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Analytical Data Package Prepared For

Fluor Hanford Inc.

Radiochemical Analysis By

TestAmerica

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

Assigned Laboratory Code: TARL

Data Package Contains _____ Pages

Report No.: 39915

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.
W05490	F08-084	B1TRB4	J8H220175-1	KVLTH1AA	9KVLTH10	8235333
		B1TRB5	J8H220175-3	KVLTX1AA	9KVLTX10	8235333
		B1TRB7	J8H220175-4	KVLT41AA	9KVLT410	8235333
		B1TRB8	J8H220175-5	KVLVF1AA	9KVLVF10	8235333
		B1TRC0	J8H220175-2	KVLTR1AA	9KVLTR10	8235333
		B1TVH6	J8H220175-6	KVLVM1AA	9KVLVM10	8235333
		B1TVH7	J8H220175-7	KVLVX1AC	9KVLVX10	8235333
		B1TVH7	J8H220175-7	KVLVX1AE	9KVLVX10	8235489
		B1TVH7	J8H220175-7	KVLVX1AG	9KVLVX10	8235492
		B1TVH7	J8H220175-7	KVLVX1AA	9KVLVX10	8235493
		B1TVH7	J8H220175-7	KVLVX1AH	9KVLVX10	8235494
		B1TVH7	J8H220175-7	KVLVX2AD	9KVLVX20	8262204

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THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Fluor Hanford, Inc.
1200 Jadwin Ave.
Richland, WA 99352

September 30, 2008

Attention: Steve Trent

SAF Number	:	F08-084
Date SDG Closed	:	August 22, 2008
Number of Samples	:	Seven (7)
Sample Type	:	Water
SDG Number	:	W05490
Data Deliverable	:	45/45 Day

CASE NARRATIVE

I. Introduction

On August 22, 2008 seven samples were received at TestAmerica for radiochemical analysis. Upon receipt, the samples were assigned to lot J8H220175 and assigned the following laboratory ID number to correspond with the Fluor Hanford (FH) specific ID:

FH ID#	TALR ID#	MATRIX	DATE OF RECEIPT
B1TRB4	KVLTH	WATER	8/22/08
B1TRB5	KVLTX	WATER	8/22/08
B1TRB7	KVLT4	WATER	8/22/08
B1TRB8	KVLVF	WATER	8/22/08
B1TRC0	KVLTR	WATER	8/22/08
B1TVH6	KVLVM	WATER	8/22/08
B1TVH7	KVLVX	WATER	8/22/08

II. Sample Receipt

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

III. Analytical Results/Methodology

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

The requested analyses were:

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)*
Liquid Scintillation Counting
Technetium-99 by method RL-LSC-013 (RICH-RC-5078)*
Laser Induced Phosphorimetry
Total Uranium by method RL-KPA-003 (RICH-RC-5058)*
Chemical Analysis
Hexavalent Chromium by EPA method 7196A

*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

Gas Proportional Counting
Gross Alpha by method RL-GPC-001 (RICH-RC-5014):
The LCS, batch blank, sample and sample duplicate (B1TVH7) results are within contractual requirements.

Gross Beta by method RL-GPC-001 (RICH-RC-5014):
The LCS, batch blank, sample and sample duplicate (B1TVH7) results are within contractual requirements.

Gas Proportional Counting
Strontium-90 by method RL-GPC-003 (RICH-RC-5006):
The LCS, batch blank, sample and sample duplicate (B1TVH7) results are within contractual requirements.

Fluor Hanford, Inc.
September 30, 2008

Liquid Scintillation Counting

Technetium-99 by method RL-LSC-013 (RICH-RC-5078):

The LCS and sample matrix spike (B1TVH7) yields were low. The batch was re-analyzed with acceptable yields. Data will be accepted. Except as noted, the LCS, batch blank, sample, sample duplicate (B1TVH7), and sample matrix spike (B1TVH7) results are within contractual requirements.

Total Uranium

Total Uranium by method RL-KPA-003 (RICH-RC-5058):

There was an obvious switch between the two LCS samples. The switch was corrected and recalculated. Except as noted, the LCS, batch blank, sample, sample duplicate (B1TVH7), and sample matrix spike (B1TVH7) results are within contractual requirements.

Chemical Analysis

Hexavalent Chromium by EPA method 7196A

Samples B1TRB4 and B1TRB5 were received out of hold time. TestAmerica was instructed by D. Widrig to analyze all samples including the samples that have exceeded their hold times (email dated Friday, August 22, 2008 @ 8:40am). On August 26, 2008 TestAmerica sent an Issue Resolution Form. The client accepted the proposed resolution (Tracking Number: 08-153) on August 26, 2008.

There was only one set of CCV and CCB ran for the twelve samples in this batch instead of two sets. The analyst miscounted the number of samples in the batch.

Except as noted, the LCS, batch blank, samples, sample duplicate (B1TRB4), sample matrix spike (B1TRB4), and matrix spike duplicate results (B1TRB4) 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:

for Sandra Seger
Project Manager

TAL RICHLAND ISSUE RESOLUTION FORM
FOR CONTRACT 615

FH Tracking Number: 08-153
SAF No.: F08-084
Date: August 26, 2008
SDG: W05490
Sample No.(s) B1TRB4,B1TRB5

Submitted By: Sandra Seger

Phone No. 509-375-3131 x158
Fax No. 509-375-5590

Submitted To: **Steve Trent (FH)**

Phone No. **509-373-5869**
Fax No. 866-252-5816

ISSUE	PROPOSED RESOLUTION
The hold time was exceeded for Cr+6 samples.	The client instructed TestAmerica to analyze the samples even though the hold time exceeded, email dated 8/22/08 10:42 AM.

FLH COMMENTS -
Accept proposed resolution and include in case narrative.

Heidi Hampt 8/26/08

Signature and date

Seger, Sandra

From: Hampt, Heidi [Heidi_Hampt@RL.gov]
Sent: Tuesday, August 26, 2008 3:39 PM
To: Hampt, Heidi; Seger, Sandra; Wagar, Rhonda
Cc: Neely, Michael; Anastos, Heather L; Widrig, Dana L; Fies, Gregory A; ^CPP Sample Management
Subject: RE: W05490 IRF
Attachments: 08-153.DOC

Sandra,

A revised response is attached. The original IRF you sent had the wrong SAF number.

Thanks,
Heidi

From: Hampt, Heidi
Sent: Tuesday, August 26, 2008 3:35 PM
To: 'Seger, Sandra'; 'Wagar, Rhonda'
Cc: Neely, Michael; Anastos, Heather L; Widrig, Dana L; Fies, Gregory A; ^CPP Sample Management
Subject: RE: W05490 IRF

Sandra,

Our response is attached.

Thanks,
Heidi

From: Seger, Sandra [mailto:Sandra.Seger@testamericainc.com]
Sent: Tuesday, August 26, 2008 1:39 PM
To: ^CPP Sample Management; Hampt, Heidi
Subject: W05490 IRF

Wagar, Rhonda

From: Smith, Summer
Sent: Friday, August 22, 2008 10:42 AM
To: Wagar, Rhonda
Subject: FW: Hold Times
Importance: High

Summer

From: Dana Widrig [mailto:dlwidrig@verizon.net]
Sent: Friday, August 22, 2008 8:40 AM
To: Smith, Summer
Cc: 'Widrig, Dana L'; Stephen_J_Trent@ri.gov
Subject: Hold Times

Summer,

You will be receiving samples for Cr6+ today for one of our projects (Aquifer Tubes). Please run all of the samples including samples that have exceeded their hold times.

Thanks,

Dana

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 Microsopy 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
Fe59	RL-LSC-016	RICH-RC-5023	R4-73-014 / EPA HASL 300	DETERMINATION OF IRON-55 AND IRON-59 IN WATER
Gamma	RL-GAM-001	RICH-RC-5017	901.0 / HASL 300 ASTM D3649	PREPARATION OF ALL MATRICES FOR ANALYSIS BY GAMMA SPECTROSCOPY
H3	RL-LSC-001	RICH-RB-5013	Mod H-02 / EPA 520	TRITIUM, CARBON-14, NICKEL-63 OR PHOSPHORUS-32 ANALYSIS IN URINE
H3	RL-LSC-003	RICH-RB-5034	7500-3 / SM	DETERMINATION OF TRITIUM IN URINE BY DISTILLATION
H3	RL-LSC-004	RICH-RC-5004	H3 / EPA LV539	DETERMINATION OF TRITIUM IN AIR
H3	RL-LSC-005	RICH-RC-5007	Mod '906.0 / EPA 600	SEPARATION OF TRITIUM IN WATER AND AQUEOUS COMPONENT OF WINE
H3	RL-LSC-007	RICH-RC-5024	H-3 by EE EPA LV539 / HASL 300	DETERMINATION OF LOW LEVEL TRITIUM IN WATER BY ELECTROLYTIC ENRICHMENT
H3	RL-LSC-002	RICH-RC-5037	H-3 in Water/Tissue / LV 539	DETERMINATION OF TRITIUM BY CRYOGENIC DISTILLATION

Isotope	Richland SOP #	Old Richland SOP #	Method Reference	Title
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	R4-73-0141/EPA ASTM D2334 (Discontinued)	DETERMINATION OF IODINE-131 AND 129 IN WATER BY SOLVENT EXTRACTION METHOD
I131	RL-GAM-002	RICH-RC-5025	R4-73-0141/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
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 / DOE0089T	SEPARATION OF Ni-63 BY EXTRACTION CHROMATOGRAPHY
Np	RL-ALP-013	RICH-RC-5009	NAS-NS-3060	DETERMINATION OF NEPTUNIUM-237 BY LIQUID-LIQUID EXTRACTION IN ALL MATRICES
Np	RL-ALP-006	RICH-RC-5064	EXT Chromatography	SEPARATION OF NEPTUNIUM BY EXTRACTION CHROMATOGRAPHY
P32	RL-LSC-001	RICH-RB-5013	Mod H-02 / EPA 520	TRITIUM, CARBON-14, NICKEL-63 OR PHOSPHORUS-32 ANALYSIS IN URINE
Po	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

