			**JorgensonD**	4/24/2015 2:20:46 PM		
AC			**Saliful**	4/25/2015 9:21:59		
AC			**nortonj**	4/27/2015 10:03:06		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 6

ICOCFractions

4/22/2015 7:04:56 AM

Sample Preparation/Analysis

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

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

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

AnalyDueDate: 04/27/2015

Batch: 5110039 SOIL mg/kg PM, Quote: RW2, 27038
SEQ Batch, Test: None All Tests: 5110037 AXTB, 5110038 ATS6, 5110039 DWEA, 5110040 ANS5, 5110041 7ZSS,

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 M6MK9-1-AA													
J5D200420-1-SAMP													
04/16/2015 12:43			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
2 M6MK9-1-AG-S													
J5D200420-1-MS													
04/16/2015 12:43			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
3 M6MK9-1-AH-X													
J5D200420-1-DUP													
04/16/2015 12:43			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
4 M6MK9-1-AJ-S													
J5D200420-1-MS													
04/16/2015 12:43			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
5 M6MLC-1-AA													
J5D200420-2-SAMP													
04/16/2015 12:52			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
6 M6MLD-1-AA													
J5D200420-3-SAMP													
04/16/2015 13:25			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
7 M6MLE-1-AA													
J5D200420-4-SAMP													
04/16/2015 13:36			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:

4/22/2015 7:04:58 AM

Sample Preparation/Analysis

Balance Id:,,

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

DW Alkaline Digestion by method 3060A
EA Chromium, Hexavalent (7196A)

Pipet #: _____

AnalyDueDate: 04/27/2015

5I CLIENT: HANFORD

Sep1 DT/Tm Tech:

Batch: 5110039 SOIL mg/kg PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 M6MLG-1-AA													
J5D200420-5-SAMP													
04/16/2015 13:46			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
9 M6MLJ-1-AA													
J5D200420-6-SAMP													
04/16/2015 14:00			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
10 M6MLK-1-AA													
J5D200420-7-SAMP													
04/16/2015 14:12			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
11 M6MLL-1-AA													
J5D200420-8-SAMP													
04/16/2015 14:20			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
12 M6MLM-1-AA													
J5D200420-9-SAMP													
04/16/2015 14:32			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
13 M6MLN-1-AA													
J5D200420-10-SAMP													
04/16/2015 14:45			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
14 M6MLQ-1-AA													
J5D200420-11-SAMP													
04/16/2015 13:02			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:

4/22/2015 7:04:58 AM

Sample Preparation/Analysis

Balance Id:,,

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

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

Pipet #: _____

AnalyDueDate: 04/27/2015

Sep1 DT/Tm Tech:

Batch: 5110039 SOIL mg/kg PM, Quote: RW2, 27038

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech:

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
15 M6MLR-1-AA													
J5D200420-12-SAMP													
04/16/2015 13:14			AmtRec: 1X250MLP;1XLP		#Containers: 2				Scr:		Alpha:		Beta:
16 M6MMC-1-AA-B													
J5D200000-39-BLK													
04/22/2015 07:04 pd			AmtRec:		#Containers: 1				Scr:		Alpha:		Beta:
17 M6MMC-1-AC-C													
J5D200000-39-LCS													
04/22/2015 07:04 pd			AmtRec:		#Containers: 1				Scr:		Alpha:		Beta:

4/22/2015 7:04:59 AM

Sample Preparation/Analysis

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

Balance Id:,,

Pipet #: _____

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech:

AnalyDueDate: 04/27/2015

Batch: 5110039 **mg/kg**
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:

Comments:

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

M6MK91AA-SAMP Constituent List:

HEXCHROME	RDL:.1548	mg/kg	LCL:80	UCL:120	RPD:20	HXCR	RDL:.1548	mg/kg	LCL:80	UCL:120	RPD:20

M6MK91AG-MS Constituent List:

HEXCHROME	RDL:0.35	mg/kg	LCL:75	UCL:125	RPD:20	HXCR	RDL:0.35	mg/kg	LCL:75	UCL:125	RPD:20

M6MK91AJ-MS:

HEXCHROME	RDL:0.35	mg/kg	LCL:75	UCL:125	RPD:20	HXCR	RDL:0.35	mg/kg	LCL:75	UCL:125	RPD:20

M6MMC1AA-BLK:

HEXCHROME	RDL:.1548	mg/kg	LCL:	UCL:	RPD:	HXCR	RDL:.1548	mg/kg	LCL:	UCL:	RPD:

M6MMC1AC-LCS:

HEXCHROME	RDL:0.35	mg/kg	LCL:80	UCL:120	RPD:20	HXCR	RDL:0.35	mg/kg	LCL:80	UCL:120	RPD:20

M6MK91AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M6MK91AG-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M6MK91AJ-MS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M6MMC1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M6MMC1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

ANALYTICAL REPORT

Job Number: 280-68112-1

SDG Number: JP0944

Job Description: SAF# RC-149

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

Attention: Joan H Kessner

Approved for release.
Kae E Yoder
Senior Project Manager
4/28/2015 1:40 PM

Kae E Yoder, Senior Project Manager
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0190
kae.yoder@testamericainc.com
04/28/2015

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.

Table of Contents

Cover Title Page 1
Report Narrative 3
Data Qualifiers 5
Sample Summary 6
Method Summary 7
Method / Analyst Summary 8
Sample Results 9
Sample Datasheets 10
QC Results 82
Surrogate Recovery Report 83
Qc Reports 86
Qc Association Summary 105
Client Chain of Custody 113
Sample Receipt Checklist 116

CASE NARRATIVE

Client: Washington Closure Hanford

Project: WASHINGTON CLOSURE HANFORD

Job Number: 280-68112-1

SDG #: JP0944
SAF#: RC-149

Date SDG Closed: April 21, 2015
Data Deliverable: 7 Day / Summary

CLIENT ID	LAB ID	ANALYSES REQUESTED	ANALYSES PERFORMED
J1V614	280-68112-1	6010/7471/WTPH-D+/8310/8082	6010B/6020/7471A/NWTPH-Dx/8031/8082
J1V615	280-68112-2	6010/7471/WTPH-D+/8310/8082	6010B/6020/7471A/NWTPH-Dx/8031/8082
J1V616	280-68112-3	6010/7471/WTPH-D+/8310/8082	6010B/6020/7471A/NWTPH-Dx/8031/8082
J1V617	280-68112-4	6010/7471/WTPH-D+/8310/8082	6010B/6020/7471A/NWTPH-Dx/8031/8082
J1V618	280-68112-5	6010/7471/WTPH-D+/8310/8082	6010B/6020/7471A/NWTPH-Dx/8031/8082
J1V619	280-68112-6	6010/7471/WTPH-D+/8310/8082	6010B/6020/7471A/NWTPH-Dx/8031/8082
J1V620	280-68112-7	6010/7471/WTPH-D+/8310/8082	6010B/6020/7471A/NWTPH-Dx/8031/8082
J1V621	280-68112-8	6010/7471/WTPH-D+/8310/8082	6010B/6020/7471A/NWTPH-Dx/8031/8082
J1V622	280-68112-9	6010/7471/WTPH-D+/8310/8082	6010B/6020/7471A/NWTPH-Dx/8031/8082
J1V623	280-68112-10	6010/7471/WTPH-D+/8310/8082	6010B/6020/7471A/NWTPH-Dx/8031/8082
J1V624	280-68112-11	6010/7471/WTPH-D+/8310/8082	6010B/6020/7471A/NWTPH-Dx/8031/8082
J1V625	280-68112-12	6010/7471/WTPH-D+/8310/8082	6010B/6020/7471A/NWTPH-Dx/8031/8082

The Uranium 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 4/21/2015 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.5º C and 1.2º C.

The samples presented in this report contained large rocks that were not included in the aliquots used for extraction and/or analysis.

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.

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to high constituent concentration, samples J1V624 and J1V625 had to be analyzed at dilutions, and the associated results have been flagged with a "D". The reporting limits have been adjusted relative to the dilutions required. In addition, the sample surrogate recoveries were not calculated, because the extracts were diluted beyond the ability to reliably quantitate recoveries.

Samples J1V624 and J1V625 contained a combination of Aroclor 1248 and Aroclor 1254 with insufficient separation to quantify individually. The samples have been quantified and reported as the predominant Aroclor. Due to the shared peaks of these two Aroclors, there is increased qualitative and quantitative uncertainty associated with these results.

No other anomalies were encountered.

GC SEMIVOLATILES - NWTPH-Dx - DRO
No anomalies were encountered.

HPLC - SW846 8310 - PAHs
The RPD between the primary and confirmation columns exceeded 40% for Benzo[b]fluoranthene in samples J1V624 and J1V625. The lower of the two values has been reported, as matrix interference is evident on both columns. The results have been flagged with an “X”.

Surrogate Terphenyl-d14 was recovered outside the control limits, biased high, in sample J1V625. Surrogate Terphenyl-d14 was also recovered outside the control limits, biased high, in the MS/MSD performed on sample J1V625, demonstrating that this anomaly is most likely due to matrix interference; therefore, corrective action is deemed unnecessary.

The MS/MSD performed on sample J1V625 exhibited percent recoveries outside the control limits, biased high, for Pyrene, and the associated sample result has been flagged “N”. In addition, the RPD limit was exceeded for Pyrene and surrogate Terphenyl-d14 was recovered outside the control limits, biased high. 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.

TOTAL METALS - SW846 6010B/6020/7471A
Serial dilution of a digestate in batch 280-273811 indicates that physical and chemical interferences are present for several elements. Results have been flagged with an “X”.

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the methods. Sample J1V621 required a 5X dilution prior to the analysis of Beryllium, Cobalt, Copper, Lead, Tin and Vanadium to minimize the interference caused by the Titanium concentration greater than the linear range. The reporting limits have been adjusted relative to the dilution required.

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the methods. Due to high constituent concentration, samples J1V624 and J1V625 required dilutions prior to the analysis of Mercury. The reporting limits have been adjusted relative to the dilutions required.

Low levels of Barium, Calcium, Magnesium, Strontium and Uranium are present in the method blanks associated with batches 280-273811 and 280-273810, respectively. Because the concentrations in the method blankd are not present at levels greater than half the reporting limit, corrective action is deemed unnecessary.

Silicon was recovered outside the control limits, biased low, in the LCS associated with batch 280-273811, and the associated sample results have been flagged “N”. Silicon has been identified as a poor performing element when analyzed using this method and has a history of reacting inconsistently; therefore, corrective action is not initiated. Data are reported as is.

It can be noted that the sample amount was greater than four times the spike amount for Aluminum, Iron and Manganese in the Matrix Spike performed on sample J1V615; therefore, control limits are not applicable.

The Matrix Spike performed on sample J1V615 exhibited percent recoveries outside the control limits for Boron, Selenium and Tin, 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 J1V615 exhibited RPD data outside the control limits for Arsenic, Chromium and Sodium, and the associated sample results have been flagged “M”. There is no indication that the analytical system was operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

PERCENT MOISTURE
The duplicate analysis of sample J1V625 exceeded the RPD limit, and the associated sample result has been flagged “M”.

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Lab Section	Qualifier	Description
GC Semi VOA		
	U	Analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	D	The reported value is from a dilution.
HPLC/IC		
	U	Analyzed for but not detected.
	X	More than 40% difference between columns, lower result reported.
	N	MS, MSD: Spike recovery is outside acceptance limits.
	*	MS/MSD RPD exceeded the control limit
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	*	Surrogate is outside acceptance limits.
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		
	M	Sample duplicate precision not met.

SAMPLE SUMMARY

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-68112-1	J1V614	Solid	04/16/2015 1243	04/21/2015 0940
280-68112-2	J1V615	Solid	04/16/2015 1252	04/21/2015 0940
280-68112-3	J1V616	Solid	04/16/2015 1325	04/21/2015 0940
280-68112-4	J1V617	Solid	04/16/2015 1336	04/21/2015 0940
280-68112-5	J1V618	Solid	04/16/2015 1346	04/21/2015 0940
280-68112-6	J1V619	Solid	04/16/2015 1400	04/21/2015 0940
280-68112-7	J1V620	Solid	04/16/2015 1412	04/21/2015 0940
280-68112-8	J1V621	Solid	04/16/2015 1420	04/21/2015 0940
280-68112-9	J1V622	Solid	04/16/2015 1432	04/21/2015 0940
280-68112-10	J1V623	Solid	04/16/2015 1445	04/21/2015 0940
280-68112-11	J1V624	Solid	04/16/2015 1302	04/21/2015 0940
280-68112-12	J1V625	Solid	04/16/2015 1314	04/21/2015 0940

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
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
PAHs (HPLC)	TAL DEN	SW846 8310	
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
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: 280-68112-1
Sdg Number: JP0944

Method	Analyst	Analyst ID
SW846 8082	Jackson, Todd D	TDJ
NWTPH NWTPH-Dx	Moore, Tegan E	TEM
SW846 6010B	Scott, Samantha J	SJS
SW846 6020	Mooney, Joseph C	JM
SW846 7471A	Grisdale, Christopher G	CGG
ASTM D-2216	Shaheen, Scott W	SWS
SW846 8310	Fiedler, Heather K	HKF

SAMPLE RESULTS

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V614**

Lab Sample ID: 280-68112-1
Client Matrix: Solid
% Moisture: 7.3

Date Sampled: 04/16/2015 1243
Date Received: 04/21/2015 0940

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-274365	Instrument ID:	SGC_W
Prep Method:	3550C	Prep Batch:	280-273771	Initial Weight/Volume:	30.4 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	04/24/2015 1508			Injection Volume:	1 uL
Prep Date:	04/21/2015 1700			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.9	U	2.9	11
Aroclor 1221		8.5	U	8.5	18
Aroclor 1232		2.1	U	2.1	11
Aroclor 1242		5.0	U	5.0	11
Aroclor 1248		5.0	U	5.0	11
Aroclor 1254		2.8	U	2.8	11
Aroclor 1260		2.8	U	2.8	11

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	73		59 - 130
Tetrachloro-m-xylene	69		53 - 128

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V615**

Lab Sample ID: 280-68112-2
Client Matrix: Solid
% Moisture: 5.3

Date Sampled: 04/16/2015 1252
Date Received: 04/21/2015 0940

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-274365	Instrument ID:	SGC_W
Prep Method:	3550C	Prep Batch:	280-273771	Initial Weight/Volume:	31.9 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	04/24/2015 1531			Injection Volume:	1 uL
Prep Date:	04/21/2015 1700			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.8	U	2.8	9.9
Aroclor 1221		8.0	U	8.0	16
Aroclor 1232		2.0	U	2.0	9.9
Aroclor 1242		4.6	U	4.6	9.9
Aroclor 1248		4.6	U	4.6	9.9
Aroclor 1254		2.6	U	2.6	9.9
Aroclor 1260		2.6	U	2.6	9.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	80		59 - 130
Tetrachloro-m-xylene	69		53 - 128

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V616**

Lab Sample ID: 280-68112-3
Client Matrix: Solid
% Moisture: 4.2

Date Sampled: 04/16/2015 1325
Date Received: 04/21/2015 0940

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-274672	Instrument ID:	SGC_W
Prep Method:	3550C	Prep Batch:	280-273771	Initial Weight/Volume:	30.9 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	04/27/2015 1335			Injection Volume:	1 uL
Prep Date:	04/21/2015 1700			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		6.3	J	2.6	10
Aroclor 1260		2.6	U	2.6	10

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	87		59 - 130
Tetrachloro-m-xylene	75		53 - 128

