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Analytical Data Package Prepared For

CH2M Hill Plateau Remediation

Radiochemical Analysis By

TestAmerica TARL

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

Data Package Contains _____ Pages

Report Nbr: 42389

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W05708	I09-050	B215Y4	J9H120303-1	LH2981AA	9LH29810	9225312
		B215Y5	J9H120303-2	LH2991AA	9LH29910	9225312
	I09-045	B20WP2	J9H120311-1	LH3A51AA	9LH3A510	9225313
		B20WP3	J9H120311-2	LH3DW1AA	9LH3DW10	9225313
	I09-055	B218B2	J9H130313-1	LH5HG1AA	9LH5HG10	9225437
		B218B3	J9H130313-2	LH5HW1AA	9LH5HW10	9225437
	I09-051	B21763	J9H140249-1	LH7HC1AA	9LH7HC10	9229296
		B21764	J9H140249-2	LH7HT1AA	9LH7HT10	9229296
	I09-042	B20MY6	J9H170167-1	LH9331AA	9LH93310	9240307
	S09-008	B21943	J9H170169-1	LH94E1AA	9LH94E10	9240308
		B21944	J9H170169-2	LH94F1AA	9LH94F10	9240308
	I09-053	B217W0	J9H170170-1	LH94J1AA	9LH94J10	9240307
		B217W3	J9H170170-2	LH94K1AA	9LH94K10	9240307
		B217M6	J9H170171-1	LH94L1AA	9LH94L10	9240307
		B217N1	J9H170171-2	LH94N1AA	9LH94N10	9240307

Comments:

P&D SUBMITTAL DECEMBER 21, 2010 REVISION 1

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Report Nbr: 42389

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W05708	I09-053	B217N2	J9H170171-3	LH94P1AA	9LH94P10	9240307
	W09-007	B210F9	J9H170172-1	LH94V1AA	9LH94V10	9240307
		B210H6	J9H170172-2	LH9401AA	9LH94010	9240307
		B210N5	J9H170173-1	LH9411AA	9LH94110	9240309

Comments:

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

CH2M Hill Plateau Remediation Company
P.O. Box 1600
Mail Stop – R3-60
Richland, WA 99352

TestAmerica Laboratories, Inc.

September 21, 2009

Attention: Mike Neely

SAF Number	:	I09-050, I09-045, I09-055, I09-051, I09-042, S09-008, I09-053, W09-007
Date SDG Closed	:	August 25, 2009
Number of Samples	:	Nineteen (19)
Sample Type	:	Water
SDG Number	:	W05708
Data Deliverable	:	30-Day / Summary

CASE NARRATIVE

I. Introduction

Between August 12, 2009 and August 14, 2009 nineteen water samples were received at TestAmerica (TARL) for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the CH2M specific IDs:

CH2M ID#	TARL ID#	DATE OF RECEIPT	MATRIX
B215Y4	LH298	08/12/09	WATER
B215Y5	LH299	08/12/09	WATER
B20WP2	LH3A5	08/12/09	WATER
B20WP3	LH3DW	08/12/09	WATER
B218B2	LH5HG	08/13/09	WATER
B218B3	LH5HW	08/13/09	WATER
B21763	LH7HL	08/14/09	WATER
B21764	LH7H7	08/14/09	WATER
B20MY6	LH933	08/14/09	WATER
B21943	LH94E	08/14/09	WATER
B21944	LH94F	08/14/09	WATER
B217W0	LH94J	08/14/09	WATER
B217W3	LH947	08/14/09	WATER

CH2M Hill Plateau Remediation Company
September 21, 2009

B217M6	LH94L	08/14/09	WATER
B217N1	LH94N	08/14/09	WATER
B217N2	LH94P	08/14/09	WATER
B210F9	LH94V	08/14/09	WATER
B210H6	LH940	08/14/09	WATER
B210N5	LH941	08/14/09	WATER

II. Sample Receipt

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

III. Analytical Results/Methodology

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

The requested analyses were:

Gamma Spectroscopy
Iodine-129 (LL) by method RL-GAM-002 (RICH-RC-5025)*
Liquid Scintillation Counting
Selenium-79 by method RL-LSC-012 (RICH-RC-5043)*
Technetium-99 by method RL-LSC-013 (RICH-RC-5078)*
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

Gamma Spectroscopy
Iodine-129 (LL) by method RL-GAM-002 (RICH-RC-5025):
The samples and QC were counted using the improved method. All samples in this batch were analyzed with reduced aliquots due to insufficient sample volumes. Except as noted, the LCS, batch blank, samples and sample duplicate (B20MY6) results are within contractual requirements.

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Liquid Scintillation Counting
Technetium-99 by method RL-LSC-013 (RICH-RC-5078):
The LCS, batch blank, samples, sample duplicate (B21943), and sample matrix spike (B21944) results are within contractual requirements.

Selenium-79 by method RL-LSC-012 (RICH-RC-5043):
There is no LCS for selenium-79. Except as noted, batch blank, samples and sample duplicate (B210N5) results are within contractual requirements.

Chemical Analysis
Hexavalent Chromium by EPA method 7196A

Batch 9229296
Samples B21763 and B21764 were cloudy. Both samples were clear after centrifuging. Once the 10% sulfuric was added, the samples were slightly cloudy again. The matrix spike and matrix spike duplicate recovery were low at 18.12%. Suspect that there was a matrix effect with the samples. Except as noted, the LCS, batch blank, samples, sample duplicate (B21763), sample matrix spike (B21763), and matrix spike duplicate (B21763) results are within contractual requirements.

Batch 9225437
The LCS, batch blank, samples, sample duplicate (B218B2), sample matrix spike (B218B2), and matrix spike duplicate (B218B2) results are within contractual requirements.

Batch 9225313
The LCS, batch blank, samples, sample duplicate (B20WP2), sample matrix spike (B20WP2), and matrix spike duplicate (B20WP2) results are within contractual requirements.

Batch 9225312
The LCS, batch blank, samples, sample duplicate (B215Y4), sample matrix spike (B215Y4), and matrix spike duplicate (B215Y4) results are within contractual requirements.

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

Reviewed and approved:

Sandra Seger
Project Manager

Problem and Discrepancy Report

TARL

SDG W05708

1. The data package has the following issues:

a) Discrepancy between COC received time and sample check in list received time for COCs I09-051-8, I09-042-40, I09-053-100, 106, 10, 23, 22, ~~W09-007-44~~, **W09-007-94**, 104, and 204.

Resolution: Provide a correct time.

Lab Response: **None provided**

CHPRC Response:

A review of the problem and discrepancy issue reported above was conducted on 12/21/2010. It was concluded from the review that the errant sample received times identified on the sample check-in lists were obvious laboratory errors. The sample received time(s) identified on the sample check-in lists should always match the sample received time(s) recorded on the individual COCs. TARL has been instructed on the acceptable use and recording of the date and time stamp. No further corrective action is required at this time.

b) Discrepancy between COC received date and time and sample check in list received date and time for COCs S09-008-32 and 33.

Resolution: Provide a correct time and date.

Lab Response: **None provided**

CHPRC Response:

A review of the problem and discrepancy issue reported above was conducted on 12/21/2010. It was concluded from the review that the incorrect sample date/time received identified on the sample check-in list was due to an obvious laboratory error. The sample date and time received should always match the sample date and time received recorded on the individual COCs. TARL has been instructed on the acceptable use and recording of the date and time stamp. No further corrective action is required at this time.

c) Lab is using a non-military time format. **(Affected COCs I09-053-100, S09-008-32 and S09-008-33)**

Resolution: Instruct staff to use a military time format.

Lab Response: **None provided**

Provide a resolution to each issue noted on the report

Problem and Discrepancy Report

TARL

SDG W05708

CHPRC Response:

A review of the problem and discrepancy issue reported above was conducted on 12/21/2010. It was concluded from the review that the received time of 2:35 recorded by the TARL sample custodian should have been recorded as 14:35 on the affected COCs identified above. (Note: Relinquished time recorded by the CHPRC was 14:35). TARL has been instructed on the acceptable use and recording of the date and time stamp. No further corrective action is required at this time.

Please correct the issues and resubmit the hard copy data package.

Drinking Water Method Cross References

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

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

Uncertainty Estimation

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

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

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

Report Definitions

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

Isotope	Richland SOP #	Old Richland SOP #	Method Reference	Title
Asbestos	RL-ASB-001	N/A	NIOSH 7400	Fiber Counting by Phase Contrast Microscopy based on NIOSH 7400
Asbestos	RL-ASB-002	N/A	NIOSH 9002	Sample Prep and Analysis for Asbestos (bulk) by Polarized Light Microscopy based on NIOSH 9002
Alpha - Gross	ARCHIVED	RICH-RB-5035	Liquid Scintillation Anal/ Packard	DETERMINATION OF GROSS ALPHA IN NASAL SMEARS BY LIQUID SCINTILLATION COUNTING
Alpha - Gross	RL-GPC-001	RICH-RC-5014	9310 / EPA SW846 900.0 / EPA 600	DETERMINATION OF GROSS ALPHA AND GROSS BETA IN WATER BY METHOD 9310
Alpha - Gross	RL-GPC-007	RICH-RC-5020	SM 7110B EPA 680	DETERMINATION OF GROSS ALPHA AND GROSS BETA IN SOIL, SHORELINE SOIL, FOOD AND VEGETATION
Alpha - Gross	RL-GPC-002	RICH-RC-5021	00-02 EPA 520	DETERMINATION OF GROSS ALPHA ACTIVITY IN WATER BY COPRECIPITATION
Alpha - Gross	RL-GPC-008	RICH-RC-5036	ER100 / LANL	PREPARATION OF AIR FILTERS FOR GROSS ALPHA/BETA AND COMPOSITING AIR FILTERS
Am	RL-ALP-003	RICH-RC-5072	Mod RP 725 / DOE0089T EXT Chromatography	SEPARATION OF AMERICIUM, CURIUM, AND URANIUM BY EXTRACTION CHROMATOGRAPHY
Am	RL-ALP-010	RICH-RC-5080	Am03/Pu11HASL 300 NAS-NS-3006	SEQUENTIAL SEPARATION OF PLUTONIUM AND AMERICIUM
Beta - Gross	RL-GPC-001	RICH-RC-5014	9310 / EPA SW846 900.0 / EPA 600	DETERMINATION OF GROSS ALPHA AND GROSS BETA IN WATER BY METHOD 9310
Beta - Gross	RL-GPC-007	RICH-RC-5020	SM 7110B EPA 680	DETERMINATION OF GROSS ALPHA AND GROSS BETA IN SOIL, SHORELINE SOIL, FOOD AND VEGETATION
Beta - Gross	RL-GPC-008	RICH-RC-5036	ER100 / LANL	PREPARATION OF AIR FILTERS FOR GROSS ALPHA/BETA AND COMPOSITING AIR FILTERS
C14	RL-LSC-001	RICH-RB-5013	Mod H-02 / EPA 520	TRITIUM, CARBON-14, NICKEL-63 OR PHOSPHORUS-32 ANALYSIS IN URINE
C14	RL-LSC-008	RICH-RC-5022	EPA C-01 / EPA 520	CARBON 14 BY DIGESTION METHOD
C14	RL-LSC-009	RICH-RC-5040	Mod C14 / EPA 680	DETERMINATION OF CARBON-14 BY BENZENE SYNTHESIS
C14	RL-LSC-010	RICH-RC-5046	EPA C-01 / EPA 520	DETERMINATION OF CARBON-14 IN GRAPHITE AND SOIL.
C14	RL-LSC-011	RICH-RC-5047	Mod H-02 / EPA 520	DETERMINATION OF CARBON-14 IN WATER BY DIRECT COUNTING
Cm	RL-ALP-003	RICH-RC-5072	Mod RP 725 / DOE0089T EXT Chromatography	SEPARATION OF AMERICIUM, CURIUM, AND URANIUM BY EXTRACTION CHROMATOGRAPHY
Coliform	RL-WC-001	RICH-WC-5001	9222B	DETERMINATION OF TOTAL COLIFORM: MULTIPLE TUBE FERMENTATION TECHNIQUE
Coliform	RL-WC-002	RICH-WC-5002	9131	TOTAL COLIFORMS BY MEMBRANE FILTRATION
Coliform	RL-WC-005	RICH-WC-5007	9223	TOTAL COLIFORM BY THE COLILERT METHOD
Cr6+	RL-WC-003	RICH-WC-5003	7196A, SW846	DETERMINATION OF HEXAVALENT CHROMIUM [Cr(VI)] IN WATER, SOIL, AND SIMILAR MATRICES
Cr6+	RL-WC-004	RICH-WC-5005	3060 / SW846	DETERMINATION OF HEXAVALENT CHROMIUM (CrVI) IN SOLID MATRICES WITH ALKALINE DIGESTION
Fe	RL-LSC-015	RICH-RC-5074	EXT Chromatography ModFe55/PNL-ALO-435	SEPARATION OF IRON AND NICKEL BY EXTRACTION CHROMATOGRAPHY
Fe55	RL-LSC-016	RICH-RC-5023	R4-73-014 / EPA HASL 300	DETERMINATION OF IRON-55 AND IRON-59 IN WATER
Fe59	RL-LSC-016	RICH-RC-5023	R4-73-014 / EPA HASL 300	DETERMINATION OF IRON-55 AND IRON-59 IN WATER
Gamma	RL-GAM-001	RICH-RC-5017	901.0 / HASL 300 ASTM D3649	PREPARATION OF ALL MATRICES FOR ANALYSIS BY GAMMA SPECTROSCOPY
H3	RL-LSC-001	RICH-RB-5013	Mod H-02 / EPA 520	TRITIUM, CARBON-14, NICKEL-63 OR PHOSPHORUS-32 ANALYSIS IN URINE
H3	RL-LSC-003	RICH-RB-5034	7500-3 / SM	DETERMINATION OF TRITIUM IN URINE BY DISTILLATION
H3	RL-LSC-004	RICH-RC-5004	H3 / EPA LV539	DETERMINATION OF TRITIUM IN AIR
H3	RL-LSC-005	RICH-RC-5007	Mod 906.0 / EPA 600	SEPARATION OF TRITIUM IN WATER AND AQUEOUS COMPONENT OF WINE
H3	RL-LSC-007	RICH-RC-5024	H-3 by EE EPA LV539 / HASL 300	DETERMINATION OF LOW LEVEL TRITIUM IN WATER BY ELECTROLYTIC ENRICHMENT
H3	RL-LSC-002	RICH-RC-5037	H-3 in Water/Tissue / LV 539	DETERMINATION OF TRITIUM BY CRYOGENIC DISTILLATION
H3	RL-LSC-006	RICH-RC-5048	H-3 in Water/Tissue / LV 539	TRITIUM PREPARATION IN MILK SAMPLES
I129	RL-GAM-002	RICH-RC-5025	R4-73-014I/EPA ASTM D2334 (Discontinued)	DETERMINATION OF IODINE-131 AND 129 IN WATER BY SOLVENT EXTRACTION METHOD
I131	RL-GAM-002	RICH-RC-5025	R4-73-014I/EPA ASTM D2334 (Discontinued)	DETERMINATION OF IODINE-131 AND 129 IN WATER BY SOLVENT EXTRACTION METHOD
I131	ARCHIVED	RICH-RC-5049	HASL 300 (1983)	DETERMINATION OF IODINE-131 IN MILK BY BATCH ION-EXCHANGE
Metals	ARCHIVED	BHI-MT-0001	6010	ICP-AE SPECTROSCOPY, SPECTROMETRIC METHOD FOR TRACE ELEMENT ANALYSIS, METHOD 6010A FOR Bechtel