Isotope	Richland SOP #	Old Richland SOP #	Method Reference	Title
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-RB-5015	Pu11 / HASL 300	RAPID DETERMINATION OF PLUTONIUM IN FECES
Pu	RL-ALP-002	RICH-RC-5010	Pu11 / HASL 300	DETERMINATION OF ISOTOPIC PLUTONIUM IN ALL MATRICES
Pu	RL-ALP-010	RICH-RC-5080	Am03 HASL 300 Pu11 / HASL 300	SEQUENTIAL SEPARATION OF PLUTONIUM AND AMERICIUM
Pu	RL-ALP-001	RICH-RC-5087	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
Ra	RL-RA-002	RICH-RC-5027	Mod D2460/ ASTM 903.0 / EPA 600	DETERMINATION OF TOTAL RADIUM
Rn	RL-LSC-019	RICH-RC-5082	913.0 / EPA	DETERMINATION OF RADON-222 - ADAPTED FROM METHOD 913.0
S35	ARCHIVED	RICH-RB-5020	Hillebrand, Lundeell, Bright, Hoffman 1953	DETERMINATION OF SULFUR-35 IN URINE
Se79	RL-LSC-012	RICH-RC-5043	Selenium / NAS-NS-3030	RADIOCHEMICAL DETERMINATION OF SELENIUM-79
Solubility	ARCHIVED	RICH-RC-5035	Kalfward&Thomas PNL3716	DETERMINATION OF SOLUBILITY OF RADIOACTIVE PARTICLE CONSTITUENTS
Sr	RL-GPC-005	RICH-RB-5007	Mod Sr02 / HASL 300 Mod 905.0 / EPA 600	DETERMINATION OF TOTAL STRONTIUM IN URINE
Sr	RL-GPC-006	RICH-RB-5021	Mod Sr02 / HASL300 Mod 905.0 / EPA 600	DETERMINATION OF STRONTIUM IN FECES
Sr	ARCHIVED	RICH-RB-5022	Mod Sr02 / HASL300 Mod 905.0 / EPA 600	DETERMINATION OF TOTAL STRONTIUM IN URINE FOR RAPID ANALYSIS
Sr	ARCHIVED	RICH-RB-5031	Mod Sr02 / HASL300 Mod 905.0 / EPA 600	RAPID DETERMINATION OF TOTAL STRONTIUM IN FECES
Sr	RL-GPC-003	RICH-RC-5006	Mod Sr02 / HASL300 Mod 905.0 / EPA 600	STRONTIUM SEPARATION IN ENVIROMENTAL MATRICES
Sr - Yt	RL-GPC-004	RICH-RC-5071	Mod Sr02 / HASL300 Mod 905.0 / EPA 600	YTTRIUM-90 SEPARATION FOR STRONTIUM-90 DETERMINATION IN ALL MATRICES
Tc	RL-LSC-014	RICH-RC-5065	EXT Chromatography Mod RP550 / DOE0089T	DETERMINATION OF TECHNETIUM-99 BY EXTRACTION CHROMATOGRAPHY
Tc	RL-LSC-013	RICH-RC-5078	Tc01 / HASL 300	SEPARATION OF TECHNETIUM-99 IN ALL MATRICES
Th	RL-ALP-008	RICH-RB-5006	Mod Th01 / HASL 300	SEPARATION OF THORIUM FROM URINE AND FECAL SAMPLES
Th	RL-ALP-005	RICH-RC-5084	Mod Th01 / HASL 300 Anal Chim Acta 1982	DETERMINATION OF THORIUM ISOTOPIC IN ENVIRONMENTAL MATRICES
U	RL-ALP-012	RICH-RC-5012	Po-01 / HASL 300 Mod U01 / HASL 300	SEPARATION OF ISOTOPIC URANIUM AND POLONIUM-210 IN WATER, SOIL AND FILTERS
U	RL-KPA-002	RICH-RC-5031	Mod U01 / HASL 300	SEPARATION OF TOTAL URANIUM IN WATER AND URINE
U	RL-KPA-003	RICH-RC-5058	D5174 / ASTM	DETERMINATION OF URANIUM BY PHOSPHORESCENCE ANALYSIS
U	RL-ALP-004	RICH-RC-5067	EXT Chromatography Mod RP725 / DOE0089T	SEPARATION OF URANIUM BY EXTRACTION CHROMATOGRAPHY
U	RL-ALP-003	RICH-RC-5072	EXT Chrom Mod RP725 & 800 / DOE0089T	SEPARATION OF AMERICIUM, CURIUM, AND URANIUM BY EXTRACTION CHROMATOGRAPHY
U	RL-ALP-009	RICH-RC-5079	EXT Chromatography Mod RP725 / DOE0089T	DETERMINATION OF ISOTOPIC URANIUM IN ALL MATRICES

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.

Sample Results Summary

TestAmerica TARL

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

Date: 30-Sep-08

Report No. : 39915

SDG No: W05490

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
8235494 SRTOT_SEP_PRECIP_GPC									
B1TVH7									
	KVLVX1AH	STRONTIUM	1.03E-01 +- 4.80E-01	U	pCi/L	100%	1.05E+00		
B1TVH7 DUP									
	KVLVX1AQ	STRONTIUM	1.72E-01 +- 5.10E-01	U	pCi/L	100%	1.11E+00		49.8
8235492 9310_ALPHABETA_GPC									
B1TVH7									
	KVLVX1AG	ALPHA	5.87E-01 +- 6.88E-01	U	pCi/L	100%	1.20E+00	3.00E+00	
B1TVH7 DUP									
	KVLVX1AN	ALPHA	3.34E-01 +- 5.49E-01	U	pCi/L	100%	1.12E+00	3.00E+00	54.8
8235493 BETA_GPC									
B1TVH7									
	KVLVX1AA	BETA	3.58E+00 +- 1.55E+00		pCi/L	100%	2.70E+00	4.00E+00	
B1TVH7 DUP									
	KVLVX1AP	BETA	3.59E+00 +- 1.56E+00		pCi/L	100%	2.72E+00	4.00E+00	0.2
8235333 7196_CR6									
B1TRB4									
	KVLTH1AA	HEXCHROME	2.30E-02 +- 0.00E+00		mg/L	N/A	2.00E-03	3.50E-01	
	KVLTH1AE	HEXCHROME	2.00E-02 +- 0.00E+00		mg/L	N/A	2.00E-03	3.50E-01	14.0
B1TRB5									
	KVLTX1AA	HEXCHROME	1.20E-02 +- 0.00E+00		mg/L	N/A	2.00E-03	3.50E-01	
B1TRB7									
	KVLT41AA	HEXCHROME	1.60E-02 +- 0.00E+00		mg/L	N/A	2.00E-03	3.50E-01	
B1TRB8									
	KVLVF1AA	HEXCHROME	2.00E-03 +- 0.00E+00	U	mg/L	N/A	2.00E-03	3.50E-01	
B1TRC0									
	KVLTR1AA	HEXCHROME	8.00E-03 +- 0.00E+00		mg/L	N/A	2.00E-03	3.50E-01	
B1TVH6									
	KVLVM1AA	HEXCHROME	7.00E-03 +- 0.00E+00		mg/L	N/A	2.00E-03	3.50E-01	
B1TVH7									
	KVLVX1AC	HEXCHROME	7.00E-03 +- 0.00E+00		mg/L	N/A	2.00E-03	3.50E-01	
8235489 UTOT_KPA									
B1TVH7									
	KVLVX1AE	TOTAL-URANIUM	7.90E-01 +- 8.11E-02		pCi/L		5.57E-02	1.40E-01	
B1TVH7 DUP									
	KVLVX1AK	TOTAL-URANIUM	8.00E-01 +- 8.20E-02		pCi/L		5.57E-02	1.40E-01	
8262204 TC99_SEP_LSC									
B1TVH7									
	KVLVX2AD	TC-99	-1.60E+01 +- 5.58E+00	U	pCi/L	100%	9.68E+00	1.50E+01	
B1TVH7 DUP									

TestAmerica

rptSTLRchSaSummary2 V5.1.8
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: 30-Sep-08

TestAmerica TARL

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

Report No. : 39915

SDG No: W05490

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
8262204	TC99_SEP_LSC								
B1TVH7 DUP									
	KVLVX1AU	TC-99	-9.63E+00 +- 5.97E+00	U	pCi/L	100%	1.00E+01	1.50E+01	-49.5

No. of Results: 18

TestAmerica

rptSTLRchSaSummary2 V5.1.8
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: 30-Sep-08

Report No. : 39915

SDG No.: W05490

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC|MDA
SRTOT_SEP_PRECIP_GPC								
8235494 BLANK QC,								
KVNA51AA	STRONTIUM	2.60E-01 +- 5.36E-01	U	pCi/L	93%			1.14E+00
8235494 LCS,								
KVNA51AC	STRONTIUM	2.74E+01 +- 7.28E+00		pCi/L	99%	95%	0.0	1.04E+00
9310_ALPHABETA_GPC								
8235492 BLANK QC,								
KVNA31AA	ALPHA	1.45E-01 +- 3.69E-01	U	pCi/L	100%			8.90E-01
8235492 LCS,								
KVNA31AC	ALPHA	1.98E+01 +- 4.92E+00		pCi/L	100%	88%	-0.1	8.23E-01
BETA_GPC								
8235493 BLANK QC,								
KVNA41AA	BETA	3.67E-01 +- 1.25E+00	U	pCi/L	100%			2.71E+00
8235493 LCS,								
KVNA41AC	BETA	2.17E+01 +- 3.62E+00		pCi/L	100%	98%	0.0	2.38E+00
7196_CR6								
8235333 MATRIX SPIKE, B1TRB4								
KVLTH1AC	HEXCHROME	5.12E-01 +- 0.00E+00		mg/L	N/A	97%	0.0	2.00E-03
KVLTH1AD	HEXCHROME	5.10E-01 +- 0.00E+00		mg/L	N/A	97%	0.0	2.00E-03
8235333 LCS,								
KVMFF1AC	HEXCHROME	5.04E-01 +- 0.00E+00		mg/L	N/A	101%	0.0	2.00E-03
8235333 BLANK QC,								
KVMFF1AA	HEXCHROME	2.00E-03 +- 0.00E+00	U	mg/L	N/A			2.00E-03
UTOT_KPA								
8235489 MATRIX SPIKE, B1TVH7								
KVLVX1AJ	TOTAL-URANIUM	2.56E+01 +- 3.13E+00		pCi/L		106%	0.1	5.62E-02
8235489 BLANK QC,								
KVNA11AA	TOTAL-URANIUM	0.00E+00 +- 0.00E+00	U	pCi/L				5.62E-02
8235489 LCS,								
KVNA11AC	TOTAL-URANIUM	2.42E+00 +- 2.48E-01		pCi/L		100%	0.0	5.59E-02
KVNA11AD	TOTAL-URANIUM	2.44E+01 +- 2.90E+00		pCi/L		102%	0.0	5.57E-02
TC99_SEP_LSC								
8262204 MATRIX SPIKE, B1TVH7								
KVLVX1AR	TC-99	3.39E+03 +- 2.04E+02		pCi/L	100%	92%	-0.1	9.91E+00
8262204 BLANK QC,								
KW4K61AA	TC-99	-1.08E+01 +- 5.87E+00	U	pCi/L	100%			9.80E+00
8262204 LCS,								
KW4K61AC	TC-99	4.85E+02 +- 3.44E+01		pCi/L	100%	86%	-0.1	9.82E+00

No. of Results: 17

TestAmerica

rptSTLRchQcSummary V5.1.8 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.