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V617**

Lab Sample ID: 280-68112-4
Client Matrix: Solid
% Moisture: 2.3

Date Sampled: 04/16/2015 1336
Date Received: 04/21/2015 0940

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-274365	Instrument ID:	SGC_W
Prep Method:	3550C	Prep Batch:	280-273771	Initial Weight/Volume:	31.3 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	04/24/2015 1704			Injection Volume:	1 uL
Prep Date:	04/21/2015 1700			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	84		59 - 130
Tetrachloro-m-xylene	74		53 - 128

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V618**

Lab Sample ID: 280-68112-5
Client Matrix: Solid
% Moisture: 3.6

Date Sampled: 04/16/2015 1346
Date Received: 04/21/2015 0940

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-274672	Instrument ID:	SGC_W
Prep Method:	3550C	Prep Batch:	280-273771	Initial Weight/Volume:	31.0 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	04/27/2015 1359			Injection Volume:	1 uL
Prep Date:	04/21/2015 1700			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	89		59 - 130
Tetrachloro-m-xylene	78		53 - 128

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V619**

Lab Sample ID: 280-68112-6
Client Matrix: Solid
% Moisture: 4.9

Date Sampled: 04/16/2015 1400
Date Received: 04/21/2015 0940

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-274365	Instrument ID:	SGC_W
Prep Method:	3550C	Prep Batch:	280-273771	Initial Weight/Volume:	32.6 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	04/24/2015 1750			Injection Volume:	1 uL
Prep Date:	04/21/2015 1700			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	84		59 - 130
Tetrachloro-m-xylene	76		53 - 128

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V620**

Lab Sample ID: 280-68112-7
Client Matrix: Solid
% Moisture: 9.4

Date Sampled: 04/16/2015 1412
Date Received: 04/21/2015 0940

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-274365	Instrument ID:	SGC_W
Prep Method:	3550C	Prep Batch:	280-273771	Initial Weight/Volume:	31.3 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	04/24/2015 1814			Injection Volume:	1 uL
Prep Date:	04/21/2015 1700			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.9	U	2.9	11
Aroclor 1221		8.5	U	8.5	17
Aroclor 1232		2.1	U	2.1	11
Aroclor 1242		4.9	U	4.9	11
Aroclor 1248		4.9	U	4.9	11
Aroclor 1254		2.8	U	2.8	11
Aroclor 1260		2.8	U	2.8	11

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	75		59 - 130
Tetrachloro-m-xylene	68		53 - 128

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V621**

Lab Sample ID: 280-68112-8
Client Matrix: Solid
% Moisture: 5.8

Date Sampled: 04/16/2015 1420
Date Received: 04/21/2015 0940

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-274365	Instrument ID:	SGC_W
Prep Method:	3550C	Prep Batch:	280-273771	Initial Weight/Volume:	32.3 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	04/24/2015 1837			Injection Volume:	1 uL
Prep Date:	04/21/2015 1700			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.7	U	2.7	9.9
Aroclor 1221		7.9	U	7.9	16
Aroclor 1232		2.0	U	2.0	9.9
Aroclor 1242		4.6	U	4.6	9.9
Aroclor 1248		4.6	U	4.6	9.9
Aroclor 1254		2.6	U	2.6	9.9
Aroclor 1260		2.6	U	2.6	9.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	81		59 - 130
Tetrachloro-m-xylene	72		53 - 128

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V622**

Lab Sample ID: 280-68112-9
Client Matrix: Solid
% Moisture: 4.6

Date Sampled: 04/16/2015 1432
Date Received: 04/21/2015 0940

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-274672	Instrument ID:	SGC_W
Prep Method:	3550C	Prep Batch:	280-273771	Initial Weight/Volume:	32.2 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	04/27/2015 1422			Injection Volume:	1 uL
Prep Date:	04/21/2015 1700			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	78		59 - 130
Tetrachloro-m-xylene	68		53 - 128

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V623**

Lab Sample ID: 280-68112-10
Client Matrix: Solid
% Moisture: 5.7

Date Sampled: 04/16/2015 1445
Date Received: 04/21/2015 0940

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-274365	Instrument ID:	SGC_W
Prep Method:	3550C	Prep Batch:	280-273771	Initial Weight/Volume:	32.0 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	04/24/2015 1923			Injection Volume:	1 uL
Prep Date:	04/21/2015 1700			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.8	U	2.8	9.9
Aroclor 1221		8.0	U	8.0	16
Aroclor 1232		2.0	U	2.0	9.9
Aroclor 1242		4.6	U	4.6	9.9
Aroclor 1248		4.6	U	4.6	9.9
Aroclor 1254		2.6	U	2.6	9.9
Aroclor 1260		2.6	U	2.6	9.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	87		59 - 130
Tetrachloro-m-xylene	76		53 - 128

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V624**

Lab Sample ID: 280-68112-11
Client Matrix: Solid
% Moisture: 7.5

Date Sampled: 04/16/2015 1302
Date Received: 04/21/2015 0940

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-274672	Instrument ID:	SGC_W
Prep Method:	3550C	Prep Batch:	280-273771	Initial Weight/Volume:	30.4 g
Dilution:	100			Final Weight/Volume:	5 mL
Analysis Date:	04/27/2015 1508			Injection Volume:	1 uL
Prep Date:	04/21/2015 1700			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		300	U D	300	1100
Aroclor 1221		860	U D	860	1800
Aroclor 1232		210	U D	210	1100
Aroclor 1242		500	U D	500	1100
Aroclor 1248		5000	D	500	1100
Aroclor 1254		280	U D	280	1100
Aroclor 1260		280	U D	280	1100

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

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V625**

Lab Sample ID: 280-68112-12
Client Matrix: Solid
% Moisture: 12.0

Date Sampled: 04/16/2015 1314
Date Received: 04/21/2015 0940

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-274672	Instrument ID:	SGC_W
Prep Method:	3550C	Prep Batch:	280-273771	Initial Weight/Volume:	31.7 g
Dilution:	400			Final Weight/Volume:	5 mL
Analysis Date:	04/27/2015 1531			Injection Volume:	1 uL
Prep Date:	04/21/2015 1700			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		1200	U D	1200	4300
Aroclor 1221		3500	U D	3500	7100
Aroclor 1232		860	U D	860	4300
Aroclor 1242		2000	U D	2000	4300
Aroclor 1248		11000	D	2000	4300
Aroclor 1254		1100	U D	1100	4300
Aroclor 1260		1100	U D	1100	4300

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

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V614**

Lab Sample ID: 280-68112-1
Client Matrix: Solid
% Moisture: 7.3

Date Sampled: 04/16/2015 1243
Date Received: 04/21/2015 0940

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-274657	Instrument ID:	SGC_U
Prep Method:	3550C	Prep Batch:	280-274376	Lab File ID:	04270007.D
Dilution:	1.0			Initial Weight/Volume:	31.2 g
Analysis Date:	04/27/2015 1054			Final Weight/Volume:	1 mL
Prep Date:	04/24/2015 1620			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		1000	U	1000	4100
C10-C28		1700	J	700	4100

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	85		49 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V615**

Lab Sample ID: 280-68112-2
Client Matrix: Solid
% Moisture: 5.3

Date Sampled: 04/16/2015 1252
Date Received: 04/21/2015 0940

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-274657	Instrument ID:	SGC_U
Prep Method:	3550C	Prep Batch:	280-274376	Lab File ID:	04270008.D
Dilution:	1.0			Initial Weight/Volume:	30.8 g
Analysis Date:	04/27/2015 1122			Final Weight/Volume:	1 mL
Prep Date:	04/24/2015 1620			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		1000	U	1000	4100
C10-C28		1000	J	700	4100

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	82		49 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V616**

Lab Sample ID: 280-68112-3
Client Matrix: Solid
% Moisture: 4.2

Date Sampled: 04/16/2015 1325
Date Received: 04/21/2015 0940

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-274657	Instrument ID:	SGC_U
Prep Method:	3550C	Prep Batch:	280-274376	Lab File ID:	04270009.D
Dilution:	1.0			Initial Weight/Volume:	31.4 g
Analysis Date:	04/27/2015 1150			Final Weight/Volume:	1 mL
Prep Date:	04/24/2015 1620			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		990	U	990	4000
C10-C28		1200	J	680	4000

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	80		49 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V617**

Lab Sample ID: 280-68112-4
Client Matrix: Solid
% Moisture: 2.3

Date Sampled: 04/16/2015 1336
Date Received: 04/21/2015 0940

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-274657	Instrument ID:	SGC_U
Prep Method:	3550C	Prep Batch:	280-274376	Lab File ID:	04270010.D
Dilution:	1.0			Initial Weight/Volume:	30.7 g
Analysis Date:	04/27/2015 1218			Final Weight/Volume:	1 mL
Prep Date:	04/24/2015 1620			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		1000	U	1000	4000
C10-C28		1400	J	680	4000

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	76		49 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V618**

Lab Sample ID: 280-68112-5
Client Matrix: Solid
% Moisture: 3.6

Date Sampled: 04/16/2015 1346
Date Received: 04/21/2015 0940

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-274657	Instrument ID:	SGC_U
Prep Method:	3550C	Prep Batch:	280-274376	Lab File ID:	04270013.D
Dilution:	1.0			Initial Weight/Volume:	31.5 g
Analysis Date:	04/27/2015 1343			Final Weight/Volume:	1 mL
Prep Date:	04/24/2015 1620			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		980	U	980	3900
C10-C28		1300	J	670	3900

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	82		49 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V619**

Lab Sample ID: 280-68112-6
Client Matrix: Solid
% Moisture: 4.9

Date Sampled: 04/16/2015 1400
Date Received: 04/21/2015 0940

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-274657	Instrument ID:	SGC_U
Prep Method:	3550C	Prep Batch:	280-274376	Lab File ID:	04270015.D
Dilution:	1.0			Initial Weight/Volume:	31.9 g
Analysis Date:	04/27/2015 1439			Final Weight/Volume:	1 mL
Prep Date:	04/24/2015 1620			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		990	U	990	4000
C10-C28		1100	J	670	4000

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	79		49 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V620**

Lab Sample ID: 280-68112-7
Client Matrix: Solid
% Moisture: 9.4

Date Sampled: 04/16/2015 1412
Date Received: 04/21/2015 0940

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-274657	Instrument ID:	SGC_U
Prep Method:	3550C	Prep Batch:	280-274376	Lab File ID:	04270016.D
Dilution:	1.0			Initial Weight/Volume:	29.7 g
Analysis Date:	04/27/2015 1507			Final Weight/Volume:	1 mL
Prep Date:	04/24/2015 1620			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		1100	U	1100	4500
C10-C28		1500	J	760	4500

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	80		49 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V621**

Lab Sample ID: 280-68112-8
Client Matrix: Solid
% Moisture: 5.8

Date Sampled: 04/16/2015 1420
Date Received: 04/21/2015 0940

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-274657	Instrument ID:	SGC_U
Prep Method:	3550C	Prep Batch:	280-274376	Lab File ID:	04270017.D
Dilution:	1.0			Initial Weight/Volume:	32.0 g
Analysis Date:	04/27/2015 1535			Final Weight/Volume:	1 mL
Prep Date:	04/24/2015 1620			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		990	U	990	4000
C10-C28		1300	J	680	4000

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	85		49 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V622**

Lab Sample ID: 280-68112-9
Client Matrix: Solid
% Moisture: 4.6

Date Sampled: 04/16/2015 1432
Date Received: 04/21/2015 0940

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-274657	Instrument ID:	SGC_U
Prep Method:	3550C	Prep Batch:	280-274376	Lab File ID:	04270018.D
Dilution:	1.0			Initial Weight/Volume:	30.4 g
Analysis Date:	04/27/2015 1603			Final Weight/Volume:	1 mL
Prep Date:	04/24/2015 1620			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		1000	U	1000	4100
C10-C28		1300	J	700	4100

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	81		49 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V623**

Lab Sample ID: 280-68112-10
Client Matrix: Solid
% Moisture: 5.7

Date Sampled: 04/16/2015 1445
Date Received: 04/21/2015 0940

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-274657	Instrument ID:	SGC_U
Prep Method:	3550C	Prep Batch:	280-274376	Lab File ID:	04270019.D
Dilution:	1.0			Initial Weight/Volume:	30.1 g
Analysis Date:	04/27/2015 1631			Final Weight/Volume:	1 mL
Prep Date:	04/24/2015 1620			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		1100	U	1100	4200
C10-C28		1200	J	720	4200

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	86		49 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V624**

Lab Sample ID: 280-68112-11
Client Matrix: Solid
% Moisture: 7.5

Date Sampled: 04/16/2015 1302
Date Received: 04/21/2015 0940

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-274657	Instrument ID:	SGC_U
Prep Method:	3550C	Prep Batch:	280-274376	Lab File ID:	04270022.D
Dilution:	1.0			Initial Weight/Volume:	30.0 g
Analysis Date:	04/27/2015 1755			Final Weight/Volume:	1 mL
Prep Date:	04/24/2015 1620			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		26000		1100	4300
C10-C28		13000		730	4300

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	74		49 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V625**

Lab Sample ID: 280-68112-12
Client Matrix: Solid
% Moisture: 12.0

Date Sampled: 04/16/2015 1314
Date Received: 04/21/2015 0940

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-274657	Instrument ID:	SGC_U
Prep Method:	3550C	Prep Batch:	280-274376	Lab File ID:	04270023.D
Dilution:	1.0			Initial Weight/Volume:	30.3 g
Analysis Date:	04/27/2015 1823			Final Weight/Volume:	1 mL
Prep Date:	04/24/2015 1620			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		97000		1100	4500
C10-C28		44000		760	4500

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	77		49 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V614**

Lab Sample ID: 280-68112-1
Client Matrix: Solid
% Moisture: 7.3

Date Sampled: 04/16/2015 1243
Date Received: 04/21/2015 0940

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-274393	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-273799	Initial Weight/Volume:	30.6 g
Dilution:	1.0			Final Weight/Volume:	4 mL
Analysis Date:	04/24/2015 1757			Injection Volume:	20 uL
Prep Date:	04/21/2015 2302			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		11	U	11	110
Acenaphthylene		9.5	U	9.5	110
Anthracene		3.2	U	3.2	21
Benzo[a]anthracene		3.4	U	3.4	16
Benzo[a]pyrene		6.8	U	6.8	16
Benzo[b]fluoranthene		4.4	U	4.4	16
Benzo[g,h,i]perylene		7.6	U	7.6	32
Benzo[k]fluoranthene		4.2	U	4.2	16
Chrysene		5.1	U	5.1	42
Dibenzo(a,h)anthracene		12	U	12	32
Fluoranthene		14	U	14	42
Fluorene		5.6	U	5.6	32
Indeno[1,2,3-cd]pyrene		13	U	13	32
Naphthalene		13	U	13	110
Phenanthrene		13	U	13	42
Pyrene		13	U	13	42

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	77		72 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V615**