Isotope	Richland SOP #	Old Richland SOP #	Method Refereuce	Title
Metals	RL-MT-001	RICH-MT-0001	6010B	ICP-AES for TRACE ELEMENT ANALYSIS, METHOD 6010B
Metals	RL-MT-002	RICH-MT-0002	SW486 3050B	ACID DIGESTION FOR ICP ANALYSIS
Metals	RL-MT-003	RICH-MT-0003	NIOSH 7300	DIGESTION PREP based on METHOD NIOSH 7300
Ni	RL-LSC-015	RICH-RC-5074	EXT Chromatography ModFe55/PNL-ALO-435	SEPARATION OF IRON AND NICKEL BY EXTRACTION CHROMATOGRAPHY
Ni63	RL-LSC-001	RICH-RB-5013	Mod H-02 / EPA 520	TRITIUM, CARBON-14, NICKEL-63 OR PHOSPHORUS-32 ANALYSIS IN URINE
Ni63	RL-LSC-017	RICH-RC-5069	EXT Chromatography Mod RP300 / DOE0089T	SEPARATION OF Ni-63 BY EXTRACTION CHROMATOGRAPHY
Np	RL-ALP-013	RICH-RC-5009	NAS-NS-3060	DETERMINATION OF NEPTUNIUM-237 BY LIQUID-LIQUID EXTRACTION IN ALL MATRICES
Np	RL-ALP-006	RICH-RC-5064	EXT Chromatography	SEPARATION OF NEPTUNIUM BY EXTRACTION CHROMATOGRAPHY
P32	RL-LSC-001	RICH-RB-5013	Mod H-02 / EPA 520	TRITIUM, CARBON-14, NICKEL-63 OR PHOSPHORUS-32 ANALYSIS IN URINE
Pb	RL-ALP-011	RICH-RC-5076	EXT Chromatography	DETERMINATION OF LEAD-210 BY EXTRACTION CHROMATOGRAPHY
Po	RL-ALP-007	RICH-RB-5001	NAS-NS-3037 HASL 300	DETERMINATION OF POLONIUM-210 IN URINE
Po	RL-ALP-012	RICH-RC-5012	Po-01 / HASL 300 Mod U01 HASL 300	SEPARATION OF ISOTOPIC URANIUM AND POLONIUM-210 IN WATER, SOIL AND FILTERS
Prep - Bioassay	ARCHIVED	RICH-RB-0001		PREPARATION FOR RAPID BIOASSAY ANALYSES
Prep - Bioassay	RL-PRP-001	RICH-RB-5002	Mod Pu06 / HASL 300	PREPARATION OF URINE AND BLOOD SAMPLES
Prep - Bioassay	ARCHIVED	RICH-RB-5004	ASTM D1429-95	DETERMINATION OF SPECIFIC GRAVITY OF URINE
Prep - Bioassay	RL-RPL-002	RICH-RB-5036	Pub 6490,6601 / PNL	PREPARATION OF SYNTHETIC URINE AND FECES USING RECIPES FROM HPS N13.30 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	C-03 / HASL 300	COPRECIPITATION OF SOME ACTINIDES ON NEODYMIUM FLUORIDE FOR ALPHA-PARTICLE SPECTROMETRY
Prep - Count	RL-ALP-015	RICH-RC-5039	C-03 / HASL 300 Anal Chem 1972	ELECTRODEPOSITION OF ACTINIDES
Prep - Count	RL-ALP-014	RICH-RC-5085	Morrison & Freiser NAS-NS-3050	ANHYDROUS ETHER EXTRACTION OF URANIUM
Prep - Env	RL-KPA-001	RICH-RC-5015	ASTM / D5174-97	ENVIRONMENTAL SAMPLE PREPARATION FOR URANIUM BY LASER-INDUCED PHOSPHORESCENCE
Prep - Env	RL-PRP-004	RICH-RC-5016	Sr02 / HASL 300	PREPARATION OF ENVIRONMENTAL MATRICES
Prep - Env	RL-PRP-007	RICH-RC-5045	Mod Pu02 / HASL 300	PREPARATION OF MIXED BED RESINS AND PRE-FILTERS
Prep - Env	RL-PRP-008	RICH-RC-5068	Mod ER100 / LA10300	PREPARATION OF SOIL, VEGETATION AND AIR FILTERS BY MIXED STRONG ACID LEACHING
Prep - Resin	RL-ALP-017	RICH-RC-5018	Mod Pu11 / Mod 300	ION-EXCHANGE PREPARATION
Prep - Soil	RL-PRP-003	RICH-RC-5013	Pu02A / HASL 300	PREPARATION OF SOIL SAMPLES
Prep - Soil	RL-PRP-005	RICH-RC-5019	D5259 / ASTM SW 846/3015/3051/3052	PREPARATION AND DISSOLUTION OF SEDIMENTS AND SOIL BY MICROWAVE BOMB DIGESTION
Prep - Soil	RL-PRP-006	RICH-RC-5032	Pu02A / HASL 300	COMPLETE DISSOLUTION BY MIXED ACIDS IN A TEFLON BEAKER
Prep - Soil	RL-PRP-009	RICH-RC-5077	Mod ER100 / LA10300	PREPARATION OF SMALL SOIL SAMPLES FOR GAMMA SPEC AND/OR RADIOCHEM ANAL BY ACID DIGESTION
Prep - Urine	RL-PRP-010	RICH-RC-5086	AnalyticaChemActa1992 RP800 / DOE00089T	URINE AND WATER SAMPLE PREPARATION BY CALCIUM PHOSPHATE PRECIPITATION
Prep - Water	RL-PRP-010	RICH-RC-5086	AnalyticaChemActa1992 RP800 / DOE00089T	URINE AND WATER SAMPLE PREPARATION BY CALCIUM PHOSPHATE PRECIPITATION
Pu	ARCHIVED	RICH-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-5082	AnalyticaChemActa1992 RP800 / DOE00089T	DETERMINATION OF PLUTONIUM BY EXTRACTION CHROMATOGRAPHY
Ra	RL-RA-001	RICH-RC-5005	903.1 / EPA 600	RADIUM-226 AND RADIUM-228 SEPARATION IN RADIOCHEMICAL MATRICES - ADAPTED FROM EPA 903.1 AND 904.0
Ra	RL-RA-001	RICH-RC-5005	904.0 / EPA 600	RADIUM-226 AND RADIUM-228 SEPARATION IN RADIOCHEMICAL MATRICES - ADAPTED FROM EPA 903.1 AND 904.0

Isotope	Richland SOP #	Old Richland SOP #	Method Reference	Title
Ra	RL-RA-002	RICH-RC-5027	Mod D2460/ ASTM 903.0 / EPA 600	DETERMINATION OF TOTAL RADIUM
Rn	RL-LSC-019	RICH-RC-5082	913.0 / EPA	DETERMINATION OF RADON-222 - ADAPTED FROM METHOD 913.0
S35	ARCHIVED	RICH-RB-5020	Hillebrand, 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

9/21/2009 1:50:52 PM

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 42389 File Name: h:\Reportdb\edd\FeadIV\Rad\W05708.Edd, h:\Reportdb\edd\FeadIV\Rad\42389.Edd

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9LH93310	B20MY6		MW6-SBB-A1	I09-042	W05708					08/14/2009 11:00

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
9240307	I-129	15046-84-1	5.68E-01	pCi/L	1.8E-01	1.8E-01		1.81E-01	105.1	I129LL_SEP_LEPS	3.8885E+00	L	09/11/2009 09:25	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9LH94010	B210H6		MW6-SBB-A1	W09-007	W05708					08/13/2009 09:43

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
9240307	I-129	15046-84-1	1.10E+00	pCi/L	2.6E-01	2.6E-01		2.00E-01	95.9	I129LL_SEP_LEPS	3.8534E+00	L	09/12/2009 07:41	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9LH94110	B210N5		MW6-SBB-A1	W09-007	W05708					08/13/2009 11:35

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
9240309	Se-79	15758-45-9	4.31E+00	pCi/L	2.6E+00	3.9E+00	U	5.97E+00	70.7	SE79_SEP_IE_LS	2.00E-01	L	09/04/2009 01:21	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9LH94E10	B21943		MW6-SBB-A1	S09-008	W05708					08/14/2009 11:46

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
9240308	TC-99	14133-76-7	1.47E+02	pCi/L	7.8E+00	1.3E+01		9.75E+00	100.0	TC99_SEP_LSC	1.25E-01	L	09/03/2009 20:49	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9LH94F10	B21944		MW6-SBB-A1	S09-008	W05708					08/14/2009 11:46

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
9240308	TC-99	14133-76-7	1.42E+02	pCi/L	7.7E+00	1.3E+01		9.82E+00	100.0	TC99_SEP_LSC	1.25E-01	L	09/03/2009 22:54	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9LH94J10	B217W0		MW6-SBB-A1	I09-053	W05708					08/14/2009 12:47

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
9240307	I-129	15046-84-1	1.20E+00	pCi/L	3.1E-01	3.1E-01		1.97E-01	88.6	I129LL_SEP_LEPS	3.8846E+00	L	09/11/2009 12:49	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9LH94K10	B217W3		MW6-SBB-A1	I09-053	W05708					08/14/2009 09:27

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
9240307	I-129	15046-84-1	3.27E-01	pCi/L	1.3E-01	1.3E-01		1.35E-01	100.0	I129LL_SEP_LEPS	3.8765E+00	L	09/11/2009 12:50	I

TestAmerica

rptFeadRadSummaryEdd v3.48

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

9/21/2009 1:50:52 PM

TestAmerica Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **Version:** 05 **Rpt Nbr:** 42389 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W05708.Edd, h:\Reportdb\edd\FeadIV\Rad\42389.Edd

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9LH94L10	B217M6		MW6-SBB-A1	I09-053	W05708					08/13/2009 10:35

