SAF-RC-189
100N Field Remediation – Soil Full Protocol
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 5/8/12
INITIAL/DATE

COMMENTS:

SDG J01475 SAF-RC-189

Rad only Chem only ☑ Rad & Chem

☑ Complete Partial

Sample Location: UPR-100-N-6 Verification Sampling

Analytical Data Package Prepared For

Washington Closure Hanford

Radiochemical Analysis By

TestAmerica

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

Assigned Laboratory Code: TARL

Data Package Contains 86 *Pages*

Report No.: 51442

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.
J01475	RC-189	J1NPH4	J2D120494-1	MR0N41AJ	9MR0N410	2104076
		J1NPH4	J2D120494-1	MR0N41AD	9MR0N410	2104077
		J1NPH4	J2D120494-1	MR0N41AH	9MR0N410	2104078
		J1NPH4	J2D120494-1	MR0N41AE	9MR0N410	2104079
		J1NPH4	J2D120494-1	MR0N41AK	9MR0N410	2104081
		J1NPH4	J2D120494-1	MR0N41AG	9MR0N410	2104083
		J1NPH4	J2D120494-1	MR0N41AC	9MR0N410	2104085
		J1NPH4	J2D120494-1	MR0N42AF	9MR0N420	2104086
		J1NPH4	J2D120494-1	MR0N41AA	9MR0N410	2107055
		J1NPH5	J2D120494-2	MR0N61AJ	9MR0N610	2104076
		J1NPH5	J2D120494-2	MR0N61AD	9MR0N610	2104077
		J1NPH5	J2D120494-2	MR0N61AH	9MR0N610	2104078
		J1NPH5	J2D120494-2	MR0N61AE	9MR0N610	2104079
		J1NPH5	J2D120494-2	MR0N61AK	9MR0N610	2104081
		J1NPH5	J2D120494-2	MR0N61AG	9MR0N610	2104083
		J1NPH5	J2D120494-2	MR0N61AC	9MR0N610	2104085
		J1NPH5	J2D120494-2	MR0N61AF	9MR0N610	2104086
		J1NPH5	J2D120494-2	MR0N61AA	9MR0N610	2107055
		J1NPH6	J2D120494-3	MR0N81AJ	9MR0N810	2104076
		J1NPH6	J2D120494-3	MR0N81AD	9MR0N810	2104077
		J1NPH6	J2D120494-3	MR0N81AH	9MR0N810	2104078
		J1NPH6	J2D120494-3	MR0N81AE	9MR0N810	2104079
		J1NPH6	J2D120494-3	MR0N81AK	9MR0N810	2104081
		J1NPH6	J2D120494-3	MR0N81AG	9MR0N810	2104083
		J1NPH6	J2D120494-3	MR0N81AC	9MR0N810	2104085
		J1NPH6	J2D120494-3	MR0N81AF	9MR0N810	2104086

Report No.: 51442

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.
J01475	RC-189	J1NPH6	J2D120494-3	MR0N81AA	9MR0N810	2107055

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

TestAmerica Laboratories, Inc.

April 25, 2012

Attention: Joan Kessner

SAF Number	:	RC-189
Date SDG Closed	:	April 12, 2012
Number of Samples	:	Three (3)
Sample Type	:	Soil
SDG Number	:	J01475
Data Deliverable	:	21– Day / Summary

CASE NARRATIVE

I. Introduction

On April 12, 2012, three soil samples were received at TestAmerica for radiochemical and chemical 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
J1NPH4	MR0N4	SOIL	4/12/12
J1NPH5	MR0N6	SOIL	4/12/12
J1NPH6	MR0N8	SOIL	4/12/12

II. Sample Receipt

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

III. Analytical Results/Methodology

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

The requested analyses were:

Alpha Spectroscopy
Plutonium-238, -239/240 by method RL-ALP-002
Thorium-228,230,232 by method RL-ALP-005
Uranium 234, 235 and 238 by method RL-ALP-015
Gas Proportional Counting

Strontium-90 by method RL-GPC-003
Gamma Spectroscopy
Gamma Spec by method RL-GAM-001
Liquid Scintillation Counting
Tritium by method RL-LSC-005
Carbon-14 by method RL-LSC-008
Nickel-63 by method RL-LCS-017
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

Alpha Spectroscopy
Plutonium-238, -239/240 by method RL-ALP-002:
Sample J1NPH4 tracer yield was not within the acceptance criteria on the original count. The sample was re-counted for an acceptable tracer recovery. Except as noted; the LCS, batch blank, samples and sample duplicate (J1NPH4) results are within contractual requirements.

Thorium-228,230,232 by method RL-ALP-005:
The LCS, batch blank, samples and sample duplicate (J1NPH6) results are within contractual requirements.

Uranium 234, 235 and 238 by method RL-ALP-015:
The LCS, batch blank, samples and sample duplicate (J1NPH5) results are within contractual requirements.

Gas Proportional Counting
Strontium-90 by method RL-GPC-003:
The LCS, batch blank, samples and sample duplicate (J1NPH6) results are within contractual requirements.

Gamma Spectroscopy
Gamma Spec by method RL-GAM-001:
The CRDL was not met for some of the analytes. Except as noted, the LCS, batch blank, samples and sample duplicate (J1NPH5) results are within contractual requirements.

Liquid Scintillation Counting
Tritium by method RL-LSC-005:
The LCS, batch blank, samples and sample duplicate (J1NPH4) results are within contractual

requirements.

Carbon-14 by method RL-LSC-008:
The LCS, batch blank, samples and sample duplicate (J1NPH4) results are within contractual requirements.

Nickel-63 by method RL-LCS-017:
The LCS, batch blank, samples and sample duplicate (J1NPH5) results are within contractual requirements.

Chemical Analysis
Hexavalent Chromium by EPA method 7196A
The LCS, batch blank, samples, sample duplicate (J1NPH4) and sample matrix spike (J1NPH4) results are within contractual requirements.

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

Reviewed and approved:

Rhonda Wagar
Project Manager

Drinking Water Method Cross References

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

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

Uncertainty Estimation

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

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

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

Report Definitions

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

Sample Results Summary

Date: 25-Apr-12

TestAmerica TARL

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

Report No. : 51442 **SDG No:** J01475

Batch	Client Id / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
2104086 PUISO_PLATE_AEA									
J1NPH4									
	MR0N42AF	PU-238	1.44E-02 +- 3.2E-02	U	pCi/g	100%	6.71E-02	1.00E+00	
		PU239/40	-3.21E-03 +- 3.2E-02	U	pCi/g	100%	7.69E-02	1.00E+00	
J1NPH4 DUP									
	MR0N41AN	PU-238	0.00E+00 +- 6.5E-02	U	pCi/g	43%	1.35E-01	1.00E+00	200.0
		PU239/40	3.23E-02 +- 6.5E-02	U	pCi/g	43%	1.35E-01	1.00E+00	244.2
J1NPH5									
	MR0N61AF	PU-238	-6.47E-03 +- 6.5E-02	U	pCi/g	48%	1.55E-01	1.00E+00	
		PU239/40	-3.23E-03 +- 6.5E-02	U	pCi/g	48%	1.35E-01	1.00E+00	
J1NPH6									
	MR0N81AF	PU-238	-8.10E-03 +- 3.3E-02	U	pCi/g	97%	9.72E-02	1.00E+00	
		PU239/40	3.08E-02 +- 4.6E-02	U	pCi/g	97%	6.77E-02	1.00E+00	
2104083 THISO_IE_PRECIP_AEA									
J1NPH4									
	MR0N41AG	TH-228	4.00E-01 +- 1.8E-01		pCi/g	99%	7.30E-02	1.00E+00	
		TH-230	3.43E-01 +- 1.6E-01		pCi/g	99%	7.21E-02	1.00E+00	
		TH-232	2.57E-01 +- 1.4E-01		pCi/g	99%	7.21E-02	1.00E+00	
J1NPH5									
	MR0N61AG	TH-228	2.77E-01 +- 1.5E-01		pCi/g	94%	8.39E-02	1.00E+00	
		TH-230	3.80E-01 +- 1.7E-01		pCi/g	94%	6.30E-02	1.00E+00	
		TH-232	3.46E-01 +- 1.6E-01		pCi/g	94%	6.30E-02	1.00E+00	
J1NPH6									
	MR0N81AG	TH-228	3.41E-01 +- 1.6E-01		pCi/g	93%	7.86E-02	1.00E+00	
		TH-230	2.54E-01 +- 1.4E-01		pCi/g	93%	6.19E-02	1.00E+00	
		TH-232	3.57E-01 +- 1.6E-01		pCi/g	93%	6.19E-02	1.00E+00	
J1NPH6 DUP									
	MR0N81AM	TH-228	5.92E-01 +- 2.1E-01		pCi/g	93%	5.40E-02	1.00E+00	53.8
		TH-230	3.81E-01 +- 1.6E-01		pCi/g	93%	5.33E-02	1.00E+00	39.9
		TH-232	8.93E-01 +- 2.6E-01		pCi/g	93%	5.33E-02	1.00E+00	85.8
2104085 UISO_IE_PLATE_AEA									
J1NPH4									
	MR0N41AC	U-234	1.26E-01 +- 8.5E-02		pCi/g	93%	6.84E-02	1.00E+00	
		U-235	2.60E-02 +- 3.7E-02	U	pCi/g	93%	5.44E-02	1.00E+00	
		U-238	1.22E-01 +- 8.5E-02		pCi/g	93%	8.21E-02	1.00E+00	
J1NPH5									
	MR0N61AC	U-234	2.46E-01 +- 1.2E-01		pCi/g	82%	5.72E-02	1.00E+00	
		U-235	0.00E+00 +- 2.7E-02	U	pCi/g	82%	5.72E-02	1.00E+00	
		U-238	1.35E-01 +- 9.0E-02		pCi/g	82%	5.72E-02	1.00E+00	

TestAmerica

rptSTLRchSaSummary2 V5.2.20 A2002

RPD - Relative Percent Difference.

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

Sample Results Summary

Date: 25-Apr-12

TestAmerica TARL

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

Report No. : 51442 **SDG No:** J01475

Batch	Client Id / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
2104085 UISO_IE_PLATE_AEA									
J1NPH5 DUP									
	MR0N61AN	U-234	1.71E-01 +- 1.0E-01		pCi/g	76%	5.99E-02	1.00E+00	36.3
		U-235	-1.44E-03 +- 2.9E-02	U	pCi/g	76%	5.99E-02	1.00E+00	-200.0
		U-238	2.68E-01 +- 1.3E-01		pCi/g	76%	7.54E-02	1.00E+00	65.7
J1NPH6									
	MR0N81AC	U-234	1.46E-01 +- 8.8E-02		pCi/g	96%	5.10E-02	1.00E+00	
		U-235	0.00E+00 +- 2.5E-02	U	pCi/g	96%	5.10E-02	1.00E+00	
		U-238	2.06E-01 +- 1.1E-01		pCi/g	96%	5.10E-02	1.00E+00	
2104076 GAMMA_GS									
J1NPH4									
	MR0N41AJ	AMERICIUM 241	1.53E-03 +- 1.8E-02	U	pCi/g		3.01E-02		
		CO-60	9.32E-02 +- 2.8E-02		pCi/g		2.49E-02	5.00E-02	
		CS-137	4.51E-02 +- 2.4E-02		pCi/g		2.12E-02	1.00E-01	
		EU-152	-9.58E-03 +- 2.7E-02	U	pCi/g		4.58E-02	1.00E-01	
		EU-154	-2.07E-03 +- 4.2E-02	U	pCi/g		7.32E-02	1.00E-01	
		EU-155	3.37E-02 +- 3.6E-02	U	pCi/g		4.13E-02	1.00E-01	
		RA-226	5.06E-01 +- 8.4E-02		pCi/g		3.42E-02		
J1NPH5									
	MR0N61AJ	AMERICIUM 241	3.56E-05 +- 2.0E-02	U	pCi/g		3.38E-02		
		CO-60	1.69E-02 +- 1.6E-02	U	pCi/g		3.00E-02	5.00E-02	
		CS-137	2.69E-02 +- 1.8E-02		pCi/g		2.29E-02	1.00E-01	
		EU-152	-1.53E-02 +- 3.1E-02	U	pCi/g		5.14E-02	1.00E-01	
		EU-154	4.00E-02 +- 4.7E-02	U	pCi/g		8.64E-02	1.00E-01	
		EU-155	4.85E-02 +- 3.0E-02	U	pCi/g		5.06E-02	1.00E-01	
		RA-226	5.38E-01 +- 9.3E-02		pCi/g		4.16E-02		
J1NPH5 DUP									
	MR0N61AL	AMERICIUM 241	1.60E-02 +- 1.9E-02	U	pCi/g		3.23E-02		199.1
		CO-60	3.00E-02 +- 1.9E-02	U	pCi/g		3.54E-02	5.00E-02	56.0
		CS-137	3.85E-02 +- 2.0E-02		pCi/g		2.40E-02	1.00E-01	35.4
		EU-152	-2.47E-02 +- 3.0E-02	U	pCi/g		4.90E-02	1.00E-01	-46.7
		EU-154	-7.10E-04 +- 4.8E-02	U	pCi/g		8.31E-02	1.00E-01	207.2
		EU-155	2.84E-02 +- 2.7E-02	U	pCi/g		4.62E-02	1.00E-01	52.2
		RA-226	5.35E-01 +- 9.1E-02		pCi/g		4.27E-02		0.6
J1NPH6									
	MR0N81AJ	AMERICIUM 241	5.66E-02 +- 4.9E-02	U	pCi/g		7.39E-02		
		CO-60	8.75E-02 +- 3.4E-02	U	pCi/g		5.63E-02	5.00E-02	
		CS-137	6.49E-02 +- 3.1E-02		pCi/g		3.68E-02	1.00E-01	
		EU-152	-6.72E-02 +- 6.0E-02	U	pCi/g		8.81E-02	1.00E-01	

TestAmerica

rptSTLRchSaSummary2 V5.2.20 A2002

RPD - Relative Percent Difference.

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

Sample Results Summary

Date: 25-Apr-12

TestAmerica TARL

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

Report No. : 51442 **SDG No:** J01475

Batch	Client Id / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
2104076 GAMMA_GS									
J1NPH6									
	MR0N81AJ	EU-154	5.79E-02 +- 6.7E-02	U	pCi/g		1.26E-01	1.00E-01	
		EU-155	1.61E-02 +- 6.1E-02	U	pCi/g		1.03E-01	1.00E-01	
		RA-226	4.88E-01 +- 1.2E-01		pCi/g		7.11E-02		
2104077 SRTOT_SEP_PRECIP_GPC									
J1NPH4									
	MR0N41AD	STRONTIUM	8.80E-02 +- 7.4E-02	U	pCi/g	72%	1.42E-01		
J1NPH5									
	MR0N61AD	STRONTIUM	2.48E-02 +- 7.3E-02	U	pCi/g	65%	1.60E-01		
J1NPH6									
	MR0N81AD	STRONTIUM	6.36E-02 +- 6.6E-02	U	pCi/g	70%	1.32E-01		
J1NPH6 DUP									
	MR0N81AL	STRONTIUM	-1.81E-02 +- 5.5E-02	U	pCi/g	71%	1.32E-01		359.4
2104078 906.0_H3_LSC									
J1NPH4									
	MR0N41AH	H-3	2.71E-02 +- 1.7E-02	U	pCi/g	100%	3.49E-02	4.00E+02	
J1NPH4 DUP									
	MR0N41AL	H-3	2.00E-01 +- 2.2E-02		pCi/g	100%	3.02E-02	4.00E+02	152.4
J1NPH5									
	MR0N61AH	H-3	7.16E-02 +- 2.0E-02		pCi/g	100%	3.81E-02	4.00E+02	
J1NPH6									
	MR0N81AH	H-3	4.67E-02 +- 1.5E-02		pCi/g	100%	2.91E-02	4.00E+02	
2104079 NI63_LSC									
J1NPH4									
	MR0N41AE	NI-63	1.63E+00 +- 7.1E+00	U	pCi/g	90%	1.39E+01	3.00E+01	
J1NPH5									
	MR0N61AE	NI-63	-1.05E+00 +- 7.1E+00	U	pCi/g	87%	1.42E+01	3.00E+01	
J1NPH5 DUP									
	MR0N61AM	NI-63	1.14E+00 +- 6.8E+00	U	pCi/g	92%	1.36E+01	3.00E+01	4773.2
J1NPH6									
	MR0N81AE	NI-63	-4.85E+00 +- 6.8E+00	U	pCi/g	88%	1.42E+01	3.00E+01	
2104081 C14_CHEM_LSC									
J1NPH4									
	MR0N41AK	C-14	2.46E-01 +- 2.3E-01	U	pCi/g	100%	4.56E-01	5.00E+01	
J1NPH4 DUP									
	MR0N41AM	C-14	1.90E-01 +- 2.2E-01	U	pCi/g	100%	4.59E-01	5.00E+01	25.9
J1NPH5									
	MR0N61AK	C-14	1.41E-02 +- 2.1E-01	U	pCi/g	100%	4.56E-01	5.00E+01	
J1NPH6									

TestAmerica rptSTLRchSaSummary2 V5.2.20 A2002

RPD - Relative Percent Difference.

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

Sample Results Summary

Date: 25-Apr-12

TestAmerica TARL

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

Report No. : 51442 **SDG No:** J01475

Batch	Client Id / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
2104081 C14_CHEM_LSC									
J1NPH6									
	MR0N81AK	C-14	1.41E-01 +- 2.2E-01	U	pCi/g	100%	4.59E-01	5.00E+01	
2107055 7196_CR6									
J1NPH4									
	MR0N41AA	HEXCHROME	1.55E-01 +- 0.0E+00	U	mg/kg	N/A	1.55E-01	1.55E-01	
	MR0N41AQ	HEXCHROME	1.55E-01 +- 0.0E+00	U	mg/kg	N/A	1.55E-01	3.50E-01	0.0
J1NPH5									
	MR0N61AA	HEXCHROME	3.42E-01 +- 0.0E+00		mg/kg	N/A	1.55E-01	1.55E-01	
J1NPH6									
	MR0N81AA	HEXCHROME	1.55E-01 +- 0.0E+00	U	mg/kg	N/A	1.55E-01	1.55E-01	

No. of Results: 80

TestAmerica

rptSTLRchSaSummary2 V5.2.20 A2002

RPD - Relative Percent Difference.

