

Analytical Data Package Prepared For
CH2M Hill Plateau Remediation

Radiochemical Analysis By

TestAmerica TARL

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

Data Package Contains _____ Pages

Report Nbr: 40590

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W05554	X08-048	B1W562	J8K040320-1	K178J1AA	9K178J10	8323598
		B1W562	J8K040320-1	K178J1AC	9K178J10	8323596
		B1W562	J8K040320-1	K178J1AE	9K178J10	8323594
		B1W562	J8K040320-1	K178J2AD	9K178J20	9005153
		B1W598	J8K040320-2	K178M1AA	9K178M10	8323598
		B1W598	J8K040320-2	K178M1AC	9K178M10	8323596
		B1W598	J8K040320-2	K178M1AD	9K178M10	8323601
		B1W598	J8K040320-2	K178M1AE	9K178M10	8323594
		B1W5B4	J8K040320-3	K178V1AA	9K178V10	8323598
		B1W5B4	J8K040320-3	K178V1AC	9K178V10	8323596
		B1W5B4	J8K040320-3	K178V1AD	9K178V10	8323601
		B1W5B4	J8K040320-3	K178V1AE	9K178V10	8323594
		B1W5C6	J8K060146-1	K2CKQ1AA	9K2CKQ10	8323598
		B1W5C6	J8K060146-1	K2CKQ1AC	9K2CKQ10	8323596
		B1W5C6	J8K060146-1	K2CKQ1AD	9K2CKQ10	8323601

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Comments:

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W05554	X08-048	B1W5C6	J8K060146-1	K2CKQ1AE	9K2CKQ10	8323594
		B1W5D8	J8K060146-2	K2CKT1AA	9K2CKT10	8323598
		B1W5D8	J8K060146-2	K2CKT1AC	9K2CKT10	8323596
		B1W5D8	J8K060146-2	K2CKT1AD	9K2CKT10	8323601
		B1W5D8	J8K060146-2	K2CKT1AE	9K2CKT10	8323594
		B1W586	J8K060146-3	K2CKX1AA	9K2CKX10	8323598
		B1W586	J8K060146-3	K2CKX1AC	9K2CKX10	8323596
		B1W586	J8K060146-3	K2CKX1AD	9K2CKX10	8323601
		B1W586	J8K060146-3	K2CKX1AE	9K2CKX10	8323594
		B1W568	J8K060146-4	K2CK21AA	9K2CK210	8323598
		B1W568	J8K060146-4	K2CK21AC	9K2CK210	8323596
		B1W568	J8K060146-4	K2CK21AD	9K2CK210	8323601
		B1W568	J8K060146-4	K2CK21AE	9K2CK210	8323594
		B1W592	J8K060146-5	K2CK31AA	9K2CK310	8323598
		B1W592	J8K060146-5	K2CK31AC	9K2CK310	8323596
		B1W592	J8K060146-5	K2CK31AD	9K2CK310	8323601
		B1W592	J8K060146-5	K2CK31AE	9K2CK310	8323594
		B1W5H6	J8K060146-6	K2CK41AA	9K2CK410	8323598
		B1W5H6	J8K060146-6	K2CK41AC	9K2CK410	8323596
		B1W5H6	J8K060146-6	K2CK41AD	9K2CK410	8323601
		B1W5H6	J8K060146-6	K2CK41AE	9K2CK410	8323594
		B1W538	J8K060146-7	K2CK61AA	9K2CK610	8323598
		B1W538	J8K060146-7	K2CK61AC	9K2CK610	8323596
		B1W538	J8K060146-7	K2CK61AD	9K2CK610	8323601
		B1W538	J8K060146-7	K2CK61AE	9K2CK610	8323594
		B1W5C0	J8K060156-1	K2CNN1AA	9K2CNN10	8323598

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SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W05554	X08-048	B1W5C0	J8K060156-1	K2CNN1AC	9K2CNN10	8323596
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		B1W5C0	J8K060156-1	K2CNN1AE	9K2CNN10	8323594
		B1W5D2	J8K060156-2	K2CN01AA	9K2CN010	8323598
		B1W5D2	J8K060156-2	K2CN01AC	9K2CN010	8323596
		B1W5D2	J8K060156-2	K2CN01AD	9K2CN010	8323601
		B1W5D2	J8K060156-2	K2CN01AE	9K2CN010	8323594
		B1W502	J8K060156-3	K2CN51AA	9K2CN510	8323598
		B1W502	J8K060156-3	K2CN51AC	9K2CN510	8323596
		B1W502	J8K060156-3	K2CN51AD	9K2CN510	8323601
		B1W502	J8K060156-3	K2CN51AE	9K2CN510	8323594
		B1W574	J8K130104-1	K2TQ51AA	9K2TQ510	8323598
		B1W574	J8K130104-1	K2TQ51AC	9K2TQ510	8323596
		B1W574	J8K130104-1	K2TQ51AD	9K2TQ510	8323594
		B1W574	J8K130104-1	K2TQ51AE	9K2TQ510	8323601
		B1W5F4	J8K130104-2	K2TQ61AA	9K2TQ610	8323598
		B1W5F4	J8K130104-2	K2TQ61AC	9K2TQ610	8323596
		B1W5F4	J8K130104-2	K2TQ61AD	9K2TQ610	8323594
		B1W5F4	J8K130104-2	K2TQ61AE	9K2TQ610	8323601
		B1W5H0	J8K130104-3	K2TQ81AA	9K2TQ810	8323598
		B1W5H0	J8K130104-3	K2TQ81AC	9K2TQ810	8323596
		B1W5H0	J8K130104-3	K2TQ81AD	9K2TQ810	8323594
		B1W5H0	J8K130104-3	K2TQ81AE	9K2TQ810	8323601
		B1W5J8	J8K130108-1	K2TRK1AA	9K2TRK10	8323598
		B1W5J8	J8K130108-1	K2TRK1AC	9K2TRK10	8323596
		B1W5J8	J8K130108-1	K2TRK1AD	9K2TRK10	8323601

 Comments:

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SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W05554	X08-048	B1W5J8	J8K130108-1	K2TRK1AE	9K2TRK10	8323594
		B1W556	J8K130108-2	K2TRM1AA	9K2TRM10	8323598
		B1W556	J8K130108-2	K2TRM1AC	9K2TRM10	8323596
		B1W556	J8K130108-2	K2TRM1AE	9K2TRM10	8323594
		B1W556	J8K130108-2	K2TRM2AD	9K2TRM20	9005153
		B1W5J2	J8K130122-1	K2T1E1AA	9K2T1E10	8323598
		B1W5J2	J8K130122-1	K2T1E1AC	9K2T1E10	8323596
		B1W5J2	J8K130122-1	K2T1E1AD	9K2T1E10	8323601
		B1W5J2	J8K130122-1	K2T1E1AE	9K2T1E10	8323594

Comments:

Certificate of Analysis

CH2M Hill Plateau Remediation Company
P.O. Box 1600
Mail Stop - B6-06
Richland, WA 99352

January 14, 2009

Attention: Mike Neely

SAF Number : X08-048
Date SDG Closed : November 14, 2008
Number of Samples : Nineteen (19)
Sample Type : Water
SDG Number : W05554
Data Deliverable : 45-Day / Summary

CASE NARRATIVE

I. Introduction

Between October 31, 2008 and November 11, 2008 nineteen water samples were received at TestAmerica (TARL) for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Fluor Hanford specific IDs:

<u>PGW ID#</u>	<u>TARL ID#</u>	<u>DATE OF RECEIPT</u>	<u>MATRIX</u>
B1W562	K178J	10/31/08	WATER
B1W598	K178M	10/31/08	WATER
B1W5B4	K178V	10/31/08	WATER
B1W5H6	K2CK4	11/04/08	WATER
B1W592	K2CK3	11/04/08	WATER
B1W568	K2CK2	11/04/08	WATER
B1W586	K2CKX	11/04/08	WATER
B1W5D8	K2CKT	11/04/08	WATER
B1W5C6	K2CKQ	11/04/08	WATER
B1W538	K2CKG	11/04/08	WATER
B1W502	K26N5	11/05/08	WATER
B1W5D2	K2CN0	11/05/08	WATER
B1W5C0	K2CNN	11/05/08	WATER
B1W5H0	K2TQ8	11/06/08	WATER

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B1W5F4	K2TQ6	11/06/08	WATER
B1W574	K2TQ5	11/06/08	WATER
B1W556	K2TRM	11/10/08	WATER
B1W5J8	K2TRK	11/10/08	WATER
B1W5J2	K2T1E	11/11/08	WATER

II. Sample Receipt

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

III. Analytical Results/Methodology

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

The requested analyses were:

Alpha Spectroscopy

Uranium 234, 235 and 238 by method RL-ALP-015 (RICH-RC-5039)*

Neptunium-237 by method RL-ALP-013 (RICH-RC-5009)*

Gamma Spectroscopy

Iodine-129 (LL) by method RL-GAM-002 (RICH-RC-5025)*

Liquid Scintillation Counting

Selenium-79 by method RL-LSC-012 (RICH-RC-5043)*

*SOP ID's changed effective 7-01-2008. Attached is a cross reference until SOP ID's are changed in all systems.

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.

CH2M Hill Plateau Remediation Company
January 14, 2009

V. Comments

Alpha Spectroscopy

Uranium 234, 235 and 238 by method RL-ALP-015 (RICH-RC-5039):

The LCS, batch blank, sample and sample duplicate (B1W5J2) results are within contractual requirements.

Neptunium-237 by method RL-ALP-013 (RICH-RC-5009):

The LCS, batch blank, sample and sample duplicate (B1W562) results are within contractual requirements.

Gamma Spectroscopy

Iodine-129 (I.I.) by method RL-GAM-002 (RICH-RC-5025):

The LCS, batch blank, samples and sample duplicate (B1W5C0) results are within contractual requirements.

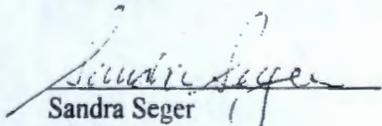
Liquid Scintillation Counting

Selenium-79 by method RL-LSC-012 (RICH-RC-5043):

Samples B1W562 and B1W556 had low tracer recoveries. Both samples were reanalyzed with acceptable results. There is no LCS for selenium-79. Except as noted, batch blank, samples and sample duplicate (B1W574) 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:


Sandra Seger
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	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 900-02	Gross Alpha (Coprecipitation)	RICH-RC-5021
EPA 903.0	Total Alpha Radium (Ra-226)	RICH-RC-5027
EPA 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr-89/90	RICH-RC-5006
ASTM D5174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007

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

Uncertainty Estimation

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

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

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

Report Definitions

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) <i>u_c Combined Uncertainty</i>	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, <i>u_c the combined uncertainty</i> . 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%. $Lc = (1.645 * \text{Sqrt}(2 * (\text{BkgndCnt}/\text{BkgndCntMin})/\text{SCntMin})) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$. For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
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%. $MDC = (4.65 * \text{Sqrt}((\text{BkgndCnt}/\text{BkgndCntMin})/\text{SCntMin}) + 2.71/\text{SCntMin}) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$. For LSC methods the batch blank is used as a measure of the background variability.
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/TotUncert	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.
LER	The equation Replicate Error Ratio = $(S-D)/[\text{sqrt}(\text{TPUs}^2 + \text{TPUd}^2)]$ as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by TestAmerica upon sample receipt.
Sum Rpt Alpha Active Rs(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.

Isotope	Richland SOP #	Old Richland SOP #	Method Reference	Title
Asbestos	RL-ASB-001	N/A	NIOSH 7400	Fiber Counting by Phase Contrast Microscopy based on NIOSH 7400
Asbestos	RL-ASB-002	N/A	NIOSH 9002	Sample Prep and Analysis for Asbestos (bulk) by Polarized Light Microscopy based on NIOSH 9002
Alpha - Gross	ARCHIVED	RICH-RB-5035	Liquid Scintillation Anal/ Packard	DETERMINATION OF GROSS ALPHA IN NASAL SMEARS BY LIQUID SCINTILLATION COUNTING
Alpha - Gross	RL-GPC-001	RICH-RC-5014	9310 / EPA SW846 900.0 / EPA 600	DETERMINATION OF GROSS ALPHA AND GROSS BETA IN WATER BY METHOD 9310
Alpha - Gross	RL-GPC-007	RICH-RC-5020	SM 7110B EPA 680	DETERMINATION OF GROSS ALPHA AND GROSS BETA IN SOIL, SHORELINE SOIL, FOOD AND VEGETATION
Alpha - Gross	RL-GPC-002	RICH-RC-5021	00-02 EPA 520	DETERMINATION OF GROSS ALPHA ACTIVITY IN WATER BY COPRECIPIATION
Alpha - Gross	RL-GPC-008	RICH-RC-5036	ER100 / LANL	PREPARATION OF AIR FILTERS FOR GROSS ALPHA/BETA AND COMPOSITING AIR FILTERS
Am	RL-ALP-003	RICH-RC-5072	Mod RP 725 / DOE0089T EXT Chromatography	SEPARATION OF AMERICIUM, CURIUM, AND URANIUM BY EXTRACTION CHROMATOGRAPHY
Am	RL-ALP-010	RICH-RC-5080	Am03/Pu11HASL 300 NAS-NS-3006	SEQUENTIAL SEPARATION OF PLUTONIUM AND AMERICIUM
Beta - Gross	RL-GPC-001	RICH-RC-5014	9310 / EPA SW846 900.0 / EPA 600	DETERMINATION OF GROSS ALPHA AND GROSS BETA IN WATER BY METHOD 9310
Beta - Gross	RL-GPC-007	RICH-RC-5020	SM 7110B EPA 680	DETERMINATION OF GROSS ALPHA AND GROSS BETA IN SOIL, SHORELINE SOIL, FOOD AND VEGETATION
Beta - Gross	RL-GPC-008	RICH-RC-5036	ER100 / LANL	PREPARATION OF AIR FILTERS FOR GROSS ALPHA/BETA AND COMPOSITING AIR FILTERS
C14	RL-LSC-001	RICH-RB-5013	Mod H-02 / EPA 520	TRITIUM, CARBON-14, NICKEL-63 OR PHOSPHORUS-32 ANALYSIS IN URINE
C14	RL-LSC-008	RICH-RC-5022	EPA C-01 / EPA 520	CARBON 14 BY DIGESTION METHOD
C14	RL-LSC-009	RICH-RC-5040	Mod C14 / EPA 680	DETERMINATION OF CARBON-14 BY BENZENE SYNTHESIS
C14	RL-LSC-010	RICH-RC-5046	EPA C-01 / EPA 520	DETERMINATION OF CARBON-14 IN GRAPHITE AND SOIL
C14	RL-LSC-011	RICH-RC-5047	Mod H-02 / EPA 520	DETERMINATION OF CARBON-14 IN WATER BY DIRECT COUNTING
Cm	RL-ALP-003	RICH-RC-5072	Mod RP 725 / DOE0089T EXT Chromatography	SEPARATION OF AMERICIUM, CURIUM, AND URANIUM BY EXTRACTION CHROMATOGRAPHY
Coliform	RL-WC-001	RICH-WC-5001	9222B	DETERMINATION OF TOTAL COLIFORM: MULTIPLE TUBE FERMENTATION TECHNIQUE
Coliform	RL-WC-002	RICH-WC-5002	9131	TOTAL COLIFORMS BY MEMBRANE FILTRATION
Coliform	RL-WC-005	RICH-WC-5007	9223	TOTAL COLIFORM BY THE COLILERT METHOD
Cr6+	RL-WC-003	RICH-WC-5003	7196A, SW846	DETERMINATION OF HEXAVALENT CHROMIUM [Cr(VI)] IN WATER, SOIL, AND SIMILAR MATRICES
Cr6+	RL-WC-004	RICH-WC-5005	3060 / SW846	DETERMINATION OF HEXAVALENT CHROMIUM (CrVI) IN SOLID MATRICES WITH ALKALINE DIGESTION
Fe	RL-LSC-015	RICH-RC-5074	EXT Chromatography Mod Fe55/PNL-ALO-435	SEPARATION OF IRON AND NICKEL BY EXTRACTION CHROMATOGRAPHY
Fe55	RL-LSC-016	RICH-RC-5023	R4-73-014 / EPA HASL 300	DETERMINATION OF IRON-55 AND IRON-59 IN WATER
Fe59	RL-LSC-016	RICH-RC-5023	R4-73-014 / EPA HASL 300	DETERMINATION OF IRON-55 AND IRON-59 IN WATER
Gamma	RL-GAM-001	RICH-RC-5017	901.0 / HASL 300 ASTM D3649	PREPARATION OF ALL MATRICES FOR ANALYSIS BY GAMMA SPECTROSCOPY
H3	RL-LSC-001	RICH-RB-5013	Mod H-02 / EPA 520	TRITIUM, CARBON-14, NICKEL-63 OR PHOSPHORUS-32 ANALYSIS IN URINE
H3	RL-LSC-003	RICH-RB-5034	7500-3 / SM	DETERMINATION OF TRITIUM IN URINE BY DISTILLATION
H3	RL-LSC-004	RICH-RC-5004	H3 / EPA LV539	DETERMINATION OF TRITIUM IN AIR
H3	RL-LSC-005	RICH-RC-5007	Mod 906.0 / EPA 600	SEPARATION OF TRITIUM IN WATER AND AQUEOUS COMPONENT OF WINE
H3	RL-LSC-007	RICH-RC-5024	H-3 by EE EPA LV539 / HASL 300	DETERMINATION OF LOW LEVEL TRITIUM IN WATER BY ELECTROLYTIC ENRICHMENT
H3	RL-LSC-002	RICH-RC-5037	H-3 in Water/Tissue / LV 539	DETERMINATION OF TRITIUM BY CRYOGENIC DISTILLATION
H3	RL-LSC-006	RICH-RC-5048	H-3 in Water/Tissue / LV 539	TRITIUM PREPARATION IN MILK SAMPLES
I129	RL-GAM-002	RICH-RC-5025	R4-73-014/EPA ASTM D2334 (Discontinued)	DETERMINATION OF IODINE-131 AND 129 IN WATER BY SOLVENT EXTRACTION METHOD
I131	RL-GAM-002	RICH-RC-5025	R4-73-014/EPA ASTM D2334 (Discontinued)	DETERMINATION OF IODINE-131 AND 129 IN WATER BY SOLVENT EXTRACTION METHOD
I131	ARCHIVED	RICH-RC-5049	HASL 300 (1983)	DETERMINATION OF IODINE-131 IN MILK BY BATCH ION-EXCHANGE
Metals	ARCHIVED	BH-MT-0001	6010	ICP-AE SPECTROSCOPY, SPECTROMETRIC METHOD FOR TRACE ELEMENT ANALYSIS, METHOD 6010A FOR Bechtel