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
9240307	I-129	15046-84-1	6.02E-01	pCi/L	2.7E-01	2.7E-01		1.98E-01	94.1	I129LL_SEP_LEPS	3.9427E+00	L	09/12/2009 00:56	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9LH94N10	B217N1		MW6-SBB-A1	I09-053	W05708					08/13/2009 09:33

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
9240307	I-129	15046-84-1	1.88E+00	pCi/L	3.4E-01	3.4E-01		1.88E-01	99.5	I129LL_SEP_LEPS	3.9277E+00	L	09/12/2009 00:56	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9LH94P10	B217N2		MW6-SBB-A1	I09-053	W05708					08/13/2009 08:00

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
9240307	I-129	15046-84-1	5.55E-02	pCi/L	1.2E-01	1.2E-01	U	2.15E-01	94.9	I129LL_SEP_LEPS	3.7599E+00	L	09/12/2009 04:18	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9LH94V10	B210F9		MW6-SBB-A1	W09-007	W05708					08/13/2009 08:38

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
9240307	I-129	15046-84-1	2.11E+01	pCi/L	2.3E+00	2.3E+00		3.68E-01	96.8	I129LL_SEP_LEPS	3.8886E+00	L	09/12/2009 04:18	I

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

Monday, September 21, 2009

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W05708.Edd, h:\Reportdb\edd\FeadIV\Rad\42389.Edd

Lab Sample Id:	LJ0X21AB	**Sdg/Rept Nbr:**	W05708	42389	**Collection Date:** 08/14/2009 11:46
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 08/14/2009

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

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
9240308	TC-99	8.05E+00	pCi/L	5.8E+00	U	9.77E+00	100.0		TC99_SEP_LS	1.25E-01	09/04/2009				D
BLK	14133-76-7			4.3E+00						L	00:59				

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

Monday, September 21, 2009

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W05708.Edd, h:\Reportdb\edd\FeadIV\Rad\42389.Edd

Lab Sample Id: LJ0X61AB **Sdg/Rept Nbr:** W05708 42389 **Collection Date:** 08/13/2009 11:35

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BLK **Received Date:** 08/14/2009

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

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
9240309	Se-79	3.77E+00	pCi/L	3.5E+00	U	5.40E+00	78.2		SE79_SEP_IE_	2.00E-01	09/04/2009				D
BLK	15758-45-9			2.3E+00						L	08:07				

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

Monday, September 21, 2009

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W05708.Edd, h:\Reportdb\edd\FeadIV\Rad\42389.Edd

Lab Sample Id:	LJ0XP1AB	**Sdg/Rept Nbr:**	W05708	42389	**Collection Date:** 08/14/2009 11:00
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 08/14/2009

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

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
9240307	I-129	-7.04E-02	pCi/L	7.6E-02	U	1.22E-01	95.7		I129LL_SEP_L	3.969E+00	09/12/2009				D
BLK	15046-84-1			7.6E-02						L	07:41				

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

Monday, September 21, 2009

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W05708.Edd, h:\Reportdb\edd\FeadIV\Rad\42389.Edd

Lab Sample Id:	LJ0X21CS	**Sdg/Rept Nbr:**	W05708	42389	**Collection Date:** 08/14/2009 11:46
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BS		**Received Date:** 08/14/2009

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

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
9240308	TC-99	5.05E+02	pCi/L	3.3E+01		9.77E+00	100.0	5.43E+02	TC99_SEP_LS	1.25E-01	09/04/2009			70	D
BS	14133-76-7			1.3E+01				92.9		L	02:02			130	

P&D SUBMITTAL DECEMBER 21, 2010 REVISION 1

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

Monday, September 21, 2009

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W05708.Edd, h:\Reportdb\edd\FeadIV\Rad\42389.Edd

Lab Sample Id: LJ0XP1CS **Sdg/Rept Nbr:** W05708 42389 **Collection Date:** 08/14/2009 11:00

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BS **Received Date:** 08/14/2009

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

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
9240307	I-129	9.61E+00	pCi/L	1.1E+00		3.06E-01	90.9	9.63E+00	I129LL_SEP_L	3.9801E+00	09/12/2009			70	D
BS	15046-84-1			1.1E+00				99.8		L	11:06			130	

19
17

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

Monday, September 21, 2009

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W05708.Edd, h:\Reportdb\edd\FeadIV\Rad\42389.Edd

Lab Sample Id:	LH9331CR	**Sdg/Rept Nbr:**	W05708	42389	**Collection Date:** 08/14/2009 11:00
Client Id:	B20MY6	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 08/14/2009

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
I09-042	MW6-SBB-A19981								AL	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
9240307	I-129	7.56E-01	pCi/L	2.0E-01		1.65E-01	99.2		I129LL_SEP_L	3.9053E+00	09/11/2009	28.5	1.4		D
DUP	15046-84-1	5.68E-01		2.0E-01						L	09:25	20.0	3		

SES 9/21/09

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

Monday, September 21, 2009

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W05708.Edd, h:\Reportdb\edd\FeadIV\Rad\42389.Edd

Lab Sample Id: LH9411CR **Sdg/Rept Nbr:** W05708 42389 **Collection Date:** 08/13/2009 11:35
Client Id: B210N5 **Matrix:** WATER WATER **Sample On Date:**
Moisture/Solids%*: **QC Type:** DUP **Received Date:** 08/14/2009

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
W09-007	MW6-SBB-A19981								AM	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
9240309	Se-79	5.06E+00	pCi/L	3.7E+00	U	5.62E+00	75.1		SE79_SEP_IE_	2.00E-01	09/04/2009	16.1	0.3		D
DUP	15758-45-9	4.31E+00		2.5E+00						L	04:44	20.0	3		

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

Monday, September 21, 2009

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W05708.Edd, h:\Reportdb\edd\FeadIV\Rad\42389.Edd

Lab Sample Id:	LH94E1CR	**Sdg/Rept Nbr:**	W05708	42389	**Collection Date:** 08/14/2009 11:46
Client Id:	B21943	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 08/14/2009

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S09-008	MW6-SBB-A19981								AN	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
9240308	TC-99	1.52E+02	pCi/L	1.4E+01		9.77E+00	100.0		TC99_SEP_LS	1.25E-01	09/03/2009	3.1	0.5		D
DUP	14133-76-7	1.47E+02		7.8E+00						L	21:52	20.0	3		

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

Monday, September 21, 2009

TestAmerica Qc Matrix Spike Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W05708.Edd, h:\Reportdb\edd\FeadIV\Rad\42389.Edd

Lab Sample Id:	LH94F1CW	**Sdg/Rept Nbr:**	W05708	42389	**Collection Date:** 08/14/2009 11:46
Client Id:	B21944	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	**MS**		**Received Date:** 08/14/2009

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S09-008	MW6-SBB-A19981								AO	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
9240308	TC-99	3.39E+03	pCi/L	2.0E+02		9.80E+00	100.0	3.62E+03	TC99_SEP_LS	1.25E-01	09/03/2009			60	D
MS	14133-76-7			3.3E+01				93.7		L	23:57			140	

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TA Richland
Hexavalent Chromium - Water

Analyst:	L. Dinh	Calibration Curve Information				SOP Information		BATCH #	9229296
Start Date:	8/14/2009		Amount	Conc.(mg/L)	ABS.	RL-WC-003		SDG #	
Start Time:		Blank	0.000	0.000	0.000	Revision 0		Matrix	Water
End Date:	8/14/2009	Std. 1	0.100	0.050	0.097				
End Time		Std. 2	0.500	0.250	0.486			Instrument Information	
		Std. 3	0.750	0.375	0.725	MDL (mg/L)	0.0037	Instrument:	Hach DR2010
Analyst Signature:		Std. 4	1.500	0.750	1.416			Wavelength:	540
		Std 5	2.000	1.000	1.866			R Squared	0.99978
Date:	08/17/09	Standard Volume (mL):			100.000			Slope:	1.86683
		Date of Curve:			8/14/2009			Intercept:	0.01049

	Calibration Information:	ICV Information:		LCS Information:		Matrix Spike Information:	
Dilution ID #	Cr-09-00231	Cr-09-00232		Cr-09-00231		Cr-09-00231	
Prep Date:	08/14/09	08/14/09		08/14/09		08/14/09	
Concentration (mg/L)	50	50		50		50	
Expiration Date:	08/15/09	08/15/09		08/15/09		08/15/09	
Pipettor(s)	70,190	190		190		190	
Volume Used (Expected Value		1.000	0.50000	1.00	0.50000	0.50	0.26316

Expected values are only amounts added in mg and not final concentrations

Sample ID	Client ID	Type	Sample Volume (mL)	Sample ABS.	Blank ABS.	Corrected ABS.	Dilution Factor	Curve Conc. (mg/L)	Final Conc. (mg/L)	% Rec. / RPD
n/a	n/a	ICV	100.000	0.966	0.000	0.966	1	0.5118	0.512	102.37%
n/a	n/a	ICB	100.000	0.001	0.000	0.001	1	-0.0051	<MDL	
LH9NQ1AA	n/a	Prep Blank	100.000	0.005		0.005	1	-0.0029	<MDL	
LH9NQ1AC	n/a	LCS	100.000	0.955		0.955	1	0.5059	0.506	101.19%
LH7HL1AA	B21763'	Sample	100.000	0.110		0.110	1	0.0533	0.053	0.048
LH7HL1AC-S	B21763'-MS	MS	100.000	0.199		0.199	1	0.1010	~~0.101~~	18.12%
LH7HL1AD-D	B21763'-MSD	MSD	100.000	0.199		0.199	1	0.1010	~~0.101~~	18.12%
LH7HL1AE-X	B21763'-DUP	Duplicate	100.000	0.111		0.111	1	0.0538	0.054	1.00%
LH7HT1AA	B21764'	Sample	100.000	0.066		0.066	1	0.0297	0.030	0.048
			100.000				1			
			100.000				1			
			100.000				1			
n/a	n/a	CCV	100.000	0.965		0.965	1	0.5113	0.511	102.26%
n/a	n/a	CCB	100.000	-0.001		-0.001	1	<MDL	<MDL	
			100.000				1			
			100.000				1			
			100.000				1			
			100.000				1			
			100.000				1			

SKS 9/17/09

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TA Richland
Hexavalent Chromium - Water

Analyst:	D. Petty	Calibration Curve Information				SOP Information		BATCH #	9225437
Start Date:	8/13/2009		Amount	Conc.(mg/L)	ABS.	RL-WC-003		SDG #	
Start Time:		Blank	0.000	0.000	0.000	Revision 0		Matrix	Water
End Date:	8/13/2009	Std. 1	0.100	0.050	0.098				
End Time		Std. 2	0.500	0.250	0.486			Instrument Information	
		Std. 3	0.750	0.375	0.727	MDL (mg/L)	0.0037	Instrument:	Hach DR2010
Analyst Signature:	DP	Std. 4	1.500	0.750	1.408			Wavelength:	540
		Std 5	2.000	1.000	1.864			R Squared	0.99976
Date:	08/14/09	Standard Volume (mL):			100.000			Slope:	1.86128
		Date of Curve:			8/13/2009			Intercept:	0.01157

	Calibration Information:	ICV Information:		LCS Information:		Matrix Spike Information:	
Dilution ID #	Cr-09-00227	Cr-09-00228		Cr-09-00227		Cr-09-00227	
Prep Date:	08/13/09	08/13/09		08/13/09		08/13/09	
Concentration (mg/L)	50	50		50		50	
Expiration Date:	08/14/09	08/14/09		08/14/09		08/14/09	
Pipettor(s)	70,190	190		190		190	
Volume Used (Expected Value		1.000	0.50000	1.00	0.50000	0.50	0.26316

Expected values are only amounts added in mg and not final concentrations

Sample ID	Client ID	Type	Sample Volume (mL)	Sample ABS.	Blank ABS.	Corrected ABS.	Dilution Factor	Curve Conc. (mg/L)	Final Conc. (mg/L)	% Rec. / RPD
n/a	n/a	ICV	100.000	0.955	0.000	0.955	1	0.5069	0.507	101.37%
n/a	n/a	ICB	100.000	-0.001	0.000	-0.001	1	<MDL	<MDL	
LH5L61AA	n/a	Prep Blank	100.000	0.002		0.002	1	-0.0051	<MDL	
LH5L61AC	n/a	LCS	100.000	0.960		0.960	1	0.5096	0.510	101.91%
LH5HG1AA	B218B2'	Sample	100.000	0.190		0.190	1	0.0959	0.096	→ 0.272
LH5HG1AC-S	B218B2'-MS	MS	100.000	0.697		0.697	1	0.3683	~~0.368~~	103.51%
LH5HG1AD-D	B218B2'-MSD	MSD	100.000	0.698		0.698	1	0.3688	~~0.369~~	103.71%
LH5HG1AE-X	B218B2'-DUP	Duplicate	100.000	0.191		0.191	1	0.0964	0.096	0.56%
LH5HW1AA	B218B3'	Sample	100.000	0.191		0.191	1	0.0964	0.096	→ 0.273
			100.000				1			
			100.000				1			
			100.000				1			
n/a	n/a	CCV	100.000	0.957		0.957	1	0.5079	0.508	101.59%
n/a	n/a	CCB	100.000	0.004		0.004	1	-0.0041	<MDL	
			100.000				1			
			100.000				1			
			100.000				1			
			100.000				1			
			100.000				1			

