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Analytical Data Package Prepared For

CH2M Hill Plateau Remediation

Radiochemical Analysis By

TestAmerica

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

Assigned Laboratory Code: TARL

Data Package Contains _____ Pages

Report No.: 40410

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

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
W05549	F08-086	B1TRT2	J8J280293-1	K1RL21AG	9K1RL210	8305490
		B1TRT2	J8J280293-1	K1RL21AE	9K1RL210	8305491
		B1TRT2	J8J280293-1	K1RL21AD	9K1RL210	8305493
		B1TRT2	J8J280293-1	K1RL21AA	9K1RL210	8305495
		B1TRT2	J8J280293-1	K1RL21AL	9K1RL210	8305496
		B1TRT2	J8J280293-1	K1RL21AK	9K1RL210	8305498
		B1TRT2	J8J280293-1	K1RL21AJ	9K1RL210	8305499
		B1TRT2	J8J280293-1	K1RL21AH	9K1RL210	8305500
		B1TRT2	J8J280293-1	K1RL21AC	9K1RL210	8305501
		B1TRT2	J8J280293-1	K1RL22AF	9K1RL220	8346129

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Certificate of Analysis

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

December 22, 2008

Attention: Mike Neely

SAF Number	:	F08-086
Date SDG Closed	:	October 28, 2008
Number of Samples	:	One (1)
Sample Type	:	Water
SDG Number	:	W05549
Data Deliverable	:	45/45 Day

CASE NARRATIVE

I. Introduction

On October 28, 2008 one sample was received at TestAmerica for radiochemical analysis. Upon receipt, the sample was assigned to lot J8J280293 and assigned the following laboratory ID number to correspond with the Fluor Hanford (FH) specific ID:

FH ID#	TARL ID#	MATRIX	DATE OF RECEIPT
B1TRT2	K1RL2	WATER	10/28/08

II. Sample Receipt

The sample was 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)*
Gas Proportional Counting
Gross Alpha by method RL-GPC-001 (RICH-RC-5014)*
Gross Beta by method RL-GPC-001 (RICH-RC-5014)*
Strontium-90 by method RL-GPC-003 (RICH-RC-5006)*
Gamma Spectroscopy
Iodine-129 by method RL-GAM-002 (RICH-RC-5025)*
Liquid Scintillation Counting
Selenium-79 by method RL-LSC-012 (RICH-RC-5043)*
Technetium-99 by method RL-LSC-013 (RICH-RC-5078)*
Tritium by method RL-LSC-005 (RICH-RC-5007)*
Laser Induced Phosphorimetry
Total Uranium by method RL-KPA-003 (RICH-RC-5058)*

*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.

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 (B1TRT2) results are within contractual requirements.

Neptunium-237 by method RL-ALP-013 (RICH-RC-5009):
The LCS, batch blank, sample and sample duplicate (B1TRT2) results are within contractual requirements.

Gas Proportional Counting
Gross Alpha by method RL-GPC-001 (RICH-RC-5014):
The LCS recovered low on the first analysis. The samples were reanalyzed with acceptable results. Except as noted, the LCS, batch blank, samples and sample duplicate (B1TRT2) results are within contractual requirements.

Gross Beta by method RL-GPC-001 (RICH-RC-5014):
The LCS, batch blank, samples and sample duplicate (B1TRT2) results are within contractual requirements.

Strontium-90 by method RL-GPC-003 (RICH-RC-5006):
The MDA was not met for sample B1TRT2 due to low but acceptable tracer recovery. Except as noted, the LCS, batch blank, samples and sample duplicate (B1TRT2) results are within contractual requirements.

Gamma Spectroscopy
Iodine-129 by method RL-GAM-002 (RICH-RC-5025):
The LCS, batch blank, samples and sample duplicate (B1TRT2) results are within contractual requirements.

Liquid Scintillation Counting
Technetium-99 by method RL-LSC-013 (RICH-RC-5078):
The LCS, batch blank, samples, sample duplicate (B1TRT2), and sample matrix spike (B1TRT2) results are within contractual requirements.

Selenium-79 by method RL-LSC-012 (RICH-RC-5043):
There is no LCS for selenium-79. Except as noted, the LCS, batch blank, samples and sample duplicate (B1TRT2) results are within contractual requirements.

Tritium by method RL-LSC-005 (RICH-RC-5007):
The LCS, batch blank, samples and sample duplicate (B1TRT2) results are within contractual requirements.

Total Uranium
Total Uranium by method RL-KPA-003 (RICH-RC-5058):
The LCS, batch blank, samples, sample duplicate (B1TRT2), and sample matrix spike (B1TRT2) 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 00-02	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 = constants * f(x,y,z,...). The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1,2, or 3).

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

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

Report Definitions

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

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 COPRECIPITATION
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 ModFe55/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
Fe55	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	R4-73-014I/EPA ASTM D2334 (Discontinued)	DETERMINATION OF IODINE-131 AND 129 IN WATER BY SOLVENT EXTRACTION METHOD
I131	RL-GAM-002	RICH-RC-5025	R4-73-014I/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	BHI-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 ModFe55/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 / DOE00089T	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 PREFORMANCE 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	COPRECIPITATION OF SOME ACTINIDES ON NEODYMIUM FLUORIDE FOR ALPHA-PARTICLE SPECTROMETRY
Prep - Count	RL-ALP-015	RICH-RC-5039	G-03 / HASL 300 Anal Chem 1972	ELECTRODEPOSITION OF ACTINIDES
Prep - Count	RL-ALP-014	RICH-RC-5085	Morrison & Freiser NAS-NS-3050	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	Sr02 / 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	PREPARATION OF SOIL SAMPLES
Prep - Soil	RL-PRP-005	RICH-RC-5019	D5259 / ASTM 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	AnalyticaChemActa1992 RP800 / DOE00089T	URINE AND WATER SAMPLE PREPARATION BY CALCIUM PHOSPHATE PRECIPITATION
Prep - Water	RL-PRP-010	RICH-RC-5086	AnalyticaChemActa1992 RP800 / DOE00089T	URINE AND WATER SAMPLE PREPARATION BY CALCIUM PHOSPHATE PRECIPITATION
Pu	ARCHIVED	RICH-RE-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	AnalyticaChemActa1992 RP800 / DOE00089T	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, Lundrell, 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

Sample Results Summary

TestAmerica TARL

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

Date: 22-Dec-08

Report No. : 40410

SDG No: W05549

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
8305498 SRTOT_SEP_PRECIP_GPC									
B1TRT2									
	K1RL21AK	STRONTIUM	2.00E+00 +- 1.96E+00	U	pCi/L	25%	3.87E+00		
B1TRT2 DUP									
	K1RL21AW	STRONTIUM	4.32E-01 +- 9.11E-01	U	pCi/L	49%	1.94E+00		128.9
8305500 KOXW									
B1TRT2									
	K1RL21AH	NP-237	5.02E-02 +- 1.03E-01	U	pCi/L	83%	2.41E-01	1.00E+00	
B1TRT2 DUP									
	K1RL21A0	NP-237	-1.22E-02 +- 1.24E-01	U	pCi/L	82%	2.92E-01	1.00E+00	328.5
8305490 UISO_PLATE_AEA									
B1TRT2									
	K1RL21AG	U-234	1.77E+00 +- 5.42E-01		pCi/L	94%	1.42E-01	1.00E+00	
		U-235	8.88E-02 +- 1.04E-01	U	pCi/L	94%	1.42E-01	1.00E+00	
		U-238	1.26E+00 +- 4.40E-01		pCi/L	94%	1.67E-01	1.00E+00	
B1TRT2 DUP									
	K1RL21AM	U-234	2.06E+00 +- 6.11E-01		pCi/L	104%	1.50E-01	1.00E+00	15.2
		U-235	6.27E-02 +- 9.01E-02	U	pCi/L	104%	1.50E-01	1.00E+00	34.5
		U-238	1.28E+00 +- 4.53E-01		pCi/L	104%	1.50E-01	1.00E+00	1.4
8305496 I129_SEP_LEPS_GS									
B1TRT2									
	K1RL21AL	I-129L	-3.55E-01 +- 1.03E+00	U	pCi/L	99%	1.77E+00		
B1TRT2 DUP									
	K1RL21AV	I-129L	-1.07E-01 +- 1.01E+00	U	pCi/L	100%	1.84E+00		
8305495 BETA_GPC									
B1TRT2									
	K1RL21AA	BETA	1.07E+01 +- 2.40E+00		pCi/L	100%	2.83E+00	4.00E+00	
B1TRT2 DUP									
	K1RL21AU	BETA	9.92E+00 +- 2.60E+00		pCi/L	100%	2.78E+00	4.00E+00	7.8
8346129 9310_ALPHABETA_GPC									
B1TRT2									
	K1RL22AF	ALPHA	2.45E+00 +- 1.38E+00		pCi/L	100%	1.21E+00	3.00E+00	
B1TRT2 DUP									
	K1RL21A2	ALPHA	1.79E+00 +- 1.26E+00		pCi/L	100%	1.74E+00	3.00E+00	31.2
8305491 UTOT_KPA									
B1TRT2									
	K1RL21AE	TOTAL-URANIUM	2.90E+00 +- 2.98E-01		pCi/L		5.62E-02	1.40E-01	
B1TRT2 DUP									
	K1RL21AP	TOTAL-URANIUM	2.91E+00 +- 2.98E-01		pCi/L		5.62E-02	1.40E-01	
8305493 TC99_SEP_LSC									

TestAmerica
rptSTLRchSaSummary2 V5.2 A2002

RPD - Relative Percent Difference.

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

Sample Results Summary

Date: 22-Dec-08

TestAmerica TARL

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

Report No. : 40410

SDG No: W05549

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
8305493 TC99_SEP_LSC									
B1TRT2									
	K1RL21AD	TC-99	2.12E+01 +- 7.21E+00		pCi/L	100%	1.01E+01	1.50E+01	
B1TRT2 DUP									
	K1RL21AR	TC-99	2.31E+01 +- 7.30E+00		pCi/L	100%	9.98E+00	1.50E+01	8.2
8305499 RICHRC5043									
B1TRT2									
	K1RL21AJ	Se-79	2.96E+00 +- 1.68E+01	U	pCi/L	41%	1.04E+01	3.00E+01	
B1TRT2 DUP									
	K1RL21AX	Se-79	1.49E+00 +- 8.85E+00	U	pCi/L	78%	5.48E+00	3.00E+01	66.2
8305501 906.0_H3_LSC									
B1TRT2									
	K1RL21AC	H-3	8.87E+03 +- 5.18E+02		pCi/L	100%	3.64E+02	4.00E+02	
B1TRT2 DUP									
	K1RL21A1	H-3	9.29E+03 +- 5.19E+02		pCi/L	100%	3.24E+02	4.00E+02	4.5

No. of Results: 24

TestAmerica

rptSTLRchSaSummary2 V5.2 A2002

RPD - Relative Percent Difference.