Isotope	Richland SOP #	Old Richland SOP #	Method Reference	Title
Metals	RL-MT-001	RICH-MT-0001	6010B	ICP-AES for TRACE ELEMENT ANALYSIS, METHOD 6010B
Metals	RL-MT-002	RICH-MT-0002	SW486 3050B	ACID DIGESTION FOR ICP ANALYSIS
Metals	RL-MT-003	RICH-MT-0003	NIOSH 7300	DIGESTION PREP based on METHOD NIOSH 7300
Ni	RL-LSC-015	RICH-RC-5074	EXT Chromatography Mod Fe55 / PNL-ALO-435	SEPARATION OF IRON AND NICKEL BY EXTRACTION CHROMATOGRAPHY
Ni63	RL-LSC-001	RICH-RB-5013	Mod H-02 / EPA 520	TRITIUM, CARBON-14, NICKEL-63 OR PHOSPHORUS-32 ANALYSIS IN URINE
Ni63	RL-LSC-017	RICH-RC-5069	EXT Chromatography Mod RP300 / DOE0089T	SEPARATION OF Ni-63 BY EXTRACTION CHROMATOGRAPHY
Np	RL-ALP-013	RICH-RC-5009	NAS-NS-3060	DETERMINATION OF NEPTUNIUM-237 BY LIQUID-LIQUID EXTRACTION IN ALL MATRICES
Np	RL-ALP-006	RICH-RC-5064	EXT Chromatography	SEPARATION OF NEPTUNIUM BY EXTRACTION CHROMATOGRAPHY
P32	RL-LSC-001	RICH-RB-5013	Mod H-02 / EPA 520	TRITIUM, CARBON-14, NICKEL-63 OR PHOSPHORUS-32 ANALYSIS IN URINE
Pb	RL-ALP-011	RICH-RC-5076	EXT Chromatography	DETERMINATION OF LEAD-210 BY EXTRACTION CHROMATOGRAPHY
Po	RL-ALP-007	RICH-RB-5001	NAS-NS-3037 HASL 300	DETERMINATION OF POLONIUM-210 IN URINE
Po	RL-ALP-012	RICH-RC-5012	Po-01 / HASL 300 Mod U01 HASL 300	SEPARATION OF ISOTOPIC URANIUM AND POLONIUM-210 IN WATER, SOIL AND FILTERS
Prep - Bioassay	ARCHIVED	RICH-RB-0001		PREPARATION FOR RAPID BIOASSAY ANALYSES
Prep - Bioassay	RL-PRP-001	RICH-RB-5002	Mod Pu06 / HASL 300	PREPARATION OF URINE AND BLOOD SAMPLES
Prep - Bioassay	ARCHIVED	RICH-RB-5004	ASTM D1429-95	DETERMINATION OF SPECIFIC GRAVITY OF URINE
Prep - Bioassay	RL-RPL-002	RICH-RB-5036	Pub 6490,6601 / PNL	PREPARATION OF SYNTHETIC URINE AND FECES USING RECIPES FROM HPS N13.30 PERFORMANCE TESTING
Prep - Bioassay	RL-PRP-002	RICH-RB-5037	LA-10300-M R200 ASTM D3865	PREPARATION OF FECAL SAMPLES USING HYDROFLUORIC ACID DIGESTION
Prep - Bioassay	RL-RPL-003	RICH-RC-5028	ICRP Publication 23	PREPARATION OF SYNTHETIC URINE AND FECES
Prep - Count	RL-ALP-016	RICH-RC-5003	G-03 / HASL 300 C-03 / HASL 300 Anal Chem 1972	COPRECIPIATION OF SOME ACTINIDES ON NEODYMIUM FLUORIDE FOR ALPHA-PARTICLE SPECTROMETRY
Prep - Count	RL-ALP-015	RICH-RC-5039	Morrison & Freiser NAS-NS-3050	ELECTRODEPOSITION OF ACTINIDES
Prep - Count	RL-ALP-014	RICH-RC-5085		ANHYDROUS ETHER EXTRACTION OF URANIUM
Prep - Env	RL-KPA-001	RICH-RC-5015	ASTM / D5174-97	ENVIRONMENTAL SAMPLE PREPARATION FOR URANIUM BY LASER-INDUCED PHOSPHORESCENCE
Prep - Env	RL-PRP-004	RICH-RC-5016	Std2 / HASL 300	PREPARATION OF ENVIRONMENTAL MATRICES
Prep - Env	RL-PRP-007	RICH-RC-5045	Mod Pu02 / HASL 300	PREPARATION OF MIXED BED RESINS AND PRE-FILTERS
Prep - Env	RL-PRP-008	RICH-RC-5068	Mod ER100 / LA10300	PREPARATION OF SOIL, VEGETATION AND AIR FILTERS BY MIXED STRONG ACID LEACHING
Prep - Resin	RL-ALP-017	RICH-RC-5018	Mod Pu11 / Mod 300	ION-EXCHANGE PREPARATION
Prep - Soil	RL-PRP-003	RICH-RC-5013	Pu02A / HASL 300 D5259 / ASTM	PREPARATION OF SOIL SAMPLES
Prep - Soil	RL-PRP-005	RICH-RC-5019	SW 846/3015/3051/3052	PREPARATION AND DISSOLUTION OF SEDIMENTS AND SOIL BY MICROWAVE BOMB DIGESTION
Prep - Soil	RL-PRP-006	RICH-RC-5032	Pu02A / HASL 300	COMPLETE DISSOLUTION BY MIXED ACIDS IN A TEFLON BEAKER
Prep - Soil	RL-PRP-009	RICH-RC-5077	Mod ER100 / LA10300	PREPARATION OF SMALL SOIL SAMPLES FOR GAMMA SPEC AND/OR RADIOCHEM ANAL BY ACID DIGESTION
Prep - Urine	RL-PRP-010	RICH-RC-5086	Analytica Chem Acta 1992 RP800 / DOE0089T	URINE AND WATER SAMPLE PREPARATION BY CALCIUM PHOSPHATE PRECIPITATION
Prep - Water	RL-PRP-010	RICH-RC-5086	Analytica Chem Acta 1992 RP800 / DOE0089T	URINE AND WATER SAMPLE PREPARATION BY CALCIUM PHOSPHATE PRECIPITATION
Pu	ARCHIVED	RICH-RB-5015	Pu11 / HASL 300	RAPID DETERMINATION OF PLUTONIUM IN FECES
Pu	RL-ALP-002	RICH-RC-5010	Pu11 / HASL 300	DETERMINATION OF ISOTOPIC PLUTONIUM IN ALL MATRICES
Pu	RL-ALP-010	RICH-RC-5080	Am03 HASL 300 Pu11 / HASL 300	SEQUENTIAL SEPARATION OF PLUTONIUM AND AMERICIUM
Pu	RL-ALP-001	RICH-RC-5087	Analytica Chem Acta 1992 RP800 / DOE0089T	DETERMINATION OF PLUTONIUM BY EXTRACTION CHROMATOGRAPHY
Ra	RL-RA-001	RICH-RC-5005	903.1 / EPA 600	RADIUM-226 AND RADIUM-228 SEPARATION IN RADIOCHEMICAL MATRICES - ADAPTED FROM EPA 903.1 AND 904.0
Ra	RL-RA-001	RICH-RC-5005	904.0 / EPA 600	RADIUM-226 AND RADIUM-228 SEPARATION IN RADIOCHEMICAL MATRICES - ADAPTED FROM EPA 903.1 AND 904.0

Isotope	Richland SOP #	Old Richland SOP #	Method Reference	Title
Ra	RL-RA-002	RICH-RC-5027	Mod D2460/ ASTM 903.0 / EPA 600	DETERMINATION OF TOTAL RADIUM
Rn	RL-LSC-019	RICH-RC-5082	913.0 / EPA	DETERMINATION OF RADON-222 - ADAPTED FROM METHOD 913.0
S35	ARCHIVED	RICH-RB-5020	Hillebrand, Lundeell, Bright, Hoffman 1953	DETERMINATION OF SULFUR-35 IN URINE
Se79	RL-LSC-012	RICH-RC-5043	Selenium / NAS-NS-3030	RADIOCHEMICAL DETERMINATION OF SELENIUM-79
Solubility	ARCHIVED	RICH-RC-5035	Kalfward&Thomas PNL3716	DETERMINATION OF SOLUBILITY OF RADIOACTIVE PARTICLE CONSTITUENTS
Sr	RL-GPC-005	RICH-RB-5007	Mod Sr02 / HASL 300 Mod 905.0 / EPA 600	DETERMINATION OF TOTAL STRONTIUM IN URINE
Sr	RL-GPC-006	RICH-RB-5021	Mod Sr02 / HASL300 Mod 905.0 / EPA 600	DETERMINATION OF STRONTIUM IN FECES
Sr	ARCHIVED	RICH-RB-5022	Mod Sr02 / HASL300 Mod 905.0 / EPA 600	DETERMINATION OF TOTAL STRONTIUM IN URINE FOR RAPID ANALYSIS
Sr	ARCHIVED	RICH-RB-5031	Mod Sr02 / HASL300 Mod 905.0 / EPA 600	RAPID DETERMINATION OF TOTAL STRONTIUM IN FECES
Sr	RL-GPC-003	RICH-RC-5006	Mod Sr02 / HASL300 Mod 905.0 / EPA 600	STRONTIUM SEPARATION IN ENVIROMENTAL MATRICES
Sr - Yt	RL-GPC-004	RICH-RC-5071	Mod Sr02 / HASL300 Mod 905.0 / EPA 600	YTTRIUM-90 SEPARATION FOR STRONTIUM-90 DETERMINATION IN ALL MATRICES
Tc	RL-LSC-014	RICH-RC-5065	EXT Chromatography Mod RP550 / DOE0089T	DETERMINATION OF TECHNETIUM-99 BY EXTRACTION CHROMATOGRAPHY
Tc	RL-LSC-013	RICH-RC-5078	Tc01 / HASL 300	SEPARATION OF TECHNETIUM-99 IN ALL MATRICES
Th	RL-ALP-008	RICH-RB-5006	Mod Th01 / HASL 300	SEPARATION OF THORIUM FROM URINE AND FECAL SAMPLES
Th	RL-ALP-005	RICH-RC-5084	Mod Th01 / HASL 300 Anal Chim Acta 1982	DETERMINATION OF THORIUM ISOTOPIC IN ENVIRONMENTAL MATRICES
U	RL-ALP-012	RICH-RC-5012	Po-01 / HASL 300 Mod U01 / HASL 300	SEPARATION OF ISOTOPIC URANIUM AND POLONIUM-210 IN WATER, SOIL AND FILTERS
U	RL-KPA-002	RICH-RC-5031	Mod U01 / HASL 300	SEPARATION OF TOTAL URANIUM IN WATER AND URINE
U	RL-KPA-003	RICH-RC-5058	D5174 / ASTM	DETERMINATION OF URANIUM BY PHOSPHORESCENCE ANALYSIS
U	RL-ALP-004	RICH-RC-5067	EXT Chromatography Mod RP725 / DOE0089T	SEPARATION OF URANIUM BY EXTRACTION CHROMATOGRAPHY
U	RL-ALP-003	RICH-RC-5072	EXT Chrom Mod RP725 & 800 / DOE0089T	SEPARATION OF AMERICIUM, CURIUM, AND URANIUM BY EXTRACTION CHROMATOGRAPHY
U	RL-ALP-009	RICH-RC-5079	EXT Chromatography Mod RP725 / DOE0089T	DETERMINATION OF ISOTOPIC URANIUM IN ALL MATRICES

1/14/2009 10:45:18 AM

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 40590 File Name: h:\Reportdb\edd\Fead\Rad\W05554.Edd, h:\Reportdb\edd\Fead\Rad\W05554.Edd

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9K178J10	B1W562		MW6-SBB-A1	X08-048	W05554					10/31/2008 12:37				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8323596	I-129L	15046-84-1	-4.05E-02	pCi/L	1.0E+00	1.0E+00	U	1.80E+00	98.1	I129_SEP_LEPS_G	5.00E-01	L	12/17/2008 15:13	I
8323598	NP-237	13994-20-2	-2.65E-02	pCi/L	9.3E-02	9.4E-02	U	2.79E-01	89.7	NP237_LLE_PLAT	2.00E-01	L	12/19/2008 09:04	I
8323594	U-234	13966-29-5	5.48E-01	pCi/L	2.6E-01	2.7E-01		1.46E-01	106.0	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 16:56	I
8323594	U-235	15117-96-1	3.05E-02	pCi/L	6.2E-02	6.2E-02	U	1.46E-01	106.0	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 16:56	I
8323594	U-238	U-238	7.80E-01	pCi/L	3.1E-01	3.4E-01		1.72E-01	106.0	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 16:56	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9K178J20	B1W562		MW6-SBB-A1	X08-048	W05554					10/31/2008 12:37				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
9005153	Se-79	15758-45-9	4.73E-01	pCi/L	2.4E+00	3.6E+00	U	5.69E+00	76.1	SE79_SEP_IE_LS	2.001E-01	L	01/09/2009 10:30	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9K178M10	B1W598		MW6-SBB-A1	X08-048	W05554					10/31/2008 11:02				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8323596	I-129L	15046-84-1	2.68E-01	pCi/L	1.2E+00	1.2E+00	U	2.14E+00	97.6	I129_SEP_LEPS_G	5.00E-01	L	12/17/2008 17:02	I
8323598	NP-237	13994-20-2	-1.87E-02	pCi/L	9.7E-02	9.7E-02	U	2.64E-01	82.7	NP237_LLE_PLAT	2.00E-01	L	12/19/2008 09:04	I
8323601	Se-79	15758-45-9	2.02E+00	pCi/L	2.9E+00	4.2E+00	U	6.78E+00	66.5	SE79_SEP_IE_LS	2.001E-01	L	12/24/2008 21:19	I
8323594	U-234	13966-29-5	3.21E+00	pCi/L	6.3E-01	8.2E-01		2.79E-01	99.9	UIISO_PLATE_AEA	1.999E-01	L	12/22/2008 16:56	I
8323594	U-235	15117-96-1	7.80E-02	pCi/L	1.1E-01	1.1E-01	U	1.70E-01	99.9	UIISO_PLATE_AEA	1.999E-01	L	12/22/2008 16:56	I
8323594	U-238	U-238	2.20E+00	pCi/L	5.2E-01	6.3E-01		2.69E-01	99.9	UIISO_PLATE_AEA	1.999E-01	L	12/22/2008 16:56	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9K178V10	B1W584		MW6-SBB-A1	X08-048	W05554					10/31/2008 09:36				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8323596	I-129L	15046-84-1	6.58E-01	pCi/L	9.4E-01	9.4E-01	U	1.87E+00	98.4	I129_SEP_LEPS_G	5.00E-01	L	12/17/2008 18:48	I
8323598	NP-237	13994-20-2	-9.16E-03	pCi/L	9.3E-02	9.3E-02	U	2.19E-01	87.0	NP237_LLE_PLAT	1.999E-01	L	12/19/2008 09:04	I
8323601	Se-79	15758-45-9	7.43E-02	pCi/L	2.4E+00	3.4E+00	U	5.64E+00	80.1	SE79_SEP_IE_LS	2.00E-01	L	12/25/2008 00:41	I
8323594	U-234	13966-29-5	1.76E+00	pCi/L	4.7E-01	5.5E-01		2.34E-01	104.0	UIISO_PLATE_AEA	1.999E-01	L	12/22/2008 16:56	I
8323594	U-235	15117-96-1	6.59E-02	pCi/L	1.1E-01	1.1E-01	U	2.06E-01	104.0	UIISO_PLATE_AEA	1.999E-01	L	12/22/2008 16:56	I
8323594	U-238	U-238	9.47E-01	pCi/L	3.4E-01	3.7E-01		1.69E-01	104.0	UIISO_PLATE_AEA	1.999E-01	L	12/22/2008 16:56	I