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

QC Results Summary

Date: 25-Apr-12

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Report No. : 51442 **SDG No.:** J01475

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDL
PUISO_PLATE_AEA								
2104086 BLANK QC,								
MR02Q1AA	PU-238	1.20E-02 +- 2.7E-02	U	pCi/g	100%			5.57E-02
	PU239/40	-6.67E-03 +- 2.7E-02	U	pCi/g	100%			7.99E-02
2104086 LCS,								
MR02Q1AC	PU239/40	7.19E+00 +- 1.5E+00		pCi/g	100%	107%	0.1	7.69E-02
THISO_IE_PRECIP_AEA								
2104083 BLANK QC,								
MR02K1AA	TH-228	1.61E-02 +- 3.6E-02	U	pCi/g	97%			7.47E-02
	TH-230	0.00E+00 +- 3.5E-02	U	pCi/g	97%			7.38E-02
	TH-232	0.00E+00 +- 3.5E-02	U	pCi/g	97%			7.38E-02
2104083 LCS,								
MR02K1AC	TH-230	2.30E+00 +- 5.4E-01		pCi/g	89%	103%	0.0	1.19E-01
UISO_IE_PLATE_AEA								
2104085 BLANK QC,								
MR02P1AA	U-234	2.22E-02 +- 3.5E-02	U	pCi/g	87%			5.92E-02
	U-235	-4.95E-03 +- 2.5E-02	U	pCi/g	87%			6.98E-02
	U-238	-2.48E-03 +- 2.5E-02	U	pCi/g	87%			5.92E-02
2104085 LCS,								
MR02P1AC	U-234	3.08E+00 +- 6.7E-01		pCi/g	86%	98%	0.0	5.35E-02
	U-238	2.95E+00 +- 6.5E-01		pCi/g	86%	90%	-0.1	6.13E-02
GAMMA_GS								
2104076 BLANK QC,								
MR02C1AA	AMERICIUM 241	5.18E-03 +- 8.3E-03	U	pCi/g				1.48E-02
	CO-60	-2.20E-03 +- 7.8E-03	U	pCi/g				1.40E-02
	CS-137	-2.32E-03 +- 5.8E-03	U	pCi/g				1.02E-02
	EU-152	6.84E-03 +- 1.5E-02	U	pCi/g				2.82E-02
	EU-154	-2.38E-03 +- 2.1E-02	U	pCi/g				3.92E-02
	EU-155	4.00E-04 +- 1.2E-02	U	pCi/g				2.13E-02
	RA-226	6.88E-02 +- 2.9E-02		pCi/g				2.42E-02
2104076 LCS,								
MR02C1AC	CS-137	1.10E+00 +- 1.4E-01		pCi/g		104%	0.0	2.26E-02
	RA-226	9.48E-01 +- 1.3E-01		pCi/g		83%	-0.2	4.05E-02
	RA-228	7.44E-01 +- 1.3E-01		pCi/g		90%	-0.1	8.21E-02
	U-238	9.39E-01 +- 1.2E-01		pCi/g		78%	-0.2	4.08E-02
SRTOT_SEP_PRECIP_GPC								
2104077 BLANK QC,								
MR02D1AA	STRONTIUM	3.73E-02 +- 8.5E-02	U	pCi/g	90%			1.85E-01
2104077 LCS,								
MR02D1AC	STRONTIUM	1.14E+00 +- 3.2E-01		pCi/g	90%	102%	0.0	1.07E-01
906.0_H3_LSC								
2104078 BLANK QC,								

TestAmerica rptSTLRchQcSummary V5.2.20 A2002

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

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

QC Results Summary

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Date: 25-Apr-12

Report No. : 51442 **SDG No.:** J01475

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDL
MR02F1AA	H-3	2.24E-02 +- 1.7E-02	U	pCi/g	100%			3.51E-02
2104078 LCS,								
MR02F1AC	H-3	2.96E-01 +- 2.7E-02		pCi/g	100%	103%	0.0	3.67E-02
NI63_LSC								
2104079 BLANK QC,								
MR02G1AA	NI-63	-4.04E+00 +- 6.6E+00	U	pCi/g	91%			1.36E+01
2104079 LCS,								
MR02G1AC	NI-63	4.73E+02 +- 4.8E+01		pCi/g	89%	78%	-0.2	1.39E+01
C14_CHEM_LSC								
2104081 BLANK QC,								
MR02J1AA	C-14	-2.70E-03 +- 5.2E-03	U	pCi/g	100%			1.15E-02
2104081 LCS,								
MR02J1AC	C-14	7.44E+00 +- 5.3E-01		pCi/g	100%	100%	0.0	4.60E-01
7196_CR6								
2107055 MATRIX SPIKE, J1NPH4								
MR0N41AP	HEXCHROME	9.39E+00 +- 0.0E+00		mg/kg	N/A	92%	-0.1	1.55E-01
2107055 LCS,								
MR1N61AC	HEXCHROME	1.90E+01 +- 0.0E+00		mg/kg	N/A	95%	-0.1	1.55E-01
2107055 BLANK QC,								
MR1N61AA	HEXCHROME	1.55E-01 +- 0.0E+00	U	mg/kg	N/A			1.55E-01

No. of Results: 34

TestAmerica

rptSTLRchQcSummary V5.2.20 A2002

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

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

FORM I

SAMPLE RESULTS

Date: 25-Apr-12

Lab Name: TestAmerica | **SDG:** J01475 | **Collection Date:** 4/11/2012 7:50:00 AM

Lot-Sample No.: J2D120494-1 | **Report No. :** 51442 | **Received Date:** 4/12/2012 3:15:00 PM

Client Sample ID: J1NPH4 | **COC No. :** RC-189-065 | **Matrix:** SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 2104076	GAMMA_GS			**Work Order:** MR0N41AJ			**Report DB ID:** 9MR0N410					
AMERICIUM 241	1.53E-03	U	1.8E-02	1.8E-02	3.01E-02	pCi/g		*0.05*	4/18/12 06:30 a		385.7	GER17$1
								0.17			g	
CO-60	9.32E-02		2.8E-02	2.8E-02	2.49E-02	pCi/g		*(3.7)*	4/18/12 06:30 a		385.7	GER17$1
							5.00E-02	*(6.7)*			g	
CS-137	4.51E-02		2.4E-02	2.4E-02	2.12E-02	pCi/g		*(2.1)*	4/18/12 06:30 a		385.7	GER17$1
							1.00E-01	*(3.8)*			g	
EU-152	-9.58E-03	U	2.7E-02	2.7E-02	4.58E-02	pCi/g		*-0.21*	4/18/12 06:30 a		385.7	GER17$1
							1.00E-01	*-0.72*			g	
EU-154	-2.07E-03	U	4.2E-02	4.2E-02	7.32E-02	pCi/g		*-0.03*	4/18/12 06:30 a		385.7	GER17$1
							1.00E-01	*-0.1*			g	
EU-155	3.37E-02	U	3.6E-02	3.6E-02	4.13E-02	pCi/g		*0.82*	4/18/12 06:30 a		385.7	GER17$1
							1.00E-01	*(1.9)*			g	
RA-226	5.06E-01		8.4E-02	8.4E-02	3.42E-02	pCi/g		*(14.8)*	4/18/12 06:30 a		385.7	GER17$1
								(12.)			g	
Batch: 2104077	SRTOT_SEP_PRECIP_GPC			**Work Order:** MR0N41AD			**Report DB ID:** 9MR0N410					
STRONTIUM	8.80E-02	U	7.1E-02	7.4E-02	1.42E-01	pCi/g	72%	*0.62*	4/20/12 05:28 a		6.01	GPC26A
						6.60E-02		*(2.4)*			g	
Batch: 2104078	906.0_H3_LSC			**Work Order:** MR0N41AH			**Report DB ID:** 9MR0N410					
H-3	2.71E-02	U	1.5E-02	1.7E-02	3.49E-02	pCi/g	100%	*0.77*	4/18/12 03:17 a		68.55	LSC6
						1.66E-02	4.00E+02	*(3.2)*			g	
Batch: 2104079	NI63_LSC			**Work Order:** MR0N41AE			**Report DB ID:** 9MR0N410					

TestAmerica
rptSTLRchSample
V5.2.20 A2002

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

FORM I

SAMPLE RESULTS

Date: 25-Apr-12

Lab Name: TestAmerica | **SDG:** J01475 | **Collection Date:** 4/11/2012 7:50:00 AM

Lot-Sample No.: J2D120494-1 | **Report No. :** 51442 | **Received Date:** 4/12/2012 3:15:00 PM

Client Sample ID: J1NPH4 | **COC No. :** RC-189-065 | **Matrix:** SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
NI-63	1.63E+00	U	5.7E+00	7.1E+00	1.39E+01	pCi/g	90%	*0.12*	4/20/12 06:10 p		0.25	LSC3
						6.49E+00	3.00E+01	*0.46*			g	
Batch: 2104081	C14_CHEM_LSC			**Work Order:**	MR0N41AK		**Report DB ID:**	9MR0N410				
C-14	2.46E-01	U	2.0E-01	2.3E-01	4.56E-01	pCi/g	100%	*0.54*	4/18/12 09:04 a		5.044	LSC3
						2.15E-01	5.00E+01	*(2.2)*			g	
Batch: 2104083	THISO_IE_PRECIP_AEA			**Work Order:**	MR0N41AG		**Report DB ID:**	9MR0N410				
TH-228	4.00E-01		1.7E-01	1.8E-01	7.30E-02	pCi/g	99%	*(5.5)*	4/23/12 02:10 p		1.03	ALP21
						1.28E-02	1.00E+00	*(4.5)*			g	
TH-230	3.43E-01		1.5E-01	1.6E-01	7.21E-02	pCi/g	99%	*(4.8)*	4/23/12 02:10 p		1.03	ALP21
						1.27E-02	1.00E+00	*(4.2)*			g	
TH-232	2.57E-01		1.3E-01	1.4E-01	7.21E-02	pCi/g	99%	*(3.6)*	4/23/12 02:10 p		1.03	ALP21
						1.27E-02	1.00E+00	*(3.7)*			g	
Batch: 2104085	UISO_IE_PLATE_AEA			**Work Order:**	MR0N41AC		**Report DB ID:**	9MR0N410				
U-234	1.26E-01		8.2E-02	8.5E-02	6.84E-02	pCi/g	93%	*(1.8)*	4/19/12 09:37 a		1.03	ALP7
						1.66E-02	1.00E+00	*(3.)*			g	
U-235	2.60E-02	U	3.7E-02	3.7E-02	5.44E-02	pCi/g	93%	*0.48*	4/19/12 09:37 a		1.03	ALP7
						9.57E-03	1.00E+00	*(1.4)*			g	
U-238	1.22E-01		8.2E-02	8.5E-02	8.21E-02	pCi/g	93%	*(1.5)*	4/19/12 09:37 a		1.03	ALP7
						2.34E-02	1.00E+00	*(2.9)*			g	
								Ratio U-234/238 = 1.0				
Batch: 2104086	PUISO_PLATE_AEA			**Work Order:**	MR0N42AF		**Report DB ID:**	9MR0N420				

TestAmerica
rptSTLRchSample
V5.2.20 A2002

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

FORM I

SAMPLE RESULTS

Date: 25-Apr-12

Lab Name: TestAmerica | **SDG:** J01475 | **Collection Date:** 4/11/2012 7:50:00 AM

Lot-Sample No.: J2D120494-1 | **Report No. :** 51442 | **Received Date:** 4/12/2012 3:15:00 PM

Client Sample ID: J1NPH4 | **COC No. :** RC-189-065 | **Matrix:** SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
PU-238	1.44E-02	U	3.2E-02	3.2E-02	6.71E-02	pCi/g	100%	*0.22*	4/24/12 11:14 p		1.04	ALP46
						1.18E-02	1.00E+00	*0.89*			g	
PU239/40	-3.21E-03	U	3.2E-02	3.2E-02	7.69E-02	pCi/g	100%	*-0.04*	4/24/12 11:14 p		1.04	ALP46
						1.67E-02	1.00E+00	*-0.2*			g	
Batch: 2107055	7196_CR6			**Work Order:**	MR0N41AA		**Report DB ID:**	9MR0N410				
HEXCHROME	1.55E-01	U		0.0E+00	1.55E-01	mg/kg	N/A	*1.*	4/16/12 09:50 a		2.5081	
							1.55E-01	*N/A*			g	

No. of Results: 20 **Comments:**

TestAmerica
rptSTLRchSample
V5.2.20 A2002

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

FORM I

SAMPLE RESULTS

Date: 25-Apr-12

Lab Name: TestAmerica | **SDG:** J01475 | **Collection Date:** 4/11/2012 8:00:00 AM

Lot-Sample No.: J2D120494-2 | **Report No. :** 51442 | **Received Date:** 4/12/2012 3:15:00 PM

Client Sample ID: J1NPH5 | **COC No. :** RC-189-065 | **Matrix:** SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 2104076	GAMMA_GS			**Work Order:** MR0N61AJ			**Report DB ID:** 9MR0N610					
AMERICIUM 241	3.56E-05	U	2.0E-02	2.0E-02	3.38E-02	pCi/g		*0.*	4/18/12 06:31 a		373.9	GER19$1
								0.			g	
CO-60	1.69E-02	U	1.6E-02	1.6E-02	3.00E-02	pCi/g		*0.56*	4/18/12 06:31 a		373.9	GER19$1
							5.00E-02	*(2.2)*			g	
CS-137	2.69E-02		1.8E-02	1.8E-02	2.29E-02	pCi/g		*(1.2)*	4/18/12 06:31 a		373.9	GER19$1
							1.00E-01	*(3.1)*			g	
EU-152	-1.53E-02	U	3.1E-02	3.1E-02	5.14E-02	pCi/g		*-0.3*	4/18/12 06:31 a		373.9	GER19$1
							1.00E-01	*-1.*			g	
EU-154	4.00E-02	U	4.7E-02	4.7E-02	8.64E-02	pCi/g		*0.46*	4/18/12 06:31 a		373.9	GER19$1
							1.00E-01	*(1.7)*			g	
EU-155	4.85E-02	U	3.0E-02	3.0E-02	5.06E-02	pCi/g		*0.96*	4/18/12 06:31 a		373.9	GER19$1
							1.00E-01	*(3.3)*			g	
RA-226	5.38E-01		9.3E-02	9.3E-02	4.16E-02	pCi/g		*(12.9)*	4/18/12 06:31 a		373.9	GER19$1
								(11.6)			g	
Batch: 2104077	SRTOT_SEP_PRECIP_GPC			**Work Order:** MR0N61AD			**Report DB ID:** 9MR0N610					
STRONTIUM	2.48E-02	U	7.2E-02	7.3E-02	1.60E-01	pCi/g	65%	*0.15*	4/20/12 05:28 a		6.03	GPC26B
						7.49E-02		*0.68*			g	
Batch: 2104078	906.0_H3_LSC			**Work Order:** MR0N61AH			**Report DB ID:** 9MR0N610					
H-3	7.16E-02		1.8E-02	2.0E-02	3.81E-02	pCi/g	100%	*(1.9)*	4/18/12 06:03 a		79.95	LSC6
						1.81E-02	4.00E+02	*(7.1)*			g	
Batch: 2104079	NI63_LSC			**Work Order:** MR0N61AE			**Report DB ID:** 9MR0N610					

TestAmerica
rptSTLRchSample
V5.2.20 A2002

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

FORM I

SAMPLE RESULTS

Date: 25-Apr-12

Lab Name: TestAmerica | **SDG:** J01475 | **Collection Date:** 4/11/2012 8:00:00 AM

Lot-Sample No.: J2D120494-2 | **Report No. :** 51442 | **Received Date:** 4/12/2012 3:15:00 PM

Client Sample ID: J1NPH5 | **COC No. :** RC-189-065 | **Matrix:** SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
NI-63	-1.05E+00	U	5.7E+00	7.1E+00	1.42E+01	pCi/g	87%	*-0.07*	4/20/12 06:33 p		0.25	LSC3
						6.66E+00	3.00E+01	*-0.3*			g	
Batch: 2104081	C14_CHEM_LSC			**Work Order:**	MR0N61AK		**Report DB ID:**	9MR0N610				
C-14	1.41E-02	U	1.9E-01	2.1E-01	4.56E-01	pCi/g	100%	*0.03*	4/18/12 09:50 a		5.041	LSC3
						2.15E-01	5.00E+01	*0.13*			g	
Batch: 2104083	THISO_IE_PRECIP_AEA			**Work Order:**	MR0N61AG		**Report DB ID:**	9MR0N610				
TH-228	2.77E-01		1.4E-01	1.5E-01	8.39E-02	pCi/g	94%	*(3.3)*	4/23/12 02:11 p		1.02	ALP23
						1.82E-02	1.00E+00	*(3.8)*			g	
TH-230	3.80E-01		1.6E-01	1.7E-01	6.30E-02	pCi/g	94%	*(6.)*	4/23/12 02:11 p		1.02	ALP23
						8.06E-03	1.00E+00	*(4.4)*			g	
TH-232	3.46E-01		1.5E-01	1.6E-01	6.30E-02	pCi/g	94%	*(5.5)*	4/23/12 02:11 p		1.02	ALP23
						8.06E-03	1.00E+00	*(4.2)*			g	
Batch: 2104085	UISO_IE_PLATE_AEA			**Work Order:**	MR0N61AC		**Report DB ID:**	9MR0N610				
U-234	2.46E-01		1.2E-01	1.2E-01	5.72E-02	pCi/g	82%	*(4.3)*	4/19/12 09:37 a		1.04	ALP8
						1.01E-02	1.00E+00	*(4.)*			g	
U-235	0.00E+00	U	0.0E+00	2.7E-02	5.72E-02	pCi/g	82%	*0.*	4/19/12 09:37 a		1.04	ALP8
						1.01E-02	1.00E+00	*0.*			g	
U-238	1.35E-01		8.7E-02	9.0E-02	5.72E-02	pCi/g	82%	*(2.4)*	4/19/12 09:37 a		1.04	ALP8
						1.01E-02	1.00E+00	*(3.)*			g	
								Ratio U-234/238 = 1.8				
Batch: 2104086	PUISO_PLATE_AEA			**Work Order:**	MR0N61AF		**Report DB ID:**	9MR0N610				

TestAmerica
rptSTLRchSample
V5.2.20 A2002

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

FORM I

SAMPLE RESULTS

Date: 25-Apr-12

Lab Name: TestAmerica | **SDG:** J01475 | **Collection Date:** 4/11/2012 8:00:00 AM

Lot-Sample No.: J2D120494-2 | **Report No. :** 51442 | **Received Date:** 4/12/2012 3:15:00 PM

Client Sample ID: J1NPH5 | **COC No. :** RC-189-065 | **Matrix:** SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
PU-238	-6.47E-03	U	6.5E-02	6.5E-02	1.55E-01	pCi/g	48%	*-0.04*	4/23/12 01:15 p		1.01	ALP39
						3.36E-02	1.00E+00	*-0.2*			g	
PU239/40	-3.23E-03	U	6.5E-02	6.5E-02	1.35E-01	pCi/g	48%	*-0.02*	4/23/12 01:15 p		1.01	ALP39
						2.38E-02	1.00E+00	*-0.1*			g	
Batch: 2107055	7196_CR6			**Work Order:**	MR0N61AA		**Report DB ID:**	9MR0N610				
HEXCHROME	3.42E-01			0.0E+00	1.55E-01	mg/kg	N/A	*(2.2)*	4/16/12 09:50 a		2.5092	
							1.55E-01	*N/A*			g	

No. of Results: 20 **Comments:**

TestAmerica
rptSTLRchSample
V5.2.20 A2002

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

FORM I

SAMPLE RESULTS

Date: 25-Apr-12

Lab Name: TestAmerica | **SDG:** J01475 | **Collection Date:** 4/11/2012 7:50:00 AM

Lot-Sample No.: J2D120494-3 | **Report No. :** 51442 | **Received Date:** 4/12/2012 3:15:00 PM

Client Sample ID: J1NPH6 | **COC No. :** RC-189-065 | **Matrix:** SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 2104076	GAMMA_GS			**Work Order:** MR0N81AJ			**Report DB ID:** 9MR0N810					
AMERICIUM 241	5.66E-02	U	4.9E-02	4.9E-02	7.39E-02	pCi/g		*0.77*	4/18/12 06:53 a		362.3	GER5$1
								(2.3)			g	
CO-60	8.75E-02	U	3.4E-02	3.4E-02	5.63E-02	pCi/g		*(1.6)*	4/18/12 06:53 a		362.3	GER5$1
							5.00E-02	*(5.1)*			g	
CS-137	6.49E-02		3.1E-02	3.1E-02	3.68E-02	pCi/g		*(1.8)*	4/18/12 06:53 a		362.3	GER5$1
							1.00E-01	*(4.3)*			g	
EU-152	-6.72E-02	U	6.0E-02	6.0E-02	8.81E-02	pCi/g		*-0.76*	4/18/12 06:53 a		362.3	GER5$1
							1.00E-01	*-(2.2)*			g	
EU-154	5.79E-02	U	6.7E-02	6.7E-02	1.26E-01	pCi/g		*0.46*	4/18/12 06:53 a		362.3	GER5$1
							1.00E-01	*(1.7)*			g	
EU-155	1.61E-02	U	6.1E-02	6.1E-02	1.03E-01	pCi/g		*0.16*	4/18/12 06:53 a		362.3	GER5$1
							1.00E-01	*0.53*			g	
RA-226	4.88E-01		1.2E-01	1.2E-01	7.11E-02	pCi/g		*(6.9)*	4/18/12 06:53 a		362.3	GER5$1
								(8.4)			g	
Batch: 2104077	SRTOT_SEP_PRECIP_GPC			**Work Order:** MR0N81AD			**Report DB ID:** 9MR0N810					
STRONTIUM	6.36E-02	U	6.4E-02	6.6E-02	1.32E-01	pCi/g	70%	*0.48*	4/20/12 05:28 a		6.04	GPC26C
						6.11E-02		*(1.9)*			g	
Batch: 2104078	906.0_H3_LSC			**Work Order:** MR0N81AH			**Report DB ID:** 9MR0N810					
H-3	4.67E-02		1.4E-02	1.5E-02	2.91E-02	pCi/g	100%	*(1.6)*	4/18/12 07:26 a		86.11	LSC6
						1.38E-02	4.00E+02	*(6.2)*			g	
Batch: 2104079	NI63_LSC			**Work Order:** MR0N81AE			**Report DB ID:** 9MR0N810					