FORM I

SAMPLE RESULTS

Date: 30-Sep-08

Lab Name:	TestAmerica	SDG:	W05490	Collection Date:	8/21/2008 9:48:00 AM
Lot-Sample No.:	J8H220175-1	Report No. :	39915	Received Date:	8/22/2008 10:00:00 AM
Client Sample ID:	B1TRB4	COC No. :	F08-084-030	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: 8235333	7196_CR6			Work Order: KVLTH1AA			Report DB ID: 9KVLTH10					
HEXCHROME	***2.30E-02***			0.0E+00	2.00E-03	mg/L	N/A	*(11.5)*	8/22/08		100.0	
							3.50E-01	*N/A*			ML	

No. of Results: 1 Comments:

TestAmerica
rptSTLRchSample
V5.1.8 A2002

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

FORM I

SAMPLE RESULTS

Date: 30-Sep-08

Lab Name:	**TestAmerica**	**SDG:**	W05490	**Collection Date:**	8/21/2008 9:35:00 AM
Lot-Sample No.:	**J8H220175-3**	**Report No. :**	39915	**Received Date:**	8/22/2008 10:00:00 AM
Client Sample ID:	**B1TRB5**	**COC No. :**	F08-084-031	**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: 8235333	7196_CR6			**Work Order:**	KVLTX1AA		**Report DB ID:**	9KVLTX10				
HEXCHROME	***1.20E-02***			0.0E+00	2.00E-03	mg/L	N/A	*(6.)*	8/22/08		100.0	
							3.50E-01	*N/A*			ML	

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

TestAmerica
rptSTLRchSample
V5.1.8 A2002

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

FORM I

SAMPLE RESULTS

Date: 30-Sep-08

Lab Name:	TestAmerica	**SDG:**	W05490	**Collection Date:**	8/21/2008 10:49:00 AM
Lot-Sample No.:	J8H220175-4	**Report No. :**	39915	**Received Date:**	8/22/2008 10:00:00 AM
Client Sample ID:	B1TRB7	**COC No. :**	F08-084-033	**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: 8235333	7196_CR6			**Work Order:**	KVLT41AA		**Report DB ID:**	9KVLT410				
HEXCHROME	***1.60E-02***			0.0E+00	2.00E-03	mg/L	N/A	*(8.)*	8/22/08		100.0	
							3.50E-01	*N/A*			ML	

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

TestAmerica
rptSTLRchSample
V5.1.8 A2002

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

FORM I

SAMPLE RESULTS

Date: 30-Sep-08

Lab Name:	TestAmerica	**SDG:**	W05490	**Collection Date:**	8/21/2008 10:44:00 AM
Lot-Sample No.:	J8H220175-5	**Report No. :**	39915	**Received Date:**	8/22/2008 10:00:00 AM
Client Sample ID:	B1TRB8	**COC No. :**	F08-084-034	**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: 8235333	7196_CR6			**Work Order:** KVLVF1AA			**Report DB ID:** 9KVLVF10					
HEXCHROME	***2.00E-03***	U		0.0E+00	2.00E-03	mg/L	N/A	*1.*	8/22/08		100.0	
							3.50E-01	*N/A*			ML	

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

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

FORM I

SAMPLE RESULTS

Date: 30-Sep-08

Lab Name:	TestAmerica	**SDG:**	W05490	**Collection Date:**	8/21/2008 11:52:00 AM
Lot-Sample No.:	J8H220175-2	**Report No. :**	39915	**Received Date:**	8/22/2008 10:00:00 AM
Client Sample ID:	B1TRC0	**COC No. :**	F08-084-036	**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: 8235333	7196_CR6			**Work Order:**	KVLTR1AA		**Report DB ID:**	9KVLTR10				
HEXCHROME	***8.00E-03***			0.0E+00	2.00E-03	mg/L	N/A	*(4.)*	8/22/08		100.0	
							3.50E-01	*N/A*			ML	

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

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

FORM I

SAMPLE RESULTS

Date: 30-Sep-08

Lab Name:	TestAmerica	**SDG:**	W05490	**Collection Date:**	8/21/2008 11:52:00 AM
Lot-Sample No.:	J8H220175-6	**Report No. :**	39915	**Received Date:**	8/22/2008 10:00:00 AM
Client Sample ID:	B1TVH6	**COC No. :**	F08-084-038	**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: 8235333	7196_CR6			**Work Order:**	KVLVM1AA		**Report DB ID:**	9KVLVM10				
HEXCHROME	***7.00E-03***			0.0E+00	2.00E-03	mg/L	N/A	*(3.5)*	8/22/08		100.0	
							3.50E-01	*N/A*			ML	

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

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

FORM I

SAMPLE RESULTS

Date: 30-Sep-08

Lab Name:	TestAmerica	**SDG:**	W05490	**Collection Date:**	8/21/2008 11:52:00 AM
Lot-Sample No.:	J8H220175-7	**Report No. :**	39915	**Received Date:**	8/22/2008 10:00:00 AM
Client Sample ID:	B1TVH7	**COC No. :**	F08-084-039	**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: 8235333	7196_CR6			**Work Order:**	KVLVX1AC		**Report DB ID:**	9KVLVX10				
HEXCHROME	***7.00E-03***			0.0E+00	2.00E-03	mg/L	N/A	*(3.5)*	8/22/08		100.0	
							3.50E-01	*N/A*			ML	
Batch: 8235489	UTOT_KPA			**Work Order:**	KVLVX1AE		**Report DB ID:**	9KVLVX10				
TOTAL-URANIUM	***7.90E-01***			8.1E-02	5.57E-02	pCi/L		*(14.2)*	9/10/08 10:19 a		0.0252	KPAW3
						1.97E-02	1.40E-01	*(19.5)*			ML	
Batch: 8235492	9310_ALPHABETA_GPC			**Work Order:**	KVLVX1AG		**Report DB ID:**	9KVLVX10				
ALPHA	***5.87E-01***	U	6.8E-01	6.9E-01	1.20E+00	pCi/L	100%	*0.49*	9/5/08 06:32 p		0.2022	GPC10D
						4.14E-01	3.00E+00	*(1.7)*			L	
Batch: 8235493	BETA_GPC			**Work Order:**	KVLVX1AA		**Report DB ID:**	9KVLVX10				
BETA	***3.58E+00***		1.5E+00	1.6E+00	2.70E+00	pCi/L	100%	*(1.3)*	9/5/08 07:57 p		0.2007	GPC26B
						1.28E+00	4.00E+00	*(4.6)*			L	
Batch: 8235494	SRTOT_SEP_PRECIP_GPC			**Work Order:**	KVLVX1AH		**Report DB ID:**	9KVLVX10				
STRONTIUM	***1.03E-01***	U	4.8E-01	4.8E-01	1.05E+00	pCi/L	100%	*0.1*	9/4/08 05:41 p		0.5	GPC28B
						5.00E-01		*0.43*			L	
Batch: 8262204	TC99_SEP_LSC			**Work Order:**	KVLVX2AD		**Report DB ID:**	9KVLVX20				
TC-99	***-1.60E+01***	U	3.8E+00	5.6E+00	9.68E+00	pCi/L	100%	*-(1.6)*	9/26/08 01:12 a		0.125	LSC7
						4.64E+00	1.50E+01	*-(5.7)*			L	

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

TestAmerica
rptSTLRchSample
V5.1.8 A2002

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

FORM II

Date: 30-Sep-08

DUPLICATE RESULTS

Lab Name:	TestAmerica	**SDG:**	W05490	**Collection Date:**	8/21/2008 9:48:00 AM
Lot-Sample No.:	J8H220175-1	**Report No. :**	39915	**Received Date:**	8/22/2008 10:00:00 AM
Client Sample ID:	B1TRB4	**COC No. :**	F08-084-030	**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: 8235333	7196_CR6			**Work Order:** KVLTH1AE		**Report DB ID:** KVLTH1ER			**Orig Sa DB ID:** 9KVLTH10			
HEXCHROME	2.00E-02			0.0E+00	2.00E-03	mg/L	N/A	(10.)	8/22/08		100.0	
	2.30E-02		**RPD**	**14.0**		3.50E-01		N/A			ML	

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

TestAmerica
rptSTLRchDupV5.1
.8 A2002

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

FORM II

Date: 30-Sep-08

DUPLICATE RESULTS

Lab Name:	**TestAmerica**	**SDG:**	W05490	**Collection Date:**	8/21/2008 11:52:00 AM
Lot-Sample No.:	**J8H220175-7**	**Report No. :**	39915	**Received Date:**	8/22/2008 10:00:00 AM
Client Sample ID:	**B1TVH7 DUP**	**COC No. :**	F08-084-039	**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: 8235489	UTOT_KPA			**Work Order:** KVLVX1AK		**Report DB ID:** KVLVX1KR			**Orig Sa DB ID:** 9KVLVX10			
TOTAL-URANIUM	8.00E-01			8.2E-02	5.57E-02	pCi/L		(14.4)	9/10/08 10:22 a		0.0252	KPAW3
	7.90E-01		**RPD**	**1.3**		1.40E-01		(19.5)			ML	
Batch: 8235492	9310_ALPHABETA_GPC			**Work Order:** KVLVX1AN		**Report DB ID:** KVLVX1NR			**Orig Sa DB ID:** 9KVLVX10			
ALPHA	3.34E-01	U	5.4E-01	5.5E-01	1.12E+00	pCi/L	100%	0.3	9/5/08 06:32 p		0.2028	GPC10C
	5.87E-01	U	**RPD**	**54.8**		3.00E+00		(1.2)			L	
Batch: 8235493	BETA_GPC			**Work Order:** KVLVX1AP		**Report DB ID:** KVLVX1PR			**Orig Sa DB ID:** 9KVLVX10			
BETA	3.59E+00		1.5E+00	1.6E+00	2.72E+00	pCi/L	100%	(1.3)	9/5/08 07:57 p		0.2002	GPC26D
	3.58E+00		**RPD**	**0.2**		4.00E+00		(4.6)			L	
Batch: 8235494	SRTOT_SEP_PRECIP_GPC			**Work Order:** KVLVX1AQ		**Report DB ID:** KVLVX1QR			**Orig Sa DB ID:** 9KVLVX10			
STRONTIUM	1.72E-01	U	5.1E-01	5.1E-01	1.11E+00	pCi/L	100%	0.16	9/4/08 05:41 p		0.4952	GPC28D
	1.03E-01	U	**RPD**	**49.8**				0.67			L	
Batch: 8262204	TC99_SEP_LSC			**Work Order:** KVLVX1AU		**Report DB ID:** KVLVX1UR			**Orig Sa DB ID:** 9KVLVX20			
TC-99	-9.63E+00	U	4.1E+00	6.0E+00	1.00E+01	pCi/L	100%	-0.96	9/26/08 01:12 a		0.125	LSC7
	-1.60E+01	U	**RPD**	**-49.5**		1.50E+01		-(3.2)			L	

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

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

FORM II

BLANK RESULTS

Date: 30-Sep-08

Lab Name: TestAmerica

Matrix: WATER

SDG: W05490

Report No. : 39915

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: 8235333	7196_CR6			**Work Order:**	KVMFF1AA		**Report DB ID:**	KVMFF1AB				
HEXCHROME	2.00E-03	U		0.0E+00	2.00E-03	mg/L	N/A	1.	8/22/08		100.0	
						3.50E-01		N/A			ML	
Batch: 8262204	TC99_SEP_LSC			**Work Order:**	KW4K61AA		**Report DB ID:**	KW4K61AB				
TC-99	-1.08E+01	U	4.0E+00	5.9E+00	9.80E+00	pCi/L	100%	-(1.1)	9/26/08 01:12 a		0.125	LSC7
					4.70E+00			-(3.7)			L	
Batch: 8235492	9310_ALPHABETA_GPC			**Work Order:**	KVNA31AA		**Report DB ID:**	KVNA31AB				
ALPHA	1.45E-01	U	3.7E-01	3.7E-01	8.90E-01	pCi/L	100%	0.16	9/5/08 06:32 p		0.2004	GPC10B
					3.05E-01	3.00E+00		0.79			L	
Batch: 8235493	BETA_GPC			**Work Order:**	KVNA41AA		**Report DB ID:**	KVNA41AB				
BETA	3.67E-01	U	1.2E+00	1.2E+00	2.71E+00	pCi/L	100%	0.14	9/5/08 07:57 p		0.2016	GPC26A
					1.29E+00	4.00E+00		0.59			L	
Batch: 8235494	SRTOT_SEP_PRECIP_GPC			**Work Order:**	KVNA51AA		**Report DB ID:**	KVNA51AB				
STRONTIUM	2.60E-01	U	5.3E-01	5.4E-01	1.14E+00	pCi/L	93%	0.23	9/4/08 05:41 p		0.5	GPC31A
					5.42E-01	5.00E+00		0.97			L	
Batch: 8235489	UTOT_KPA			**Work Order:**	KVNA11AA		**Report DB ID:**	KVNA11AB				
TOTAL-URANIUM	0.00E+00	U		0.0E+00	5.62E-02	pCi/L		0.	9/10/08 10:10 a		0.025	KPAW3
					1.99E-02	1.00E+00		N/A			ML	