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

QC Results Summary

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Date: 22-Dec-08

Report No. : 40410

SDG No.: W03549

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC|MDA
SRTOT_SEP_PRECIP_GPC								
8305498 BLANK QC,								
K12XQ1AA	STRONTIUM	5.03E-02 +- 4.90E-01	U	pCi/L	98%			1.09E+00
8305498 LCS,								
K12XQ1AC	STRONTIUM	2.78E+01 +- 7.35E+00		pCi/L	99%	103%	0.0	1.04E+00
KOXW								
8305500 BLANK QC,								
K12XV1AA	NP-237	0.00E+00 +- 1.00E-01	U	pCi/L	81%			2.36E-01
8305500 LCS,								
K12XV1AC	NP-237	1.05E+01 +- 2.15E+00		pCi/L	83%	115%	0.2	4.60E-01
UISO_PLATE_AEA								
8305490 BLANK QC,								
K12XF1AA	U-234	3.97E-02 +- 8.29E-02	U	pCi/L	98%			1.79E-01
	U-235	-5.68E-03 +- 5.79E-02	U	pCi/L	98%			1.36E-01
	U-238	2.84E-02 +- 5.81E-02	U	pCi/L	98%			1.36E-01
8305490 LCS,								
K12XF1AC	U-234	8.72E+00 +- 1.79E+00		pCi/L	92%	100%	0.0	1.83E-01
	U-238	9.42E+00 +- 1.91E+00		pCi/L	92%	103%	0.0	1.55E-01
I129_SEP_LEPS_GS								
8305496 BLANK QC,								
K12XM1AA	I-129L	2.25E-01 +- 1.20E+00	U	pCi/L	99%			2.08E+00
8305496 LCS,								
K12XM1AC	I-129L	4.81E+01 +- 6.70E+00		pCi/L	104%	105%	0.1	2.68E+00
BETA_GPC								
8305495 BLANK QC,								
K12XL1AA	BETA	1.36E+00 +- 1.34E+00	U	pCi/L	100%			2.73E+00
8305495 LCS,								
K12XL1AC	BETA	2.21E+01 +- 3.74E+00		pCi/L	100%	93%	-0.1	2.72E+00
9310_ALPHABETA_GPC								
8346129 BLANK QC,								
K4GJW1AA	ALPHA	3.42E-01 +- 4.77E-01	U	pCi/L	100%			9.10E-01
8346129 LCS,								
K4GJW1AC	ALPHA	1.82E+01 +- 4.67E+00		pCi/L	100%	80%	-0.2	8.42E-01
UTOT_KPA								
8305491 MATRIX SPIKE, B1TRT2								
K1RL21AN	TOTAL-URANIUM	2.30E+01 +- 3.08E+00		pCi/L		94%	-0.1	5.62E-02
8305491 BLANK QC,								
K12XG1AA	TOTAL-URANIUM	2.39E-02 +- 3.07E-03	U	pCi/L				5.62E-02
8305491 LCS,								
K12XG1AD	TOTAL-URANIUM	2.49E+00 +- 2.55E-01		pCi/L		99%	0.0	5.62E-02
K12XG1AC	TOTAL-URANIUM	2.29E+01 +- 2.70E+00		pCi/L		94%	-0.1	5.62E-02
TC99_SEP_LSC								
8305493 MATRIX SPIKE, B1TRT2								

TestAmerica

rptSTLRchQcSummary V5.2 A2002

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

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncer: or not identified by gamma scan software.

QC Results Summary

Date: 22-Dec-08

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Report No. : 40410

SDG No.: W05549

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC|MDA
K1RL21AQ	TC-99	3.25E+03 +- 2.00E+02		pCi/L	100%	90%	-0.1	1.00E+01
8305493 BLANK QC,								
K12XH1AA	TC-99	2.77E+00 +- 6.17E+00	U	pCi/L	100%			1.01E+01
8305493 LCS,								
K12XH1AC	TC-99	4.98E+02 +- 3.52E+01		pCi/L	100%	90%	-0.1	9.92E+00
RICHRC5043								
8305499 BLANK QC,								
K12XR1AA	Se-79	-7.06E+00 +- 2.60E+01	U	pCi/L	25%			1.68E+01
906.0_H3_LSC								
8305501 BLANK QC,								
K12X01AA	H-3	1.82E+02 +- 1.57E+02	U	pCi/L	100%			3.22E+02
K12X01AD	H-3	-5.71E+01 +- 1.46E+02	U	pCi/L	100%			3.24E+02
8305501 LCS,								
K12X01AE	H-3	2.50E+03 +- 2.56E+02		pCi/L	100%	92%	-0.1	3.23E+02
K12X01AC	H-3	2.64E+03 +- 2.61E+02		pCi/L	100%	97%	0.0	3.22E+02

No. of Results: 27

TestAmerica

rptSTLRchQcSummary V5.2 A2002

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

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

TESTAMERICA

FORM I

SAMPLE RESULTS

Date: 22-Dec-08

Lab Name:	TestAmerica	**SDG:**	W05549	**Collection Date:**	10/28/2008 9:25:00 AM
Lot-Sample No.:	J8J280293-1	**Report No. :**	40410	**Received Date:**	10/28/2008 1:00:00 PM
Client Sample ID:	B1TRT2	**COC No. :**		**Matrix:**	WATER

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 8305490	UISO_PLATE_AEA			**Work Order:** K1RL21AG			**Report DB ID:** 9K1RL210					
U-234	***1.77E+00***		4.6E-01	5.4E-01	1.42E-01	pCi/L	94%	*(12.5)*	12/8/08 11:05 a		0.2	ALP9
						3.08E-02	1.00E+00	*(6.5)*			L	
U-235	***8.88E-02***	U	1.0E-01	1.0E-01	1.42E-01	pCi/L	94%	*0.63*	12/8/08 11:05 a		0.2	ALP9
						3.08E-02	1.00E+00	*(1.7)*			L	
U-238	***1.26E+00***		3.9E-01	4.4E-01	1.67E-01	pCi/L	94%	*(7.5)*	12/8/08 11:05 a		0.2	ALP9
						4.35E-02	1.00E+00	*(5.7)*			L	
							Ratio U-234/238 = 1.4					
Batch: 8305491	UTOT_KPA			**Work Order:** K1RL21AE			**Report DB ID:** 9K1RL210					
TOTAL-URANIUM	***2.90E+00***			3.0E-01	5.62E-02	pCi/L		*(51.7)*	12/8/08 09:20 a		0.025	KPAW3
						1.99E-02	1.40E-01	*(19.5)*			ML	
Batch: 8305493	TC99_SEP_LSC			**Work Order:** K1RL21AD			**Report DB ID:** 9K1RL210					
TC-99	***2.12E+01***		4.9E+00	7.2E+00	1.01E+01	pCi/L	100%	*(2.1)*	12/17/08 11:21 a		0.1249	LSC6
						4.84E+00	1.50E+01	*(5.9)*			L	
Batch: 8305495	BETA_GPC			**Work Order:** K1RL21AA			**Report DB ID:** 9K1RL210					
BETA	***1.07E+01***		2.0E+00	2.4E+00	2.83E+00	pCi/L	100%	*(3.8)*	12/8/08 06:07 a		0.2	GPC31A
						1.34E+00	4.00E+00	*(8.9)*			L	
Batch: 8305496	I129_SEP_LEPS_GS			**Work Order:** K1RL21AL			**Report DB ID:** 9K1RL210					
I-129L	***-3.55E-01***	U	1.0E+00	1.0E+00	1.77E+00	pCi/L	99%	*-0.2*	12/4/08 11:21 p		0.5	LEP2$1
						8.83E-01		*-0.69*			L	
Batch: 8305498	SRTOT SEP PRECIP_GPC			**Work Order:** K1RL21AK			**Report DB ID:** 9K1RL210					

TestAmerica
rptSTLRchSample
V5.2 A2002

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

TESTAMERICA

FORM I

SAMPLE RESULTS

Date: 22-Dec-08

Lab Name:	TestAmerica	**SDG:**	W05549	**Collection Date:**	10/28/2008 9:25:00 AM
Lot-Sample No.:	J8J280293-1	**Report No. :**	40410	**Received Date:**	10/28/2008 1:00:00 PM
Client Sample ID:	B1TRT2	**COC No. :**		**Matrix:**	WATER

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
STRONTIUM	***2.00E+00***	U	1.9E+00	2.0E+00	3.87E+00	pCi/L	25%	*0.52*	12/12/08 05:58 p		0.5004	GPC26A
						1.85E+00		*(2.)*			L	
Batch: 8305499	RICHRC5043			**Work Order:**	K1RL21AJ		**Report DB ID:**	9K1RL210				
Se-79	***2.96E+00***	U	4.4E+00	1.7E+01	1.04E+01	pCi/L	41%	*0.29*	12/16/08 07:34 a		0.1999	LSC6
						5.09E+00	3.00E+01	*0.35*			L	
Batch: 8305500	KOXW			**Work Order:**	K1RL21AH		**Report DB ID:**	9K1RL210				
NP-237	***5.02E-02***	U	1.0E-01	1.0E-01	2.41E-01	pCi/L	83%	*0.21*	12/9/08 09:25 p		0.2	ALP130
						5.23E-02	1.00E+00	*0.98*			L	
Batch: 8305501	906.0_H3_LSC			**Work Order:**	K1RL21AC		**Report DB ID:**	9K1RL210				
H-3	***8.87E+03***		3.6E+02	5.2E+02	3.64E+02	pCi/L	100%	*(24.4)*	11/11/08 11:18 p		0.005	LSC6
						1.74E+02	4.00E+02	*(34.3)*			L	
Batch: 8346129	9310_ALPHABETA_GPC			**Work Order:**	K1RL22AF		**Report DB ID:**	9K1RL220				
ALPHA	***2.45E+00***		1.3E+00	1.4E+00	1.21E+00	pCi/L	100%	*(2.)*	12/13/08 07:41 a		0.2	GPC10B
						3.95E-01	3.00E+00	*(3.6)*			L	

No. of Results: 12 **Comments:**

TestAmerica
rptSTLRchSample
V5.2 A2002

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

TESTAMERICA

FORM II

Date: 22-Dec-08

DUPLICATE RESULTS

Lab Name:	TestAmerica	**SDG:**	W05549	**Collection Date:**	10/28/2008 9:25:00 AM
Lot-Sample No.:	J8J280293-1	**Report No. :**	40410	**Received Date:**	10/28/2008 1:00:00 PM
Client Sample ID:	B1TRT2 DUP	**COC No. :**		**Matrix:**	WATER

