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Analytical Data Package Prepared For

CH2M Hill Plateau Remediation

Radiochemical Analysis By

TestAmerica

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

Assigned Laboratory Code: TARL

Data Package Contains _____ Pages

Report No.: 45422

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

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
W06087	F11-039	B2B4V6	J0L210595-9	MCNDP1AA	9MCNDP10	0362264
		B2B4V7	J0L210595-8	MCNDN1AA	9MCNDN10	0362264
		B2B4V8	J0L210595-7	MCNDL1AA	9MCNDL10	0362264
		B2B4V9	J0L210595-6	MCNDK1AA	9MCNDK10	0362264
		B2B4W0	J0L210595-5	MCNDH1AA	9MCNDH10	0362264
		B2B4W1	J0L210595-12	MCNEK1AA	9MCNEK10	0362264
		B2B4W2	J0L210595-13	MCNEL1AA	9MCNEL10	0362264
		B2B4W3	J0L210595-11	MCNEG1AA	9MCNEG10	0362264
		B2B4W4	J0L210595-10	MCNDT1AA	9MCNDT10	0362264
	F11-039	B2B4W5	J0L210595-4	MCNDE1AA	9MCNDE10	0362264
		B2B4W6	J0L210595-3	MCNC31AA	9MCNC310	0362264
		B2B4W7	J0L210595-2	MCNCP1AA	9MCNCP10	0362264
		B2B4W8	J0L210595-1	MCNCF1AA	9MCNCF10	0362264

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THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

TestAmerica Laboratories, Inc.

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

December 30, 2010

Attention: Mike Neely

SAF Number	:	F11-039
Date SDG Closed	:	December 21, 2010
Number of Samples	:	Thirteen (13)
Sample Type	:	Soil
SDG Number	:	W06087
Data Deliverable	:	15/15 Day

CASE NARRATIVE

I. Introduction

On December 21, 2010 thirteen soil samples were received at TestAmerica for chemical analysis. Upon receipt, the samples were assigned to lot J0L210595 and assigned the following laboratory ID numbers to correspond with the CH2M specific IDs:

CH2M ID#	TARL ID#	MATRIX	DATE OF RECEIPT
B2B4W3	MCNEG	SOIL	12/21/10
B2B4W4	MCNDT	SOIL	12/21/10
B2B4V6	MCNDP	SOIL	12/21/10
B2B4V7	MCNDN	SOIL	12/21/10
B2B4V8	MCNDL	SOIL	12/21/10
B2B4V9	MCNDK	SOIL	12/21/10
B2B4W0	MCNDH	SOIL	12/21/10
B2B4W5	MCNDE	SOIL	12/21/10
B2B4W6	MCNC3	SOIL	12/21/10
B2B4W7	MCNCP	SOIL	12/21/10
B2B4W8	MCNCF	SOIL	12/21/10
B2B4W2	MCNEL	SOIL	12/21/10
B2B4W1	MCNEK	SOIL	12/21/10

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:

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

Chemical Analysis
Hexavalent Chromium by EPA method 7196A
The LCS, batch blank, samples, sample duplicate (B2B4W8) and sample matrix spike (B2B4W8) results are within contractual requirements.

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

Reviewed and approved:

Sandra Seger
Project Manager

Drinking Water Method Cross References

	DRINKING WATER ASTM METHOD CROSS REFERENCES	
Referenced Method	**Isotope(s)**	**TestAmerica Richland's SOP No.**
EPA 901.1	Cs-134, I-131	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 Microsopy based on NIOSH 9002
Alpha - Gross	ARCHIVED	RICH-RB-5035	Liquid Scintillation Anal/ Packard	DETERMINATION OF GROSS ALPHA IN NASAL SMEARS BY LIQUID SCINTILLATION COUNTING
Alpha - Gross	RL-GPC-001	RICH-RC-5014	9310 / EPA SW846 900.0 / EPA 600	DETERMINATION OF GROSS ALPHA AND GROSS BETA IN WATER BY METHOD 9310
Alpha - Gross	RL-GPC-007	RICH-RC-5020	SM 7110B EPA 680	DETERMINATION OF GROSS ALPHA AND GROSS BETA IN SOIL, SHORELINE SOIL, FOOD AND VEGETATION
Alpha - Gross	RL-GPC-002	RICH-RC-5021	00-02 EPA 520	DETERMINATION OF GROSS ALPHA ACTIVITY IN WATER BY COPRECIPITATION
Alpha - Gross	RL-GPC-008	RICH-RC-5036	BR100 / 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	BR100 / 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-5008	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	R4-73-0141/EPA ASTM D2334 (Discontinued)	DETERMINATION OF IODINE-131 AND 129 IN WATER BY SOLVENT EXTRACTION METHOD
I131	RL-GAM-002	RICH-RC-5025	R4-73-0141/EPA ASTM D2334 (Discontinued)	DETERMINATION OF IODINE-131 AND 129 IN WATER BY SOLVENT EXTRACTION METHOD
I131	ARCHIVED	RICH-RC-5049	HASL 300 (1983)	DETERMINATION OF IODINE-131 IN MILK BY BATCH ION-EXCHANGE
Metals	ARCHIVED	BHI-MT-0001	6010	ICP-AE SPECTROSCOPY, SPECTROMETRIC METHOD FOR TRACE ELEMENT ANALYSIS, METHOD 6010A FOR Bechtel
Metals	RL-MT-001	RICH-MT-0001	6010B	ICP-AES for TRACE ELEMENT ANALYSIS, METHOD 6010B

Isotope	Richland SOP #	Old Richland SOP #	Method Reference	Title
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	G-03 / HASL 300	COPRECIPITATION OF SOME ACTINIDES ON NEODYMIUM FLUORIDE FOR ALPHA-PARTICLE SPECTROMETRY
Prep - Count	RL-ALP-015	RICH-RC-5039	G-03 / HASL 300 Anal Chem 1972	ELECTRODEPOSITION OF ACTINIDES
Prep - Count	RL-ALP-014	RICH-RC-5085	Morrison & Freiser NAS-NS-3050	ANHYDROUS ETHER EXTRACTION OF URANIUM
Prep - Env	RL-KPA-001	RICH-RC-5015	ASTM / D5174-97	ENVIRONMENTAL SAMPLE PREPARATION FOR URANIUM BY LASER-INDUCED PHOSPHORESCENCE
Prep - Env	RL-PRP-004	RICH-RC-5016	Sr02 / HASL 300	PREPARATION OF ENVIRONMENTAL MATRICES
Prep - Env	RL-PRP-007	RICH-RC-5045	Mod Pu02 / HASL 300	PREPARATION OF MIXED BED RESINS AND PRE-FILTERS
Prep - Env	RL-PRP-008	RICH-RC-5068	Mod ER100 / LA10300	PREPARATION OF SOIL, VEGETATION AND AIR FILTERS BY MIXED STRONG ACID LEACHING
Prep - Resin	RL-ALP-017	RICH-RC-5018	Mod Pu11 / Mod 300	ION-EXCHANGE PREPARATION
Prep - Soil	RL-PRP-003	RICH-RC-5013	Pu02A / HASL 300	PREPARATION OF SOIL SAMPLES
Prep - Soil	RL-PRP-005	RICH-RC-5019	D5259 / ASTM SW 846/3015/3051/3052	PREPARATION AND DISSOLUTION OF SEDIMENTS AND SOIL BY MICROWAVE BOMB DIGESTION
Prep - Soil	RL-PRP-006	RICH-RC-5032	Pu02A / HASL 300	COMPLETE DISSOLUTION BY MIXED ACIDS IN A TEFLON BEAKER
Prep - Soil	RL-PRP-009	RICH-RC-5077	Mod ER100 / LA10300	PREPARATION OF SMALL SOIL SAMPLES FOR GAMMA SPEC AND/OR RADIOCHEM ANAL BY ACID DIGESTION
Prep - Urine	RL-PRP-010	RICH-RC-5086	AnalyticaChemActa1992 RP800 / DOE00089T	URINE AND WATER SAMPLE PREPARATION BY CALCIUM PHOSPHATE PRECIPITATION
Prep - Water	RL-PRP-010	RICH-RC-5086	AnalyticaChemActa1992 RP800 / DOE00089T	URINE AND WATER SAMPLE PREPARATION BY CALCIUM PHOSPHATE PRECIPITATION
Pu	ARCHIVED	RICH-RB-5015	Pu11 / HASL 300	RAPID DETERMINATION OF PLUTONIUM IN FECES
Pu	RL-ALP-002	RICH-RC-5010	Pu11 / HASL 300	DETERMINATION OF ISOTOPIC PLUTONIUM IN ALL MATRICES
Pu	RL-ALP-010	RICH-RC-5080	Am03 HASL 300 Pu11 / HASL 300	SEQUENTIAL SEPARATION OF PLUTONIUM AND AMERICIUM
Pu	RL-ALP-001	RICH-RC-5087	AnalyticaChemActa1992 RP800 / DOE00089T	DETERMINATION OF PLUTONIUM BY EXTRACTION CHROMATOGRAPHY
Ra	RL-RA-001	RICH-RC-5005	903.1 / EPA 600	RADIUM-226 AND RADIUM-228 SEPARATION IN RADIOCHEMICAL MATRICES - ADAPTED FROM EPA 903.1 AND 904.0
Ra	RL-RA-001	RICH-RC-5005	904.0 / EPA 600	RADIUM-226 AND RADIUM-228 SEPARATION IN RADIOCHEMICAL MATRICES - ADAPTED FROM EPA 903.1 AND 904.0
Ra	RL-RA-002	RICH-RC-5027	Mod D2460/ ASTM 903.0 / EPA 600	DETERMINATION OF TOTAL RADIUM
Rn	RL-LSC-019	RICH-RC-5082	913.0 / EPA	DETERMINATION OF RADON-222 - ADAPTED FROM METHOD 913.0