TestAmerica

rptFeadRadSummaryEdd v3.48

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

1/14/2009 10:45:18 AM

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 40590 File Name: h:\Reportdb\edd\Fead\Rad\W05554.Edd, h:\Reportdb\edd\Fead\Rad\40590.Edd

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%:	Distilled Volume	Sample On Date:	Collection Date:				
9K2CK210	B1W568		MW6-SBB-A1	X08-048	W05554					11/03/2008 10:21				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8323596	I-129L	15046-84-1	-1.61E+00	pCi/L	1.1E+00	1.1E+00	U	1.62E+00	98.9	I129_SEP_LEPS_G	5.00E-01	L	12/18/2008 05:58	I
8323598	NP-237	13994-20-2	2.83E-02	pCi/L	9.8E-02	9.8E-02	U	2.67E-01	83.1	NP237_LLE_PLAT	2.00E-01	L	12/19/2008 09:05	I
8323601	Se-79	15758-45-9	-2.03E+00	pCi/L	2.3E+00	3.3E+00	U	5.59E+00	80.7	SE79_SEP_IE_LS	2.00E-01	L	12/25/2008 14:13	I
8323594	U-234	13966-29-5	1.57E+00	pCi/L	4.2E-01	4.9E-01		1.37E-01	101.1	UIISO_PLATE_AEA	2.001E-01	L	12/22/2008 16:57	I
8323594	U-235	15117-96-1	2.28E-02	pCi/L	5.8E-02	5.8E-02	U	1.37E-01	101.1	UIISO_PLATE_AEA	2.001E-01	L	12/22/2008 16:57	I
8323594	U-238	U-238	6.84E-01	pCi/L	2.8E-01	3.0E-01		1.37E-01	101.1	UIISO_PLATE_AEA	2.001E-01	L	12/22/2008 16:57	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%:	Distilled Volume	Sample On Date:	Collection Date:				
9K2CK310	B1W592		MW6-SBB-A1	X08-048	W05554					11/03/2008 11:34				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8323596	I-129L	15046-84-1	5.66E-01	pCi/L	1.3E+00	1.3E+00	U	2.44E+00	99.7	I129_SEP_LEPS_G	5.00E-01	L	12/18/2008 05:59	I
8323598	NP-237	13994-20-2	-1.11E-02	pCi/L	1.1E-01	1.1E-01	U	2.66E-01	71.3	NP237_LLE_PLAT	2.00E-01	L	12/19/2008 09:05	I
8323601	Se-79	15758-45-9	-1.66E+00	pCi/L	6.1E+00	8.7E+00	U	1.45E+01	31.2	SE79_SEP_IE_LS	2.00E-01	L	12/25/2008 17:37	I
8323594	U-234	13966-29-5	5.85E-02	pCi/L	9.3E-02	9.3E-02	U	1.56E-01	86.0	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 16:57	I
8323594	U-235	15117-96-1	0.00E+00	pCi/L	6.6E-02	6.6E-02	U	1.56E-01	86.0	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 16:57	I
8323594	U-238	U-238	2.14E-01	pCi/L	1.7E-01	1.8E-01		1.84E-01	86.0	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 16:57	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%:	Distilled Volume	Sample On Date:	Collection Date:				
9K2CK410	B1W5H6		MW6-SBB-A1	X08-048	W05554					11/03/2008 11:12				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8323596	I-129L	15046-84-1	-5.52E-02	pCi/L	9.2E-01	9.2E-01	U	1.71E+00	101.1	I129_SEP_LEPS_G	5.00E-01	L	12/18/2008 05:59	I
8323598	NP-237	13994-20-2	0.00E+00	pCi/L	1.1E-01	1.1E-01	U	2.55E-01	68.2	NP237_LLE_PLAT	2.00E-01	L	12/19/2008 09:29	I
8323601	Se-79	15758-45-9	-4.04E+00	pCi/L	5.7E+00	8.1E+00	U	1.36E+01	33.2	SE79_SEP_IE_LS	2.001E-01	L	12/25/2008 20:59	I
8323594	U-234	13966-29-5	2.60E+00	pCi/L	5.7E-01	7.1E-01		1.50E-01	102.9	UIISO_PLATE_AEA	2.001E-01	L	12/22/2008 16:58	I
8323594	U-235	15117-96-1	6.26E-02	pCi/L	8.9E-02	9.0E-02	U	1.50E-01	102.9	UIISO_PLATE_AEA	2.001E-01	L	12/22/2008 16:58	I
8323594	U-238	U-238	1.90E+00	pCi/L	4.9E-01	5.8E-01		1.50E-01	102.9	UIISO_PLATE_AEA	2.001E-01	L	12/22/2008 16:58	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%:	Distilled Volume	Sample On Date:	Collection Date:
9K2CK610	B1W538		MW6-SBB-A1	X08-048	W05554					11/03/2008 13:04

TestAmerica

rptFeadRadSummaryEdd v3.48

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

1/14/2009 10:45:18 AM

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 40590 File Name: h:\Reportdb\edd\Fead\Rad\W05554.Edd, h:\Reportdb\edd\Fead\Rad\40590.Edd

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8323596	I-129L	15046-84-1	-2.66E-01	pCi/L	1.0E+00	1.0E+00	U	1.86E+00	98.4	I129_SEP_LEPS_G	4.999E-01	L	12/18/2008 07:44	I
8323598	NP-237	13994-20-2	0.00E+00	pCi/L	1.3E-01	1.3E-01	U	3.06E-01	67.3	NP237_LLE_PLAT	2.00E-01	L	12/19/2008 09:30	I
8323601	Se-79	15758-45-9	-7.99E+00	pCi/L	5.9E+00	8.5E+00	U	1.43E+01	31.5	SE79_SEP_IE_LS	2.00E-01	L	12/26/2008 00:22	I
8323594	U-234	13966-29-5	2.68E+00	pCi/L	5.6E-01	7.1E-01		1.38E-01	96.9	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 16:58	I
8323594	U-235	15117-96-1	1.38E-01	pCi/L	1.3E-01	1.3E-01		1.38E-01	96.9	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 16:58	I
8323594	U-238	U-238	2.36E+00	pCi/L	5.2E-01	6.5E-01		1.38E-01	96.9	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 16:58	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9K2CKQ10	B1W5C6		MW6-SBB-A1	X08-048	W05554					11/03/2008 14:10

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8323596	I-129L	15046-84-1	5.58E+00	pCi/L	2.4E+00	2.4E+00	U	3.77E+00	96.5	I129_SEP_LEPS_G	5.00E-01	L	12/18/2008 04:08	I
8323598	NP-237	13994-20-2	-2.62E-02	pCi/L	9.2E-02	9.2E-02	U	2.75E-01	76.6	NP237_LLE_PLAT	2.00E-01	L	12/19/2008 09:04	I
8323601	Se-79	15758-45-9	-1.91E+00	pCi/L	2.5E+00	3.6E+00	U	6.10E+00	74.0	SE79_SEP_IE_LS	2.00E-01	L	12/25/2008 04:05	I
8323594	U-234	13966-29-5	7.57E-01	pCi/L	3.0E-01	3.2E-01		1.39E-01	96.8	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 16:57	I
8323594	U-235	15117-96-1	2.33E-02	pCi/L	5.9E-02	5.9E-02	U	1.39E-01	96.8	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 16:57	I
8323594	U-238	U-238	3.38E-01	pCi/L	2.1E-01	2.2E-01		2.39E-01	96.8	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 16:57	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9K2CKT10	B1W5D8		MW6-SBB-A1	X08-048	W05554					11/03/2008 13:44

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8323596	I-129L	15046-84-1	-1.38E+00	pCi/L	1.4E+00	1.4E+00	U	2.19E+00	100.3	I129_SEP_LEPS_G	5.00E-01	L	12/18/2008 04:08	I
8323598	NP-237	13994-20-2	0.00E+00	pCi/L	1.1E-01	1.1E-01	U	2.55E-01	77.4	NP237_LLE_PLAT	2.00E-01	L	12/19/2008 09:04	I
8323601	Se-79	15758-45-9	-4.21E+00	pCi/L	4.0E+00	5.7E+00	U	9.53E+00	47.4	SE79_SEP_IE_LS	2.00E-01	L	12/25/2008 07:27	I
8323594	U-234	13966-29-5	1.46E+00	pCi/L	4.2E-01	4.8E-01		1.43E-01	103.0	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 16:57	I
8323594	U-235	15117-96-1	-1.19E-02	pCi/L	6.2E-02	6.2E-02	U	1.69E-01	103.0	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 16:57	I
8323594	U-238	U-238	7.93E-01	pCi/L	3.1E-01	3.4E-01		1.69E-01	103.0	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 16:57	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9K2CKX10	B1W586		MW6-SBB-A1	X08-048	W05554					11/03/2008 12:29

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8323596	I-129L	15046-84-1	3.20E+00	pCi/L	1.8E+00	1.8E+00	U	2.87E+00	100.0	I129_SEP_LEPS_G	5.00E-01	L	12/18/2008 04:09	I
8323598	NP-237	13994-20-2	-8.08E-03	pCi/L	8.2E-02	8.2E-02	U	1.93E-01	86.7	NP237_LLE_PLAT	2.001E-01	L	12/19/2008 09:05	I
8323601	Se-79	15758-45-9	-1.42E-02	pCi/L	2.6E+00	3.7E+00	U	6.17E+00	73.2	SE79_SEP_IE_LS	2.00E-01	L	12/25/2008 10:51	I

TestAmerica

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

rptFeadRadSummaryEdd v3.48

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

1/14/2009 10:15:18 AM

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 40590 File Name: h:\Reportdb\edd\FeadIV\RadW05554.Edd, h:\Reportdb\edd\FeadIV\Rad\40590.Edd

8323594	U-234	13966-29-5	1.17E+00	pCi/L	3.9E-01	4.4E-01		1.57E-01	93.2	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008	16:57	I
8323594	U-235	15117-96-1	6.54E-02	pCi/L	9.3E-02	9.4E-02	U	1.57E-01	93.2	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008	16:57	I
8323594	U-238	U-238	8.43E-01	pCi/L	3.3E-01	3.6E-01		1.57E-01	93.2	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008	16:57	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*	Distilled Volume	Sample On Date:	Collection Date:				
9K2CN010	B1W5D2		MW6-SBB-A1	X08-048	W05554					11/04/2008 13:16				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8323596	I-129L	15046-84-1	-1.32E-01	pCi/L	1.1E+00	1.1E+00	U	2.04E+00	99.7	I129_SEP_LEPS_G	5.00E-01	L	12/18/2008 09:30	I
8323598	NP-237	13994-20-2	-7.60E-03	pCi/L	7.7E-02	7.8E-02	U	1.82E-01	92.1	NP237_LLE_PLAT	2.00E-01	L	12/19/2008 09:30	I
8323601	Se-79	15758-45-9	-4.10E+00	pCi/L	2.8E+00	4.0E+00	U	6.79E+00	66.5	SE79_SEP_IE_LS	2.00E-01	L	12/26/2008 10:32	I
8323594	U-234	13966-29-5	1.33E+00	pCi/L	4.1E-01	4.7E-01		2.10E-01	90.9	UIISO_PLATE_AEA	2.001E-01	L	12/22/2008 16:59	I
8323594	U-235	15117-96-1	1.48E-01	pCi/L	1.4E-01	1.4E-01	U	1.68E-01	90.9	UIISO_PLATE_AEA	2.001E-01	L	12/22/2008 16:59	I
8323594	U-238	U-238	1.06E+00	pCi/L	3.7E-01	4.1E-01		1.87E-01	90.9	UIISO_PLATE_AEA	2.001E-01	L	12/22/2008 16:59	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*	Distilled Volume	Sample On Date:	Collection Date:				
9K2CN510	B1W5D2		MW6-SBB-A1	X08-048	W05554					11/04/2008 10:00				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8323596	I-129L	15046-84-1	5.57E+00	pCi/L	1.8E+00	1.8E+00	U	3.51E+00	97.6	I129_SEP_LEPS_G	5.00E-01	L	12/18/2008 09:30	I
8323598	NP-237	13994-20-2	0.00E+00	pCi/L	1.1E-01	1.1E-01	U	2.67E-01	84.1	NP237_LLE_PLAT	2.001E-01	L	12/19/2008 09:30	I
8323601	Se-79	15758-45-9	-7.60E+00	pCi/L	4.9E+00	7.0E+00	U	1.18E+01	38.3	SE79_SEP_IE_LS	2.00E-01	L	12/26/2008 13:54	I
8323594	U-234	13966-29-5	3.14E+01	pCi/L	2.0E+00	5.6E+00		2.00E-01	95.4	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 17:13	I
8323594	U-235	15117-96-1	2.06E+00	pCi/L	5.2E-01	6.2E-01		1.83E-01	95.4	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 17:13	I
8323594	U-238	U-238	3.35E+01	pCi/L	2.1E+00	5.9E+00		2.29E-01	95.4	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 17:13	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*	Distilled Volume	Sample On Date:	Collection Date:				
9K2CNN10	B1W5C0		MW6-SBB-A1	X08-048	W05554					11/04/2008 12:10				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8323596	I-129L	15046-84-1	-2.99E-01	pCi/L	1.2E+00	1.2E+00	U	2.05E+00	100.8	I129_SEP_LEPS_G	5.00E-01	L	12/18/2008 07:44	I
8323598	NP-237	13994-20-2	0.00E+00	pCi/L	1.1E-01	1.1E-01	U	2.47E-01	80.3	NP237_LLE_PLAT	1.999E-01	L	12/19/2008 09:30	I
8323601	Se-79	15758-45-9	-1.58E+00	pCi/L	2.5E+00	3.6E+00	U	6.05E+00	74.6	SE79_SEP_IE_LS	2.001E-01	L	12/26/2008 03:46	I
8323594	U-234	13966-29-5	1.73E+00	pCi/L	4.5E-01	5.3E-01		1.43E-01	103.3	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 16:58	I
8323594	U-235	15117-96-1	1.49E-01	pCi/L	1.3E-01	1.4E-01		1.43E-01	103.3	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 16:58	I
8323594	U-238	U-238	1.49E+00	pCi/L	4.2E-01	4.9E-01		1.43E-01	103.3	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 16:58	I

1/14/2009 10:45:18 AM

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 40590 File Name: h:\Reportdb\edd\FeadIV\RadW05554.Edd, h:\Reportdb\edd\FeadIV\Rad\40590.Edd

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9K2T1E10	B1W5J2		MW6-SBB-A1	X08-048	W05554					11/11/2008 10:23				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8323596	I-129L	15046-84-1	2.83E-01	pCi/L	1.1E+00	1.1E+00	U	2.12E+00	100.0	I129_SEP_LEPS_G	5.00E-01	L	12/18/2008 18:18	I
8323598	NP-237	13994-20-2	-9.11E-03	pCi/L	9.3E-02	9.3E-02	U	2.18E-01	87.5	NP237_LLE_PLAT	2.00E-01	L	12/19/2008 12:52	I
8323601	Se-79	15758-45-9	-1.71E+01	pCi/L	9.2E+00	1.3E+01	U	2.24E+01	20.2	SE79_SEP_IE_LS	2.00E-01	L	12/27/2008 13:35	I
8323594	U-234	13966-29-5	2.50E-02	pCi/L	6.4E-02	6.4E-02	U	1.50E-01	103.8	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 21:27	I
8323594	U-235	15117-96-1	0.00E+00	pCi/L	6.4E-02	6.4E-02	U	1.50E-01	103.8	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 21:27	I
8323594	U-238	U-238	5.64E-02	pCi/L	8.9E-02	9.0E-02	U	1.50E-01	103.8	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 21:27	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9K2TQ510	B1W574		MW6-SBB-A1	X08-048	W05554					11/06/2008 11:05				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8323596	I-129L	15046-84-1	5.96E-01	pCi/L	1.0E+00	1.0E+00	U	2.06E+00	100.8	I129_SEP_LEPS_G	5.00E-01	L	12/18/2008 09:31	I
8323598	NP-237	13994-20-2	-1.07E-02	pCi/L	1.1E-01	1.1E-01	U	2.56E-01	83.7	NP237_LLE_PLAT	2.00E-01	L	12/19/2008 09:30	I
8323601	Se-79	15758-45-9	-6.82E+00	pCi/L	2.4E+00	3.4E+00	U	5.88E+00	76.8	SE79_SEP_IE_LS	2.00E-01	L	12/26/2008 17:18	I
8323594	U-234	13966-29-5	3.90E+00	pCi/L	7.8E-01	1.0E+00	U	2.07E-01	90.7	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 17:14	I
8323594	U-235	15117-96-1	-3.10E-03	pCi/L	7.8E-02	7.8E-02	U	1.56E-01	90.7	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 17:14	I
8323594	U-238	U-238	2.93E+00	pCi/L	6.7E-01	8.4E-01	U	1.77E-01	90.7	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 17:14	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9K2TQ610	B1W5F4		MW6-SBB-A1	X08-048	W05554					11/06/2008 09:46				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8323596	I-129L	15046-84-1	-8.94E-01	pCi/L	1.1E+00	1.1E+00	U	1.83E+00	97.8	I129_SEP_LEPS_G	5.00E-01	L	12/18/2008 11:17	I
8323598	NP-237	13994-20-2	0.00E+00	pCi/L	1.1E-01	1.1E-01	U	2.63E-01	76.4	NP237_LLE_PLAT	2.00E-01	L	12/19/2008 09:31	I
8323601	Se-79	15758-45-9	-5.85E+00	pCi/L	2.9E+00	4.2E+00	U	7.11E+00	63.5	SE79_SEP_IE_LS	2.00E-01	L	12/27/2008 00:04	I
8323594	U-234	13966-29-5	2.18E+00	pCi/L	6.3E-01	7.3E-01	U	2.73E-01	110.0	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 17:14	I
8323594	U-235	15117-96-1	0.00E+00	pCi/L	8.9E-02	8.9E-02	U	1.78E-01	110.0	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 17:14	I
8323594	U-238	U-238	1.32E+00	pCi/L	4.8E-01	5.3E-01	U	1.78E-01	110.0	UIISO_PLATE_AEA	2.00E-01	L	12/22/2008 17:14	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9K2TQ810	B1W5H0		MW6-SBB-A1	X08-048	W05554					11/06/2008 12:46