TestAmerica
rptSTLRchSample
V5.2.20 A2002

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

FORM I

SAMPLE RESULTS

Date: 25-Apr-12

Lab Name: TestAmerica | **SDG:** J01475 | **Collection Date:** 4/11/2012 7:50:00 AM

Lot-Sample No.: J2D120494-3 | **Report No. :** 51442 | **Received Date:** 4/12/2012 3:15:00 PM

Client Sample ID: J1NPH6 | **COC No. :** RC-189-065 | **Matrix:** SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
NI-63	-4.85E+00	U	5.5E+00	6.8E+00	1.42E+01	pCi/g	88%	*-0.34*	4/20/12 07:19 p		0.25	LSC3
						6.63E+00	3.00E+01	*-(1.4)*			g	
Batch: 2104081	C14_CHEM_LSC			**Work Order:**	MR0N81AK		**Report DB ID:**	9MR0N810				
C-14	1.41E-01	U	1.9E-01	2.2E-01	4.59E-01	pCi/g	100%	*0.31*	4/18/12 10:13 a		5.01	LSC3
						2.16E-01	5.00E+01	*(1.3)*			g	
Batch: 2104083	THISO_IE_PRECIP_AEA			**Work Order:**	MR0N81AG		**Report DB ID:**	9MR0N810				
TH-228	3.41E-01		1.5E-01	1.6E-01	7.86E-02	pCi/g	93%	*(4.3)*	4/23/12 02:11 p		1.03	ALP27
						1.60E-02	1.00E+00	*(4.2)*			g	
TH-230	2.54E-01		1.3E-01	1.4E-01	6.19E-02	pCi/g	93%	*(4.1)*	4/23/12 02:11 p		1.03	ALP27
						7.91E-03	1.00E+00	*(3.7)*			g	
TH-232	3.57E-01		1.6E-01	1.6E-01	6.19E-02	pCi/g	93%	*(5.8)*	4/23/12 02:11 p		1.03	ALP27
						7.91E-03	1.00E+00	*(4.3)*			g	
Batch: 2104085	UISO_IE_PLATE_AEA			**Work Order:**	MR0N81AC		**Report DB ID:**	9MR0N810				
U-234	1.46E-01		8.5E-02	8.8E-02	5.10E-02	pCi/g	96%	*(2.9)*	4/19/12 09:38 a		1.04	ALP10
						8.99E-03	1.00E+00	*(3.3)*			g	
U-235	0.00E+00	U	0.0E+00	2.5E-02	5.10E-02	pCi/g	96%	*0.*	4/19/12 09:38 a		1.04	ALP10
						8.99E-03	1.00E+00	*0.*			g	
U-238	2.06E-01		1.0E-01	1.1E-01	5.10E-02	pCi/g	96%	*(4.)*	4/19/12 09:38 a		1.04	ALP10
						8.99E-03	1.00E+00	*(3.9)*			g	
								Ratio U-234/238 = 0.7				
Batch: 2104086	PUISO_PLATE_AEA			**Work Order:**	MR0N81AF		**Report DB ID:**	9MR0N810				

TestAmerica
rptSTLRchSample
V5.2.20 A2002

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

FORM I

SAMPLE RESULTS

Date: 25-Apr-12

Lab Name: TestAmerica | **SDG:** J01475 | **Collection Date:** 4/11/2012 7:50:00 AM

Lot-Sample No.: J2D120494-3 | **Report No. :** 51442 | **Received Date:** 4/12/2012 3:15:00 PM

Client Sample ID: J1NPH6 | **COC No. :** RC-189-065 | **Matrix:** SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
PU-238	-8.10E-03	U	3.3E-02	3.3E-02	9.72E-02	pCi/g	97%	*-0.08*	4/23/12 01:16 p		1.02	ALP40
						2.66E-02	1.00E+00	*-0.49*			g	
PU239/40	3.08E-02	U	4.6E-02	4.6E-02	6.77E-02	pCi/g	97%	*0.45*	4/23/12 01:16 p		1.02	ALP40
						1.19E-02	1.00E+00	*(1.3)*			g	
Batch: 2107055	7196_CR6			**Work Order:**	MR0N81AA		**Report DB ID:**	9MR0N810				
HEXCHROME	1.55E-01	U		0.0E+00	1.55E-01	mg/kg	N/A	*1.*	4/16/12 09:50 a		2.5068	
							1.55E-01	*N/A*			g	

No. of Results: 20 **Comments:**

TestAmerica
rptSTLRchSample
V5.2.20 A2002

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

FORM II

Date: 25-Apr-12

DUPLICATE RESULTS

Lab Name:	TestAmerica	**SDG:**	J01475	**Collection Date:**	4/11/2012 7:50:00 AM
Lot-Sample No.:	J2D120494-1	**Report No. :**	51442	**Received Date:**	4/12/2012 3:15:00 PM
Client Sample ID:	J1NPH4	**COC No. :**	RC-189-065	**Matrix:**	SOIL

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 2107055	7196_CR6			**Work Order:** MR0N41AQ		**Report DB ID:** MR0N41ER			**Orig Sa DB ID:** 9MR0N410			
HEXCHROME	1.55E-01	U		0.0E+00	1.55E-01	mg/kg	N/A	1.	4/16/12 09:50 a		2.5029	
	1.55E-01	U	**RPD**	**0.0**		3.50E-01		N/A			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. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM II

Date: 25-Apr-12

DUPLICATE RESULTS

Lab Name: TestAmerica **SDG:** J01475 **Collection Date:** 4/11/2012 7:50:00 AM

Lot-Sample No.: J2D120494-1 **Report No. :** 51442 **Received Date:** 4/12/2012 3:15:00 PM

Client Sample ID: J1NPH4 DUP **COC No. :** RC-189-065 **Matrix:** SOIL

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 2104078	906.0_H3_LSC			**Work Order:** MR0N41AL		**Report DB ID:** MR0N41LR			**Orig Sa DB ID:** 9MR0N410			
H-3	2.00E-01		1.9E-02	2.2E-02	3.02E-02	pCi/g	100%	(6.6)	4/18/12 04:40 a		83.08	LSC6
	2.71E-02	U	**RPD**	**152.4**		4.00E+02		(18.2)			g	
Batch: 2104081	C14_CHEM_LSC			**Work Order:** MR0N41AM		**Report DB ID:** MR0N41MR			**Orig Sa DB ID:** 9MR0N410			
C-14	1.90E-01	U	2.0E-01	2.2E-01	4.59E-01	pCi/g	100%	0.41	4/18/12 09:27 a		5.009	LSC3
	2.46E-01	U	**RPD**	**25.9**		5.00E+01		(1.7)			g	
Batch: 2104086	PUISO_PLATE_AEA			**Work Order:** MR0N41AN		**Report DB ID:** MR0N41NR			**Orig Sa DB ID:** 9MR0N420			
PU-238	0.00E+00	U	0.0E+00	6.5E-02	1.35E-01	pCi/g	43%	0.	4/23/12 01:15 p		1.03	ALP38
	1.44E-02	U	**RPD**	**200.0**		1.00E+00		0.			g	
PU239/40	3.23E-02	U	6.5E-02	6.5E-02	1.35E-01	pCi/g	43%	0.24	4/23/12 01:15 p		1.03	ALP38
	-3.21E-03	U	**RPD**	**244.2**		1.00E+00		0.99			g	

Alpha Spec Result Sum = 3.2E-02

No. of Results: 4 **Comments:**

RPD - Relative Percent Difference.

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

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

FORM II

Date: 25-Apr-12

DUPLICATE RESULTS

Lab Name: TestAmerica | **SDG:** J01475 | **Collection Date:** 4/11/2012 8:00:00 AM

Lot-Sample No.: J2D120494-2 | **Report No. :** 51442 | **Received Date:** 4/12/2012 3:15:00 PM

Client Sample ID: J1NPH5 DUP | **COC No. :** RC-189-065 | **Matrix:** SOIL

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 2104076	GAMMA_GS			**Work Order:**	MR0N61AL	**Report DB ID:**	MR0N61LR		**Orig Sa DB ID:**	9MR0N610		
AMERICIUM 241	1.60E-02	U	1.9E-02	1.9E-02	3.23E-02	pCi/g		0.5	4/18/12 10:13 a		373.9	GER16$1
	3.56E-05	U	**RPD**	**199.1**				(1.7)			g	
CO-60	3.00E-02	U	1.9E-02	1.9E-02	3.54E-02	pCi/g		0.85	4/18/12 10:13 a		373.9	GER16$1
	1.69E-02	U	**RPD**	**56.0**		5.00E-02		(3.2)			g	
CS-137	3.85E-02		2.0E-02	2.0E-02	2.40E-02	pCi/g		(1.6)	4/18/12 10:13 a		373.9	GER16$1
	2.69E-02		**RPD**	**35.4**		1.00E-01		(3.9)			g	
EU-152	-2.47E-02	U	3.0E-02	3.0E-02	4.90E-02	pCi/g		-0.5	4/18/12 10:13 a		373.9	GER16$1
	-1.53E-02	U	**RPD**	**-46.7**		1.00E-01		-(1.7)			g	
EU-154	-7.10E-04	U	4.8E-02	4.8E-02	8.31E-02	pCi/g		-0.01	4/18/12 10:13 a		373.9	GER16$1
	4.00E-02	U	**RPD**	**207.2**		1.00E-01		-0.03			g	
EU-155	2.84E-02	U	2.7E-02	2.7E-02	4.62E-02	pCi/g		0.62	4/18/12 10:13 a		373.9	GER16$1
	4.85E-02	U	**RPD**	**52.2**		1.00E-01		(2.1)			g	
RA-226	5.35E-01		9.1E-02	9.1E-02	4.27E-02	pCi/g		(12.5)	4/18/12 10:13 a		373.9	GER16$1
	5.38E-01		**RPD**	**0.6**				(11.7)			g	
Batch: 2104079	NI63_LSC			**Work Order:**	MR0N61AM	**Report DB ID:**	MR0N61MR		**Orig Sa DB ID:**	9MR0N610		
NI-63	1.14E+00	U	5.6E+00	6.8E+00	1.36E+01	pCi/g	92%	0.08	4/20/12 06:56 p		0.25	LSC3
	-1.05E+00	U	**RPD**	**4773.2**		3.00E+01		0.33			g	
Batch: 2104085	UISO_IE_PLATE_AEA			**Work Order:**	MR0N61AN	**Report DB ID:**	MR0N61NR		**Orig Sa DB ID:**	9MR0N610		
U-234	1.71E-01		9.9E-02	1.0E-01	5.99E-02	pCi/g	76%	(2.8)	4/19/12 09:38 a		1.04	ALP9
	2.46E-01		**RPD**	**36.3**		1.00E+00		(3.3)			g	

TestAmerica
rptSTLRchDupV5.
2.20 A2002

RPD - Relative Percent Difference.

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

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

TestAmerica Laboratories, Inc.

FORM II

Date: 25-Apr-12

DUPLICATE RESULTS

Lab Name:	TestAmerica	**SDG:**	J01475	**Collection Date:**	4/11/2012 8:00:00 AM
Lot-Sample No.:	J2D120494-2	**Report No. :**	51442	**Received Date:**	4/12/2012 3:15:00 PM
Client Sample ID:	J1NPH5 DUP	**COC No. :**	RC-189-065	**Matrix:**	SOIL

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
U-235	-1.44E-03	U	2.9E-02	2.9E-02	5.99E-02	pCi/g	76%	-0.02	4/19/12 09:38 a		1.04	ALP9
	0.00E+00	U	**RPD**	**-200.0**		1.00E+00		-0.1			g	
U-238	2.68E-01		1.3E-01	1.3E-01	7.54E-02	pCi/g	76%	(3.6)	4/19/12 09:38 a		1.04	ALP9
	1.35E-01		**RPD**	**65.7**		1.00E+00		(4.)			g	

Alpha Spec Result Sum = 2.7E-01

No. of Results: 11 **Comments:**

TestAmerica rptSTLRchDupV5. 2.20 A2002

RPD - Relative Percent Difference.

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

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

TestAmerica Laboratories, Inc.

FORM II

Date: 25-Apr-12

DUPLICATE RESULTS

Lab Name:	TestAmerica	**SDG:**	J01475	**Collection Date:**	4/11/2012 7:50:00 AM
Lot-Sample No.:	J2D120494-3	**Report No. :**	51442	**Received Date:**	4/12/2012 3:15:00 PM
Client Sample ID:	J1NPH6 DUP	**COC No. :**	RC-189-065	**Matrix:**	SOIL

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 2104077	SRTOT_SEP_PRECIP_GPC			**Work Order:** MR0N81AL		**Report DB ID:** MR0N81LR			**Orig Sa DB ID:** 9MR0N810			
STRONTIUM	-1.81E-02	U	5.5E-02	5.5E-02	1.32E-01	pCi/g	71%	-0.14	4/20/12 05:28 a		6.01	GPC26D
	6.36E-02	U	**RPD**	**359.4**				-0.66			g	
Batch: 2104083	THISO_IE_PRECIP_AEA			**Work Order:** MR0N81AM		**Report DB ID:** MR0N81MR			**Orig Sa DB ID:** 9MR0N810			
TH-228	5.92E-01		1.9E-01	2.1E-01	5.40E-02	pCi/g	93%	(11.)	4/23/12 02:13 p		1.01	ALP28
	3.41E-01		**RPD**	**53.8**		1.00E+00		(5.7)			g	
TH-230	3.81E-01		1.5E-01	1.6E-01	5.33E-02	pCi/g	93%	(7.1)	4/23/12 02:13 p		1.01	ALP28
	2.54E-01		**RPD**	**39.9**		1.00E+00		(4.8)			g	
TH-232	8.93E-01		2.3E-01	2.6E-01	5.33E-02	pCi/g	93%	(16.8)	4/23/12 02:13 p		1.01	ALP28
	3.57E-01		**RPD**	**85.8**		1.00E+00		(6.7)			g	

Alpha Spec Result Sum = 1.9E+00

No. of Results: 4 **Comments:**

TestAmerica rptSTLRchDupV5. 2.20 A2002

RPD - Relative Percent Difference.

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

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

TestAmerica Laboratories, Inc.

FORM II

BLANK RESULTS

Date: 25-Apr-12

Lab Name: TestAmerica **SDG:** J01475

Matrix: SOIL **Report No. :** 51442

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Lc	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 2107055	7196_CR6			**Work Order:**	MR1N61AA	**Report DB ID:**	MR1N61AB					
HEXCHROME	1.55E-01	U		0.0E+00	1.55E-01	mg/kg	N/A	1.	4/16/12 09:50 a		2.5	
						1.55E-01		N/A			g	
Batch: 2104081	C14_CHEM_LSC			**Work Order:**	MR02J1AA	**Report DB ID:**	MR02J1AB					
C-14	-2.70E-03	U	4.5E-03	5.2E-03	1.15E-02	pCi/g	100%	-0.23	4/18/12 10:36 a		200.0	LSC3
					5.42E-03	5.00E+01		-(1.)			g	
Batch: 2104086	PUISO_PLATE_AEA			**Work Order:**	MR02Q1AA	**Report DB ID:**	MR02Q1AB					
PU-238	1.20E-02	U	2.7E-02	2.7E-02	5.57E-02	pCi/g	100%	0.22	4/23/12 01:16 p		1.03	ALP41
					9.81E-03	1.00E+00		0.89			g	
PU239/40	-6.67E-03	U	2.7E-02	2.7E-02	7.99E-02	pCi/g	100%	-0.08	4/23/12 01:16 p		1.03	ALP41
					2.19E-02	1.00E+00		-0.49			g	
Batch: 2104085	UISO_IE_PLATE_AEA			**Work Order:**	MR02P1AA	**Report DB ID:**	MR02P1AB					
U-234	2.22E-02	U	3.5E-02	3.5E-02	5.92E-02	pCi/g	87%	0.38	4/19/12 09:39 a		1.02	ALP11
					1.29E-02	1.00E+00		(1.3)			g	
U-235	-4.95E-03	U	2.5E-02	2.5E-02	6.98E-02	pCi/g	87%	-0.07	4/19/12 09:39 a		1.02	ALP11
					1.82E-02	1.00E+00		-0.39			g	
U-238	-2.48E-03	U	2.5E-02	2.5E-02	5.92E-02	pCi/g	87%	-0.04	4/19/12 09:39 a		1.02	ALP11
					1.29E-02	1.00E+00		-0.2			g	
						Ratio U-234/238 = -9.0						
Batch: 2104083	THISO_IE_PRECIP_AEA			**Work Order:**	MR02K1AA	**Report DB ID:**	MR02K1AB					
TH-228	1.61E-02	U	3.6E-02	3.6E-02	7.47E-02	pCi/g	97%	0.22	4/23/12 02:13 p		1.01	ALP113
					1.32E-02	1.00E+00		0.89			g	

TestAmerica
rptSTLRchBlank
V5.2.20 A2002

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

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

FORM II

BLANK RESULTS

Date: 25-Apr-12

Lab Name: TestAmerica **SDG:** J01475

Matrix: SOIL **Report No. :** 51442

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Lc	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
TH-230	0.00E+00	U	0.0E+00	3.5E-02	7.38E-02	pCi/g	97%	0.	4/23/12 02:13 p		1.01	ALP113
					1.30E-02	1.00E+00		0.			g	
TH-232	0.00E+00	U	0.0E+00	3.5E-02	7.38E-02	pCi/g	97%	0.	4/23/12 02:13 p		1.01	ALP113
					1.30E-02	1.00E+00		0.			g	
Batch: 2104079	NI63_LSC			**Work Order:**	MR02G1AA		**Report DB ID:**	MR02G1AB				
NI-63	-4.04E+00	U	5.3E+00	6.6E+00	1.36E+01	pCi/g	91%	-0.3	4/20/12 07:42 p		0.25	LSC3
					6.37E+00	3.00E+01		-(1.2)			g	
Batch: 2104078	906.0_H3_LSC			**Work Order:**	MR02F1AA		**Report DB ID:**	MR02F1AB				
H-3	2.24E-02	U	1.5E-02	1.7E-02	3.51E-02	pCi/g	100%	0.64	4/18/12 08:49 a		99.33	LSC6
					1.67E-02	4.00E+02		(2.6)			g	
Batch: 2104076	GAMMA_GS			**Work Order:**	MR02C1AA		**Report DB ID:**	MR02C1AB				
AMERICIUM 241	5.18E-03	U	8.3E-03	8.3E-03	1.48E-02	pCi/g		0.35	4/18/12 10:13 a		348.0	GER17$1
								(1.3)			g	
CO-60	-2.20E-03	U	7.8E-03	7.8E-03	1.40E-02	pCi/g		-0.16	4/18/12 10:13 a		348.0	GER17$1
						5.00E-02		-0.57			g	
CS-137	-2.32E-03	U	5.8E-03	5.8E-03	1.02E-02	pCi/g		-0.23	4/18/12 10:13 a		348.0	GER17$1
						1.00E-01		-0.8			g	
EU-152	6.84E-03	U	1.5E-02	1.5E-02	2.82E-02	pCi/g		0.24	4/18/12 10:13 a		348.0	GER17$1
						1.00E-01		0.91			g	
EU-154	-2.38E-03	U	2.1E-02	2.1E-02	3.92E-02	pCi/g		-0.06	4/18/12 10:13 a		348.0	GER17$1
						1.00E-01		-0.23			g	
EU-155	4.00E-04	U	1.2E-02	1.2E-02	2.13E-02	pCi/g		0.02	4/18/12 10:13 a		348.0	GER17$1
						1.00E-01		0.07			g	