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P&D SUBMITTAL DECEMBER 21, 2010 REVISION 1

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TA Richland
Hexavalent Chromium - Water

Analyst:	D. Petty	Calibration Curve Information				SOP Information		BATCH #	9225313
Start Date:	8/12/2009		Amount	Conc.(mg/L)	ABS.	RL-WC-003		SDG #	
Start Time:		Blank	0.000	0.000	0.000	Revision 0		Matrix	Water
End Date:	8/12/2009	Std. 1	0.100	0.050	0.098				
End Time		Std. 2	0.500	0.250	0.485			Instrument Information	
		Std. 3	0.750	0.375	0.725	MDL (mg/L)	0.0037	Instrument:	Hach DR2010
Analyst Signature:		Std. 4	1.500	0.750	1.420			Wavelength:	540
		Std 5	2.000	1.000	1.869			R Squared	0.99980
Date:	08/13/09	Standard Volume (mL):			100.000			Slope:	1.87060
		Date of Curve:			8/12/2009			Intercept:	0.01013

	Calibration Information:	ICV Information:		LCS Information:		Matrix Spike Information:	
Dilution ID #	Cr-09-00227	Cr-09-00228		Cr-09-00227		Cr-09-00227	
Prep Date:	08/12/09	08/12/09		08/12/09		08/12/09	
Concentration (mg/L)	50	50		50		50	
Expiration Date:	08/13/09	08/13/09		08/13/09		08/13/09	
Pipettor(s)	70,190	190		190		190	
Volume Used / Expected Value		1.000	0.50000	1.00	0.50000	0.50	0.26316

Expected values are only amounts added in mg and not final concentrations

Sample ID	Client ID	Type	Sample Volume (mL)	Sample ABS.	Blank ABS.	Corrected ABS.	Dilution Factor	Curve Conc. (mg/L)	Final Conc. (mg/L)	% Rec. / RPD
n/a	n/a	ICV	100.000	0.959	0.000	0.959	1	0.5073	0.507	101.45%
n/a	n/a	ICB	100.000	-0.001	0.000	-0.001	1	<MDL	<MDL	
LH4KE1AA	n/a	Prep Blank	100.000	-0.001		-0.001	1	<MDL	<MDL	
LH4KE1AC	n/a	LCS	100.000	0.954		0.954	1	0.5046	0.505	100.92%
LH3A51AA	B20WP2'	Sample	100.000	1.250		1.250	1	0.6628	0.663	→ 0.252
LH3A51AC-S	B20WP2'-MS	MS	100.000	1.722		1.722	1	0.9151	~~0.915~~	95.88%
LH3A51AD-D	B20WP2'-MSD	MSD	100.000	1.718		1.718	1	0.9130	~~0.913~~	95.07%
LH3A51AE-X	B20WP2'-DUP	Duplicate	100.000	1.244		1.244	1	0.6596	0.660	0.49%
LH3DW1AA	B20WP3'	Sample	100.000	1.240		1.240	1	0.6575	0.657	→ 0.250
			100.000				1			
			100.000				1			
			100.000				1			
n/a	n/a	CCV	100.000	0.956		0.956	1	0.5056	0.506	101.13%
n/a	n/a	CCB	100.000	-0.003		-0.003	1	<MDL	<MDL	
			100.000				1			
			100.000				1			
			100.000				1			
			100.000				1			
			100.000				1			

SFS 9/17/09

TESTAMERICA

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TA Richland
Hexavalent Chromium - Water

Analyst:	D. Petty	Calibration Curve Information				SOP Information		BATCH #	9225312
Start Date:	8/12/2009		Amount	Conc.(mg/L)	ABS.	RL-WC-003		SDG #	
Start Time:		Blank	0.000	0.000	0.000	Revision 0		Matrix	Water
End Date:	8/12/2009	Std. 1	0.100	0.050	0.098				
End Time		Std. 2	0.500	0.250	0.485			Instrument Information	
		Std. 3	0.750	0.375	0.725	MDL (mg/L)	0.0037	Instrument:	Hach DR2010
Analyst Signature:		Std. 4	1.500	0.750	1.420			Wavelength:	540
		Std 5	2.000	1.000	1.869			R Squared	0.99980
Date:	08/13/09	Standard Volume (mL):			100.000			Slope:	1.87060
		Date of Curve:			8/12/2009			Intercept:	0.01013

	Calibration Information:	ICV Information:		LCS Information:		Matrix Spike Information:	
Dilution ID #	Cr-09-00227	Cr-09-00228		Cr-09-00227		Cr-09-00227	
Prep Date:	08/12/09	08/12/09		08/12/09		08/12/09	
Concentration (mg/L)	50	50		50		50	
Expiration Date:	08/13/09	08/13/09		08/13/09		08/13/09	
Pipettor(s)	70,190	190		190		190	
Volume Used (Expected Value		1.000	0.50000	1.00	0.50000	0.50	0.26316

Expected values are only amounts added in mg and not final concentrations

Sample ID	Client ID	Type	Sample Volume (mL)	Sample ABS.	Blank ABS.	Corrected ABS.	Dilution Factor	Curve Conc. (mg/L)	Final Conc. (mg/L)	% Rec. / RPD
n/a	n/a	ICV	100.000	0.959	0.000	0.959	1	0.5073	0.507	101.45%
n/a	n/a	ICB	100.000	-0.001	0.000	-0.001	1	<MDL	<MDL	
LH4J51AA	n/a	Prep Blank	100.000	0.002		0.002	1	-0.0043	<MDL	
LH4J51AC	n/a	LCS	100.000	0.960		0.960	1	0.5078	0.508	101.56%
LH2981AA	B215Y4'	Sample	100.000	0.045		0.045	1	0.0186	0.019	0.272
LH2981AC-S	B215Y4'-MS	MS	100.000	0.555		0.555	1	0.2913	~~0.291~~	103.60%
LH2981AD-D	B215Y4'-MSD	MSD	100.000	0.555		0.555	1	0.2913	~~0.291~~	103.60%
LH2981AE-X	B215Y4'-DUP	Duplicate	100.000	0.045		0.045	1	0.0186	0.019	0.00%
LH2991AA	B215Y5'	Sample	100.000	0.044		0.044	1	0.0181	0.018	0.272
			100.000				1			
			100.000				1			
			100.000				1			
n/a	n/a	CCV	100.000	0.958		0.958	1	0.5067	0.507	101.34%
n/a	n/a	CCB	100.000	-0.001		-0.001	1	<MDL	<MDL	
			100.000				1			
			100.000				1			
			100.000				1			
			100.000				1			
			100.000				1			

SKS 9/17/09

P&D SUBMITTAL DECEMBER 21, 2010 REVISION 1

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

P&B SUBMITTAL DECEMBER 21, 2010

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

REVISION 1

9/14/2009 10:50:45 AM

Lot No., Due Date: J9H170167,J9H170172,J9H170170,J9H170171; 09/24/2009

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 9240307; RGAMLEPS Gamma by LEPS

SDG, Matrix: W05708; 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 John Norton **Date** 9-14-9

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 9240307

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

Comments on any "No" response: _____

Second Level Review: Jodie G Date: 9/21/09

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

TestAmerica THE LEADER IN ENVIRONMENTAL TESTING

SUBMITTAL Data Review/Verification Checklist DECEMBER 21, 2010 REVISION 1

RADIOCHEMISTRY, First Level Review

9/8/2009 4:28:34 PM

Lot No., Due Date: J9H170169; 09/24/2009

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 9240308; RTC99 Tc-99 by LSC

SDG, Matrix: W05708; 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 [signature] **Date** 9-8-9

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 9240308

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

Comments on any "No" response: _____

Second Level Review: Jodie G Date: 9/21/09

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

TestAmerica THE LEADER IN ENVIRONMENTAL TESTING

SUBMITTAL Data Review/Verification Checklist DECEMBER 21, 2010 REVISION 1

RADIOCHEMISTRY, First Level Review

9/8/2009 4:26:17 PM

Lot No., Due Date: J9H170173; 09/24/2009

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 9240309; RSE79 Se-79 by LSC

SDG, Matrix: W05708; 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 John Klostow **Date** 9-8-9

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 9240309

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?	✓		

V.C 9/21/09

Comments on any "No" response: _____

Second Level Review: Jodie C. Date: 9/21/09

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Richland Laboratory
Data Review Check List
Hexavalent Chromium

Batch Number(s): **9229296**
Lab Sample Numbers or SDG: WD5708 J9H140249
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:
The samples were cloudy so they were then centrifuged and it became clear. Once the 10% sulfuric acid was added, they became a little bit cloudy again. The MS and MSD recovery were low at 18.12%. Suspect that there was a matrix effect with the samples.

Analyst: [signature] Date: 8/17/09
Second-Level Review: SSeger Date: 9/17/09

Clouseau Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-14851**
NCM Initiated By: LIEM DINH
Date Opened: 08/17/2009
Date Closed:

Classification: **Anomaly**
Status: **PMREVIEW**
Production Area: Classical Chemistry
Tests: 7196A
Lot #'s (Sample #'s): J9H140249 (1,2),
QC Batches: 9229296,

Nonconformance: QC data exceeded criteria
Subcategory: MS/MSD accuracy and/or precision out of control

Problem Description / Root Cause

Name	Date	Description
LIEM DINH	08/17/2009	The samples were cloudy so they were then centrifuged and it became clear. Once the 10% sulfuric acid was added, they became a little bit cloudy again. The MS and MSD recovery were low at 18.12%. Suspect that there was a matrix effect with the samples.
Liem Dinhl	08/17/2009	The samples were cloudy so they were then centrifuged and it became clear. Once the 10% sulfuric acid was added, they became a little bit cloudy again. The MS and MSD recovery were low at 18.12%. Suspect that there was a matrix effect with the samples.

Corrective Action

Name	Date	Corrective Action
LIEM DINH	08/17/2009	Report Data
Liem Dinhl	08/17/2009	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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Richland Laboratory
Data Review Check List
Hexavalent Chromium

Batch Number(s): **9225437**
Lab Sample Numbers or SDG: J9H130313 WQ5708
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:

Analyst: DJ Date: 8/13/09

Second-Level Review: S Segu Date: 9/17/09

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Richland Laboratory
Data Review Check List
Hexavalent Chromium

Batch Number(s): **9225313**
Lab Sample Numbers or SDG: J9H120311 WQ5708
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:

Analyst: [signature] Date: 8/13/09

Second-Level Review: [signature] Date: 9/7/09

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Richland Laboratory
Data Review Check List
Hexavalent Chromium

Batch Number(s): **9225312**
Lab Sample Numbers or SDG: J9H120303 W05708
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:

Analyst: [signature] Date: 8/13/09

Second-Level Review: Seger Date: 9/17/09

CHPRC WO 5708
J9H120303
Due 9/11/09

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I09-050-122

Collector: AR McIntyre	Contact/Requester: Dana Widrig	Telephone No.: 509-376-2858 MSIN FAX
SAF No.: I09-050	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: 100HR3IAM(1/2), AUGUST 2009	~~HNF-N-506~~ 21165	Ice Chest No.: GWS-001 Temp.
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.