Isotope	Richland SOP #	Old Richland SOP #	Method Reference	Title
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

Sample Results Summary

TestAmerica TARL

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

Date: 30-Dec-10

Report No. : 45422

SDG No: W06087

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
0362264 7196_CR6									
B2B4V6									
	MCNDP1AA	HEXCHROME	1.50E-01 +- 0.0E+00	U	mg/kg	N/A	1.50E-01	1.55E-01	
B2B4V7									
	MCNDN1AA	HEXCHROME	1.50E-01 +- 0.0E+00	U	mg/kg	N/A	1.50E-01	1.55E-01	
B2B4V8									
	MCNDL1AA	HEXCHROME	1.49E-01 +- 0.0E+00	U	mg/kg	N/A	1.49E-01	1.55E-01	
B2B4V9									
	MCNDK1AA	HEXCHROME	1.46E-01 +- 0.0E+00	U	mg/kg	N/A	1.46E-01	1.55E-01	
B2B4W0									
	MCNDH1AA	HEXCHROME	1.41E-01 +- 0.0E+00	U	mg/kg	N/A	1.41E-01	1.55E-01	
B2B4W1									
	MCNEK1AA	HEXCHROME	1.47E-01 +- 0.0E+00	U	mg/kg	N/A	1.47E-01	1.55E-01	
B2B4W2									
	MCNEL1AA	HEXCHROME	1.47E-01 +- 0.0E+00	U	mg/kg	N/A	1.47E-01	1.55E-01	
B2B4W3									
	MCNEG1AA	HEXCHROME	1.51E-01 +- 0.0E+00	U	mg/kg	N/A	1.51E-01	1.55E-01	
B2B4W4									
	MCNDT1AA	HEXCHROME	1.52E-01 +- 0.0E+00	U	mg/kg	N/A	1.52E-01	1.55E-01	
B2B4W5									
	MCNDE1AA	HEXCHROME	1.53E-01 +- 0.0E+00	U	mg/kg	N/A	1.53E-01	1.55E-01	
B2B4W6									
	MCNC31AA	HEXCHROME	1.52E-01 +- 0.0E+00	U	mg/kg	N/A	1.52E-01	1.55E-01	
B2B4W7									
	MCNCP1AA	HEXCHROME	1.53E-01 +- 0.0E+00	U	mg/kg	N/A	1.53E-01	1.55E-01	
B2B4W8									
	MCNCF1AA	HEXCHROME	1.52E-01 +- 0.0E+00	U	mg/kg	N/A	1.52E-01	1.55E-01	
	MCNCF1AD	HEXCHROME	1.51E-01 +- 0.0E+00	U	mg/kg	N/A	1.51E-01	3.50E-01	0.7

No. of Results: 14

TestAmerica

rptSTLRchSaSummary2 V5.2.9 A2002

RPD - Relative Percent Difference.

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

QC Results Summary

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Date: 30-Dec-10

Report No. : 45422

SDG No.: W06087

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC|MDA
7196_CR6								
0362264 MATRIX SPIKE, B2B4W8								
MCNCF1AC	HEXCHROME	9.89E+00 +- 0.0E+00		mg/kg	N/A	92%	-0.1	1.54E-02
0362264 BLANK QC,								
MCTT21AA	HEXCHROME	1.55E-01 +- 0.0E+00	U	mg/kg	N/A			1.55E-01
0362264 LCS,								
MCTT21AC	HEXCHROME	1.92E+01 +- 0.0E+00		mg/kg	N/A			1.55E-01

No. of Results: 3

TestAmerica

rptSTLRchQcSummary V5.2.9 A2002

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

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

FORM I

SAMPLE RESULTS

Date: 30-Dec-10

Lab Name:	**TestAmerica**	**SDG:**	W06087	**Collection Date:**	12/19/2010 11:22:00 AM
Lot-Sample No.:	**J0L210595-9**	**Report No. :**	45422	**Received Date:**	12/21/2010 1:30:00 PM
Client Sample ID:	**B2B4V6**	**COC No. :**	F11-039-073	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 0362264	7196_CR6			Work Order:	MCNDP1AA		Report DB ID:	9MCNDP10				
HEXCHROME	***1.50E-01***	U		0.0E+00	1.50E-01	mg/kg	N/A	*1.*	12/28/10 11:05 a		2.5778	
							1.55E-01	*N/A*			g	

No. of Results: 1 Comments:

TestAmerica
rptSTLRchSample
V5.2.9 A2002

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

FORM I

SAMPLE RESULTS

Date: 30-Dec-10

Lab Name:	**TestAmerica**	**SDG:**	W06087	**Collection Date:**	12/19/2010 11:30:00 PM
Lot-Sample No.:	**J0L210595-8**	**Report No. :**	45422	**Received Date:**	12/21/2010 1:30:00 PM
Client Sample ID:	**B2B4V7**	**COC No. :**	F11-039-077	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 0362264	7196_CR6			Work Order:	MCNDN1AA		Report DB ID:	9MCNDN10				
HEXCHROME	***1.50E-01***	U		0.0E+00	1.50E-01	mg/kg	N/A	*1.*	12/28/10 11:05 a		2.5827	
							1.55E-01	*N/A*			g	

No. of Results: 1 Comments:

TestAmerica
rptSTLRchSample
V5.2.9 A2002

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

FORM I

SAMPLE RESULTS

Date: 30-Dec-10

Lab Name:	**TestAmerica**	**SDG:**	W06087	**Collection Date:**	12/19/2010 12:30:00 PM
Lot-Sample No.:	**J0L210595-7**	**Report No. :**	45422	**Received Date:**	12/21/2010 1:30:00 PM
Client Sample ID:	**B2B4V8**	**COC No. :**	F11-039-081	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 0362264	7196_CR6			Work Order:	MCNDL1AA		Report DB ID:	9MCNDL10				
HEXCHROME	***1.49E-01***	U		0.0E+00	1.49E-01	mg/kg	N/A	*1.*	12/28/10 11:05 a		2.5908	
							1.55E-01	*N/A*			g	

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

TestAmerica
rptSTLRchSample
V5.2.9 A2002

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

FORM I

SAMPLE RESULTS

Date: 30-Dec-10

Lab Name:	**TestAmerica**	**SDG:**	W06087	**Collection Date:**	12/19/2010 12:10:00 PM
Lot-Sample No.:	**J0L210595-6**	**Report No. :**	45422	**Received Date:**	12/21/2010 1:30:00 PM
Client Sample ID:	**B2B4V9**	**COC No. :**	F11-039-085	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 0362264	7196_CR6			Work Order:	MCNDK1AA		Report DB ID:	9MCNDK10				
HEXCHROME	***1.46E-01***	U		0.0E+00	1.46E-01	mg/kg	N/A	*(1.)*	12/28/10 11:05 a		2.6429	
							1.55E-01	*N/A*			g	

No. of Results: 1 Comments:

TestAmerica
rptSTLRchSample
V5.2.9 A2002

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

FORM I

SAMPLE RESULTS

Date: 30-Dec-10

Lab Name:	**TestAmerica**	**SDG:**	W06087	**Collection Date:**	12/19/2010 11:56:00 AM
Lot-Sample No.:	**J0L210595-5**	**Report No. :**	45422	**Received Date:**	12/21/2010 1:30:00 PM
Client Sample ID:	**B2B4W0**	**COC No. :**	F11-039-089	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 0362264	7196_CR6			Work Order:	MCNDH1AA		Report DB ID:	9MCNDH10				
HEXCHROME	***1.41E-01***	U		0.0E+00	1.41E-01	mg/kg	N/A	*1.*	12/28/10 11:05 a		2.7371	
							1.55E-01	*N/A*			g	

No. of Results: 1 Comments:

TestAmerica
rptSTLRchSample
V5.2.9 A2002

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

FORM I

SAMPLE RESULTS

Date: 30-Dec-10

Lab Name:	**TestAmerica**	**SDG:**	W06087	**Collection Date:**	12/19/2010 11:56:00 AM
Lot-Sample No.:	**J0L210595-12**	**Report No. :**	45422	**Received Date:**	12/21/2010 1:30:00 PM
Client Sample ID:	**B2B4W1**	**COC No. :**	F11-039-093	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 0362264	7196_CR6			**Work Order:**	MCNEK1AA		**Report DB ID:**	9MCNEK10				
HEXCHROME	***1.47E-01***	U		0.0E+00	1.47E-01	mg/kg	N/A	*(1.)*	12/28/10 11:05 a		2.6282	
							1.55E-01	*N/A*			g	

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

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

FORM I

SAMPLE RESULTS

Date: 30-Dec-10

Lab Name:	**TestAmerica**	**SDG:**	W06087	**Collection Date:**	12/19/2010 11:30:00 AM
Lot-Sample No.:	**J0L210595-13**	**Report No. :**	45422	**Received Date:**	12/21/2010 1:30:00 PM
Client Sample ID:	**B2B4W2**	**COC No. :**	F11-039-097	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 0362264	7196_CR6			Work Order:	MCNEL1AA		Report DB ID:	9MCNEL10				
HEXCHROME	***1.47E-01***	U		0.0E+00	1.47E-01	mg/kg	N/A	*(1.)*	12/28/10 11:05 a		2.6398	
							1.55E-01	*N/A*			g	

No. of Results: 1 Comments:

TestAmerica
rptSTLRchSample
V5.2.9 A2002

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

FORM I

SAMPLE RESULTS

Date: 30-Dec-10

Lab Name:	**TestAmerica**	**SDG:**	W06087	**Collection Date:**	12/19/2010 10:45:00 AM
Lot-Sample No.:	**J0L210595-11**	**Report No. :**	45422	**Received Date:**	12/21/2010 1:30:00 PM
Client Sample ID:	**B2B4W3**	**COC No. :**	F11-039-101	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 0362264	7196_CR6			Work Order:	MCNEG1AA		Report DB ID:	9MCNEG10				
HEXCHROME	***1.51E-01***	U		0.0E+00	1.51E-01	mg/kg	N/A	*(1.)*	12/28/10 11:05 a		2.5552	
							1.55E-01	*N/A*			g	

No. of Results: 1 Comments:

TestAmerica
rptSTLRchSample
V5.2.9 A2002

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

FORM I

SAMPLE RESULTS

Date: 30-Dec-10

Lab Name:	TestAmerica	**SDG:**	W06087	**Collection Date:**	12/19/2010 12:45:00 PM
Lot-Sample No.:	J0L210595-10	**Report No. :**	45422	**Received Date:**	12/21/2010 1:30:00 PM
Client Sample ID:	B2B4W4	**COC No. :**	F11-039-105	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 0362264	7196_CR6			Work Order:	MCNDT1AA		Report DB ID:	9MCNDT10				
HEXCHROME	***1.52E-01***	U		0.0E+00	1.52E-01	mg/kg	N/A	*(1.)*	12/28/10 11:05 a		2.5535	
							1.55E-01	*N/A*			g	

No. of Results: 1 Comments:

TestAmerica
rptSTLRchSample
V5.2.9 A2002

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

FORM I

SAMPLE RESULTS

Date: 30-Dec-10

Lab Name:	**TestAmerica**	**SDG:**	W06087	**Collection Date:**	12/19/2010 12:06:00 PM
Lot-Sample No.:	**J0L210595-4**	**Report No. :**	45422	**Received Date:**	12/21/2010 1:30:00 PM
Client Sample ID:	**B2B4W5**	**COC No. :**	F11-039-049	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 0362264	7196_CR6			Work Order:	MCNDE1AA		Report DB ID:	9MCNDE10				
HEXCHROME	***1.53E-01***	U		0.0E+00	1.53E-01	mg/kg	N/A	*(1.)*	12/28/10 11:05 a		2.5243	
							1.55E-01	*N/A*			g	

No. of Results: 1 Comments:

TestAmerica
rptSTLRchSample
V5.2.9 A2002

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

FORM I

SAMPLE RESULTS

Date: 30-Dec-10

Lab Name:	**TestAmerica**	**SDG:**	W06087	**Collection Date:**	12/19/2010 11:46:00 AM
Lot-Sample No.:	**J0L210595-3**	**Report No. :**	45422	**Received Date:**	12/21/2010 1:30:00 PM
Client Sample ID:	**B2B4W6**	**COC No. :**	F11-039-053	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 0362264	7196_CR6			Work Order:	MCNC31AA		Report DB ID:	9MCNC310				
HEXCHROME	***1.52E-01***	U		0.0E+00	1.52E-01	mg/kg	N/A	*(1.)*	12/28/10 11:05 a		2.5536	
							1.55E-01	*N/A*			g	

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

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

FORM I

SAMPLE RESULTS

Date: 30-Dec-10

Lab Name:	**TestAmerica**	**SDG:**	W06087	**Collection Date:**	12/19/2010 11:16:00 AM
Lot-Sample No.:	**J0L210595-2**	**Report No. :**	45422	**Received Date:**	12/21/2010 1:30:00 PM
Client Sample ID:	**B2B4W7**	**COC No. :**	F11-039-057	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 0362264	7196_CR6			**Work Order:**	MCNCP1AA		**Report DB ID:**	9MCNCP10				
HEXCHROME	***1.53E-01***	U		0.0E+00	1.53E-01	mg/kg	N/A	*(1.)*	12/28/10 11:05 a		2.5265	
							1.55E-01	*N/A*			g	

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

TestAmerica
rptSTLRchSample
V5.2.9 A2002

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

FORM I

SAMPLE RESULTS

Date: 30-Dec-10

Lab Name:	**TestAmerica**	**SDG:**	W06087	**Collection Date:**	12/19/2010 12:38:00 PM
Lot-Sample No.:	**J0L210595-1**	**Report No. :**	45422	**Received Date:**	12/21/2010 1:30:00 PM
Client Sample ID:	**B2B4W8**	**COC No. :**	F11-039-061	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 0362264	7196_CR6			**Work Order:**	MCNCF1AA		**Report DB ID:**	9MCNCF10				
HEXCHROME	***1.52E-01***	U		0.0E+00	1.52E-01	mg/kg	N/A	*(1.)*	12/28/10 11:05 a		2.5422	
							1.55E-01	*N/A*			g	

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

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

FORM II

Date: 30-Dec-10

DUPLICATE RESULTS

Lab Name:	**TestAmerica**	**SDG:**	W06087	**Collection Date:**	12/19/2010 12:38:00 PM
Lot-Sample No.:	**J0L210595-1**	**Report No. :**	45422	**Received Date:**	12/21/2010 1:30:00 PM
Client Sample ID:	**B2B4W8**	**COC No. :**	F11-039-061	**Matrix:**	SOIL

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 0362264	7196_CR6			Work Order:	MCNCF1AD	Report DB ID:	MCNCF1AD		Orig Sa DB ID:	9MCNCF10		
HEXCHROME	1.51E-01	U		0.0E+00	1.51E-01	mg/kg	N/A	(1.)	12/28/10 11:05 a		2.5591	
	1.52E-01	U	RPD	0.7		3.50E-01		N/A			g	

No. of Results: 1 Comments:

TestAmerica
rptSTLRchDupV5.2
.9 A2002

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

FORM II
BLANK RESULTS

Date: 30-Dec-10

Lab Name: TestAmerica
Matrix: SOIL

SDG: W06087
Report No. : 45422

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA ,	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 0362264	7196_CR6			Work Order:	MCTT21AA		Report DB ID:	MCTT21AA				
HEXCHROME	1.55E-01	U		0.0E+00	1.55E-01	mg/kg	N/A	1.	12/28/10 11:05 a		2.5	
						1.55E-01		N/A			g	

No. of Results: 1 Comments:

TestAmerica
rptSTLRchBlank
V5.2.9 A2002

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

FORM II

LCS RESULTS

Date: 30-Dec-10

Lab Name: TestAmerica

SDG: W06087

Matrix: SOIL

Report No. : 45422

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 0362264	7196_CR6			Work Order:	MCTT21AC		Report DB ID:	MCTT21AC					
HEXCHROME	1.92E+01			0.0E+00	1.55E-01	mg/kg	N/A	0.00E+00		#Div/0!	12/28/10 11:05 a	2.5	
							Rec Limits:	80	120			g	

No. of Results: 1 Comments:

FORM II

MATRIX SPIKE RESULTS

Date: 30-Dec-10

Lab Name: TestAmerica **SDG:** W06087

Lot-Sample No.: J0L210595-1, B2B4W8 **Report No. :** 45422 **Matrix:** SOIL

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 0362264	Work Order:	MCNCF1AC		Report DB ID:	MCNCF1AC		Orig Sa DB ID:	9MCNCF10				
HEXCHROME	9.89E+00			0.0E+00	1.54E-02	mg/kg	N/A	92.05%	1.07E+01	12/28/10 11:05 a	2.5094	7196_CR6
	1.52E-01										g	

Number of Results: 1

Comments:

RER - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Richland Laboratory
Data Review Check List
Hexavalent Chromium

Batch Number(s): **0362264**

Lab Sample Numbers or SDG: **W06087**

Method/Test/Parameter: **Cr+6 in SOLID / RL-WC-004**

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: Date: 12/29/2010

Second-Level Review: Date: 12/29/10

Form CG-191, Rev. 4, 2/03 page 2 of 2

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-039-061	PAGE 1 OF 1
COLLECTOR: Chamberlain	COMPANY CONTACT: WIDRIG, DL	TELEPHONE NO.: 376-2858	PROJECT COORDINATOR: WIDRIG, DL	PRICE CODE: C01	DATA TURNAROUND
SAMPLING LOCATION: 600-287-PL In-Process Sample 4	PROJECT DESIGNATION: 600-287-PL - Soil		SAF NO.: F11-039	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO.: GWS-200	FIELD LOGBOOK NO.: HNF-N-507-16	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302560ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B2B4P3

PRESERVATION	Cool~4C
HOLDING TIME	30 Days
TYPE OF CONTAINER	G/P
NO. OF CONTAINER(S)	1
VOLUME	120mL
SAMPLE ANALYSIS	Chromium Hex - 7196 {Hexavalent Chromium};

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2B4W8	SOIL	12-19-10	1238	X

JOL210595.FLH
SDG W06087

MCNCF

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: [signature]	DATE/TIME: 12-19-10 / 1009	RECEIVED BY/STORED IN: SSU-1 DEC ~~20~~ 19 2010	DATE/TIME: 1009
RELINQUISHED BY/REMOVED FROM: SSU-1 1200 DEC 21 2010	DATE/TIME:	RECEIVED BY/STORED IN: SE Hamaker [signature] 1200 DEC 21 2010	DATE/TIME:
RELINQUISHED BY/REMOVED FROM: SE Hamaker [signature] CHPRC DEC 21 2010 1330	DATE/TIME:	RECEIVED BY/STORED IN: [signature] CHPRC DEC 21 2010 1330	DATE/TIME:
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** The laboratory shall report only the requested constituents of concern in all final data reports, and EDDs. QC results for non-requested constituents need not be reported, but samples chosen for matrix spike, and all spike compounds shall be identified in the final data report case narrative. No TICs shall be reported.☐** Per previous written agreement, the Laboratories shall report all final data for this sampling event on or before December 30, 2010. Contact the Project Coordinator for questions.

ORIGINAL

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

A-6003-618 (REV 2)

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103446

Sample # 103446013
SAF# F11-039
Sample ID B2B4P3

Matrix SOIL
Sampled 12/19/10
Received 12/19/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
LSC Prep										
TRI-CARB LSC										**12/20/10**
Total Alpha	12587-46-1	LA-508-421	U	1.0	1.4	pCi/g	1	2.2		12/20/10
Total Beta	12587-47-2	LA-508-421		25	5.5	pCi/g	1	2.9		12/20/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

DRAFT

Hogan, James G

From: Baechler, Michael A
Sent: Tuesday, December 21, 2010 10:01 AM
To: Aguilar, Christina M; Aguilar, Juan R; Baechler, Michael A; Briggs, Barbara E; Brotherton, Donald W Jr; Christian, Eric C; Ellingsworth, Randy D; Elliott, Wanda S; Hall, Frank M; Hamaker, Scott E; Higham, Dale B; Higuera, Jeffrey C; Hogan, James G; Hulse, Karl B; Neely, Michael; Patterson, Kevin C; Plunkett, Roy W; Ramirez, Ruben; Rizzo, Al G; Smith, Janet M; Wall, Lesly D; Wells, Richard P; White, Mitzi A; Young, Kenneth J; Zunker, Zakery A
Subject: 600-287-PL - WSCF103446 - Radscreens B2B4P0, B2B4P1, B2B4P2, B2B4P3, B2B4N1, B2B4N2, B2B4N3, B2B4N4, B2B4N5, B2B4N6, B2B4N7, B2B4N8, and B2B4N9
Attachments: 103446_Preliminary TAB.pdf

Importance: High

All,

The following samples, associated with the subject radscreens, are authorized for transport as non-regulated material.

LOCATION	EST_INT	MATRIX	METHOD	WSCF	TASL	TARL	EBRLNE	COC
600-287-PL In-Process Sample 1	---	Soil	Grab	B2B4P0(RS)	B2B4V0	B2B4W5	B2B4R5	F11-039-046(WSCF) F11-039-047(EBRLNE) F11-039-048(TASL) F11-039-049(TARL)
600-287-PL In-Process Sample 2	---	Soil	Grab	B2B4P1(RS)	B2B4V1	B2B4W6	B2B4R6	F11-039-050(WSCF) F11-039-051(EBRLNE) F11-039-052(TASL) F11-039-053(TARL)
600-287-PL In-Process Sample 3	---	Soil	Grab	B2B4P2(RS)	B2B4V2	B2B4W7	B2B4R7	F11-039-054(WSCF) F11-039-055(EBRLNE) F11-039-056(TASL) F11-039-057(TARL)
600-287-PL In-Process Sample 4	---	Soil	Grab	B2B4P3(RS)	B2B4V3	B2B4W8	B2B4R8	F11-039-058(WSCF) F11-039-059(EBRLNE) F11-039-060(TASL) F11-039-061(TARL)
600-287-PL V-1	0 - 12 IN	Soil	Grab	B2B4N1(RS)	B2B4T1	B2B4V6	B2B4P6	F11-039-070(WSCF) F11-039-071(EBRLNE) F11-039-072(TASL) F11-039-073(TARL)
600-287-PL V-2	0 - 12 IN	Soil	Grab	B2B4N2(RS)	B2B4T2	B2B4V7	B2B4P7	F11-039-074(WSCF) F11-039-075(EBRLNE) F11-039-076(TASL) F11-039-077(TARL)
600-287-PL V-3	0 - 12 IN	Soil	Grab	B2B4N3(RS)	B2B4T3	B2B4V8	B2B4P8	F11-039-078(WSCF) F11-039-079(EBRLNE) F11-039-080(TASL)

1

								F11-039-081(TARL)
600-287-PL V-4	0 - 12 IN	Soil	Grab	B2B4N4(RS)	B2B4T4	B2B4V9	B2B4P9	F11-039-082(WSCF) F11-039-083(EBRLNE) F11-039-084(TASL) F11-039-085(TARL)
600-287-PL V-5	0 - 12 IN	Soil	Grab	B2B4N5(RS)	B2B4T5	B2B4W0	B2B4R0	F11-039-086(WSCF) F11-039-087(EBRLNE) F11-039-088(TASL) F11-039-089(TARL)
600-287-PL V-5 D	0 - 12 IN	Soil	Grab	B2B4N6(RS)	B2B4T6	B2B4W1	B2B4R1	F11-039-090(WSCF) F11-039-091(EBRLNE) F11-039-092(TASL) F11-039-093(TARL)
600-287-PL V-6	0 - 12 IN	Soil	Grab	B2B4N7(RS)	B2B4T7	B2B4W2	B2B4R2	F11-039-094(WSCF) F11-039-095(EBRLNE) F11-039-096(TASL) F11-039-097(TARL)
600-287-PL V-7	0 - 12 IN	Soil	Grab	B2B4N8(RS)	B2B4T8	B2B4W3	B2B4R3	F11-039-098(WSCF) F11-039-099(EBRLNE) F11-039-100(TASL) F11-039-101(TARL)
600-287-PL V-8	0 - 12 IN	Soil	Grab	B2B4N9(RS)	B2B4T9	B2B4W4	B2B4R4	F11-039-102(WSCF) F11-039-103(EBRLNE) F11-039-104(TASL) F11-039-105(TARL)

Thanks,

Michael A. Baechler

Scientist, CHPRC, Contractor to the Department of Energy
Soil & Groundwater Remediation Project,
Analytical Support,
(509) 373-4452 Office
(509) 539-3117 Cellular
(509) 373-9551 FAX

From: ^SDM Administration
Sent: Tuesday, December 21, 2010 8:27 AM
To: Baechler, Michael A; Kessner, Joan H
Cc: Lynch, Sherry A
Subject: FW: Preliminary results Total Alpha/Beta for SDG#103446 SAF#F11-039
Importance: High

*Samples not checked into SDT or IDMS yet.