Lab Sample ID: 280-68112-2
Client Matrix: Solid
% Moisture: 5.3

Date Sampled: 04/16/2015 1252
Date Received: 04/21/2015 0940

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-274393	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-273799	Initial Weight/Volume:	30.4 g
Dilution:	1.0			Final Weight/Volume:	4 mL
Analysis Date:	04/24/2015 1827			Injection Volume:	20 uL
Prep Date:	04/21/2015 2302			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	100
Acenaphthylene		9.4	U	9.4	100
Anthracene		3.2	U	3.2	21
Benzo[a]anthracene		3.3	U	3.3	16
Benzo[a]pyrene		6.7	U	6.7	16
Benzo[b]fluoranthene		4.4	U	4.4	16
Benzo[g,h,i]perylene		7.5	U	7.5	31
Benzo[k]fluoranthene		4.1	U	4.1	16
Chrysene		5.0	U	5.0	42
Dibenzo(a,h)anthracene		11	U	11	31
Fluoranthene		14	U	14	42
Fluorene		5.5	U	5.5	31
Indeno[1,2,3-cd]pyrene		13	U	13	31
Naphthalene		13	U	13	100
Phenanthrene		13	U	13	42
Pyrene		13	U	13	42

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	83		72 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V616**

Lab Sample ID: 280-68112-3
Client Matrix: Solid
% Moisture: 4.2

Date Sampled: 04/16/2015 1325
Date Received: 04/21/2015 0940

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-274393	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-273799	Initial Weight/Volume:	30.8 g
Dilution:	1.0			Final Weight/Volume:	4 mL
Analysis Date:	04/24/2015 1858			Injection Volume:	20 uL
Prep Date:	04/21/2015 2302			Result Type:	PRIMARY

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

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	81		72 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V617**

Lab Sample ID: 280-68112-4
Client Matrix: Solid
% Moisture: 2.3

Date Sampled: 04/16/2015 1336
Date Received: 04/21/2015 0940

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-274393	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-273799	Initial Weight/Volume:	30.4 g
Dilution:	1.0			Final Weight/Volume:	4 mL
Analysis Date:	04/24/2015 1928			Injection Volume:	20 uL
Prep Date:	04/21/2015 2302			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	100
Acenaphthylene		9.1	U	9.1	100
Anthracene		3.1	U	3.1	20
Benzo[a]anthracene		3.2	U	3.2	15
Benzo[a]pyrene		6.5	U	6.5	15
Benzo[b]fluoranthene		4.2	U	4.2	15
Benzo[g,h,i]perylene		7.3	U	7.3	30
Benzo[k]fluoranthene		4.0	U	4.0	15
Chrysene		4.9	U	4.9	40
Dibenzo(a,h)anthracene		11	U	11	30
Fluoranthene		13	U	13	40
Fluorene		5.3	U	5.3	30
Indeno[1,2,3-cd]pyrene		12	U	12	30
Naphthalene		12	U	12	100
Phenanthrene		12	U	12	40
Pyrene		12	U	12	40

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	89		72 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V618**

Lab Sample ID: 280-68112-5
Client Matrix: Solid
% Moisture: 3.6

Date Sampled: 04/16/2015 1346
Date Received: 04/21/2015 0940

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-274393	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-273799	Initial Weight/Volume:	30.2 g
Dilution:	1.0			Final Weight/Volume:	4 mL
Analysis Date:	04/24/2015 1959			Injection Volume:	20 uL
Prep Date:	04/21/2015 2302			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	100
Acenaphthylene		9.3	U	9.3	100
Anthracene		3.1	U	3.1	21
Benzo[a]anthracene		3.3	U	3.3	15
Benzo[a]pyrene		6.6	U	6.6	15
Benzo[b]fluoranthene		4.3	U	4.3	15
Benzo[g,h,i]perylene		7.4	U	7.4	31
Benzo[k]fluoranthene		4.1	U	4.1	15
Chrysene		5.0	U	5.0	41
Dibenzo(a,h)anthracene		11	U	11	31
Fluoranthene		13	U	13	41
Fluorene		5.4	U	5.4	31
Indeno[1,2,3-cd]pyrene		12	U	12	31
Naphthalene		12	U	12	100
Phenanthrene		12	U	12	41
Pyrene		12	U	12	41

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

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V619**

Lab Sample ID: 280-68112-6
Client Matrix: Solid
% Moisture: 4.9

Date Sampled: 04/16/2015 1400
Date Received: 04/21/2015 0940

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-274393	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-273799	Initial Weight/Volume:	32.7 g
Dilution:	1.0			Final Weight/Volume:	4 mL
Analysis Date:	04/24/2015 2029			Injection Volume:	20 uL
Prep Date:	04/21/2015 2302			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		9.6	U	9.6	96
Acenaphthylene		8.7	U	8.7	96
Anthracene		2.9	U	2.9	19
Benzo[a]anthracene		3.1	U	3.1	14
Benzo[a]pyrene		6.2	U	6.2	14
Benzo[b]fluoranthene		4.1	U	4.1	14
Benzo[g,h,i]perylene		6.9	U	6.9	29
Benzo[k]fluoranthene		3.8	U	3.8	14
Chrysene		4.7	U	4.7	39
Dibenzo(a,h)anthracene		11	U	11	29
Fluoranthene		13	U	13	39
Fluorene		5.1	U	5.1	29
Indeno[1,2,3-cd]pyrene		12	U	12	29
Naphthalene		12	U	12	96
Phenanthrene		12	U	12	39
Pyrene		12	U	12	39

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	90		72 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V620**

Lab Sample ID: 280-68112-7
Client Matrix: Solid
% Moisture: 9.4

Date Sampled: 04/16/2015 1412
Date Received: 04/21/2015 0940

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-274393	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-273799	Initial Weight/Volume:	31.5 g
Dilution:	1.0			Final Weight/Volume:	4 mL
Analysis Date:	04/24/2015 2100			Injection Volume:	20 uL
Prep Date:	04/21/2015 2302			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		11	U	11	110
Acenaphthylene		9.5	U	9.5	110
Anthracene		3.2	U	3.2	21
Benzo[a]anthracene		3.4	U	3.4	16
Benzo[a]pyrene		6.7	U	6.7	16
Benzo[b]fluoranthene		4.4	U	4.4	16
Benzo[g,h,i]perylene		7.6	U	7.6	32
Benzo[k]fluoranthene		4.1	U	4.1	16
Chrysene		5.1	U	5.1	42
Dibenzo(a,h)anthracene		12	U	12	32
Fluoranthene		14	U	14	42
Fluorene		5.6	U	5.6	32
Indeno[1,2,3-cd]pyrene		13	U	13	32
Naphthalene		13	U	13	110
Phenanthrene		13	U	13	42
Pyrene		13	U	13	42

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	91		72 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V621**

Lab Sample ID: 280-68112-8
Client Matrix: Solid
% Moisture: 5.8

Date Sampled: 04/16/2015 1420
Date Received: 04/21/2015 0940

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-274393	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-273799	Initial Weight/Volume:	32.0 g
Dilution:	1.0			Final Weight/Volume:	4 mL
Analysis Date:	04/24/2015 2130			Injection Volume:	20 uL
Prep Date:	04/21/2015 2302			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	100
Acenaphthylene		9.0	U	9.0	100
Anthracene		3.0	U	3.0	20
Benzo[a]anthracene		3.2	U	3.2	15
Benzo[a]pyrene		6.4	U	6.4	15
Benzo[b]fluoranthene		4.2	U	4.2	15
Benzo[g,h,i]perylene		7.2	U	7.2	30
Benzo[k]fluoranthene		3.9	U	3.9	15
Chrysene		4.8	U	4.8	40
Dibenzo(a,h)anthracene		11	U	11	30
Fluoranthene		13	U	13	40
Fluorene		5.3	U	5.3	30
Indeno[1,2,3-cd]pyrene		12	U	12	30
Naphthalene		12	U	12	100
Phenanthrene		12	U	12	40
Pyrene		12	U	12	40

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

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V622**

Lab Sample ID: 280-68112-9
Client Matrix: Solid
% Moisture: 4.6

Date Sampled: 04/16/2015 1432
Date Received: 04/21/2015 0940

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-274393	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-273799	Initial Weight/Volume:	30.9 g
Dilution:	1.0			Final Weight/Volume:	4 mL
Analysis Date:	04/24/2015 2231			Injection Volume:	20 uL
Prep Date:	04/21/2015 2302			Result Type:	PRIMARY

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

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	93		72 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V623**

Lab Sample ID: 280-68112-10
Client Matrix: Solid
% Moisture: 5.7

Date Sampled: 04/16/2015 1445
Date Received: 04/21/2015 0940

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-274393	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-273799	Initial Weight/Volume:	30.9 g
Dilution:	1.0			Final Weight/Volume:	4 mL
Analysis Date:	04/24/2015 2302			Injection Volume:	20 uL
Prep Date:	04/21/2015 2302			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	100
Acenaphthylene		9.3	U	9.3	100
Anthracene		3.1	U	3.1	21
Benzo[a]anthracene		3.3	U	3.3	15
Benzo[a]pyrene		6.6	U	6.6	15
Benzo[b]fluoranthene		4.3	U	4.3	15
Benzo[g,h,i]perylene		7.4	U	7.4	31
Benzo[k]fluoranthene		4.1	U	4.1	15
Chrysene		5.0	U	5.0	41
Dibenzo(a,h)anthracene		11	U	11	31
Fluoranthene		13	U	13	41
Fluorene		5.4	U	5.4	31
Indeno[1,2,3-cd]pyrene		12	U	12	31
Naphthalene		12	U	12	100
Phenanthrene		12	U	12	41
Pyrene		12	U	12	41

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	79		72 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V624**

Lab Sample ID: 280-68112-11
Client Matrix: Solid
% Moisture: 7.5

Date Sampled: 04/16/2015 1302
Date Received: 04/21/2015 0940

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-274393	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-273799	Initial Weight/Volume:	30.5 g
Dilution:	1.0			Final Weight/Volume:	4 mL
Analysis Date:	04/24/2015 2332			Injection Volume:	20 uL
Prep Date:	04/21/2015 2302			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		11	U	11	110
Acenaphthylene		9.6	U	9.6	110
Anthracene		3.2	U	3.2	21
Benzo[a]anthracene		3.4	U	3.4	16
Benzo[a]pyrene		6.8	U	6.8	16
Benzo[b]fluoranthene		11	J X	4.5	16
Benzo[g,h,i]perylene		7.7	U	7.7	32
Benzo[k]fluoranthene		4.2	U	4.2	16
Chrysene		5.1	U	5.1	43
Dibenzo(a,h)anthracene		12	U	12	32
Fluoranthene		14	U	14	43
Fluorene		5.6	U	5.6	32
Indeno[1,2,3-cd]pyrene		13	U	13	32
Naphthalene		13	U	13	110
Phenanthrene		13	U	13	43
Pyrene		13	U	13	43

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	103		72 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V625**

Lab Sample ID: 280-68112-12
Client Matrix: Solid
% Moisture: 12.0

Date Sampled: 04/16/2015 1314
Date Received: 04/21/2015 0940

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-274393	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-273799	Initial Weight/Volume:	31.7 g
Dilution:	1.0			Final Weight/Volume:	4 mL
Analysis Date:	04/25/2015 0003			Injection Volume:	20 uL
Prep Date:	04/21/2015 2302			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		11	U	11	110
Acenaphthylene		9.7	U	9.7	110
Anthracene		3.3	U	3.3	22
Benzo[a]anthracene		3.4	U	3.4	16
Benzo[a]pyrene		6.9	U	6.9	16
Benzo[b]fluoranthene		18	X	4.5	16
Benzo[g,h,i]perylene		7.7	U	7.7	32
Benzo[k]fluoranthene		4.2	U	4.2	16
Chrysene		5.2	U	5.2	43
Dibenzo(a,h)anthracene		12	U	12	32
Fluoranthene		14	U	14	43
Fluorene		5.7	U	5.7	32
Indeno[1,2,3-cd]pyrene		13	U	13	32
Naphthalene		13	U	13	110
Phenanthrene		13	U	13	43
Pyrene		13	U N	13	43

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	203	*	72 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V614**

Lab Sample ID: 280-68112-1
Client Matrix: Solid
% Moisture: 7.3

Date Sampled: 04/16/2015 1243
Date Received: 04/21/2015 0940

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-274332	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042315.asc
Dilution:	1.0			Initial Weight/Volume:	1.05 g
Analysis Date:	04/23/2015 1144			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4210	X	1.6	5.1
Antimony		0.39	U	0.39	0.62
Arsenic		1.7		0.68	1.0
Barium		48.7	X	0.078	0.51
Beryllium		0.13	B	0.034	0.21
Boron		1.0	U	1.0	2.1
Cadmium		0.042	U	0.042	0.21
Calcium		2860	X	14.5	51.4
Chromium		5.0	X	0.060	0.21
Cobalt		6.4	X	0.10	1.0
Copper		10.4	X	0.22	1.0
Iron		15200	X	3.9	5.1
Lead		5.0		0.28	0.51
Magnesium		2700	X	3.8	20.5
Manganese		209	X	0.10	1.0
Molybdenum		0.27	U	0.27	2.1
Nickel		6.4	X	0.13	4.1
Potassium		570		42.1	308
Selenium		0.88	U	0.88	1.0
Silicon		156	N	5.8	10.3
Silver		0.16	U	0.16	0.21
Sodium		192		60.6	123
Strontium		14.1	X	0.037	1.0
Vanadium		34.2	X	0.097	2.1
Zinc		28.3	X	0.41	1.0

Analysis Method:	6010B	Analysis Batch:	280-274420	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042415a.asc
Dilution:	1.0			Initial Weight/Volume:	1.05 g
Analysis Date:	04/24/2015 1136			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Lithium		4.3		0.31	2.6
Tin		1.3	B	0.94	10.3
Zirconium		15.3	X	0.36	2.6

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-274123	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-273810	Lab File ID:	105SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.13 g
Analysis Date:	04/23/2015 0227			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V614**

Lab Sample ID: 280-68112-1
Client Matrix: Solid
% Moisture: 7.3

Date Sampled: 04/16/2015 1243
Date Received: 04/21/2015 0940

6020 Metals (ICP/MS)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		4.4		0.0015	0.095

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-274061	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-273866	Lab File ID:	150422ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.59 g
Analysis Date:	04/22/2015 1535			Final Weight/Volume:	50 mL
Prep Date:	04/22/2015 1000				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.10		0.0061	0.019

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V615**

Lab Sample ID: 280-68112-2
Client Matrix: Solid
% Moisture: 5.3

Date Sampled: 04/16/2015 1252
Date Received: 04/21/2015 0940

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-274332	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042315.asc
Dilution:	1.0			Initial Weight/Volume:	1.09 g
Analysis Date:	04/23/2015 1147			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4120	X	1.5	4.8
Antimony		0.37	U	0.37	0.58
Arsenic		1.0	M	0.64	0.97
Barium		68.9	X	0.074	0.48
Beryllium		0.099	B	0.032	0.19
Boron		0.95	U N	0.95	1.9
Cadmium		0.040	U	0.040	0.19
Calcium		5320	X	13.7	48.4
Chromium		3.7	X M	0.056	0.19
Cobalt		10.2	X	0.097	0.97
Copper		13.4	X	0.21	0.97
Iron		23400	X	3.7	4.8
Lead		2.1		0.26	0.48
Magnesium		3400	X	3.6	19.4
Manganese		325	X	0.097	0.97
Molybdenum		0.25	B	0.25	1.9
Nickel		6.5	X	0.12	3.9
Potassium		464		39.7	291
Selenium		0.83	U N	0.83	0.97
Silicon		136	N	5.5	9.7
Silver		0.16	U	0.16	0.19
Sodium		245	M	57.2	116
Strontium		18.8	X	0.035	0.97
Vanadium		62.7	X	0.091	1.9
Zinc		42.1	X	0.39	0.97