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 8305490	UISO_PLATE_AEA			**Work Order:** K1RL21AM		**Report DB ID:** K1RL21MR			**Orig Sa DB ID:** 9K1RL210			
U-234	2.06E+00		5.1E-01	6.1E-01	1.50E-01	pCi/L	104%	(13.7)	12/8/08 11:06 a		0.1999	ALP10
	1.77E+00		**RPD**	**15.2**		1.00E+00		(6.7)			L	
U-235	6.27E-02	U	9.0E-02	9.0E-02	1.50E-01	pCi/L	104%	0.42	12/8/08 11:06 a		0.1999	ALP10
	8.88E-02	U	**RPD**	**34.5**		1.00E+00		(1.4)			L	
U-238	1.28E+00		4.0E-01	4.5E-01	1.50E-01	pCi/L	104%	(8.5)	12/8/08 11:06 a		0.1999	ALP10
	1.26E+00		**RPD**	**1.4**		1.00E+00		(5.6)			L	
						Ratio U-234/238 = 1.6			***Alpha Spec Result Sum = 3.4E+00***			
Batch: 8305491	UTOT_KPA			**Work Order:** K1RL21AP		**Report DB ID:** K1RL21PR			**Orig Sa DB ID:** 9K1RL210			
TOTAL-URANIUM	2.91E+00			3.0E-01	5.62E-02	pCi/L		(51.8)	12/8/08 09:28 a		0.025	KPAW3
	2.90E+00		**RPD**	**0.1**		1.40E-01		(19.5)			ML	
									Alpha Spec Result Sum = 3.4E+00			
Batch: 8305493	TC99_SEP_LSC			**Work Order:** K1RL21AR		**Report DB ID:** K1RL21RR			**Orig Sa DB ID:** 9K1RL210			
TC-99	2.31E+01		4.9E+00	7.3E+00	9.98E+00	pCi/L	100%	(2.3)	12/17/08 01:26 p		0.1251	LSC6
	2.12E+01		**RPD**	**8.2**		1.50E+01		(6.3)			L	
									Alpha Spec Result Sum = 3.4E+00			
Batch: 8305495	BETA_GPC			**Work Order:** K1RL21AU		**Report DB ID:** K1RL21UR			**Orig Sa DB ID:** 9K1RL210			
BETA	9.92E+00		1.9E+00	2.6E+00	2.78E+00	pCi/L	100%	(3.6)	12/8/08 06:07 a		0.2001	GPC31B
	1.07E+01		**RPD**	**7.8**		4.00E+00		(7.6)			L	
									Alpha Spec Result Sum = 3.4E+00			
Batch: 8305496	I129_SEP_LEPS_GS			**Work Order:** K1RL21AV		**Report DB ID:** K1RL21VR			**Orig Sa DB ID:** 9K1RL210			

TestAmerica **RPD** - Relative Percent Difference.

rptSTLRchDupV5.2 A2002 MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

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

TESTAMERICA

FORM II

Date: 22-Dec-08

DUPLICATE RESULTS

Lab Name:	TestAmerica	**SDG:**	W05549	**Collection Date:**	10/28/2008 9:25:00 AM
Lot-Sample No.:	J8J280293-1	**Report No. :**	40410	**Received Date:**	10/28/2008 1:00:00 PM
Client Sample ID:	B1TRT2 DUP	**COC No. :**		**Matrix:**	WATER

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
I-129L	-1.07E-01	U	1.0E+00	1.0E+00	1.84E+00	pCi/L	100%	-0.06	12/5/08 02:06 a		0.5	LEP2$1
	-3.55E-01	U	RPD	-107.3				-0.21			L	
Batch: 8305498	SRTOT_SEP_PRECIP_GPC			**Work Order:**	K1RL21AW	**Report DB ID:**	K1RL21WR		**Orig Sa DB ID:** 9K1RL210			
STRONTIUM	4.32E-01	U	9.0E-01	9.1E-01	1.94E+00	pCi/L	49%	0.22	12/12/08 05:58 p		0.5009	GPC26B
	2.00E+00	U	RPD	128.9				0.95			L	
Batch: 8305499	RICHRC5043			**Work Order:**	K1RL21AX	**Report DB ID:**	K1RL21XR		**Orig Sa DB ID:** 9K1RL210			
Se-79	1.49E+00	U	2.3E+00	8.9E+00	5.48E+00	pCi/L	78%	0.27	12/16/08 10:57 a		0.2	LSC6
	2.96E+00	U	RPD	66.2		3.00E+01		0.34			L	
Batch: 8305500	KOXW			**Work Order:**	K1RL21A0	**Report DB ID:**	K1RL210R		**Orig Sa DB ID:** 9K1RL210			
NP-237	-1.22E-02	U	1.2E-01	1.2E-01	2.92E-01	pCi/L	82%	-0.04	12/9/08 09:25 p		0.2	ALP131
	5.02E-02	U	RPD	328.5		1.00E+00		-0.2			L	
Batch: 8305501	906.0_H3_LSC			**Work Order:**	K1RL21A1	**Report DB ID:**	K1RL211R		**Orig Sa DB ID:** 9K1RL210			
H-3	9.29E+03		3.5E+02	5.2E+02	3.24E+02	pCi/L	100%	(28.7)	11/12/08 12:40 a		0.005	LSC6
	8.87E+03		RPD	4.5		4.00E+02		(35.8)			L	
Batch: 8346129	9310_ALPHABETA_GPC			**Work Order:**	K1RL21A2	**Report DB ID:**	K1RL212R		**Orig Sa DB ID:** 9K1RL220			
ALPHA	1.79E+00		1.2E+00	1.3E+00	1.74E+00	pCi/L	100%	(1.)	12/13/08 07:41 a		0.1999	GPC10A
	2.45E+00		RPD	31.2		3.00E+00		(2.8)			L	

TestAmerica
rptSTLRchDupV5.2
A2002

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

TESTAMERICA

FORM II

Date: 22-Dec-08

DUPLICATE RESULTS

Lab Name:	TestAmerica	SDG:	W05549	Collection Date:	10/28/2008 9:25:00 AM
Lot-Sample No.:	J8J280293-1	Report No. :	40410	Received Date:	10/28/2008 1:00:00 PM
Client Sample ID:	B1TRT2 DUP	COC No. :		Matrix:	WATER

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 12 Comments:

TestAmerica RPD - Relative Percent Difference.

rptSTLRchDupV5.2 MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

A2002

TESTAMERICA

FORM II

BLANK RESULTS

Date: 22-Dec-08

Lab Name: TestAmerica

Matrix: WATER

SDG: W05549

Report No. : 40410

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA ,	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 8305490	UISO_PLATE_AEA			**Work Order:** K12XF1AA		**Report DB ID:** K12XF1AB						
U-234	3.97E-02	U	8.3E-02	8.3E-02	1.79E-01	pCi/L	98%	0.22	12/8/08 11:06 a		0.2	ALP11
					5.11E-02	1.00E+00		0.96			L	
U-235	-5.68E-03	U	5.8E-02	5.8E-02	1.36E-01	pCi/L	98%	-0.04	12/8/08 11:06 a		0.2	ALP11
					2.95E-02	1.00E+00		-0.2			L	
U-238	2.84E-02	U	5.8E-02	5.8E-02	1.36E-01	pCi/L	98%	0.21	12/8/08 11:06 a		0.2	ALP11
					2.95E-02	1.00E+00		0.98			L	
								Ratio U-234/238 = 1.4				
Batch: 8305493	TC99_SEP_LSC			**Work Order:** K12XH1AA		**Report DB ID:** K12XH1AB						
TC-99	2.77E+00	U	4.3E+00	6.2E+00	1.01E+01	pCi/L	100%	0.28	12/17/08 02:28 p		0.125	LSC6
					4.83E+00			0.9			L	
Batch: 8305501	906.0_H3_LSC			**Work Order:** K12X01AA		**Report DB ID:** K12X01AB						
H-3	1.82E+02	U	1.4E+02	1.6E+02	3.22E+02	pCi/L	100%	0.57	11/11/08 08:33 p		0.005	LSC6
					1.54E+02	5.00E+02		(2.3)			L	
Batch: 8305501	906.0_H3_LSC			**Work Order:** K12X01AD		**Report DB ID:** K12X01DX						
H-3	-5.71E+01	U	1.3E+02	1.5E+02	3.24E+02	pCi/L	100%	-0.18	11/12/08 03:25 a		0.005	LSC6
					1.54E+02	5.00E+02		-0.78			L	
Batch: 8346129	9310_ALPHABETA_GPC			**Work Order:** K4GJW1AA		**Report DB ID:** K4GJW1AB						
ALPHA	3.42E-01	U	4.7E-01	4.8E-01	9.10E-01	pCi/L	100%	0.38	12/13/08 07:41 a		0.2001	GPC10D
					3.15E-01	3.00E+00		(1.4)			L	
Batch: 8305495	BETA_GPC			**Work Order:** K12XL1AA		**Report DB ID:** K12XL1AB						
BETA	1.36E+00	U	1.3E+00	1.3E+00	2.73E+00	pCi/L	100%	0.5	12/8/08 06:07 a		0.2001	GPC31C
					1.30E+00	4.00E+00		(2.)			L	

TestAmerica
rptSTLRchBlank
V5.2 A2002

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

TESTAMERICA

FORM II

BLANK RESULTS

Date: 22-Dec-08

Lab Name: TestAmerica

Matrix: WATER

SDG: W05549

Report No. : 40410

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA ,	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 8305496	I129_SEP_LEPS_GS			**Work Order:**	K12XM1AA		**Report DB ID:**	K12XM1AB				
I-129L	2.25E-01	U	1.2E+00	1.2E+00	2.08E+00	pCi/L	99%	0.11	12/5/08 02:06 a		0.5	LEP4$1
					1.03E+00			0.37			L	
Batch: 8305498	SRTOT_SEP_PRECIP_GPC			**Work Order:**	K12XQ1AA		**Report DB ID:**	K12XQ1AB				
STRONTIUM	5.03E-02	U	4.9E-01	4.9E-01	1.09E+00	pCi/L	98%	0.05	12/12/08 05:58 p		0.5002	GPC26C
					5.15E-01	5.00E+00		0.21			L	
Batch: 8305499	RICHRC5043			**Work Order:**	K12XR1AA		**Report DB ID:**	K12XR1AB				
Se-79	-7.06E+00	U	7.0E+00	2.6E+01	1.68E+01	pCi/L	25%	-0.42	12/16/08 12:48 a		0.2	LSC6
					8.25E+00	3.00E+01		-0.54			L	
Batch: 8305491	UTOT_KPA			**Work Order:**	K12XG1AA		**Report DB ID:**	K12XG1AB				
TOTAL-URANIUM	2.39E-02	U		3.1E-03	5.62E-02	pCi/L		0.43	12/8/08 09:02 a		0.025	KPAW3
					1.99E-02	1.00E+00		(15.6)			ML	
Batch: 8305500	KOXW			**Work Order:**	K12XV1AA		**Report DB ID:**	K12XV1AB				
NP-237	0.00E+00	U	0.0E+00	1.0E-01	2.36E-01	pCi/L	81%	0.	12/9/08 09:25 p		0.2	ALP132
					5.12E-02	1.00E+00		0.			L	