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

SPECIAL INSTRUCTIONS Hold Time — Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B215Y4 (F)		W	8/12/09	1135	1x500-mL aG	7196_CR6: Hexavalent Chromium (1) LH298	24 Hours	Cool~4C
B215Y5		W	8/12/09		1x500-mL aG	7196_CR6: Hexavalent Chromium (1) LH299	24 Hours	Cool~4C
B215Y5		W	8/12/09		1x20-mL P	Activity Scan	6 Months	None

N/A 8/12/09

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
AR McIntyre	AR McIntyre	AUG 12 2009 815		ANGEL TALK	AUG 12 2009 2:15PM
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

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

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

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P&D SUBMITTAL DECEMBER 21, 2010 REVISION 1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: PGW 08/12/09 @ 2:15 pm GM Screen Results .04

Client: PGW SDG #: W05708 NA [ ] SAF #: I09-050 NA [ ]

Work Order Number: J9H120303 Chain of Custody # I09-050-122

Shipping Container ID: GWS-001 Air Bill # N/A

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain of Custody record present? Yes [✓] No [ ]
4. Cooler temperature: 4°C NA [ ] 5. Vermiculite/packing materials is NA [ ] Wet [✓] Dry [ ]
6. Number of samples in shipping container: 2
7. Sample holding times exceeded? NA [ ] ~~Yes [✓]~~ No [✓] SKS 8/17/09
8. Samples have:
   ✓ tape
   ✓ custody seals
   ____ hazard labels
   ✓ appropriate samples labels
9. Samples are:
   ✓ in good condition
   ____ broken
   ____ leaking
   ____ have air bubbles
   (Only for samples requiring head space)
10. Sample pH taken? NA [✓] pH<2 [ ] pH>2 [ ] pH>9 [ ] Amount of HNO3 Added ____ (Cr+6)
11. Sample Location, Sample Collector Listed? * Yes [X] ~~No [✓]~~ SKS 8/17/09
    *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: Angel Garcia Date: 08/12/09 Wed

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. 8, 3/09

TESTAMERICA

CHPRC WO5708 J9H120311 Due 9/11/09

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I09-045-71

Page 1 of 1

Collector: FM Hall CHPRC	Contact/Requester: Dana Widrig	Telephone No.: 509-376-2858 MSIN FAX
SAF No.: I09-045	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: 100HR3IAM(1/2), JULY 2009	HNF-N-506-22172	Ice Chest No. Temp.
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.

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

SPECIAL INSTRUCTIONS Hold Time
100 Area Generator Knowledge Information Form applies.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B20WP2 (F)		W	8-12-09	1303	1x500-mL aG	7196_CR6: Hexavalent Chromium (1) LH3A5	24 Hours	Cool~4C
B20WP3		W	↓	↓	1x500-mL aG	7196_CR6: Hexavalent Chromium (1) LH3DU	24 Hours	Cool~4C
B20WP3		W	↓	↓	1x20-mL P	Activity Scan	6 Months	None

45

8-12-09

Relinquished By	Received By
FM Hall CHPRC Print Sign Date/Time AUG 12 2009 1335	AR Mathews Print Sign Date/Time AUG 12 2009 1335
AR Mathews Date/Time 8/12/09 215	Received By TALR Date/Time 08/12/09 215
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

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

P&D SUBMITTAL DECEMBER 21, 2010 REVISION 1

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 08/12/09@2:15pm GM Screen Results .04

Client: CHPRC SDG #: W05708 NA [ ] SAF #: T09-045 NA [ ]

Work Order Number: J9H120311 Chain of Custody # T09-04571

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

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain of Custody record present? Yes [✓] No [ ]
4. Cooler temperature: 4°C NA [ ] 5. Vermiculite/packing materials is NA [ ] Wet [✓] Dry [ ]
6. Number of samples in shipping container: 2
7. Sample holding times exceeded? NA [ ] Yes [✓] No [✓] SKS 8/17/09 AB 8/12/09 NO is correct Response SKS 8/17/09
8. Samples have:
   ✓ tape
   ✓ custody seals
   ___ hazard labels
   ✓ appropriate samples labels
9. Samples are:
   ✓ in good condition
   ___ broken
   ___ leaking
   ___ have air bubbles
   (Only for samples requiring head space)
10. Sample pH taken? NA [✓] pH<2 [ ] pH>2 [ ] pH>9 [ ] Amount of HNO3 Added ___ (Cr+6)
11. Sample Location, Sample Collector Listed? * Yes [X] ~~No [✓]~~ SKS 8/17/09
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers): ___

Sample Custodian [signature] Date: 08/12/09 WED

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. 8, 3/09

TESTAMERICA

CHPRC W05708
J9H130313
Due 9/11/09

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I09-055-48

Collector: RT Sickle CHPRC	Contact/Requester: Dana Widrig	Telephone No.: 509-376-2858 MSIN FAX
SAF No.: I09-055	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: ISRM, AUGUST 2009		Ice Chest No.: GW5-00 Temp.
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: ~~HNF-N-506~~ 21166 Govt. Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

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

SPECIAL INSTRUCTIONS · Hold Time
100 Area Generator Knowledge Information Form applies.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B218B2 (F)		W	8/13/09	0831	1x500-mL aG	7196_CR6: Hexavalent Chromium (1) LH5H6	24 Hours	Cool~4C
B218B3		W	↓	↓	1x500-mL aG	7196_CR6: Hexavalent Chromium (1) LH5HW	24 Hours	Cool~4C
B218B3		W	↓	↓	1x20-mL P	Activity Scan	6 Months	None

N/A 8/13/09 AW

Relinquished By	Received By
Print: RT Sickle CHPRC Sign: Date/Time: AUG 13 2009 1000	Print: KB Hulse Sign: Date/Time: AUG 13 2009 1000
Relinquished By: KB Hulse 8-13-09 Date/Time: 1200	Received By: Tabor 8/13/09 Date/Time: 1200
Relinquished By: Date/Time:	Received By: Date/Time:
Relinquished By: Date/Time:	Received By: Date/Time:

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liquid	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

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

P&D SUBMITTAL DECEMBER 21, 2010 REVISION 1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 08·13·09 @ 12:00 pm GM Screen Results .06

Client: PGW SDG #: WD5708 NA [ ] SAF #: I09-055 NA [ ]

Work Order Number: J9H130313 Chain of Custody # I09-055-U8

Shipping Container ID: GWS-001 Air Bill # N/A

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain of Custody record present? Yes [✓] No [ ]
4. Cooler temperature: 4°C NA [ ] 5. Vermiculite/packing materials is NA [ ] Wet [✓] Dry [ ]
6. Number of samples in shipping container: 2
7. Sample holding times exceeded? NA [ ] Yes [ ] No [✓]
8. Samples have:
   ✓ tape
   ✓ custody seals
   ___ hazard labels
   ✓ appropriate samples labels
9. Samples are:
   ✓ in good condition
   ___ broken
   ___ leaking
   ___ have air bubbles
   (Only for samples requiring head space)
10. Sample pH taken? NA [✓] pH<2 [ ] pH>2 [ ] pH>9 [ ] Amount of HNO3 Added ___
    (Cr+6)
11. Sample Location, Sample Collector Listed? * Yes [✓] No [ ]
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers): ___

Sample Custodian: [signature] Date: 08/13/09 12pm Thres.

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. 8, 3/09

TESTAMERICA

CHPRC WO 5708 J9H1 WO2L19 Due 9/13/09

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I09-051-8

Page 1 of 1

Collector: RD Ellingsworth CHPRC	Contact/Requester: Dana Widrig	Telephone No.: 509-376-2858 MSIN FAX
SAF No.: I09-051	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: 100KR4IAM(1/2), AUGUST 2009	HNF-N-506-22174	Ice Chest No.: GWS-037 Temp.
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

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

SPECIAL INSTRUCTIONS Hold Time
100 Area Generator Knowledge Information Form applies.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B21763 (F)		W	8-14-09	0913	1x500-mL aG	7196_CR6: Hexavalent Chromium (1) LH7HL	24 Hours	Cool~4C
B21764		W			1x500-mL aG	7196_CR6: Hexavalent Chromium (1) LH7HT	24 Hours	Cool~4C
B21764		W			1x20-mL P	Activity Scan	6 Months	None

8-14-09

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
RD Ellingsworth CHPRC			AUG 14 2009 0930	KB Hulse CHPRC			AUG 14 2009 0930
KB Hulse CHPRC			8-14-09 1135			TALR	8/14/09 1135
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

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

P&D SUBMITTAL

DECEMBER 21, 2010

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: Aug.14.2009@10AM GM Screen Results .03

Client: PGW SDG #: W05708 NA [ ] SAF #: I09-051 NA [ ]

Work Order Number: J9H140219 Chain of Custody # I09-0518

Shipping Container ID: GWS-037 Air Bill # N/A

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain of Custody record present? Yes [✓] No [ ]
4. Cooler temperature: 4°C NA [ ] 5.Vermiculite/packing materials is NA [ ] Wet [✓] Dry [ ]
6. Number of samples in shipping container: 2 @ 3 Containers - 1@20mL 2@500mL
7. Sample holding times exceeded? NA [ ] Yes [ ] No [✓]
8. Samples have:
   ✓ tape
   ✓ custody seals
   ___ hazard labels
   ✓ appropriate samples labels
9. Samples are:
   ✓ in good condition
   ___ broken
   ___ leaking
   ___ have air bubbles
   (Only for samples requiring head space)

(Cr+6)

10. Sample pH taken? NA [✓] pH<2 [ ] pH>2 [ ] pH>9 [ ] Amount of HNO3 Added ___
11. Sample Location, Sample Collector Listed? * Yes [✓] No [ ]
    *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: Angel Garcia Date: Aug.14.2009 FRI@10AM

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. 8, 3/09

TESTAMERICA

CHPRC	WO 5708 JA#70167	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I09-042-40
			Page 1 of 1

Collector RT Sickle CHPRC	Contact/Requester Dana Widrig	Telephone No. 509-376-2858 MSIN FAX
SAF No. I09-042	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title 2UP1, JUNE 2009	HNF-N-506-21167	Ice Chest No. GWS-001 Temp.
Shipped To (Lab) TestAmerica Incorporated, Richland	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol SURV	Priority: 45 Days	Offsite Property No.

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

SPECIAL INSTRUCTIONS Hold Time
200 Area Generator Knowledge Information Form applies.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B20MY6		W	8/14/09	1100	1x20-mL P	Activity Scan LH933	6 Months	None
B20MY6		W	8/14/09	1100	2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	6 Months	None

N/A 8/14/09 NH

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
RT Sickle CHPRC			1345 AUG 14 2009	SSU #1			1345 AUG 14 2009
SSU #1			1400 AUG 14 2009	SE Hamaker CHPRC			1400 AUG 14 2009
SE Hamaker CHPRC			1455 AUG 14 2009				1435 AUG 14 2009
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

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

P&D SUBMITTAL

DECEMBER 21, 2010

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: Aug 14 · 09 @ 10 AM GM Screen Results .03

Client: PGW SDG #: W05108 NA [ ] SAF #: I09042 NA [ ]

Work Order Number: J9H170167 Chain of Custody # I09-042-40

Shipping Container ID: GWS-001 Air Bill # N/A

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain of Custody record present? Yes [✓] No [ ]
4. Cooler temperature: _____ NA [✓] 5. Vermiculite/packing materials is NA [✓] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 1 @ 3 Containers 2 @ 4000 mL 1 @ 20 mL
7. Sample holding times exceeded? NA [ ] Yes [ ] No [✓]
8. Samples have:
   ✓ tape
   ✓ custody seals
   ____ hazard labels
   ✓ appropriate samples labels
9. Samples are:
   ✓ in good condition
   ____ broken
   ____ leaking
   ____ have air bubbles
   (Only for samples requiring head space)
10. Sample pH taken? NA [ ] pH<2 [ ] pH>2 [✓] pH>9 [ ] Amount of HNO3 Added _____
11. Sample Location, Sample Collector Listed? * Yes [✓] No [ ]
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers): _____

Sample Custodian: [signature] Date: Aug 14 · 2009 · FRI @ 10:00 AM

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. 8, 3/09

CHPRC W05708 J9H170169

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S09-008-32

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Collector: RA Shepard CHPRC	Contact/Requester: Dana Widrig	Telephone No.: 509-376-2858 MSIN FAX
SAF No.: S09-008	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: SURV, AUGUST 2009	HNF-N-506-24158	Ice Chest No.: GWS-001 Temp.
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol: SURV	Priority: 30 Days PRIORITY	Offsite Property No.

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

SPECIAL INSTRUCTIONS Hold Time
Site-Wide Generator Knowledge Information Form applies.
Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B21943		W	8/14/09	1146	1x20-mL P	Activity Scan LH9UE	6 Months	None
B21943		W	↓	↓	3x1000-mL G/P	TC99_SEP_LSC: Tc-99 (1)	6 Months	HCl to pH <2

KEH 8/14/09

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
RA Shepard CHPRC			1245 AUG 14 2009	SSU #1			1245 AUG 14 2009
SSU #1			1400 AUG 14 2009	SE Hamaker CHPRC			1400 AUG 14 2009
SE Hamaker CHPRC			1435 AUG 14 2009	Angel Silva TALR			1235 AUG 14 2009
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

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

TESTAMERICA

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TESTAMERICA

CHPRC W05708 SPH 120169

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S09-008-33

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Collector: RA Shepard CHPRC	Contact/Requester: Dana Widrig	Telephone No.: 509-376-2858 MSIN FAX
SAF No.: S09-008	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: SURV, AUGUST 2009	HNF-N-506- 24 / 58	Ice Chest No. GWS-001 Temp.
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol: SURV	Priority: 30 Days PRIORITY	Offsite Property No.