TestAmerica

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

5

rptFeadRadSummaryEdd v3.48

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

1/14/2009 10:45:18 AM

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 40590 File Name: h:\Reportdb\edd\Fead\Rad\W05554.Edd, h:\Reportdb\edd\Fead\Rad\40590.Edd

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8323596	I-129L	15046-84-1	1.18E+00	pCi/L	1.1E+00	1.1E+00	U	2.21E+00	98.6	I129_SEP_LEPS_G	5.00E-01	L	12/18/2008 13:02	I
8323598	NP-237	13994-20-2	1.93E-02	pCi/L	1.0E-01	1.0E-01	U	3.05E-01	82.0	NP237_LLE_PLAT	2.00E-01	L	12/19/2008 12:51	I
8323601	Se-79	15758-45-9	-2.04E+00	pCi/L	2.6E+00	3.7E+00	U	6.20E+00	72.8	SE79_SEP_IE_LS	2.001E-01	L	12/27/2008 03:26	I
8323594	U-234	13966-29-5	7.99E-02	pCi/L	1.2E-01	1.2E-01	U	2.10E-01	91.5	UIISO_PLATE_AEA	1.999E-01	L	12/22/2008 21:26	I
8323594	U-235	15117-96-1	0.00E+00	pCi/L	6.8E-02	6.8E-02	U	1.60E-01	91.5	UIISO_PLATE_AEA	1.999E-01	L	12/22/2008 21:26	I
8323594	U-238	U-238	2.00E-02	pCi/L	6.9E-02	6.9E-02	U	1.88E-01	91.5	UIISO_PLATE_AEA	1.999E-01	L	12/22/2008 21:26	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9K2TRK10	B1W5J8		MW6-SBB-A1	X08-048	W05554					11/09/2008 12:55

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8323596	I-129L	15046-84-1	6.53E-02	pCi/L	1.1E+00	1.1E+00	U	2.08E+00	100.3	I129_SEP_LEPS_G	4.999E-01	L	12/18/2008 14:44	I
8323598	NP-237	13994-20-2	-2.50E-02	pCi/L	8.8E-02	8.8E-02	U	2.62E-01	83.8	NP237_LLE_PLAT	1.999E-01	L	12/19/2008 12:51	I
8323601	Se-79	15758-45-9	-3.75E+00	pCi/L	2.8E+00	4.0E+00	U	6.80E+00	66.3	SE79_SEP_IE_LS	2.001E-01	L	12/27/2008 06:49	I
8323594	U-234	13966-29-5	1.80E-01	pCi/L	1.6E-01	1.6E-01	U	2.21E-01	106.0	UIISO_PLATE_AEA	2.001E-01	L	12/22/2008 21:26	I
8323594	U-235	15117-96-1	7.79E-02	pCi/L	1.1E-01	1.1E-01	U	1.69E-01	106.0	UIISO_PLATE_AEA	2.001E-01	L	12/22/2008 21:26	I
8323594	U-238	U-238	5.99E-02	pCi/L	1.3E-01	1.3E-01	U	2.78E-01	106.0	UIISO_PLATE_AEA	2.001E-01	L	12/22/2008 21:26	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9K2TRM10	B1W556		MW6-SBB-A1	X08-048	W05554					11/09/2008 10:53

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8323596	I-129L	15046-84-1	-8.13E-03	pCi/L	7.5E-01	7.5E-01	U	1.39E+00	126.8	I129_SEP_LEPS_G	5.001E-01	L	12/18/2008 16:30	I
8323598	NP-237	13994-20-2	2.66E-02	pCi/L	9.2E-02	9.2E-02	U	2.51E-01	87.0	NP237_LLE_PLAT	2.001E-01	L	12/19/2008 12:52	I
8323594	U-234	13966-29-5	1.66E-01	pCi/L	1.7E-01	1.7E-01	U	2.70E-01	86.6	UIISO_PLATE_AEA	2.001E-01	L	12/22/2008 21:26	I
8323594	U-235	15117-96-1	-2.77E-02	pCi/L	7.4E-02	7.5E-02	U	2.38E-01	86.6	UIISO_PLATE_AEA	2.001E-01	L	12/22/2008 21:26	I
8323594	U-238	U-238	-5.54E-02	pCi/L	7.9E-02	8.0E-02	U	2.97E-01	86.6	UIISO_PLATE_AEA	2.001E-01	L	12/22/2008 21:26	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9K2TRM20	B1W556		MW6-SBB-A1	X08-048	W05554					11/09/2008 10:53

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
9005153	Se-79	15758-45-9	6.32E-01	pCi/L	2.2E+00	3.3E+00	U	5.26E+00	82.4	SE79_SEP_IE_LS	2.00E-01	L	01/09/2009 13:53	I

TestAmerica

rptFeadRadSummaryEdd v3.48

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

Wednesday, January 14, 2009

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\FeadIVRad\W05554.Edd, h:\Reportdb\ledd\FeadIVRad\40590.Edd

Lab Sample Id: K27E31AB

Sdg/Rept Nbr: W05554 40590

Collection Date: 10/31/2008 12:37

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 10/31/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AW	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8323598 BLK	NP-237 13994-20-2	-2.36E-02	pCi/L	8.3E-02 8.3E-02	U	2.48E-01	85.1		NP237_LLE_P	2.00E-01 L	12/19/2008 12:53				D

Wednesday, January 14, 2009

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\VRad\W05554.Edd, h:\Reportdb\ledd\Fead\VRad\40590.Edd

Lab Sample Id: K27EQ1AB

Sdg/Rept Nbr: W05554 40590

Collection Date: 11/11/2008 10:23

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 11/11/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AY	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8323594 BLK	U-234 13966-29-5	1.88E-02	pCi/L	6.5E-02 6.5E-02	U	1.77E-01	95.4		UIISO_PLATE_	2.001E-01 L	12/22/2008 21:27				D
8323594 BLK	U-235 15117-96-1	0.00E+00	pCi/L	6.4E-02 6.4E-02	U	1.50E-01	95.4		UIISO_PLATE_	2.001E-01 L	12/22/2008 21:27				D
8323594 BLK	U-238 U-238	3.13E-02	pCi/L	6.4E-02 6.4E-02	U	1.50E-01	95.4		UIISO_PLATE_	2.001E-01 L	12/22/2008 21:27				D

Wednesday, January 14, 2009

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05554.Edd, h:\Reportdb\edd\Fead\VRad\40590.Edd

Lab Sample Id: K27EV1AB

Sdg/Rept Nbr: W05554 40590

Collection Date: 11/04/2008 12:10

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 11/05/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BA	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ Yield	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8323596 BLK	I-129L 15046-84-1	1.22E-01	pCi/L	1.0E+00 1.0E+00	U	1.93E+00	99.5		I129_SEP_LEP	5.00E-01 L	12/18/2008 20:10				D

Wednesday, January 14, 2009

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05554.Edd, h:\Reportdb\edd\Fead\VRad\40590.Edd

Lab Sample Id: K27FD1AB

Sdg/Rept Nbr: W05554 40590

Collection Date: 11/06/2008 11:05

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 11/06/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BC	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8323601 BLK	Se-79 15758-45-9	-6.09E+00	pCi/L	3.7E+00 2.6E+00	U	6.40E+00	70.5		SE79_SEP_IE_	2.00E-01	12/27/2008 16:59				D

Wednesday, January 14, 2009

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\ledd\Fead\VRad\W05554.Edd, h:\Reportdb\ledd\Fead\VRad\40590.Edd

Lab Sample Id: K5FM81AB

Sdg/Rept Nbr: W05554 40590

Collection Date: 10/31/2008 12:37

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BLK

Received Date: 10/31/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BG	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
9005153 BLK	Se-79 15758-45-9	5.62E-01	pCi/L	3.6E+00 2.4E+00	U	5.64E+00	76.8		SE79_SEP_IE_	2.001E-01	01/09/2009 17:17				D

Wednesday, January 14, 2009

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05554.Edd, h:\Reportdb\edd\Fead\VRad\40590.Edd

Lab Sample Id: K27E31CS

Sdg/Rept Nbr: W05554 40590

Collection Date: 10/31/2008 12:37

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 10/31/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AX	H					
Batch # / Qc Type	Analy/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8323598 BS	NP-237 13994-20-2	8.80E+00	pCi/L	1.8E+00 1.3E+00		2.23E-01	88.1	9.20E+00 95.6	NP237_LLE_P	2.00E-01 L	12/19/2008 12:53			70 130	D

Wednesday, January 14, 2009

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIVRad\W05554.Edd, h:\Reportdb\edd\FeadIVRad\40590.Edd

Lab Sample Id: K27EQ1CS

Sdg/Rept Nbr: W05554 40590

Collection Date: 11/11/2008 10:23

Client Id: NA

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: BS

Received Date: 11/11/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								AZ	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qual	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8323594 BS	U-234 13966-29-5	8.98E+00	pCi/L	1.8E+00 1.0E+00		1.83E-01	97.1	8.63E+00 104.0	UIISO_PLATE_	1.999E-01 L	12/22/2008 21:28			70 130	D
8323594 BS	U-235 15117-96-1	2.05E-01	pCi/L	1.6E-01 1.6E-01		1.19E-01	97.1	3.94E-01 52.0	UIISO_PLATE_	1.999E-01 L	12/22/2008 21:28			70 130	D
8323594 BS	U-238 U-238	8.19E+00	pCi/L	1.7E+00 9.9E-01		1.67E-01	97.1	9.04E+00 90.6	UIISO_PLATE_	1.999E-01 L	12/22/2008 21:28			70 130	D

Wednesday, January 14, 2009

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIVRad\W05554.Edd, h:\Reportdb\edd\FeadIVRad\40590.Edd

Lab Sample Id: K27EV1CS Sdg/Rept Nbr: W05554 40590 Collection Date: 11/04/2008 12:10
 Client Id: NA Matrix: WATER WATER Sample On Date:
 Moisture/Solids%*: QC Type: BS Received Date: 11/05/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp				
	MW6-SBB-A19981								BB	H				
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qual MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8323596 BS	I-129L 15046-84-1	5.07E+01	pCi/L	7.5E+00 7.5E+00	2.71E+00	95.9	4.57E+01 111.1	I129_SEP_LEP	5.00E-01 L	12/18/2008 22:05			70 130	D

Wednesday, January 14, 2009

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05554.Edd, h:\Reportdb\edd\Fead\VRad\40590.Edd

Lab Sample Id: K178J1FR

Sdg/Rept Nbr: W05554 40590

Collection Date: 10/31/2008 12:37

Client Id: B1W562

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 10/31/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
X08-048	MW6-SBB-A19981								AV	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8323598 DUP	NP-237 13994-20-2	1.80E-02 -2.65E-02	pCi/L	9.5E-02 9.5E-02	U	2.84E-01	77.3		NP237_LLE_P	2.00E-01	12/19/2008 09:04	0.0 20.0	0.7 3		D

Wednesday, January 14, 2009

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\Fead\VRad\W05554.Edd, h:\Reportdb\edd\Fead\VRad\40590.Edd

Lab Sample Id: K2CNN1FR Sdg/Rept Nbr: W05554 40590 Collection Date: 11/04/2008 12:10
 Client Id: B1W5C0 Matrix: WATER WATER Sample On Date:
 Moisture/Solids%*: QC Type: DUP Received Date: 11/05/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
X08-048	MW6-SBB-A19981								BD	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qual	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8323596	I-129L	3.12E-01	pCi/L	9.5E-01	U	1.86E+00	99.2		I129_SEP_LEP	5.00E-01	12/18/2008	9514.0	0.9		D
DUP	15046-84-1	-2.99E-01		9.5E-01						L	07:45	20.0	3		

Wednesday, January 14, 2009

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\IVRad\W05554.Edd, h:\Reportdb\edd\Fead\IVRad\40590.Edd

Lab Sample Id: K2T1E1FR

Sdg/Rept Nbr: W05554 40590

Collection Date: 11/11/2008 10:23

Client Id: B1W5J2

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 11/11/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
X08-048	MW6-SBB-A19981								BE	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8323594 DUP	U-234 13966-29-5	-1.67E-02 2.50E-02	pCi/L	5.9E-02 5.9E-02	U	1.76E-01	103.2		UIISO_PLATE_	2.001E-01 L	12/22/2008 21:27	1006.0 20.0	1. 3		D
8323594 DUP	U-235 15117-96-1	-5.58E-03 0.00E+00	pCi/L	5.7E-02 5.7E-02	U	1.34E-01	103.2		UIISO_PLATE_	2.001E-01 L	12/22/2008 21:27	0.0 20.0	0.1 3		D
8323594 DUP	U-238 U-238	5.58E-02 5.64E-02	pCi/L	8.0E-02 8.0E-02	U	1.34E-01	103.2		UIISO_PLATE_	2.001E-01 L	12/22/2008 21:27	1.0 20.0	0. 3		D

Wednesday, January 14, 2009

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Report\bledd\Fead\VRad\W05554.Edd, h:\Report\bledd\Fead\VRad\40590.Edd

Lab Sample Id: K2TC31FR

Sdg/Rept Nbr: W05554 40590

Collection Date: 11/06/2008 11:05

Client Id: B1W574

Matrix: WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type: DUP

Received Date: 11/06/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
X08-048	MW6-SBB-A19981								BF	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ Yield	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8323601	Se-79	-4.24E+00	pCi/L	3.6E+00	U	6.07E+00	74.4		SE79_SEP_IE_	2.00E-01	12/26/2008	0.0	1.		D
DUP	15758-45-9	-6.82E+00		2.5E+00						L	20:40	20.0	3		

Lot No., Due Date: J8K040320,J8K060146,J8K060156,J8K130122,J8K130104,J8K130108; 12/29/2008

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8323594; RUIO Iso by ALP

SDG, Matrix: W05554; WATER

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 Review

Handwritten signature

Date

12/23/08

Data Review Checklist RADIOCHEMISTRY Second Level Review

Batch Number: 8323594

Review Item	Yes (v)	No (v)	NA (v)
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: _____

Second Level Review: *Eike Jod* Date: 12/29/18

Lot No., Due Date: J8K040320,J8K060146,J8K060156,J8K130122,J8K130104,J8K130108; 12/29/2008
Client. Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 8323598; RNP237 Np-237 w/tracer
SDG. Matrix: W05554; WATER

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 Review

John R. Hester

Date 12-22-08



Data Review Checklist
RADIOCHEMISTRY
 Second Level Review

Batch Number: 8323598

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: _____

Second Level Review: Jodie A Date: 12/22/08

Lot No., Due Date: J8K040320,J8K060146,J8K060156,J8K130122,J8K130104,J8K130108; 12/29/2008
Client, Site: 384868; PGW 615HANFORD HANFORD
QC Batch No., Method Test: 8323596; RGAMLEPS Gamma by LEPS
SDG, Matrix: W05554; WATER

1.0 COC

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

✓ 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

✓ Yes No N/A

2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A

✓ Yes No N/A

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A

✓ Yes No N/A

2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N/A

✓ Yes No N/A

3.0 QC & Samples

3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A

✓ Yes No N/A

3.2 Is the LCS result, yield, and MDA within contract limits? Yes No N/A

✓ Yes No N/A

3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A

✓ Yes No N/A

3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes No N/A

✓ Yes No N/A

3.5 Are the sample yields and MDAs within contract limits? Yes No N/A

✓ Yes No N/A

4.0 Raw Data

4.1 Were results calculated in the correct units? Yes No N/A

✓ Yes No N/A

4.2 Were analysis volumes entered correctly? Yes No N/A

✓ Yes No N/A

4.3 Were Yields entered correctly? Yes No N/A

✓ Yes No N/A

4.4 Were spectra reviewed/meet contractual requirements? Yes No N/A

✓ Yes No N/A

4.5 Were raw counts reviewed for anomalies? Yes No N/A

✓ Yes No N/A

5.0 Other

5.1 Are all nonconformances included and noted? Yes No N/A

✓ Yes No N/A

5.2 Are all required forms filled out? Yes No N/A

✓ Yes No N/A

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

✓ Yes No N/A

5.4 Was transcription checked? Yes No N/A

✓ Yes No N/A

5.5 Were all calculations checked at a minimum frequency? Yes No N/A

✓ Yes No N/A

5.6 Are worksheet entries complete and correct? Yes No N/A

✓ Yes No N/A

6.0 Comments on any No response:

First Level Review

Ann E. Mikuland

Date

12/23/08



Data Review Checklist
RADIOCHEMISTRY
 Second Level Review

Batch Number: 8323596

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: _____

Second Level Review: Jodie Date: 12/23/08

Lot No., Due Date: J8K040320, J8K130108; 12/29/2008
 Client, Site: 384868; PGW 615HANFORD HANFORD
 QC Batch No., Method Test: 9005153; RSE79 Se-79 by LSC
 SDG, Matrix: W05554; WATER

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 10-13841

First Level Review *Tracy Anderson* Date 1/13/09

Data Review Checklist
RADIOCHEMISTRY
 Second Level Review

Batch Number: 8323601; 9005153

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: _____

Second Level Review: Jodie A Date: 1/14/09

Clouseau Nonconformance Memo



NCM #: 10-13641 NCM Initiated By: Lisa Antonson Date Opened: 01/13/2009 Date Closed:	Classification: Anomaly Status: GLREVIEW Production Area: Environmental - Sep Tests: Se-79 by LSC Lot #'s (Sample #'s): J8K040320 (1,2,3), J8K060146 (1,2,3,4,5,6,7), J8K060156 (1,2,3), J8K130104 (1,2,3), J8K130108 (1,2), J8K130122 (1), J8K180000 (601), QC Batches: 8323601,
Nonconformance: Other (describe in detail) Subcategory: Other (explanation required)	

Problem Description / Root Cause

Name	Date	Description
Lisa Antonson	01/13/2009	Samples K178J1 and K2TRM had low tracer yields.

