0092145

SAF-RC-174
ARRA Remaining Sites Confirmation Sampling – Soil Full Protocol
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 11/29/10
INITIAL/DATE

COMMENTS:

SDG J00926 SAF-RC-174

Rad only ☑ Chem only Rad & Chem

☑ Complete Partial

Sample Location: 100-K-89

RECEIVED
DEC 02 2010
EDMC

Analytical Data Package Prepared For

Washington Closure Hanford

RECEIVED NOV 2010

Radiochemical Analysis By

TestAmerica

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

Assigned Laboratory Code: TARL

Data Package Contains 21 *Pages*

Report No.: 45231

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.
J00926	RC-174	J1B513	J0K110442-1	L9V2X1AA	9L9V2X10	0326264
		J1B514	J0K110442-2	L9V281AA	9L9V2810	0326264
		J1B515	J0K110442-3	L9V3A1AA	9L9V3A10	0326264
		J1B516	J0K110442-4	L9V3C1AA	9L9V3C10	0326264
		J1B517	J0K110442-5	L9V3E1AA	9L9V3E10	0326264

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

TestAmerica Laboratories, Inc.

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

November 29, 2010

Attention: Joan Kessner

SAF Number	:	RC-174
Date SDG Closed	:	November 10, 2010
Number of Samples	:	Five (5)
Sample Type	:	Soil
SDG Number	:	J00926
Data Deliverable	:	15/15 Summary

CASE NARRATIVE

I. Introduction

On November 10, 2010 five water samples were received at TestAmerica for chemistry analysis. Upon receipt, the samples were assigned the following laboratory ID number to correspond with the Washington Closure Hanford (WCH) specific ID:

WCH ID#	TARL ID#	MATRIX	DATE OF RECEIPT
J1B513	L9V2X	SOIL	11/10/10
J1B514	L9V28	SOIL	11/10/10
J1B515	L9V3A	SOIL	11/10/10
J1B516	L9V3C	SOIL	11/10/10
J1B517	L9V3E	SOIL	11/10/10