TestAmerica
rptSTLRchBlank
V5.2.20 A2002

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

FORM II

BLANK RESULTS

Date: 25-Apr-12

Lab Name: TestAmerica **SDG:** J01475

Matrix: SOIL **Report No. :** 51442

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Lc	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
RA-226	6.88E-02		2.9E-02	2.9E-02	2.42E-02	pCi/g		(2.8)	4/18/12 10:13 a		348.0	GER17$1
								(4.7)			g	
Batch: 2104077	SRTOT_SEP_PRECIP_GPC		**Work Order:**	MR02D1AA		**Report DB ID:**	MR02D1AB					
STRONTIUM	3.73E-02	U	8.5E-02	8.5E-02	1.85E-01	pCi/g	90%	0.2	4/20/12 05:28 a		6.03	GPC28A
					8.82E-02			0.87			g	

No. of Results: 20 **Comments:**

TestAmerica
rptSTLRchBlank
V5.2.20 A2002

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

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

FORM II

LCS RESULTS

Date: 25-Apr-12

Lab Name: TestAmerica **SDG:** J01475

Matrix: SOIL **Report No. :** 51442

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 2107055	7196_CR6			**Work Order:**	MR1N61AC		**Report DB ID:**	MR1N61AS					
HEXCHROME	1.90E+01			0.0E+00	1.55E-01	mg/kg	N/A	2.00E+01		95%	4/16/12 09:50 a	2.5	
							Rec Limits:	80	120	-0.1		g	
Batch: 2104081	C14_CHEM_LSC			**Work Order:**	MR02J1AC		**Report DB ID:**	MR02J1CS					
C-14	7.44E+00		4.2E-01	5.3E-01	4.60E-01	pCi/g	100%	7.42E+00	1.2E-01	100%	4/18/12 10:59 a	5.0	LSC3
							Rec Limits:	70	130	0.0		g	
Batch: 2104086	PUISO_PLATE_AEA			**Work Order:**	MR02Q1AC		**Report DB ID:**	MR02Q1CS					
PU239/40	7.19E+00		6.8E-01	1.5E+00	7.69E-02	pCi/g	100%	6.71E+00	2.0E-01	107%	4/23/12 01:17 p	1.03	ALP42
							Rec Limits:	70	130	0.1		g	
Batch: 2104085	UISO_IE_PLATE_AEA			**Work Order:**	MR02P1AC		**Report DB ID:**	MR02P1CS					
U-234	3.08E+00		4.0E-01	6.7E-01	5.35E-02	pCi/g	86%	3.13E+00	1.7E-02	98%	4/19/12 09:39 a	1.04	ALP12
							Rec Limits:	70	130	0.0		g	
U-238	2.95E+00		3.9E-01	6.5E-01	6.13E-02	pCi/g	86%	3.28E+00	1.7E-02	90%	4/19/12 09:39 a	1.04	ALP12
							Rec Limits:	70	130	-0.1		g	
Batch: 2104083	THISO_IE_PRECIP_AEA			**Work Order:**	MR02K1AC		**Report DB ID:**	MR02K1CS					
TH-230	2.30E+00		4.1E-01	5.4E-01	1.19E-01	pCi/g	89%	2.23E+00	6.7E-02	103%	4/23/12 02:14 p	1.01	ALP116
							Rec Limits:	70	130	0.0		g	
Batch: 2104079	NI63_LSC			**Work Order:**	MR02G1AC		**Report DB ID:**	MR02G1CS					
NI-63	4.73E+02		1.8E+01	4.8E+01	1.39E+01	pCi/g	89%	6.08E+02	1.0E+01	78%	4/20/12 08:05 p	0.25	LSC3
							Rec Limits:	70	130	-0.2		g	
Batch: 2104078	906.0_H3_LSC			**Work Order:**	MR02F1AC		**Report DB ID:**	MR02F1CS					
H-3	2.96E-01		2.5E-02	2.7E-02	3.67E-02	pCi/g	100%	2.86E-01	8.6E-03	103%	4/18/12 10:12 a	94.4	LSC6
							Rec Limits:	70	130	0.0		g	

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

rptSTLRchLcs
V5.2.20 A2002

FORM II

LCS RESULTS

Date: 25-Apr-12

Lab Name: TestAmerica **SDG:** J01475

Matrix: SOIL **Report No. :** 51442

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 2104076	GAMMA_GS			**Work Order:** MR02C1AC			**Report DB ID:** MR02C1CS						
CS-137	1.10E+00		1.4E-01	1.4E-01	2.26E-02	pCi/g		1.06E+00	1.1E-02	104%	4/18/12 10:17 a	350.1	GER18$1
							Rec Limits:	70	130	0.0		g	
RA-226	9.48E-01		1.3E-01	1.3E-01	4.05E-02	pCi/g		1.14E+00	1.2E-02	83%	4/18/12 10:17 a	350.1	GER18$1
							Rec Limits:	70	130	-0.2		g	
RA-228	7.44E-01		1.3E-01	1.3E-01	8.21E-02	pCi/g		8.29E-01	8.6E-03	90%	4/18/12 10:17 a	350.1	GER18$1
							Rec Limits:	70	130	-0.1		g	
U-238	9.39E-01		1.2E-01	1.2E-01	4.08E-02	pCi/g		1.20E+00	1.2E-02	78%	4/18/12 10:17 a	350.1	GER18$1
							Rec Limits:	70	130	-0.2		g	
Batch: 2104077	SRTOT_SEP_PRECIP_GPC			**Work Order:** MR02D1AC			**Report DB ID:** MR02D1CS						
STRONTIUM	1.14E+00		1.3E-01	3.2E-01	1.07E-01	pCi/g	90%	1.13E+00	1.3E-02	102%	4/20/12 05:28 a	6.04	GPC28B
							Rec Limits:	70	130	0.0		g	

No. of Results: 13 **Comments:**

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

rptSTLRchLcs
V5.2.20 A2002

FORM II

Date: 25-Apr-12

MATRIX SPIKE RESULTS

Lab Name: TestAmerica **SDG:** J01475

Lot-Sample No.: J2D120494-1, J1NPH4 **Report No. :** 51442 **Matrix:** SOIL

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 2107055	Work Order: MR0N41AP			Report DB ID: MR0N41CW			Orig Sa DB ID: 9MR0N410					
HEXCHROME	9.39E+00			0.0E+00	1.55E-01	mg/kg	N/A	92.25%	1.02E+01	4/16/12 09:50 a	2.5045	7196_CR6
	1.55E-01										g	

Number of Results: 1

Comments:

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

4/25/2012 9:47:08 AM

Lot No., Due Date: J2D120494; 05/03/2012
Client, Site: 127642; S00X235B00 HANFORD
QC Batch No., Method Test: 2104086; RPUISO Pulso by ALP
SDG, Matrix: J01475; 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:
NCM 10-20881

First Level Lisa Autenson **Date** 4/25/12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 210-4086

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

Comments on any "No" response: CRDL = 1.0 pCi/g
See NCM #: 10-20881

Second Level Review: Brenda Wyatt Date: 4/25/12

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

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: 10-20881
NCM Initiated By: Lisa Antonson
Date Opened: 04/25/2012
Date Closed:

Classification: **Anomaly**
Status: **PMREVIEW**
Production Area: Counting
Tests: Pulso by ALP
Lot #'s (Sample #'s): J2D120494 (1,2,3), J2D130000 (86),
QC Batches: 2104086,

Nonconformance: Other (describe in detail)
Subcategory: Other (explanation required)

Problem Description / Root Cause

Name	Date	Description
Lisa Antonson	04/25/2012	Sample MR0N41AF had a high tracer recovery in the original count. A recount brought it within limits.

Corrective Action

Name	Date	Corrective Action
Lisa Antonson	04/25/2012	The sample was recounted.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note
	Response	Response Note			

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position

Date Printed: 4/25/2012

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

4/24/2012 3:41:15 PM

Lot No., Due Date: J2D120494; 05/03/2012
Client, Site: 127642; S00X235B00 HANFORD
QC Batch No., Method Test: 2104083; RTHISO ThIso by ALP
SDG, Matrix: J01475; SOIL

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

6.0 Comments on any No response:

First Level John Morton **Date** 4-24-12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 2104083

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

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

Second Level Review: [signature] Date: 4/25/12

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

4/24/2012 2:36:19 PM

Lot No., Due Date: J2D120494; 05/03/2012
Client, Site: 127642; S00X235B00 HANFORD
QC Batch No., Method Test: 2104085; RUISO Also by ALP
SDG, Matrix: J01475; 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 Lisa Anderson Date 4/24/12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 2104085

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

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

Second Level Review: Rhonda Wyatt Date: 4/26/12

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

4/24/2012 3:05:32 PM

Lot No., Due Date: J2D120494; 05/03/2012
Client, Site: 127642; S00X235B00 HANFORD
QC Batch No., Method Test: 2104077; RSRTOT SrTot by GPC
SDG, Matrix: J01475; 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 Lisa Anderson **Date** 4/25/12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 2104077

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

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

Second Level Review: [signature] Date: 4/25/12

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

4/19/2012 3:21:35 PM

Lot No., Due Date: J2D120494; 05/03/2012
Client, Site: 127642; S00X235B00 HANFORD
QC Batch No., Method Test: 2104076; RGAMMA Gamma by GER
SDG, Matrix: J01475; SOIL

1.0 COC

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes ✓	No	N/A

2.0 QC Batch

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes ✓	No	N/A
2.2 Are the QC appropriate for the analysis included in the batch?	Yes ✓	No	N/A
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes ✓	No	N/A
2.4 Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A ✓

3.0 QC & Samples

3.1 Is the blank results, yield, and MDA within contract limits?	Yes ✓	No	N/A
3.2 Is the LCS result, yield, and MDA within contract limits?	Yes ✓	No	N/A
3.3 Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	N/A ✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?	Yes ✓	No	N/A
3.5 Are the sample yields and MDAs within contract limits?	Yes	No ✓	N/A

4.0 Raw Data

4.1 Were results calculated in the correct units?	Yes ✓	No	N/A
4.2 Were analysis volumes entered correctly?	Yes ✓	No	N/A
4.3 Were Yields entered correctly?	Yes	No	N/A ✓
4.4 Were spectra reviewed/meet contractual requirements?	Yes ✓	No	N/A
4.5 Were raw counts reviewed for anomalies?	Yes ✓	No	N/A

5.0 Other

5.1 Are all nonconformances included and noted?	Yes ✓	No	N/A
5.2 Are all required forms filled out?	Yes ✓	No	N/A
5.3 Was the correct methodology used?	Yes ✓	No	N/A
5.4 Was transcription checked?	Yes ✓	No	N/A
5.5 Were all calculations checked at a minimum frequency?	Yes	No	N/A ✓
5.6 Are worksheet entries complete and correct?	Yes ✓	No	N/A

6.0 Comments on any No response:
NCM 10-20842

First Level Lisa Anderson **Date** 4/19/12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 210 40716

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

Comments on any "No" response: SRDL = 0.1 pCi/g
See NCM #: 10-20842

Second Level Review: [signature] Date: 4/27/12

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

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: 10-20842
NCM Initiated By: Lisa Antonson
Date Opened: 04/19/2012
Date Closed:

Classification: **Anomaly**
Status: **PMREVIEW**
Production Area: Counting
Tests: Gamma by GER
Lot #'s (Sample #'s): J2D120494 (1,2,3), J2D130000 (76),
QC Batches: 2104076,

Nonconformance: MDA not met
Subcategory: Data accepted

Problem Description / Root Cause

Name	Date	Description
Lisa Antonson	04/19/2012	CRDL is not met for C0-60, Eu-152 and Eu-155 for sample MR0N8.

Corrective Action

Name	Date	Corrective Action
Lisa Antonson	04/19/2012	Data accepted.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note
	Response	Response Note			

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position

Date Printed: 4/19/2012

Lot No., Due Date: J2D120494; 05/03/2012
Client, Site: 127642; S00X235B00 HANFORD
QC Batch No., Method Test: 2104078; RTRITIUM H-3 by LSC
SDG, Matrix: J01475; 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 Lisa Anderson **Date** 4/19/12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 2104078

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

Comments on any "No" response: CRDL = 10.0 pCi/g

Second Level Review: Amanda Wyer Date: 4/19/12

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

4/19/2012 12:08:00 PM

Lot No., Due Date: J2D120494; 05/03/2012
Client, Site: 127642; S00X235B00 HANFORD
QC Batch No., Method Test: 2104081; RC14 C-14 by LSC
SDG, Matrix: J01475; 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 Lisa Antonson **Date** 4/19/12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 2104081

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

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

Second Level Review: Rhonda Wyatt Date: 4/9/12

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

4/23/2012 4:52:03 PM

Lot No., Due Date: J2D120494; 05/03/2012
Client, Site: 127642; S00X235B00 HANFORD
QC Batch No., Method Test: 2104079; RNI63 Ni-63 by LSC
SDG, Matrix: J01475; 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 Lisa Antonsen **Date** 4/23/12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 2104079

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

Comments on any "No" response: CRDL = 30pCi/gr

Second Level Review: [signature] Date: 4/24/12

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Richland Laboratory
Data Review Check List
Hexavalent Chromium

Batch Number(s):	2107055	Lab Sample Numbers or SDG:	J01475

Method/Test/Parameter: Cr+6 ☐ 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 85-115%?	✓			✓
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 A. Rahavi Date 4-18-12 2nd Review [signature] Date 4/18/12

CG-231 Rev 0, 2/12

On 4/11/12

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-189-065	Page 1 of 1
Collector Russell, JK	**Company Contact** Joan Kessner	**Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH	**Price Code** 8L **Data Turnaround** 21 Days
Project Designation 100N Field Remediation - Soil Full Protocol	**Sampling Location** UPR-100-N-6 Verification Sampling		**SAF No.** RC-189	
Ice Chest No. NA	**Field Logbook No.** EL-1652-06	**COA** RUPN06N6W0	**Method of Shipment** (Hand Deliver) / FedEx	
Shipped To TestAmerica Incorporated, Richland	**Offsite Property No.** NA		**Bill of Lading/Air Bill No.** NA	

POSSIBLE SAMPLE HAZARDS/REMARKS

~~Potential~~ Radioactivity LDOT Limits
As 4-12-12

SDG# JO1475

Special Handling and/or Storage

Cool 4C

Lot# J2D120494

Preservation	Cool 4C	Cool 4C	Cool 4C	None	None	None	None	None	None	None
Type of Container	G/P	G/P	G/P	G/P	G/P	G/P	G/P	G	G/P	G/P
No. of Container(s)	1	1	1	1	0	0	0	1	0	0
Volume	120mL	60mL	60mL	500mL	500mL	500mL	500mL	60mL	500mL	500mL
SAMPLE ANALYSIS Due 5.3.12	See item (1) in Special Instructions.	Chromium Hex - 7196	IC Anions - 9056 Modified; NO2/NO3 - 353.2; pH - 9045	See item (2) in Special Instructions. (3)	Isotopic Uranium	Isotopic Plutonium	Carbon-14 Low Level	Tritium - H3 Low Level Soil	Nickel-63	Strontium-89,90 -- Total Sr

Sample No.	Matrix *	Sample Date	Sample Time										RCF
J1NPH4 MRCN4	SOIL	4/11/12	0750		X		X	X	X	X	X	X	X 32739
J1NPH5 MRCN6	SOIL	4/11/12	0800		X		X	X	X	X	X	X	X 32740
J1NPH6 MRCN8	SOIL	4/11/12	0750		X		X	X	X	X	X	X	X 32739

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
John Russell	4/11/12 1000	JV Fullmer	4/11/12 1000
JV Fullmer	4/11/12 1545	1060#2 A. Freier	4/11/12 1545
1060#2 A. Freier	4-12-12 1515	TA Lip @amem1rompa	4.12.12 1515

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010TR (Close-out List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV)
(2) Gamma Spec (Client List) {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Radium-226}
(3) Please add Isotopic thorium 4-12-12 CMB

REVIEWED BY CMB DATE 4-12-12

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

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

WCH-EE-011

TestAmerica Laboratories, Inc.

Apex™

Analysis Report for RCF32739

J1NPH4 SAF-RC-189 100N FR/UPR-100-N-6 VERIFICATION SAMPLING

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF32739
Sample Description	: J1NPH4 SAF-RC-189 100N FR/UPR-100-N-6 VERIFICATION SAMPLING
Sample Type	: 80g pillbox
Sample Size	: 6.200E+01 grams
Facility	: Default
Sample Taken On	: 4/11/2012 7:50:00AM
Acquisition Started	: 4/12/2012 10:38:54AM
Procedure	: 80 Gram Pill Box
Operator	: RCT
Detector Name	: NEWBEGE
Geometry	: 80 Gram Pill Box
Live Time	: 1800.0 seconds
Real Time	: 1800.3 seconds
Dead Time	: 0.01 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 40 - 4096
Peak Area Range (in channels)	: 40 - 4096
Identification Energy Tolerance	: 1.000 keV
Energy Calibration Used Done On	: 3/5/2012
Efficiency Calibration Used Done On	: 3/9/2012
Efficiency Calibration Description	: NBEGE 80gPB EC030712 SN85269-238
Sample Number	: 24344

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.978	1.57E+01	3.69E+00	
PB-212		0.708	9.86E-01	1.91E-01	
RA-226d	@	0.350	6.32E-01	1.72E-01	
TH-232d		0.443	6.45E-01	1.78E-01	

Apex™

Analysis Report for RCF32740

J1NPH5 SAF-RC-189 100N FR/UPR-100-N-6 VERIFICATION SAMPLING

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF32740
Sample Description	: J1NPH5 SAF-RC-189 100N FR/UPR-100-N-6 VERIFICATION SAMPLING
Sample Type	: 50g pillbox
Sample Size	: 5.900E+01 grams
Facility	: Default
Sample Taken On	: 4/11/2012 8:00:00AM
Acquisition Started	: 4/12/2012 11:36:28AM
Procedure	: 50 Gram Pill Box
Operator	: RCT
Detector Name	: NEWBEGE
Geometry	: 50 ml Pill Box
Live Time	: 1800.0 seconds
Real Time	: 1800.3 seconds
Dead Time	: 0.02 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 40 - 4096
Peak Area Range (in channels)	: 40 - 4096
Identification Energy Tolerance	: 1.000 keV
Energy Calibration Used Done On	: 3/5/2012
Efficiency Calibration Used Done On	: 3/9/2012
Efficiency Calibration Description	: NBEGE 50ml PB EC030712 SN85268-238
Sample Number	: 24352

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.963	1.43E+01	3.45E+00	
PB-212	0.708	1.04E+00	1.96E-01	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 4-12-12 / 1515 Container GM Screen Result: (Airlock) 102 Initials[ ]
Sample GM Screen Result (Sample Receiving) 102 Initials[ ]

Client: WCH SDG #: JQ1475 NA [ ] SAF #: RC-189 NA [ ]

Lot Number: J2D120494

Chain of Custody # RC-189-065

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

Samples received inside shipping container/cooler/box Yes [ ] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ ]
3. Cooler temperature: 1 °C on ice NA [ ] 4-12-12
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [ ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 3
7. Containers received: 2 x 60 mLAG; 1 x 500 mLP
8. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
9. Samples have:
   ____ tape ____ hazard labels
   [ ] custody seals [ ] appropriate sample labels
10. Matrix:
    [ ] A (FLT, Wipe, Solid, Soil) ____ I (Water)
    ____ S (Air, Niosh 7400) ____ T (Biological, Ni-63)
11. Samples:
    [ ] are in good condition ____ are leaking
    ____ are broken ____ have air bubbles (Only for samples requiring no head space)
    ____ Other
12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [ ]
    (If acidification is necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition on table overleaf)
    RPL ID # of preservative used : N/A
13. Were any anomalies identified in sample receipt? Yes [ ] No [ ]
14. Description of anomalies (include sample numbers): NA [ ]

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

16. Additional Information: _____

_____

_____

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

Sample Custodian: _____ Date: 4-12-12

Client Informed on _____ by _____ Person contacted _____

[ ] No action necessary; process as is

Project Manager _____ Date 4/13/12

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

JD120494 4/13/12

LS-023, Rev. 15, 07/11

See over for additional information.