This is a courtesy copy of the data package report. Be advised the report has not been verified for completeness by SDM. An IDMS link to this data package and any subsequent revisions will be forwarded upon the completion of the verification process.

From: ^CPP Sample Management
Sent: Tuesday, December 21, 2010 8:25 AM
To: ^SDM Administration
Subject: FW: Preliminary results Total Alpha/Beta for SDG#103446 SAF#F11-039

From: Avila, Marisol
Sent: Tuesday, December 21, 2010 8:24:07 AM
To: ^CPP Sample Management; Kon, Susan L; Medley, Heather A; Westberg, Richard A
Cc: Widrig, Dana L
Subject: Preliminary results Total Alpha/Beta for SDG#103446 SAF#F11-039
Auto forwarded by a Rule

Please find attached preliminary results for Total Alpha, Total Beta.

Marisol Avila
WSCF Client Services
Office: (509) 373-1613
Mobile: (509)366-8823
Marisol_Avila@rl.gov

3

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-039-057	PAGE 1 OF 1
COLLECTOR Scales	COMPANY CONTACT WIDRIG, DL	TELEPHONE NO. 376-2858	PROJECT COORDINATOR WIDRIG, DL	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 600-287-PL In-Process Sample 3	PROJECT DESIGNATION 600-287-PL - Soil		SAF NO. F11-039	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. GWS-200	FIELD LOGBOOK NO. HNF-W-507-14	ACTUAL SAMPLE DEPTH Surface	COA 302560ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B2B4P2

PRESERVATION	Cool~4C
HOLDING TIME	30 Days
TYPE OF CONTAINER	G/P
NO. OF CONTAINER(S)	1
VOLUME	120mL
SAMPLE ANALYSIS	Chromium Hex - 7196 (Hexavalent Chromium);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2B4W7	SOIL	12-19-10	1146	X

JOC210595
SDGW06087

MCNCP.

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J Scales 12-19-10	1610	SSU-1	1610
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SSU-1 1200	DEC 21 2010	SE Hamaker CHPRC	DEC 21 2010
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SE Hamaker CHPRC	DEC 21 2010 1330	741C	DEC 21 2010 1330
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** The laboratory shall report only the requested constituents of concern in all final data reports, and EDDs. QC results for non-requested constituents need not be reported, but samples chosen for matrix spike, and all spike compounds shall be identified in the final data report case narrative. No TICs shall be reported.☐** Per previous written agreement, the Laboratories shall report all final data for this sampling event on or before December 30, 2010. Contact the Project Coordinator for questions.

ORIGINAL

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

A-6003-618 (REV 2)

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103446

Sample # 103446012
SAF# F11-039
Sample ID B2B4P2

Matrix SOIL
Sampled 12/19/10
Received 12/19/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
LSC Prep										
TRI-CARB LSC										**12/20/10**
Total Alpha	12587-46-1	LA-508-421	U	1.2	1.2	pCi/g	1	1.9		12/21/10
Total Beta	12587-47-2	LA-508-421		5.2	2	pCi/g	1	2.8		12/21/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-039-053	PAGE 1 OF 1
COLLECTOR Scales	COMPANY CONTACT WIDRIG, DL	TELEPHONE NO. 376-2858	PROJECT COORDINATOR WIDRIG, DL	PRICE CODE C01 AIR QUALITY ☐	DATA TURNAROUND 12 Days / 12 Days
SAMPLING LOCATION 600-287-PL In-Process Sample 2	PROJECT DESIGNATION 600-287-PL - Soil		SAF NO. F11-039		
ICE CHEST NO. GWS-200	FIELD LOGBOOK NO. HWF-N-307-16	ACTUAL SAMPLE DEPTH Surface	COA 302560ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B2B4P1

PRESERVATION	Cool~4C
HOLDING TIME	30 Days
TYPE OF CONTAINER	G/P
NO. OF CONTAINER(S)	1
VOLUME	120mL
SAMPLE ANALYSIS	Chromium Hex - 7196 (Hexavalent Chromium);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2B4W6	SOIL	12-19-10	1196	X

MCNC3

JOC210595
JDGW06087

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM J Scales	DATE/TIME 12-19-10 0610	RECEIVED BY/STORED IN SSU-1	DATE/TIME 12-19-10 0610
RELINQUISHED BY/REMOVED FROM SSU-1 1200	DATE/TIME DEC 21 2010	RECEIVED BY/STORED IN SE Hamaker 1200	DATE/TIME DEC 21 2010
RELINQUISHED BY/REMOVED FROM SE Hamaker	DATE/TIME DEC 21 2010 1330	RECEIVED BY/STORED IN [illegible]	DATE/TIME DEC 21 2010 1330
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** The laboratory shall report only the requested constituents of concern in all final data reports, and EDDs. QC results for non-requested constituents need not be reported, but samples chosen for matrix spike, and all spike compounds shall be identified in the final data report case narrative. No TICs shall be reported.☐** Per previous written agreement, the Laboratories shall report all final data for this sampling event on or before December 30, 2010. Contact the Project Coordinator for questions.

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

A-6003-618 (REV 2)

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103446

Sample # 103446011
SAF# F11-039
Sample ID B2B4P1

Matrix SOIL
Sampled 12/19/10
Received 12/19/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
LSC Prep										
TRI-CARB LSC										**12/20/10**
Total Alpha	12587-46-1	LA-508-421	U	1.3	1.2	pCi/g	1	1.9		12/21/10
Total Beta	12587-47-2	LA-508-421		7.8	2.4	pCi/g	1	2.8		12/21/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-039-049	PAGE 1 OF 1
COLLECTOR Scales	COMPANY CONTACT WIDRIG, DL	TELEPHONE NO. 376-2858	PROJECT COORDINATOR WIDRIG, DL	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 600-287-PL In-Process Sample 1	PROJECT DESIGNATION 600-287-PL - Soil		SAF NO. F11-039	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. GWS-200	FIELD LOGBOOK NO. HNF-N-507-18	ACTUAL SAMPLE DEPTH Surface	COA 302560ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B2B4P0

PRESERVATION	Cool~4C
HOLDING TIME	30 Days
TYPE OF CONTAINER	G/P
NO. OF CONTAINER(S)	1
VOLUME	120mL
SAMPLE ANALYSIS	Chromium Hex - 7196 (Hexavalent Chromium);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2B4W5	SOIL	12-19-10	1206	X

MCNDE

JOC210595
JDGW06087

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J Scales 12-19-10	1613	SSU-1 12-19-10	1613
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SSU-1 1200 DEC 21 2010		SE Hamaker DEC 21 2010	1200
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SE Hamaker DEC 21 2010	1330	[illegible] DEC 21 2010	1330
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** The laboratory shall report only the requested constituents of concern in all final data reports, and EDDs. QC results for non-requested constituents need not be reported, but samples chosen for matrix spike, and all spike compounds shall be identified in the final data report case narrative. No TICs shall be reported.☐** Per previous written agreement, the Laboratories shall report all final data for this sampling event on or before December 30, 2010. Contact the Project Coordinator for questions.

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

A-6003-618 (REV 2)

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103446

Sample # 103446010
SAF# F11-039
Sample ID B2B4P0

Matrix SOIL
Sampled 12/19/10
Received 12/19/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
LSC Prep										
TRI-CARB LSC										**12/20/10**
Total Alpha	12587-46-1	LA-508-421	U	0.24	1.3	pCi/g	1	2.2		12/20/10
Total Beta	12587-47-2	LA-508-421		6.7	2.3	pCi/g	1	2.9		12/20/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-039-089	PAGE 1 OF 1
COLLECTOR Scales	COMPANY CONTACT WIDRIG, DL	TELEPHONE NO. 376-2858	PROJECT COORDINATOR WIDRIG, DL	PRICE CODE C01 AIR QUALITY ☐	DATA TURNAROUND 12 Days / 12 Days
SAMPLING LOCATION 600-287-PL V-5	PROJECT DESIGNATION 600-287-PL - Soil		SAF NO. F11-039		
ICE CHEST NO. GWS-200	FIELD LOGBOOK NO. HNF-N-507-16	ACTUAL SAMPLE DEPTH Surface	COA 302560ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B2B4N5

PRESERVATION	Cool~4C
HOLDING TIME	30 Days
TYPE OF CONTAINER	G/P
NO. OF CONTAINER(S)	1
VOLUME	120mL
SAMPLE ANALYSIS	Chromium Hex - 7196 {Hexavalent Chromium};

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2B4W0	SOIL	12-19-10	X 1156	X

MCNDH

JOC210595
SDGW06087

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM J Scales [signature] 12-19-10	DATE/TIME 1613	RECEIVED BY/STORED IN SSU- 1 12-19-10	DATE/TIME 1613
RELINQUISHED BY/REMOVED FROM SSU- 1	DATE/TIME DEC 21 2010 1200	RECEIVED BY/STORED IN KB Hulse [signature]	DATE/TIME DEC 21 2010 1200
RELINQUISHED BY/REMOVED FROM KB Hulse [signature]	DATE/TIME DEC 21 2010 1330	RECEIVED BY/STORED IN [signature] TAIL	DATE/TIME DEC 21 2010 1330
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** The laboratory shall report only the requested constituents of concern in all final data reports, and EDDs. QC results for non-requested constituents need not be reported, but samples chosen for matrix spike, and all spike compounds shall be identified in the final data report case narrative. No TICs shall be reported.☐** Per previous written agreement, the Laboratories shall report all final data for this sampling event on or before December 30, 2010. Contact the Project Coordinator for questions.