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

TestAmerica
rptSTLRchBlank
V5.1.8 A2002

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

FORM II

LCS RESULTS

Date: 30-Sep-08

Lab Name: TestAmerica

Matrix: WATER

SDG: W05490

Report No. : 39915

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: 8235333	7196_CR6			**Work Order:**	KVMFF1AC		**Report DB ID:**	KVMFF1AS					
HEXCHROME	5.04E-01			0.0E+00	2.00E-03	mg/L	N/A	5.00E-01		101%	8/22/08	100.0	
							Rec Limits:	70	130	0.0		ML	
Batch: 8262204	TC99_SEP_LSC			**Work Order:**	KW4K61AC		**Report DB ID:**	KW4K61CS					
TC-99	4.85E+02		1.3E+01	3.4E+01	9.82E+00	pCi/L	100%	5.65E+02	5.93E+00	86%	9/26/08 01:12 a	0.125	LSC7
							Rec Limits:	70	130	-0.1		L	
Batch: 8235492	9310_ALPHABETA_GPC			**Work Order:**	KVNA31AC		**Report DB ID:**	KVNA31CS					
ALPHA	1.98E+01		2.8E+00	4.9E+00	8.23E-01	pCi/L	100%	2.24E+01	3.45E-01	88%	9/5/08 06:32 p	0.2034	GPC10A
							Rec Limits:	70	130	-0.1		L	
Batch: 8235493	BETA_GPC			**Work Order:**	KVNA41AC		**Report DB ID:**	KVNA41CS					
BETA	2.17E+01		2.3E+00	3.6E+00	2.38E+00	pCi/L	100%	2.22E+01	2.93E-01	98%	9/5/08 07:57 p	0.2004	GPC26C
							Rec Limits:	70	130	0.0		L	
Batch: 8235494	SRTOT_SEP_PRECIP_GPC			**Work Order:**	KVNA51AC		**Report DB ID:**	KVNA51CS					
STRONTIUM	2.74E+01		1.6E+00	7.3E+00	1.04E+00	pCi/L	99%	2.87E+01	5.57E-01	95%	9/4/08 05:41 p	0.5	GPC31B
							Rec Limits:	75	125	0.0		L	
Batch: 8235489	UTOT_KPA			**Work Order:**	KVNA11AC		**Report DB ID:**	KVNA11CS					
TOTAL-URANIUM	2.42E+00			2.5E-01	5.59E-02	pCi/L		2.40E+00	1.58E-02	100%	9/10/08 10:14 a	0.0251	KPAW3
							Rec Limits:	75	125	0.0		ML	
Batch: 8235489	UTOT_KPA			**Work Order:**	KVNA11AD		**Report DB ID:**	KVNA11DS					
TOTAL-URANIUM	2.44E+01			2.9E+00	5.57E-02	pCi/L		2.41E+01	7.43E-01	102%	9/10/08 10:17 a	0.0252	KPAW3
							Rec Limits:	75	125	0.0		ML	

No. of Results: 7 **Comments:**

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

rptSTLRchLcs
V5.1.8 A2002

FORM II

MATRIX SPIKE RESULTS

Date: 30-Sep-08

Lab Name: TestAmerica **SDG:** W05490

Lot-Sample No.: J8H220175-1, B1TRB4 **Report No. :** 39915 **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: 8235333	**Work Order:** KVLTH1AC			**Report DB ID:** KVLTH1CW			**Orig Sa DB ID:** 9KVLTH10					
HEXCHROME	5.12E-01			0.0E+00	2.00E-03	mg/L	N/A	97.34%	5.26E-01	8/22/08	100.0	7196_CR6
	2.30E-02										ML	
Batch: 8235333	**Work Order:** KVLTH1AD			**Report DB ID:** KVLTH1DW			**Orig Sa DB ID:** KVLTH1CW					
HEXCHROME	5.10E-01			0.0E+00	2.00E-03	mg/L	N/A	96.96%	5.26E-01	8/22/08	100.0	7196_CR6
	5.12E-01										ML	

Number of Results: 2

Comments:

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

FORM II

MATRIX SPIKE RESULTS

Date: 30-Sep-08

Lab Name: TestAmerica **SDG:** W05490

Lot-Sample No.: J8H220175-7, B1TVH7 **Report No. :** 39915 **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: 8235489	**Work Order:**	KVLVX1AJ		**Report DB ID:**	KVLVX1JW		**Orig Sa DB ID:**	9KVLVX10				
TOTAL-URANIUM	2.56E+01			3.1E+00	5.62E-02	pCi/L		105.99%	2.41E+01	9/10/08 10:20 a	0.025	UTOT_KPA
	7.90E-01								7.45E-01		ML	KPAW3
Batch: 8262204	**Work Order:**	KVLVX1AR		**Report DB ID:**	KVLVX1RW		**Orig Sa DB ID:**	9KVLVX10				
TC-99	3.39E+03		3.2E+01	2.0E+02	9.91E+00	pCi/L	100%	92.00%	3.68E+03	9/26/08 01:12 a	0.125	TC99_SEP_LSC
									2.16E+01		L	LSC7

Number of Results: 2

Comments:

TestAmerica
rptSTLRchMs
V5.1.8 A2002

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

FORM II

Date: 30-Sep-08

MATRIX SPIKE DUPLICATE RESULTS

Lab Name: TestAmerica **SDG:** W05490

Lot-Sample No.: J8H220175-1, B1TRB4 **Report No. :** 39915 **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	Primary Detector
Batch: 8235333	7196_CR6			**Work Order:** KVLTH1AC			**Report DB ID:** KVLTH1CW			**Orig Sa DB ID:** KVLTH1DW		
HEXCHROME	5.12E-01			0.0E+00	2.00E-03	mg/L	N/A	97.34%	5.26E-01	8/22/08	100.0	
	5.10E-01	***RPD***	0.4								ML	
Batch: 8235333	7196_CR6			**Work Order:** KVLTH1AD			**Report DB ID:** KVLTH1DW			**Orig Sa DB ID:** KVLTH1CW		
HEXCHROME	5.10E-01			0.0E+00	2.00E-03	mg/L	N/A	96.96%	5.26E-01	8/22/08	100.0	
	5.12E-01	***RPD***	0.4								ML	

No. of Results: 2 **Comments:**

TestAmerica RER - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
rptSTLRchMsDup2 Bias - (Result/Expected)-1 as defined by ANSI N13.30.
V5.1.8 A2002

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

9/10/2008 7:23:14 AM

Lot No., Due Date: J8H220175; 10/06/2008

Client, Site: 108302; FLH HANFORD

QC Batch No., Method Test: 8235492; RALPHA-A Alpha by GPC-Am

SDG, Matrix: W05490; 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 Rba Autonson **Date** 9/10/08

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 8235492

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: NO NCM

Second Level Review: [signature] Date: 09-10-08

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

9/10/2008 7:26:52 AM

Lot No., Due Date: J8H220175; 10/06/2008

Client, Site: 108302; FLH HANFORD

QC Batch No., Method Test: 8235493; RBETA-SR Beta by GPC-Sr/Y

SDG, Matrix: W05490; 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 Lee Anderson **Date** 9/10/08

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 8235493

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: NO NCM

Second Level Review: [signature] Date: 09-10-08

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

9/11/2008 1:21:49 PM

Lot No., Due Date: J8H220175; 10/06/2008

Client, Site: 108302; FLH HANFORD

QC Batch No., Method Test: 8235494; RSRTOT SrTot by GPC

SDG, Matrix: W05490; 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 Lori Anderson **Date** 9/11/08

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 6235494

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: No NCM

Second Level Review: [signature] Date: 09-11-08

TestAmerica

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

9/30/2008 2:10:27 PM

Lot No., Due Date: 8H220175; 10/06/2008

Client, Site: 108302; FLH HANFORD

QC Batch No., Method Test: 8262204; RTC99 Tc-99 by LSC

SDG, Matrix: W05490; 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:
Please see NCM # 10-13061

First Level Review John Hooker **Date** 9-30-8

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 8262204

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: Low LCS See NCM

Second Level Review: D. Petty Date: 09-30-08

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-13061**
NCM Initiated By: John Norton
Date Opened: 09/30/2008
Date Closed:

Classification: **Anomaly**
Status: **GLREVIEW**
Production Area: Environmental - Sep
Tests: None
Lot #'s (Sample #'s): J8H220175 (7),
QC Batches: None.,

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

Problem Description / Root Cause

Name	Date	Description
John Norton	09/30/2008	The yield from the LCS and the matrix spike were both unacceptabley low.

Corrective Action

Name	Date	Corrective Action
John Norton	09/30/2008	The batch was re-analyzed providing acceptable yields.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position

Date Printed: 9/30/2008

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

9/11/2008 1:19:19 PM

Lot No., Due Date: J8H220175; 10/06/2008

Client, Site: 108302; FLH HANFORD

QC Batch No., Method Test: 8235489; RUNAT UNat by KPA

SDG, Matrix: W05490; 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 Lisa Anderson **Date** 9/11/08

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist

RADIOCHEMISTRY

Second Level Review

Batch Number: 8235489

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: LCS switched. See Nam

Second Level Review: [signature] Date: 09-11-08

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-12972**
NCM Initiated By: Lisa Antonson
Date Opened: 09/11/2008
Date Closed:

Classification: **Deficiency**
Status: **QAREVIEW**
Production Area: Environmental - Prep
Tests: UNat by KPA
Lot #'s (Sample #'s): J8H220000 (489), J8H220175 (7),
QC Batches: 8235489,

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

Problem Description / Root Cause

Name	Date	Description
Lisa Antonson	09/11/2008	There was an obvious switch between the two LCS samples. The switch was corrected and recalculated.

Corrective Action

Name	Date	Corrective Action
Lisa Antonson	09/11/2008	techs reminded to double check labels during processing

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note

Response	Response Note

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position

Date Printed: 9/11/2008

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Richland Laboratory
Data Review Check List
Hexavalent Chromium

Batch Number(s): **8235333**

Lab Sample Numbers or WQ5490 J8H220175 Due 10/6/09

Method/Test/Parameter: **Cr+6 in Water / RL-WC-003**

Review Item	Yes (✓)	No (✓)	N/A (✓)	2nd Level Review (✓)
A. Initial Calibration				
1. Performed at required frequency with required number of levels?	✓			✓
2. Correlation coefficient within QC limits?	✓			✓
3. Initial calibration verification (ICV) analyzed immediately after calibration and results within QC limits?	✓			✓
4. Initial calibration blank (ICB) analyzed immediately after ICV and concentrations of all parameters ≤ reporting limit?	✓			✓
B. Continuing Calibration				
1. CCV analyzed at required frequency and all parameters within QC limits?	✓			✓
2. CCB analyzed at required frequency and all results ≤ reporting limit?	✓			✓
C. Sample Analysis				
1. Were any samples with concentrations above the linear range for any parameter diluted and reanalyzed?	✓			✓
2. Were all sample holding times met?	✓			✓
D. QC Samples				
1. All results for the preparation blank below limits?	✓			✓
2. MS or MS/MSD recoveries within QC limits and %RPD (for MSD) acceptable?	✓			✓
3. LCS percent recovery within QC limits and %RPD (for LCSD) acceptable?	✓			✓
4. Analytical spikes within QC limits where applicable?	✓			✓
5. ICP only: One serial dilution performed per SDG?			✓	✓
6. ICP only: CRDL standard (CRI or CRA) analyzed at required frequency?			✓	✓
7. ICP only: Interference check samples (ICSA, ICSAB) and HICAL analyzed at the required frequencies and within QC limits?			✓	✓

Review Item	Yes (✓)	No (✓)	N/A (✓)	2nd Level Review (✓)
E. Other	✓			
1. Are all nonconformances included and noted?				✓
2. Is the correct date and time of analysis shown?	✓			✓
3. Did the analyst sign and date the front page of the analytical run?	✓			✓
4. Correct methodology used?	✓			✓
5. Transcriptions checked?	✓			✓
6. Calculations checked at minimum frequency?	✓			✓
7. Units checked?	✓			✓

Comments on any "No" response:
There was only one set of CCV and CCB ran for the 12 total samples instead of two sets. There was a miscount in the samples by the analyst. Everything else was acceptable in all cases. –See NCM

Analyst: [signature] Date: 8/26/08

Second-Level Review: [signature] Date: 9/12/08

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-12873**
NCM Initiated By: LIEM DINH
Date Opened: 08/26/2008
Date Closed:

Classification: **Anomaly**
Status: **GLREVIEW**
Production Area: Classical Chemistry
Tests: 7196A
Lot #'s (Sample #'s): J8H220000 (333), J8H220175 (1,2,3,4,5,6,7),
QC Batches: 8235333,

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

Problem Description / Root Cause

Name	Date	Description
LIEM DINH	08/26/2008	There was only one set of CCV and CCB ran for the 12 total samples instead of two sets. There was a miscount in the samples by the analyst. Everything else was acceptable in all cases.
Liem Dinhl	08/26/2008	There was only one set of CCV and CCB ran for the 12 total samples instead of two sets. There was a miscount in the samples by the analyst. Everything else was acceptable in all cases.