Analysis Method:	6010B	Analysis Batch:	280-274420	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042415a.asc
Dilution:	1.0			Initial Weight/Volume:	1.09 g
Analysis Date:	04/24/2015 1138			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Lithium		3.0		0.29	2.4
Tin		1.2	B N	0.88	9.7
Zirconium		23.9	X	0.34	2.4

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-274123	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-273810	Lab File ID:	110SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.08 g
Analysis Date:	04/23/2015 0245			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V615**

Lab Sample ID: 280-68112-2
Client Matrix: Solid
% Moisture: 5.3

Date Sampled: 04/16/2015 1252
Date Received: 04/21/2015 0940

6020 Metals (ICP/MS)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		2.6		0.0015	0.098

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-274061	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-273866	Lab File ID:	150422ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.55 g
Analysis Date:	04/22/2015 1542			Final Weight/Volume:	50 mL
Prep Date:	04/22/2015 1000				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.029		0.0064	0.020

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V616**

Lab Sample ID: 280-68112-3
Client Matrix: Solid
% Moisture: 4.2

Date Sampled: 04/16/2015 1325
Date Received: 04/21/2015 0940

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-274332	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042315.asc
Dilution:	1.0			Initial Weight/Volume:	1.13 g
Analysis Date:	04/23/2015 1157			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5190	X	1.4	4.6
Antimony		0.35	U	0.35	0.55
Arsenic		1.9		0.61	0.92
Barium		50.4	X	0.070	0.46
Beryllium		0.16	B	0.030	0.18
Boron		0.91	U	0.91	1.8
Cadmium		0.038	U	0.038	0.18
Calcium		4570	X	13.0	46.2
Chromium		3.8	X	0.054	0.18
Cobalt		8.7	X	0.092	0.92
Copper		14.8	X	0.20	0.92
Iron		20000	X	3.5	4.6
Lead		2.9		0.25	0.46
Magnesium		3790	X	3.4	18.5
Manganese		250	X	0.092	0.92
Molybdenum		0.28	B	0.24	1.8
Nickel		7.4	X	0.11	3.7
Potassium		669		37.9	277
Selenium		0.79	U	0.79	0.92
Silicon		136	N	5.2	9.2
Silver		0.15	U	0.15	0.18
Sodium		401		54.5	111
Strontium		18.5	X	0.033	0.92
Vanadium		46.5	X	0.087	1.8
Zinc		35.7	X	0.37	0.92

Analysis Method:	6010B	Analysis Batch:	280-274420	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042415a.asc
Dilution:	1.0			Initial Weight/Volume:	1.13 g
Analysis Date:	04/24/2015 1149			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Lithium		3.7		0.28	2.3
Tin		1.2	B	0.84	9.2
Zirconium		18.7	X	0.33	2.3

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-274123	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-273810	Lab File ID:	113SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.13 g
Analysis Date:	04/23/2015 0255			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V616**

Lab Sample ID: 280-68112-3
Client Matrix: Solid
% Moisture: 4.2

Date Sampled: 04/16/2015 1325
Date Received: 04/21/2015 0940

6020 Metals (ICP/MS)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		4.1		0.0015	0.092

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-274061	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-273866	Lab File ID:	150422ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.59 g
Analysis Date:	04/22/2015 1544			Final Weight/Volume:	50 mL
Prep Date:	04/22/2015 1000				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.094		0.0059	0.018

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V617**

Lab Sample ID: 280-68112-4
Client Matrix: Solid
% Moisture: 2.3

Date Sampled: 04/16/2015 1336
Date Received: 04/21/2015 0940

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-274332	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042315.asc
Dilution:	1.0			Initial Weight/Volume:	1.06 g
Analysis Date:	04/23/2015 1200			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4480	X	1.5	4.8
Antimony		0.37	U	0.37	0.58
Arsenic		1.5		0.64	0.97
Barium		53.8	X	0.073	0.48
Beryllium		0.15	B	0.032	0.19
Boron		0.95	U	0.95	1.9
Cadmium		0.040	U	0.040	0.19
Calcium		4850	X	13.6	48.3
Chromium		3.4	X	0.056	0.19
Cobalt		9.4	X	0.097	0.97
Copper		14.1	X	0.21	0.97
Iron		22400	X	3.7	4.8
Lead		2.4		0.26	0.48
Magnesium		3370	X	3.6	19.3
Manganese		250	X	0.097	0.97
Molybdenum		0.25	U	0.25	1.9
Nickel		6.5	X	0.12	3.9
Potassium		632		39.6	290
Selenium		0.83	U	0.83	0.97
Silicon		150	N	5.5	9.7
Silver		0.15	U	0.15	0.19
Sodium		319		57.0	116
Strontium		23.8	X	0.035	0.97
Vanadium		57.7	X	0.091	1.9
Zinc		41.3	X	0.38	0.97

Analysis Method:	6010B	Analysis Batch:	280-274420	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042415a.asc
Dilution:	1.0			Initial Weight/Volume:	1.06 g
Analysis Date:	04/24/2015 1151			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Lithium		3.3		0.29	2.4
Tin		1.1	B	0.88	9.7
Zirconium		22.1	X	0.34	2.4

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-274123	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-273810	Lab File ID:	114SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.13 g
Analysis Date:	04/23/2015 0259			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V617**

Lab Sample ID: 280-68112-4
Client Matrix: Solid
% Moisture: 2.3

Date Sampled: 04/16/2015 1336
Date Received: 04/21/2015 0940

6020 Metals (ICP/MS)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		1.5		0.0014	0.091

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-274061	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-273866	Lab File ID:	150422ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.59 g
Analysis Date:	04/22/2015 1547			Final Weight/Volume:	50 mL
Prep Date:	04/22/2015 1000				

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

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V618**

Lab Sample ID: 280-68112-5
Client Matrix: Solid
% Moisture: 3.6

Date Sampled: 04/16/2015 1346
Date Received: 04/21/2015 0940

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-274332	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042315.asc
Dilution:	1.0			Initial Weight/Volume:	1.18 g
Analysis Date:	04/23/2015 1203			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		3860	X	1.4	4.4
Antimony		0.33	U	0.33	0.53
Arsenic		1.6		0.58	0.88
Barium		50.8	X	0.067	0.44
Beryllium		0.12	B	0.029	0.18
Boron		0.86	U	0.86	1.8
Cadmium		0.043	B	0.036	0.18
Calcium		4690	X	12.4	43.9
Chromium		3.5	X	0.051	0.18
Cobalt		8.9	X	0.088	0.88
Copper		13.4	X	0.19	0.88
Iron		22100	X	3.3	4.4
Lead		2.2		0.24	0.44
Magnesium		3180	X	3.3	17.6
Manganese		241	X	0.088	0.88
Molybdenum		0.23	U	0.23	1.8
Nickel		6.0	X	0.11	3.5
Potassium		479		36.0	264
Selenium		0.76	U	0.76	0.88
Silicon		123	N	5.0	8.8
Silver		0.14	U	0.14	0.18
Sodium		202		51.8	105
Strontium		23.2	X	0.032	0.88
Vanadium		60.9	X	0.083	1.8
Zinc		39.3	X	0.35	0.88

Analysis Method:	6010B	Analysis Batch:	280-274420	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042415a.asc
Dilution:	1.0			Initial Weight/Volume:	1.18 g
Analysis Date:	04/24/2015 1154			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Lithium		3.1		0.26	2.2
Tin		1.2	B	0.80	8.8
Zirconium		20.7	X	0.31	2.2

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-274123	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-273810	Lab File ID:	115SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.06 g
Analysis Date:	04/23/2015 0302			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V618**

Lab Sample ID: 280-68112-5
Client Matrix: Solid
% Moisture: 3.6

Date Sampled: 04/16/2015 1346
Date Received: 04/21/2015 0940

6020 Metals (ICP/MS)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		0.85		0.0015	0.098

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-274061	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-273866	Lab File ID:	150422ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.57 g
Analysis Date:	04/22/2015 1549			Final Weight/Volume:	50 mL
Prep Date:	04/22/2015 1000				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.062		0.0060	0.019

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V619**

Lab Sample ID: 280-68112-6
Client Matrix: Solid
% Moisture: 4.9

Date Sampled: 04/16/2015 1400
Date Received: 04/21/2015 0940

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-274332	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042315.asc
Dilution:	1.0			Initial Weight/Volume:	1.16 g
Analysis Date:	04/23/2015 1216			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		3660	X	1.4	4.5
Antimony		0.34	U	0.34	0.54
Arsenic		1.7		0.60	0.91
Barium		57.7	X	0.069	0.45
Beryllium		0.16	B	0.030	0.18
Boron		0.89	U	0.89	1.8
Cadmium		0.037	U	0.037	0.18
Calcium		3690	X	12.8	45.3
Chromium		3.1	X	0.053	0.18
Cobalt		8.5	X	0.091	0.91
Copper		11.6	X	0.20	0.91
Iron		17100	X	3.4	4.5
Lead		2.4		0.24	0.45
Magnesium		3020	X	3.4	18.1
Manganese		217	X	0.091	0.91
Molybdenum		0.24	U	0.24	1.8
Nickel		6.4	X	0.11	3.6
Potassium		622		37.2	272
Selenium		0.78	U	0.78	0.91
Silicon		128	N	5.1	9.1
Silver		0.14	U	0.14	0.18
Sodium		269		53.5	109
Strontium		16.1	X	0.033	0.91
Vanadium		40.2	X	0.085	1.8
Zinc		31.8	X	0.36	0.91

Analysis Method:	6010B	Analysis Batch:	280-274420	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042415a.asc
Dilution:	1.0			Initial Weight/Volume:	1.16 g
Analysis Date:	04/24/2015 1207			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Lithium		2.7		0.27	2.3
Tin		0.91	B	0.83	9.1
Zirconium		18.2	X	0.32	2.3

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-274123	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-273810	Lab File ID:	116SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.13 g
Analysis Date:	04/23/2015 0306			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V619**

Lab Sample ID: 280-68112-6
Client Matrix: Solid
% Moisture: 4.9

Date Sampled: 04/16/2015 1400
Date Received: 04/21/2015 0940

6020 Metals (ICP/MS)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		1.5		0.0015	0.093

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-274061	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-273866	Lab File ID:	150422ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.56 g
Analysis Date:	04/22/2015 1551			Final Weight/Volume:	50 mL
Prep Date:	04/22/2015 1000				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0062	U	0.0062	0.019

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V620**

Lab Sample ID: 280-68112-7
Client Matrix: Solid
% Moisture: 9.4

Date Sampled: 04/16/2015 1412
Date Received: 04/21/2015 0940

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-274332	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042315.asc
Dilution:	1.0			Initial Weight/Volume:	1.15 g
Analysis Date:	04/23/2015 1219			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		10300	X	1.5	4.8
Antimony		0.36	U	0.36	0.58
Arsenic		3.2		0.63	0.96
Barium		81.1	X	0.073	0.48
Beryllium		0.41		0.032	0.19
Boron		0.97	B	0.94	1.9
Cadmium		0.039	U	0.039	0.19
Calcium		5290	X	13.5	48.0
Chromium		8.7	X	0.056	0.19
Cobalt		8.3	X	0.096	0.96
Copper		16.1	X	0.21	0.96
Iron		22100	X	3.6	4.8
Lead		4.5		0.26	0.48
Magnesium		4240	X	3.6	19.2
Manganese		275	X	0.096	0.96
Molybdenum		0.25	U	0.25	1.9
Nickel		9.0	X	0.12	3.8
Potassium		1910		39.4	288
Selenium		0.83	U	0.83	0.96
Silicon		217	N	5.4	9.6
Silver		0.15	U	0.15	0.19
Sodium		240		56.7	115
Strontium		24.8	X	0.035	0.96
Vanadium		49.9	X	0.090	1.9
Zinc		41.9	X	0.38	0.96

Analysis Method:	6010B	Analysis Batch:	280-274420	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042415a.asc
Dilution:	1.0			Initial Weight/Volume:	1.15 g
Analysis Date:	04/24/2015 1210			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Lithium		6.5		0.29	2.4
Tin		1.5	B	0.88	9.6
Zirconium		27.1	X	0.34	2.4

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-274123	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-273810	Lab File ID:	117SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.09 g
Analysis Date:	04/23/2015 0310			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V620**

Lab Sample ID: 280-68112-7
Client Matrix: Solid
% Moisture: 9.4

Date Sampled: 04/16/2015 1412
Date Received: 04/21/2015 0940

6020 Metals (ICP/MS)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		0.95		0.0016	0.10

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-274061	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-273866	Lab File ID:	150422ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.59 g
Analysis Date:	04/22/2015 1558			Final Weight/Volume:	50 mL
Prep Date:	04/22/2015 1000				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.048		0.0062	0.019

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V621**

Lab Sample ID: 280-68112-8
Client Matrix: Solid
% Moisture: 5.8

Date Sampled: 04/16/2015 1420
Date Received: 04/21/2015 0940

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-274332	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042315.asc
Dilution:	1.0			Initial Weight/Volume:	1.18 g
Analysis Date:	04/23/2015 1221			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		3780	X	1.4	4.5
Antimony		0.34	U	0.34	0.54
Arsenic		1.7		0.59	0.90
Barium		59.8	X	0.068	0.45
Boron		3.0		0.88	1.8
Cadmium		0.037	U	0.037	0.18
Calcium		5160	X	12.7	45.0
Chromium		3.1	X	0.052	0.18
Iron		26100	X	3.4	4.5
Magnesium		3680	X	3.3	18.0
Manganese		292	X	0.090	0.90
Molybdenum		0.23	U	0.23	1.8
Nickel		6.7	X	0.11	3.6
Potassium		384		36.9	270
Selenium		0.77	U	0.77	0.90
Silicon		104	N	5.1	9.0
Silver		0.14	U	0.14	0.18
Sodium		306		53.1	108
Strontium		19.3	X	0.032	0.90
Zinc		44.5	X	0.36	0.90

Analysis Method:	6010B	Analysis Batch:	280-274420	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042415a.asc
Dilution:	1.0			Initial Weight/Volume:	1.18 g
Analysis Date:	04/24/2015 1213			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Lithium		2.3		0.27	2.3
Zirconium		26.9	X	0.32	2.3

Analysis Method:	6010B	Analysis Batch:	280-274420	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042415a.asc
Dilution:	5.0			Initial Weight/Volume:	1.18 g
Analysis Date:	04/24/2015 1215			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Beryllium		0.22	B	0.15	0.90
Cobalt		10.6	X	0.45	4.5
Copper		16.6	X	0.98	4.5
Lead		1.7	B	1.2	2.3
Tin		4.1	U	4.1	45.0
Vanadium		82.4	X	0.42	9.0

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V621**

Lab Sample ID: 280-68112-8
Client Matrix: Solid
% Moisture: 5.8

Date Sampled: 04/16/2015 1420
Date Received: 04/21/2015 0940

6010B Metals (ICP)

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-274123	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-273810	Lab File ID:	118SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.06 g
Analysis Date:	04/23/2015 0313			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		2.7		0.0016	0.10

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-274061	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-273866	Lab File ID:	150422ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.55 g
Analysis Date:	04/22/2015 1601			Final Weight/Volume:	50 mL
Prep Date:	04/22/2015 1000				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.011	B	0.0064	0.020