ORIGINAL

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

A-6003-618 (REV 2)

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103446

Sample # 103446005
SAF# F11-039
Sample ID B2B4N5

Matrix SOIL
Sampled 12/19/10
Received 12/19/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
LSC Prep										**12/20/10**
TRI-CARB LSC										
Total Alpha	12587-46-1	LA-508-421	U	0.98	1.2	pCi/g	1	1.9		12/21/10
Total Beta	12587-47-2	LA-508-421		3.2	1.8	pCi/g	1	2.8		12/21/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

DRAFT

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-039-085	PAGE 1 OF 1
COLLECTOR: Chamberlain	COMPANY CONTACT: WIDRIG, DL	TELEPHONE NO.: 376-2858	PROJECT COORDINATOR: WIDRIG, DL	PRICE CODE: C01	DATA TURNAROUND
SAMPLING LOCATION: 600-287-PL V-4	PROJECT DESIGNATION: 600-287-PL - Soil		SAF NO.: F11-039	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO.: GWS-200	FIELD LOGBOOK NO.: ANF-N-507-16	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302560ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B2B4N4

PRESERVATION	Cool~4C
HOLDING TIME	30 Days
TYPE OF CONTAINER	G/P
NO. OF CONTAINER(S)	1
VOLUME	120mL
SAMPLE ANALYSIS	Chromium Hex - 7196 (Hexavalent Chromium);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2B4V9	SOIL	12-19-10	1210	X

MCNDK

JOC210595
SDGW06087

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: Craig Chamberlain	DATE/TIME: 12-19-10 1213	RECEIVED BY/STORED IN: SSU-1 12-19-10	DATE/TIME: 1213
RELINQUISHED BY/REMOVED FROM: SSU-1	DATE/TIME: DEC 21 2010 1200	RECEIVED BY/STORED IN: KB Hulse KB Hulse	DATE/TIME: DEC 21 2010 1200
RELINQUISHED BY/REMOVED FROM: KB Hulse KB Hulse	DATE/TIME: DEC 21 2010 1330	RECEIVED BY/STORED IN: [illegible]	DATE/TIME: DEC 21 2010 1330
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** The laboratory shall report only the requested constituents of concern in all final data reports, and EDDs. QC results for non-requested constituents need not be reported, but samples chosen for matrix spike, and all spike compounds shall be identified in the final data report case narrative. No TICs shall be reported.☐** Per previous written agreement, the Laboratories shall report all final data for this sampling event on or before December 30, 2010. Contact the Project Coordinator for questions.

ORIGINAL

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

A-6003-618 (REV 2)

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103446

Sample # 103446004
SAF# F11-039
Sample ID B2B4N4

Matrix SOIL
Sampled 12/19/10
Received 12/19/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
LSC Prep										
TRI-CARB LSC										**12/20/10**
Total Alpha	12587-46-1	LA-508-421	U	0.80	1.4	pCi/g	1	2.2		12/20/10
Total Beta	12587-47-2	LA-508-421		6.9	2.3	pCi/g	1	2.9		12/20/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

DRAFT

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-039-081	PAGE 1 OF 1
COLLECTOR Chamberlain	COMPANY CONTACT WIDRIG, DL	TELEPHONE NO. 376-2858	PROJECT COORDINATOR WIDRIG, DL	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 600-287-PL V-3	PROJECT DESIGNATION 600-287-PL - Soil		SAF NO. F11-039	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. GWS-200	FIELD LOGBOOK NO. HNF-N-507-16	ACTUAL SAMPLE DEPTH 0-1'	COA 302560ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B2B4N3

PRESERVATION	Cool~4C
HOLDING TIME	30 Days
TYPE OF CONTAINER	G/P
NO. OF CONTAINER(S)	1
VOLUME	120mL
SAMPLE ANALYSIS	Chromium Hex - 7196 (Hexavalent Chromium);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2B4V8	SOIL	12-19-10	1230	✓

MCNDL

JOC210595
SDGW06087

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[illegible] 12-19-10	1615	SSU-1 12-19-10	1615
RELINQUISHED BY/REMOVED FROM SSU-1	DATE/TIME 1200 DEC 21 2010	RECEIVED BY/STORED IN [illegible] DEC 21 2010	DATE/TIME 1200
RELINQUISHED BY/REMOVED FROM [illegible] DEC 21 2010	DATE/TIME 1330	RECEIVED BY/STORED IN [illegible] DEC 21 2010	DATE/TIME 1330
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
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ORIGINAL

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

A-6003-618 (REV 2)

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103446

Sample # 103446003
SAF# F11-039
Sample ID B2B4N3

Matrix SOIL
Sampled 12/19/10
Received 12/19/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
LSC Prep										
TRI-CARB LSC										**12/20/10**
Total Alpha	12587-46-1	LA-508-421	U	-0.16	1.3	pCi/g	1	2.2		12/20/10
Total Beta	12587-47-2	LA-508-421		4.0	2	pCi/g	1	2.9		12/20/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-039-077	PAGE 1 OF 1
COLLECTOR: Chamberlain	COMPANY CONTACT: WIDRIG, DL	TELEPHONE NO.: 376-2858	PROJECT COORDINATOR: WIDRIG, DL	PRICE CODE: C01	DATA TURNAROUND
SAMPLING LOCATION: 600-287-PL V-2	PROJECT DESIGNATION: 600-287-PL - Soil		SAF NO.: F11-039	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO.: GWS - 200	FIELD LOGBOOK NO.: HNF-N-507-16	ACTUAL SAMPLE DEPTH: 0-1'	COA: 302560ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B2B4N2

PRESERVATION	Cool~4C
HOLDING TIME	30 Days
TYPE OF CONTAINER	G/P
NO. OF CONTAINER(S)	1
VOLUME	120mL
SAMPLE ANALYSIS	Chromium Hex - 7196 (Hexavalent Chromium);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2B4V7	SOIL	12-19-10	1130	X

MCNDN
JU6210595
SDGW06087

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: Chamberlain	DATE/TIME: 12-19-10 / 0615	RECEIVED BY/STORED IN: SSU- 1	DATE/TIME: 12-19-10 0615
RELINQUISHED BY/REMOVED FROM: SSU- 1	DATE/TIME: DEC 21 2010 1200	RECEIVED BY/STORED IN: KB Hulse	DATE/TIME: DEC 21 2010 1200
RELINQUISHED BY/REMOVED FROM: KB Hulse	DATE/TIME: DEC 21 2010 1330	RECEIVED BY/STORED IN: [illegible]	DATE/TIME: DEC 21 2010 1330
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** The laboratory shall report only the requested constituents of concern in all final data reports, and EDDs. QC results for non-requested constituents need not be reported, but samples chosen for matrix spike, and all spike compounds shall be identified in the final data report case narrative. No TICs shall be reported.☐** Per previous written agreement, the Laboratories shall report all final data for this sampling event on or before December 30, 2010. Contact the Project Coordinator for questions.

ORIGINAL

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

A-6003-618 (REV 2)

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103446

Sample # 103446002
SAF# F11-039
Sample ID B2B4N2

Matrix SOIL
Sampled 12/19/10
Received 12/19/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
LSC Prep										
TRI-CARB LSC										**12/20/10**
Total Alpha	12587-46-1	LA-508-421	U	0.52	1.2	pCi/g	1	1.9		12/21/10
Total Beta	12587-47-2	LA-508-421		7.2	2.3	pCi/g	1	2.8		12/21/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

DRAFT

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-039-073	PAGE 1 OF 1
COLLECTOR Chamberlain	COMPANY CONTACT WIDRIG, DL	TELEPHONE NO. 376-2858	PROJECT COORDINATOR WIDRIG, DL	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 600-287-PL V-1	PROJECT DESIGNATION 600-287-PL - Soil		SAF NO. F11-039	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. GWS-200	FIELD LOGBOOK NO. HNF-N-507-16	ACTUAL SAMPLE DEPTH 0-1'	COA 302560ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B2B4N1

PRESERVATION	Cool~4C
HOLDING TIME	30 Days
TYPE OF CONTAINER	G/P
NO. OF CONTAINER(S)	1
VOLUME	120mL
SAMPLE ANALYSIS	Chromium Hex - 7196 {Hexavalent Chromium};

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2B4V6	SOIL	12-19-10	1122	X

MCNDP

JOC210595
SDGW06087

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[signature]	12-19-10 / 1622	SSU- 1 12-19-10	1621
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SSU 1	12-21-10 / 1140	[signature]	DEC 21 2010 1140
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
KB Hulse [signature]	DEC 21 2010 1330	[signature]	DEC 21 2010 1330
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** The laboratory shall report only the requested constituents of concern in all final data reports, and EDDs. QC results for non-requested constituents need not be reported, but samples chosen for matrix spike, and all spike compounds shall be identified in the final data report case narrative. No TICs shall be reported.☐** Per previous written agreement, the Laboratories shall report all final data for this sampling event on or before December 30, 2010. Contact the Project Coordinator for questions.