Corrective Action

Name	Date	Corrective Action
LIEM DINH	08/26/2008	Report Data
Liem Dinhl	08/26/2008	Report Data

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position

Date Printed: 8/26/2008

J8H220175 W05490 Due 10/06/08

TestAmerica Laboratories, Inc.

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-084-030

COLLECTOR: NCO Sampler

COMPANY CONTACT: Trent, SJ

TELEPHONE NO.: 373-5869

PROJECT COORDINATOR: TRENT, SJ

PRICE CODE: 7N

DATA TURNAROUND: 45 Days / 45 Days

SAMPLING LOCATION: H-C6287-S

PROJECT DESIGNATION: Aquifer Tube Installation Sampling and Analysis in the 100-HR-3 OU

SAF NO.: F08-084

AIR QUALITY: ☐

ICE CHEST NO.

FIELD LOGBOOK NO.: HNF-N-451-3

ACTUAL SAMPLE DEPTH

COA: 122577ES10

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

SHIPPED TO TEST AMERICA ~~Waste Sampling & Characterization~~ 8-22-08

OFFSITE PROPERTY NO.: N/A

BILL OF LADING/AIR BILL NO.: N/A

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			Cool~4C	Cool~4C	HNO3 to pH <2						
TYPE OF CONTAINER			P	aG	G/P						
NO. OF CONTAINER(S)			1	1	1						
VOLUME			250mL	250mL	500mL						
SAMPLE ANALYSIS			SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	Gross Alpha (Gross alpha) Gross Beta (Gross beta)						
SAMPLE NO.	**MATRIX***	**SAMPLE DATE**	**SAMPLE TIME**								
B1TRB4	WATER	8-21-08	0948	✓	✓	✓	KVLTH				
	LOT#			C27994	029623	029038					

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
MA White Ma White	8-21-08 / 1300	MO413 FRIDGE #2	8-21-08/1300
MO413 FRIDGE #2	8-22-08/0900	[illegible]	8/22/08 0901
[illegible]	8/22/08 1000	S. Smith S. Smith	08/22/08 1000

SPECIAL INSTRUCTIONS
(1)IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate}

ORIGINAL COC GOING TO WSCF PER D. WIDRIG

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

FINAL SAMPLE DISPOSITION — **DISPOSAL METHOD** — **DISPOSED BY** — **DATE/TIME**

A-6003-618(01/06)

J8H220175 W05490 Due 10 06 08

TestAmerica Laboratories, Inc.

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-084-036

COLLECTOR
NCO Sampler

COMPANY CONTACT
Trent, SJ

TELEPHONE NO.
373-5869

PROJECT COORDINATOR
TRENT, SJ

PRICE CODE 7N

DATA TURNAROUND
45 Days / 45 Days

AIR QUALITY ☐

SAMPLING LOCATION
J-C6293-S

PROJECT DESIGNATION
Aquifer Tube Installation Sampling and Analysis in the 100-HR-3 OU

SAF NO.
F08-084

ICE CHEST NO.

FIELD LOGBOOK NO.
HNF-N-451-3

ACTUAL SAMPLE DEPTH

COA
122577ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SHIPPED TO TEST AMERICA
~~Waste Sampling & Characterization~~ MA 8-22-08

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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			Cool~4C	Cool~4C	Cool~4C	HNO3 to pH <2	HNO3 to pH <2	HCl to pH <2			
TYPE OF CONTAINER			G/P	aG	G/P	G/P	G/P	G/P			
NO. OF CONTAINER(S)			1	1	1	1	1	2			
VOLUME			~~150mL~~ 250mL	250mL	500mL	500mL	1L	1L			
SAMPLE ANALYSIS			SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	ICP/MS - 200.8 (Addition) (Uranium)	Gross Alpha (Gross alpha) Gross Beta (Gross beta)	Strontium-89,90 – Total Sr;	Technetium-99 (Technetium-99)			
SAMPLE NO.	**MATRIX***	**SAMPLE DATE**	**SAMPLE TIME**								
B1TRC0	WATER	8-21-08	1152	✓	✓	✓	✓	✓	✓	KVLTR	
				027994	029468	027381	027361	030008	030008		

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
MA White MA White	8-21-08 / 1300	MO413 FRIDGE	8-21-08/1300
MO413 FRIDGE	8-22-08 0800	Pete Law	8/22/08 0801
Pete Law	8/22/08 1000	S. Smith S Smith	08/22/08 1000

SPECIAL INSTRUCTIONS
(1)IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate}

ORIGINAL COC GOING TO WSCF
PER D. WORIG

LABORATORY SECTION | **RECEIVED BY** | **TITLE** | **DATE/TIME**

FINAL SAMPLE DISPOSITION | **DISPOSAL METHOD** | **DISPOSED BY** | **DATE/TIME**

A-6003-618(01/06)

J8H220175 W05490 Due 10/06/08

TestAmerica Laboratories, Inc.

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-084-031 | PAGE 1 OF 1

COLLECTOR: NCO Sampler	COMPANY CONTACT: Trent, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 7N	DATA TURNAROUND: 45 Days / 45 Days	AIR QUALITY: ☐	
SAMPLING LOCATION: H-C6288-M	PROJECT DESIGNATION: Aquifer Tube Installation Sampling and Analysis in the 100-HR-3 OU	SAF NO.: F08-084	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-451-3	ACTUAL SAMPLE DEPTH	COA: 122577ES10
METHOD OF SHIPMENT: GOVERNMENT VEHICLE	SHIPPED TO: TEST AMERICA ~~Waste Sampling & Characterization~~ 8-22-08	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A

MATRIX*: A=Air, DL=Drum, L=Liquids, DS=Drum, S=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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
PRESERVATION				Cool~4C	Cool~4C	HNO3 to pH <2							
TYPE OF CONTAINER				P	aG	G/P							
NO. OF CONTAINER(S)				1	1	1							
VOLUME				150mL	250mL	500mL							
SAMPLE ANALYSIS				SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	Gross Alpha (Gross alpha) Gross Beta (Gross beta)							
B1TRB5	WATER	8-21-08	0935	✓	✓	✓		KVLTX					
	LOT#			027994	029623	029038							

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
M.A. White M.A. White	8-21-08 1300	MO 413 FRIDGE #2	8-21-08 1300
MO 413 FRIDGE #2	8-22-08 0900	S. Smith	8/22/08 0901
S. Smith	8/22/08 1000	S. Smith S. Smith	08/22/08 1000

SPECIAL INSTRUCTIONS

(1)IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate}

ORIGINAL COC GOING TO WSCF PER D. WIDRIG

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(01/06)

J8H220170 W05490 Due 10.06.09

TestAmerica Laboratories, Inc.

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-084-033

COLLECTOR: NCO Sampler M WHITE

SAMPLING LOCATION: 1-C6290-S

ICE CHEST NO.:

SHIPPED TO: TEST AMERICA ~~Waste Sampling & Characterization~~ PA 8-22-08

COMPANY CONTACT: Trent, SJ

TELEPHONE NO.: 373-5869

PROJECT DESIGNATION: Aquifer Tube Installation Sampling and Analysis in the 100-HR-3 OU

FIELD LOGBOOK NO.: HNF-N-451-3

ACTUAL SAMPLE DEPTH:

OFFSITE PROPERTY NO.: N/A

PROJECT COORDINATOR: TRENT, SJ

SAF NO.: F08-084

COA: 122577ES10

BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: 7N

AIR QUALITY: ☐

DATA TURNAROUND: 45 Days / 45 Days

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

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	Cool~4C	Cool~4C	HNO3 to pH <2
TYPE OF CONTAINER	P	aG	G/P
NO. OF CONTAINER(S)	1	1	1
VOLUME	250mL	250mL	500mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	Gross Alpha (Gross alpha) Gross Beta (Gross beta)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B1TRB7	WATER	8-21-08	1049				KVLT4
LOT #				027994	029623	029038	

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
M WHITE SG HOGAN	8-21-08 1300	M0413 FRIDGE #2	8-21-08 / 1300
M0413 FRIDGE #2	8-22-08/0900	[illegible]	8/22/08 0901
[illegible]	8/22/08 1000	S. Smith S. Smith	08/22/08 1000

SPECIAL INSTRUCTIONS

(1)IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate}

ORIGINAL COC GOING TO WSCF PER D. WIDRIG

LABORATORY SECTION — RECEIVED BY — TITLE — DATE/TIME

FINAL SAMPLE DISPOSITION — DISPOSAL METHOD — DISPOSED BY — DATE/TIME

A-6003-618(01/06)

J8H220175 W05490 Due 10 06 08

TestAmerica Laboratories, Inc.

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-084-034

COLLECTOR: NCO Sampler	COMPANY CONTACT: Trent, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 7N	DATA TURNAROUND: 45 Days / 45 Days	AIR QUALITY: ☐	
SAMPLING LOCATION: I-C6291-M	PROJECT DESIGNATION: Aquifer Tube Installation Sampling and Analysis in the 100-HR-3 OU	SAF NO.: F08-084	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-451-3	ACTUAL SAMPLE DEPTH	COA: 122577ES10
METHOD OF SHIPMENT: GOVERNMENT VEHICLE			
SHIPPED TO: TEST AMERICA ~~Waste Sampling & Characterization~~ 8-22-08	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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	Cool~4C	Cool~4C	HNO3 to pH <2
TYPE OF CONTAINER	P	aG	G/P
NO. OF CONTAINER(S)	1	1	1
VOLUME	2/150mL	250mL	500mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	Gross Alpha (Gross alpha) Gross Beta (Gross beta)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
FB1TRB8	WATER	8-21-08	1044	✓	✓	✓	KVLVF
				027994	029623	029038	

LOT #

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
MA White MA White	8-21-08 / 1700	MO 413 FRIDGE #2	8-21-08 1700
MO 413 FRIDGE #2	8-22-08 0900	[illegible]	8/22/08 0901
[illegible]	8/22/08 1000	[illegible]	8/22/08 1000

SPECIAL INSTRUCTIONS

(1)IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrogen In Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate}

ORIGINAL COC GOING TO WSLF PER D. WIDRIG

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(01/06)

J8H220175 W05490 Due 10-06-08

TestAmerica Laboratories, Inc.