4/16/2012 11:15:07 AM

Sample Preparation/Analysis

Balance Id:1120373922

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

6A Pu Prp PRP003/PRP005, Sep ALP002(ALP015)
SO Plutonium-238,239/40 by Alpha Spec
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 05/03/2012

Sep1 DT/Tm Tech:

Batch: 2104086 SOIL pCi/g PM, Quote: RW2, 27038

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: SannohS

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 **MR0N4-1-AF**			1.04g,in	1.04g	PUTC12986								
J2D120494-1-SAMP					04/06/12,pd 01/01/10,r								
04/11/2012 07:50			AmtRec: 2XJAR60MLG,1X500P		#Containers: 3					Scr:	Alpha:		Beta:
2 **MR0N4-1-AN-X**			1.03g,in	1.03g	PUTC12987								
J2D120494-1-DUP					04/06/12,pd 01/01/10,r								
04/11/2012 07:50			AmtRec: 2XJAR60MLG,1X500P		#Containers: 3					Scr:	Alpha:		Beta:
3 **MR0N6-1-AF**			1.01g,in	1.01g	PUTC12988								
J2D120494-2-SAMP					04/06/12,pd 01/01/10,r								
04/11/2012 08:00			AmtRec: 2XJAR60MLG,1X500P		#Containers: 3					Scr:	Alpha:		Beta:
4 **MR0N8-1-AF**			1.02g,in	1.02g	PUTC12989								
J2D120494-3-SAMP					04/06/12,pd 01/01/10,r								
04/11/2012 07:50			AmtRec: 2XJAR60MLG,1X500P		#Containers: 3					Scr:	Alpha:		Beta:
5 **MR02Q-1-AA-B**			1.03g,in	1.03g	PUTC12990								
J2D130000-86-BLK					04/06/12,pd 01/01/10,r								
04/13/2012 10:09 pd			AmtRec:		#Containers: 1					Scr:	Alpha:		Beta:
6 **MR02Q-1-AC-C**			1.03g,in	1.03g	PUSK0939								
J2D130000-86-LCS					04/06/12,pd 01/01/10,r								
04/13/2012 10:09 pd			AmtRec:		#Containers: 1					Scr:	Alpha:		Beta:

37 38 39 40 41 42

100 min.

TestAmerica Richland Wa.

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1
pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: 6

Prep_SamplePrep v4.8.59

Sample Preparation/Analysis

6A Pu Prp PRP003/PRP005, Sep ALP002(ALP015)
SO Plutonium-238,239/40 by Alpha Spec
5I CLIENT: HANFORD

Balance Id:1120373922

Pipet #: _____

AnalyDueDate: 05/03/2012

Sep1 DT/Tm Tech:

Batch: 2104086 pCi/g
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,SannohS

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

Comments: MR0N4-SAMP "CommentsISV-Recount DUP On a Different Detector"

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

MR0N41AF-SAMP Constituent List:

PU-238	RDL:1	pCi/g	LCL:	UCL:	RPD:	PU-239	RDL:1	pCi/g	LCL:70	UCL:130	RPD:35
Pu-242	RDL:	pCi/g	LCL:20	UCL:105	RPD:35						

MR02Q1AA-BLK:

PU-238	RDL:1	pCi/g	LCL:	UCL:	RPD:	PU-239	RDL:1	pCi/g	LCL:	UCL:	RPD:
Pu-242	RDL:	pCi/g	LCL:20	UCL:105	RPD:35						

MR02Q1AC-LCS:

PU-239	RDL:1	pCi/g	LCL:70	UCL:130	RPD:35	Pu-242	RDL:	pCi/g	LCL:20	UCL:105	RPD:35

MR0N41AF-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

MR02Q1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

MR02Q1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

RE-COUNT REQUEST

DUE DATE 5-3

CUSTOMER WCH

ANALAYSIS PU

MATRIX SOIL

LOT NUMBER 320120949

SAMPLE DELIVERY GROUP

OLD BATCH NUMBER 2104086

NEW BATCH NUMBER

LAB SAMPLE ID	CLIENT ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1) MRONTIAP		HIGH TRACER YIELD
2)		
3)		
4)		
5)		
6)		
7)		
8)		
9)		
10)		
11)		
12)		
13)		
14)		
15)		
16)		
17)		
18)		
19)		
20)		

RC-126, 12/07, Rev 5

4/24/2012 3:20:02 PM

Sample Preparation/Analysis

Balance Id:1120373922

127642, Washington Closure Hanford LLC
Bechtel Hanford, Inc.

6A Pu Prp PRP003/PRP005, Sep ALP002(ALP015)
SO Plutonium-238,239/40 by Alpha Spec
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 05/03/2012

Sep1 DT/Tm Tech:

Batch: 2104086 SOIL pCi/g PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: 2104076 AXTA, 2104077 CHTH, 2104078 ATS6, 2104079 AFS4, 2104081 5SS3, 2104083 9RS1, 2104085 7SSR, 2104086 6ASO, 2107055 DWEA,

Prep Tech: LuksicS ,SannohS

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MR0N4-1-AF J2D120494-1-SAMP 04/11/2012 07:50			1.04g,in AmtRec: 2XJAR60MLG,1X500P	1.04g #Containers: 3	PUTC12986 04/06/12,pd 01/01/10,r				Scr:	Alpha:		Beta:	
2 MR0N4-1-AN-X J2D120494-1-DUP 04/11/2012 07:50			1.03g,in AmtRec: 2XJAR60MLG,1X500P	1.03g #Containers: 3	PUTC12987 04/06/12,pd 01/01/10,r				Scr:	Alpha:		Beta:	
3 MR0N4-2-AF J2D120494-1-SAMP 04/11/2012 07:50			1.03 AmtRec: 2XJAR60MLG,1X500P	PUTC 12987 #Containers: 3					100 Scr:	Alpha:		Beta:	
4 MR0N6-1-AF J2D120494-2-SAMP 04/11/2012 08:00			1.01g,in AmtRec: 2XJAR60MLG,1X500P	1.01g #Containers: 3	PUTC12988 04/06/12,pd 01/01/10,r				Scr:	Alpha:		Beta:	
5 MR0N8-1-AF J2D120494-3-SAMP 04/11/2012 07:50			1.02g,in AmtRec: 2XJAR60MLG,1X500P	1.02g #Containers: 3	PUTC12989 04/06/12,pd 01/01/10,r				Scr:	Alpha:		Beta:	
6 MR02Q-1-AA-B J2D130000-86-BLK 04/13/2012 10:09 pd			1.03g,in AmtRec:	1.03g #Containers: 1	PUTC12990 04/06/12,pd 01/01/10,r				Scr:	Alpha:		Beta:	
7 MR02Q-1-AC-C J2D130000-86-LCS 04/13/2012 10:09 pd			1.03g,in AmtRec:	1.03g #Containers: 1	PUSK0939 04/06/12,pd 01/01/10,r				Scr:	Alpha:		Beta:	

TestAmerica Laboratories, Inc.

TestAmerica Laboratories, Inc.

4/24/2012 3:20:03 PM

Sample Preparation/Analysis

6A Pu Prp PRP003/PRP005, Sep ALP002(ALP015)
SO Plutonium-238,239/40 by Alpha Spec
5I CLIENT: HANFORD

Balance Id:1120373922

Pipet #: _____

AnalyDueDate: 05/03/2012

Sep1 DT/Tm Tech:

Batch: 2104086 **pCi/g**
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,SannohS

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

Comments: MR0N4-SAMP "CommentsISV-Recount DUP On a Different Detector"

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

MR0N41AF-SAMP Constituent List:

PU-238	RDL:1	pCi/g	LCL:	UCL:	RPD:	PU-239	RDL:1	pCi/g	LCL:70	UCL:130	RPD:35
Pu-242	RDL:	pCi/g	LCL:20	UCL:105	RPD:35						

MR02Q1AA-BLK:

PU-238	RDL:1	pCi/g	LCL:	UCL:	RPD:	PU-239	RDL:1	pCi/g	LCL:	UCL:	RPD:
Pu-242	RDL:	pCi/g	LCL:20	UCL:105	RPD:35						

MR02Q1AC-LCS:

PU-239	RDL:1	pCi/g	LCL:70	UCL:130	RPD:35	Pu-242	RDL:	pCi/g	LCL:20	UCL:105	RPD:35

MR0N41AF-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

MR02Q1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

MR02Q1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

62

4/25/2012 9:46:24 AM

ICOC Fraction Transfer/Status Report

ByDate: 4/26/2011, 4/30/2012, Batch: '2104086', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
2104086						
AC		**Rev1C**	**SannohS**	4/16/2012 11:06:07		
SC			davilan	IsBatched	4/13/2012 10:12:37 AM	ICOC_RADCALC v4.8.49
SC			SannohS	InPrep	4/16/2012 11:06:07 AM	RL-PRP-003 REV. 2
SC			WoodT	Prep1C	4/17/2012 4:17:15 AM	RL-PRP-003 REV. 2
SC			HayesA	Sep1C	4/18/2012 2:19:23 PM	RL-ALP-001 REV. 3
SC			LuksicS	Sep2C	4/23/2012 11:35:51 AM	RL-ALP-016 REV. 2
SC			DawkinsO	CalcC	4/24/2012 1:57:17 AM	RL-CI-008 REV. 2
SC			DawkinsO	InCnt1	4/24/2012 4:38:51 PM	RL-CI-008 REV. 2
SC			DawkinsO	CalcC	4/25/2012 2:37:05 AM	RL-CI-008 REV. 2
SC			antonsonl	Rev1C	4/25/2012 9:46:17 AM	RL-DR-001 Rev 2
AC			**WoodT**	4/17/2012 4:17:15		P-12-00183
AC			**HayesA**	4/18/2012 2:19:23 PM		
AC			**LuksicS**	4/23/2012 11:35:51		
AC			**DawkinsO**	4/24/2012 1:57:17		
AC			**DawkinsO**	4/24/2012 4:38:51 PM		
AC			**DawkinsO**	4/25/2012 2:37:05		
AC			**antonsonl**	4/25/2012 9:46:17		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 8

ICOCFractions v4.8.44

4/16/2012 10:51:40 AM

Sample Preparation/Analysis

Balance Id:1120373922

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

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

Pipet #: _____

AnalyDueDate: 05/03/2012

Sep1 DT/Tm Tech:

Batch: 2104083 SOIL pCi/g PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: 2104076 AXTA, 2104077 CHTH, 2104078 ATS6, 2104079 AFS4, 2104081 5SS3, 2104083 9RS1, 2104085 7SSR, 2104086 6ASO, 2107055 DWEA,

Prep Tech: SannohS

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 **MR0N4-1-AG**			1.03g,in	1.03g	THTC23079								
J2D120494-1-SAMP					04/13/12,pd 04/12/12,r								
04/11/2012 07:50			AmtRec: 2XJAR60MLG,1X500P		#Containers: 3								
2 **MR0N6-1-AG**			1.02g,in	1.02g	THTC23080								
J2D120494-2-SAMP					04/13/12,pd 04/12/12,r								
04/11/2012 08:00			AmtRec: 2XJAR60MLG,1X500P		#Containers: 3								
3 **MR0N8-1-AG**			1.03g,in	1.03g	THTC23081								
J2D120494-3-SAMP					04/13/12,pd 04/12/12,r								
04/11/2012 07:50			AmtRec: 2XJAR60MLG,1X500P		#Containers: 3								
4 **MR0N8-1-AM-X**			1.01g,in	1.01g	THTC23082								
J2D120494-3-DUP					04/13/12,pd 04/12/12,r								
04/11/2012 07:50			AmtRec: 2XJAR60MLG,1X500P		#Containers: 3								
5 **MR02K-1-AA-B**			1.01g,in	1.01g	THTC23083								
J2D130000-83-BLK					04/13/12,pd 04/12/12,r								
04/13/2012 10:09 pd			AmtRec:		#Containers: 1								
6 **MR02K-1-AC-C**			1.01g,in	1.01g	THSI3110								
J2D130000-83-LCS					04/13/12,pd 04/12/12,r								
04/13/2012 10:09 pd			AmtRec:		#Containers: 1								

Scr: Alpha: Beta:

TestAmerica Laboratories, Inc.

4/16/2012 10:51:41 AM

Sample Preparation/Analysis

Balance Id:1120373922

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

Pipet #: _____

AnalyDueDate: 05/03/2012

Sep1 DT/Tm Tech:

Batch: 2104083 pCi/g
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,SannohS

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

Comments: MR0N4-SAMP "CommentsISV-Recount DUP On a Different Detector"

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

MR0N41AG-SAMP Constituent List:

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

MR02K1AA-BLK:

Th-228	RDL:1	pCi/g	LCL:	UCL:	RPD:	Th-230	RDL:1	pCi/g	LCL:	UCL:	RPD:
Th-232	RDL:1	pCi/g	LCL:	UCL:	RPD:	Th-234	RDL:	pCi/g	LCL:20	UCL:105	RPD:35

MR02K1AC-LCS:

Th-230	RDL:1	pCi/g	LCL:70	UCL:130	RPD:35	Th-234	RDL:	pCi/g	LCL:20	UCL:105	RPD:35

MR0N41AG-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MR02K1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MR02K1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.

4/24/2012 3:40:33 PM

ICOC Fraction Transfer/Status Report

ByDate: 4/25/2011, 4/29/2012, Batch: '2104083', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
2104083						
AC		**Rev1C**	**SannohS**	4/16/2012 10:43:55		
SC			davilan	IsBatched	4/13/2012 10:12:27 AM	ICOC_RADCALC v4.8.49
SC			SannohS	InPrep	4/16/2012 10:43:55 AM	RL-PRP-003 REV. 2
SC			WoodT	Prep1C	4/17/2012 4:16:20 AM	RL-PRP-003 REV. 2
SC			LuksicS	Sep2C	4/23/2012 11:35:43 AM	RL-ALP-016 REV. 2
SC			ClarkR	CalcC	4/24/2012 8:40:27 AM	RL-CI-008 REV. 2
SC			nortonj	Rev1C	4/24/2012 3:40:15 PM	RL-DR-001 Rev 2
AC			**WoodT**	4/17/2012 4:16:20		P-12-00183
AC			**LuksicS**	4/23/2012 11:35:43		
AC			**ClarkR**	4/24/2012 8:40:27		
AC			**nortonj**	4/24/2012 3:40:15 PM		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Grp Rec Cnt: 5

ICOCFractions v4.8.44

4/16/2012 11:03:12 AM

Sample Preparation/Analysis

Balance Id:1120373922

127642, Washington Closure Hanford LLC
Bechtel Hanford, Inc.

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

Pipet #: _____

AnalyDueDate: 05/03/2012

Sep1 DT/Tm Tech:

Batch: 2104085 SOIL pCi/g PM, Quote: RW2, 27038

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: SannohS

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MR0N4-1-AC			1.03g,in	1.03g	UITC28404								
J2D120494-1-SAMP					03/08/12,pd 06/15/01,r								
04/11/2012 07:50			AmtRec: 2XJAR60MLG,1X500P		#Containers: 3				Scr:	Alpha:		Beta:	
2 MR0N6-1-AC			1.04g,in	1.04g	UITC28405								
J2D120494-2-SAMP					03/08/12,pd 06/15/01,r								
04/11/2012 08:00			AmtRec: 2XJAR60MLG,1X500P		#Containers: 3				Scr:	Alpha:		Beta:	
3 MR0N6-1-AN-X			1.04g,in	1.04g	UITC28406								
J2D120494-2-DUP					03/08/12,pd 06/15/01,r								
04/11/2012 08:00			AmtRec: 2XJAR60MLG,1X500P		#Containers: 3				Scr:	Alpha:		Beta:	
4 MR0N8-1-AC			1.04g,in	1.04g	UITC28407								
J2D120494-3-SAMP					03/08/12,pd 06/15/01,r								
04/11/2012 07:50			AmtRec: 2XJAR60MLG,1X500P		#Containers: 3				Scr:	Alpha:		Beta:	
5 MR02P-1-AA-B			1.02g,in	1.02g	UITC28408								
J2D130000-85-BLK					03/08/12,pd 06/15/01,r								
04/13/2012 10:09 pd			AmtRec:		#Containers: 1				Scr:	Alpha:		Beta:	
6 MR02P-1-AC-C			1.04g,in	1.04g	UISH1546								
J2D130000-85-LCS					02/22/12,pd 06/15/01,r								
04/13/2012 10:09 pd			AmtRec:		#Containers: 1				Scr:	Alpha:		Beta:	

TestAmerica Laboratories, Inc.

4/16/2012 11:03:14 AM

Sample Preparation/Analysis

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

Balance Id:1120373922

Pipet #: _____

AnalyDueDate: 05/03/2012

Sep1 DT/Tm Tech:

Batch: 2104085 **pCi/g**
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,SannohS

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

Comments: MR0N4-SAMP "CommentsISV-Recount DUP On a Different Detector"

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

MR0N41AC-SAMP Constituent List:
  U-232      RDL:          pCi/g    LCL:20    UCL:105   RPD:35    U-234      RDL:1         pCi/g    LCL:      UCL:      RPD:
  U-235      RDL:1         pCi/g    LCL:      UCL:      RPD:      U-238      RDL:1         pCi/g    LCL:      UCL:      RPD:

MR02P1AA-BLK:
  U-232      RDL:          pCi/g    LCL:20    UCL:105   RPD:35    U-234      RDL:1         pCi/g    LCL:      UCL:      RPD:
  U-235      RDL:1         pCi/g    LCL:      UCL:      RPD:      U-238      RDL:1         pCi/g    LCL:      UCL:      RPD:

MR02P1AC-LCS:
  U-232      RDL:          pCi/g    LCL:20    UCL:105   RPD:35    Uranium    RDL:          pCi/g    LCL:70    UCL:130   RPD:35

MR0N41AC-SAMP Calc Info:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MR02P1AA-BLK:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
MR02P1AC-LCS:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```


TestAmerica Laboratories, Inc.