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V622**

Lab Sample ID: 280-68112-9
Client Matrix: Solid
% Moisture: 4.6

Date Sampled: 04/16/2015 1432
Date Received: 04/21/2015 0940

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-274332	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042315.asc
Dilution:	1.0			Initial Weight/Volume:	1.12 g
Analysis Date:	04/23/2015 1224			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4190	X	1.5	4.7
Antimony		0.36	U	0.36	0.56
Arsenic		1.0		0.62	0.94
Barium		55.2	X	0.071	0.47
Beryllium		0.17	B	0.031	0.19
Boron		0.92	U	0.92	1.9
Cadmium		0.038	U	0.038	0.19
Calcium		4130	X	13.2	46.8
Chromium		4.6	X	0.054	0.19
Cobalt		8.8	X	0.094	0.94
Copper		12.2	X	0.20	0.94
Iron		20900	X	3.6	4.7
Lead		2.3		0.25	0.47
Magnesium		3340	X	3.5	18.7
Manganese		231	X	0.094	0.94
Molybdenum		0.24	U	0.24	1.9
Nickel		6.0	X	0.12	3.7
Potassium		534		38.4	281
Selenium		0.80	U	0.80	0.94
Silicon		148	N	5.3	9.4
Silver		0.15	U	0.15	0.19
Sodium		197		55.2	112
Strontium		16.6	X	0.034	0.94
Vanadium		49.3	X	0.088	1.9
Zinc		36.4	X	0.37	0.94

Analysis Method:	6010B	Analysis Batch:	280-274420	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042415a.asc
Dilution:	1.0			Initial Weight/Volume:	1.12 g
Analysis Date:	04/24/2015 1218			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Lithium		3.4		0.28	2.3
Tin		1.1	B	0.85	9.4
Zirconium		25.1	X	0.33	2.3

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-274123	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-273810	Lab File ID:	119SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.09 g
Analysis Date:	04/23/2015 0317			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V622**

Lab Sample ID: 280-68112-9
Client Matrix: Solid
% Moisture: 4.6

Date Sampled: 04/16/2015 1432
Date Received: 04/21/2015 0940

6020 Metals (ICP/MS)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		1.2		0.0015	0.096

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-274061	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-273866	Lab File ID:	150422ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.59 g
Analysis Date:	04/22/2015 1603			Final Weight/Volume:	50 mL
Prep Date:	04/22/2015 1000				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.041		0.0059	0.018

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V623**

Lab Sample ID: 280-68112-10
Client Matrix: Solid
% Moisture: 5.7

Date Sampled: 04/16/2015 1445
Date Received: 04/21/2015 0940

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-274332	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042315.asc
Dilution:	1.0			Initial Weight/Volume:	1.19 g
Analysis Date:	04/23/2015 1227			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		2630	X	1.4	4.5
Antimony		0.34	U	0.34	0.53
Arsenic		0.98		0.59	0.89
Barium		43.8	X	0.068	0.45
Beryllium		0.10	B	0.029	0.18
Boron		1.9		0.87	1.8
Cadmium		0.037	U	0.037	0.18
Calcium		2190	X	12.6	44.6
Chromium		3.3	X	0.052	0.18
Cobalt		5.7	X	0.089	0.89
Copper		11.8	X	0.19	0.89
Iron		13100	X	3.4	4.5
Lead		1.5		0.24	0.45
Magnesium		2400	X	3.3	17.8
Manganese		146	X	0.089	0.89
Molybdenum		0.23	U	0.23	1.8
Nickel		7.4	X	0.11	3.6
Potassium		335		36.5	267
Selenium		0.77	U	0.77	0.89
Silicon		121	N	5.0	8.9
Silver		0.14	U	0.14	0.18
Sodium		169		52.6	107
Strontium		10.0	X	0.032	0.89
Vanadium		29.5	X	0.084	1.8
Zinc		20.8	X	0.35	0.89

Analysis Method:	6010B	Analysis Batch:	280-274420	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042415a.asc
Dilution:	1.0			Initial Weight/Volume:	1.19 g
Analysis Date:	04/24/2015 1221			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Lithium		2.1	B	0.27	2.2
Tin		1.0	B	0.81	8.9
Zirconium		15.1	X	0.32	2.2

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-274123	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-273810	Lab File ID:	120SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.11 g
Analysis Date:	04/23/2015 0320			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V623**

Lab Sample ID: 280-68112-10
Client Matrix: Solid
% Moisture: 5.7

Date Sampled: 04/16/2015 1445
Date Received: 04/21/2015 0940

6020 Metals (ICP/MS)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		5.3		0.0015	0.096

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-274061	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-273866	Lab File ID:	150422ba.txt
Dilution:	1.0			Initial Weight/Volume:	0.59 g
Analysis Date:	04/22/2015 1605			Final Weight/Volume:	50 mL
Prep Date:	04/22/2015 1000				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.063		0.0060	0.018

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V624**

Lab Sample ID: 280-68112-11
Client Matrix: Solid
% Moisture: 7.5

Date Sampled: 04/16/2015 1302
Date Received: 04/21/2015 0940

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-274332	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042315.asc
Dilution:	1.0			Initial Weight/Volume:	1.16 g
Analysis Date:	04/23/2015 1229			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4250	X	1.4	4.7
Antimony		0.35	U	0.35	0.56
Arsenic		2.2		0.61	0.93
Barium		70.2	X	0.071	0.47
Beryllium		0.15	B	0.031	0.19
Boron		1.7	B	0.91	1.9
Cadmium		1.1		0.038	0.19
Calcium		3840	X	13.1	46.6
Chromium		14.4	X	0.054	0.19
Cobalt		7.3	X	0.093	0.93
Copper		30.0	X	0.20	0.93
Iron		17100	X	3.5	4.7
Lead		9.7		0.25	0.47
Magnesium		3100	X	3.4	18.6
Manganese		262	X	0.093	0.93
Molybdenum		0.24	U	0.24	1.9
Nickel		11.1	X	0.11	3.7
Potassium		804		38.2	280
Selenium		0.80	U	0.80	0.93
Silicon		174	N	5.3	9.3
Silver		23.8		0.15	0.19
Sodium		175		55.0	112
Strontium		17.0	X	0.034	0.93
Vanadium		38.3	X	0.088	1.9
Zinc		76.0	X	0.37	0.93

Analysis Method:	6010B	Analysis Batch:	280-274420	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042415a.asc
Dilution:	1.0			Initial Weight/Volume:	1.16 g
Analysis Date:	04/24/2015 1223			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Lithium		4.2		0.28	2.3
Tin		3.8	B	0.85	9.3
Zirconium		104	X	0.33	2.3

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-274123	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-273810	Lab File ID:	121SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.12 g
Analysis Date:	04/23/2015 0324			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V624**

Lab Sample ID: 280-68112-11
Client Matrix: Solid
% Moisture: 7.5

Date Sampled: 04/16/2015 1302
Date Received: 04/21/2015 0940

6020 Metals (ICP/MS)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		11.7		0.0015	0.097

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-274061	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-273866	Lab File ID:	150422ba.txt
Dilution:	5.0			Initial Weight/Volume:	0.56 g
Analysis Date:	04/22/2015 1742			Final Weight/Volume:	50 mL
Prep Date:	04/22/2015 1000				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		1.4		0.032	0.098

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V625**

Lab Sample ID: 280-68112-12
Client Matrix: Solid
% Moisture: 12.0

Date Sampled: 04/16/2015 1314
Date Received: 04/21/2015 0940

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-274332	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042315.asc
Dilution:	1.0			Initial Weight/Volume:	1.05 g
Analysis Date:	04/23/2015 1232			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6610	X	1.7	5.4
Antimony		0.41	U	0.41	0.65
Arsenic		3.5		0.71	1.1
Barium		138	X	0.082	0.54
Beryllium		0.21	B	0.036	0.22
Boron		5.5		1.1	2.2
Cadmium		1.3		0.044	0.22
Calcium		4480	X	15.3	54.1
Chromium		43.3	X	0.063	0.22
Cobalt		9.8	X	0.11	1.1
Copper		98.1	X	0.23	1.1
Iron		17100	X	4.1	5.4
Lead		42.3		0.29	0.54
Magnesium		3620	X	4.0	21.7
Manganese		314	X	0.11	1.1
Molybdenum		1.0	B	0.28	2.2
Nickel		15.8	X	0.13	4.3
Potassium		1340		44.4	325
Selenium		0.93	U	0.93	1.1
Silicon		238	N	6.1	10.8
Silver		128		0.17	0.22
Sodium		226		63.9	130
Strontium		29.2	X	0.039	1.1
Vanadium		41.9	X	0.10	2.2
Zinc		129	X	0.43	1.1

Analysis Method:	6010B	Analysis Batch:	280-274420	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-273811	Lab File ID:	26a042415a.asc
Dilution:	1.0			Initial Weight/Volume:	1.05 g
Analysis Date:	04/24/2015 1226			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Lithium		11.0		0.32	2.7
Tin		16.6		0.99	10.8
Zirconium		315	X	0.38	2.7

6020 Metals (ICP/MS)

Analysis Method:	6020	Analysis Batch:	280-274123	Instrument ID:	MT_078
Prep Method:	3050B	Prep Batch:	280-273810	Lab File ID:	122SMPL.d
Dilution:	1.0			Initial Weight/Volume:	1.05 g
Analysis Date:	04/23/2015 0327			Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Client Sample ID: **J1V625**

Lab Sample ID: 280-68112-12
Client Matrix: Solid
% Moisture: 12.0

Date Sampled: 04/16/2015 1314
Date Received: 04/21/2015 0940

6020 Metals (ICP/MS)

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Uranium		14.1		0.0017	0.11

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-274061	Instrument ID:	MT_034
Prep Method:	7471A	Prep Batch:	280-273866	Lab File ID:	150422ba.txt
Dilution:	10			Initial Weight/Volume:	0.58 g
Analysis Date:	04/22/2015 1744			Final Weight/Volume:	50 mL
Prep Date:	04/22/2015 1000				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		3.5		0.065	0.20

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

General Chemistry

Client Sample ID: **J1V614**

Lab Sample ID: 280-68112-1
Client Matrix: Solid

Date Sampled: 04/16/2015 1243
Date Received: 04/21/2015 0940

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	7.3		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-274252 Analysis Date: 04/23/2015 1853 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

General Chemistry

Client Sample ID: **J1V615**

Lab Sample ID: 280-68112-2
Client Matrix: Solid

Date Sampled: 04/16/2015 1252
Date Received: 04/21/2015 0940

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	5.3		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-274252 Analysis Date: 04/23/2015 1853 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

General Chemistry

Client Sample ID: **J1V616**

Lab Sample ID: 280-68112-3
Client Matrix: Solid

Date Sampled: 04/16/2015 1325
Date Received: 04/21/2015 0940

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	4.2		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-274252 Analysis Date: 04/23/2015 1853 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

General Chemistry

Client Sample ID: **J1V617**

Lab Sample ID: 280-68112-4
Client Matrix: Solid

Date Sampled: 04/16/2015 1336
Date Received: 04/21/2015 0940

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	2.3		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-274252 Analysis Date: 04/23/2015 1853 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

General Chemistry

Client Sample ID: **J1V618**

Lab Sample ID: 280-68112-5
Client Matrix: Solid

Date Sampled: 04/16/2015 1346
Date Received: 04/21/2015 0940

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	3.6		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-274252 Analysis Date: 04/23/2015 1853 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

General Chemistry

Client Sample ID: **J1V619**

Lab Sample ID: 280-68112-6
Client Matrix: Solid

Date Sampled: 04/16/2015 1400
Date Received: 04/21/2015 0940

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	4.9		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-274252 Analysis Date: 04/23/2015 1853 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

General Chemistry

Client Sample ID: **J1V620**

Lab Sample ID: 280-68112-7
Client Matrix: Solid

Date Sampled: 04/16/2015 1412
Date Received: 04/21/2015 0940

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	9.4		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-274252 Analysis Date: 04/23/2015 1853 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

General Chemistry

Client Sample ID: **J1V621**

Lab Sample ID: 280-68112-8
Client Matrix: Solid

Date Sampled: 04/16/2015 1420
Date Received: 04/21/2015 0940

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	5.8		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-274252 Analysis Date: 04/23/2015 1853 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

General Chemistry

Client Sample ID: **J1V622**

Lab Sample ID: 280-68112-9
Client Matrix: Solid

Date Sampled: 04/16/2015 1432
Date Received: 04/21/2015 0940

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	4.6		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-274252 Analysis Date: 04/23/2015 1853 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

General Chemistry

Client Sample ID: **J1V623**

Lab Sample ID: 280-68112-10
Client Matrix: Solid

Date Sampled: 04/16/2015 1445
Date Received: 04/21/2015 0940

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	5.7		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-274252 Analysis Date: 04/23/2015 1853 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

General Chemistry

Client Sample ID: **J1V624**

Lab Sample ID: 280-68112-11
Client Matrix: Solid

Date Sampled: 04/16/2015 1302
Date Received: 04/21/2015 0940

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	7.5		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-274252 Analysis Date: 04/23/2015 1853 DryWt Corrected: N

General Chemistry

Client Sample ID: **J1V625**

Lab Sample ID: 280-68112-12
Client Matrix: Solid

Date Sampled: 04/16/2015 1314
Date Received: 04/21/2015 0940

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	12.0	M	%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-274252 Analysis Date: 04/23/2015 1853 DryWt Corrected: N

QUALITY CONTROL RESULTS

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Surrogate Recovery Report

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCB1 %Rec	TCX1 %Rec
280-68112-1	J1V614	73	69
280-68112-2	J1V615	80	69
280-68112-3	J1V616	87	75
280-68112-4	J1V617	84	74
280-68112-5	J1V618	89	78
280-68112-6	J1V619	84	76
280-68112-7	J1V620	75	68
280-68112-8	J1V621	81	72
280-68112-9	J1V622	78	68
280-68112-10	J1V623	87	76
280-68112-11	J1V624	0D	0D
280-68112-12	J1V625	0D	0D
MB 280-273771/1-A		79	75
LCS 280-273771/2-A		88	81
280-68112-2 MS	J1V615 MS	83	75
280-68112-2 MSD	J1V615 MSD	84	75

Surrogate	Acceptance Limits
DCB = Decachlorobiphenyl	59-130
TCX = Tetrachloro-m-xylene	53-128

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Surrogate Recovery Report

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

Client Matrix: Solid

Lab Sample ID	Client Sample ID	OTPH %Rec
280-68112-1	J1V614	85
280-68112-2	J1V615	82
280-68112-3	J1V616	80
280-68112-4	J1V617	76
280-68112-5	J1V618	82
280-68112-6	J1V619	79
280-68112-7	J1V620	80
280-68112-8	J1V621	85
280-68112-9	J1V622	81
280-68112-10	J1V623	86
280-68112-11	J1V624	74
280-68112-12	J1V625	77
MB 280-274376/1-A		82
LCS 280-274376/2-A		85
280-68112-4 MS	J1V617 MS	77
280-68112-10 MS	J1V623 MS	75
280-68112-4 MSD	J1V617 MSD	83
280-68112-10 MSD	J1V623 MSD	75

Surrogate	Acceptance Limits
OTPH = o-Terphenyl	49-115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Surrogate Recovery Report

8310 PAHs (HPLC)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	TPH1 %Rec
280-68112-1	J1V614	77
280-68112-2	J1V615	83
280-68112-3	J1V616	81
280-68112-4	J1V617	89
280-68112-5	J1V618	94
280-68112-6	J1V619	90
280-68112-7	J1V620	91
280-68112-8	J1V621	97
280-68112-9	J1V622	93
280-68112-10	J1V623	79
280-68112-11	J1V624	103
280-68112-12	J1V625	203*
MB 280-273799/1-A		91
LCS 280-273799/2-A		96
280-68112-12 MS	J1V625 MS	127*
280-68112-12 MSD	J1V625 MSD	126*