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-084-038

COLLECTOR
NCO Sampler

SAMPLING LOCATION
J-C6293-S

ICE CHEST NO.

SHIPPED TO TEST AMERICA
~~Waste Sampling & Characterization~~ 8-22-08

COMPANY CONTACT
Trent, SJ

TELEPHONE NO.
373-5869

PROJECT COORDINATOR
TRENT, SJ

PRICE CODE 7N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
Aquifer Tube Installation Sampling and Analysis in the 100-HR-3 OU

SAF NO.
F08-084

FIELD LOGBOOK NO.
HNF-N-451-3

ACTUAL SAMPLE DEPTH

COA
122577ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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	Cool~4C	HNO3 to pH <2	Cool~4C	HNO3 to pH <2	HNO3 to pH <2	HCl to pH <2				
TYPE OF CONTAINER	P	G/P	aG	G/P	G/P	G/P				
NO. OF CONTAINER(S)	1	1	1	1	1	2				
VOLUME	250mL	500mL	250mL	500mL	1L	1L				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	ICP/MS - 200.8 (Addion) (Uranium)	Chromium Hex - 7196;	Gross Alpha (Gross alpha) Gross Beta (Gross beta)	Strontium-89,90 -- Total Sr;	Technetium-99 (Technetium-99)				
SAMPLE NO. / MATRIX* / SAMPLE DATE / SAMPLE TIME										
31TVH6 / WATER / 8-21-08 / 1152	✓	✓	✓	✓	✓	✓	KVLVM			
	029464 029468	029038	029468	029038	030008	030008				

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
M.A. White M.A. White	8-21-08 1300	MO413 FRIDGE #2	8-21-08 1300
MO413 FRIDGE #2	8-22-08 0900	[illegible]	8/22/08 0901
[illegible]	8/22/08 1000	S. Smith S. Smith	08/22/08 1000

SPECIAL INSTRUCTIONS
(1)IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate}

ORIGINAL COC GOING TO WSCF
PER D. WIDRIG

LABORATORY SECTION | **RECEIVED BY** | **TITLE** | **DATE/TIME**

FINAL SAMPLE DISPOSITION | **DISPOSAL METHOD** | **DISPOSED BY** | **DATE/TIME**

A-6003-618(01/06)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-084-039 PAGE 1 OF 1

COLLECTOR NCO Sampler M WHITE

SAMPLING LOCATION J-C6293-S

ICE CHEST NO.

SHIPPED TO TestAmerica Incorporated, Richland

COMPANY CONTACT Trent, SJ

TELEPHONE NO. 373-5869

PROJECT COORDINATOR TRENT, SJ

PRICE CODE 7N

DATA TURNAROUND 45 Days / 45 Days

AIR QUALITY ☐

PROJECT DESIGNATION Aquifer Tube Installation Sampling and Analysis in the 100-HR-3 OU

SAF NO. F08-084

FIELD LOGBOOK NO. HNF-N-451-3

ACTUAL SAMPLE DEPTH

COA 122577ES10

METHOD OF SHIPMENT GOVERNMENT VEHICLE

OFFSITE PROPERTY NO. N/A

BILL OF LADING/AIR BILL NO. N/A

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	Cool~4C	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HCl to pH <2	None				
TYPE OF CONTAINER	aG	G/P	G/P	G/P	G/P	P				
NO. OF CONTAINER(S)	1	1	1	1	3	1				
VOLUME	250mL	1L	1000mL	500mL	1000mL	20mL				
SAMPLE ANALYSIS	Chromium Hex - 7196;	Strontium-89,90 – Total Sr;	Gross Alpha; Gross Beta;	Total Uranium;	Technetium-99 (Technetium-99)	Activity Scan;				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1TVH7	WATER	8-21-08	1152	✓	✓	✓	✓	✓	✓	iVLVX			
	LOT #			629468	030008	030008	029038	030008					

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
M WHITE JGHOLAN	8-21-08 1300	MO413 FRIDGE #2	8-21-08 1300
MO413 FRIDGE #2	8-22-08 0900		8/22/08 0900
	8/22/08 1000	S. Smith S. Smith	08/22/08 1000

SPECIAL INSTRUCTIONS

J8H220175
W05490
Due 10/06/08

LABORATORY SECTION **RECEIVED BY** **TITLE** **DATE/TIME**

FINAL SAMPLE DISPOSITION **DISPOSAL METHOD** **DISPOSED BY** **DATE/TIME**

A-6003-618(01/06)

TestAmerica Laboratories, Inc.

51

TestAmerica

Sample Check-in List

Date/Time Received: 08/22/08 10:00 GM Screen Result .02

Client: FLH SDG #: 005490 NA[ ] SAF #: F08-084 NA [ ]

Work Order Number: J8H220175 Chain of Custody # F08-084-30, 36, 31, 33, 34, 38, 39

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

1. Custody Seals on shipping container intact? NA [ ] Yes [✓] No [ ]
2. Custody Seals dated and signed? NA [ ] Yes [✓] No [ ]
3. Chain of Custody record present? NA [ ] Yes [✓] No [ ]
4. Cooler Temperature: _____ NA [✓] 5. Vermiculite/packing materials is NA [✓] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 7
7. Sample holding times exceeded? NA [✓] Yes [ ] No [ ]
8. Samples have:
   - ___ Tape
   - ___ Custody Seals
   - ___ Hazard Lables
   - 7 Appropriate Sample Lables
9. Samples are:
   - 7 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** none
11. Sample Location, Sample Collector Listed? *
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers): _____

Sample Custodian: S. Smith **Date:** 08/22/08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

LS-023, Rev. 7, 1/08

9/3/2008 3:39:13 PM

Sample Preparation/Analysis

Balance Id:1120482733

108302, Fluor Hanford Inc , Waste
Management Federal Servi

AZ Gross Alpha PrpRC5014
S7 Gross Alpha by GPC using Am-241 curve
5I CLIENT: HANFORD

Pipet #: 245

AnalyDueDate: 10/02/2008 W05490

Sep1 DT/Tm Tech:

Batch: 8235492 WATER pCi/L PM, Quote: SS , 29754

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,LucasD | Bock

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 B1TVH7;KVLVX1A J8H220175-7-SAMP 08/21/2008 11:52		202.20g,in AmtRec: VIAL20,250G,500MLP,5XLP #Containers: 8		1.5	25.8	50	10D Scr:	1858 Alpha: -9.80E-05 uCi/Sa	4/4/08 MC Beta: 7.25E-04 uCi/Sa	
2 B1TVH7 DUP:KVLVX1AN J8H220175-7-DUP 08/21/2008 11:52		202.80g,in AmtRec: VIAL20,250G,500MLP,5XLP #Containers: 8			26.4		10C Scr:	Alpha: 9.80E-05 uCi/Sa	Beta: 7.25E-04 uCi/Sa	
3 KVNA31AA J8H220000-492-BLK 08/21/2008 11:52		200.40g,in AmtRec: #Containers: 1			Ø		10B Scr:	Alpha:	Beta:	
4 KVNA31AC J8H220000-492-LCS 08/21/2008 11:52		203.40g,in AmtRec: #Containers: 1	ASD4587 08/05/08,pd 06/01/01,r		0.4		10A Scr:	Alpha:	Beta:	

Comments: pH < 2.0

All Clients for Batch:
108302, Fluor Hanford Inc Waste Management Federal Servi, SS , 29754

KVLVX1AG-SAMP Constituent List:

ALPHA	RDL:3	pCi/L	LCL:	UCL:	RPD:
KVNA31AA-BLK:					
ALPHA	RDL:3	pCi/L	LCL:	UCL:	RPD:
KVNA31AC-LCS:					
Am-241	RDL:	pCi/L	LCL:70	UCL:130	RPD:20

TestAmerica Laboratories, Inc.

9/3/2008 3:39:13 PM

Sample Preparation/Analysis

AZ Gross Alpha PrpRC5014
S7 Gross Alpha by GPC using Am-241 curve
5I CLIENT: HANFORD

Balance Id:1120482733

Pipet #: _____

AnalyDueDate: 10/02/2008

Sep1 DT/Tm Tech:

Batch: 8235492 pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,LucasD

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:

KVLVX1AG-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KVNA31AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KVNA31AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

9/10/2008 7:22:38 AM

ICOC Fraction Transfer/Status Report

ByDate: 9/11/2007, 9/15/2008, Batch: '8235492', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
8235492						
AC		Rev1C	LucasD	9/3/2008 3:22:21 PM		
SC			wagarr	IsBatched	8/25/2008 11:21:07 AM	ICOC_RADCALC v4.8.34
SC			LucasD	InPrep	9/3/2008 3:22:21 PM	RL-PRP-004 REVISION 0
SC			LucasD	Prep1C	9/3/2008 3:40:24 PM	RL-PRP-004 REVISION 0
SC			BockJ	InPrep2	9/4/2008 10:35:07 AM	RL-GPC-001 REVISION 0
SC			BockJ	Prep2C	9/5/2008 2:58:47 PM	RL-GPC-001 REVISION 0
SC			DAWKINSO	InCnt1	9/5/2008 3:55:48 PM	RL-CI-006 REVISION 0
SC			antonsonl	Rev1C	9/10/2008 7:22:28 AM	RL-DR-001 REV 8
AC			LucasD	9/3/2008 3:40:24 PM		
AC			BockJ	9/4/2008 10:35:07		
AC			BockJ	9/5/2008 2:58:47 PM		
AC			DAWKINSO	9/5/2008 3:55:48 PM		
AC			antonsonl	9/10/2008 7:22:28		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 6

ICOCFractions v4.8.34

9/3/2008 3:22:06 PM

Sample Preparation/Analysis

Balance Id:1120482733

108302, Fluor Hanford Inc , Waste
Management Federal Servi

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

Pipet #: 245

AnalyDueDate: 10/02/2008 W05490

Sep1 DT/Tm Tech:

Batch: 8235493 WATER pCi/L PM, Quote: SS , 29754

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,LucasD/Bock

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 KVLVX-1-AA J8H220175-7-SAMP 08/21/2008 11:52	AmtRec: VIAL20,250G,500MLP,5XLP #Containers: 8	200.70g,in		1.5	50.7	100	26B	2047	9/5/08 DL	Scr: Alpha: -9.80E-05 uCi/Sa Beta: 7.25E-04 uCi/Sa
2 KVLVX-1-AP-X J8H220175-7-DUP 08/21/2008 11:52	AmtRec: VIAL20,250G,500MLP,5XLP #Containers: 8	200.20g,in			58.8		26D			Scr: Alpha: -9.80E-05 uCi/Sa Beta: 7.25E-04 uCi/Sa
3 KVNA4-1-AA-B J8H220000-493-BLK 08/21/2008 11:52	AmtRec: #Containers: 1	201.60g,in			0.1		26A			Scr: Alpha: Beta:
4 KVNA4-1-AC-C J8H220000-493-LCS 08/21/2008 11:52	AmtRec: #Containers: 1	200.40g,in	BESB3349 07/24/08,pd 07/14/08,r		0.3		26C			Scr: Alpha: Beta:

Comments: pH < 2.0

All Clients for Batch:
108302, Fluor Hanford Inc Waste Management Federal Servi, SS , 29754

KVLVX1AA-SAMP Constituent List:

BETA	RDL:4	pCi/L	LCL:	UCL:	RPD:
KVNA41AA-BLK:					
BETA	RDL:4	pCi/L	LCL:	UCL:	RPD:
KVNA41AC-LCS:					
Sr-90	RDL:	pCi/L	LCL:70	UCL:130	RPD:20

KVLVX1AA-SAMP Calc Info:

TestAmerica Laboratories, Inc.