4/24/2012 2:35:36 PM

ICOC Fraction Transfer/Status Report

ByDate: 4/25/2011, 4/29/2012, Batch: '2104085', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			Comments
2104085							
AC			Rev1C	SannohS	4/16/2012 10:55:12		
SC				davilan	IsBatched	4/13/2012 10:12:31 AM	ICOC_RADCALC v4.8.49
SC				SannohS	InPrep	4/16/2012 10:55:12 AM	RL-PRP-003 REV. 2
SC				WoodT	Prep1C	4/17/2012 4:17:37 AM	RL-PRP-003 REV. 2
SC				HayesA	Sep2C	4/17/2012 2:52:00 PM	RL-ALP-004 REV. 2
SC				HayesA	Sep2C	4/18/2012 4:48:32 PM	RL-ALP-015 REV. 2
SC				JorgensonD	Sep2C	4/18/2012 6:16:30 PM	RL-ALP-015 REV. 2
SC				ClarkR	CalcC	4/19/2012 11:39:32 AM	RL-CI-008 REV. 2
SC				antonsonl	Rev1C	4/24/2012 2:35:29 PM	RL-DR-001 Rev 2
AC				WoodT	4/17/2012 4:17:37		P-12-00183
AC				HayesA	4/17/2012 2:52:00 PM		
AC				HayesA	4/18/2012 4:48:32 PM		
AC				JorgensonD	4/18/2012 6:16:30 PM		
AC				ClarkR	4/19/2012 11:39:32		
AC				antonsonl	4/24/2012 2:35:29 PM		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Grp Rec Cnt: 7

ICOCFractions v4.8.44

4/16/2012 11:43:17 AM

Sample Preparation/Analysis

Balance Id:1120373922

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

CH Sr-Total Prp PRP003, Sep GPC003
TH Total Strontium by GPC
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 05/03/2012

Sep1 DT/Tm Tech: 11:45 4/19/12 APA

Batch: 2104077 **SOIL** **pCi/g** **PM, Quote: RW2, 27038**

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: sannohs

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MR0N4-1-AD J2D120494-1-SAMP 04/11/2012 07:50			6.01g,in AmtRec: 2XJAR60MLG,1X500P #Containers: 3	6.01g	SRTA23051 03/08/12	72.4	1.5	1.3584g -1.2860g 72.4mg	50min.	26A	0552	4/20/12	
2 MR0N6-1-AD J2D120494-2-SAMP 04/11/2012 08:00			6.03g,in AmtRec: 2XJAR60MLG,1X500P #Containers: 3	6.03g	SRTA23052 03/08/12			1.4477g -1.3832g 64.5mg		26B			
3 MR0N8-1-AD J2D120494-3-SAMP 04/11/2012 07:50			6.04g,in AmtRec: 2XJAR60MLG,1X500P #Containers: 3	6.04g	SRTA23053 03/08/12	70.0		1.3382g -1.2682g 70.0mg		26C			
4 MR0N8-1-AL-X J2D120494-3-DUP 04/11/2012 07:50			6.01g,in AmtRec: 2XJAR60MLG,1X500P #Containers: 3	6.01g	SRTA23054 03/08/12			1.4702g -1.3996g 70.6mg		26D			
5 MR02D-1-AA-B J2D130000-77-BLK 04/13/2012 10:09 pd			6.03g,in AmtRec: #Containers: 1	6.03g	SRTA23055 03/08/12			1.3912g -1.3012g 90.0mg		28A			
6 MR02D-1-AC-C J2D130000-77-LCS 04/13/2012 10:09 pd			6.04g,in AmtRec: #Containers: 1	6.04g	STSB1794 02/10/12			1.4618g -1.3718g 90.0mg		28B			

TestAmerica Laboratories, Inc.

Sample Preparation/Analysis

CH Sr-Total Prp PRP003, Sep GPC003
TH Total Strontium by GPC
5I CLIENT: HANFORD

Balance Id:1120373922

Pipet #: _____

AnalyDueDate: 05/03/2012

Sep1 DT/Tm Tech:

Batch: 2104077 pCi/g
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,sannohs

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

Comments: ~~MR0N4-SAMP "CommentsISV-Recount DUP On a Different Detector"~~ 4/19/12 APA

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

MR0N41AD-SAMP Constituent List:

Sr-90	RDL:1	pCi/g	LCL:70	UCL:130	RPD:35
MR02D1AA-BLK:					
Sr-90	RDL:1	pCi/g	LCL:	UCL:	RPD:
MR02D1AC-LCS:					
Sr-90	RDL:1	pCi/g	LCL:70	UCL:130	RPD:35

MR0N41AD-SAMP Calc Info:

Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
MR02D1AA-BLK:				
Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
MR02D1AC-LCS:				
Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

TestAmerica Laboratories, Inc.

4/24/2012 3:04:58 PM

ICOC Fraction Transfer/Status Report

ByDate: 4/25/2011, 4/29/2012, Batch: '2104077', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
2104077						
AC		Rev1C	**sannohs**	4/16/2012 11:32:46		
SC			davilan	IsBatched	4/13/2012 10:12:04 AM	ICOC_RADCALC v4.8.49
SC			sannohs	InPrep	4/16/2012 11:32:46 AM	RL-PRP-003 REV. 2
SC			WoodT	Prep1C	4/17/2012 4:18:01 AM	RL-PRP-003 REV. 2
SC			AshworthA	Sep2C	4/19/2012 8:39:29 PM	RL-GPC-003 REV. 2
SC			DawkinsO	InCnt1	4/19/2012 11:10:30 PM	RL-CI-006 REV. 2
SC			ClarkR	CalcC	4/20/2012 8:08:05 AM	RL-CI-006 REV. 2
SC			antonsonl	Rev1C	4/24/2012 2:42:22 PM	RL-DR-001 Rev 2
AC			**WoodT**	4/17/2012 4:18:01		P-12-00183
AC			**AshworthA**	4/19/2012 8:39:29 PM		
AC			**DawkinsO**	4/19/2012 11:10:30		
AC			**ClarkR**	4/20/2012 8:08:05		
AC			**antonsonl**	4/24/2012 2:42:22 PM		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 6

ICOCFractions v4.8.44

BIF

4/17/2012 7:09:18 AM

Sample Preparation/Analysis

Balance Id:1120421763

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

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

Pipet #: _____

AnalyDueDate: 05/03/2012

Sep1 DT/Tm Tech:

Batch: 2104076 SOIL pCi/g PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: 2104076 AXTA, 2104077 CHTH, 2104078 ATS6, 2104079 AFS4, 2104081 5SS3, 2104083 9RS1, 2104085 7SSR, 2104086 6ASO, 2107055 DWEA,

Prep Tech: NortonP,SannohS

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MR0N4-1-AJ J2D120494-1-SAMP 04/11/2012 07:50			385.70g,in AmtRec: 2XJAR60MLG,1X500P	385.70g #Containers: 3			S200	260min.		G17 Scr:	0950 Alpha:	4/18/12 m Beta:	
2 MR0N6-1-AJ J2D120494-2-SAMP 04/11/2012 08:00			373.90g,in AmtRec: 2XJAR60MLG,1X500P	373.90g #Containers: 3						G19 Scr:	0951 Alpha:	 Beta:	
3 MR0N6-1-AL-X J2D120494-2-DUP 04/11/2012 08:00			 AmtRec: 2XJAR60MLG,1X500P	I S V #Containers: 3						G16 Scr:	1333 Alpha:	4/18/12 m Beta:	
4 MR0N8-1-AJ J2D120494-3-SAMP 04/11/2012 07:50			362.30g,in AmtRec: 2XJAR60MLG,1X500P	362.30g #Containers: 3						G5 Scr:	1013 Alpha:	4/18/12 m Beta:	
5 MR02C-1-AA-B J2D130000-76-BLK 04/13/2012 10:09 pd			348.00g,in AmtRec:	348.00g #Containers: 1						G17 Scr:	1333 Alpha:	4/18/12 m Beta:	
6 MR02C-1-AC-C J2D130000-76-LCS 04/13/2012 10:09 pd			350.10g,in AmtRec:	350.10g #Containers: 1	qc20009 08/04/09,pd 09/01/09,r					G18 Scr:	1337 Alpha:	 Beta:	

Sample Preparation/Analysis

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

Balance Id:1120421763
Pipet #: _____

AnalyDueDate: 05/03/2012

Sep1 DT/Tm Tech:

Batch: 2104076 pCi/g
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,SannohS

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

Comments: MR0N4-SAMP "CommentsISV-Recount DUP On a Different Detector"

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

MR0N41AJ-SAMP Constituent List:

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

MR02C1AA-BLK:

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

MR02C1AC-LCS:

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

MR0N41AJ-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MR02C1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MR02C1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.

4/19/2012 3:16:55 PM

ICOC Fraction Transfer/Status Report

ByDate: 4/20/2011, 4/24/2012, Batch: '2104076', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			Comments
2104076							
AC			Rev1C	SannohS	4/13/2012 12:57:18		
SC				davilan	IsBatched	4/13/2012 10:11:57 AM	ICOC_RADCALC v4.8.49
SC				SannohS	InPrep	4/13/2012 12:57:18 PM	rl-gam-001 rev. 2
SC				SannohS	Prep1C	4/17/2012 7:11:15 AM	RL-GAM-001 REV. 2
SC				HiattC	InCnt1	4/17/2012 7:16:55 AM	RL-CI-007 REV. 2
SC				DawkinsO	CalcC	4/19/2012 1:20:59 AM	RL-CI-007 REV. 2
SC				antonsonl	Rev1C	4/19/2012 3:15:33 PM	RL-DR-001 Rev 2
AC				SannohS	4/17/2012 7:11:15		
AC				HiattC	4/17/2012 7:16:55		
AC				DawkinsO	4/19/2012 1:20:59		
AC				antonsonl	4/19/2012 3:15:33 PM		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Grp Rec Cnt: 5

ICOCFractions v4.8.44

4/13/2012 10:09:31 AM

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

AnalyDueDate: 05/03/2012

Batch: 2104078 SOIL pCi/g
SEQ Batch, Test: None

PM, Quote: RW2, 27038

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

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MR0N4-1-AH													
J2D120494-1-SAMP													
04/11/2012 07:50			AmtRec: 2XJAR60MLG,1X500P		#Containers: 3				Scr:		Alpha:		Beta:
2 MR0N4-1-AL-X													
J2D120494-1-DUP													
04/11/2012 07:50			AmtRec: 2XJAR60MLG,1X500P		#Containers: 3				Scr:		Alpha:		Beta:
3 MR0N6-1-AH													
J2D120494-2-SAMP													
04/11/2012 08:00			AmtRec: 2XJAR60MLG,1X500P		#Containers: 3				Scr:		Alpha:		Beta:
4 MR0N8-1-AH													
J2D120494-3-SAMP													
04/11/2012 07:50			AmtRec: 2XJAR60MLG,1X500P		#Containers: 3				Scr:		Alpha:		Beta:
5 MR02F-1-AA-B													
J2D130000-78-BLK													
04/13/2012 10:09 pd			AmtRec:		#Containers: 1				Scr:		Alpha:		Beta:
6 MR02F-1-AC-C													
J2D130000-78-LCS													
04/13/2012 10:09 pd			AmtRec:		#Containers: 1				Scr:		Alpha:		Beta:
7 MR02F-1-AD-BN													
J2D130000-78-IBLK													
04/13/2012 10:09 pd			AmtRec:		#Containers: 1				Scr:		Alpha:		Beta:

TestAmerica Laboratories, Inc.

Sample Preparation/Analysis

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

AnalyDueDate: 05/03/2012

Batch: 2104078 **pCi/g**
SEQ Batch, Test: None

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

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

Comments:

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

MR0N41AH-SAMP Constituent List:
H-3 RDL:400 pCi/g LCL:70 UCL:130 RPD:35
MR02F1AA-BLK:

MR02F1AC-LCS:

MR02F1AD-IBLK:

MR0N41AH-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MR02F1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MR02F1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MR02F1AD-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.

4/19/2012 1:07:56 PM

ICOC Fraction Transfer/Status Report

ByDate: 4/20/2011, 4/24/2012, Batch: '2104078', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			Comments
2104078							
AC			Rev1C	NortonP	4/16/2012 12:19:26		
SC				davilan	IsBatched	4/13/2012 10:12:10 AM	ICOC_RADCALC v4.8.49
SC				NortonP	Sep1C	4/16/2012 12:19:26 PM	RL-LSC-002 REV. 2
SC				NyeM	Sep1C	4/16/2012 12:20:09 PM	RL-LSC-002 REV. 2
SC				DawkinsO	InCnt1	4/17/2012 4:59:24 PM	RL-CI-005 REV. 2
SC				HiattC	CalcC	4/18/2012 12:58:23 PM	RL-CI-005 REV. 2
SC				antonsonl	Rev1C	4/19/2012 1:07:48 PM	RL-DR-001 Rev 2
AC				NyeM	4/16/2012 12:20:09		
AC				DawkinsO	4/17/2012 4:59:24 PM		
AC				HiattC	4/18/2012 12:58:23		
AC				antonsonl	4/19/2012 1:07:48 PM		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 5

ICOCFractions v4.8.44

4/13/2012 10:09:33 AM

Sample Preparation/Analysis

127642, Washington Closure Hanford LLC
Bechtel Hanford, Inc.

5S C-14 Prp/Sep LSC008
S3 Carbon-14 by Liquid Scint
5I CLIENT: HANFORD

AnalyDueDate: 05/03/2012

Batch: 2104081 **SOIL** **pCi/g** **PM, Quote: RW2, 27038**
SEQ Batch, Test: None

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

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

1 MR0N4-1-AK 5.044 g
J2D120494-1-SAMP
04/11/2012 07:50 AmtRec: 2XJAR60MLG,1X500P #Containers: 3 Scr: Alpha: Beta:

2 MR0N4-1-AM-X 5.009 g
J2D120494-1-DUP
04/11/2012 07:50 AmtRec: 2XJAR60MLG,1X500P #Containers: 3 Scr: Alpha: Beta:

3 MR0N6-1-AK 5.041 g
J2D120494-2-SAMP
04/11/2012 08:00 AmtRec: 2XJAR60MLG,1X500P #Containers: 3 Scr: Alpha: Beta:

4 MR0N8-1-AK 5.010 g
J2D120494-3-SAMP
04/11/2012 07:50 AmtRec: 2XJAR60MLG,1X500P #Containers: 3 Scr: Alpha: Beta:

5 MR02J-1-AA-B
J2D130000-81-BLK
04/13/2012 10:09 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

6 MR02J-1-AC-C
J2D130000-81-LCS
04/13/2012 10:09 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

7 MR02J-1-AD-BN
J2D130000-81-IBLK
04/13/2012 10:09 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

TestAmerica Laboratories, Inc.

4/13/2012 10:09:33 AM

Sample Preparation/Analysis

5S C-14 Prp/Sep LSC008
S3 Carbon-14 by Liquid Scint
5I CLIENT: HANFORD

Balance Id:

Pipet #: _____

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech:

AnalyDueDate: 05/03/2012

Batch: 2104081 **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

MR0N41AK-SAMP Constituent List:
C-14 RDL:50 pCi/g LCL:70 UCL:130 RPD:35
MR02J1AA-BLK:

MR02J1AC-LCS:

MR02J1AD-IBLK:

MR0N41AK-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MR02J1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MR02J1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MR02J1AD-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

4/19/2012 11:52:04 AM

ICOC Fraction Transfer/Status Report

ByDate: 4/20/2011, 4/24/2012, Batch: '2104081', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			Comments
	2104081						
AC			Rev1C	NortonP	4/16/2012 12:21:19		
SC				davilan	IsBatched	4/13/2012 10:12:22 AM	ICOC_RADCALC v4.8.49
SC				NortonP	Sep1C	4/16/2012 12:21:19 PM	RL-LSC-008 REV. 2
SC				NyeM	Sep1C	4/16/2012 12:21:45 PM	RL-LSC-008 REV. 2
SC				DawkinsO	InCnt1	4/17/2012 4:59:35 PM	RL-CI-005 REV. 2
SC				HiattC	CalcC	4/18/2012 1:52:23 PM	RL-CI-005 REV. 2
SC				antonsonl	Rev1C	4/19/2012 11:51:55 AM	RL-DR-001 Rev 2
AC				NyeM	4/16/2012 12:21:45		
AC				DawkinsO	4/17/2012 4:59:35 PM		
AC				HiattC	4/18/2012 1:52:23 PM		
AC				antonsonl	4/19/2012 11:51:55		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 5

ICOCFractions v4.8.44

4/16/2012 11:29:56 AM

Sample Preparation/Analysis

Balance Id:1120373922

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

AF Ni-63 Prp PRP003/PRP005, Sep LSC017
S4 Nickel by ICP and Nickel-63 by Liquid Scint
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 05/03/2012

Sep1 DT/Tm Tech:

Batch: 2104079 SOIL pCi/g

PM, Quote: RW2, 27038

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: sannohs

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 **MR0N4-1-AE**			0.25g,in	0.25g	NITA6700 03/13/12				20 min.				
J2D120494-1-SAMP													
04/11/2012 07:50			AmtRec: 2XJAR60MLG,1X500P		#Containers: 3				Scr:		Alpha:		Beta:
2 **MR0N6-1-AE**			0.25g,in	0.25g	NITA6701 03/13/12								
J2D120494-2-SAMP													
04/11/2012 08:00			AmtRec: 2XJAR60MLG,1X500P		#Containers: 3				Scr:		Alpha:		Beta:
3 **MR0N6-1-AM-X**			0.25g,in	0.25g	NITA6702 03/13/12								
J2D120494-2-DUP													
04/11/2012 08:00			AmtRec: 2XJAR60MLG,1X500P		#Containers: 3				Scr:		Alpha:		Beta:
4 **MR0N8-1-AE**			0.25g,in	0.25g	NITA6703 03/13/12								
J2D120494-3-SAMP													
04/11/2012 07:50			AmtRec: 2XJAR60MLG,1X500P		#Containers: 3				Scr:		Alpha:		Beta:
5 **MR02G-1-AA-B**			0.25g,in	0.25g	NITA6704 03/13/12								
J2D130000-79-BLK													
04/13/2012 10:09 pd			AmtRec:		#Containers: 1				Scr:		Alpha:		Beta:
6 **MR02G-1-AC-C**			0.25g,in	0.25g	NISA1644 03/14/12								
J2D130000-79-LCS													
04/13/2012 10:09 pd			AmtRec:		#Containers: 1				Scr:		Alpha:		Beta:
7 **MR02G-1-AD-BN**													
J2D130000-79-IBLK													
04/13/2012 10:09 pd			AmtRec:		#Containers: 1				Scr:		Alpha:		Beta:

TestAmerica Laboratories, Inc.

Sample Preparation/Analysis

AF Ni-63 Prp PRP003/PRP005, Sep LSC017
S4 Nickel by ICP and Nickel-63 by Liquid Scint
5I CLIENT: HANFORD

AnalyDueDate: 05/03/2012

Batch: 2104079 pCi/g
SEQ Batch, Test: None

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

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

Comments: MR0N4-SAMP "CommentsISV-Recount DUP On a Different Detector"

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

MR0N41AE-SAMP Constituent List:

Ni-63	RDL:30	pCi/g	LCL:70	UCL:130	RPD:35
MR02G1AA-BLK:					
Ni-63	RDL:30	pCi/g	LCL:	UCL:	RPD:
MR02G1AC-LCS:					
Ni-63	RDL:30	pCi/g	LCL:70	UCL:130	RPD:35
MR02G1AD-IBLK:					
Ni-63	RDL:30	pCi/g	LCL:	UCL:	RPD:

MR0N41AE-SAMP Calc Info:

Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
MR02G1AA-BLK:				
Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
MR02G1AC-LCS:				
Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
MR02G1AD-IBLK:				
Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

TestAmerica Laboratories, Inc.