Corrective Action

Name	Date	Corrective Action
Lisa Antonson	01/13/2009	These samples were rerun with good results in batch 9005153.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note
			<u>Response</u>		<u>Response Note</u>

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position
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TESTAMERICA

FLUOR HANFORD	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. #	X08-048-118
		Page <u>1</u> of <u>1</u>	

Collector FLUOR HANFORD R.F. CARRIGAN	Contact/Requester Steve Trent	Telephone No. MSIN FAX 509-373-5869
SAF No. X08-048	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title 2POL CHARACTERIZATION	<i>HNF-N-506-17 Pg 66</i>	Ice Chest No. <i>SAWS-10</i> Temp.
Shipped To (Lab) TestAmerica Incorporated Richland	Method of Shipment Govt Vehicle	Bill of Lading/Air Bill No.
Protocol SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Do not combine X SAF samples with other sets. Need SDG to be stand alone. Site-Wide Generator Knowledge Information Form applies.
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Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1W562		W	<i>10/31/08</i>		2x4000-mL G/P	I129_SEP_LEPS_GS: I-129 (1)	None
B1W562		W	<i>↓</i>	<i>↓</i>	1x1000-mL G/P	NP237_LLE_PLATE_AEA:Np-237(1)	HNO3 to pH <2
B1W562		W	<i>↓</i>	<i>↓</i>	2x1000-mL G/P	Selenium-79	HNO3 to pH <2
B1W562		W	<i>↓</i>	<i>↓</i>	1x1000-mL G/P	UIISO_PLATE_AEA: List-1 (3)	HNO3 to pH <2
						<i>K1785</i>	
							<i>J8K040320 W05554 Due 12/5/08</i>

Relinquished By FLUOR HANFORD R.F. CARRIGAN	Print	Sign <i>R.F. Carrigan</i>	Date/Time <i>10/31/08</i>	Received By <i>Rhonda Lopez</i>	Print	Sign <i>[Signature]</i>	Date/Time <i>OCT 31 2008</i>	Matrix *
Relinquished By			Date/Time	Received By			Date/Time	S = Soil DS = Drum Solid SF = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By			Date/Time	Received By			Date/Time	
Relinquished By			Date/Time	Received By			Date/Time	
Relinquished By			Date/Time	Received By			Date/Time	
FINAL SAMPL. DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By			Date/Time	

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TESTAMERICA

FLUOR HANFORD	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X08-048-153
		Page <u>1</u> of <u>1</u>

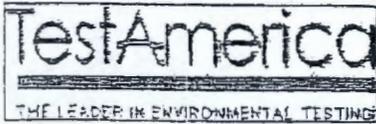
Collector FLUOR HANFORD RICHLAND	Contact/Requester Steve Trent	Telephone No. MSIN FAX 509-373-5869
SAF No. X08-048	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title 2PO1 CHARACTERIZATION	HNF-N-506-17 Pg 66	Ice Chest No. SAWS-10 Temp.
Shipped To (Lab) TestAmerica Incorporated Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Do not combine X SAF samples with other sets. Need SDG to be stand alone. Site-Wide Generator Knowledge Information Form applies.
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Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1W5B4		W	<i>10/31/08</i>	<i>0936</i>	2x4000-mL G/P	I129_SEP_LEPS_GS: I-129 (1)	None
B1W5B4		W	↓	↓	1x1000-mL G/P	NP237_LLE_PLATE_AEA: Np-237(1)	HNO3 to pH <2
B1W5B4		W	↓	↓	2x1000-mL G/P	Selenium-79	HNO3 to pH <2
B1W5B4		W	↓	↓	1x1000-mL G/P	UIISO_PLATE_AEA: List-1 (3)	HNO3 to pH <2
						<i>K178V</i>	
							<i>J8K040330</i>
							<i>W05554</i>
							<i>Due 12/15/08</i>

Relinquished By FLUOR HANFORD	Sign <i>R. F. ...</i>	Date/Time OCT 31 2008	Received By <i>Thom de Weger</i>	Sign <i>Thom de Weger</i>	Date/Time OCT 31 2008	Matrix * S = Soil DS = Drum Solid SF = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By		Date/Time	Received By		Date/Time	
Relinquished By		Date/Time	Received By		Date/Time	
Relinquished By		Date/Time	Received By		Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By		Date/Time	

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Sample Check-in List

Date/Time Received: 10/31/08 @ 14:40 GM Screen Result <0.2
 Client: PDW SDG #: W05554 NA [] SAF #: X08-048 NA []
 Work Order Number: J8K040320 Chain of Custody # X08-048-118, 148 & 153
 Shipping Container ID: N/A Air Bill # N/A

1. Custody Seals on shipping container intact? NA [] Yes No []
2. Custody Seals dated and signed? NA [] Yes No []
3. Chain of Custody record present? NA [] Yes No []
4. Cooler Temperature: _____ NA 5. Vermiculite/packing materials is NA Wet [] Dry []
6. Number of samples in shipping container: 18
7. Sample holding times exceeded? NA Yes [] No []
8. Samples have:
 - _____ Tape
 - _____ Custody Seals
 - _____ Hazard Labels
 - Appropriate Sample Labels
9. Samples are:
 - In Good Condition
 - _____ Broken
 - _____ Leaking
 - _____ Have Air Bubbles
 - (Only for samples requiring no head space.)
10. Sample pH taken? NA pH<2 [] pH>2 [] pH>9 [] Amount HNO₃ Added _____
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [] No
13. Description of anomalies (include sample numbers): Time for sample B1W562 taken from 1 sample bottle.

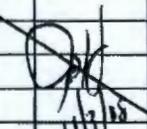
Sample Custodian: [Signature] Date: 10/31/08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____
 [] No action necessary; process as is.

TESTAMERICA

FLUOR HANFORD		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			C.O.C. # X08-048-188
					Page <u>1</u> of <u>1</u>
Collector R. D. Julian		Contact/Requester Steve Trent		Telephone No. MSIN FAX 509-373-5869	
SAF No. X08-048		Sampling Origin Hanford Site		Purchase Order/Charge Code	
Project Title 2PO1 CHARACTERIZATION		MNF-N-506-20		Ice Chest No. LWS-064 Temp.	
Shipped To (Lab) TestAmerica Incorporated, Richland		Method of Shipment Govt. Vehicle		Bill of Lading/Air Bill No.	
Protocol SURV		Priority: 45 Days		Offsite Property No.	
POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)				SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Do not combine X SAF samples with other sets. Need SDG to be stand alone. Site-Wide Generator Knowledge Information Form applies.	

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1W5H6		W	11/3/08	1112	2x4000-mL G/P	I129_SEP_LEPS_GS: I-129 (1)	None
B1W5H6		W	↓	↓	1x1000-mL G/P	NP237_LLE_PLATE_AEA:Np-237(1)	HNO3 to pH <2
B1W5H6		W	↓	↓	2x1000-mL G/P	Selenium-79	HNO3 to pH <2
B1W5H6		W	↓	↓	1x1000-mL G/P	UIISO_PLATE_AEA: List-1 (3) K2CR4	HNO3 to pH <2
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  11/3/08 </div> <div style="text-align: right; font-size: 1.2em;"> J8R060146 W05554 Due 12/9/08 </div> </div>							

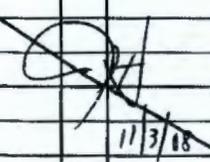
Relinquished By JP Herick <i>J. Herick</i>	Print	Sign	Date/Time 11/04/08 0945	Received By KE Hamilton <i>KE Hamilton</i>	Print	Sign	Date/Time 11/04/08 0945	Matrix * S = Soil DS = Drum Solid SF = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge W = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By KE Hamilton <i>KE Hamilton</i>			Date/Time 11/4/08 1330	Received By S. Smith <i>S. Smith</i>			Date/Time 11.4.08 1330	
Relinquished By			Date/Time	Received By			Date/Time	
Relinquished By			Date/Time	Received By			Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By		Date/Time	

TESTAMERICA

FLUOR HANFORD	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X08-048-98
		Page <u>1</u> of <u>1</u>

Collector R. D. Julian	Contact/Requester Steve Trent	Telephone No. MSIN FAX 509-373-5869
SAF No. X08-048	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title 2P01 CHARACTERIZATION	HNF-N-506-20	Ice Chest No. <i>aws-064</i> Temp.
Shipped To (Lab) Test America Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Do not combine X SAF samples with other sets. Need SDG to be stand alone. Site-Wide Generator Knowledge Information Form applies.
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Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1W538		W	11/3/08	1304	2x4000-mL G/P	I129_SEP_LEPS_GS: I-129 (1)	None
B1W538		W	↓	↓	1x1000-mL G/P	NP237_LLE_PLATE_AEA:Np-237(1)	HNO3 to pH <2
B1W538		W	↓	↓	2x1000-mL G/P	Selenium-79	HNO3 to pH <2
B1W538		W	↓	↓	1x1000-mL G/P	UIISO_PLATE_AEA: List-1 (3) KZCRG	HNO3 to pH <2
<div style="display: flex; justify-content: space-between;"> <div style="width: 40%; text-align: center;">  11/3/08 </div> <div style="width: 40%; text-align: right;"> J8K060146 W05554 Due 121908 </div> </div>							

Relinquished By JP Herrick <i>J. Herrick</i> 11/04/08 0945	Received By KE Hamilton <i>Ken E Hamilton</i> 11/04/08 0945	Matrix * S = Soil DS = Drum Solid SE = Sediment DI = Drum Liner SO = Solid T = Tissue SL = Sludge W = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By KE Hamilton <i>Ken E Hamilton</i> 11/04/08 1330	Received By <i>A. Smith</i> S. Smith 11-4-08 1330	
Relinquished By	Received By	
Relinquished By	Received By	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By
		Date/Time



Sample Check-in List

Date/Time Received: 110408 1330 GM Screen Result 101
 Client: PGW SDG #: W05554 NA [] SAF #: X08-048 NA []
 Work Order Number: J8K060146 Chain of Custody # X08-048-168, 143, 123,
 Shipping Container ID: 6WS-064 Air Bill # 138, 173, 163, 98

1. Custody Seals on shipping container intact? NA [] Yes [/] No []
2. Custody Seals dated and signed? NA [] Yes [/] No []
3. Chain of Custody record present? NA [] Yes [/] No []
4. Cooler Temperature: _____ NA [/] 5. Vermiculite/packing materials is NA [] Wet [] Dry [/]
6. Number of samples in shipping container: 8718
7. Sample holding times exceeded? NA [] Yes [] No [/]
8. Samples have:
 _____ Tape
 _____ Custody Seals
 _____ Hazard Labels
 _____ / _____ Appropriate Sample Labels
9. Samples are:
 _____ / _____ In Good Condition
 _____ Broken
 _____ Leaking
 _____ Have Air Bubbles
 (Only for samples requiring no head space.)
10. Sample pH taken? NA [] pH < 2 [/] pH > 2 [/] pH > 9 [] Amount HNO₃ Added _____
11. Sample Location, Sample Collector Listed? *
 *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [] No [/]
13. Description of anomalies (include sample numbers): _____

Sample Custodian: S. Smith Date: 110408

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____

TESTAMERICA

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
X08-048-168
Page 1 of 1

Collector Roy Sickle	Contact/Requester Steve Trent	Telephone No. 509-373-5869	MSIN FAX
SAF No. X08-048	Sampling Origin Hanford Site	Purchase Order/Charge Code	
Project Title 2POI CHARACTERIZATION	HWF-N-506-16	Ice Chest No.	Temp.
Shipped To (Lab) TestAmerica Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.	
Protocol SURV	Priority: 45 Days	Offsite Property No.	

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes No
Do not combine X SAF samples with other sets. Need SDG to be stand alone.
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1W5D2	✓	W	11/4/08	1316	2x4000-mL G/P	I129_SEP_LEPS_GS: I-129 (1)	None
B1W5D2	✓	W	↓	↓	1x1000-mL G/P	NP237_LLE_PLATE_AEA:Np-237(1)	HNO3 to pH <2
B1W5D2	✓	W	↓	↓	2x1000-mL G/P	Selenium-79	HNO3 to pH <2
B1W5D2	✓	W	↓	↓	1x1000-mL G/P	UI50_PLATE_AEA: List-1 (3) K2CNO	HNO3 to pH <2
							J8K060156
							W05554
							Due 12/9/08

Relinquished By Roy Sickle	Date/Time 11/5/08	Received By D.J. Sparks	Date/Time 11/5/08	Matrix * S = Soil DS = Drum Solid SF = Sediment DI = Drum Lami SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By D.J. Sparks	Date/Time 11/5/08 (1300)	Received By A. Smith	Date/Time 11/5/08 (1300)	
Relinquished By	Date/Time	Received By	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

TESTAMERICA

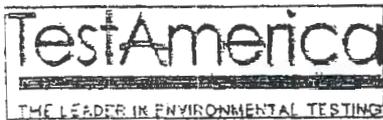
FLUOR HANFORD	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X08-048-158
		Page 1 of 1

Collector H. Ellingsworth	Contact/Requester Steve Trent	Telephone No. 509-373-5869
SAF No. X08-048	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title 2POI CHARACTERIZATION	HNF - N - 50618	Ice Chest No. Temp.
Shipped To (Lab) TestAmerica Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Do not combine X SAF samples with other sets. Need SDG to be stand alone. Site-Wide Generator Knowledge Information Form applies.
--	--

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1W5C0	✓	W	11/4/08	1210	2x4000-mL G/P	I129_SEP_LEPS_GS: I-129 (1)	None
B1W5C0	✓	W	↓	↓	1x1000-mL G/P	NP237_LLE_PLATE_AEA:Np-237(1)	HNO3 to pH <2
B1W5C0	✓	W	↓	↓	2x1000-mL G/P	Selenium-79	HNO3 to pH <2
B1W5C0	✓	W	↓	↓	1x1000-mL G/P	UI50_PLATE_AEA: List-1 (3) K2CNN	HNO3 to pH <2
J8K060156							
W05554							
Due 12/19/08							

Relinquished By R. Ellingsworth	Print	Sign	Date/Time 11/5/08	Received By DJ. Sparks	Print	Sign	Date/Time 11/5/08	Matrix * S = Soil DS = Drum Solid SE = Sediment DI = Drum Liner SO = Solid T = Tissue SI = Sludge WI = Wine W = Water L = Lintid O = Oil V = Vegetation A = Air X = Other	
Relinquished By DJ. Sparks			Date/Time 11/5/08	Received By John Miller			Date/Time 11/5/08		
Relinquished By			Date/Time	Received By			Date/Time		
Relinquished By			Date/Time	Received By			Date/Time		
FINAL SAMPLE DISPOSITION				Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed By	Date/Time



Sample Check-in List

Date/Time Received: 110508 1300 GM Screen Result _____
Client: PGW SDG #: W05554 NA [] SAF #: X08048 NA []
Work Order Number: J8K060156 Chain of Custody # X08-048-68,158,168
Shipping Container ID: _____ Air Bill # _____