Surrogate	Acceptance Limits
TPH = Terphenyl-d14 (SUR)	72-115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Method Blank - Batch: 280-273771

Method: 8082
Preparation: 3550C

Lab Sample ID:	MB 280-273771/1-A	Analysis Batch:	280-274365	Instrument ID:	SGC_W
Client Matrix:	Solid	Prep Batch:	280-273771	Lab File ID:	04241511.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.7 g
Analysis Date:	04/24/2015 1422	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	04/21/2015 1700			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	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	Acceptance Limits
Decachlorobiphenyl	79	59 - 130
Tetrachloro-m-xylene	75	53 - 128

Lab Control Sample - Batch: 280-273771

Method: 8082
Preparation: 3550C

Lab Sample ID:	LCS 280-273771/2-A	Analysis Batch:	280-274365	Instrument ID:	SGC_W
Client Matrix:	Solid	Prep Batch:	280-273771	Lab File ID:	04241512.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.3 g
Analysis Date:	04/24/2015 1445	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	04/21/2015 1700			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	33.0	28.5	86	54 - 132	
Aroclor 1260	33.0	30.7	93	62 - 129	

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	88	59 - 130
Tetrachloro-m-xylene	81	53 - 128

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-273771

Method: 8082
Preparation: 3550C

MS Lab Sample ID:	280-68112-2	Analysis Batch:	280-274365	Instrument ID:	SGC_W
Client Matrix:	Solid	Prep Batch:	280-273771	Lab File ID:	04241515.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.1 g
Analysis Date:	04/24/2015 1554			Final Weight/Volume:	5 mL
Prep Date:	04/21/2015 1700			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	280-68112-2	Analysis Batch:	280-274365	Instrument ID:	SGC_W
Client Matrix:	Solid	Prep Batch:	280-273771	Lab File ID:	04241516.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.1 g
Analysis Date:	04/24/2015 1618			Final Weight/Volume:	5 mL
Prep Date:	04/21/2015 1700			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aroclor 1016	84	85	54 - 132	5	26		
Aroclor 1260	86	89	62 - 129	7	26		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Decachlorobiphenyl	83	84	59 - 130
Tetrachloro-m-xylene	75	75	53 - 128

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-273771

Method: 8082
Preparation: 3550C

MS Lab Sample ID:	280-68112-2	Units:	ug/Kg	MSD Lab Sample ID:	280-68112-2
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	04/24/2015 1554			Analysis Date:	04/24/2015 1618
Prep Date:	04/21/2015 1700			Prep Date:	04/21/2015 1700
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	2.8	U	34.0	35.1	28.5	30.0
Aroclor 1260	2.6	U	34.0	35.1	29.2	31.4

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Method Blank - Batch: 280-274376

Method: NWTPH-Dx
Preparation: 3550C

Lab Sample ID:	MB 280-274376/1-A	Analysis Batch:	280-274657	Instrument ID:	SGC_U
Client Matrix:	Solid	Prep Batch:	280-274376	Lab File ID:	04270005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	32.1 g
Analysis Date:	04/27/2015 0958	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	04/24/2015 1620			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
C10-C36	930	U	930	3700
C10-C28	630	U	630	3700

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	82	49 - 115

Lab Control Sample - Batch: 280-274376

Method: NWTPH-Dx
Preparation: 3550C

Lab Sample ID:	LCS 280-274376/2-A	Analysis Batch:	280-274657	Instrument ID:	SGC_U
Client Matrix:	Solid	Prep Batch:	280-274376	Lab File ID:	04270006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.8 g
Analysis Date:	04/27/2015 1026	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	04/24/2015 1620			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
C10-C36	62900	55800	89	57 - 115	
C10-C28	62900	54300	86	53 - 115	

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	85	49 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-274376

Method: NWTPH-Dx
Preparation: 3550C

MS Lab Sample ID:	280-68112-4	Analysis Batch:	280-274657	Instrument ID:	SGC_U
Client Matrix:	Solid	Prep Batch:	280-274376	Lab File ID:	04270011.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.4 g
Analysis Date:	04/27/2015 1247			Final Weight/Volume:	1 mL
Prep Date:	04/24/2015 1620			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-68112-4	Analysis Batch:	280-274657	Instrument ID:	SGC_U
Client Matrix:	Solid	Prep Batch:	280-274376	Lab File ID:	04270012.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.6 g
Analysis Date:	04/27/2015 1315			Final Weight/Volume:	1 mL
Prep Date:	04/24/2015 1620			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
C10-C36	77	81	57 - 115	0	23		
C10-C28	74	77	56 - 115	0	23		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
o-Terphenyl	77	83	49 - 115

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-274376

Method: NWTPH-Dx
Preparation: 3550C

MS Lab Sample ID:	280-68112-10	Analysis Batch:	280-274657	Instrument ID:	SGC_U
Client Matrix:	Solid	Prep Batch:	280-274376	Lab File ID:	04270020.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	29.1 g
Analysis Date:	04/27/2015 1659			Final Weight/Volume:	1 mL
Prep Date:	04/24/2015 1620			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-68112-10	Analysis Batch:	280-274657	Instrument ID:	SGC_U
Client Matrix:	Solid	Prep Batch:	280-274376	Lab File ID:	04270021.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.1 g
Analysis Date:	04/27/2015 1727			Final Weight/Volume:	1 mL
Prep Date:	04/24/2015 1620			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
C10-C36	80	79	57 - 115	7	23		
C10-C28	77	76	56 - 115	8	23		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
o-Terphenyl	75	75	49 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-274376

Method: NWTPH-Dx
Preparation: 3550C

MS Lab Sample ID:	280-68112-4	Units:	ug/Kg	MSD Lab Sample ID:	280-68112-4
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	04/27/2015 1247			Analysis Date:	04/27/2015 1315
Prep Date:	04/24/2015 1620			Prep Date:	04/24/2015 1620
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
C10-C36	1000	U	67400	64800	52100	52300
C10-C28	1400	J	67400	64800	50900	51000

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-274376

Method: NWTPH-Dx
Preparation: 3550C

MS Lab Sample ID:	280-68112-10	Units:	ug/Kg	MSD Lab Sample ID:	280-68112-10
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	04/27/2015 1659			Analysis Date:	04/27/2015 1727
Prep Date:	04/24/2015 1620			Prep Date:	04/24/2015 1620
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
C10-C36	1100	U	72900	68200	58400	54200
C10-C28	1200	J	72900	68200	57000	52800

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Method Blank - Batch: 280-273799

Method: 8310
Preparation: 3550C

Lab Sample ID:	MB 280-273799/1-A	Analysis Batch:	280-274393	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-273799	Lab File ID:	G0424006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.7 g
Analysis Date:	04/24/2015 1656	Units:	ug/Kg	Final Weight/Volume:	4 mL
Prep Date:	04/21/2015 2302			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Acenaphthene	9.8	U	9.8	98
Acenaphthylene	8.8	U	8.8	98
Anthracene	3.0	U	3.0	20
Benzo[a]anthracene	3.1	U	3.1	15
Benzo[a]pyrene	6.3	U	6.3	15
Benzo[b]fluoranthene	4.1	U	4.1	15
Benzo[g,h,i]perylene	7.0	U	7.0	29
Benzo[k]fluoranthene	3.9	U	3.9	15
Chrysene	4.7	U	4.7	39
Dibenzo(a,h)anthracene	11	U	11	29
Fluoranthene	13	U	13	39
Fluorene	5.2	U	5.2	29
Indeno[1,2,3-cd]pyrene	12	U	12	29
Naphthalene	12	U	12	98
Phenanthrene	12	U	12	39
Pyrene	12	U	12	39

Surrogate	% Rec	Acceptance Limits
Terphenyl-d14 (SUR)	91	72 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Lab Control Sample - Batch: 280-273799

Method: 8310
Preparation: 3550C

Lab Sample ID:	LCS 280-273799/2-A	Analysis Batch:	280-274393	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-273799	Lab File ID:	G0424007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.5 g
Analysis Date:	04/24/2015 1726	Units:	ug/Kg	Final Weight/Volume:	4 mL
Prep Date:	04/21/2015 2302			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	1970	1730	88	75 - 116	
Acenaphthylene	1970	1720	87	66 - 115	
Anthracene	1970	1760	89	71 - 115	
Benzo[a]anthracene	1970	1920	98	77 - 120	
Benzo[a]pyrene	1970	1940	98	69 - 115	
Benzo[b]fluoranthene	1970	1880	96	56 - 115	
Benzo[g,h,i]perylene	1970	2140	109	72 - 120	
Benzo[k]fluoranthene	1970	1940	99	76 - 115	
Chrysene	1970	1890	96	79 - 115	
Dibenzo(a,h)anthracene	1970	1850	94	72 - 115	
Fluoranthene	1970	1900	97	77 - 115	
Fluorene	1970	1870	95	77 - 115	
Indeno[1,2,3-cd]pyrene	1970	1890	96	78 - 115	
Naphthalene	1970	1660	84	68 - 120	
Phenanthrene	1970	1770	90	75 - 115	
Pyrene	1970	2010	102	72 - 115	

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

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-273799

Method: 8310
Preparation: 3550C

MS Lab Sample ID:	280-68112-12	Analysis Batch:	280-274393	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-273799	Lab File ID:	G0424021.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.7 g
Analysis Date:	04/25/2015 0034			Final Weight/Volume:	4 mL
Prep Date:	04/21/2015 2302			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	280-68112-12	Analysis Batch:	280-274393	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-273799	Lab File ID:	G0424022.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.0 g
Analysis Date:	04/25/2015 0104			Final Weight/Volume:	4 mL
Prep Date:	04/21/2015 2302			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	85	90	75 - 116	5	20		
Acenaphthylene	85	89	66 - 115	3	20		
Anthracene	96	98	71 - 115	1	20		
Benzo[a]anthracene	106	107	77 - 120	0	20		
Benzo[a]pyrene	71	76	69 - 115	5	20		
Benzo[b]fluoranthene	81	85	56 - 115	4	20		
Benzo[g,h,i]perylene	101	105	72 - 120	2	20		
Benzo[k]fluoranthene	88	92	76 - 115	4	20		
Chrysene	95	98	79 - 115	2	20		
Dibenzo(a,h)anthracene	90	93	72 - 115	2	20		
Fluoranthene	112	112	77 - 115	1	20		
Fluorene	93	97	77 - 115	3	20		
Indeno[1,2,3-cd]pyrene	93	96	78 - 115	3	20		
Naphthalene	88	90	68 - 120	1	20		
Phenanthrene	89	92	75 - 115	2	20		
Pyrene	140	192	72 - 115	30	20	N	N *

Surrogate	MS % Rec		MSD % Rec		Acceptance Limits
Terphenyl-d14 (SUR)	127	*	126	*	72 - 115

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-273799

Method: 8310
Preparation: 3550C

MS Lab Sample ID:	280-68112-12	Units:	ug/Kg	MSD Lab Sample ID:	280-68112-12
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	04/25/2015 0034			Analysis Date:	04/25/2015 0104
Prep Date:	04/21/2015 2302			Prep Date:	04/21/2015 2302
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	11	U	2220	2200	1890		1990	
Acenaphthylene	9.7	U	2220	2200	1890		1950	
Anthracene	3.3	U	2220	2200	2120		2160	
Benzo[a]anthracene	3.4	U	2220	2200	2350		2350	
Benzo[a]pyrene	6.9	U	2220	2200	1590		1660	
Benzo[b]fluoranthene	18		2220	2200	1810		1890	
Benzo[g,h,i]perylene	7.7	U	2220	2200	2240		2300	
Benzo[k]fluoranthene	4.2	U	2220	2200	1960		2030	
Chrysene	5.2	U	2220	2200	2120		2160	
Dibenzo(a,h)anthracene	12	U	2220	2200	2000		2050	
Fluoranthene	14	U	2220	2200	2490		2460	
Fluorene	5.7	U	2220	2200	2070		2130	
Indeno[1,2,3-cd]pyrene	13	U	2220	2200	2070		2120	
Naphthalene	13	U	2220	2200	1950		1970	
Phenanthrene	13	U	2220	2200	1980		2030	
Pyrene	13	U	2220	2200	3100	N	4210	N *

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Method Blank - Batch: 280-273811

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 280-273811/1-A	Analysis Batch:	280-274332	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-273811	Lab File ID:	26a042315.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/23/2015 1139	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	1.6	U	1.6	5.0
Antimony	0.38	U	0.38	0.60
Arsenic	0.66	U	0.66	1.0
Barium	0.107	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	23.36	B	14.1	50.0
Chromium	0.058	U	0.058	0.20
Cobalt	0.10	U	0.10	1.0
Copper	0.22	U	0.22	1.0
Iron	3.8	U	3.8	5.0
Lead	0.27	U	0.27	0.50
Magnesium	7.12	B	3.7	20.0
Manganese	0.10	U	0.10	1.0
Molybdenum	0.26	U	0.26	2.0
Nickel	0.12	U	0.12	4.0
Potassium	41.0	U	41.0	300
Selenium	0.86	U	0.86	1.0
Silicon	5.7	U	5.7	10.0
Silver	0.16	U	0.16	0.20
Sodium	59.0	U	59.0	120
Strontium	0.0770	B	0.036	1.0
Vanadium	0.094	U	0.094	2.0
Zinc	0.40	U	0.40	1.0

Method Blank - Batch: 280-273811

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 280-273811/1-A	Analysis Batch:	280-274420	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-273811	Lab File ID:	26a042415a.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/24/2015 1131	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Lithium	0.30	U	0.30	2.5
Tin	0.91	U	0.91	10.0
Zirconium	0.35	U	0.35	2.5

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Lab Control Sample - Batch: 280-273811

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 280-273811/2-A	Analysis Batch:	280-274332	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-273811	Lab File ID:	26a042315.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/23/2015 1142	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	182.9	91	82 - 116	
Antimony	50.0	47.13	94	82 - 110	
Arsenic	100	91.97	92	85 - 110	
Barium	200	186.5	93	87 - 112	
Beryllium	5.00	4.71	94	84 - 114	
Boron	100	91.20	91	80 - 120	
Cadmium	10.0	9.29	93	87 - 110	
Calcium	5000	4736	95	82 - 114	
Chromium	20.0	19.34	97	84 - 114	
Cobalt	50.0	46.74	93	87 - 110	
Copper	25.0	24.19	97	88 - 110	
Iron	100	105.7	106	87 - 120	
Lead	50.0	47.06	94	86 - 110	
Magnesium	5000	4614	92	90 - 110	
Manganese	50.0	46.55	93	88 - 110	
Molybdenum	100	97.19	97	86 - 110	
Nickel	50.0	46.14	92	87 - 110	
Potassium	5000	4755	95	89 - 110	
Selenium	200	182.6	91	83 - 110	
Silicon	1000	50.01	5	10 - 70	N
Silver	5.00	4.79	96	87 - 114	
Sodium	5000	4768	95	90 - 112	
Strontium	100	93.04	93	89 - 110	
Vanadium	50.0	46.52	93	88 - 110	
Zinc	50.0	45.73	91	76 - 114	

Lab Control Sample - Batch: 280-273811

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 280-273811/2-A	Analysis Batch:	280-274420	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-273811	Lab File ID:	26a042415a.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/24/2015 1133	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Lithium	100	94.97	95	90 - 110	
Tin	200	195.0	97	84 - 110	
Zirconium	50.0	51.61	103	90 - 110	

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Matrix Spike - Batch: 280-273811