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

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B21944		W	8/14/09	1146	1x20-mL P	Activity Scan LH9LF	6 Months	None
B21944		W	↓	↓	3x1000-mL G/P	TC99_SEP_LSC: Tc-99 (1)	6 Months	HCl to pH <2

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Relinquished By	Date/Time	Received By	Date/Time
RA Shepard CHPRC	AUG 14 2009 1245	SSU #1	AUG 14 2009 1245
SSU #1	AUG 14 2009 1400	SE Hamaker CHPRC	AUG 14 2009 1400
SE Hamaker CHPRC	AUG 14 2009 1435		AUG 14 2009 1435
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

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

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 08/13/09@10 AM GM Screen Results .03

Client: PGW SDG #: W05708 NA [ ] SAF #: S09-008 NA [ ]

Work Order Number: J9H170169 Chain of Custody # S09-008-32, S09-008-33

Shipping Container ID: GWS-001 Air Bill # N/A

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain of Custody record present? Yes [✓] No [ ]
4. Cooler temperature:_____ NA [✓] 5. Vermiculite/packing materials is NA [✓] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 2 @ 8 Containers 6@1000 mL 2@20mL
7. Sample holding times exceeded? NA [ ] Yes [ ] No [✓]
8. Samples have:
   ✓ tape
   ✓ custody seals
   ___ hazard labels
   ✓ appropriate samples labels
9. Samples are:
   ✓ in good condition
   ___ broken
   ___ leaking
   ___ have air bubbles
   (Only for samples requiring head space)
10. Sample pH taken? NA [ ] pH<2 [✓] ~~pH>2 [✓]~~ pH>9 [ ] Amount of HNO3 Added 2mL/L
    SKS 8/18/09
11. Sample Location, Sample Collector Listed? * Yes [✓] No [ ]
    *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: Eng J Garcia Jr Date: 08/14/09 FRI @10AM

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on_____ by_____ Person contacted_____

[ ] No action necessary; process as is.

Project Manager_____ Date_____

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CHPRC WOS708
JAH170120

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I09-053-100

Page 1 of 1

Collector: RT Sickle	Contact/Requester: Dana Widrig	Telephone No.: 509-376-2858 MSIN FAX
SAF No.: CHPRC I09-053	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: 2UP1, AUGUST 2009	HNF-N-506-2167	Ice Chest No.: GWS-001 Temp.
Shipped To (Lab): TestAmerica Incorporated Richland	Method of Shipment: Govt Vehicle	Bill of Lading/Air Bill No.
Protocol: SURV	Priority: 30 Days PRIORITY	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)
HAD TURBIDITY PROBLEMS, FILTERED ALL SAMPLES. DH

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
200 Area Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B217W0	L4945	W	8/14/09	1247	1x20-mL P	Activity Scan FILTERED	6 Months	None
B217W0		W	8/14/09	1247	2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	6 Months	None

N/A 8/14/09 DH

Relinquished By	Date/Time	Received By	Date/Time
RT Sickle CHPRC	AUG 14 2009 1345	SSU #1	AUG 14 2009 1345
SSU #1	1400 AUG 14 2009	SE Hamaker CHPRC	1400 AUG 14 2009
SE Hamaker CHPRC	1435 AUG 14 2009	Angel Garcia TAR	235 AUG 14 2009

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

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

P&D SUBMITTAL DECEMBER 21, 2010 REVISION 1

TESTAMERICA

CHPRC W05708 J9H170170

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I09-053-106

Page 1 of 1

Collector: RT Sickle CHPRC	Contact/Requester: Dana Widrig	Telephone No.: 509-376-2858 MSIN FAX
SAF No.: I09-053	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: 2UP1, AUGUST 2009	~~HNF-N-506~~ 21167	Ice Chest No.: GWS-001 Temp.
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol: SURV	Priority: 30 Days **PRIORITY**	Offsite Property No.

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

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
200 Area Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B217W3		W	8/14/09	0927	1x20-mL P	Activity Scan LH9U7	6 Months	None
B217W3		W	8/14/09	0927	2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	6 Months	None

N/A 8/14/09 DW

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
RT Sickle CHPRC			AUG 14 2009 1345	SSU #1			AUG 14 2009 1345
SSU #1			1400 AUG 14 2009	SE Hamaker CHPRC			1400 AUG 14 2009
SE Hamaker CHPRC			1435 AUG 14 2009				1435 AUG 14 2009
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liquid	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

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

P&D SUBMITTAL DECEMBER 21, 2010 REVISION 1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 08/14/09@10AM GM Screen Results .04

Client: PGW SDG #: W05708 NA [ ] SAF #: I09-053 NA [ ]

Work Order Number: 9H170170 Chain of Custody # I09-053-100, ~~I09-053-106~~ I09-053-106 SKS 8/18/09

Shipping Container ID: GWS-001 Air Bill # N/A

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain of Custody record present? Yes [✓] No [ ]
4. Cooler temperature:_____ NA [✓] 5.Vermiculite/packing materials is NA [✓] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 2@ 6 Containers 4@4000mL 2@20mL
7. Sample holding times exceeded? NA [ ] Yes [ ] No [✓]
8. Samples have:
   ✓ tape
   ✓ custody seals
   ___ hazard labels
   ✓ appropriate samples labels
9. Samples are:
   ✓ in good condition
   ___ broken
   ___ leaking
   ___ have air bubbles
   (Only for samples requiring head space)
10. Sample pH taken? NA [ ] pH<2 [ ] pH>2 [✓] pH>9 [ ] Amount of HNO3 Added_____
11. Sample Location, Sample Collector Listed? * Yes [✓] No [ ]
    *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: Angel Garcia Date: 08/14/09 FRI@10 AM

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on_____ by_____ Person contacted_____

[ ] No action necessary; process as is.

Project Manager_____ Date_____

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CHPRC W058708 J9H170171

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I09-053-10

Page 1 of 1

Collector: KJ Young	Contact/Requester: Dana Widrig	Telephone No.: 509-376-2858 MSIN FAX
SAF No.: I09-053	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: 2UP1, AUGUST 2009	HNF-N-506- 24 / 57	Ice Chest No.: GWS-112 Temp.
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: SURV	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

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

SPECIAL INSTRUCTIONS Hold Time
200 Area Generator Knowledge Information Form applies.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B217M6		W	8/13/09	1035	1x20-mL P	Activity Scan LH9LL	6 Months	None
B217M6		W	↓	↓	2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	6 Months	None

KJY 8/13/09

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
KJ Young			AUG 13 2009 1300	S.S.U #1			AUG 13 2009
SSU #1			8-14-09 1000	KB Huise CHPRC			8-14-09 1000
KB Huise CHPRC			8-14-09 1135				8/14/09 1135

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

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

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CHPRC W05708 J9H170171

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I09-053-22

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Collector: KJ Young	Contact/Requester: Dana Widrig	Telephone No.: 509-376-2858 MSIN FAX
SAF No.: I09-053	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: 2UP1, AUGUST 2009	HNF-N-506-24 / 57	Ice Chest No.: GWS-112 Temp.
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: SURV	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

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

SPECIAL INSTRUCTIONS Hold Time
200 Area Generator Knowledge Information Form applies.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B217N1		W	8/13/09	0933	1x20-mL P	Activity Scan LH9LH	6 Months	None
B217N1		W	↓	↓	2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	6 Months	None

PEH 8/13/09

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
KJ Young	1300 AUG 13 2009	S.S.U #1	1300 AUG 13 2009
SSU #1	8-14-09 1000	KB Hulse CHPRC	8-14-09 1000
KB Hulse CHPRC	8-14-09 1135	Tabb	8-14-09 1135

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liquid	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

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

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TESTAMERICA

CHPRC WO 5708 J9H170171

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I09-053-23

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Collector: KJ Young	Contact/Requester: Dana Widrig	Telephone No.: 509-376-2858 MSIN FAX
SAF No.: I09-053	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: 2UP1, AUGUST 2009	HNF-N-506- 24157	Ice Chest No.: GWS-112 Temp.
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: SURV	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

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

SPECIAL INSTRUCTIONS · Hold Time
200 Area Generator Knowledge Information Form applies.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B217N2		W	8/13/09	0800	1x20-mL P	Activity Scan LH94P	6 Months	None
B217N2		W	8/13/09	↓	2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1)	6 Months	None

TAR 8/13/09

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
KJ Young	[signature]	AUG 13 2009 1300	S.S.U #1		AUG 13 2009 1300
SSU #1		8-14-09 1000	KB Hulse CHPRC	KB Hulse	8-14-09 1000
KB Hulse CHPRC	KB Hulse	8-14-09 1135	[signature]	TAR	8/14/09 1135
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

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

P&D SUBMITTAL DECEMBER 21, 2010 REVISION 1

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: Aug 14.09 @ 10 AM GM Screen Results .02

Client: PGW SDG #: WO5708 NA [ ] SAF #: I09-053 NA [ ]

Work Order Number: J9H170171 Chain of Custody # I09-053-10, ~~I09-053-21~~ I09-053-23.

Shipping Container ID: G-WS-112 Air Bill # ~~I09-053-22~~ SICS 8/18/09

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain of Custody record present? Yes [✓] No [ ]
4. Cooler temperature:_____ NA [✓] 5. Vermiculite/packing materials is NA [✓] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 3 @ 9 containers 3 @ 20 mL 6 @ 4000 mL
7. Sample holding times exceeded? NA [ ] Yes [ ] No [✓]
8. Samples have:
   ✓ tape
   ✓ custody seals
   ____ hazard labels
   ✓ appropriate samples labels
9. Samples are:
   ✓ in good condition
   ____ broken
   ____ leaking
   ____ have air bubbles
   (Only for samples requiring head space)
10. Sample pH taken? NA [ ] pH<2 [ ] pH>2 [✓] pH>9 [ ] Amount of HNO3 Added_____
11. Sample Location, Sample Collector Listed? * Yes [✓] No [ ]
    *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: Greg Garcia Date: Aug. 14.09 FRI @ 10 AM

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. 8, 3/09

TESTAMERICA

CHPRC W05708
JGH 17012

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W09-007-94

Page 1 of 1

Collector: R. Ellingsworth CHPRC	Contact/Requester: Dana Widrig	Telephone No.: 376-2858 MSIN FAX
SAF No.: W09-007	Sampling Origin	Purchase Order/Charge Code
Project Title: RCRA JULY 2009	HNF-N-506-23 1 50	Ice Chest No.: GWS-037 Temp.
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: RCRA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

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

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W 09 SAFs into one SDG, not to exceed SDG closure of 14 days.WSCF: Batch all GW samples submitted into one SDG, daily closure.FY08 and FY09 samples cannot be in the same SDG.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B210F9		W	8/13/09	0838	2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1) LW4LIV	6 Months	None
B210F9		W	8/13/09	0838	1x20-mL P	Activity Scan	6 Months	None

NP 8/13/09

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R. Ellingsworth			1400 AUG 13 2009	SSU 1			1400 AUG 13 2009
SSU 1			8-14-09 1000	KB Huise CHPRC			8-14-09 1000
KB Huise CHPRC			8-14-09 1135	TAER			8/14/09 1135

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

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

P&D SUBMITTAL DECEMBER 21, 2010 REVISION 1

TESTAMERICA

CHPRC W05708 J9H170172

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W09-007-104

Page 1 of 1

Collector: ~~RD Ellingsworth~~ CHPRC	Contact/Requester: Dana Widrig	Telephone No.: 376-2858 MSIN FAX
SAF No.: W09-007	Sampling Origin	Purchase Order/Charge Code
Project Title: RCRA, JULY 2009	HNF-N-506- 3150	Ice Chest No. GWS-037 Temp.
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No. N/A
Protocol: RCRA	Priority: 30 Days PRIORITY	Offsite Property No. N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

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

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W 09 SAFs into one SDG, not to exceed SDG closure of 14 days.WSCF: Batch all GW samples submitted into one SDG, daily closure.FY08 and FY09 samples cannot be in the same SDG.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B210H6		W	8/13/09	0943	2x4000-mL G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1) LH940	6 Months	None
B210H6		W	8/13/09	0943	1x20-mL P	Activity Scan	6 Months	None

8/13/09

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
RD Ellingsworth CHPRC			1400 AUG 13 2009	SSW 1			1400 AUG 13 2009
SSW 1			8-14-09 1000	KB Hulse CHPRC			8-14-09 1000
KB Hulse CHPRC			8-14-09 1135				8/14/09 1135
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

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

P&D SUBMITTAL

DECEMBER 21, 2010

REVISION 1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: Aug 14.09@10AM GM Screen Results .04

Client: PGW SDG #: W05708 NA [ ] SAF #: W09-007 NA [ ]