- 1. Custody Seals on shipping container intact? NA [] Yes [] No []
- 2. Custody Seals dated and signed? NA [] Yes [] No []
- 3. Chain of Custody record present? NA [] Yes [] No []
- 4. Cooler Temperature: _____ NA [] 5. Vermiculite/packing materials is NA [] Wet [] Dry []
- 6. Number of samples in shipping container: 3
- 7. Sample holding times exceeded? NA [] Yes [] No []
- 8. Samples have:
____ Tape _____ Hazard Labels
____ Custody Seals _____ / _____ Appropriate Sample Labels
- 9. Samples are:
____ / In Good Condition _____ Leaking
____ Broken _____ Have Air Bubbles
(Only for samples requiring no head space.)
- 10. Sample pH taken? NA [] pH<2 [] pH>2 [] pH>9 [] Amount HNO₃ Added _____
- 11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed.
- 12. Were any anomalies identified in sample receipt? Yes [] No []
- 13. Description of anomalies (include sample numbers): _____

Sample Custodian: S. Smith Date: 110508

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____

TESTAMERICA

FLUOR HANFORD	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X08-048-128
		Page <u>1</u> of <u>1</u>

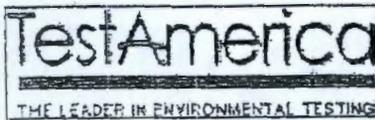
Collector R. Ellingsworth	Contact/Requester Steve Trent	Telephone No. 509-373-5869 MSIN FAX
SAF No. X08-048	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title 2POI CHARACTERIZATION	HNF - N - 806 - 18	Ice Chest No. Temp.
Shipped To (Lab) TestAmerica, Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Do not combine X SAF samples with other sets. Need SDG to be stand alone. Site-Wide Generator Knowledge Information Form applies.
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Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1W574		W	11/6/08	1105	2x4000-mL G/P	I129_SEP_LEPS_GS: I-129 (1)	None
B1W574		W	↓	↓	1x1000-mL G/P	NP237_LLE_PLATE_AEA:Np-237(1)	HNO3 to pH <2
B1W574		W	↓	↓	2x1000-mL G/P	Selenium-79	HNO3 to pH <2
B1W574		W	↓	↓	1x1000-mL G/P	UIISO_PLATE_AEA: List-1 (3)	HNO3 to pH <2
						K2TQ5	
							J8K130104 W05554 Due to 12-22-08

Relinquished By R. Ellingsworth	Received By S. Smith	Date/Time NOV 06 2008 1505	Date/Time NOV 06 2008 1505	Matrix *
Relinquished By	Received By	Date/Time	Date/Time	S - Soil DS - Drum Solid SF - Sediment DI - Drum Liquid SO - Solid T - Tissue SL - Sludge WI - Wine W - Water L - Liquid O - Oil V - Vegetation A - Air X - Other
Relinquished By	Received By	Date/Time	Date/Time	
Relinquished By	Received By	Date/Time	Date/Time	
Relinquished By	Received By	Date/Time	Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By	Date/Time

58



Sample Check-in List

Date/Time Received: 110608 1505 GM Screen Result 101

Client: P6W SDG #: W05554 NA SAF #: X08-048 NA

Work Order Number: J8K130104 Chain of Custody # X08-048-128, 178, 183

Shipping Container ID: N/A Air Bill # N/A

1. Custody Seals on shipping container intact? NA Yes No
2. Custody Seals dated and signed? NA Yes No
3. Chain of Custody record present? NA Yes No
4. Cooler Temperature: _____ NA 5. Vermiculite/packing materials is NA Wet Dry
6. Number of samples in shipping container: 3
7. Sample holding times exceeded? NA Yes No
8. Samples have:

<input type="checkbox"/> Tape <input type="checkbox"/> Custody Seals	<input type="checkbox"/> Hazard Labels <input checked="" type="checkbox"/> Appropriate Sample Labels
---	---
9. Samples are:

<input checked="" type="checkbox"/> In Good Condition <input type="checkbox"/> Broken	<input type="checkbox"/> Leaking <input type="checkbox"/> Have Air Bubbles <small>(Only for samples requiring no head space.)</small>
--	---
10. Sample pH taken? NA pH < 2 pH > 2 pH > 9 Amount HNO₃ Added _____
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes No
13. Description of anomalies (include sample numbers): _____

Sample Custodian: S. Smith Date: 110608

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

No action necessary; process as is.

Project Manager _____ Date _____

TESTAMERICA

FLUOR HANFORD		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C. # X08-048-198
		Page <u>1</u> of <u>1</u>		
Collector F. M. Hall	Contact/Requester Steve Trent	Telephone No. 509-373-5869	MSIN FAX	
SAF No. X08-048	Sampling Origin Hanford Site	Purchase Order/Charge Code		
Project Title 2POI CHARACTERIZATION	HNF-N-SOC-17	Ice Chest No. GWS-047	Temp.	
Shipped To (Lab) TestAmerica Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No. N/A		
Protocol SURV	Priority: 45 Days	Offsite Property No. N/A		
POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)		SPECIAL INSTRUCTIONS Hold Time Do not combine X SAF samples with other sets. Need SDG to be stand alone. Site-Wide Generator Knowledge Information Form applies.		
		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1W5J8		W	11/09/08	1255	2x4000-mL G/P	I129_SEP_LEPS_GS: I-129 (1)	None
B1W5J8		W	↓	↓	1x1000-mL G/P	NP237_LLE_PLATE_AEA:Np-237(1)	HNO3 to pH <2
B1W5J8		W	↓	↓	2x1000-mL G/P	Selenium-79	HNO3 to pH <2
B1W5J8		W	↓	↓	1x1000-mL G/P	UIISO_PLATE_AEA: List-1 (3)	HNO3 to pH <2
K2TRK							
							J 8K130/08
							WP5554
							W05554 SKS 11/27-08
							Due 122508

Relinquished By F. M. Hall	Print 	Sign 	Date/Time 11-10-08 1000	Received By KB Hulse	Print 	Sign 	Date/Time 11-10-08 1000	Matrix * S = Soil DS = Drum Solid SE = Sediment DI = Drum Linn SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Limid O = Oil V = Vegetation A = Air X = Other
Relinquished By KB Hulse			Date/Time 11-10-08 1110	Received By Neyra P. ...			Date/Time 11-10-08 1110	
Relinquished By			Date/Time	Received By			Date/Time	
Relinquished By			Date/Time	Received By			Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By		Date/Time	



Sample Check-in List

Date/Time Received: 11/008 1110 GM Screen Result .02
 Client: PGW SDG #: WD5554 NA [] SAF #: SKS11/1308 NA []
 Work Order Number: 78K130108 Chain of Custody # X08-048-198
 Shipping Container ID: GWS-047 Air Bill # N/A -113

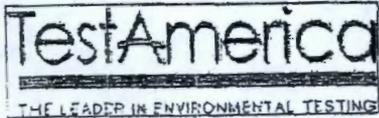
1. Custody Seals on shipping container intact? NA [] Yes No []
2. Custody Seals dated and signed? NA [] Yes No []
3. Chain of Custody record present? NA [] Yes No []
4. Cooler Temperature: _____ NA 5. Vermiculite/packing materials is NA [] Wet [] Dry
6. Number of samples in shipping container: _____
7. Sample holding times exceeded? NA Yes [] No []
8. Samples have:
 - _____ Tape
 - _____ Custody Seals
 - _____ Hazard Labels
 - _____ Appropriate Sample Labels
9. Samples are:
 - In Good Condition
 - _____ Broken
 - _____ Leaking
 - _____ Have Air Bubbles
 - (Only for samples requiring no head space.)
10. Sample pH taken? NA [] pH < 2 pH > 2 [] pH > 9 [] Amount HNO₃ Added _____
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed. ll
12. Were any anomalies identified in sample receipt? Yes [] No
13. Description of anomalies (include sample numbers): _____

Sample Custodian: [Signature] Date: 11-10-08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client informed on _____ by _____ Person Contacted _____

[] No action necessary; process as is.



Sample Check-in List

Date/Time Received: 11-11-08 1510 GM Screen Result .01

Client: PCW SDG #: W05554 NA [] SAF #: X08-048 NA []

Work Order Number: 58K130122 Chain of Custody # X08-048-193

Shipping Container ID: _____ Air Bill # _____

1. Custody Seals on shipping container intact? NA [] Yes No []
2. Custody Seals dated and signed? NA [] Yes No []
3. Chain of Custody record present? NA [] Yes No []
4. Cooler Temperature: NR NA []
5. Vermiculite/packing materials' is NA [] Wet [] Dry []
6. Number of samples in shipping container: 10
7. Sample holding times exceeded? NA [] Yes [] No
8. Samples have:

<input type="checkbox"/> Tape <input type="checkbox"/> Custody Seals	<input type="checkbox"/> Hazard Labels <input checked="" type="checkbox"/> Appropriate Sample Labels
---	---
9. Samples are:

<input checked="" type="checkbox"/> In Good Condition <input type="checkbox"/> Broken	<input type="checkbox"/> Leaking <input type="checkbox"/> Have Air Bubbles <small>(Only for samples requiring no head space.)</small>
--	---
10. Sample pH taken? NA [] pH < 2 pH > 2 [] pH > 9 [] Amount HNO₃ Added _____
11. Sample Location, Sample Collector Listed? *
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [] No
13. Description of anomalies (include sample numbers): _____

Sample Custodian: [Signature] Date: 11-11-08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[] No action necessary; process as is.

Project Manager _____ Date _____

TESTAMERICA

12/10/2008 2:00:00

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National Lab

7Y Uiso PrpRC5016/5086, SepRC5067(5039)

Pipet #:

SR Uranium-234,235,238 by Alpha Spec

Sep1 DT/Tm Tech:

AnalyDueDate: 12/15/2008

SI CLIENT: HANFORD

Sep2 DT/Tm Tech:

Batch: 8323554 WATER pCi/L

PM, Quote: SS , 57671

Prep Tech: ,LaneL

SEQ Batch. Test: None

Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 K178J-1-AE J8K040320-1-SAMP 10/31/2008 12:37			200.00g, in	200.00g	UITC20625 12/03/08, pd 01/20/04, r	200				
			AmtRec: 4XLP,2X4LP	#Containers: 6				Scr: Alpha: -1.08E-03 uCi/Sa	Beta: 8.94E-04 uCi/Sa	
2 K178M-1-AE J8K040320-2-SAMP 10/31/2008 11:02			199.90g, in	199.90g	UITC20626 12/03/08, pd 01/20/04, r					
			AmtRec: 4XLP,2X4LP	#Containers: 6				Scr: Alpha: 1.99E-05 uCi/Sa	Beta: -2.63E-05 uCi/Sa	
3 K178V-1-AE J8K040320-3-SAMP 10/31/2008 09:36			199.90g, in	199.90g	UITC20627 12/03/08, pd 01/20/04, r					
			AmtRec: 4XLP,2X4LP	#Containers: 6				Scr: Alpha: -1.17E-03 uCi/Sa	Beta: 4.98E-04 uCi/Sa	
4 K2CKQ-1-AE J8K060146-1-SAMP 11/03/2008 14:10			200.00g, in	200.00g	UITC20628 12/03/08, pd 01/20/04, r					
			AmtRec: 4XLP,2X4LP	#Containers: 6				Scr: Alpha: -2.95E-03 uCi/Sa	Beta: 3.52E-03 uCi/Sa	
5 K2CKT-1-AE J8K060146-2-SAMP 11/03/2008 13:44			200.00g, in	200.00g	UITC20629 12/03/08, pd 01/20/04, r					
			AmtRec: 4XLP,2X4LP	#Containers: 6				Scr: Alpha: -2.39E-03 uCi/Sa	Beta: 1.42E-03 uCi/Sa	
6 K2CKX-1-AE J8K060146-3-SAMP 11/03/2008 12:29			200.00g, in	200.00g	UITC20630 12/03/08, pd 01/20/04, r					
			AmtRec: 4XLP,2X4LP	#Containers: 6				Scr: Alpha: -8.05E-04 uCi/Sa	Beta: 3.67E-04 uCi/Sa	
7 K2CK2-1-AE J8K060146-4-SAMP 11/03/2008 10:21			200.10g, in	200.10g	UITC20631 12/03/08, pd 01/20/04, r					
			AmtRec: 4XLP,2X4LP	#Containers: 6				Scr: Alpha: -2.72E-03 uCi/Sa	Beta: 3.91E-03 uCi/Sa	

TESTAMERICA

Sample Preparation Analysis

Balance Id: 1120482733

12/03/2008, Sep 1 DT/Tm (5000)

Pipet #:

12/13/2008

SI CLIENT: HANFORD

Sep1 DT/Tm Tech:

SEQ Batch, Test: None

11/03/2008, 11:34

Sep2 DT/Tm Tech:

Prep Tech: ,LanCL

Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	OC Trace/ Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 K2CK3-1-AE J8K060146-5-SAMP 11/03/2008 11:34			200.00g.in	200.00g	UITS20632 12/03/08,pd 01/20/04,r	200				Scr: Alpha: -4.87E-04 uCi/Sa Beta: -1.60E-03 uCi/Sa
9 K2CK4-1-AE J8K060146-6-SAMP 11/03/2008 11:12			200.10g.in	200.10g	UITS20633 12/03/08,pd 01/20/04,r					Scr: Alpha: -1.82E-03 uCi/Sa Beta: 2.73E-03 uCi/Sa
10 K2CK6-1-AE J8K060146-7-SAMP 11/03/2008 13:04			200.00g.in	200.00g	UITS20634 12/03/08,pd 01/20/04,r					Scr: Alpha: -6.11E-04 uCi/Sa Beta: 6.29E-04 uCi/Sa
11 K2CNN-1-AE J8K060156-1-SAMP 11/04/2008 12:10			200.00g.in	200.00g	UITS20635 12/03/08,pd 01/20/04,r					Scr: Alpha: 3.15E-03 uCi/Sa Beta: 1.02E-03 uCi/Sa
12 K2CN0-1-AE J8K060156-2-SAMP 11/04/2008 13:16			200.10g.in	200.10g	UITS20636 12/03/08,pd 01/20/04,r					Scr: Alpha: -1.91E-03 uCi/Sa Beta: 1.82E-03 uCi/Sa
13 K2CN5-1-AE J8K060156-3-SAMP 11/04/2008 10:00			200.00g.in	200.00g	UITS20637 12/03/08,pd 01/20/04,r					Scr: Alpha: -1.24E-03 uCi/Sa Beta: 3.52E-03 uCi/Sa
14 K2TQ5-1-AD J8K130104-1-SAMP 11/06/2008 11:05			200.10g.in	200.10g	UITS20638 12/03/08,pd 01/20/04,r					Scr: Alpha: 4.97E-04 uCi/Sa Beta: -1.33E-04 uCi/Sa

TESTAMERICA

Batch: 8323594
SEO Batch, Test: None

pCi/L

Sepr Dri/Tm Tech:

Prep Tech: ,Lanel

Client Order, Lab Sample Data	Total Amt (dpm)	Total Acidified Amt	Initial Adjusted Amt/Unit	Avg Adj Amt (Un-Adj/Std)	QC Process Prep Date	Count Time Min	Detector Id	Count Off Cr (24hr) Circle	CR Analyst, Inlt Date	Comments
22K27EQ-1-AC-C			199.90g.in	199.90g	UISG1717					
J8K180000-594-LCS					10/08/08,pd 01/20/04,r					Z00
11/11/2008 10:23			Amt/Pac:	#Containers: 1			Scr:	Alpha:		Beta:

Comments: pH < 2.0. *[Signature]* 12/10/08

All Clients for Batch:
384868, Pacific Northwest National Laboratory Pacific Northwest National Lab, SS, 57671

K178J1AE-SAMP Constituent List:											
U-232	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	U-234	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:
U-235	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:	U-238	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:
K27EQ1AA-BLK:											
U-232	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	U-234	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:
U-235	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:	U-238	RDL:1.00E+00	pCi/L	LCL:	UCL:	RPD:
K27EQ1AC-LCS:											
U-232	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Uranium	RDL:	pCi/L	LCL:70	UCL:130	RPD:20
K178J1AE-SAMP Calc Info:											
Uncert Level (#s): 2		Decay to SaDt: Y		Blk Subst.: N		Sci.Not.: Y		ODRs: B			
K27EQ1AA-BLK:											
Uncert Level (#s): 2		Decay to SaDt: Y		Blk Subst.: N		Sci.Not.: Y		ODRs: B			
K27EQ1AC-LCS:											
Uncert Level (#s): 2		Decay to SaDt: Y		Blk Subst.: N		Sci.Not.: Y		ODRs: B			

Approved By _____ Date: _____

12/23/2008 3:27:07 PM

ICOC Fraction Transfer/Status Report

ByDate: 12/24/2007, 12/28/2008, Batch: '8323594', User: 'ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
8323594				
AC	Rev1C	LaneL	12/10/2008 1:50:16	
SC		wagarr	IsBatched 11/19/2008 10:08:55 AM	ICOC_RADCALC v4.8.35
SC		LaneL	InPrep 12/10/2008 1:50:16 PM	RL-PRP-004 REVISION 0
SC		LaneL	Prep1C 12/10/2008 2:26:14 PM	RL-PRP-004 REVISION 0
SC		AshworthA	Sep1C 12/21/2008 2:53:50 PM	ALP-004 REVISION 0
SC		AshworthA	Sep2C 12/22/2008 2:44:04 PM	ALP-015 REVISION 0
SC		whelands	Rev1C 12/23/2008 3:26:46 PM	RL-DR-001 REV 0
AC		LaneL	12/10/2008 2:26:14	
AC		AshworthA	12/21/2008 2:53:50	
AC		AshworthA	12/22/2008 2:44:04	
AC		whelands	12/23/2008 3:26:46	

AC: Accepting Entry; SC: Status Change

TestAmerica Richland
Richland Wa.