9/3/2008 3:22:07 PM

Sample Preparation/Analysis

Balance Id:1120482733

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

Pipet #: _____

AnalyDueDate: 10/02/2008

Sep1 DT/Tm Tech:

Batch: 8235493 pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,LucasD

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
KVNA41AA-BLK:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
KVNA41AC-LCS:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```

Approved By _____ Date: _____

9/10/2008 7:26:20 AM

ICOC Fraction Transfer/Status Report

ByDate: 9/11/2007, 9/15/2008, Batch: '8235493', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
8235493						
AC		Rev1C	LucasD	9/3/2008 3:17:57 PM		
SC			wagarr	IsBatched	8/25/2008 11:21:07 AM	ICOC_RADCALC v4.8.34
SC			LucasD	InPrep	9/3/2008 3:17:57 PM	RL-PRP-004 REVISION 0
SC			LucasD	Prep1C	9/3/2008 3:40:41 PM	RL-PRP-004 REVISION 0
SC			BockJ	InPrep2	9/4/2008 10:35:00 AM	RL-GPC-001 REVISION 0
SC			BockJ	Prep2C	9/5/2008 2:59:04 PM	RL-GPC-001 REVISION 0
SC			DAWKINSO	InCnt1	9/5/2008 3:55:44 PM	RL-CI-006 REVISION 0
SC			DAWKINSO	CalcC	9/5/2008 9:22:09 PM	RL-CI-006 REVISION 0
SC			antonsonl	Rev1C	9/10/2008 7:26:13 AM	RL-DR-001 REV 8
AC			LucasD	9/3/2008 3:40:41 PM		
AC			BockJ	9/4/2008 10:35:00		
AC			BockJ	9/5/2008 2:59:04 PM		
AC			DAWKINSO	9/5/2008 3:55:44 PM		
AC			DAWKINSO	9/5/2008 9:22:09 PM		
AC			antonsonl	9/10/2008 7:26:13		

AC: Accepting Entry, SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 7

ICOCFractions v4.8.34

8/28/2008 2:10:40 PM

Sample Preparation/Analysis

Balance Id:1120482733

108302, Fluor Hanford Inc , Waste
Management Federal Servi

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

Pipet #:

AnalyDueDate: 10/02/2008

Sep1 DT/Tm Tech: 9.4.08 1025

Batch: 8235494 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 KVLVX-1-AH J8H220175-7-SAMP 08/21/2008 11:52			500.00g,in AmtRec: VIAL20,250G,500MLP,5XLP	500.00g #Containers: 8	SRTA17786 07/15/08,pd 05/22/07,r	1.5	102.4	100	3PB Scr:	1831 Alpha: -9.80E-05 uCi/Sa	9/4/08 800 Beta: 7.25E-04 uCi/Sa	
2 KVLVX-1-AQ-X J8H220175-7-DUP 08/21/2008 11:52			495.20g,in AmtRec: VIAL20,250G,500MLP,5XLP	495.20g #Containers: 8	SRTA17787 07/15/08,pd 05/22/07,r		102.8		2SI Scr:	Alpha: -9.80E-05 uCi/Sa	Beta: 7.25E-04 uCi/Sa	
3 KVNA5-1-AA-B J8H220000-494-BLK 08/21/2008 11:52			500.00g,in AmtRec:	500.00g #Containers: 1	SRTA17788 07/15/08,pd 05/22/07,r		093.3		3IA Scr:	Alpha:	Beta:	
4 KVNA5-1-AC-C J8H220000-494-LCS 08/21/2008 11:52			500.00g,in AmtRec:	500.00g #Containers: 1	STSC2026 07/23/08,pd 05/22/07,r		099.2		3IB Scr:	Alpha:	Beta:	

Comments:

PH < 2.0. [illegible] 82808

All Clients for Batch:
108302, Fluor Hanford Inc Waste Management Federal Servi, SS , 29754

KVLVX1AH-SAMP Constituent List:

Sr-90	RDL:2	pCi/L	LCL:70	UCL:130	RPD:20

KVNA51AA-BLK:

Sr-90	RDL:2	pCi/L	LCL:	UCL:	RPD:

KVNA51AC-LCS:

Sr-90	RDL:2	pCi/L	LCL:70	UCL:130	RPD:20

KVLVX1AH-SAMP Calc Info:

8/28/2008 2:10:40 PM

Sample Preparation/Analysis

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

Balance Id:1120482733
Pipet #:
Sep1 DT/Tm Tech: 9-4-08 DM
Sep2 DT/Tm Tech:
Prep Tech: ,LaneL

AnalyDueDate: 10/02/2008

Batch: 8235494 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

KVNA51AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

KVNA51AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

9/11/2008 1:21:15 PM

ICOC Fraction Transfer/Status Report

ByDate: 9/12/2007, 9/16/2008, Batch: '8235494', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
8235494						
AC		**Rev1C**	**LaneL**	8/28/2008 1:57:53 PM		
SC			wagarr	IsBatched	8/25/2008 11:21:07 AM	ICOC_RADCALC v4.8.34
SC			LaneL	InPrep	8/28/2008 1:57:53 PM	RL-PRP-004 REVISION 0
SC			LaneL	Prep1C	8/28/2008 2:10:48 PM	RL-PRP-004 REVISION 0
SC			ManisD	InSep1	8/28/2008 3:17:03 PM	RL-GPC-003 REV 0
SC			McDowellD	InSep1	9/4/2008 1:38:28 PM	RL-GPC-003 REVISION 0
SC			ClarkR	InCnt1	9/4/2008 1:42:17 PM	RL-CI-006 REVISION 0
SC			DAWKINSO	CalcC	9/4/2008 9:46:42 PM	RL-CI-006 REVISION 0
SC			antonsonl	Rev1C	9/11/2008 1:21:06 PM	RL-DR-001 REV 8
AC			**LaneL**	8/28/2008 2:10:48 PM		
AC			**ManisD**	8/28/2008 3:17:03 PM		
AC			**McDowellD**	9/4/2008 1:38:28 PM		
AC			**ClarkR**	9/4/2008 1:42:17 PM		
AC			**DAWKINSO**	9/4/2008 9:46:42 PM		
AC			**antonsonl**	9/11/2008 1:21:06 PM		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Grp Rec Cnt: 7

ICOCFractions v4.8.34

9/19/2008 1:05:33 PM

Sample Preparation/Analysis

Balance Id:1120482733

108302, Fluor Hanford Inc , Waste
Management Federal Servi

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

Pipet #: _____

AnalyDueDate: 10/02/2008 W05490

Sep1 DT/Tm Tech:

Batch: 8262204 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 KVLVX-1-AR-S J8H220175-7-MS 08/21/2008 11:52	AmtRec: VIAL20,250G,500MLP,5XLP #Containers: 8	125.00g,in	TCSG2209 08/27/08,pd 09/01/06,r	60		Scr:	Alpha: -9.80E-05 uCi/Sa	Beta: 7.25E-04 uCi/Sa
2 KVLVX-1-AU-X J8H220175-7-DUP 08/21/2008 11:52	AmtRec: VIAL20,250G,500MLP,5XLP #Containers: 8	125.00g,in				Scr:	Alpha: -9.80E-05 uCi/Sa	Beta: 7.25E-04 uCi/Sa
3 KVLVX-2-AD J8H220175-7-SAMP 08/21/2008 11:52	AmtRec: VIAL20,250G,500MLP,5XLP #Containers: 8	125.00g,in				Scr:	Alpha: -9.80E-05 uCi/Sa	Beta: 7.25E-04 uCi/Sa
4 KW4K6-1-AA-B J8I180000-204-BLK 08/21/2008 11:52	AmtRec: #Containers: 1	125.00g,in				Scr:	Alpha:	Beta:
5 KW4K6-1-AC-C J8I180000-204-LCS 08/21/2008 11:52	AmtRec: #Containers: 1	125.00g,in	TCSE2252 08/27/08,pd 07/01/05,r			Scr:	Alpha:	Beta:
6 KW4K6-1-AD-BN J8I180000-204-IBLK 08/21/2008 11:52	AmtRec: #Containers: 1					Scr:	Alpha:	Beta:

TestAmerica Laboratories, Inc.

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9/19/2008 1:05:34 PM

Sample Preparation/Analysis

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

AnalyDueDate: 10/02/2008

Batch: 8262204 pCi/L
SEQ Batch, Test: None

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

Comments: PH < 2.0. 91908

All Clients for Batch:
108302, Fluor Hanford Inc Waste Management Federal Servi, SS , 29754

KVLVX1AR-MS Constituent List:

KW4K61AA-BLK:
Tc-99 RDL:15 pCi/L LCL: UCL: RPD:
KW4K61AC-LCS:
Tc-99 RDL:15 pCi/L LCL:70 UCL:130 RPD:20
KW4K61AD-IBLK:
Tc-99 RDL:15 pCi/L LCL: UCL: RPD:

KVLVX1AR-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KW4K61AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KW4K61AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KW4K61AD-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

RE-ANALYSIS REQUEST

DUE DATE 10-2

CUSTOMER FLUOR

ANALAYSIS Tc-99

MATRIX H_2O

LOT NUMBER J-8H220175

SAMPLE DELIVERY GROUP WO 5490

OLD BATCH NUMBER 8235490

NEW BATCH NUMBER 8262204

LAB SAMPLE ID	CLIENT ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1) ALL		NO MS YIELD
2)		
3)		NO LCS YIELD
4)		
5)		
6)		
7)		
8)		
9)		
10)		
11)		
12)		
13)		
14)		
15)		
16)		
17)		
18)		
19)		
20)		
LAB QC ID		Assigned with new batch.