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

TestAmerica
rptSTLRchBlank
V5.2 A2002

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

TESTAMERICA

FORM II

LCS RESULTS

Date: 22-Dec-08

Lab Name: TestAmerica

Matrix: WATER

SDG: W05549

Report No. : 40410

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 8305490	UISO_PLATE_AEA			**Work Order:** K12XF1AC			**Report DB ID:** K12XF1CS						
U-234	8.72E+00		1.1E+00	1.8E+00	1.83E-01	pCi/L	92%	8.70E+00	4.90E-02	100%	12/8/08 11:06 a	0.2	ALP12
							Rec Limits:	75	125	0.0		L	
U-238	9.42E+00		1.1E+00	1.9E+00	1.55E-01	pCi/L	92%	9.11E+00	5.13E-02	103%	12/8/08 11:06 a	0.2	ALP12
							Rec Limits:	75	125	0.0		L	
Batch: 8305493	TC99_SEP_LSC			**Work Order:** K12XH1AC			**Report DB ID:** K12XH1CS						
TC-99	4.98E+02		1.3E+01	3.5E+01	9.92E+00	pCi/L	100%	5.54E+02	5.82E+00	90%	12/17/08 03:31 p	0.1251	LSC6
							Rec Limits:	70	130	-0.1		L	
Batch: 8305501	906.0_H3_LSC			**Work Order:** K12X01AC			**Report DB ID:** K12X01CS						
H-3	2.64E+03		2.2E+02	2.6E+02	3.22E+02	pCi/L	100%	2.71E+03	8.13E+01	97%	11/11/08 09:56 p	0.005	LSC6
							Rec Limits:	75	125	0.0		L	
Batch: 8305501	906.0_H3_LSC			**Work Order:** K12X01AE			**Report DB ID:** K12X01EM						
H-3	2.50E+03		2.1E+02	2.6E+02	3.23E+02	pCi/L	100%	2.71E+03	8.13E+01	92%	11/12/08 04:48 a	0.005	LSC6
							Rec Limits:	75	125	-0.1		L	
Batch: 8346129	9310_ALPHABETA_GPC			**Work Order:** K4GJW1AC			**Report DB ID:** K4GJW1CS						
ALPHA	1.82E+01		2.8E+00	4.7E+00	8.42E-01	pCi/L	100%	2.28E+01	7.47E-01	80%	12/13/08 07:41 a	0.2	GPC10E
							Rec Limits:	70	130	-0.2		L	
Batch: 8305495	BETA_GPC			**Work Order:** K12XL1AC			**Report DB ID:** K12XL1CS						
BETA	2.21E+01		2.4E+00	3.7E+00	2.72E+00	pCi/L	100%	2.37E+01	3.07E-01	93%	12/8/08 06:07 a	0.2	GPC31D
							Rec Limits:	70	130	-0.1		L	
Batch: 8305496	I129_SEP_LEPS_GS			**Work Order:** K12XM1AC			**Report DB ID:** K12XM1CS						
I-129L	4.81E+01		6.7E+00	6.7E+00	2.68E+00	pCi/L	104%	4.57E+01	1.49E+00	105%	12/5/08 02:06 a	0.5	LEP5$I
							Rec Limits:	70	130	0.1		L	

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

rptSTLRchLcs
V5.2 A2002

TESTAMERICA

FORM II

LCS RESULTS

Date: 22-Dec-08

Lab Name: TestAmerica

Matrix: WATER

SDG: W05549

Report No. : 40410

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 8305498	SRTOT_SEP_PRECIP_GPC			**Work Order:**	K12XQ1AC		**Report DB ID:**	K12XQ1CS					
STRONTIUM	2.78E+01		1.6E+00	7.3E+00	1.04E+00	pCi/L	99%	2.70E+01	3.14E-01	103%	12/12/08 05:58 p	0.5005	GPC26D
							Rec Limits:	75	125	0.0		L	
Batch: 8305491	UTOT_KPA			**Work Order:**	K12XG1AC		**Report DB ID:**	K12XG1CS					
TOTAL-URANIUM	2.29E+01			2.7E+00	5.62E-02	pCi/L		2.43E+01	2.08E-01	94%	12/8/08 09:06 a	0.025	KPAW3
							Rec Limits:	75	125	-0.1		ML	
Batch: 8305491	UTOT_KPA			**Work Order:**	K12XG1AD		**Report DB ID:**	K12XG1DS					
TOTAL-URANIUM	2.49E+00			2.6E-01	5.62E-02	pCi/L		2.51E+00	1.95E-02	99%	12/8/08 09:19 a	0.025	KPAW3
							Rec Limits:	75	125	0.0		ML	
Batch: 8305500	KOXW			**Work Order:**	K12XV1AC		**Report DB ID:**	K12XV1CS					
NP-237	1.05E+01		1.4E+00	2.1E+00	4.60E-01	pCi/L	83%	9.15E+00	2.74E-01	115%	12/10/08 12:56 a	0.2001	ALP37
							Rec Limits:			0.2		L	

No. of Results: 12 **Comments:**

22

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

rptSTLRchLcs
V5.2 A2002

TESTAMERICA

FORM II

MATRIX SPIKE RESULTS

Date: 22-Dec-08

Lab Name: TestAmerica **SDG:** W05549

Lot-Sample No.: J8J280293-1, B1TRT2 **Report No. :** 40410 **Matrix:** WATER

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 8305491	Work Order:	K1RL21AN		Report DB ID:	K1RL21NW		Orig Sa DB ID:	9K1RL210				
TOTAL-URANIUM	2.30E+01			3.1E+00	5.62E-02	pCi/L		94.21%	2.44E+01	12/8/08 09:26 a	0.025	UTOT_KPA
	2.90E+00								2.09E-01		ML	KPAW3
Batch: 8305493	Work Order:	K1RL21AQ		Report DB ID:	K1RL21QW		Orig Sa DB ID:	9K1RL210				
TC-99	3.25E+03		3.2E+01	2.0E+02	1.00E+01	pCi/L	100%	90.24%	3.61E+03	12/17/08 12:24 p	0.125	TC99_SEP_LSC
	2.12E+01								3.72E+01		L	LSC6

Number of Results: 2

Comments:

23

TestAmerica RER - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
rptSTLRchMs V5.2 Bias - (Result/Expected)-1 as defined by ANSI N13.30.
A2002

TestAmerica

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/10/2008 9:54:45 AM

Lot No., Due Date: J8J280293; 12/12/2008

Client, Site: 108302; FLH HANFORD

QC Batch No., Method Test: 8305490; RUISO Uiso by ALP

SDG, Matrix: W05549; WATER

1.0 COC			
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 [signature] **Date** 12-10-8

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 830540

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: Erika Ford Date: 12/15/10

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

TestAmerica

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/ 1/2008 3:07:49 PM

Lot No., Due Date: J8J280293; 12/12/2008

Client, Site: 108302; FLH HANFORD

QC Batch No., Method Test: 8305500; RNP237 Np-237 w/tracer

SDG, Matrix: W05549; 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 Lisa Antonsen **Date** 8/12/08

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 8305500

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: Erika Ford Date: 12/12/15 12/11/15

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

TestAmerica

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/18/2008 1:11:07 PM

Lot No., Due Date: J8J280293; 12/12/2008

Client, Site: 108302; FLH HANFORD

QC Batch No., Method Test: 8346129; RALPHA-A Alpha by GPC-Am

SDG, Matrix: W05549; WATER

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

6.0 Comments on any No response:
NCM 10-13507

First Level Review Tina Anderson **Date** 12/18/08

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 8346129

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: See NCM

Second Level Review: [signature] Date: 12/18/08

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

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-13507**
NCM Initiated By: Lisa Antonson
Date Opened: 12/18/2008
Date Closed:

Classification: **Anomaly**
Status: **GLREVIEW**
Production Area: Environmental - Prep
Tests: Alpha by GPC-Arn
Lot #'s (Sample #'s): J8J280293 (1), J8L110000 (129),
QC Batches: 8346129,

Nonconformance: LCS result out of limits
Subcategory: Analyte was recovered low in the LCS

Problem Description / Root Cause

Name	Date	Description
Lisa Antonson	12/18/2008	This is a rerun of batch 8305494. In the original batch the LCS was recovered low. A recount did not improve the results.

Corrective Action

Name	Date	Corrective Action
Lisa Antonson	12/18/2008	The batch was rerun with good results.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note
	Response	Response Note			

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position

TestAmerica

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/8/2008 2:32:27 PM

Lot No.. Due Date: J8J280293; 12/12/2008

Client, Site: 108302; FLH HANFORD

QC Batch No., Method Test: 8305495; RBETA-SR Beta by GPC-Sr/Y

SDG, Matrix: W05549; 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 [signature] **Date** 12-9-8

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 830549 5

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 G Date: 12/10/08

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

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THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/18/2008 1:34:19 PM

Lot No., Due Date: J8J280293; 12/12/2008

Client, Site: 108302; FLH HANFORD

QC Batch No., Method Test: 8305498; RSRTOT SrTot by GPC

SDG, Matrix: W05549; WATER

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

6.0 Comments on any No response:
NCM 10-13509

First Level Review Lisa Anderson **Date** 12/18/08

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 8305498

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: See NCM

Second Level Review: [signature] Date: 12/18/08

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

Clouseau
Nonconformance Memo

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-13509**
NCM Initiated By: Lisa Antonson
Date Opened: 12/18/2008
Date Closed:

Classification: **Anomaly**
Status: **GLREVIEW**
Production Area: Environmental - Prep
Tests: SrTot by GPC
Lot #'s (Sample #'s): J8J280293 (1), J8J310000 (498),
QC Batches: 8305498,

Nonconformance: MDA not met
Subcategory: Data accepted

Problem Description / Root Cause

Name	Date	Description
Lisa Antonson	12/18/2008	The MDA for sample K1RL1AK is not met due to low but acceptable yield. The result is right at DL.

Corrective Action

Name	Date	Corrective Action
Lisa Antonson	12/18/2008	will monitor

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position

TestAmerica

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/5/2008 12:53:40 PM

Lot No., Due Date: J8J280293; 12/12/2008

Client, Site: 108302; FLH HANFORD

QC Batch No., Method Test: 8305496; RGAMLEPS Gamma by LEPS

SDG, Matrix: W05549; 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 [signature] **Date** 12-5-8

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 8305496

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 C. Date: 12/8/08

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/18/2008 1:42:37 PM

Lot No., Due Date: J8J280293; 12/12/2008

Client, Site: 108302; FLH HANFORD

QC Batch No., Method Test: 8305493; RTC99 Tc-99 by LSC

SDG, Matrix: W05549; 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 Lisa Anderson **Date** 12/18/08

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 8305493

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 C. Date: 12/18/08

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

TestAmerica

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/18/2008 11:32:59 AM

Lot No., Due Date: J8J280293; 12/12/2008

Client, Site: 108302; FLH HANFORD

QC Batch No., Method Test: 8305499; RSE79 Se-79 by LSC

SDG, Matrix: W05549; 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 Lisa Anderson **Date** 12/18/08

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 8305499

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 G Date: 12/3/08

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

11/ 3/2008 4:19:47 PM

Lot No., Due Date: J8J280293; 12/12/2008
Client, Site: 108302; FLH HANFORD
QC Batch No., Method Test: 8305501; RTRITIUM H-3 by LSC
SDG, Matrix: W05549; WATER

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

6.0 Comments on any No response:

First Level Review Jba Anderson **Date** 11/13/08

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 8305501

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 C Date: 11/14/08

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

TestAmerica

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

12/8/2008 2:31:06 PM

Lot No., Due Date: J8J280293; 12/12/2008

Client, Site: 108302; FLH HANFORD

QC Batch No., Method Test: 8305491; RUNAT UNat by KPA

SDG, Matrix: W05549; 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 [signature] **Date** 12-8-9

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 8305491

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 G Date: 12/10/08

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

TESTAMERICA

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-086-062

COLLECTOR
NCO Sampler ED Kramer / Steve Stamper

COMPANY CONTACT
Trent, SJ

TELEPHONE NO.
373-5869

PROJECT COORDINATOR
WIDRIG, DL

PRICE CODE 7N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
I-C6375-M

PROJECT DESIGNATION
Aquifer Tube Installation Sampling and Analysis in the 200-PO-1 OU (Shorel

SAF NO.
F08-086

AIR QUALITY ☐

ICE CHEST NO.