4/23/2012 4:51:26 PM

ICOC Fraction Transfer/Status Report

ByDate: 4/24/2011, 4/28/2012, Batch: '2104079', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			Comments
2104079							
AC			Rev1C	SannohS	4/16/2012 11:17:26		
SC				davilan	IsBatched	4/13/2012 10:12:15 AM	ICOC_RADCALC v4.8.49
SC				SannohS	InPrep	4/16/2012 11:17:26 AM	RL-PRP-003 REV. 2
SC				WoodT	Prep1C	4/17/2012 4:16:51 AM	RL-PRP-003 REV. 2
SC				LuksicS	Sep2C	4/20/2012 8:22:48 AM	RL-LSC-017 REV. 2
SC				HiattC	InCnt1	4/20/2012 8:33:53 AM	RL-CI-005 REV. 2
SC				HiattC	CalcC	4/23/2012 8:30:13 AM	RL-CI-005 REV. 2
SC				antonsonl	Rev1C	4/23/2012 4:51:19 PM	RL-DR-001 Rev 2
AC				WoodT	4/17/2012 4:16:51		P-12-00183
AC				LuksicS	4/20/2012 8:22:48		
AC				HiattC	4/20/2012 8:33:53		
AC				HiattC	4/23/2012 8:30:13		
AC				antonsonl	4/23/2012 4:51:19 PM		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Grp Rec Cnt: 6

ICOCFractions v4.8.44

4/16/2012 9:27:58 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

AnalyDueDate: 05/03/2012

Batch: 2107055 SOIL mg/kg
SEQ Batch, Test: None

PM, Quote: RW2, 27038

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

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

1 MR0N4-1-AA

J2D120494-1-SAMP

04/11/2012 07:50 AmtRec: 2XJAR60MLG,1X500P #Containers: 3 Scr: Alpha: Beta:

2 MR0N4-1-AP-S

J2D120494-1-MS

04/11/2012 07:50 AmtRec: 2XJAR60MLG,1X500P #Containers: 3 Scr: Alpha: Beta:

3 MR0N4-1-AQ-X

J2D120494-1-DUP

04/11/2012 07:50 AmtRec: 2XJAR60MLG,1X500P #Containers: 3 Scr: Alpha: Beta:

4 MR0N6-1-AA

J2D120494-2-SAMP

04/11/2012 08:00 AmtRec: 2XJAR60MLG,1X500P #Containers: 3 Scr: Alpha: Beta:

5 MR0N8-1-AA

J2D120494-3-SAMP

04/11/2012 07:50 AmtRec: 2XJAR60MLG,1X500P #Containers: 3 Scr: Alpha: Beta:

6 MR1N6-1-AA-B

J2D160000-55-BLK

04/16/2012 09:27 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

7 MR1N6-1-AC-C

J2D160000-55-LCS

04/16/2012 09:27 pd AmtRec: #Containers: 1 Scr: Alpha: Beta:

Sample Preparation/Analysis

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

AnalyDueDate: 05/03/2012

Batch: 2107055 **mg/kg**
SEQ Batch, Test: None

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

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

Comments: MR0N4-SAMP "CommentsISV-Recount DUP On a Different Detector"

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

MR0N41AA-SAMP Constituent List:
HEXCHROME RDL:0.1548 mg/kg LCL:80 UCL:120 RPD:20
MR0N41AP-MS Constituent List:

MR1N61AA-BLK:

MR1N61AC-LCS:

MR0N41AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MR0N41AP-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MR1N61AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MR1N61AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

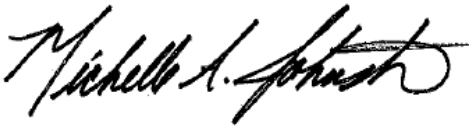
Job Number: 280-27773-1

SDG Number: J01475

Job Description: SAF# RC-189

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

Attention: Joan H Kessner



Approved for release.
Michelle Johnston
Project Manager I
5/7/2012 11:06 AM

Designee for
Kae E Yoder
Project Manager II
kae.yoder@testamericainc.com
05/07/2012

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

The Lab Certification ID# is E87667.

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

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

ACCREDITED IN ACCORDANCE WITH nelac

Table of Contents

Cover Title Page 1
Report Narrative 3
Data Qualifiers 4
Method Summary 5
Method / Analyst Summary 6
Sample Summary 7
Sample Results 8
Sample Datasheets 9
QC Results 15
Qc Association Summary 16
Qc Reports 20
Client Chain of Custody 33
Sample Receipt Checklist 34

CASE NARRATIVE

Client: Washington Closure Hanford

Project: WASHINGTON CLOSURE HANFORD

Report Number: 280-27773-1

SDG #: J01475
SAF#: RC-189

Date SDG Closed: April 17, 2012
Data Deliverable: 15 Day / Summary

CLIENT ID	LAB ID	ANALYSES REQUESTED	ANALYSES PERFORMED
J1NPH4	280-27773-1	6010/7471/9056M/353.2	6010B/7471A/9056M/353.2
J1NPH5	280-27773-2	6010/7471/9056M/353.2	6010B/7471A/9056M/353.2
J1NPH6	280-27773-3	6010/7471/9056M/353.2	6010B/7471A/9056M/353.2

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 04/17/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 4.6 C.

TOTAL METALS - SW846 6010B/7471A
Serial dilution of a digestate in batch 280-115844 indicates that physical and chemical interferences are present for several elements. Results have been flagged with an "X".

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 J1NPH4; therefore, control limits are not applicable.

No other anomalies were encountered.

GENERAL CHEMISTRY - MCAWW 353.2 - NITRATE+NITRITE as N
The duplicate analysis of sample J1NPH4 exhibited RPD data outside the control limits, and the associated sample result has been flagged "M". There is no indication that the analytical system was operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

GENERAL CHEMISTRY - SW846 9056M - ANIONS
No anomalies were encountered.

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

Lab Section	Qualifier	Description
Metals		
	U	Analyzed for but not detected.
	B	Estimated result. Result is less than the RL, but greater than MDL
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	N	Recovery exceeds upper or lower control limits
	X	Serial dilution in the analytical batch indicates that physical and chemical interferences are present.
General Chemistry		
	U	Analyzed for but not detected.
	B	Estimated result. Result is less than the RL, but greater than MDL
	M	Sample duplicate precision not met.

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Metals	TAL DEN		SW846 3050B
Mercury (CVAA)	TAL DEN	SW846 7471A	
Preparation, Mercury	TAL DEN		SW846 7471A
Nitrogen, Nitrate-Nitrite	TAL DEN	MCAWW 353.2	
Deionized Water Leaching Procedure	TAL DEN		ASTM DI Leach
Anions, Ion Chromatography	TAL DEN	SW846 9056M	
Deionized Water Leaching Procedure	TAL DEN		ASTM DI Leach
ASTM D-2216	TAL DEN	ASTM D-2216	

Lab References:

TAL DEN = TestAmerica Denver

Method References:

ASTM = ASTM International

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

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

METHOD / ANALYST SUMMARY

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

Method	Analyst	Analyst ID
SW846 6010B	Harre, John K	JKH
SW846 7471A	Rawlings, Brendon L	BLR
MCAWW 353.2	Scott, Samantha J	SJS
SW846 9056M	Phan, Thu L	TLP
ASTM D-2216	Blythe, Scott	SB

SAMPLE SUMMARY

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-27773-1	J1NPH4	Solid	04/11/2012 0750	04/17/2012 0900
280-27773-2	J1NPH5	Solid	04/11/2012 0800	04/17/2012 0900
280-27773-3	J1NPH6	Solid	04/11/2012 0750	04/17/2012 0900

SAMPLE RESULTS

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

Client Sample ID: **J1NPH4**

Lab Sample ID: 280-27773-1
Client Matrix: Solid
% Moisture: 2.3

Date Sampled: 04/11/2012 0750
Date Received: 04/17/2012 0900

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-116709	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-115844	Lab File ID:	25A2042312.asc
Dilution:	1.0			Initial Weight/Volume:	1.02 g
Analysis Date:	04/23/2012 1758			Final Weight/Volume:	100 mL
Prep Date:	04/20/2012 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		0.38	U	0.38	0.60
Arsenic		3.5		0.66	1.0
Barium		65.8		0.076	0.50
Beryllium		0.47		0.033	0.20
Boron		1.2	B	0.98	2.0
Cadmium		0.096	B	0.041	0.20
Calcium		7520		14.1	50.2
Chromium		11.0		0.058	0.20
Cobalt		6.6	X	0.10	1.0
Copper		14.8		0.22	1.0
Iron		17700		3.8	5.0
Lead		3.8		0.27	0.50
Magnesium		4410		3.7	20.1
Manganese		288		0.10	1.0
Molybdenum		0.26	U	0.26	2.0
Nickel		11.4	X	0.12	4.0
Potassium		1160		41.1	301
Silicon		326	N	5.7	10.0
Silver		0.16	U	0.16	0.20
Sodium		266		59.2	120
Vanadium		41.0		0.094	2.0
Zinc		47.4	X	0.40	1.0

Analysis Method:	6010B	Analysis Batch:	280-116884	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-115844	Lab File ID:	25A3042412.asc
Dilution:	1.0			Initial Weight/Volume:	1.02 g
Analysis Date:	04/24/2012 1945			Final Weight/Volume:	100 mL
Prep Date:	04/20/2012 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6970		1.6	5.0
Selenium		0.90	B	0.86	1.0

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-116322	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-115852	Lab File ID:	120419aa.txt
Dilution:	1.0			Initial Weight/Volume:	0.61 g
Analysis Date:	04/19/2012 1456			Final Weight/Volume:	50 mL
Prep Date:	04/19/2012 1210				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0056	U	0.0056	0.017

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

Client Sample ID: **J1NPH5**

Lab Sample ID: 280-27773-2
Client Matrix: Solid
% Moisture: 4.6

Date Sampled: 04/11/2012 0800
Date Received: 04/17/2012 0900

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-116709	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-115844	Lab File ID:	25A2042312.asc
Dilution:	1.0			Initial Weight/Volume:	1.03 g
Analysis Date:	04/23/2012 1807			Final Weight/Volume:	100 mL
Prep Date:	04/20/2012 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		0.39	U	0.39	0.61
Arsenic		3.7		0.67	1.0
Barium		77.5		0.077	0.51
Beryllium		0.64		0.034	0.20
Boron		2.7		1.0	2.0
Cadmium		0.15	B	0.042	0.20
Calcium		5200		14.4	50.9
Chromium		12.6		0.059	0.20
Cobalt		8.2	X	0.10	1.0
Copper		18.2		0.22	1.0
Iron		21800		3.9	5.1
Lead		7.1		0.27	0.51
Magnesium		4260		3.8	20.4
Manganese		364		0.10	1.0
Molybdenum		0.26	U	0.26	2.0
Nickel		11.7	X	0.13	4.1
Potassium		1820		41.7	305
Silicon		299		5.8	10.2
Silver		0.16	U	0.16	0.20
Sodium		314		60.1	122
Vanadium		48.7		0.096	2.0
Zinc		48.2	X	0.41	1.0

Analysis Method:	6010B	Analysis Batch:	280-116884	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-115844	Lab File ID:	25A3042412.asc
Dilution:	1.0			Initial Weight/Volume:	1.03 g
Analysis Date:	04/24/2012 1954			Final Weight/Volume:	100 mL
Prep Date:	04/20/2012 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		9390		1.6	5.1
Selenium		0.88	U	0.88	1.0

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-116322	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-115852	Lab File ID:	120419aa.txt
Dilution:	1.0			Initial Weight/Volume:	0.56 g
Analysis Date:	04/19/2012 1507			Final Weight/Volume:	50 mL
Prep Date:	04/19/2012 1210				

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

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

Client Sample ID: **J1NPH6**

Lab Sample ID: 280-27773-3
Client Matrix: Solid
% Moisture: 2.3

Date Sampled: 04/11/2012 0750
Date Received: 04/17/2012 0900

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-116709	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-115844	Lab File ID:	25A2042312.asc
Dilution:	1.0			Initial Weight/Volume:	1.03 g
Analysis Date:	04/23/2012 1810			Final Weight/Volume:	100 mL
Prep Date:	04/20/2012 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		0.38	U	0.38	0.60
Arsenic		3.7		0.66	0.99
Barium		61.5		0.076	0.50
Beryllium		0.46		0.033	0.20
Boron		0.97	U	0.97	2.0
Cadmium		0.086	B	0.041	0.20
Calcium		7630		14.0	49.7
Chromium		10.5		0.058	0.20
Cobalt		6.4	X	0.099	0.99
Copper		14.9		0.22	0.99
Iron		17400		3.8	5.0
Lead		3.4		0.27	0.50
Magnesium		4380		3.7	19.9
Manganese		286		0.099	0.99
Molybdenum		0.26	U	0.26	2.0
Nickel		10.8	X	0.12	4.0
Potassium		1060		40.8	298
Silicon		340		5.6	9.9
Silver		0.16	U	0.16	0.20
Sodium		255		58.7	119
Vanadium		40.6		0.093	2.0
Zinc		35.7	X	0.40	0.99

Analysis Method:	6010B	Analysis Batch:	280-116884	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-115844	Lab File ID:	25A3042412.asc
Dilution:	1.0			Initial Weight/Volume:	1.03 g
Analysis Date:	04/24/2012 1956			Final Weight/Volume:	100 mL
Prep Date:	04/20/2012 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6770		1.5	5.0
Selenium		0.85	U	0.85	0.99

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-116322	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-115852	Lab File ID:	120419aa.txt
Dilution:	1.0			Initial Weight/Volume:	0.72 g
Analysis Date:	04/19/2012 1513			Final Weight/Volume:	50 mL
Prep Date:	04/19/2012 1210				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0047	U	0.0047	0.015

General Chemistry

Client Sample ID: **J1NPH4**

Lab Sample ID: 280-27773-1
Client Matrix: Solid
% Moisture: 2.3
Date Sampled: 04/11/2012 0750
Date Received: 04/17/2012 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate Nitrite as N-Soluble	2.2	M	mg/Kg	0.31	0.77	1.0	353.2
Analysis Batch: 280-118238	Analysis Date: 05/03/2012 1155						DryWt Corrected: Y
Chloride-Soluble	54.4		mg/Kg	2.0	5.1	1.0	9056M
Analysis Batch: 280-116860	Analysis Date: 04/23/2012 1232						DryWt Corrected: Y
Nitrate as N-Soluble	2.4	B	mg/Kg	0.32	2.6	1.0	9056M
Analysis Batch: 280-116859	Analysis Date: 04/23/2012 1232						DryWt Corrected: Y
Bromide-Soluble	0.40	U	mg/Kg	0.40	2.0	1.0	9056M
Analysis Batch: 280-116860	Analysis Date: 04/23/2012 1232						DryWt Corrected: Y
Nitrite as N-Soluble	0.34	U	mg/Kg	0.34	2.6	1.0	9056M
Analysis Batch: 280-116859	Analysis Date: 04/23/2012 1232						DryWt Corrected: Y
Orthophosphate as P-Soluble	1.3	U	mg/Kg	1.3	5.1	1.0	9056M
Analysis Batch: 280-116859	Analysis Date: 04/23/2012 1232						DryWt Corrected: Y
Sulfate-Soluble	6.7		mg/Kg	1.8	5.1	1.0	9056M
Analysis Batch: 280-116860	Analysis Date: 04/23/2012 1232						DryWt Corrected: Y
Fluoride-Soluble	0.84	U	mg/Kg	0.84	5.1	1.0	9056M
Analysis Batch: 280-116860	Analysis Date: 04/23/2012 1232						DryWt Corrected: Y

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	2.3		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-115940	Analysis Date: 04/18/2012 1010						DryWt Corrected: N

General Chemistry

Client Sample ID: **J1NPH5**

Lab Sample ID: 280-27773-2
Client Matrix: Solid
% Moisture: 4.6
Date Sampled: 04/11/2012 0800
Date Received: 04/17/2012 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate Nitrite as N-Soluble	4.2		mg/Kg	0.31	0.79	1.0	353.2
Analysis Batch: 280-118238	Analysis Date: 05/03/2012 1209						DryWt Corrected: Y
Chloride-Soluble	65.5		mg/Kg	2.0	5.2	1.0	9056M
Analysis Batch: 280-116860	Analysis Date: 04/23/2012 1324						DryWt Corrected: Y
Nitrate as N-Soluble	3.9		mg/Kg	0.33	2.6	1.0	9056M
Analysis Batch: 280-116859	Analysis Date: 04/23/2012 1324						DryWt Corrected: Y
Bromide-Soluble	0.40	U	mg/Kg	0.40	2.1	1.0	9056M
Analysis Batch: 280-116860	Analysis Date: 04/23/2012 1324						DryWt Corrected: Y
Nitrite as N-Soluble	0.35	U	mg/Kg	0.35	2.6	1.0	9056M
Analysis Batch: 280-116859	Analysis Date: 04/23/2012 1324						DryWt Corrected: Y
Orthophosphate as P-Soluble	1.3	U	mg/Kg	1.3	5.2	1.0	9056M
Analysis Batch: 280-116859	Analysis Date: 04/23/2012 1324						DryWt Corrected: Y
Sulfate-Soluble	16.1		mg/Kg	1.8	5.2	1.0	9056M
Analysis Batch: 280-116860	Analysis Date: 04/23/2012 1324						DryWt Corrected: Y
Fluoride-Soluble	0.85	U	mg/Kg	0.85	5.2	1.0	9056M
Analysis Batch: 280-116860	Analysis Date: 04/23/2012 1324						DryWt Corrected: Y

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	4.6		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-115940	Analysis Date: 04/18/2012 1010						DryWt Corrected: N

General Chemistry

Client Sample ID: **J1NPH6**

Lab Sample ID: 280-27773-3
Client Matrix: Solid
% Moisture: 2.3
Date Sampled: 04/11/2012 0750
Date Received: 04/17/2012 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Nitrate Nitrite as N-Soluble	2.6		mg/Kg	0.31	0.77	1.0	353.2
Analysis Batch: 280-118238	Analysis Date: 05/03/2012 1210						DryWt Corrected: Y
Chloride-Soluble	53.9		mg/Kg	2.0	5.1	1.0	9056M
Analysis Batch: 280-116860	Analysis Date: 04/23/2012 1341						DryWt Corrected: Y
Nitrate as N-Soluble	2.3	B	mg/Kg	0.32	2.5	1.0	9056M
Analysis Batch: 280-116859	Analysis Date: 04/23/2012 1341						DryWt Corrected: Y
Bromide-Soluble	0.39	U	mg/Kg	0.39	2.0	1.0	9056M
Analysis Batch: 280-116860	Analysis Date: 04/23/2012 1341						DryWt Corrected: Y
Nitrite as N-Soluble	0.34	U	mg/Kg	0.34	2.5	1.0	9056M
Analysis Batch: 280-116859	Analysis Date: 04/23/2012 1341						DryWt Corrected: Y
Orthophosphate as P-Soluble	1.3	U	mg/Kg	1.3	5.1	1.0	9056M
Analysis Batch: 280-116859	Analysis Date: 04/23/2012 1341						DryWt Corrected: Y
Sulfate-Soluble	6.4		mg/Kg	1.8	5.1	1.0	9056M
Analysis Batch: 280-116860	Analysis Date: 04/23/2012 1341						DryWt Corrected: Y
Fluoride-Soluble	0.83	U	mg/Kg	0.83	5.1	1.0	9056M
Analysis Batch: 280-116860	Analysis Date: 04/23/2012 1341						DryWt Corrected: Y

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	2.3		%	0.10	0.10	1.0	D-2216
Analysis Batch: 280-115940	Analysis Date: 04/18/2012 1010						DryWt Corrected: N

QUALITY CONTROL RESULTS

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-115844					
LCS 280-115844/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-115844/1-A	Method Blank	T	Solid	3050B	
280-27773-1	J1NPH4	T	Solid	3050B	
280-27773-1DU	Duplicate	T	Solid	3050B	
280-27773-1MS	Matrix Spike	T	Solid	3050B	
280-27773-2	J1NPH5	T	Solid	3050B	
280-27773-3	J1NPH6	T	Solid	3050B	
Prep Batch: 280-115852					
LCS 280-115852/2-A	Lab Control Sample	T	Solid	7471A	
MB 280-115852/1-A	Method Blank	T	Solid	7471A	
280-27773-1	J1NPH4	T	Solid	7471A	
280-27773-1DU	Duplicate	T	Solid	7471A	
280-27773-1MS	Matrix Spike	T	Solid	7471A	
280-27773-2	J1NPH5	T	Solid	7471A	
280-27773-3	J1NPH6	T	Solid	7471A	
Analysis Batch:280-116322					
LCS 280-115852/2-A	Lab Control Sample	T	Solid	7471A	280-115852
MB 280-115852/1-A	Method Blank	T	Solid	7471A	280-115852
280-27773-1	J1NPH4	T	Solid	7471A	280-115852
280-27773-1DU	Duplicate	T	Solid	7471A	280-115852
280-27773-1MS	Matrix Spike	T	Solid	7471A	280-115852
280-27773-2	J1NPH5	T	Solid	7471A	280-115852
280-27773-3	J1NPH6	T	Solid	7471A	280-115852
Analysis Batch:280-116709					
LCS 280-115844/2-A	Lab Control Sample	T	Solid	6010B	280-115844
MB 280-115844/1-A	Method Blank	T	Solid	6010B	280-115844
280-27773-1	J1NPH4	T	Solid	6010B	280-115844
280-27773-1DU	Duplicate	T	Solid	6010B	280-115844
280-27773-1MS	Matrix Spike	T	Solid	6010B	280-115844
280-27773-2	J1NPH5	T	Solid	6010B	280-115844
280-27773-3	J1NPH6	T	Solid	6010B	280-115844
Analysis Batch:280-116884					
LCS 280-115844/2-A	Lab Control Sample	T	Solid	6010B	280-115844
MB 280-115844/1-A	Method Blank	T	Solid	6010B	280-115844
280-27773-1	J1NPH4	T	Solid	6010B	280-115844
280-27773-1DU	Duplicate	T	Solid	6010B	280-115844
280-27773-1MS	Matrix Spike	T	Solid	6010B	280-115844
280-27773-2	J1NPH5	T	Solid	6010B	280-115844
280-27773-3	J1NPH6	T	Solid	6010B	280-115844