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-68112-2	Analysis Batch:	280-274332	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-273811	Lab File ID:	26a042315.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.13 g
Analysis Date:	04/23/2015 1155	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	4120		187	5712	852	50 - 200	4
Antimony	0.37	U	46.7	24.33	52	20 - 200	
Arsenic	1.0		93.5	72.80	77	76 - 111	
Barium	68.9		187	219.5	81	52 - 159	
Beryllium	0.099	B	4.67	3.97	83	72 - 105	
Boron	0.95	U	93.5	71.38	76	80 - 120	N
Cadmium	0.040	U	9.35	7.50	80	40 - 130	
Calcium	5320		4670	11710	137	43 - 165	
Chromium	3.7		18.7	20.28	89	70 - 200	
Cobalt	10.2		46.7	47.13	79	72 - 106	
Copper	13.4		23.4	34.13	89	37 - 187	
Iron	23400		93.5	25460	2229	70 - 200	4
Lead	2.1		46.7	39.23	79	70 - 200	
Magnesium	3400		4670	7654	91	64 - 145	
Manganese	325		46.7	334.4	20	40 - 200	4
Molybdenum	0.25	B	93.5	77.74	83	75 - 103	
Nickel	6.5		46.7	44.62	82	61 - 126	
Potassium	464		4670	4589	88	56 - 172	
Selenium	0.83	U	187	139.6	75	76 - 104	N
Silicon	136		935	369.5	25	20 - 200	
Silver	0.16	U	4.67	3.87	83	75 - 141	
Sodium	245		4670	4524	92	78 - 111	
Strontium	18.8		93.5	106.2	94	81 - 125	
Vanadium	62.7		46.7	107.4	96	50 - 169	
Zinc	42.1		46.7	78.11	77	70 - 200	

Matrix Spike - Batch: 280-273811

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-68112-2	Analysis Batch:	280-274420	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-273811	Lab File ID:	26a042415a.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.13 g
Analysis Date:	04/24/2015 1146	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Lithium	3.0		93.5	81.35	84	84 - 109	
Tin	1.2	B	187	135.4	72	77 - 126	N

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Matrix Spike - Batch: 280-273811

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-68112-2	Analysis Batch:	280-274420	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-273811	Lab File ID:	26a042415a.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.13 g
Analysis Date:	04/24/2015 1146	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Zirconium	23.9	46.7	69.32	97	75 - 125	

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Duplicate - Batch: 280-273811

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-68112-2	Analysis Batch:	280-274332	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-273811	Lab File ID:	26a042315.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.10 g
Analysis Date:	04/23/2015 1152	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	4120		4603	11	40	
Antimony	0.37	U	0.36	NC	40	U
Arsenic	1.0		1.88	58	30	M
Barium	68.9		53.51	25	30	
Beryllium	0.099	B	0.114	14	30	B
Boron	0.95	U	0.94	NC	30	U
Cadmium	0.040	U	0.039	NC	30	U
Calcium	5320		5861	10	30	
Chromium	3.7		6.09	48	40	M
Cobalt	10.2		9.27	10	30	
Copper	13.4		13.33	0.3	30	
Iron	23400		21690	8	40	
Lead	2.1		1.82	14	40	
Magnesium	3400		3732	9	30	
Manganese	325		274.5	17	40	
Molybdenum	0.25	B	0.25	NC	30	U
Nickel	6.5		7.39	13	30	
Potassium	464		502.7	8	40	
Selenium	0.83	U	0.83	NC	30	U
Silicon	136		133.5	2	40	N
Silver	0.16	U	0.15	NC	30	U
Sodium	245		351.4	36	30	M
Strontium	18.8		22.94	20	30	
Vanadium	62.7		52.85	17	30	
Zinc	42.1		36.75	14	40	

Duplicate - Batch: 280-273811

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-68112-2	Analysis Batch:	280-274420	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-273811	Lab File ID:	26a042415a.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.10 g
Analysis Date:	04/24/2015 1144	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Lithium	3.0		2.77	7	30	
Tin	1.2	B	1.36	10	30	B
Zirconium	23.9		22.11	8	30	

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Method Blank - Batch: 280-273810

Method: 6020
Preparation: 3050B

Lab Sample ID:	MB 280-273810/1-A	Analysis Batch:	280-274123	Instrument ID:	MT_078
Client Matrix:	Solid	Prep Batch:	280-273810	Lab File ID:	103_BLK.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/23/2015 0220	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Uranium	0.00470	B	0.0016	0.10

Lab Control Sample - Batch: 280-273810

Method: 6020
Preparation: 3050B

Lab Sample ID:	LCS 280-273810/2-A	Analysis Batch:	280-274123	Instrument ID:	MT_078
Client Matrix:	Solid	Prep Batch:	280-273810	Lab File ID:	104_LCS.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/23/2015 0223	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Uranium	20.0	20.04	100	85 - 123	

Matrix Spike - Batch: 280-273810

Method: 6020
Preparation: 3050B

Lab Sample ID:	280-68112-1	Analysis Batch:	280-274123	Instrument ID:	MT_078
Client Matrix:	Solid	Prep Batch:	280-273810	Lab File ID:	108SMPL.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.10 g
Analysis Date:	04/23/2015 0237	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Uranium	4.4	19.6	26.45	113	85 - 123	

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Duplicate - Batch: 280-273810

Method: 6020
Preparation: 3050B

Lab Sample ID:	280-68112-1	Analysis Batch:	280-274123	Instrument ID:	MT_078
Client Matrix:	Solid	Prep Batch:	280-273810	Lab File ID:	107SMPL.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.15 g
Analysis Date:	04/23/2015 0234	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/22/2015 1430				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Uranium	4.4	4.89	12	20	

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Method Blank - Batch: 280-273866

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 280-273866/1-A	Analysis Batch:	280-274061	Instrument ID:	MT_034
Client Matrix:	Solid	Prep Batch:	280-273866	Lab File ID:	150422ba.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	04/22/2015 1531	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/22/2015 1000				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.0055	U	0.0055	0.017

Lab Control Sample - Batch: 280-273866

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 280-273866/2-A	Analysis Batch:	280-274061	Instrument ID:	MT_034
Client Matrix:	Solid	Prep Batch:	280-273866	Lab File ID:	150422ba.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	04/22/2015 1533	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/22/2015 1000				
Leach Date:	N/A				

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

Matrix Spike - Batch: 280-273866

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-68112-1	Analysis Batch:	280-274061	Instrument ID:	MT_034
Client Matrix:	Solid	Prep Batch:	280-273866	Lab File ID:	150422ba.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.52 g
Analysis Date:	04/22/2015 1540	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/22/2015 1000				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.10	0.519	0.624	100	87 - 111	

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Duplicate - Batch: 280-273866

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-68112-1	Analysis Batch:	280-274061	Instrument ID:	MT_034
Client Matrix:	Solid	Prep Batch:	280-273866	Lab File ID:	150422ba.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.57 g
Analysis Date:	04/22/2015 1538	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/22/2015 1000				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Mercury	0.10	0.0929	11	20	

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

Duplicate - Batch: 280-274252

Method: D-2216
Preparation: N/A

Lab Sample ID:	280-68112-12	Analysis Batch:	280-274252	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:	04/23/2015 1853	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	12.0	14.9	21	20	M

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 280-273771					
LCS 280-273771/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-273771/1-A	Method Blank	T	Solid	3550C	
280-68112-1	J1V614	T	Solid	3550C	
280-68112-2	J1V615	T	Solid	3550C	
280-68112-2MS	Matrix Spike	T	Solid	3550C	
280-68112-2MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-68112-3	J1V616	T	Solid	3550C	
280-68112-4	J1V617	T	Solid	3550C	
280-68112-5	J1V618	T	Solid	3550C	
280-68112-6	J1V619	T	Solid	3550C	
280-68112-7	J1V620	T	Solid	3550C	
280-68112-8	J1V621	T	Solid	3550C	
280-68112-9	J1V622	T	Solid	3550C	
280-68112-10	J1V623	T	Solid	3550C	
280-68112-11	J1V624	T	Solid	3550C	
280-68112-12	J1V625	T	Solid	3550C	
Analysis Batch:280-274365					
LCS 280-273771/2-A	Lab Control Sample	T	Solid	8082	280-273771
MB 280-273771/1-A	Method Blank	T	Solid	8082	280-273771
280-68112-1	J1V614	T	Solid	8082	280-273771
280-68112-2	J1V615	T	Solid	8082	280-273771
280-68112-2MS	Matrix Spike	T	Solid	8082	280-273771
280-68112-2MSD	Matrix Spike Duplicate	T	Solid	8082	280-273771
280-68112-4	J1V617	T	Solid	8082	280-273771
280-68112-6	J1V619	T	Solid	8082	280-273771
280-68112-7	J1V620	T	Solid	8082	280-273771
280-68112-8	J1V621	T	Solid	8082	280-273771
280-68112-10	J1V623	T	Solid	8082	280-273771

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 280-274376					
LCS 280-274376/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-274376/1-A	Method Blank	T	Solid	3550C	
280-68112-1	J1V614	T	Solid	3550C	
280-68112-2	J1V615	T	Solid	3550C	
280-68112-3	J1V616	T	Solid	3550C	
280-68112-4	J1V617	T	Solid	3550C	
280-68112-4MS	Matrix Spike	T	Solid	3550C	
280-68112-4MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-68112-5	J1V618	T	Solid	3550C	
280-68112-6	J1V619	T	Solid	3550C	
280-68112-7	J1V620	T	Solid	3550C	
280-68112-8	J1V621	T	Solid	3550C	
280-68112-9	J1V622	T	Solid	3550C	
280-68112-10	J1V623	T	Solid	3550C	
280-68112-10MS	Matrix Spike	T	Solid	3550C	
280-68112-10MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-68112-11	J1V624	T	Solid	3550C	
280-68112-12	J1V625	T	Solid	3550C	
Analysis Batch:280-274657					
LCS 280-274376/2-A	Lab Control Sample	T	Solid	NWTPH-Dx	280-274376
MB 280-274376/1-A	Method Blank	T	Solid	NWTPH-Dx	280-274376
280-68112-1	J1V614	T	Solid	NWTPH-Dx	280-274376
280-68112-2	J1V615	T	Solid	NWTPH-Dx	280-274376
280-68112-3	J1V616	T	Solid	NWTPH-Dx	280-274376
280-68112-4	J1V617	T	Solid	NWTPH-Dx	280-274376
280-68112-4MS	Matrix Spike	T	Solid	NWTPH-Dx	280-274376
280-68112-4MSD	Matrix Spike Duplicate	T	Solid	NWTPH-Dx	280-274376
280-68112-5	J1V618	T	Solid	NWTPH-Dx	280-274376
280-68112-6	J1V619	T	Solid	NWTPH-Dx	280-274376
280-68112-7	J1V620	T	Solid	NWTPH-Dx	280-274376
280-68112-8	J1V621	T	Solid	NWTPH-Dx	280-274376
280-68112-9	J1V622	T	Solid	NWTPH-Dx	280-274376
280-68112-10	J1V623	T	Solid	NWTPH-Dx	280-274376
280-68112-10MS	Matrix Spike	T	Solid	NWTPH-Dx	280-274376
280-68112-10MSD	Matrix Spike Duplicate	T	Solid	NWTPH-Dx	280-274376
280-68112-11	J1V624	T	Solid	NWTPH-Dx	280-274376
280-68112-12	J1V625	T	Solid	NWTPH-Dx	280-274376
Analysis Batch:280-274672					
280-68112-3	J1V616	T	Solid	8082	280-273771
280-68112-5	J1V618	T	Solid	8082	280-273771
280-68112-9	J1V622	T	Solid	8082	280-273771
280-68112-11	J1V624	T	Solid	8082	280-273771
280-68112-12	J1V625	T	Solid	8082	280-273771

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-273810					
LCS 280-273810/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-273810/1-A	Method Blank	T	Solid	3050B	
280-68112-1	J1V614	T	Solid	3050B	
280-68112-1DU	Duplicate	T	Solid	3050B	
280-68112-1MS	Matrix Spike	T	Solid	3050B	
280-68112-2	J1V615	T	Solid	3050B	
280-68112-3	J1V616	T	Solid	3050B	
280-68112-4	J1V617	T	Solid	3050B	
280-68112-5	J1V618	T	Solid	3050B	
280-68112-6	J1V619	T	Solid	3050B	
280-68112-7	J1V620	T	Solid	3050B	
280-68112-8	J1V621	T	Solid	3050B	
280-68112-9	J1V622	T	Solid	3050B	
280-68112-10	J1V623	T	Solid	3050B	
280-68112-11	J1V624	T	Solid	3050B	
280-68112-12	J1V625	T	Solid	3050B	
Prep Batch: 280-273811					
LCS 280-273811/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-273811/1-A	Method Blank	T	Solid	3050B	
280-68112-1	J1V614	T	Solid	3050B	
280-68112-2	J1V615	T	Solid	3050B	
280-68112-2DU	Duplicate	T	Solid	3050B	
280-68112-2MS	Matrix Spike	T	Solid	3050B	
280-68112-3	J1V616	T	Solid	3050B	
280-68112-4	J1V617	T	Solid	3050B	
280-68112-5	J1V618	T	Solid	3050B	
280-68112-6	J1V619	T	Solid	3050B	
280-68112-7	J1V620	T	Solid	3050B	
280-68112-8	J1V621	T	Solid	3050B	
280-68112-9	J1V622	T	Solid	3050B	
280-68112-10	J1V623	T	Solid	3050B	
280-68112-11	J1V624	T	Solid	3050B	
280-68112-12	J1V625	T	Solid	3050B	

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-273866					
LCS 280-273866/2-A	Lab Control Sample	T	Solid	7471A	
MB 280-273866/1-A	Method Blank	T	Solid	7471A	
280-68112-1	J1V614	T	Solid	7471A	
280-68112-1DU	Duplicate	T	Solid	7471A	
280-68112-1MS	Matrix Spike	T	Solid	7471A	
280-68112-2	J1V615	T	Solid	7471A	
280-68112-3	J1V616	T	Solid	7471A	
280-68112-4	J1V617	T	Solid	7471A	
280-68112-5	J1V618	T	Solid	7471A	
280-68112-6	J1V619	T	Solid	7471A	
280-68112-7	J1V620	T	Solid	7471A	
280-68112-8	J1V621	T	Solid	7471A	
280-68112-9	J1V622	T	Solid	7471A	
280-68112-10	J1V623	T	Solid	7471A	
280-68112-11	J1V624	T	Solid	7471A	
280-68112-12	J1V625	T	Solid	7471A	
Analysis Batch:280-274061					
LCS 280-273866/2-A	Lab Control Sample	T	Solid	7471A	280-273866
MB 280-273866/1-A	Method Blank	T	Solid	7471A	280-273866
280-68112-1	J1V614	T	Solid	7471A	280-273866
280-68112-1DU	Duplicate	T	Solid	7471A	280-273866
280-68112-1MS	Matrix Spike	T	Solid	7471A	280-273866
280-68112-2	J1V615	T	Solid	7471A	280-273866
280-68112-3	J1V616	T	Solid	7471A	280-273866
280-68112-4	J1V617	T	Solid	7471A	280-273866
280-68112-5	J1V618	T	Solid	7471A	280-273866
280-68112-6	J1V619	T	Solid	7471A	280-273866
280-68112-7	J1V620	T	Solid	7471A	280-273866
280-68112-8	J1V621	T	Solid	7471A	280-273866
280-68112-9	J1V622	T	Solid	7471A	280-273866
280-68112-10	J1V623	T	Solid	7471A	280-273866
280-68112-11	J1V624	T	Solid	7471A	280-273866
280-68112-12	J1V625	T	Solid	7471A	280-273866