FIELD LOGBOOK NO.
HNF-N-451-3

ACTUAL SAMPLE DEPTH

COA
122588ES10

METHOD OF SHIPMENT
FEDERAL EXPRESS

SHIPPED TO
TestAmerica Incorporated, Richland

OFFSITE PROPERTY NO.
See PTR

BILL OF LADING/AIR BILL NO.
See PTR

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HCl to pH <2	HNO3 to pH <2	None	None	None
TYPE OF CONTAINER	G/P	G/P	G/P	G/P	G/P	G/P	G/P	P	G/P	P
NO. OF CONTAINER(S)	1	1	1	2	3	3	1	1	3	1
VOLUME	1000mL	1000mL	1000mL	1000mL	1000mL	1000mL	500mL	1000mL	1000mL	20mL
SAMPLE ANALYSIS	Gross Alpha; Gross Beta;	Isotopic Uranium (Uranium-233/234, Uranium-238)	Neptunium-237;	Selenium-79;	Strontium-89,90 -- Total Sr;	Technetium-99;	Total Uranium;	Tritium - H3;	Iodine-129;	Activity Scan;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
4 B1TRT2	WATER	10-28-08	0925	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

KIRL2

LOC 024409 → 030014 ← → N/A

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
CFulton	10-28-08 1300	David HARBINSON	10-28-08 1300
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

W055L9
J8J280293
Due 12/12/08

LABORATORY SECTION RECEIVED BY TITLE DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD DISPOSED BY DATE/TIME

A-6003-618(01/06)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 10/28/08 13:00 GM Screen Result 0.10 mR/hr

Client: Fluor SDG #: W0S5U9 NA[ ] SAF #: F08-086 NA [ ]

Work Order Number: J8J280293 Chain of Custody # F08-086-062

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: 17
7. Sample holding times exceeded? NA [✓] Yes [ ] No [ ]
8. Samples have:
   - ✓ Tape
   - ✓ Custody Seals
   - ✓ Hazard Lables
   - _____ Appropriate Sample Lables
9. Samples are:
   - ✓ In Good Condition
   - _____ Broken
   - _____ Leaking
   - _____ Have Air Bubbles
   (Only for samples requiring no head space.)
10. Sample pH taken? NA [ ] pH<2 [✓] pH>2 [✓] pH>9 [ ] Amount HNO_3 Added _____
11. Sample Location, Sample Collector Listed? *
    *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: 10/28/08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

TESTAMERICA

12/3/2008 4:34:55 PM

Sample Preparation/Analysis

Balance Id:1120482733

108302, CH2M Hill Plateau Remediation DOE RL
, Waste Management Federal Servi

7Y Ulso PrpRC5016/5086, SepRC5067(5039)
SR Uranium-234,235,238 by Alpha Spec
5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 12/08/2008 W05549

Sep1 DT/Tm Tech:

Batch: 8305490 WATER pCi/L PM, Quote: SS , 29754

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,LaneL

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 K1RL2 1-AG J8J280293-1-SAMP 10/28/2008 09:25		AmtRec: VIAL,500MLP,15LP	200.00g,in #Containers: 17	200.00g	UITC20617 12/03/08,pd 01/20/04,r	200	Scr:	Alpha: -9.26E-04 uCi/Sa	Beta: 1.06E-02 uCi/Sa	7.2E-02L
2 K1RL2-1-AM-X J8J280293-1-DUP 10/28/2008 09:25		AmtRec: VIAL,500MLP,15LP	199.90g,in #Containers: 17	199.90g	UITC20618 12/03/08,pd 01/20/04,r		Scr:	Alpha: -9.26E-04 uCi/Sa	Beta: 1.06E-02 uCi/Sa	7.2E-02L
3 K12XF-1-AA-B J8J310000-490-BLK 10/28/2008 09:25		AmtRec:	200.00g,in #Containers: 1	200.00g	UITC20619 12/03/08,pd 01/20/04,r		Scr:	Alpha:	Beta:	
4 K12XF-1-AC-C J8J310000-490-LCS 10/28/2008 09:25		AmtRec:	200.00g,in #Containers: 1	200.00g	UISG1715 10/08/08,pd 01/20/04,r		Scr:	Alpha:	Beta:	

Comments: PH < 2.0, 12308

All Clients for Batch:
108302, CH2M Hill Plateau Remediation DOE RL Waste Management Federal Servi, SS , 29754

K1RL21AG-SAMP Constituent List:

U-232	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	U-234	RDL:1	pCi/L	LCL:	UCL:	RPD:
U-235	RDL:1	pCi/L	LCL:	UCL:	RPD:	U-238	RDL:1	pCi/L	LCL:	UCL:	RPD:

K12XF1AA-BLK:

U-232	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	U-234	RDL:1	pCi/L	LCL:	UCL:	RPD:
U-235	RDL:1	pCi/L	LCL:	UCL:	RPD:	U-238	RDL:1	pCi/L	LCL:	UCL:	RPD:

12/3/2008 4:34:56 PM

Sample Preparation/Analysis

7Y Uiso PrpRC5016/5086, SepRC5067(5039)
SR Uranium-234,235,238 by Alpha Spec
5I CLIENT: HANFORD

Balance Id:1120482733
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: ,LaneL

AnalyDueDate: 12/08/2008

Batch: 8305490 pCi/L
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:

K12XF1AC-LCS:
U-232 RDL: pCi/L LCL:20 UCL:105 RPD:20 Uranium RDL: pCi/L LCL:70 UCL:130 RPD:20

K1RL21AG-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
K12XF1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
K12XF1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

12/10/2008 9:53:22 AM

ICOC Fraction Transfer/Status Report

ByDate: 12/11/2007, 12/15/2008, Batch: '8305490', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
8305490						
AC		Rev1C	LaneL	12/3/2008 4:29:35 PM		
SC			wagarr	IsBatched	10/31/2008 3:24:36 PM	ICOC_RADCALC v4.8.35
SC			LaneL	InPrep	12/3/2008 4:29:35 PM	RL-PRP-004 REVISION 0
SC			LaneL	Prep1C	12/3/2008 4:35:34 PM	RL-PRP-004 REVISION 0
SC			AshworthA	Sep2C	12/5/2008 7:53:53 PM	ALP-004 REVISION 0
SC			AshworthA	Sep2C	12/8/2008 9:02:01 AM	ALP-015 REVISION 0
SC			ClarkR	InCnt1	12/8/2008 9:07:32 AM	RL-CI-008 REVISION 0
SC			DAWKINSO	CalcC	12/8/2008 11:40:59 PM	RL-CI-008 REVISION 0
SC			nortonj	Rev1C	12/10/2008 9:51:50 AM	RL-DR-001 REV 0
AC			LaneL	12/3/2008 4:35:34 PM		
AC			AshworthA	12/5/2008 7:53:53 PM		
AC			AshworthA	12/8/2008 9:02:01		
AC			ClarkR	12/8/2008 9:07:32		
AC			DAWKINSO	12/8/2008 11:40:59		
AC			nortonj	12/10/2008 9:51:50		

AC: Accepting Entry; SC: Status Change

TESTAMERICA

12/3/2008 5:27:20 PM

Sample Preparation/Analysis

Balance Id:1120482733

108302, CH2M Hill Plateau Remediation DOE RL
, Waste Management Federal Servi

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

Pipet #: 12-9-08 11:49:21 AM

AnalyDueDate: 12/08/2008 005549

Sep1 DT/Tm Tech:

Batch: 8305500 WATER pCi/L PM, Quote: SS , 29754

SEQ Batch, Test: None

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 K1RL2-1-AH J8J280293-1-SAMP 10/28/2008 09:25			200.00g,in AmtRec: VIAL,500MLP,15LP	200.00g #Containers: 17	NPTA7301 12/02/08,pd 09/17/08,r			200	Scr:	Alpha: -9.26E-04 uCi/Sa	Beta: 1.06E-02 uCi/Sa	7.2E-02L
2 K1RL2-1-A0-X J8J280293-1-DUP 10/28/2008 09:25			200.00g,in AmtRec: VIAL,500MLP,15LP	200.00g #Containers: 17	NPTA7302 12/02/08,pd 09/17/08,r				Scr:	Alpha: -9.26E-04 uCi/Sa	Beta: 1.06E-02 uCi/Sa	7.2E-02L
3 K12XV-1-AA-B J8J310000-500-BLK 10/28/2008 09:25			200.00g,in AmtRec:	200.00g #Containers: 1	NPTA7303 12/02/08,pd 09/17/08,r				Scr:	Alpha:	Beta:	
4 K12XV-1-AC-C J8J310000-500-LCS 10/28/2008 09:25			200.10g,in AmtRec:	200.10g #Containers: 1	NPSE0501 10/10/08,pd 09/17/08,r				Scr:	Alpha:	Beta:	

Comments: pH<2.0. KJ 12 3 08

All Clients for Batch:
108302, CH2M Hill Plateau Remediation DOE RL Waste Management Federal Servi, SS , 29754

K1RL21AH-SAMP Constituent List:

Np-237	RDL:1	pCi/L	LCL:	UCL:	RPD:

K12XV1AA-BLK:

Np-237	RDL:1	pCi/L	LCL:	UCL:	RPD:

K12XV1AC-LCS:

K1RL21AH-SAMP Calc Info:

12/3/2008 5:27:20 PM

Sample Preparation/Analysis

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

Balance Id:1120482733
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: ,LaneL

AnalyDueDate: 12/08/2008

Batch: 8305500 pCi/L
SEQ Batch, Test: None

Work Ord, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Dish Size	Ppt or Geometry	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
K12XV1AA-BLK:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
K12XV1AC-LCS:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```

Approved By _____ Date: _____

12/11/2008 3:04:33 PM

ICOC Fraction Transfer/Status Report

ByDate: 12/12/2007, 12/16/2008, Batch: '8305500', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			Comments
8305500							
AC			Rev1C	LaneL	12/3/2008 5:22:38 PM		
SC				wagarr	IsBatched	10/31/2008 3:24:36 PM	ICOC_RADCALC v4 8.35
SC				LaneL	InPrep	12/3/2008 5:22:38 PM	RL-PRP-004 REVISION 0
SC				LaneL	Prep1C	12/3/2008 5:28:17 PM	RL-PRP-004 REVISION 0
SC				Barcotl	InSep1	12/9/2008 1:02:23 PM	RL-ALP-006 REVISION 0
SC				Barcotl	Sep1C	12/9/2008 1:02:34 PM	RL-ALP-006 REVISION 0
SC				AshworthA	Sep2C	12/9/2008 6:56:37 PM	ALP-016 REVISION 0
SC				BlackCL	CalcC	12/10/2008 10:05:35 AM	RL-CI-008 REVISION 0
SC				antonsonl	Rev1C	12/11/2008 3:04:15 PM	RL-DR-001 REV 0
AC				LaneL	12/3/2008 5:28:17 PM		
AC				Barcotl	12/9/2008 1:02:23 PM		
AC				Barcotl	12/9/2008 1:02:34 PM		
AC				AshworthA	12/9/2008 6:56:37 PM		
AC				BlackCL	12/10/2008 10:05:35		
AC				antonsonl	12/11/2008 3:04:15		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 7