ORIGINAL

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

A-6003-618 (REV 2)

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103446

Sample # 103446001
SAF# F11-039
Sample ID B2B4N1

Matrix SOIL
Sampled 12/19/10
Received 12/19/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
LSC Prep										**12/20/10**
TRI-CARB LSC										
Total Alpha	12587-46-1	LA-508-421	U	1.2	1.2	pCi/g	1	1.9		12/21/10
Total Beta	12587-47-2	LA-508-421		5.6	2.1	pCi/g	1	2.8		12/21/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

DRAFT

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-039-105	PAGE 1 OF 1
COLLECTOR Scales	COMPANY CONTACT WIDRIG, DL	TELEPHONE NO. 376-2858	PROJECT COORDINATOR WIDRIG, DL	PRICE CODE C01 AIR QUALITY ☐	DATA TURNAROUND 12 Days / 12 Days
SAMPLING LOCATION 600-287-PL V-8	PROJECT DESIGNATION 600-287-PL - Soil		SAF NO. F11-039		
ICE CHEST NO. GWS-200	FIELD LOGBOOK NO. HNF-N-507-14	ACTUAL SAMPLE DEPTH Surface	COA 302560ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B2B4N9

PRESERVATION	Cool~4C
HOLDING TIME	30 Days
TYPE OF CONTAINER	G/P
NO. OF CONTAINER(S)	1
VOLUME	120mL
SAMPLE ANALYSIS	Chromium Hex - 7196 {Hexavalent Chromium};

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2B4W4	SOIL	12-19-10	1245	X

J0L210595

J0C210595
SDGW06087

MCNDT

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM J Scales	DATE/TIME 12-19-10 1613	RECEIVED BY/STORED IN SSU- 1	DATE/TIME 12-19-10 1613
RELINQUISHED BY/REMOVED FROM SSU- 1	DATE/TIME 1200 DEC 21 2010	RECEIVED BY/STORED IN SE Hamaker	DATE/TIME 1200 DEC 21 2010
RELINQUISHED BY/REMOVED FROM SE Hamaker	DATE/TIME DEC 21 2010 1330	RECEIVED BY/STORED IN CHPRC	DATE/TIME DEC 21 2010 1530
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** The laboratory shall report only the requested constituents of concern in all final data reports, and EDDs. QC results for non-requested constituents need not be reported, but samples chosen for matrix spike, and all spike compounds shall be identified in the final data report case narrative. No TICs shall be reported.☐** Per previous written agreement, the Laboratories shall report all final data for this sampling event on or before December 30, 2010. Contact the Project Coordinator for questions.

ORIGINAL

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

A-6003-618 (REV 2)

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103446

Sample # 103446009
SAF# F11-039
Sample ID B2B4N9

Matrix SOIL
Sampled 12/19/10
Received 12/19/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
LSC Prep										
TRI-CARB LSC										**12/20/10**
Total Alpha	12587-46-1	LA-508-421	U	0.69	1.4	pCi/g	1	2.2		12/20/10
Total Beta	12587-47-2	LA-508-421		5.2	2.1	pCi/g	1	2.9		12/20/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-039-101	PAGE 1 OF 1
COLLECTOR Scales	COMPANY CONTACT WIDRIG, DL	TELEPHONE NO. 376-2858	PROJECT COORDINATOR WIDRIG, DL	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 600-287-PL V-7	PROJECT DESIGNATION 600-287-PL - Soil		SAF NO. F11-039	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. GWS-200	FIELD LOGBOOK NO. HWF-N-507-16	ACTUAL SAMPLE DEPTH Surface	COA 302560ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B2B4N8

PRESERVATION	Cool~4C
HOLDING TIME	30 Days
TYPE OF CONTAINER	G/P
NO. OF CONTAINER(S)	1
VOLUME	120mL
SAMPLE ANALYSIS	Chromium Hex - 7196 (Hexavalent Chromium);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2B4W3	SOIL	12-19-10	1045	X

MCNEG

JOL210595

FCH
JOL210595
SDG W06087

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J Scales 12-19-10	0613	SSU-1 12-19-10	0613
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SSU-1 1200	DEC 21 2010	SE Hamaker 1200	DEC 21 2010
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SE Hamaker CHPRC	DEC 21 2010 1330	TAA	DEC 21 2010 1330
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** The laboratory shall report only the requested constituents of concern in all final data reports, and EDDs. QC results for non-requested constituents need not be reported, but samples chosen for matrix spike, and all spike compounds shall be identified in the final data report case narrative. No TICs shall be reported.☐** Per previous written agreement, the Laboratories shall report all final data for this sampling event on or before December 30, 2010. Contact the Project Coordinator for questions.

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

A-6003-618 (REV 2)

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103446

Sample # 103446008
SAF# F11-039
Sample ID B2B4N8

Matrix SOIL
Sampled 12/19/10
Received 12/19/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
LSC Prep										
TRI-CARB LSC										**12/20/10**
Total Alpha	12587-46-1	LA-508-421	U	0.97	1.2	pCi/g	1	1.9		12/21/10
Total Beta	12587-47-2	LA-508-421		7.5	2.3	pCi/g	1	2.8		12/21/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-039-093	PAGE 1 OF 1
COLLECTOR Scales	COMPANY CONTACT WIDRIG, DL	TELEPHONE NO. 376-2858	PROJECT COORDINATOR WIDRIG, DL	PRICE CODE C01 AIR QUALITY ☐	DATA TURNAROUND 12 Days / 12 Days
SAMPLING LOCATION 600-287-PL V-5 D	PROJECT DESIGNATION 600-287-PL - Soil		SAF NO. F11-039		
ICE CHEST NO. GWS-200	FIELD LOGBOOK NO. HNF-N-507-15	ACTUAL SAMPLE DEPTH Surface	COA 302560ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B2B4N6

PRESERVATION	Cool~4C
HOLDING TIME	30 Days.
TYPE OF CONTAINER	G/P
NO. OF CONTAINER(S)	1
VOLUME	120mL
SAMPLE ANALYSIS	Chromium Hex - 7196 (Hexavalent Chromium);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2B4W1	SOIL	12-19-10	1156	X

MCNEK
JOC210595
JDGW06087

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM J Scales	DATE/TIME 12-19-10 1613	RECEIVED BY/STORED IN SSU-1 12-19-10 1613	DATE/TIME
RELINQUISHED BY/REMOVED FROM SSU-1 1200	DATE/TIME DEC 21 2010	RECEIVED BY/STORED IN SE Hamaker 1200	DATE/TIME DEC 21 2010
RELINQUISHED BY/REMOVED FROM SE Hamaker	DATE/TIME DEC 21 2010 1330	RECEIVED BY/STORED IN SHIPPING	DATE/TIME DEC 21 2010 1330
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** The laboratory shall report only the requested constituents of concern in all final data reports, and EDDs. QC results for non-requested constituents need not be reported, but samples chosen for matrix spike, and all spike compounds shall be identified in the final data report case narrative. No TICs shall be reported.☐** Per previous written agreement, the Laboratories shall report all final data for this sampling event on or before December 30, 2010. Contact the Project Coordinator for questions.