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:280-274123					
LCS 280-273810/2-A	Lab Control Sample	T	Solid	6020	280-273810
MB 280-273810/1-A	Method Blank	T	Solid	6020	280-273810
280-68112-1	J1V614	T	Solid	6020	280-273810
280-68112-1DU	Duplicate	T	Solid	6020	280-273810
280-68112-1MS	Matrix Spike	T	Solid	6020	280-273810
280-68112-2	J1V615	T	Solid	6020	280-273810
280-68112-3	J1V616	T	Solid	6020	280-273810
280-68112-4	J1V617	T	Solid	6020	280-273810
280-68112-5	J1V618	T	Solid	6020	280-273810
280-68112-6	J1V619	T	Solid	6020	280-273810
280-68112-7	J1V620	T	Solid	6020	280-273810
280-68112-8	J1V621	T	Solid	6020	280-273810
280-68112-9	J1V622	T	Solid	6020	280-273810
280-68112-10	J1V623	T	Solid	6020	280-273810
280-68112-11	J1V624	T	Solid	6020	280-273810
280-68112-12	J1V625	T	Solid	6020	280-273810
Analysis Batch:280-274332					
LCS 280-273811/2-A	Lab Control Sample	T	Solid	6010B	280-273811
MB 280-273811/1-A	Method Blank	T	Solid	6010B	280-273811
280-68112-1	J1V614	T	Solid	6010B	280-273811
280-68112-2	J1V615	T	Solid	6010B	280-273811
280-68112-2DU	Duplicate	T	Solid	6010B	280-273811
280-68112-2MS	Matrix Spike	T	Solid	6010B	280-273811
280-68112-3	J1V616	T	Solid	6010B	280-273811
280-68112-4	J1V617	T	Solid	6010B	280-273811
280-68112-5	J1V618	T	Solid	6010B	280-273811
280-68112-6	J1V619	T	Solid	6010B	280-273811
280-68112-7	J1V620	T	Solid	6010B	280-273811
280-68112-8	J1V621	T	Solid	6010B	280-273811
280-68112-9	J1V622	T	Solid	6010B	280-273811
280-68112-10	J1V623	T	Solid	6010B	280-273811
280-68112-11	J1V624	T	Solid	6010B	280-273811
280-68112-12	J1V625	T	Solid	6010B	280-273811

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:280-274420					
LCS 280-273811/2-A	Lab Control Sample	T	Solid	6010B	280-273811
MB 280-273811/1-A	Method Blank	T	Solid	6010B	280-273811
280-68112-1	J1V614	T	Solid	6010B	280-273811
280-68112-2	J1V615	T	Solid	6010B	280-273811
280-68112-2DU	Duplicate	T	Solid	6010B	280-273811
280-68112-2MS	Matrix Spike	T	Solid	6010B	280-273811
280-68112-3	J1V616	T	Solid	6010B	280-273811
280-68112-4	J1V617	T	Solid	6010B	280-273811
280-68112-5	J1V618	T	Solid	6010B	280-273811
280-68112-6	J1V619	T	Solid	6010B	280-273811
280-68112-7	J1V620	T	Solid	6010B	280-273811
280-68112-8	J1V621	T	Solid	6010B	280-273811
280-68112-9	J1V622	T	Solid	6010B	280-273811
280-68112-10	J1V623	T	Solid	6010B	280-273811
280-68112-11	J1V624	T	Solid	6010B	280-273811
280-68112-12	J1V625	T	Solid	6010B	280-273811

Report Basis
T = Total

General Chemistry				
Analysis Batch:280-274252				
280-68112-1	J1V614	T	Solid	D-2216
280-68112-2	J1V615	T	Solid	D-2216
280-68112-3	J1V616	T	Solid	D-2216
280-68112-4	J1V617	T	Solid	D-2216
280-68112-5	J1V618	T	Solid	D-2216
280-68112-6	J1V619	T	Solid	D-2216
280-68112-7	J1V620	T	Solid	D-2216
280-68112-8	J1V621	T	Solid	D-2216
280-68112-9	J1V622	T	Solid	D-2216
280-68112-10	J1V623	T	Solid	D-2216
280-68112-11	J1V624	T	Solid	D-2216
280-68112-12	J1V625	T	Solid	D-2216
280-68112-12DU	Duplicate	T	Solid	D-2216

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-68112-1
Sdg Number: JP0944

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
HPLC/IC					
Prep Batch: 280-273799					
LCS 280-273799/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-273799/1-A	Method Blank	T	Solid	3550C	
280-68112-1	J1V614	T	Solid	3550C	
280-68112-2	J1V615	T	Solid	3550C	
280-68112-3	J1V616	T	Solid	3550C	
280-68112-4	J1V617	T	Solid	3550C	
280-68112-5	J1V618	T	Solid	3550C	
280-68112-6	J1V619	T	Solid	3550C	
280-68112-7	J1V620	T	Solid	3550C	
280-68112-8	J1V621	T	Solid	3550C	
280-68112-9	J1V622	T	Solid	3550C	
280-68112-10	J1V623	T	Solid	3550C	
280-68112-11	J1V624	T	Solid	3550C	
280-68112-12	J1V625	T	Solid	3550C	
280-68112-12MS	Matrix Spike	T	Solid	3550C	
280-68112-12MSD	Matrix Spike Duplicate	T	Solid	3550C	
Analysis Batch:280-274393					
LCS 280-273799/2-A	Lab Control Sample	T	Solid	8310	280-273799
MB 280-273799/1-A	Method Blank	T	Solid	8310	280-273799
280-68112-1	J1V614	T	Solid	8310	280-273799
280-68112-2	J1V615	T	Solid	8310	280-273799
280-68112-3	J1V616	T	Solid	8310	280-273799
280-68112-4	J1V617	T	Solid	8310	280-273799
280-68112-5	J1V618	T	Solid	8310	280-273799
280-68112-6	J1V619	T	Solid	8310	280-273799
280-68112-7	J1V620	T	Solid	8310	280-273799
280-68112-8	J1V621	T	Solid	8310	280-273799
280-68112-9	J1V622	T	Solid	8310	280-273799
280-68112-10	J1V623	T	Solid	8310	280-273799
280-68112-11	J1V624	T	Solid	8310	280-273799
280-68112-12	J1V625	T	Solid	8310	280-273799
280-68112-12MS	Matrix Spike	T	Solid	8310	280-273799
280-68112-12MSD	Matrix Spike Duplicate	T	Solid	8310	280-273799

Report Basis
T = Total

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-149-149

Collector: B. Jackson	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: 316-3, west deep zone, in-process		SAF No.: RC-149
Ice Chest No.: RCC-07-004, RCC-07-002	Field Logbook No.: EL-1663-08	COA: R316032600	Method of Shipment: Commercial Carrier
Shipped To: TestAmerica Denver	Offsite Property No.: A131402		Bill of Lading/Air Bill No.: SEE OSPC

Other Labs Shipped To: TestAmerica Richland

RCF 38931

280-68112 Chain of Custody

POSSIBLE SAMPLE HAZARDS/REMARKS

potentially radioactive < D.O.T. Limits 4/16/15 cmB

Special Handling and/or Storage

cooling as required

Preservation	Cool 4C	Cool 4C	Cool 4C									
Type of Container	G/P	aG	aG									
No. of Container(s)	1	1	1									
Volume	250mL	500mL	500mL									
Sample Analysis	See item (1) in Special Instructions	TPH-Diesel Range - WTPH-D +	PAHs - 8310; PCBs - 8082									

Sample No.	Matrix	Sample Date	Sample Time										
J1V614	SOIL	4-16-15	1243	✓	✓	✓							
J1V615	SOIL	4-16-15	1252	✓	✓	✓							
J1V616	SOIL	4-16-15	1325	✓	✓	✓							
J1V617	SOIL	4-16-15	1336	✓	✓	✓							
J1V618	SOIL	4-16-15	1346	✓	✓	✓							

Page 113 of 118

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
W.H. Jackson, Jr.	4-16-15/1510	WCH DWSHEA	4/16/15 1510
DWSHEA	4/16/15 1610	C. Bingham	4-16-15 1610
C. Bingham	4-16-15 1615	1060 Battelle, fridge #2A	4-16-15 1615
1060 Battelle, fridge #2A	4-20-15 0730	C. Bingham	4-20-15 0730
C. Bingham WCH	4-20-15 0735	fed EX	4-20-15
			4-21-15 9:40

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) {Mercury}

1.0, 0.3 IRS + 0.2
Transferred by MJ
4/21/15

REVIEWED BY K. Woodworth DATE 4-20-15

JP0944

WCH-EE-011

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-149-149

Collector: B. Jackson	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: 316-3, west deep zone, in-process		SAF No.: RC-149
Ice Chest No.: RCC-07-004, RCC-07-002	Field Logbook No.: EL-1663-08	COA: R316032600	Method of Shipment: Commercial Carrier
Shipped To: TestAmerica Denver	Offsite Property No.: A131402		Bill of Lading/Air Bill No.: SEE OSPC

Other Labs Shipped To: TestAmerica Richland

RCF 38931

POSSIBLE SAMPLE HAZARDS/REMARKS

potentially radioactive < D.O.T. Limits 4/16/15 cmB

Special Handling and/or Storage

cooling as required

Preservation	Cool 4C	Cool 4C	Cool 4C									
Type of Container	G/P	aG	aG									
No. of Container(s)	1	1	1									
Volume	250mL	500mL	500mL									
Sample Analysis	See item (1) in Special Instructions	TPH-Diesel Range - WTPH-D +	PAHs - 8310; PCBs - 8082									

Sample No.	Matrix	Sample Date	Sample Time										
J1V619	SOIL	4/16/15	1400	✓	✓	✓							
J1V620	SOIL	4/16/15	4/16/15 ~~1411~~ 1412	✓	✓	✓							
J1V621	SOIL	4/16/15	1420	✓	✓	✓							
J1V622	SOIL	4/16/15	1432	✓	✓	✓							
J1V623	SOIL	4/16/15	1445	✓	✓	✓							

Page 114 of 118

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Mike Wilt. Jackson	4-16-15/1510	WCH DWSHEA DWSHEA	4/16/15 1510
DWSHEA DWSHEA	4/16/15 1610	C. Bingham	4-16-15 1610
C. Bingham	4-16-15 1615	1060 Battelle, Fridge #2A	4-16-15 1615
1060 Battelle, Fridge #2A	4-20-15 0730	C. Bingham	4-20-15 0730
C. Bingham WCH	4-20-15 0735	fed Ex	4-20-15
			4-21-15 9:40

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) {Mercury}

REVIEWED BY K. Woodworth DATE 4-20-15

JP0944

WCH-EE-011

Washington Closure Hanford — CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-149-149

Collector: B. Jackson	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: 316-3, west deep zone, in-process		SAF No.: RC-149
Ice Chest No.: RCC-07-004, RCC-07-002	Field Logbook No.: EL-1663-08	COA: R316032600	Method of Shipment: Commercial Carrier
Shipped To: TestAmerica Denver	Offsite Property No.: A131402		Bill of Lading/Air Bill No.: SEE OSPC

Other Labs Shipped To: TestAmerica Richland

RCF 38942

POSSIBLE SAMPLE HAZARDS/REMARKS

potentially radioactive < D.O.T. Limits 4/16/15 CMB

Special Handling and/or Storage

cooling as required

Preservation	Cool 4C	Cool 4C	Cool 4C									
Type of Container	G/P	aG	aG									
No. of Container(s)	1	1	1									
Volume	250mL	500mL	500mL									
Sample Analysis	See item (1) in Special Instructions	TPH-Diesel Range - WTPH-D +	PAHs - 8310; PCBs - 8082									

Sample No.	Matrix	Sample Date	Sample Time										
J1V624	SOIL	4-16-15	1302	✓	✓	✓							
J1V625	SOIL	4-16-15	1314	✓	✓	✓							
J1V626 TRB 4-16-15	SOIL												
J1V627	SOIL												
J1V628	SOIL												

Page 115 of 118

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
W.F. Jackson, JR	4-16-15 1510	WCH DWS 4/16/15	4/16/15 1510
DWSHEA DWSHEA	4/16/15 1610	C. Bingham	4-16-15 1610
C. Bingham	4-16-15 1615	1060 Battelle, fridge #2A	4-16-15 1615
1060 Battelle, fridge #2A	4-20-15 0730	C. Bingham	4-20-15 0730
C. Bingham WCH	4-20-15 0735	fed EX	4-20-15
			4-21-15 9:40

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) {Mercury}

REVIEWED BY K Wood/Vanemal DATE 4-20-15

JP0944

WCH-EE-011

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Temp 1.0 IR# 5
CF +0.2 Initals
Date: 04/21/15

Temp 0.3 IR# 5
CF +0.2 Initals
Date: 04/21/15

90 w Permission

Project 28002142
Report Due: 4/28/2015 D.A. 4-22-15
TALs TAT: Rush 5 day

Sample Check-in List

Date/Time Received: 4/21/15 9:40 **GM Screen Result** 12 **microR/hr**

Client: Washington Closure Hanford **SDG #:** JP0944 NA[ ] **SAF #:** RC-149 NA [ ]

Job Number: 68112 **Chain of Custody #** RC-149-149

Shipping Container ID: RCC-07-001 RCC-07-002 **Air Bill #** 7734 0766 3001, 7734 0766 2564

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: 1.0, 0.3 +0.2 NA [ ] 5. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [✓]
6. Number of samples in shipping container: 12
7. Sample holding times exceeded? NA [ ] ~~Yes [✓]~~ No [✓] MW 4/21/15
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? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers): ___

Sample Custodian: [signature] **Date:** 4/21/15

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on ___ by ___ Person Contacted ___

[ ] No action necessary; process as is.

Project Manager Darlene Bandy Date 4-22-15

LS-023, Rev. 7, 1/08

From: (509) 376-7492
1162 Shipping
US DOE c/o MSA
2355 Stevens Dr

Richland, WA 99354

Origin ID: PSCA

FedEx Express

J151215022303uv

Ship Date: 20APR15
ActWgt: 74.0 LB
CAD: 105266502/INET3610

Delivery Address Bar Code

Ref # R3116032600
Invoice #
PO #
Dept #

SHIP TO: (303) 736-0190
Kae Yoder
TestAmerica
4955 Yarrow St.
A131402
ARVADA, CO 80002

BILL THIRD PARTY

1 of 2

TUE - 21 APR 10:30A
PRIORITY OVERNIGHT

TRK# 7734 0766 3001
0201

MASTER

XH WHHA

80002
CO-US
DEN

537J2/6FC5/EE43

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

From: (509) 376-7492
1162 Shipping
US DOE c/o MSA
2355 Stevens Dr

Richland, WA 99354

Origin ID: PSCA

FedEx. Express

J151215022303uv

Ship Date: 20APR15
ActWgt: 67.0 LB
CAD: 105266502/INET3610

Delivery Address Bar Code

SHIP TO: (303) 736-0190

BILL THIRD PARTY

Kae Yoder
TestAmerica
4955 Yarrow St.
A131402
ARVADA, CO 80002

Ref # R3118032800
Invoice #
PO #
Dept #

2 of 2

TUE - 21 APR 10:30A
PRIORITY OVERNIGHT

MPS# 7734 0766 2564
0263
Mstr# 7734 0766 3001
0201

XH WHHA

80002
CO-US
DEN

637J2/8FC5/EE4B

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.