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

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: 280-27773-1
Sdg Number: J01475

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-115940					
280-27773-1	J1NPH4	T	Solid	D-2216	
280-27773-1DU	Duplicate	T	Solid	D-2216	
280-27773-2	J1NPH5	T	Solid	D-2216	
280-27773-3	J1NPH6	T	Solid	D-2216	
Prep Batch: 280-116534					
LCS 280-116534/1-A	Lab Control Sample	S	Solid	DI Leach	
MB 280-116534/2-A	Method Blank	S	Solid	DI Leach	
280-27773-1	J1NPH4	S	Solid	DI Leach	
280-27773-1DU	Duplicate	S	Solid	DI Leach	
280-27773-1MS	Matrix Spike	S	Solid	DI Leach	
280-27773-2	J1NPH5	S	Solid	DI Leach	
280-27773-3	J1NPH6	S	Solid	DI Leach	
Analysis Batch:280-116859					
LCS 280-116534/1-A	Lab Control Sample	S	Solid	9056M	
MB 280-116534/2-A	Method Blank	S	Solid	9056M	
280-27773-1	J1NPH4	S	Solid	9056M	
280-27773-1DU	Duplicate	S	Solid	9056M	
280-27773-1MS	Matrix Spike	S	Solid	9056M	
280-27773-2	J1NPH5	S	Solid	9056M	
280-27773-3	J1NPH6	S	Solid	9056M	
Analysis Batch:280-116860					
LCS 280-116534/1-A	Lab Control Sample	S	Solid	9056M	
MB 280-116534/2-A	Method Blank	S	Solid	9056M	
280-27773-1	J1NPH4	S	Solid	9056M	
280-27773-1DU	Duplicate	S	Solid	9056M	
280-27773-1MS	Matrix Spike	S	Solid	9056M	
280-27773-2	J1NPH5	S	Solid	9056M	
280-27773-3	J1NPH6	S	Solid	9056M	
Prep Batch: 280-118113					
LCS 280-118113/2-A	Lab Control Sample	S	Solid	DI Leach	
MB 280-118113/1-A	Method Blank	S	Solid	DI Leach	
280-27773-1	J1NPH4	S	Solid	DI Leach	
280-27773-1DU	Duplicate	S	Solid	DI Leach	
280-27773-1MS	Matrix Spike	S	Solid	DI Leach	
280-27773-2	J1NPH5	S	Solid	DI Leach	
280-27773-3	J1NPH6	S	Solid	DI Leach	

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-118238					
LCS 280-118113/2-A	Lab Control Sample	S	Solid	353.2	
MB 280-118113/1-A	Method Blank	S	Solid	353.2	
280-27773-1	J1NPH4	S	Solid	353.2	
280-27773-1DU	Duplicate	S	Solid	353.2	
280-27773-1MS	Matrix Spike	S	Solid	353.2	
280-27773-2	J1NPH5	S	Solid	353.2	
280-27773-3	J1NPH6	S	Solid	353.2	

Report Basis
S = Soluble
T = Total

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

Method Blank - Batch: 280-115844

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 280-115844/1-A	Analysis Batch:	280-116709	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-115844	Lab File ID:	25A2042312.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/23/2012 1754	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/20/2012 1400				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Antimony	0.38	U	0.38	0.60
Arsenic	0.66	U	0.66	1.0
Barium	0.076	U	0.076	0.50
Beryllium	0.033	U	0.033	0.20
Boron	0.98	U	0.98	2.0
Cadmium	0.041	U	0.041	0.20
Calcium	14.1	U	14.1	50.0
Chromium	0.058	U	0.058	0.20
Cobalt	0.10	U	0.10	1.0
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	3.7	U	3.7	20.0
Manganese	0.10	U	0.10	1.0
Molybdenum	0.26	U	0.26	2.0
Nickel	0.12	U	0.12	4.0
Potassium	41.0	U	41.0	300
Silicon	5.7	U	5.7	10.0
Silver	0.16	U	0.16	0.20
Sodium	59.0	U	59.0	120
Vanadium	0.094	U	0.094	2.0
Zinc	0.40	U	0.40	1.0

Method Blank - Batch: 280-115844

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 280-115844/1-A	Analysis Batch:	280-116884	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-115844	Lab File ID:	25A3042412.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/24/2012 1940	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/20/2012 1400				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	1.6	U	1.6	5.0
Selenium	0.86	U	0.86	1.0

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

Lab Control Sample - Batch: 280-115844

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 280-115844/2-A	Analysis Batch:	280-116709	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-115844	Lab File ID:	25A2042312.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/23/2012 1756	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/20/2012 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	50.0	47.78	96	82 - 110	
Arsenic	100	96.21	96	85 - 110	
Barium	200	198.7	99	87 - 112	
Beryllium	5.00	4.81	96	84 - 114	
Boron	100	97.35	97	81 - 110	
Cadmium	10.0	10.15	101	87 - 110	
Calcium	5000	4782	96	82 - 114	
Chromium	20.0	20.17	101	84 - 114	
Cobalt	50.0	49.29	99	87 - 110	
Copper	25.0	25.71	103	88 - 110	
Iron	100	99.09	99	87 - 120	
Lead	50.0	49.52	99	86 - 110	
Magnesium	5000	4783	96	90 - 110	
Manganese	50.0	49.67	99	88 - 110	
Molybdenum	100	101.8	102	86 - 110	
Nickel	50.0	49.43	99	87 - 110	
Potassium	5000	4887	98	89 - 110	
Silicon	1000	123.4	12	10 - 70	
Silver	5.00	5.04	101	87 - 114	
Sodium	5000	5177	104	90 - 112	
Vanadium	50.0	50.31	101	88 - 110	
Zinc	50.0	47.10	94	76 - 114	

Lab Control Sample - Batch: 280-115844

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 280-115844/2-A	Analysis Batch:	280-116884	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-115844	Lab File ID:	25A3042412.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/24/2012 1942	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/20/2012 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	194.2	97	82 - 116	
Selenium	200	206.5	103	83 - 110	

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

Matrix Spike - Batch: 280-115844

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-27773-1	Analysis Batch:	280-116709	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-115844	Lab File ID:	25A2042312.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.03 g
Analysis Date:	04/23/2012 1805	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/20/2012 1400				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Antimony	0.38	U	49.7	24.61	50	20 - 200	
Arsenic	3.5		99.3	90.42	87	76 - 111	
Barium	65.8		199	248.6	92	52 - 159	
Beryllium	0.47		4.97	4.90	89	72 - 105	
Boron	1.2	B	99.3	87.24	87	75 - 107	
Cadmium	0.096	B	9.93	9.34	93	40 - 130	
Calcium	7520		4970	12470	100	43 - 165	
Chromium	11.0		19.9	31.74	104	70 - 200	
Cobalt	6.6		49.7	51.00	89	72 - 106	
Copper	14.8		24.8	39.62	100	37 - 187	
Iron	17700		99.3	19120	1394	70 - 200	4
Lead	3.8		49.7	47.39	88	70 - 200	
Magnesium	4410		4970	9271	98	64 - 145	
Manganese	288		49.7	369.8	165	40 - 200	4
Molybdenum	0.26	U	99.3	89.88	90	75 - 103	
Nickel	11.4		49.7	55.18	88	61 - 126	
Potassium	1160		4970	5851	94	56 - 172	
Silicon	326		993	431.6	11	20 - 200	N
Silver	0.16	U	4.97	4.81	97	75 - 141	
Sodium	266		4970	5207	99	78 - 111	
Vanadium	41.0		49.7	94.12	107	50 - 169	
Zinc	47.4		49.7	81.96	70	70 - 200	

Matrix Spike - Batch: 280-115844

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-27773-1	Analysis Batch:	280-116884	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-115844	Lab File ID:	25A3042412.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.03 g
Analysis Date:	04/24/2012 1952	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/20/2012 1400				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	6970		199	9267	1155	50 - 200	4
Selenium	0.90	B	199	186.1	93	76 - 104	

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

Duplicate - Batch: 280-115844

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-27773-1	Analysis Batch:	280-116709	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-115844	Lab File ID:	25A2042312.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.04 g
Analysis Date:	04/23/2012 1803	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/20/2012 1400				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Antimony	0.38	U	0.37	NC	40	U
Arsenic	3.5		3.24	9	30	
Barium	65.8		65.34	0.8	30	
Beryllium	0.47		0.478	2	30	
Boron	1.2	B	1.06	10	30	B
Cadmium	0.096	B	0.0856	12	30	B
Calcium	7520		7098	6	30	
Chromium	11.0		11.03	0.4	40	
Cobalt	6.6		6.60	0.4	30	
Copper	14.8		15.38	4	30	
Iron	17700		17920	1	40	
Lead	3.8		3.78	2	40	
Magnesium	4410		4229	4	30	
Manganese	288		289.9	0.7	40	
Molybdenum	0.26	U	0.26	NC	30	U
Nickel	11.4		10.51	8	30	
Potassium	1160		1151	1	40	
Silicon	326		340.3	4	40	
Silver	0.16	U	0.16	NC	30	U
Sodium	266		256.1	4	30	
Vanadium	41.0		41.42	1	30	
Zinc	47.4		37.14	24	40	

Duplicate - Batch: 280-115844

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-27773-1	Analysis Batch:	280-116884	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-115844	Lab File ID:	25A3042412.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.04 g
Analysis Date:	04/24/2012 1949	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/20/2012 1400				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	6970		7096	2	40	
Selenium	0.90	B	0.85	NC	30	U

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

Method Blank - Batch: 280-115852

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 280-115852/1-A	Analysis Batch:	280-116322	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-115852	Lab File ID:	120419aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.6 g
Analysis Date:	04/19/2012 1451	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/19/2012 1210				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.0055	U	0.0055	0.017

Lab Control Sample - Batch: 280-115852

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 280-115852/2-A	Analysis Batch:	280-116322	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-115852	Lab File ID:	120419aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.6 g
Analysis Date:	04/19/2012 1454	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/19/2012 1210				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.417	0.448	108	87 - 111	

Matrix Spike - Batch: 280-115852

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-27773-1	Analysis Batch:	280-116322	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-115852	Lab File ID:	120419aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.48 g
Analysis Date:	04/19/2012 1504	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/19/2012 1210				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.0056	U	0.533	0.570	107	87 - 111	

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

Duplicate - Batch: 280-115852

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-27773-1	Analysis Batch:	280-116322	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-115852	Lab File ID:	120419aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	04/19/2012 1458	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/19/2012 1210				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.0056	U	0.0057	NC	20	U

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

Method Blank - Batch: 280-118238

Method: 353.2
Preparation: N/A

Lab Sample ID:	MB 280-118113/1-A	Analysis Batch:	280-118238	Instrument ID:	WC_Alp 2
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0503NXNB
Dilution:	1.0	Leach Batch:	280-118113	Initial Weight/Volume:	1.0 mL
Analysis Date:	05/03/2012 1233	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	05/03/2012 1013				

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

Method Reporting Limit Check - Batch: 280-118238

Method: 353.2
Preparation: N/A

Lab Sample ID:	MRL 280-118238/18	Analysis Batch:	280-118238	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0503NXNB
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/03/2012 1140	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N-Soluble	0.100	0.112	112	50 - 150	

Lab Control Sample - Batch: 280-118238

Method: 353.2
Preparation: N/A

Lab Sample ID:	LCS 280-118113/2-A	Analysis Batch:	280-118238	Instrument ID:	WC_Alp 2
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0503NXNB
Dilution:	1.0	Leach Batch:	280-118113	Initial Weight/Volume:	100 mL
Analysis Date:	05/03/2012 1153	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	05/03/2012 1013				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N-Soluble	50.0	47.01	94	90 - 110	

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

Matrix Spike - Batch: 280-118238

Method: 353.2
Preparation: N/A

Lab Sample ID:	280-27773-1	Analysis Batch:	280-118238	Instrument ID:	WC_Alp 2
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0503NXNB
Dilution:	1.0	Leach Batch:	280-118113	Initial Weight/Volume:	5 mL
Analysis Date:	05/03/2012 1207	Units:	mg/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	05/03/2012 1013				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N-Soluble	2.2	40.9	41.25	95	90 - 110	

Duplicate - Batch: 280-118238

Method: 353.2
Preparation: N/A

Lab Sample ID:	280-27773-1	Analysis Batch:	280-118238	Instrument ID:	WC_Alp 2
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0503NXNB
Dilution:	1.0	Leach Batch:	280-118113	Initial Weight/Volume:	1.0 mL
Analysis Date:	05/03/2012 1156	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	05/03/2012 1013				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Nitrate Nitrite as N-Soluble	2.2	2.98	30	10	M

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

Method Blank - Batch: 280-116859

Method: 9056M
Preparation: N/A

Lab Sample ID:	MB 280-116534/2-A	Analysis Batch:	280-116859	Instrument ID:	WC_IC6
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	119.TXT
Dilution:	1.0	Leach Batch:	280-116534	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/23/2012 1214	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/23/2012 0900				

Analyte	Result	Qual	MDL	RL
Nitrate as N-Soluble	0.31	U	0.31	2.5
Nitrite as N-Soluble	0.33	U	0.33	2.5
Orthophosphate as P-Soluble	1.2	U	1.2	5.0

Method Reporting Limit Check - Batch: 280-116859

Method: 9056M
Preparation: N/A

Lab Sample ID:	MRL 280-116859/3	Analysis Batch:	280-116859	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	112.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/23/2012 1013	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as N-Soluble	0.200	0.193	97	50 - 150	B
Nitrite as N-Soluble	0.200	0.191	96	50 - 150	B
Orthophosphate as P-Soluble	0.200	0.190	95	50 - 150	B

Lab Control Sample - Batch: 280-116859

Method: 9056M
Preparation: N/A

Lab Sample ID:	LCS 280-116534/1-A	Analysis Batch:	280-116859	Instrument ID:	WC_IC6
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	118.TXT
Dilution:	1.0	Leach Batch:	280-116534	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/23/2012 1157	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/23/2012 0900				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as N-Soluble	50.0	50.73	101	90 - 110	
Nitrite as N-Soluble	50.0	51.45	103	90 - 110	
Orthophosphate as P-Soluble	50.0	50.55	101	90 - 110	

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

Matrix Spike - Batch: 280-116859

Method: 9056M
Preparation: N/A

Lab Sample ID:	280-27773-1	Analysis Batch:	280-116859	Instrument ID:	WC_IC6
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	122.TXT
Dilution:	1.0	Leach Batch:	280-116534	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/23/2012 1306	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/23/2012 0900				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as N-Soluble	2.4	B	51.2	52.37	98	80 - 120	
Nitrite as N-Soluble	0.34	U	51.2	51.76	101	80 - 120	
Orthophosphate as P-Soluble	1.3	U	51.2	48.19	94	80 - 120	

Duplicate - Batch: 280-116859

Method: 9056M
Preparation: N/A

Lab Sample ID:	280-27773-1	Analysis Batch:	280-116859	Instrument ID:	WC_IC6
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	121.TXT
Dilution:	1.0	Leach Batch:	280-116534	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/23/2012 1249	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/23/2012 0900				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Nitrate as N-Soluble	2.4	B	2.32	2	15	B
Nitrite as N-Soluble	0.34	U	0.622	NC	15	B
Orthophosphate as P-Soluble	1.3	U	1.2	NC	15	U

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

Method Blank - Batch: 280-116860

Method: 9056M
Preparation: N/A

Lab Sample ID:	MB 280-116534/2-A	Analysis Batch:	280-116860	Instrument ID:	WC_IC6
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	119.TXT
Dilution:	1.0	Leach Batch:	280-116534	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/23/2012 1214	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/23/2012 0900				

Analyte	Result	Qual	MDL	RL
Chloride-Soluble	2.0	U	2.0	5.0
Bromide-Soluble	0.38	U	0.38	2.0
Sulfate-Soluble	1.7	U	1.7	5.0
Fluoride-Soluble	0.81	U	0.81	5.0

Method Reporting Limit Check - Batch: 280-116860

Method: 9056M
Preparation: N/A

Lab Sample ID:	MRL 280-116860/3	Analysis Batch:	280-116860	Instrument ID:	WC_IC6
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	112.TXT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/23/2012 1013	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride-Soluble	1.00	1.07	107	50 - 150	B
Bromide-Soluble	0.200	0.229	115	50 - 150	B
Sulfate-Soluble	1.00	1.19	119	50 - 150	B
Fluoride-Soluble	0.200	0.203	102	50 - 150	B

Lab Control Sample - Batch: 280-116860

Method: 9056M
Preparation: N/A

Lab Sample ID:	LCS 280-116534/1-A	Analysis Batch:	280-116860	Instrument ID:	WC_IC6
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	118.TXT
Dilution:	1.0	Leach Batch:	280-116534	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/23/2012 1157	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/23/2012 0900				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride-Soluble	250	255.9	102	90 - 110	
Bromide-Soluble	50.0	50.11	100	90 - 110	
Sulfate-Soluble	250	254.5	102	90 - 110	
Fluoride-Soluble	50.0	51.10	102	90 - 110	

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

Matrix Spike - Batch: 280-116860

Method: 9056M
Preparation: N/A

Lab Sample ID:	280-27773-1	Analysis Batch:	280-116860	Instrument ID:	WC_IC6
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	122.TXT
Dilution:	1.0	Leach Batch:	280-116534	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/23/2012 1306	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/23/2012 0900				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Chloride-Soluble	54.4		256	320.4	104	80 - 120	
Bromide-Soluble	0.40	U	51.2	49.61	97	80 - 120	
Sulfate-Soluble	6.7		256	256.0	97	80 - 120	
Fluoride-Soluble	0.84	U	51.2	44.72	87	80 - 120	

Duplicate - Batch: 280-116860

Method: 9056M
Preparation: N/A

Lab Sample ID:	280-27773-1	Analysis Batch:	280-116860	Instrument ID:	WC_IC6
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	121.TXT
Dilution:	1.0	Leach Batch:	280-116534	Initial Weight/Volume:	1.0 mL
Analysis Date:	04/23/2012 1249	Units:	mg/Kg	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	04/23/2012 0900				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Chloride-Soluble	54.4		53.38	2	15	
Bromide-Soluble	0.40	U	0.39	NC	15	U
Sulfate-Soluble	6.7		6.40	5	15	
Fluoride-Soluble	0.84	U	0.82	NC	15	U

Client: Washington Closure Hanford

Job Number: 280-27773-1
Sdg Number: J01475

Duplicate - Batch: 280-115940

Method: D-2216
Preparation: N/A

Lab Sample ID:	280-27773-1	Analysis Batch:	280-115940	Instrument ID:	No Equipment
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	04/18/2012 1010	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	2.3	2.6	12.0	20	