ORIGINAL

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

A-6003-618 (REV 2)

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103446

Sample # 103446006
SAF# F11-039
Sample ID B2B4N6

Matrix SOIL
Sampled 12/19/10
Received 12/19/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
LSC Prep										
TRI-CARB LSC										**12/20/10**
Total Alpha	12587-46-1	LA-508-421	U	-0.33	1.3	pCi/g	1	2.2		12/20/10
Total Beta	12587-47-2	LA-508-421	U	2.4	1.8	pCi/g	1	2.9		12/20/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

DRAFT

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-039-097	PAGE 1 OF 1
COLLECTOR Chamberlain	COMPANY CONTACT WIDRIG, DL	TELEPHONE NO. 376-2858	PROJECT COORDINATOR WIDRIG, DL	PRICE CODE C01	DATA TURNAROUND
SAMPLING LOCATION 600-287-PL V-6	PROJECT DESIGNATION 600-287-PL - Soil		SAF NO. F11-039	AIR QUALITY ☐	12 Days / 12 Days
ICE CHEST NO. GWS-200	FIELD LOGBOOK NO. HNF-N-507-16	ACTUAL SAMPLE DEPTH 0-1'	COA 302560ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B2B4N7

PRESERVATION	Cool~4C
HOLDING TIME	30 Days
TYPE OF CONTAINER	G/P
NO. OF CONTAINER(S)	1
VOLUME	120mL
SAMPLE ANALYSIS	Chromium Hex - 7196 (Hexavalent Chromium);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2B4W2	SOIL	12-19-10	1130	X

MCNEL
JOC210595
SDGW06087

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[illegible]	12-19-10 / 1613	SSU-1	12-19-10 1613
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SSU-1	1200 DEC 21 2010	SE Hamaker [illegible]	1200 DEC 21 2010
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SE Hamaker CHPRC [illegible]	1330 DEC 21 2010	[illegible]	1330 DEC 21 2010
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

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ORIGINAL

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

A-6003-618 (REV 2)

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103446

Sample # 103446007
SAF# F11-039
Sample ID B2B4N7

Matrix SOIL
Sampled 12/19/10
Received 12/19/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
LSC Prep										
TRI-CARB LSC										**12/20/10**
Total Alpha	12587-46-1	LA-508-421	U	0.048	1.1	pCi/g	1	1.9		12/21/10
Total Beta	12587-47-2	LA-508-421		6.7	2.2	pCi/g	1	2.8		12/21/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

DRAFT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: Dec. 21. 10 @ 1330 GM Screen Result (out) .2 (in) .3 Initials [ ]

Client: FLH SDG #: W06087 NA [ ] SAF #: F11-039 NA [ ]

Work Order Number: JOC210595 Chain of Custody # ~~F11-039-061~~ SEE #13 SKS 12/29/10

Shipping Container ID: Hand Delivery NA [ ] Air Bill # NA [ ]

Item 1 through 5 for shipping container only. Initial appropriate response.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ ]
3. Chain of Custody record present? Yes [ ] No [ ]
4. Cooler temperature: 4°C NA [ ] 5. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]

Item 6 through 10 for samples. Initial appropriate response.

6. Number of samples in shipping container (Each sample may contain multiple bottles): 13
7. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
8. Samples have:
   - tape
   - custody seals
   - hazard labels
   - appropriate sample labels
9. Samples:
   - are in good condition (Cool)
   - are broken
   - are leaking
   - have air bubbles (Only for samples requiring no head space)
10. Sample pH appropriate for analysis requested Yes [ ] No [ ] N/A [ ] (Note discrepancies in #13)
    (If acidification necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition)

    RPL ID # of preservative used :
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): NA [ ] COC #'S ARE: F11-039-101, 105, 073, 077, 081, 085, 089, 049, 053, 057, 061, 097, 093

See other side for additional comments

Sample Custodian: [signature] Date: Dec. 21. 10 @ 1330

Client Informed on N/A by N/A Person contacted N/A

[ ] No action necessary, process as is

Project Manager [signature] Date 12/29/10

LS-023, Rev. 12, 10/10

12/28/2010 11:16:14 AM

Sample Preparation/Analysis

108302, CH2M Hill Plateau Remediation DOE RL
, Flour Hanford Inc

AnalyDueDate: 01/03/2011

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

Balance Id:

Pipet #: _____

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech:

Batch: 0362264 **SOIL** **mg/kg** **PM, Quote: SS , 50639**
SEQ Batch, Test: None All Tests: 0362264 DWEA,

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 MCNCF-1-AA J0L210595-1-SAMP 12/19/2010 12:38		AmtRec: 1XJAR120MLG	#Containers: 1					Scr:	Alpha:	Beta:
2 MCNCF-1-AC-S J0L210595-1-MS 12/19/2010 12:38		AmtRec: 1XJAR120MLG	#Containers: 1					Scr:	Alpha:	Beta:
3 MCNCF-1-AD-X J0L210595-1-DUP 12/19/2010 12:38		AmtRec: 1XJAR120MLG	#Containers: 1					Scr:	Alpha:	Beta:
4 MCNCP-1-AA J0L210595-2-SAMP 12/19/2010 11:16		AmtRec: 1XJAR120G	#Containers: 1					Scr:	Alpha:	Beta:
5 MCNC3-1-AA J0L210595-3-SAMP 12/19/2010 11:46		AmtRec: 1XJAR120G	#Containers: 1					Scr:	Alpha:	Beta:
6 MCNDE-1-AA J0L210595-4-SAMP 12/19/2010 12:06		AmtRec: 1XJAR120G	#Containers: 1					Scr:	Alpha:	Beta:
7 MCNDH-1-AA J0L210595-5-SAMP 12/19/2010 11:56		AmtRec: 1XJAR120G	#Containers: 1					Scr:	Alpha:	Beta:

12/28/2010 11:16:14 AM

Sample Preparation/Analysis

108302, CH2M Hill Plateau Remediation DOE RL
, Flour Hanford Inc

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

Balance Id:
Pipet #:

AnalyDueDate: 01/03/2011

Sep1 DT/Tm Tech:

Batch: 0362264 SOIL mg/kg PM, Quote: SS , 50639

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech:

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 MCNDK-1-AA J0L210595-6-SAMP 12/19/2010 12:10		AmtRec: 1XJAR120G	#Containers: 1					Scr:	Alpha:	Beta:
9 MCNDL-1-AA J0L210595-7-SAMP 12/19/2010 12:30		AmtRec: 1XJAR120G	#Containers: 1					Scr:	Alpha:	Beta:
10 MCNDN-1-AA J0L210595-8-SAMP 12/19/2010 11:30		AmtRec: 1XJAR120G	#Containers: 1					Scr:	Alpha:	Beta:
11 MCNDP-1-AA J0L210595-9-SAMP 12/19/2010 11:22		AmtRec: 1XJAR120G	#Containers: 1					Scr:	Alpha:	Beta:
12 MCNDT-1-AA J0L210595-10-SAMP 12/19/2010 12:45		AmtRec: 1XJAR120G	#Containers: 1					Scr:	Alpha:	Beta:
13 MCNEG-1-AA J0L210595-11-SAMP 12/19/2010 10:45		AmtRec: 1XJAR120G	#Containers: 1					Scr:	Alpha:	Beta:
14 MCNEK-1-AA J0L210595-12-SAMP 12/19/2010 11:56		AmtRec: 1XJAR120G	#Containers: 1					Scr:	Alpha:	Beta:

12/28/2010 11:16:14 AM

Sample Preparation/Analysis

Balance Id:

108302, CH2M Hill Plateau Remediation DOE RL
, Flour Hanford Inc

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

Pipet #: _____

AnalyDueDate: 01/03/2011

Sep1 DT/Tm Tech:

Batch: 0362264 SOIL mg/kg PM, Quote: SS , 50639

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:

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:
15 MCNEL-1-AA J0L210595-13-SAMP 12/19/2010 11:30		AmtRec: 1XJAR120G	#Containers: 1					Scr:	Alpha:	Beta:
16 MCTT2-1-AA-B J0L280000-264-BLK 12/28/2010 11:16 pd		AmtRec:	#Containers: 1					Scr:	Alpha:	Beta:
17 MCTT2-1-AC-C J0L280000-264-LCS 12/28/2010 11:16 pd		AmtRec:	#Containers: 1					Scr:	Alpha:	Beta:

Comments:

```
All Clients for Batch:
   108302, CH2M Hill Plateau Remediation DOE RL       Flour Hanford Inc              ,  SS , 50639

MCNCF1AA-SAMP Constituent List:
  HEXCHROME   RDL:0.1548      mg/kg      LCL:80      UCL:120      RPD:20
MCNCF1AC-MS Constituent List:

MCTT21AA-BLK:

MCTT21AC-LCS:

MCNCF1AA-SAMP Calc Info:
     Uncert Level (#s).: 2      Decay to SaDt: Y      Blk Subt.: N      Sci.Not.: Y      ODRs: B
MCNCF1AC-MS Calc Info:
     Uncert Level (#s).: 2      Decay to SaDt: Y      Blk Subt.: N      Sci.Not.: Y      ODRs: B
MCTT21AA-BLK:
     Uncert Level (#s).: 2      Decay to SaDt: Y      Blk Subt.: N      Sci.Not.: Y      ODRs: B
```

12/28/2010 11:16:15 AM

Sample Preparation/Analysis

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

Balance Id:

Pipet #:

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech:

AnalyDueDate: 01/03/2011

Batch: 0362264 mg/kg
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:

MCTT21AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B