TESTAMERICA

12/9/2008 4:49:03 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National Lab

KO Np-237 PrpRC5086, SepRC5064(5003)
XW Neptunium-237 with tracer by alpha spec
5i CLIENT: HANFORD

Pipet #: 12-18-08 9:44 AM

AnalyDueDate: 12/15/2008 W05554

Sep1 DT/Tm Tech:

Batch: 8323598 WATER pCi/L
SEQ Batch, Test: None

PM, Quote: SS, 57671

Sep2 DT/Tm Tech:

Prep Tech: ,LaneL



Work Ord, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 K178J-1-AA J8K040320-1-SAMP 10/31/2008 12:37	200.00g		in 200.00g		NPTA7309 12/02/08,pd 09/17/08,r							
<p>AmtRec: 4XLP,2X4LP #Containers: 6</p> <p>Scr: Alpha: -1.08E-03 uCi/Sa Beta: 8.94E-04 uCi/Sa</p>												
2 K178J-1-AF-X J8K040320-1-DUP 10/31/2008 12:37	200.00g		in 200.00g		NPTA7310 12/02/08,pd 09/17/08,r							
<p>AmtRec: 4XLP,2X4LP #Containers: 6</p> <p>Scr: Alpha: -1.08E-03 uCi/Sa Beta: 8.94E-04 uCi/Sa</p>												
3 K178M-1-AA J8K040320-2-SAMP 10/31/2008 11:02	200.00g		in 200.00g		NPTA7311 12/02/08,pd 09/17/08,r							
<p>AmtRec: 4XLP,2X4LP #Containers: 6</p> <p>Scr: Alpha: 1.99E-05 uCi/Sa Beta: -2.63E-05 uCi/Sa</p>												
4 K178V-1-AA J8K040320-3-SAMP 10/31/2008 09:36	199.90g		in 199.90g		NPTA7312 12/02/08,pd 09/17/08,r							
<p>AmtRec: 4XLP,2X4LP #Containers: 6</p> <p>Scr: Alpha: -1.17E-03 uCi/Sa Beta: 4.98E-04 uCi/Sa</p>												
5 K2CKQ-1-AA J8K060146-1-SAMP 11/03/2008 14:10	200.00g		in 200.00g		NPTA7313 12/02/08,pd 09/17/08,r							
<p>AmtRec: 4XLP,2X4LP #Containers: 6</p> <p>Scr: Alpha: -2.95E-03 uCi/Sa Beta: 3.52E-03 uCi/Sa</p>												
6 K2CKT-1-AA J8K060146-2-SAMP 11/03/2008 13:44	200.00g		in 200.00g		NPTA7314 12/02/08,pd 09/17/08,r							
<p>AmtRec: 4XLP,2X4LP #Containers: 6</p> <p>Scr: Alpha: -2.39E-03 uCi/Sa Beta: 1.42E-03 uCi/Sa</p>												
7 K2CKX-1-AA J8K060146-3-SAMP 11/03/2008 12:29	200.10g		in 200.10g		NPTA7315 12/02/08,pd 09/17/08,r							
<p>AmtRec: 4XLP,2X4LP #Containers: 6</p> <p>Scr: Alpha: -8.05E-04 uCi/Sa Beta: 3.67E-04 uCi/Sa</p>												

ZOO

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TESTAMERICA

12/9/2008 4:49:05 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National LabKO Np-237 PrpRC5086, SepRC5064(5003)
XW Neptunium-237 with tracer by alpha spec
5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 12/15/2008

Sep1 DT/Tm Tech:

Batch: 8323598 WATER pCi/L

PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,LaneL



Work Ord, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:	
15 K2TQ5-1-AA J8K130104-1-SAMP 11/06/2008 11:05			200.00g,in	200.00g	NPTA7323 12/02/08,pd 09/17/08,r								
								200					
									Scr:	Alpha: 4.97E-04 uCi/Sa	Beta: -1.33E-04 uCi/Sa		
16 K2TQ6-1-AA J8K130104-2-SAMP 11/06/2008 09:46			200.00g,in	200.00g	NPTA7324 12/02/08,pd 09/17/08,r								
									Scr:	Alpha: 1.99E-04 uCi/Sa	Beta: 7.81E-04 uCi/Sa		
17 K2TQ8-1-AA J8K130104-3-SAMP 11/06/2008 12:46			200.00g,in	200.00g	NPTA7325 12/02/08,pd 09/17/08,r								
									Scr:	Alpha: 6.23E-04 uCi/Sa	Beta: -6.59E-04 uCi/Sa		
18 K2TRK-1-AA J8K130108-1-SAMP 11/09/2008 12:55			199.90g,in	199.90g	NPTA7326 12/02/08,pd 09/17/08,r								
									Scr:	Alpha: 2.96E-03 uCi/Sa	Beta: -1.32E-03 uCi/Sa		
19 K2TRM-1-AA J8K130108-2-SAMP 11/09/2008 10:53			200.10g,in	200.10g	NPTA7327 12/02/08,pd 09/17/08,r								
									Scr:	Alpha: 2.12E-03 uCi/Sa	Beta: -3.92E-04 uCi/Sa		
20 K2T1E-1-AA J8K130122-1-SAMP 11/11/2008 10:23			200.00g,in	200.00g	NPTA7328 12/02/08,pd 09/17/08,r								
									Scr:	Alpha: -3.29E-03 uCi/Sa	Beta: 4.31E-03 uCi/Sa		
21 K27E3-1-AA-B J8K180000-598-BLK 10/31/2008 12:37			200.00g,in	200.00g	NPTA7329 12/02/08,pd 09/17/08,r								
									Scr:	Alpha:	Beta:		

TESTAMERICA

12/9/2008 4:49:06 PM

Sample Preparation/Analysis

Balance Id:1120482733

KO Np-237 PrpRC5086, SepRC5064(5003)
XW Neptunium-237 with tracer by alpha spec
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 12/15/2008

Sep1 DT/Tm Tech: _____

Batch: 8323598
SEQ Batch, Test: None

pCi/L

Sep2 DT/Tm Tech: _____

Prep Tech: ,LaneL



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

22 K27E3-1-AC-C 200.00g,in 200.00g NPSE0503

J8K180000-598-LCS

10/10/08,pd
09/17/08,r

200

10/31/2008 12:37

AmtRec:

#Containers: 1

Scr:

Alpha:

Beta:

Comments: PH < 2.0. RFR 12908

All Clients for Batch:

384868, Pacific Northwest National Laboratory Pacific Northwest National Lab, SS , 57671

K178J1AA-SAMP Constituent List:

Np-237	RDL:0.6	pCi/L	LCL:	UCL:	RPD:
K27E31AA-BLK:					
Np-237	RDL:0.6	pCi/L	LCL:	UCL:	RPD:
K27E31AC-LCS:					

K178J1AA-SAMP Calc Info:

Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
K27E31AA-BLK:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
K27E31AC-LCS:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

Approved By _____

Date: _____

25
73

12/22/2008 3:43:57 PM

ICOC Fraction Transfer/Status Report

ByDate: 12/23/2007, 12/27/2008, Batch: '8323598', User: 'ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
8323598				
AC	Rev1C	LaneL	12/9/2008 4:18:31 PM	
SC	wagarr	IsBatched	11/19/2008 10:08:55 AM	ICOC_RADCALC v4.8.35
SC	LaneL	InPrep	12/9/2008 4:18:31 PM	RL-PRP-004 REVISION 0
SC	LaneL	Prep1C	12/9/2008 4:49:45 PM	RL-PRP-004 REVISION 0
SC	Barcotl	InPrep	12/18/2008 1:52:58 PM	RL-PRP-010 REVISION 0
SC	Barcotl	Prep1C	12/18/2008 1:53:09 PM	RL-PRP-010 REVISION 0
SC	Barcotl	InSep1	12/18/2008 1:53:21 PM	RL-ALP-006 REVISION 0
SC	Barcotl	Sep1C	12/18/2008 1:53:31 PM	RL-ALP-006 REVISION 0
SC	AshworthA	Sep2C	12/18/2008 8:05:08 PM	ALP-016 REVISION 0
SC	DAWKINSO	InCnt1	12/18/2008 10:04:25 PM	RL-CI-008 REVISION 0
SC	DAWKINSO	CalcC	12/19/2008 10:37:53 PM	RL-CI-008 REVISION 0
SC	nortonj	Rev1C	12/22/2008 2:08:36 PM	RL-DR-C01 REV 0
AC	LaneL		12/9/2008 4:49:45 PM	
AC	Barcotl		12/18/2008 1:52:58	
AC	Barcotl		12/18/2008 1:53:09	
AC	Barcotl		12/18/2008 1:53:21	
AC	Barcotl		12/18/2008 1:53:31	
AC	AshworthA		12/18/2008 8:05:08	
AC	DAWKINSO		12/18/2008 10:04:25	
AC	DAWKINSO		12/19/2008 10:37:53	
AC	nortonj		12/22/2008 2:08:36	

AC: Accepting Entry; SC: Status Change

TesiAmenca Richland
Richland Wa.

TESTAMERICA

12/9/2008 3:36:53 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National Lab

BN I-129 Prp/SepRC5025

TB Gamma by LEPD

5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 12/15/2008 *W05554*

Sep1 DT/Tm Tech:

Batch: 8323596 WATER pCi/L

PM, Quote: SS, 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,Lanel



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Ini/Date	Comments:
1 K178J-1-AC J8K040320-1-SAMP 10/31/2008 12:37	500.00g,in	500.00g,in	ITA7818 12/04/08		<i>36.3</i>	<i>100</i>	<i>L2</i>	<i>165</i>	<i>12/17/08</i>	
AmtRec: 4XLP,2X4LP		#Containers: 6		Scr:		Alpha: -1.08E-03 uCi/Sa		Beta: 8.94E-04 uCi/Sa		
2 K178M-1-AC J8K040320-2-SAMP 10/31/2008 11:02	500.00g,in	500.00g,in	ITA7819 12/04/08		<i>36.1</i>		<i>L2</i>	<i>1842</i>	<i>12/17/08</i>	
AmtRec: 4XLP,2X4LP		#Containers: 6		Scr:		Alpha: 1.99E-05 uCi/Sa		Beta: -2.63E-05 uCi/Sa		
3 K178V-1-AC J8K040320-3-SAMP 10/31/2008 09:36	500.00g,in	500.00g,in	ITA7820 12/04/08		<i>36.4</i>		<i>L2</i>	<i>2028</i>	<i>12/17/08</i>	
AmtRec: 4XLP,2X4LP		#Containers: 6		Scr:		Alpha: -1.17E-03 uCi/Sa		Beta: 4.98E-04 uCi/Sa		
4 K2CKQ-1-AC J8K060146-1-SAMP 11/03/2008 14:10	500.00g,in	500.00g,in	ITA7821 12/04/08		<i>35.7</i>		<i>L2</i>	<i>0548</i>	<i>12/18/08</i>	
AmtRec: 4XLP,2X4LP		#Containers: 6		Scr:		Alpha: -2.95E-03 uCi/Sa		Beta: 3.52E-03 uCi/Sa		
5 K2CKT-1-AC J8K060146-2-SAMP 11/03/2008 13:44	500.00g,in	500.00g,in	ITA7822 12/04/08		<i>37.1</i>		<i>L4</i>	<i>0541</i>		
AmtRec: 4XLP,2X4LP		#Containers: 6		Scr:		Alpha: -2.39E-03 uCi/Sa		Beta: 1.42E-03 uCi/Sa		
6 K2CKX-1-AC J8K060146-3-SAMP 11/03/2008 12:29	500.00g,in	500.00g,in	ITA7823 12/04/08		<i>37.0</i>		<i>L5</i>	<i>0549</i>		
AmtRec: 4XLP,2X4LP		#Containers: 6		Scr:		Alpha: -8.05E-04 uCi/Sa		Beta: 3.67E-04 uCi/Sa		
7 K2CK2-1-AC J8K060146-4-SAMP 11/03/2008 10:21	500.00g,in	500.00g,in	ITA7824 12/04/08		<i>36.6</i>		<i>L2</i>	<i>0731</i>		
AmtRec: 4XLP,2X4LP		#Containers: 6		Scr:		Alpha: -2.72E-03 uCi/Sa		Beta: 3.91E-03 uCi/Sa		

TESTAMERICA

12/9/2008 3:36:54 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National LabBN I-129 Prp/SepRC5025
TB Gamma by LEPD
5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 12/15/2008

Sep1 DT/Tm Tech:

Batch: 8323596
SEQ Batch, Test: None

WATER

pCi/L

PM, Quote: SS, 57671

Sep2 DT/Tm Tech:

Prep Tech: ,Lanel

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 K2CK3-1-AC J8K060146-5-SAMP 11/03/2008 11:34	500.00g,in	500.00g,in	ITA7825 12/04/08			100	L4	0739	12/11/08/m	
AmtRec: 4XLP,2X4LP		#Containers: 6		Scr:		Alpha: -4.87E-04 uCi/Sa		Beta: -1.60E-03 uCi/Sa		
9 K2CK4-1-AC J8K060146-6-SAMP 11/03/2008 11:12	500.00g,in	500.00g,in	ITA7826 12/04/08				L5	0719		
AmtRec: 4XLP,2X4LP		#Containers: 6		Scr:		Alpha: -1.82E-03 uCi/Sa		Beta: 2.73E-03 uCi/Sa		
10 K2CK6-1-AC J8K060146-7-SAMP 11/03/2008 13:04	499.90g,in	499.90g,in	ITA7827 12/04/08				L2	0924	12/11/08/m	
AmtRec: 4XLP,2X4LP		#Containers: 6		Scr:		Alpha: -6.11E-04 uCi/Sa		Beta: 6.29E-04 uCi/Sa		
11 K2CNN-1-AC J8K060156-1-SAMP 11/04/2008 12:10	500.00g,in	500.00g,in	ITA7828 12/04/08				L4	0924		
AmtRec: 4XLP,2X4LP		#Containers: 6		Scr:		Alpha: 3.15E-03 uCi/Sa		Beta: 1.02E-03 uCi/Sa		
12 K2CNN-1-AF-X J8K060156-1-DUP 11/04/2008 12:10	500.00g,in	500.00g,in	ITA7829 12/04/08				L5	0925		
AmtRec: 4XLP,2X4LP		#Containers: 6		Scr:		Alpha: 3.15E-03 uCi/Sa		Beta: 1.02E-03 uCi/Sa		
13 K2CN0-1-AC J8K060156-2-SAMP 11/04/2008 13:16	500.00g,in	500.00g,in	ITA7830 12/04/08				L2	1110	12/11/08/m	
AmtRec: 4XLP,2X4LP		#Containers: 6		Scr:		Alpha: -1.91E-03 uCi/Sa		Beta: 1.82E-03 uCi/Sa		
14 K2CN5-1-AC J8K060156-3-SAMP 11/04/2008 10:00	500.00g,in	500.00g,in	ITA7831 12/04/08				L4	1110		
AmtRec: 4XLP,2X4LP		#Containers: 6		Scr:		Alpha: -1.24E-03 uCi/Sa		Beta: 3.52E-03 uCi/Sa		

TESTAMERICA

12/9/2008 3:36:55 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National Lab

BN I-129 Prp/SepRC5025

TB Gamma by LEPD

5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 12/15/2008

Sep1 DT/Tm Tech:

Batch: 8323596 WATER pCi/L

PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,Lanel



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
15 K2TQ5-1-AC J8K130104-1-SAMP 11/06/2008 11:05	500.00g,in	500.00g,in	ITA7832 12/04/08							
					37.3	100	L5	1111	12/11/08	
				AmtRec: 4XLP,2X4LP	#Containers: 6	Scr:		Alpha: 4.97E-04 uCi/Sa	Beta: -1.33E-04 uCi/Sa	
16 K2TQ6-1-AC J8K130104-2-SAMP 11/06/2008 09:46	500.00g,in	500.00g,in	ITA7833 12/04/08							
					36.2		L2	1257	12/10/08	
				AmtRec: 4XLP,2X4LP	#Containers: 6	Scr:		Alpha: 1.99E-04 uCi/Sa	Beta: 7.81E-04 uCi/Sa	
17 K2TQ8-1-AC J8K130104-3-SAMP 11/06/2008 12:46	500.00g,in	500.00g,in	ITA7834 12/04/08							
					36.5		L2	1442		
				AmtRec: 4XLP,2X4LP	#Containers: 6	Scr:		Alpha: 6.23E-04 uCi/Sa	Beta: -6.59E-04 uCi/Sa	
18 K2TRK-1-AC J8K130108-1-SAMP 11/09/2008 12:55	499.90g,in	499.90g,in	ITA7835 12/04/08							
					37.1		L2	1624	12/10/08	
				AmtRec: 4XLP,2X4LP	#Containers: 6	Scr:		Alpha: 2.96E-03 uCi/Sa	Beta: -1.32E-03 uCi/Sa	
19 K2TRM-1-AC J8K130108-2-SAMP 11/09/2008 10:53	500.10g,in	500.10g,in	ITA7836 12/04/08							
					46.9		L2	1810	12/18/08	
				AmtRec: 4XLP,2X4LP	#Containers: 6	Scr:		Alpha: 2.12E-03 uCi/Sa	Beta: -3.92E-04 uCi/Sa	
20 K2T1E-1-AC J8K130122-1-SAMP 11/11/2008 10:23	500.00g,in	500.00g,in	ITA7837 12/04/08							
					37.0		L2	1958	12/18/08	
				AmtRec: 4XLP,2X4LP	#Containers: 6	Scr:		Alpha: -3.29E-03 uCi/Sa	Beta: 4.31E-03 uCi/Sa	
21 K27EV-1-AA-B J8K180000-596-BLK 11/04/2008 12:10	500.00g,in	500.00g,in	ITA7838 12/04/08							
					36.8		L2	2150	12/18/08	
				AmtRec:	#Containers: 1	Scr:		Alpha:	Beta:	