RC-048, 12/07, Rev 8

9/30/2008 2:08:51 PM

ICOC Fraction Transfer/Status Report

ByDate: 10/1/2007, 10/5/2008, Batch: '8262204', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
8262204						
AC		**Rev1C**	**LaneL**	9/19/2008 12:57:38		
SC			lanel	IsBatched	9/19/2008 12:56:44 PM	ICOC_RADCALC v4.8.34
SC			LaneL	InPrep	9/19/2008 12:57:38 PM	RL-PRP-004 REVISION 0
SC			LaneL	Prep1C	9/19/2008 1:06:18 PM	RL-PRP-004 REVISION 0
SC			Barcotl	InSep1	9/25/2008 12:58:10 PM	RL-LSC-013 REVISION 0
SC			Barcotl	Sep1C	9/25/2008 12:58:20 PM	RL-LSC-013 REVISION 0
SC			ClarkR	InCnt1	9/25/2008 1:02:18 PM	RL-CI-005 REVISION 0
SC			DAWKINSO	CalcC	9/26/2008 8:30:23 PM	RL-CI-006 REVISION 0
SC			nortonj	Rev1C	9/30/2008 2:08:46 PM	RL-DR-001 REV 0
AC			**LaneL**	9/19/2008 1:06:18 PM		
AC			**Barcotl**	9/25/2008 12:58:10		
AC			**Barcotl**	9/25/2008 12:58:20		
AC			**ClarkR**	9/25/2008 1:02:18 PM		
AC			**DAWKINSO**	9/26/2008 8:30:23 PM		
AC			**nortonj**	9/30/2008 2:08:46 PM		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 7

ICOCFractions v4.8.34

9/2/2008 12:02:36 PM

Sample Preparation/Analysis

Balance Id:1120482733

108302, Fluor Hanford Inc , Waste
Management Federal Servi

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

Pipet #: _____

AnalyDueDate: 10/02/2008 W05490

Sep1 DT/Tm Tech:

Batch: 8235490 WATER pCi/L PM, Quote: SS , 29754

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,LucasD

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 KVLVX-1-AD J8H220175-7-SAMP 08/21/2008 11:52		125.10g,in AmtRec: VIAL20,250G,500MLP,5XLP #Containers: 8		60		Scr:	Alpha: -9.80E-05 uCi/Sa	Beta: 7.25E-04 uCi/Sa
2 KVLVX-1-AL-S J8H220175-7-MS 08/21/2008 11:52		125.00g,in AmtRec: VIAL20,250G,500MLP,5XLP #Containers: 8	TCSG2186 08/27/08,pd 09/01/06,r			Scr:	Alpha: -9.80E-05 uCi/Sa	Beta: 7.25E-04 uCi/Sa
3 KVLVX-1-AM-X J8H220175-7-DUP 08/21/2008 11:52		125.00g,in AmtRec: VIAL20,250G,500MLP,5XLP #Containers: 8				Scr:	Alpha: -9.80E-05 uCi/Sa	Beta: 7.25E-04 uCi/Sa
4 KVNA2-1-AA-B J8H220000-490-BLK 08/21/2008 11:52		125.10g,in AmtRec: #Containers: 1				Scr:	Alpha:	Beta:
5 KVNA2-1-AC-C J8H220000-490-LCS 08/21/2008 11:52		125.00g,in AmtRec: #Containers: 1	TCSE2247 08/27/08,pd 07/01/05,r			Scr:	Alpha:	Beta:
6 KVNA2-1-AD-BN J8H220000-490-IBLK 08/21/2008 11:52		125.00g,in AmtRec: #Containers: 1				Scr:	Alpha:	Beta:

9/2/2008 12:02:37 PM

Sample Preparation/Analysis

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

Balance Id:1120482733

Pipet #: _____

AnalyDueDate: 10/02/2008

Sep1 DT/Tm Tech:

Batch: 8235490 pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,LucasD

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:

All Clients for Batch:
108302, Fluor Hanford Inc Waste Management Federal Servi, SS , 29754

KVLVX1AD-SAMP Constituent List:
Tc-99 RDL:15 pCi/L LCL: UCL: RPD:
KVLVX1AL-MS Constituent List:

KVNA21AA-BLK:
Tc-99 RDL:15 pCi/L LCL: UCL: RPD:
KVNA21AC-LCS:
Tc-99 RDL:15 pCi/L LCL:70 UCL:130 RPD:20
KVNA21AD-IBLK:
Tc-99 RDL:15 pCi/L LCL: UCL: RPD:

KVLVX1AD-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KVLVX1AL-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KVNA21AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KVNA21AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KVNA21AD-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

8/29/2008 12:41:10 PM

Sample Preparation/Analysis

Balance Id:1120482733

108302, Fluor Hanford Inc Management Federal Servi , Waste

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

Pipet #: _____

AnalyDueDate: 10/02/2008 W05490

Sep1 DT/Tm Tech:

Batch: 8235489 WATER pCi/L PM, Quote: SS , 29754

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,LucasD | Rick J.

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 KVLVX-1-AE J8H220175-7-SAMP 08/21/2008 11:52	AmtRec: VIAL20,250G,500MLP,5XLP #Containers: 8	25.20g,in				Scr:	Alpha: -9.80E-05 uCi/Sa	Beta: 7.25E-04 uCi/Sa
2 KVLVX-1-AJ-S J8H220175-7-MS 08/21/2008 11:52	AmtRec: VIAL20,250G,500MLP,5XLP #Containers: 8	25.00g,in	UNSF4313 08/14/08,pd 08/01/57,r			Scr:	Alpha: -9.80E-05 uCi/Sa	Beta: 7.25E-04 uCi/Sa
3 KVLVX-1-AK-X J8H220175-7-DUP 08/21/2008 11:52	AmtRec: VIAL20,250G,500MLP,5XLP #Containers: 8	25.20g,in				Scr:	Alpha: -9.80E-05 uCi/Sa	Beta: 7.25E-04 uCi/Sa
4 KVNA1-1-AA-B J8H220000-489-BLK 08/21/2008 11:52	AmtRec: #Containers: 1	25.00g,in				Scr:	Alpha:	Beta:
5 KVNA1-1-AC-C J8H220000-489-LCS 08/21/2008 11:52	AmtRec: #Containers: 1	25.10g,in	UNSF4314 08/14/08,pd 08/01/57,r			Scr:	Alpha:	Beta:
6 KVNA1-1-AD-C J8H220000-489-LCS 08/21/2008 11:52	AmtRec: #Containers: 1	25.20g,in	UNSC2659 07/29/08,pd 03/22/05,r			Scr:	Alpha:	Beta:

LCS's may have been switched during Pour up or Prep. TRN 9/10/08

TestAmerica Laboratories, Inc.

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8/29/2008 12:41:11 PM

Sample Preparation/Analysis

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

Balance Id:1120482733

Pipet #: _____

AnalyDueDate: 10/02/2008

Sep1 DT/Tm Tech:

Batch: 8235489 pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,LucasD

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:

All Clients for Batch:
108302, Fluor Hanford Inc Waste Management Federal Servi, SS , 29754

KVLVX1AE-SAMP Constituent List:
Uranium RDL:0.1 pCi/L LCL: UCL: RPD:
KVLVX1AJ-MS Constituent List:

KVNA11AA-BLK:
Uranium RDL:0.1 pCi/L LCL: UCL: RPD:
KVNA11AC-LCS:
Uranium RDL:0.1 pCi/L LCL:70 UCL:130 RPD:20
KVNA11AD-LCS:
Uranium RDL:0.1 pCi/L LCL:70 UCL:130 RPD:20

KVLVX1AE-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KVLVX1AJ-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KVNA11AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KVNA11AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KVNA11AD-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

9/11/2008 1:11:25 PM

ICOC Fraction Transfer/Status Report

ByDate: 9/12/2007, 9/16/2008, Batch: '8235489', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
8235489						
AC		**Rev1C**	**LucasD**	8/29/2008 12:29:48		
SC			wagarr	IsBatched	8/25/2008 11:21:07 AM	ICOC_RADCALC v4.8.34
SC			LucasD	InPrep	8/29/2008 12:29:48 PM	RL-PRP-004 REVISION 0
SC			BockJ	InPrep2	9/2/2008 7:44:22 AM	RL-KPA-001 REVISION 0
SC			BockJ	Prep2C	9/4/2008 3:51:17 PM	RL-KPA-001 REVISION 0
SC			NelsonT	Cnt1C	9/10/2008 10:18:17 AM	RL-KPA-003 REVISION 0
SC			antonsonl	Rev1C	9/11/2008 1:11:17 PM	RL-DR-001 REV 0
AC			**BockJ**	9/2/2008 7:44:22 AM		
AC			**BockJ**	9/4/2008 3:51:17 PM		
AC			**NelsonT**	9/10/2008 10:18:17		
AC			**antonsonl**	9/11/2008 1:11:17 PM		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Grp Rec Cnt: 5

ICOCFractions v4.8.34

8/25/2008 2:05:57 PM

Sample Preparation/Analysis

108302, Fluor Hanford Inc Management Federal Servi , Waste

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
01 STANDARD TEST SET

AnalyDueDate: 10/02/2008

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

Batch: 8235333 **WATER** **ug/L** **PM, Quote: SS , 29754**
SEQ Batch, Test: None All Tests: 8235333 88EA, 8235489 DHSS, 8235490 AMS5, 8235492 AZS7, 8235493 BCS8, 8235494 CGTH,

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 KVLTH-1-AA J8H220175-1-SAMP 08/21/2008 09:48		AmtRec: 250G	#Containers: 1			Scr:	Alpha:	Beta:
2 KVLTH-1-AC-S J8H220175-1-MS 08/21/2008 09:48		AmtRec: 250G	#Containers: 1			Scr:	Alpha:	Beta:
3 KVLTH-1-AD-D J8H220175-1-MSD 08/21/2008 09:48		AmtRec: 250G	#Containers: 1			Scr:	Alpha:	Beta:
4 KVLTH-1-AE-X J8H220175-1-DUP 08/21/2008 09:48		AmtRec: 250G	#Containers: 1			Scr:	Alpha:	Beta:
5 KVLTR-1-AA J8H220175-2-SAMP 08/21/2008 11:52		AmtRec: 250G	#Containers: 1			Scr:	Alpha:	Beta:
6 KVLTX-1-AA J8H220175-3-SAMP 08/21/2008 09:35		AmtRec: 250G	#Containers: 1			Scr:	Alpha:	Beta:
7 KVLT4-1-AA J8H220175-4-SAMP 08/21/2008 10:49		AmtRec: 250G	#Containers: 1			Scr:	Alpha:	Beta:

TestAmerica Laboratories, Inc.

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8/25/2008 2:05:58 PM

Sample Preparation/Analysis

108302, Fluor Hanford Inc , Waste
Management Federal Servi

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
01 STANDARD TEST SET

AnalyDueDate: 10/02/2008

Batch: 8235333 WATER ug/L PM, Quote: SS , 29754
SEQ Batch, Test: None

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
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:
8 KVLVF-1-AA J8H220175-5-SAMP 08/21/2008 10:44		AmtRec: 250G	#Containers: 1			Scr:	Alpha:	Beta:
9 KVLVM-1-AA J8H220175-6-SAMP 08/21/2008 11:52		AmtRec: 250G	#Containers: 1			Scr:	Alpha:	Beta:
10 KVLVX-1-AC J8H220175-7-SAMP 08/21/2008 11:52		AmtRec: VIAL20,250G,500MLP,5XLP	#Containers: 8			Scr:	Alpha:	Beta:
11 KVMFF-1-AA-B J8H220000-333-BLK 08/21/2008 09:48		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
12 KVMFF-1-AC-C J8H220000-333-LCS 08/21/2008 09:48		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:

Comments:

All Clients for Batch:
108302, Fluor Hanford Inc Waste Management Federal Servi, SS , 29754

KVLTH1AA-SAMP Constituent List:
HEXCHROME RDL: ug/L LCL:85 UCL:115 RPD:20

TestAmerica Laboratories, Inc.

8/25/2008 2:05:59 PM

Sample Preparation/Analysis

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
01 STANDARD TEST SET

AnalyDueDate: 10/02/2008

Batch: 8235333 ug/L
SEQ Batch, Test: None

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

```
KVLTH1AC-MS Constituent List:
  HEXCHROME   RDL:10          ug/L     LCL:85     UCL:115     RPD:20
KVLTH1AD-MSD:
  HEXCHROME   RDL:10          ug/L     LCL:85     UCL:115     RPD:20
KVMFF1AA-BLK:
  HEXCHROME   RDL:            ug/L     LCL:       UCL:        RPD:
KVMFF1AC-LCS:
  HEXCHROME   RDL:10          ug/L     LCL:85     UCL:115     RPD:20
KVLTH1AA-SAMP Calc Info:
     Uncert Level (#s).: 2     Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
KVLTH1AC-MS Calc Info:
     Uncert Level (#s).: 2     Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
KVLTH1AD-MSD:
     Uncert Level (#s).: 2     Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
KVMFF1AA-BLK:
     Uncert Level (#s).: 2     Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
KVMFF1AC-LCS:
     Uncert Level (#s).: 2     Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
```

Approved By _____ Date: _____