ICCCFractions v4.8.35

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

RE-ANALYSIS REQUEST

DUE DATE 12-8

CUSTOMER CH2MHILL

ANALAYSIS X

MATRIX H_2O

LOT NUMBER J8J280293

SAMPLE DELIVERY GROUP

OLD BATCH NUMBER 8305494

NEW BATCH NUMBER 8346129

LAB SAMPLE ID	CLIENT ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1) KIRLZ,1+F		200 LOW LCS
2) KIRLZ,1+Y		↓
3) BLK		↓
4) LCS		↓
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

Preparation/Analysis

Balance Id:11204 2733

Pipet #:

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: NortonJ,LaneL

GPC using Am-241 curve

PM, Quote: SS , 29754

SEQ Batch, Test: None

1 K1RL2-1-A2-X J8J280293-1-DUP 10/28/2008 09:25	199.90g,in AmtRec: VIAL,500MLP,15LP	#Containers: 17	1.5	34.3	50		Scr:	Alpha: -9.23E-04 uCi/Sa	Beta: 1.06E-02 uCi/Sa	7.2E-02L	
2 K1RL2-2-AF J8J280293-1-SAMP 10/28/2008 09:25	200.00g,in AmtRec: VIAL,500MLP,15LP	#Containers: 17		33.4			Scr:	Alpha: -9.26E-04 uCi/Sa	Beta: 1.06E-02 uCi/Sa	7.2E-02L	
3 K4GJW-1-AA-B J8L110000-129-BLK 10/28/2008 09:25	200.10g,in AmtRec:	#Containers: 1		1.5			Scr:	Alpha:	Beta:		
4 K4GJW-1-AC-C J8L110000-129-LCS 10/28/2008 09:25	200.00g,in AmtRec:	ASD4659 11/13/08,pd #Containers: 1		0.6			Scr:	Alpha:	Beta:		

Comments: pH<2.0. 121108

All Clients for Batch:
108302, CH2M Hill Plateau Remediation DOE RL Waste Management Federal Servi, SS , 29754

K1RL21A2-DUP Constituent List:

K4GJW1AA-BLK:

K4GJW1AC-LCS:

K1RL21A2-DUP Calc Info:

55

12/18/2008 1:10:23 PM

ICOC Fraction Transfer/Status Report

ByDate: 12/19/2007, 12/23/2008, Batch: '8346129', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
8346129						
AC		Rev1C	LaneL	12/11/2008 9:11:14		
SC			nortonj	IsBatched	12/11/2008 8:13:15 AM	ICOC_RADCALC v4.8.35
SC			LaneL	InPrep	12/11/2008 9:11:14 AM	RL-PRP-004 REVISION 0
SC			LaneL	Prep1C	12/11/2008 9:16:12 AM	RL-PRP-004 REVISION 0
SC			BockJ	InPrep2	12/11/2008 9:57:51 AM	RL-GPC-001 REVISION 0
SC			BockJ	Prep2C	12/11/2008 3:58:43 PM	RL-GPC-001 REVISION 0
SC			DAWKINSO	InCnt1	12/11/2008 4:21:25 PM	RL-CI-006 REVISION 0
SC			ClarkR	CalcC	12/13/2008 10:13:08 AM	RL-CI-006 REVISION 0
SC			antonsonl	Rev1C	12/18/2008 1:10:18 PM	RL-DR-001 REV 0
AC			LaneL	12/11/2008 9:16:12		
AC			BockJ	12/11/2008 9:57:51		
AC			BockJ	12/11/2008 3:58:43		
AC			DAWKINSO	12/11/2008 4:21:25		
AC			ClarkR	12/13/2008 10:13:08		
AC			antonsonl	12/18/2008 1:10:18		

AC: Accepting Entry; SC: Status Change

TESTAMERICA

12/4/2008 10:41:06 AM

Sample Preparation/Analysis

Balance Id:I4 A

108302, CH2M Hill Plateau Remediation DOE RL
, Waste Management Federal Servi

BC Gross Beta PrpRC5014
S8 Gross Beta by GPC using Sr/Y-90 curve
5I CLIENT: HANFORD

Pipet #: 245

AnalyDueDate: 12/08/2008 W05549

Sep1 DT/Tm Tech:

Batch: 8305495 WATER pCi/L PM, Quote: SS , 29754

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,LaneL (back).

Work Order, Lot, Sample DateTime	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:
1 K1RL2-1-AA J8J280293-1-SAMP 10/28/2008 09:25	AmtRec: VIAL,500MLP,15LP #Containers: 17	200.00g,in		1.5	74.6	100	31A	0656	12/5/08	Scr: Alpha: -9.26E-04 uCi/Sa Beta: 1.06E-02 uCi/Sa 7.2E-02L
2 K1RL2-1-AU-X J8J280293-1-DUP 10/28/2008 09:25	AmtRec: VIAL,500MLP,15LP #Containers: 17	200.10g,in			70.2		31B			Scr: Alpha: -9.26E-04 uCi/Sa Beta: 1.06E-02 uCi/Sa 7.2E-02L
3 K12XL-1-AA-B J8J310000-495-BLK 10/28/2008 09:25	AmtRec: #Containers: 1	200.10g,in			Ø		31C			Scr: Alpha: Beta:
4 K12XL-1-AC-C J8J310000-495-LCS 10/28/2008 09:25	AmtRec: #Containers: 1	200.00g,in	BESB3373 10/22/08,pd 07/11/06 r		0.2		31D			Scr: Alpha: Beta:

Comments: PH < 2.0. 12 4 08

All Clients for Batch:
108302, CH2M Hill Plateau Remediation DOE RL Waste Management Federal Servi, SS , 29754

K1RL21AA-SAMP Constituent List:

BETA	RDL:4	pCi/L	LCL:	UCL:	RPD:
K12XL1AA-BLK:					
BETA	RDL:4	pCi/L	LCL:	UCL:	RPD:
K12XL1AC-LCS:					
Sr-90	RDL:	pCi/L	LCL:70	UCL:130	RPD:20

K1RL21AA-SAMP Calc Info:

12/4/2008 10:41:07 AM

Sample Preparation/Analysis

BC Gross Beta PrpRC5014
S8 Gross Beta by GPC using Sr/Y-90 curve
5I CLIENT: HANFORD

Balance Id:I4 A
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech: ,LaneL

AnalyDueDate: 12/08/2008

Batch: 8305495 pCi/L
SEQ Batch, Test: None

Work Order, Lot, Sample DateTime	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:

Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
K12XL1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
K12XL1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

12/8/2008 2:31:44 PM

ICOC Fraction Transfer/Status Report

By Date: 12/9/2007, 12/13/2008, Batch: '8305495', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			Comments
8305495							
AC			Rev1C	LaneL	12/4/2008 10:37:55		
SC				wagarr	IsBatched	10/31/2008 3:24:36 PM	ICOC RADCALC v4 8 35
SC				LaneL	InPrep	12/4/2008 10:37:55 AM	RL-PRP-004 REVISION 0
SC				LaneL	Prep1C	12/4/2008 10:42:06 AM	RL-PRP-004 REVISION 0
SC				BockJ	InPrep2	12/4/2008 1:15:34 PM	RL-GPC-001 REVISION 0
SC				BockJ	Prep2C	12/6/2008 12:57:59 PM	RL-GPC-001 REVISION 0
SC				ClarkR	CalcC	12/8/2008 8:03:27 AM	RL-CI-006 REVISION 0
SC				nortonj	Rev1C	12/8/2008 2:31:38 PM	RL-DR-001 REV 0
AC				LaneL	12/4/2008 10:42:06		
AC				BockJ	12/4/2008 1:15:34 PM		
AC				BockJ	12/6/2008 12:57:59		
AC				ClarkR	12/8/2008 8:03:27		
AC				nortonj	12/8/2008 2:31:38 PM		

AC: Accepting Entry; SC: Status Change

TESTAMERICA

12/10/2008 2:12:22 PM

Sample Preparation/Analysis

108302, CH2M Hill Plateau Remediation DOE RL
, Waste Management Federal Servi

CG Sr-Total Prp/SepRC5006
TH Total Strontium by GPC
5I CLIENT: HANFORD

AnalyDueDate: 12/08/2008

Balance Id: 1117411003
Pipet #:
Sep1 DT/Tm Tech: 12-12-08 1110am
Sep2 DT/Tm Tech:
Prep Tech: NortonJ,McDowellD

Batch: 8305498 WATER pCi/L PM, Quote: SS , 29754

SEQ Batch, Test: None All Tests: 8305490 7YSR, 8305491 DHSS, 8305493 AMS5, 8305494 AZS7, 8305495 BCS8, 8305496 BNTB, 8305498 CGTH, 8305499 CYTM, 8305500 KOXW, 8305501 ARS6,

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 K1RL2-1-AK J8J280293-1-SAMP 10/28/2008 09:25			500.40g,in AmtRec: VIAL,500MLP,15LP	500.40g #Containers: 17	SRTA18047 11/13/08,pd 05/22/07,r	1.5	025.0	100	26A	'848	12/12/0800	Scr: Alpha: -9.26E-04 uCi/Sa Beta: 1.06E-02 uCi/Sa 7.2E-02L
2 K1RL2-1-AW-X J8J280293-1-DUP 10/28/2008 09:25			500.90g,in AmtRec: VIAL,500MLP,15LP	500.90g #Containers: 17	SRTA18046 11/13/08,pd 05/22/07,r		049.2		26B			Scr: Alpha: -9.26E-04 uCi/Sa Beta: 1.06E-02 uCi/Sa 7.2E-02L
3 K12XQ-1-AA-B J8J310000-498-BLK 10/28/2008 09:25			500.20g,in AmtRec:	500.20g #Containers: 1	SRTA18045 11/13/08,pd 05/22/07,r		097.7		26C			Scr: Alpha: Beta:
4 K12XQ-1-AC-C J8J310000-498-LCS 10/28/2008 09:25			500.50g,in AmtRec:	500.50g #Containers: 1	STSC2064 10/23/08,pd 05/22/07,r		099.0		26D			Scr: Alpha: Beta:

60

Comments:

All Clients for Batch:
108302, CH2M Hill Plateau Remediation DOE RL Waste Management Federal Servi, SS , 29754

K1RL21AK-SAMP Constituent List:
Sr-90 RDL:2 pCi/L LCL:70 UCL:130 RPD:20
K12XQ1AA-BLK:
Sr-90 RDL:2 pCi/L LCL. UCL. RPD:
K12XQ1AC-LCS:
Sr-90 RDL:2 pCi/L LCL:70 UCL:130 RPD:20
K1RL21AK-SAMP Calc Info:

12/18/2008 1:33:38 PM

ICOC Fraction Transfer/Status Report

ByDate: 12/19/2007, 12/23/2008, Batch: '8305498', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
8305498						
AC		Rev1C	McDowellD	12/9/2008 4:01:20 PM		
SC			wagarr	IsBatched	10/31/2008 3:24:36 PM	ICOC_RADCALC v4.3.35
SC			McDowellD	InPrep	12/9/2008 4:01:20 PM	RL-GPC-003 REV 0
SC			McDowellD	Sep1C	12/12/2008 1:34:54 PM	RL-GPC-003 REV 0
SC			ClarkR	InCnt1	12/12/2008 1:57:00 PM	RL-CI-006 REVISION 0
SC			DAWKINSO	CalcC	12/12/2008 11:13:24 PM	RL-CI-006 REVISION 0
SC			antonsonl	Rev1C	12/18/2008 1:33:31 PM	RL-DR-001 REV 0
AC			McDowellD	12/12/2008 1:34:54		
AC			ClarkR	12/12/2008 1:57:00		
AC			DAWKINSO	12/12/2008 11:13:24		
AC			antonsonl	12/18/2008 1:33:31		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 5

ICCCFractions v4.8.35

TESTAMERICA

12/3/2008 2:53:50 PM

Sample Preparation/Analysis

Balance Id:112048273314 A

108302, CH2M Hill Plateau Remediation DOE RL
, Waste Management Federal Servi

BN I-129 Prp/SepRC5025
TB Gamma by LEPD
5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 12/08/2008 W05549

Sep1 DT/Tm Tech:

Batch: 8305496 WATER pCi/L PM, Quote: SS , 29754

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,LaneL

Work Order, Lot, Sample DateTime	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:
1 K1RL2-1-AL J8J280293-1-SAMP 10/28/2008 09:25		500.00g,in AmtRec: VIAL,500MLP,15LP	ITA7771 11/20/08 #Containers: 17		36.5	100	L2	0101	12/4/08 DQ Scr: Alpha: -9.26E-04 uCi/Sa Beta: 1.06E-02 uCi/Sa 7.2E-02L	
2 K1RL2-1-AV-X J8J280293-1-DUP 10/28/2008 09:25		500.00g,in AmtRec: VIAL,500MLP,15LP	ITA7772 11/20/08 #Containers: 17		37.0		L2	0346	12/5/08 Scr: Alpha: -9.26E-04 uCi/Sa Beta: 1.06E-02 uCi/Sa 7.2E-02L	
3 K12XM-1-AA-B J8J310000-496-BLK 10/28/2008 09:25		500.00g,in AmtRec:	ITA7773 11/20/08 #Containers: 1		36.6		L4	0346 Scr:	Alpha: Beta:	
4 K12XM-1-AC-C J8J310000-496-LCS 10/28/2008 09:25		500.00g,in AmtRec:	ISB0306 10/08/08 #Containers: 1		39.1		L5	0346 Scr:	Alpha: Beta:	

Comments:

All Clients for Batch:
108302, CH2M Hill Plateau Remediation DOE RL Waste Management Federal Servi, SS , 29754

K1RL21AL-SAMP Constituent List:

I-129	RDL:5	pCi/L	LCL:70	UCL:130	RPD:20

K12XM1AA-BLK:

I-129	RDL:5	pCi/L	LCL:	UCL:	RPD:

K12XM1AC-LCS:

I-129	RDL:5	pCi/L	LCL:70	UCL:130	RPD:20

K1RL21AL-SAMP Calc Info:

12/3/2008 2:53:50 PM

Sample Preparation/Analysis

BN I-129 Prp/SepRC5025
TB Gamma by LEPD
5I CLIENT: HANFORD

Balance Id:112048273314 A

Pipet #:

AnalyDueDate: 12/08/2008

Sep1 DT/Tm Tech:

Batch: 8305496 pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,LaneL

Work Order, Lot, Sample DateTime	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:

```
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     CDRs: B
K12XM1AA-BLK:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
K12XM1AC-LCS:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```

Approved By _____ Date: _____

12/5/2008 12:52:57 PM

ICOC Fraction Transfer/Status Report

ByDate: 12/6/2007, 12/10/2008, Batch: '8305496'. User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
8305496						
AC		Rev1C	LaneL	12/3/2008 2:47:34 PM		
SC			wagarr	IsBatched	10/31/2008 3:24:36 PM	ICOC_RADCALC v4.8.35
SC			LaneL	InPrep	12/3/2008 2:47:34 PM	RL-PRP-004 REVISION 0
SC			LaneL	Prep1C	12/3/2008 2:54:38 PM	RL-PRP-004 REVISION 0
SC			BostedD	Prep2C	12/4/2008 3:52:35 PM	RL-GAM-002 REVISION 0
SC			DAWKINSO	InCnt1	12/4/2008 4:11:54 PM	RL-CI-007 REVISION 0
SC			ClarkR	CalcC	12/5/2008 7:24:48 AM	RL-CI-007 REVISION 0
SC			nortonj	Rev1C	12/5/2008 12:51:48 PM	RL-DR-001 REV 0
AC			LaneL	12/3/2008 2:54:38 PM		
AC			BostedD	12/4/2008 3:52:35 PM		
AC			DAWKINSO	12/4/2008 4:11:54 PM		
AC			ClarkR	12/5/2008 7:24:48		
AC			nortonj	12/5/2008 12:51:48		

AC: Accepting Entry; SC: Status Change

TESTAMERICA

12/3/2008 5:02:05 PM

Sample Preparation/Analysis

Balance id:1120482733

108302, CH2M Hill Plateau Remediation DOE RL
, Waste Management Federal Servi

AM Tc-99 Prp/SepRC5078
S5 Technetium-99 by Liquid Scint
5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 12/08/2008 W05549

Sep1 DT/Tm Tech:

Batch: 8305493 WATER pCi/L PM, Quote: SS , 29754

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,LaneL

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 K1RL2-1-AD J8J280293-1-SAMP 10/28/2008 09:25		124.90g,in AmtRec: VIAL,500MLP,15LP #Containers: 17		60			Scr: Alpha: -9.26E-04 uCi/Sa	Beta: 1.06E-02 uCi/Sa 7.2E-02L
2 K1RL2-1-AQ-S J8J280293-1-MS 10/28/2008 09:25		125.00g,in AmtRec: VIAL,500MLP,15LP #Containers: 17	TCSG2270 10/10/08,pd 07/01/05,r				Scr: Alpha: -9.26E-04 uCi/Sa	Beta: 1.06E-02 uCi/Sa 7.2E-02L
3 K1RL2-1-AR-X J8J280293-1-DUP 10/28/2008 09:25		125.10g,in AmtRec: VIAL,500MLP,15LP #Containers: 17					Scr: Alpha: -9.26E-04 uCi/Sa	Beta: 1.06E-02 uCi/Sa 7.2E-02L
4 K12XH-1-AA-B J8J310000-493-BLK 10/28/2008 09:25		125.00g,in AmtRec: #Containers: 1					Scr: Alpha:	Beta:
5 K12XH-1-AC-C J8J310000-493-LCS 10/28/2008 09:25		125.10g,in AmtRec: #Containers: 1	TCSE2267 09/30/08,pd 07/01/05,r				Scr: Alpha:	Beta:
6 K12XH-1-AD-BN J8J310000-493-IBLK 10/28/2008 09:25		AmtRec: #Containers: 1					Scr: Alpha:	Beta:

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TESTAMERICA

12/3/2008 5:02:06 PM

Sample Preparation/Analysis

AM Tc-99 Prp/SepRC5078
S5 Technetium-99 by Liquid Scint
5I CLIENT: HANFORD

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

AnalyDueDate: 12/08/2008

Batch: 8305493 pCi/L
SEQ Batch, Test: None

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Comments: PH < 2.0. RK 12 3 08

All Clients for Batch:
108302, CH2M Hill Plateau Remediation DOE RL Waste Management Federal Servi, SS , 29754

K1RL21AD-SAMP Constituent List:
Tc-99 RDL:15 pCi/L LCL: UCL: RPD:
K1RL21AQ-MS Constituent List:

K12XH1AA-BLK:
Tc-99 RDL:15 pCi/L LCL: UCL: RPD:
K12XH1AC-LCS:
Tc-99 RDL:15 pCi/L LCL:70 UCL:130 RPD:20
K12XH1AD-IBLK:
Tc-99 RDL:15 pCi/L LCL: UCL: RPD:

K1RL21AD-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
K1RL21AQ-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
K12XH1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
K12XH1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
K12XH1AD-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

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12/18/2008 1:40:30 PM

ICOC Fraction Transfer/Status Report

ByDate: 12/19/2007, 12/23/2008, Batch: '8305493', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
8305493						
AC		Rev1C	LaneL	12/3/2008 4:56:47 PM		
SC			wagarr	IsBatched	10/31/2008 3:24:36 PM	ICOC_RADCALC v4.8.35
SC			LaneL	InPrep	12/3/2008 4:56:47 PM	RL-PRP-004 REVISION 0
SC			LaneL	Prep1C	12/3/2008 5:02:56 PM	RL-PRP-004 REVISION 0
SC			Barcotl	InSep1	12/16/2008 5:28:23 PM	RL-LSC-013 REVISION 0
SC			Barcotl	Sep1C	12/16/2008 5:28:35 PM	RL-LSC-013 REVISION 0
SC			DAWKINSO	InCnt1	12/16/2008 6:28:10 PM	RL-CI-005 REVISION 0
SC			BlackCL	CalcC	12/18/2008 7:11:08 AM	RL-CI-005 REVISION 0
SC			antonsonl	Rev1C	12/18/2008 1:40:13 PM	RL-DR-001 REV 0
AC			LaneL	12/3/2008 5:02:56 PM		
AC			Barcotl	12/16/2008 5:28:23		
AC			Barcotl	12/16/2008 5:28:35		
AC			DAWKINSO	12/16/2008 6:28:10		
AC			BlackCL	12/18/2008 7:11:08		
AC			antonsonl	12/18/2008 1:40:13		

AC: Accepting Entry; SC: Status Change

TESTAMERICA

12/3/2008 5:14:13 PM

108302, CH2M Hill Plateau Remediation DOE RL
, Waste Management Federal Servi

AnalyDueDate: 12/08/2008 WO5549

Batch: 8305499 WATER pCi/L

SEQ Batch, Test: None

Sample Preparation/Analysis

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

PM, Quote: SS , 29754

Balance Id:1120482733

Pipet #:

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: ,LaneL

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:
1 K1RL2-1-AJ J8J280293-1-SAMP 10/28/2008 09:25		199.90g,in AmtRec: VIAL,500MLP,15LP #Containers: 17	SETA0384 10/23/08		200			Scr: Alpha: -9.26E-04 uCi/Sa	Beta: 1.06E-02 uCi/Sa 7.2E-02L
2 K1RL2-1-AX-X J8J280293-1-DUP 10/28/2008 09:25		200.00g,in AmtRec: VIAL,500MLP,15LP #Containers: 17	SETA0385 10/23/08					Scr: Alpha: -9.26E-04 uCi/Sa	Beta: 1.06E-02 uCi/Sa 7.2E-02L
3 K12XR-1-AA-B J8J310000-499-BLK 10/28/2008 09:25		200.00g,in AmtRec: #Containers: 1	SETA0386 10/23/08					Scr: Alpha:	Beta:
4 K12XR-1-AC-BN J8J310000-499-IBLK 10/28/2008 09:25		AmtRec: #Containers: 1	SETA0462					Scr: Alpha:	Beta:

Comments: PH < 2.0. RJK 12 3 08

All Clients for Batch:
108302, CH2M Hill Plateau Remediation DOE RL Waste Management Federal Servi, SS , 29754

K1RL21AJ-SAMP Constituent List:

Se-79	RDL:30	pCi/L	LCL:	UCL:	RPD:

K12XR1AA-BLK:

Se-79	RDL:30	pCi/L	LCL:	UCL:	RPD:

K12XR1AC-IBLK:

Se-79	RDL:30	pCi/L	LCL:	UCL:	RPD:

K1RL21AJ-SAMP Calc Info:

12/3/2008 5:14:13 PM

Sample Preparation/Analysis

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

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

AnalyDueDate: 12/08/2008

Batch: 8305499 pCi/L
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
K12XR1AA-BLK:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
K12XR1AC-IBLK:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```

Approved By _____ Date: _____

12/18/2008 11:31:51 AM

ICOC Fraction Transfer/Status Report

ByDate: 12/19/2007, 12/23/2008, Batch: '8305499', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
8305499						
AC		Rev1C	LaneL	12/3/2008 5:10:10 PM		
SC			wagarr	IsBatched	10/31/2008 3:24:36 PM	ICOC_RADCALC v4.8.35
SC			LaneL	InPrep	12/3/2008 5:10:10 PM	RL-PRP-004 REVISION 0
SC			LaneL	Prep1C	12/3/2008 5:15:04 PM	RL-PRP-004 REVISION 0
SC			Barcotl	InSep1	12/15/2008 5:42:06 PM	RL-LSC-012 REVISION 0
SC			Barcotl	Sep1C	12/15/2008 5:42:16 PM	RL-LSC-012 REVISION 0
SC			DAWKINSO	InCnt1	12/15/2008 6:00:52 PM	RL-CI-005 REVISION 0
SC			BlackCL	CalcC	12/17/2008 9:23:38 AM	RL-CI-005 REVISION 0
SC			antonsonl	Rev1C	12/18/2008 11:31:45 AM	RL-DR-001 REV 0
AC			LaneL	12/3/2008 5:15:04 PM		
AC			Barcotl	12/15/2008 5:42:06		
AC			Barcotl	12/15/2008 5:42:16		
AC			DAWKINSO	12/15/2008 6:00:52		
AC			BlackCL	12/17/2008 9:23:38		
AC			antonsonl	12/18/2008 11:31:45		

AC: Accepting Entry; SC: Status Change

TESTAMERICA

10/31/2008 3:23:14 PM

Sample Preparation/Analysis

108302, CH2M Hill Plateau Remediation DOE RL
, Waste Management Federal Servi

AR H-3 Prp/SepRC5007
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

AnalyDueDate: 12/08/2008 W05549

Batch: 8305501 WATER pCi/L PM, Quote: SS , 29754
SEQ Batch, Test: None

Balance Id: 12445
Pipet #:
Sep1 DT/Tm Tech: 11-10-08 2pm
Sep2 DT/Tm Tech:
Prep Tech:

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 K1RL2-1-AC J8J280293-1-SAMP 10/28/2008 09:25	AmtRec: VIAL,500MLP,15LP	#Containers: 17				Scr:	Alpha:	Beta:
2 K1RL2-1-A1-X J8J280293-1-DUP 10/28/2008 09:25	AmtRec: VIAL,500MLP,15LP	#Containers: 17				Scr:	Alpha:	Beta:
3 K12X0-1-AA-B J8J310000-501-BLK 10/28/2008 09:25	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:
4 K12X0-1-AC-C J8J310000-501-LCS 10/28/2008 09:25	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:
5 K12X0-1-AD-BX J8J310000-501-MBLK 10/28/2008 09:25	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:
6 K12X0-1-AE-CM J8J310000-501-MLCS 10/28/2008 09:25	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:
7 K12X0-1-AF-BN J8J310000-501-IBLK 10/28/2008 09:25	AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:

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TESTAMERICA

10/31/2008 3:23:15 PM

Sample Preparation/Analysis

AR H-3 Prp/SepRC5007
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Balance Id: 12445
Pipet #:
Sep1 DT/Tm Tech: 11-10-08 2m
Sep2 DT/Tm Tech:
Prep Tech:

AnalyDueDate: 12/08/2008

Batch: 8305501 pCi/L
SEQ Batch, Test: None

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 K12X0-1-AG-BN								
J8J310000-501-IBLK								
10/28/2008 09:25		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:

Comments:

All Clients for Batch:
108302, CH2M Hill Plateau Remediation DOE RL Waste Management Federal Servi, SS , 29754

K1RL21AC-SAMP Constituent List:
H-3 RDL:400 pCi/L LCL:70 UCL:130 RPD:20
K12X01AA-BLK:

K12X01AC-LCS:

K12X01AD-MBLK:

K12X01AE-MLCS:

K12X01AF-IBLK:

K12X01AG-IBLK:

K1RL21AC-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
K12X01AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
K12X01AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
K12X01AD-MBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
K12X01AE-MLCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
K12X01AF-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TESTAMERICA

10/31/2008 3:23:15 PM

Sample Preparation/Analysis

AR H-3 Prp/SepRC5007
S6 Tritium by Liquid Scint
5I CLIENT: HANFORD

Balance Id: 12445
Pipet #:
Sep1 DT/Tm Tech: 11-10-08
Sep2 DT/Tm Tech:
Prep Tech:

AnalyDueDate: 12/08/2008

Batch: 8305501 pCi/L
SEQ Batch, Test: None

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

K12X01AG-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

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11/13/2008 4:19:01 PM

ICOC Fraction Transfer/Status Report

ByDate: 11/14/2007, 11/18/2008, Batch: '8305501', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
8305501						
AC		Rev1C	McDowellD	11/10/2008 7:32:30		
SC			wagarr	IsBatched	10/31/2008 3:24:36 PM	ICOC_RADCALC v4 8.35
SC			McDowellD	InSep1	11/10/2008 7:32:30 AM	RL-LSC-005 REVISION 0
SC			McDowellD	Sep1C	11/11/2008 1:02:51 PM	RL-LSC-005 REVISION 0
SC			ClarkR	InCnt1	11/11/2008 1:09:55 PM	RL-CI-005 REVISION 0
SC			BlackCL	CalcC	11/12/2008 7:25:48 AM	RL-CI-005 REVISION 0
SC			antonsonl	Rev1C	11/13/2008 4:18:51 PM	RL-DR-001 REV 0
AC			McDowellD	11/11/2008 1:02:51		
AC			ClarkR	11/11/2008 1:09:55		
AC			BlackCL	11/12/2008 7:25:48		
AC			antonsonl	11/13/2008 4:18:51		

AC: Accepting Entry; SC: Status Change

TESTAMERICA

12/3/2008 4:47:50 PM

Sample Preparation/Analysis

Balance Id:1120482733

108302, CH2M Hill Plateau Remediation DOE RL
, Waste Management Federal Servi

DH UNat_Laser PrpRC5015
SS Total Uranium by KPA
5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 12/08/2008 W05549

Sep1 DT/Tm Tech:

Batch: 8305491 WATER pCi/L PM, Quote: SS , 29754

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,LaneL Back

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 K1RL2-1-AE J8J280293-1-SAMP 10/28/2008 09:25	AmtRec: VIAL,500MLP,15LP	25.00g,in	#Containers: 17			Scr:	Alpha: -9.26E-04 uCi/Sa	Beta: 1.06E-02 uCi/Sa 7.2E-02L
2 K1RL2-1-AN-S J8J280293-1-MS 10/28/2008 09:25	AmtRec: VIAL,500MLP,15LP	25.00g,in	UNSF4421 11/12/08,pd 02/01/86,r #Containers: 17			Scr:	Alpha: -9.26E-04 uCi/Sa	Beta: 1.06E-02 uCi/Sa 7.2E-02L
3 K1RL2-1-AP-X J8J280293-1-DUP 10/28/2008 09:25	AmtRec: VIAL,500MLP,15LP	25.00g,in	#Containers: 17			Scr:	Alpha: -9.26E-04 uCi/Sa	Beta: 1.06E-02 uCi/Sa 7.2E-02L
4 K12XG-1-AA-B J8J310000-491-BLK 10/28/2008 09:25	AmtRec:	25.00g,in	#Containers: 1			Scr:	Alpha:	Beta:
5 K12XG-1-AC-C J8J310000-491-LCS 10/28/2008 09:25	AmtRec:	25.00g,in	UNSF4422 11/12/08,pd 02/01/86,r #Containers: 1			Scr:	Alpha:	Beta:
6 K12XG-1-AD-C J8J310000-491-LCS 10/28/2008 09:25	AmtRec:	25.00g,in	UNSC2709 10/23/08,pd 02/01/86,r #Containers: 1			Scr:	Alpha:	Beta:

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TESTAMERICA

12/3/2008 4:47:51 PM

Sample Preparation/Analysis

DH UNat_Laser PrpRC5015
SS Total Uranium by KPA
5I CLIENT: HANFORD

Balance Id:1120482733

Pipet #: _

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: ,LaneL

AnalyDueDate: 12/08/2008

Batch: 8305491 pCi/L
SEQ Batch, Test: None

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Comments: pH < 2.0. [illegible] 12 3 08

All Clients for Batch:
108302, CH2M Hill Plateau Remediation DOE RL Waste Management Federal Servi, SS , 29754

K1RL21AE-SAMP Constituent List:
Uranium RDL:0.1 pCi/L LCL: UCL: RPD:
K1RL21AN-MS Constituent List:

K12XG1AA-BLK:
Uranium RDL:0.1 pCi/L LCL: UCL: RPD:
K12XG1AC-LCS:
Uranium RDL:0.1 pCi/L LCL:70 UCL:130 RPD:20
K12XG1AD-LCS:
Uranium RDL:0.1 pCi/L LCL:70 UCL:130 RPD:20

K1RL21AE-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
K1RL21AN-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
K12XG1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
K12XG1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
K12XG1AD-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

12/8/2008 2:30:20 PM

ICOC Fraction Transfer/Status Report

ByDate: 12/9/2007, 12/13/2008, Batch: '8305491', User: *ALL Order By DateTimeAccepting

O Batch	Work Ord	CurStatus	Accepting			Commer ts
8305491						
AC		Rev1C	LaneL	12/3/2008 4:41:02 PM		
SC			wagarr	IsBatched	10/31/2008 3:24:36 PM	ICOC_RADCALC v4.8.35
SC			LaneL	InPrep	12/3/2008 4:41:02 PM	RL-PRP-004 REVISION 0
SC			LaneL	Prep1C	12/3/2008 4:48:39 PM	RL-PRP-004 REVISION 0
SC			BockJ	InPrep2	12/4/2008 8:05:52 AM	RL-KPA-001 REVISION 0
SC			NelsonT	Cnt1C	12/8/2008 9:01:08 AM	RL-KPA-003 REVISION 0
SC			nortonj	Rev1C	12/8/2008 2:30:15 PM	RL-DR-001 REV 0
AC			LaneL	12/3/2008 4:48:39 PM		
AC			BockJ	12/4/2008 8:05:52		
AC			NelsonT	12/8/2008 9:01:08		
AC			nortonj	12/8/2008 2:30:15 PM		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Grp Rec Cnt: 5

ICOCFractions v4.8.35