TESTAMERICA

12/9/2008 3:36:56 PM

Sample Preparation/Analysis

Balance Id:1120482733

BN I-129 Prp/SepRC5025

Pipet #: _____

TB Gamma by LEPD

SI CLIENT: HANFORD

AnalyDueDate: 12/15/2008

Sep1 DT/Tm Tech:

Batch: 8323596

pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,LaneL

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
22 K27EV-1-AC-C		500.00g.in	ISB0308							
J8K180000-596-LCS			10/08/08		36.0	100	L2	2345	12/15/0800	
11/04/2008 12:10		AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:	

Comments:

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, SS, 57671

K178J1AC-SAMP Constituent List:

I-129 RDL:5.00E+00 pCi/L LCL:70 UCL:130 RPD:20
 K27EV1AA-BLK:
 I-129 RDL:5.00E+00 pCi/L LCL: UCL: RPD:
 K27EV1AC-LCS:
 I-129 RDL:5 pCi/L LCL:70 UCL:130 RPD:20

K178J1AC-SAMP Calc Info:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
 K27EV1AA-BLK:
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
 K27EV1AC-LCS:
 Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

12/23/2008 12:51:12 PM

ICOC Fraction Transfer/Status Report

ByDate: 12/24/2007, 12/28/2008, Batch: '8323596', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
8323596				
AC	Rev1C	LaneL	12/9/2008 3:01:47 PM	
SC		wagarr	IsBatched	11/19/2008 10:08:55 AM ICOC_RADCALC v4.8.35
SC		LaneL	InPrep	12/9/2008 3:01:47 PM RL-PRP-004 REVISION 0
SC		LaneL	Prep1C	12/9/2008 3:38:04 PM RL-PRP-004 REVISION 0
SC		BostedD	Prep2C	12/17/2008 3:07:27 PM RL-GAM-002 REVISION 0
SC		ClarkR	InCnt1	12/17/2008 3:10:17 PM RL-CI-007 REVISION 0
SC		BlackCL	CalcC	12/19/2008 5:55:02 AM RL-CI-007 REVISION 0
SC		whelands	Rev1C	12/23/2008 12:51:05 PM RL-DR-001 REV 0
AC		LaneL	12/9/2008 3:38:04 PM	
AC		BostedD	12/17/2008 3:07:27	
AC		ClarkR	12/17/2008 3:10:17	
AC		BlackCL	12/19/2008 5:55:02	
AC		whelands	12/23/2008 12:51:05	

AC: Accepting Entry, SC: Status Change

TestAmerica Richland

Richland Wa.

TESTAMERICA

12/10/2008 8:23:57 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National Lab

CY Se-79 PrpRC5016, SepRC5043
TM Selenium-79 by Liquid Scint
SI CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 12/15/2008 *W05554*

Sep1 DT/Tm Tech:

Batch: 8323601 WATER pCi/L PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None All Tests: 8323594 7YSR, 8323596 BNTB, 8323598 KOXW, 8323601 CYTM,

Prep Tech: ,LaneL



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 K178J-1-AD J8K040320-1-SAMP 10/31/2008 12:37	200.10g,in	200.10g,in	12/09/08	SETA0440					
200									
Scr: Alpha: -1.08E-03 uCi/Sa Beta: 8.94E-04 uCi/Sa									
2 K178M-1-AD J8K040320-2-SAMP 10/31/2008 11:02	200.10g,in	200.10g,in	12/09/08	SETA0441					
Scr: Alpha: 1.99E-05 uCi/Sa Beta: -2.63E-05 uCi/Sa									
3 K178V-1-AD J8K040320-3-SAMP 10/31/2008 09:36	200.00g,in	200.00g,in	12/09/08	SETA0442					
Scr: Alpha: -1.17E-03 uCi/Sa Beta: 4.98E-04 uCi/Sa									
4 K2CKQ-1-AD J8K060146-1-SAMP 11/03/2008 14:10	200.00g,in	200.00g,in	12/09/08	SETA0443					
Scr: Alpha: -2.95E-03 uCi/Sa Beta: 3.52E-03 uCi/Sa									
5 K2CKT-1-AD J8K060146-2-SAMP 11/03/2008 13:44	200.00g,in	200.00g,in	12/09/08	SETA0444					
Scr: Alpha: -2.39E-03 uCi/Sa Beta: 1.42E-03 uCi/Sa									
6 K2CKX-1-AD J8K060146-3-SAMP 11/03/2008 12:29	200.00g,in	200.00g,in	12/09/08	SETA0445					
Scr: Alpha: -8.05E-04 uCi/Sa Beta: 3.67E-04 uCi/Sa									
7 K2CK2-1-AD J8K060146-4-SAMP 11/03/2008 10:21	200.00g,in	200.00g,in	12/09/08	SETA0446					
Scr: Alpha: -2.72E-03 uCi/Sa Beta: 3.91E-03 uCi/Sa									

80

TESTAMERICA

12/10/2008 8:23:58 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National Lab

CY Se-79 PrpRC5016, SepRC5043

Pipet #: _____

TM Selenium-79 by Liquid Scint

Sep1 DT/Tm Tech: _____

5I CLIENT: HANFORD

Sep2 DT/Tm Tech: _____

AnalyDueDate: 12/15/2008

Batch: 8323601 WATER pCi/L
SEQ Batch, Test: None

PM, Quote: SS , 57671

Prep Tech: ,LaneL



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 K2CK3-1-AD J8K060146-5-SAMP 11/03/2008 11:34		200.00g,in	SETA0447 12/09/08						
					200				Scr: Alpha: -4.87E-04 uCi/Sa Beta: -1.60E-03 uCi/Sa
9 K2CK4-1-AD J8K060146-6-SAMP 11/03/2008 11:12		200.10g,in	SETA0448 12/09/08						
									Scr: Alpha: -1.82E-03 uCi/Sa Beta: 2.73E-03 uCi/Sa
10 K2CK6-1-AD J8K060146-7-SAMP 11/03/2008 13:04		200.00g,in	SETA0449 12/09/08						
									Scr: Alpha: -6.11E-04 uCi/Sa Beta: 6.29E-04 uCi/Sa
11 K2CNN-1-AD J8K060156-1-SAMP 11/04/2008 12:10		200.10g,in	SETA0450 12/09/08						
									Scr: Alpha: 3.15E-03 uCi/Sa Beta: 1.02E-03 uCi/Sa
12 K2CN0-1-AD J8K060156-2-SAMP 11/04/2008 13:16		200.00g,in	SETA0451 12/09/08						
									Scr: Alpha: -1.91E-03 uCi/Sa Beta: 1.82E-03 uCi/Sa
13 K2CN5-1-AD J8K060156-3-SAMP 11/04/2008 10:00		200.00g,in	SETA0452 12/09/08						
									Scr: Alpha: -1.24E-03 uCi/Sa Beta: 3.52E-03 uCi/Sa
14 K2TQ5-1-AE J8K130104-1-SAMP 11/06/2008 11:05		200.10g,in	SETA0453 12/09/08						
									Scr: Alpha: 4.97E-04 uCi/Sa Beta: -1.33E-04 uCi/Sa

TESTAMERICA

12/10/2008 8:23:59 AM

Sample Preparation/Analysis

Balance Id:1120482733

394898. Pacific Northwest National Laboratory
Pacific Northwest National LabCY Se-79 PrpRC5016, SepRC5043
TM Selenium-79 by Liquid Scint
SI CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 12/15/2008

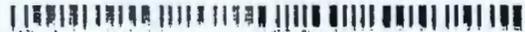
Sep1 DT/Tm Tech: _____

Batch: 8323601 WATER pCi/L
SEQ Batch, Test: None

Pm, Quote: SS, 57671

Sep2 DT/Tm Tech: _____

Prep Tech: ,Lanel



Work Order, Lot, Sample Date/Time	Total Amt./Unit	Initial Aliquot Amt./Unit	OC Tracer Prep Date	Tracer Yield	Count Time Min	Detector Id	Count On / Off (24hr) Circle	CR Analyst, Init/Date	Comments:	
15 K2TQ5-1-AF-X J8K130104-1-DUP 11/06/2008 11:05		200.00g,in	SETA0454 12/09/08							
					200					
		AmtRec: 4XLP,2X4LP	#Containers: 6				Scr: Alpha: 4.97E-04 uCi/Sa	Beta: -1.33E-04 uCi/Sa		
16 K2TQ6-1-AE J8K130104-2-SAMP 11/06/2008 09:46		200.10g,in	SETA0455 12/09/08							
		AmtRec: 4XLP,2X4LP	#Containers: 6				Scr: Alpha: 1.99E-04 uCi/Sa	Beta: 7.81E-04 uCi/Sa		
17 K2TQ8-1-AE J8K130104-3-SAMP 11/06/2008 12:46		200.10g,in	SETA0456 12/09/08							
		AmtRec: 4XLP,2X4LP	#Containers: 6				Scr: Alpha: 6.23E-04 uCi/Sa	Beta: -6.59E-04 uCi/Sa		
18 K2TRK-1-AD J8K130108-1-SAMP 11/09/2008 12:55		200.10g,in	SETA0457 12/09/08							
		AmtRec: 4XLP,2X4LP	#Containers: 6				Scr: Alpha: 2.96E-03 uCi/Sa	Beta: -1.32E-03 uCi/Sa		
19 K2TRM-1-AD J8K130108-2-SAMP 11/09/2008 10:53		200.00g,in	SETA0458 12/09/08							
		AmtRec: 4XLP,2X4LP	#Containers: 6				Scr: Alpha: 2.12E-03 uCi/Sa	Beta: -3.92E-04 uCi/Sa		
20 K2T1E-1-AD J8K130122-1-SAMP 11/11/2008 10:23		200.10g,in	SETA0459 12/09/08							
		AmtRec: 4XLP,2X4LP	#Containers: 6				Scr: Alpha: -3.29E-03 uCi/Sa	Beta: 4.31E-03 uCi/Sa		
21 K27FD-1-AA-B J8K180000-601-BLK 11/06/2008 11:05		200.00g,in	SETA0460 12/09/08							
		AmtRec:	#Containers: 1				Scr: Alpha:	Beta:		

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TESTAMERICA

12/10/2008 3:12:50 AM

Sample Preparation/Analysis

Balance Id:

CY Se-79 PrpRC5016, SepRC5043
TM Selenium-79 by Liquid Scint
5I CLIENT: HANFORD

Pipet #:

AnalyDucDate: 12/15/2008

Sep1 DT/Tm Tech:

Batch: 8323601

pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Count Time Min	Detector Id	Count On C# (24hr) Circle	CR Analyst, Init/Date	Comments:
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22 K27FD-1-AC-BN

SETA
0480

J8K180000-601-IBLK

11/06/2008 11:05

AmtRec:

#Containers: 1

Scr:

Alpha:

Beta:

23 K27FD-1-AD-BN

SETA
0481

J8K180000-601-IBLK

11/06/2008 11:05

AmtRec:

#Containers: 1

Scr:

Alpha:

Beta:

Comments: PH < 2.0. RNR 121008

83

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, SS, 57671

K178J1AD-SAMP Constituent List:

Se-79 RDL:3.00E+01 pCi/L LCL: UCL: RPD:

K27FD1AA-BLK:

Se-79 RDL:3.00E+01 pCi/L LCL: UCL: RPD:

K27FD1AC-IBLK:

Se-79 RDL:3.00E+01 pCi/L LCL: UCL: RPD:

K27FD1AD-IBLK:

Se-79 RDL:3.00E+01 pCi/L LCL: UCL: RPD:

K178J1AD-SAMP Calc Info:

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

K27FD1AA-BLK:

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

K27FD1AC-IBLK:

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

K27FD1AD-IBLK:

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

Approved By

Date:



RE-ANALYSIS REQUEST

DUE DATE 12-15

CUSTOMER PGW

ANALYSIS Se-79

MATRIX H₂O

LOT NUMBER J8K040320

SAMPLE DELIVERY GROUP WO 5554

OLD BATCH NUMBER 832 3601

NEW BATCH NUMBER 9005153

LAB SAMPLE ID	CLIENT ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1) K178JIAD		LOW TRACER YIELD
2) K2TRMIAD		↓ ↓
3)		
4)		
5)		
6)		
7)		
8)		
9)		
10)		
11)		
12)		
13)		
14)		
15)		
16)		
17)		
18)		
19)		
20)		
LAB QC ID		Assigned with new batch.

RC-048, 12/07, Rev 8

TESTAMERICA

1/5/2009 10:37:57 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory
Pacific Northwest National LabCY Se-79 PrpRC5016, SepRC5043
TM Selenium-79 by Liquid Scint
SI CLIENT: HANFORD

Pipet #:

AnalyDueDate: 12/15/2008

Sep1 DT/Tm Tech:

Batch: 9005153 WATER pCi/L
SEQ Batch, Test: None

PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

Prep Tech: ,Lanel

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 K178J-2-AD J8K040320-1-SAMP 10/31/2008 12:37		200.10g,in	SETA0489 12/18/08		200				
		AmtRec: 4XLP,2X4LP	#Containers: 6				Scr: Alpha: -1.08E-03 uCi/Sa	Beta: 8.94E-04 uCi/Sa	
2 K2TRM-2-AD J8K130108-2-SAMP 11/09/2008 10:53		200.00g,in	SETA0490 12/18/08						
		AmtRec: 4XLP,2X4LP	#Containers: 6				Scr: Alpha: 2.12E-03 uCi/Sa	Beta: -3.92E-04 uCi/Sa	
3 K5FM8-1-AA-B J9A050000-153-BLK 10/31/2008 12:37		200.10g,in	SETA0491 12/18/08						
		AmtRec:	#Containers: 1				Scr: Alpha:	Beta:	
4 K5FM8-1-AC-BN J9A050000-153-IBLK 10/31/2008 12:37			SETA 0522						
		AmtRec:	#Containers: 1				Scr: Alpha:	Beta:	

Comments: PH < 2.0. RFR 1509

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, SS , 57671

K178J2AD-SAMP Constituent List:

K5FM81AA-BLK:

K5FM81AC-IBLK:

K178J2AD-SAMP Calc Info:

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

ISV - Insufficient Volume for Analysis

WO Cnt: 4

Prep_SamplePrep v4.8.34

TESTAMERICA

1/5/2009 10:37:58 AM

Sample Preparation/Analysis

Balance Id: _____

CY Se-79 PrpRC5016, SepRC5043

Pipet #: _____

TM Selenium-79 by Liquid Scint

Sep1 DT/Tm Tech: _____

5I CLIENT: HANFORD

Sep2 DT/Tm Tech: _____

AnalyDueDate: 12/15/2008

Batch: 9005153

pCi/L

Prep Tech: _____

SEQ Batch, Test: None



Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B					
K5FM81AA-BLK:									
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B					
K5FM81AC-IBLK:									
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B					

Approved By _____

Date: _____

86

1/13/2009 12:23:20 PM

ICOC Fraction Transfer/Status Report

ByDate: 1/14/2008, 1/18/2009, Batch: '9005153', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
9005153				
AC	Rev1C	LaneL	1/5/2009 10:31:12	
SC		nortonj	IsBatched	1/5/2009 9:39:44 AM
SC		LaneL	InPrep	1/5/2009 10:31:12 AM
SC		LaneL	Prep1C	1/5/2009 10:38:20 AM
SC		Barcotl	InSep1	1/8/2009 10:36:25 PM
SC		Barcotl	Sep1C	1/8/2009 10:36:37 PM
SC		Barcotl	Sep1C	1/8/2009 10:36:47 PM
SC		DAWKINSO	InCnt1	1/8/2009 11:23:17 PM
SC		DAWKINSO	CalcC	1/12/2009 7:45:00 PM
SC		antonsonl	Rev1C	1/13/2009 12:23:08 PM
AC		LaneL	1/5/2009 10:38:20	
AC		Barcotl	1/8/2009 10:36:25 PM	
AC		Barcotl	1/8/2009 10:36:37 PM	REVISION 0
AC		Barcotl	1/8/2009 10:36:47 PM	
AC		DAWKINSO	1/8/2009 11:23:17 PM	
AC		DAWKINSO	1/12/2009 7:45:00 PM	
AC		antonsonl	1/13/2009 12:23:08	

AC: Accepting Entry; SC: Status Change

TestAmerica Richland
Richland Wa.