Work Order Number: J9H170172 Chain of Custody # W09-00794. W09-007-104

Shipping Container ID: GWS-037 Air Bill # N/A

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain of Custody record present? Yes [✓] No [ ]
4. Cooler temperature: 21.C NA [ ] 5.Vermiculite/packing materials is NA [ ] Wet [ ] Dry [✓]
6. Number of samples in shipping container: 2 @ 6 containers 4@4000-mL G/P 2@20mL
7. Sample holding times exceeded? NA [ ] Yes [ ] No [✓]
8. Samples have:
   ✓ tape
   ✓ custody seals
   ___ hazard labels
   ✓ appropriate samples labels
9. Samples are:
   ✓ in good condition
   ___ broken
   ___ leaking
   ___ have air bubbles
   (Only for samples requiring head space)
10. Sample pH taken? NA [ ] pH<2 [ ] pH>2 [✓] pH>9 [ ] Amount of HNO3 Added ___
11. Sample Location, Sample Collector Listed? * Yes [✓] No [ ]
    *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: Angel Garcia Jr Date: 08/14/09 FRI 10AM

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. 8, 3/09

TESTAMERICA

CHPRC W05708 J9H170173

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W09-007-204

Page 1 of 1

Collector: KJ Young	Contact/Requester: Dana Widrig	Telephone No.: 376-2858 MSIN FAX
SAF No.: W09-007	Sampling Origin	Purchase Order/Charge Code
Project Title: RCRA, JULY 2009	HNF-N-506-24 157	Ice Chest No.: GLSS-112 Temp.
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: RCRA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

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

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W 09 SAFs into one SDG, not to exceed SDG closure of 14 days. WSCF: Batch all GW samples submitted into one SDG, daily closure. FY08 and FY09 samples cannot be in the same SDG.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B210N5		W	8/13/09	1130	1x20-mL P	Activity Scan LH941	6 Months	None
B210N5		W	↓	↓	2x1000-mL G/P	Selenium-79	6 Months	HNO3 to pH <2

KEH 8/13/09

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
KJ Young			AUG 13 2009 1300	S.S.U #1			AUG 13 2009 1300
SSU #1			8-14-09 1000	KB Hulse CHPRC			8-14-09 1000
KB Hulse CHPRC			8-14-09 1135	TAR			8/14/09 1135

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

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

P&D SUBMITTAL DECEMBER 21, 2010 REVISION 1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 08/14/09@10:00 LMA 8/17/09 GM Screen Results .03

Client: PGW SDG #: W075708 NA [ ] SAF #: _____ NA [ ]

Work Order Number: J9H70173 Chain of Custody # W09-007-204

Shipping Container ID: GWS-112 Air Bill # N/A

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain of Custody record present? Yes [✓] No [ ]
4. Cooler temperature: _____ NA [✓] 5. Vermiculite/packing materials is NA [✓] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 1@3 containers 1@20mL 2@1000mL
7. Sample holding times exceeded? NA [ ] Yes [ ] No [✓]
8. Samples have:
   ✓ tape
   ✓ custody seals
   ____ hazard labels
   ✓ appropriate samples labels
9. Samples are:
   ✓ in good condition
   ____ broken
   ____ leaking
   ____ have air bubbles
   (Only for samples requiring head space)
10. Sample pH taken? NA [ ] pH<2 [✓] pH>2 [ ] pH>9 [ ] Amount of HNO3 Added 2mL/L
11. Sample Location, Sample Collector Listed? * Yes [✓] No [ ]
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers): _____

Sample Custodian: [signature] Date: Aug. 14.09 FKT@10AM

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

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TESTAMERICA

8/31/2009 1:11:43 PM

Sample Preparation/Analysis

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National Lab

AnalyDueDate: 09/24/2009

BN I-129 Prp/Sep GAM002
TB Gamma by LEPD
5I CLIENT: HANFORD

Balance Id:1120482733

Pipet #: _____

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: ,Barcotl

Batch: 9240307 **WATER** **pCi/L** **PM, Quote: SS , 57671**
SEQ Batch, Test: None

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments
1 LH933-1-AA J9H170167-1-SAMP 08/14/2009 11:00		3888.50g,in AmtRec: 2X4LP,VIAL20	ITA8640 07/31/09 #Containers: 3		38.4	200	1045	L4	9/11/09 S Scr: Alpha: 0.00E+00 uCi/Sa	Beta: 0.00E+00 uCi/Sa
2 LH933-1-AC-X J9H170167-1-DUP 08/14/2009 11:00		3905.30g,in AmtRec: 2X4LP,VIAL20	ITA8641 07/31/09 #Containers: 3		36.7		1045	L5	Scr: Alpha: 0.00E+00 uCi/Sa	Beta: 0.00E+00 uCi/Sa
3 LH94J-1-AA J9H170170-1-SAMP 08/14/2009 12:47		3884.60g,in AmtRec: 2X4LP,VIAL20	ITA8642 07/31/09 #Containers: 3		32.8		L4	1608	9/11/09 LC Scr: Alpha: 0.00E+00 uCi/Sa	Beta: 0.00E+00 uCi/Sa
4 LH94K-1-AA J9H170170-2-SAMP 08/14/2009 09:27		3876.50g,in AmtRec: 2X4LP,VIAL20	ITA8643 07/31/09 #Containers: 3		37.0		L5	1610	Scr: Alpha: 0.00E+00 uCi/Sa	Beta: 0.00E+00 uCi/Sa
5 LH94L-1-AA J9H170171-1-SAMP 08/13/2009 10:35		3942.70g,in AmtRec: 2X4LP,VIAL20	ITA8644 07/31/09 #Containers: 3		34.8		L4	0416	9/10/09 S Scr: Alpha: 0.00E+00 uCi/Sa	Beta: 0.00E+00 uCi/Sa
6 LH94N-1-AA J9H170171-2-SAMP 08/13/2009 09:33		3927.70g,in AmtRec: 2X4LP,VIAL20	ITA8645 07/31/09 #Containers: 3		36.8		L6	0416	Scr: Alpha: 0.00E+00 uCi/Sa	Beta: 0.00E+00 uCi/Sa
7 LH94P-1-AA J9H170171-3-SAMP 08/13/2009 08:00		3759.90g,in AmtRec: 2X4LP,VIAL20	ITA8646 07/31/09 #Containers: 3		35.1		L4	0738	9/10/09 Scr: Alpha: 0.00E+00 uCi/Sa	Beta: 0.00E+00 uCi/Sa

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TESTAMERICA

8/31/2009 1:11:44 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National Lab

BN I-129 Prp/Sep GAM002
TB Gamma by LEPD
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/24/2009

Sep1 DT/Tm Tech:

Batch: 9240307 **WATER** **pCi/L** **PM, Quote: SS , 57671**

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,Barcotl

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
8 LH94V-1-AA J9H170172-1-SAMP 08/13/2009 08:38		3888.60g,in AmtRec: 2X4LP,VIAL20	ITA8647 07/31/09 #Containers: 3		35.8	200	L5	0738	9/10/09	
								Scr:	Alpha: 0.00E+00 uCi/Sa	Beta: 0.00E+00 uCi/Sa
9 LH940-1-AA J9H170172-2-SAMP 08/13/2009 09:43		3853.40g,in AmtRec: 2X4LP,VIAL20	ITA8648 07/31/09 #Containers: 3		35.5		L4	1101		
								Scr:	Alpha: 0.00E+00 uCi/Sa	Beta: 0.00E+00 uCi/Sa
10 LJ0XP-1-AA-B J9H280000-307-BLK 08/14/2009 11:00		3969.00g,in AmtRec:	ITA8649 07/31/09 #Containers: 1		35.4		L5	1101		
								Scr:	Alpha:	Beta:
11 LJ0XP-1-AC-C J9H280000-307-LCS 08/14/2009 11:00		3980.10g,in AmtRec:	ISD0953 05/05/09 #Containers: 1		46.9		L4	1426	9/12/09	
								Scr:	Alpha:	Beta:

Comments: Samples reduced due to ISV IB 8-31-09

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

LH9331AA-SAMP Constituent List:
  I-129       RDL:0.50E+00    pCi/L     LCL:        UCL:        RPD:
LJ0XP1AA-BLK:
  I-129       RDL:0.50E+00    pCi/L     LCL:        UCL:        RPD:
LJ0XP1AC-LCS:
  I-129       RDL:5           pCi/L     LCL:70      UCL:130     RPD:20
LH9331AA-SAMP Calc Info:
    Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```


P&D SUBMITTAL DECEMBER 21, 2010 REVISION 1

8/31/2009 1:11:45 PM

Sample Preparation/Analysis

BN I-129 Prp/Sep GAM002
TB Gamma by LEPD
5I CLIENT: HANFORD

Balance Id:1120482733
Pipet #: _____

AnalyDueDate: 09/24/2009

Sep1 DT/Tm Tech:

Batch: 9240307 pCi/L
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,Barcotl

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

LJ0XP1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LJ0XP1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

9/14/2009 10:50:04 AM

ICOC Fraction Transfer/Status Report

ByDate: 9/14/2008, 9/19/2009, Batch: '9240307', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
9240307						
AC		**Rev1C**	**Barcotl**	8/31/2009 1:11:53 PM		
SC			wagarr	IsBatched	8/31/2009 7:46:19 AM	ICOC_RADCALC v4.8.35
SC			Barcotl	InPrep	8/31/2009 1:11:53 PM	RL-PRP-004 REVISION 0
SC			Barcotl	Prep1C	8/31/2009 1:12:05 PM	RL-PRP-004 REVISION 0
SC			BostedD	Prep2C	9/10/2009 3:04:55 PM	RL-GAM-002 REVISION 0
SC			ClarkR	InCnt1	9/10/2009 3:15:03 PM	RL-CI-007 REVISION 0
SC			ClarkR	CalcC	9/12/2009 3:56:54 PM	RL-CI-007 REVISION 0
SC			nortonj	Rev1C	9/14/2009 10:49:57 AM	RL-DR-001 REV 0
AC			**Barcotl**	8/31/2009 1:12:05 PM		
AC			**BostedD**	9/10/2009 3:04:55 PM		
AC			**ClarkR**	9/10/2009 3:15:03 PM		
AC			**ClarkR**	9/12/2009 3:56:54 PM		
AC			**nortonj**	9/14/2009 10:49:57		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Grp Rec Cnt: 6

ICOCFractions v4.8.36

TESTAMERICA

9/1/2009 6:33:38 AM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National Lab

AM Tc-99 Prp/Sep LSC013
S5 Technetium-99 by Liquid Scint
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/24/2009

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Batch: 9240308 WATER pCi/L
SEQ Batch, Test: None All Tests: 9240308 AMS5,

PM, Quote: SS , 57671

Prep Tech: ,Barcotl

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 LH94E-1-AA J9H170169-1-SAMP 08/14/2009 11:46		125.00g,in AmtRec: 3XLP,VIAL20	#Containers: 4	60		Scr:	Alpha: 0.00E+00 uCi/Sa	Beta: 0.00E+00 uCi/Sa
2 LH94E-1-AC-X J9H170169-1-DUP 08/14/2009 11:46		125.00g,in AmtRec: 3XLP,VIAL20	#Containers: 4			Scr:	Alpha: 0.00E+00 uCi/Sa	Beta: 0.00E+00 uCi/Sa
3 LH94F-1-AA J9H170169-2-SAMP 08/14/2009 11:46		125.00g,in AmtRec: 3XLP,VIAL20	#Containers: 4			Scr:	Alpha: 0.00E+00 uCi/Sa	Beta: 0.00E+00 uCi/Sa
4 LH94F-1-AC-S J9H170169-2-MS 08/14/2009 11:46		125.00g,in AmtRec: 3XLP,VIAL20	TCSG2331 08/26/09,pd 07/01/05,r #Containers: 4			Scr:	Alpha: 0.00E+00 uCi/Sa	Beta: 0.00E+00 uCi/Sa
5 LJ0X2-1-AA-B J9H280000-308-BLK 08/14/2009 11:46		125.00g,in AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
6 LJ0X2-1-AC-C J9H280000-308-LCS 08/14/2009 11:46		125.00g,in AmtRec:	TCSE2315 08/31/09,pd 07/01/05,r #Containers: 1			Scr:	Alpha:	Beta:
7 LJ0X2-1-AD-BN J9H280000-308-IBLK 08/14/2009 11:46		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:

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TESTAMERICA

9/1/2009 6:33:41 AM

Sample Preparation/Analysis

AM Tc-99 Prp/Sep LSC013
S5 Technetium-99 by Liquid Scint
5I CLIENT: HANFORD

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

AnalyDueDate: 09/24/2009

Batch: 9240308 pCi/L
SEQ Batch, Test: None

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

Comments:

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

LH94E1AA-SAMP Constituent List:
Tc-99 RDL:1.50E+01 pCi/L LCL:70 UCL:130 RPD:20
LH94F1AC-MS:

LJ0X21AA-BLK:
Tc-99 RDL:1.50E+01 pCi/L LCL: UCL: RPD:
LJ0X21AC-LCS:
Tc-99 RDL:15 pCi/L LCL:70 UCL:130 RPD:20
LJ0X21AD-IBLK:
Tc-99 RDL:1.50E+01 pCi/L LCL: UCL: RPD:

LH94E1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LH94F1AC-MS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LJ0X21AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LJ0X21AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LJ0X21AD-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

P&D SUBMITTAL DECEMBER 21, 2010 REVISION 1

9/8/2009 2:27:27 PM

ICOC Fraction Transfer/Status Report

ByDate: 9/8/2008, 9/13/2009, Batch: '9240308', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
9240308						
AC		**Rev1C**	**Barcotl**	9/1/2009 6:33:48 AM		
SC			wagarr	IsBatched	8/31/2009 7:46:19 AM	ICOC_RADCALC v4.8.35
SC			Barcotl	InPrep	9/1/2009 6:33:48 AM	RL-PRP-004 REVISION 0
SC			Barcotl	Prep1C	9/1/2009 6:34:03 AM	RL-PRP-004 REVISION 0
SC			JorgesonD	Sep2C	9/3/2009 1:58:00 PM	RL-LSC-013 REVISION 0
SC			ClarkR	InCnt1	9/3/2009 2:02:07 PM	RL-CI-005 REVISION 0
SC			DAWKINSO	CalcC	9/4/2009 4:00:21 PM	RL-CI-005 REVISION 0
SC			nortonj	Rev1C	9/8/2009 2:27:18 PM	RL-DR-001 REV 0
AC			**Barcotl**	9/1/2009 6:34:03 AM		
AC			**JorgesonD**	9/3/2009 1:58:00 PM		
AC			**ClarkR**	9/3/2009 2:02:07 PM		
AC			**DAWKINSO**	9/4/2009 4:00:21 PM		
AC			**nortonj**	9/8/2009 2:27:18 PM		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Grp Rec Cnt: 6

ICOCFractions v4.8.36

TESTAMERICA

8/31/2009 1:26:09 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National Lab

CY Se-79 Prp PRP004, Sep LSC012
TM Selenium-79 by Liquid Scint
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 09/24/2009

Sep1 DT/Tm Tech:

Batch: 9240309 WATER pCi/L

PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,Barcotl

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments
1 LH941-1-AA J9H170173-1-SAMP 08/13/2009 11:35		200.00g,in AmtRec: 2XLP,VIAL20	SETA0729 07/28/09 #Containers: 3		200		Scr:	Alpha: 0.00E+00 uCi/Sa	Beta: 0.00E+00 uCi/Sa
2 LH941-1-AC-X J9H170173-1-DUP 08/13/2009 11:35		200.00g,in AmtRec: 2XLP,VIAL20	SETA0730 07/28/09 #Containers: 3				Scr:	Alpha: 0.00E+00 uCi/Sa	Beta: 0.00E+00 uCi/Sa
3 LJ0X6-1-AA-B J9H280000-309-BLK 08/13/2009 11:35		200.00g,in AmtRec:	SETA0731 07/28/09 #Containers: 1				Scr:	Alpha:	Beta:
4 LJ0X6-1-AC-BN J9H280000-309-IBLK 08/13/2009 11:35		AmtRec:	#Containers: 1				Scr:	Alpha:	Beta:

Comments:

PH<2.0 EB 8-31-09

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

LH9411AA-SAMP Constituent List:

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

LJ0X61AA-BLK:

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

LJ0X61AC-IBLK:

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

LH9411AA-SAMP Calc Info:

8/31/2009 1:26:10 PM

Sample Preparation/Analysis

CY Se-79 Prp PRP004, Sep LSC012
TM Selenium-79 by Liquid Scint
5I CLIENT: HANFORD

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

AnalyDueDate: 09/24/2009

Batch: 9240309 pCi/L
SEQ Batch, Test: None

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

Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LJ0X61AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LJ0X61AC-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

P&D SUBMITTAL DECEMBER 21, 2010 REVISION 1

9/8/2009 2:25:24 PM

ICOC Fraction Transfer/Status Report

ByDate: 9/8/2008, 9/13/2009, Batch: '9240309', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
9240309						
AC		**Rev1C**	**Barcotl**	8/31/2009 1:26:19 PM		
SC			wagarr	IsBatched	8/31/2009 7:46:19 AM	ICOC_RADCALC v4.8.35
SC			Barcotl	InPrep	8/31/2009 1:26:19 PM	RL-PRP-004 REVISION 0
SC			Barcotl	Prep1C	8/31/2009 1:26:29 PM	RL-PRP-004 REVISION 0
SC			JorgesonD	Sep2C	9/3/2009 1:43:16 PM	RL-LSC-012 REVISION 0
SC			ClarkR	InCnt1	9/3/2009 1:45:55 PM	RL-CI-005 REVISION 0
SC			DAWKINSO	CalcC	9/4/2009 4:01:36 PM	RL-CI-005 REVISION 0
SC			nortonj	Rev1C	9/8/2009 2:25:14 PM	RL-DR-001 REV 0
AC			**Barcotl**	8/31/2009 1:26:29 PM		
AC			**JorgesonD**	9/3/2009 1:43:16 PM		
AC			**ClarkR**	9/3/2009 1:45:55 PM		
AC			**DAWKINSO**	9/4/2009 4:01:36 PM		
AC			**nortonj**	9/8/2009 2:25:14 PM		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Grp Rec Cnt: 6

ICOCFractions v4.8.36

TESTAMERICA

8/17/2009 1:34:12 PM

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National Lab

AnalyDueDate: 09/14/2009

Batch: 9229296 **WATER** **mg/L**
SEQ Batch, Test: None

Sample Preparation/Analysis

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

PM, Quote: SS , 57671

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:
1 **LH7HL-1-AA** J9H140249-1-SAMP 08/14/2009 09:13		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
2 **LH7HL-1-AC-S** J9H140249-1-MS 08/14/2009 09:13		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
3 **LH7HL-1-AD-D** J9H140249-1-MSD 08/14/2009 09:13		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
4 **LH7HL-1-AE-X** J9H140249-1-DUP 08/14/2009 09:13		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
5 **LH7HT-1-AA** J9H140249-2-SAMP 08/14/2009 09:13		AmtRec: 500MLP,VIAL	#Containers: 2			Scr:	Alpha:	Beta:
6 **LH9NQ-1-AA-B** J9H170000-296-BLK 08/14/2009 09:13		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
7 **LH9NQ-1-AC-C** J9H170000-296-LCS 08/14/2009 09:13		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:

P&D SUBMITTAL DECEMBER 21, 2010 REVISION 1

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TESTAMERICA

8/17/2009 1:34:12 PM

Sample Preparation/Analysis

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

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

AnalyDueDate: 09/14/2009

Batch: 9229296 mg/L
SEQ Batch, Test: None

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

Comments:

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

LH7HL1AA-SAMP Constituent List:
HEXCHROME RDL:0.0037 mg/L LCL:85 UCL:115 RPD:20
LH7HL1AC-MS Constituent List:

LH7HL1AD-MSD:

LH9NQ1AA-BLK:

LH9NQ1AC-LCS:

LH7HL1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LH7HL1AC-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LH7HL1AD-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LH9NQ1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LH9NQ1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

P&D SUBMITTAL DECEMBER 21, 2010 REVISION 1

8/13/2009 3:45:48 PM

Sample Preparation/Analysis

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National Lab

AnalyDueDate: 09/11/2009

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

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

Batch: 9225437 **WATER** **mg/L**
SEQ Batch, Test: None All Tests: 9225437 88EA,

PM, Quote: SS , 57671

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 LH5HG-1-AA J9H130313-1-SAMP 08/13/2009 08:31		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
2 LH5HG-1-AC-S J9H130313-1-MS 08/13/2009 08:31		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
3 LH5HG-1-AD-D J9H130313-1-MSD 08/13/2009 08:31		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
4 LH5HG-1-AE-X J9H130313-1-DUP 08/13/2009 08:31		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
5 LH5HW-1-AA J9H130313-2-SAMP 08/13/2009 08:31		AmtRec: 500MLP,VIAL20	#Containers: 2			Scr:	Alpha:	Beta:
6 LH5L6-1-AA-B J9H130000-437-BLK 08/13/2009 08:31		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
7 LH5L6-1-AC-C J9H130000-437-LCS 08/13/2009 08:31		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:

TestAmerica Richland Wa.

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

Page 1

ISV - Insufficient Volume for Analysis

WO Cnt: 7

ICOC v4.8.35

TESTAMERICA

P&D SUBMITTAL DECEMBER 21, 2010 REVISION 1

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8/13/2009 3:45:49 PM

Sample Preparation/Analysis

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

AnalyDueDate: 09/11/2009

Batch: 9225437 mg/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:

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

LH5HG1AA-SAMP Constituent List:

LH5HG1AC-MS Constituent List:

LH5HG1AD-MSD:

LH5L61AA-BLK:

LH5L61AC-LCS:

LH5HG1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LH5HG1AC-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LH5HG1AD-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LH5L61AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LH5L61AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

TESTAMERICA

8/13/2009 11:26:44 AM

Sample Preparation/Analysis

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National Lab

AnalyDueDate: 09/11/2009

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

Batch: 9225313 **WATER** **mg/L**
SEQ Batch, Test: None All Tests: 9225313 88EA,

PM, Quote: SS , 57671

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:
1 LH3A5-1-AA J9H120311-1-SAMP 08/12/2009 13:03		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
2 LH3A5-1-AC-S J9H120311-1-MS 08/12/2009 13:03		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
3 LH3A5-1-AD-D J9H120311-1-MSD 08/12/2009 13:03		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
4 LH3A5-1-AE-X J9H120311-1-DUP 08/12/2009 13:03		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
5 LH3DW-1-AA J9H120311-2-SAMP 08/12/2009 13:03		AmtRec: 500MLP,VIAL20	#Containers: 2			Scr:	Alpha:	Beta:
6 LH4KE-1-AA-B J9H130000-313-BLK 08/12/2009 13:03		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
7 LH4KE-1-AC-C J9H130000-313-LCS 08/12/2009 13:03		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:

P&D SUBMITTAL DECEMBER 21, 2010 REVISION 1

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8/13/2009 11:26:46 AM

Sample Preparation/Analysis

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

AnalyDueDate: 09/11/2009

Batch: 9225313 mg/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:

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

LH3A51AA-SAMP Constituent List:
HEXCHROME RDL:0.0037 mg/L LCL:85 UCL:115 RPD:20
LH3A51AC-MS Constituent List:

LH3A51AD-MSD:

LH4KE1AA-BLK:

LH4KE1AC-LCS:

LH3A51AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LH3A51AC-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LH3A51AD-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LH4KE1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LH4KE1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

TESTAMERICA

8/13/2009 11:26:55 AM

384868, Pacific Northwest National Laboratory ,
Pacific Northwest National Lab

AnalyDueDate: 09/11/2009

Sample Preparation/Analysis

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

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

Batch: 9225312 **WATER** **mg/L** **PM, Quote: SS , 57671**
SEQ Batch, Test: None

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 LH298-1-AA J9H120303-1-SAMP 08/12/2009 11:35		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
2 LH298-1-AC-S J9H120303-1-MS 08/12/2009 11:35		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
3 LH298-1-AD-D J9H120303-1-MSD 08/12/2009 11:35		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
4 LH298-1-AE-X J9H120303-1-DUP 08/12/2009 11:35		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
5 LH299-1-AA J9H120303-2-SAMP 08/12/2009 11:35		AmtRec: 500MLP,VIAL20	#Containers: 2			Scr:	Alpha:	Beta:
6 LH4J5-1-AA-B J9H130000-312-BLK 08/12/2009 11:35		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
7 LH4J5-1-AC-C J9H130000-312-LCS 08/12/2009 11:35		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:

P&D SUBMITTAL DECEMBER 21, 2010 REVISION 1

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8/13/2009 11:26:56 AM

Sample Preparation/Analysis

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
5I CLIENT: HANFORD

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

AnalyDueDate: 09/11/2009

Batch: 9225312 mg/L
SEQ Batch, Test: None

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

Comments:

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

LH2981AA-SAMP Constituent List:
HEXCHROME RDL:0.0037 mg/L LCL:85 UCL:115 RPD:20
LH2981AC-MS Constituent List:

LH2981AD-MSD:

LH4J51AA-BLK:

LH4J51AC-LCS:

LH2981AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LH2981AC-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LH2981AD-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LH4J51AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
LH4J51AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____