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

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 matrix spike recovered low at 17%. The post digestive matrix spike recovered at 28%. This implies strong reducing capacity in the sample. Except as noted, the LCS, batch blank, sample, sample duplicate (J1B513) and sample matrix spike (J1B513) 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 Microscopy based on NIOSH 9002
Alpha - Gross	ARCHIVED	RICH-RB-5035	Liquid Scintillation Anal/ Packard	DETERMINATION OF GROSS ALPHA IN NASAL SMEARS BY LIQUID SCINTILLATION COUNTING
Alpha - Gross	RL-GPC-001	RICH-RC-5014	9310 / EPA SW846 900.0 / EPA 600	DETERMINATION OF GROSS ALPHA AND GROSS BETA IN WATER BY METHOD 9310
Alpha - Gross	RL-GPC-007	RICH-RC-5020	SM 7110B EPA 680	DETERMINATION OF GROSS ALPHA AND GROSS BETA IN SOIL, SHORELINE SOIL, FOOD AND VEGETATION
Alpha - Gross	RL-GPC-002	RICH-RC-5021	00-02 EPA 520	DETERMINATION OF GROSS ALPHA ACTIVITY IN WATER BY COPRECIPITATION
Alpha - Gross	RL-GPC-008	RICH-RC-5036	ER100 / LANL	PREPARATION OF AIR FILTERS FOR GROSS ALPHA/BETA AND COMPOSITING AIR FILTERS
Am	RL-ALP-003	RICH-RC-5072	Mod RP 725 / DOE0089T EXT Chromatography	SEPARATION OF AMERICIUM, CURIUM, AND URANIUM BY EXTRACTION CHROMATOGRAPHY
Am	RL-ALP-010	RICH-RC-5080	Am03/Pu11HASL 300 NAS-NS-3006	SEQUENTIAL SEPARATION OF PLUTONIUM AND AMERICIUM
Beta - Gross	RL-GPC-001	RICH-RC-5014	9310 / EPA SW846 900.0 / EPA 600	DETERMINATION OF GROSS ALPHA AND GROSS BETA IN WATER BY METHOD 9310
Beta - Gross	RL-GPC-007	RICH-RC-5020	SM 7110B EPA 680	DETERMINATION OF GROSS ALPHA AND GROSS BETA IN SOIL, SHORELINE SOIL, FOOD AND VEGETATION
Beta - Gross	RL-GPC-008	RICH-RC-5036	ER100 / LANL	PREPARATION OF AIR FILTERS FOR GROSS ALPHA/BETA AND COMPOSITING AIR FILTERS
C14	RL-LSC-001	RICH-RB-5013	Mod H-02 / EPA 520	TRITIUM, CARBON-14, NICKEL-63 OR PHOSPHORUS-32 ANALYSIS IN URINE
C14	RL-LSC-008	RICH-RC-5022	EPA C-01 / EPA 520	CARBON 14 BY DIGESTION METHOD
C14	RL-LSC-009	RICH-RC-5040	Mod C14 / EPA 680	DETERMINATION OF CARBON-14 BY BENZENE SYNTHESIS
C14	RL-LSC-010	RICH-RC-5046	EPA C-01 / EPA 520	DETERMINATION OF CARBON-14 IN GRAPHITE AND SOIL
C14	RL-LSC-011	RICH-RC-5047	Mod H-02 / EPA 520	DETERMINATION OF CARBON-14 IN WATER BY DIRECT COUNTING
Cm	RL-ALP-003	RICH-RC-5072	Mod RP 725 / DOE0089T EXT Chromatography	SEPARATION OF AMERICIUM, CURIUM, AND URANIUM BY EXTRACTION CHROMATOGRAPHY
Coliform	RL-WC-001	RICH-WC-5001	9222B	DETERMINATION OF TOTAL COLIFORM: MULTIPLE TUBE FERMENTATION TECHNIQUE
Coliform	RL-WC-002	RICH-WC-5002	9131	TOTAL COLIFORMS BY MEMBRANE FILTRATION
Coliform	RL-WC-005	RICH-WC-5007	9223	TOTAL COLIFORM BY THE COLILERT METHOD
Cr6+	RL-WC-003	RICH-WC-5003	7196A, SW846	DETERMINATION OF HEXAVALENT CHROMIUM [Cr(VI)] IN WATER, SOIL, AND SIMILAR MATRICES
Cr6+	RL-WC-004	RICH-WC-5003	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-5057	H-3 in Water/Tissue / LV 539	DETERMINATION OF TRITIUM BY CRYOGENIC DISTILLATION
H3	RL-LSC-006	RICH-RC-5048	H-3 in Water/Tissue / LV 539	TRITIUM PREPARATION IN MILK SAMPLES
I129	RL-GAM-002	RICH-RC-5025	R4-73-014I/EPA ASTM D2334 (Discontinued)	DETERMINATION OF IODINE-131 AND 129 IN WATER BY SOLVENT EXTRACTION METHOD
I131	RL-GAM-002	RICH-RC-5025	R4-73-014I/EPA ASTM D2334 (Discontinued)	DETERMINATION OF IODINE-131 AND 129 IN WATER BY SOLVENT EXTRACTION METHOD
I131	ARCHIVED	RICH-RC-5049	HASL 300 (1983)	DETERMINATION OF IODINE-131 IN MILK BY BATCH ION-EXCHANGE
Metals	ARCHIVED	BHI-MT-0001	6010	ICP-AE SPECTROSCOPY, SPECTROMETRIC METHOD FOR TRACE ELEMENT ANALYSIS, METHOD 6010A FOR Bechtel
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 D1429-98	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-5008	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 / DOE0089T	URINE AND WATER SAMPLE PREPARATION BY CALCIUM PHOSPHATE PRECIPITATION
Prep - Water	RL-PRP-010	RICH-RC-5086	AnalyticaChemActa1992 RP800 / DOE0089T	URINE AND WATER SAMPLE PREPARATION BY CALCIUM PHOSPHATE PRECIPITATION
Pu	ARCHIVED	RICH-RB-5015	Pu11 / HASL 300	RAPID DETERMINATION OF PLUTONIUM IN FECES
Pu	RL-ALP-002	RICH-RC-5010	Pu11 / HASL 300	DETERMINATION OF ISOTOPIC PLUTONIUM IN ALL MATRICES
Pu	RL-ALP-010	RICH-RC-5080	Am03 HASL 300 Pu11 / HASL 300	SEQUENTIAL SEPARATION OF PLUTONIUM AND AMERICIUM
Pu	RL-ALP-001	RICH-RC-5087	AnalyticaChemActa1992 RP800 / DOE0089T	DETERMINATION OF PLUTONIUM BY EXTRACTION CHROMATOGRAPHY
Ra	RL-RA-001	RICH-RC-5005	903.1 / EPA 600	RADIUM-226 AND RADIUM-228 SEPARATION IN RADIOCHEMICAL MATRICES - ADAPTED FROM EPA 903.1 AND 904.0
Ra	RL-RA-001	RICH-RC-5005	904.0 / EPA 600	RADIUM-226 AND RADIUM-228 SEPARATION IN RADIOCHEMICAL MATRICES - ADAPTED FROM EPA 903.1 AND 904.0
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, Lundell, 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

Date: 24-Nov-10

TestAmerica TARL

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

Report No. : 45231

SDG No: J00926

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
0326264	7196_CR6								
J1B513									
	L9V2X1AA	HEXCHROME	1.54E-01 +- 0.0E+00	U	mg/kg	N/A	1.54E-01	1.55E-01	
	L9V2X1AD	HEXCHROME	1.50E-01 +- 0.0E+00	U	mg/kg	N/A	1.50E-01	3.50E-01	2.6
J1B514									
	L9V281AA	HEXCHROME	2.02E-01 +- 0.0E+00		mg/kg	N/A	1.54E-01	1.55E-01	
J1B515									
	L9V3A1AA	HEXCHROME	1.53E-01 +- 0.0E+00	U	mg/kg	N/A	1.53E-01	1.55E-01	
J1B516									
	L9V3C1AA	HEXCHROME	1.51E-01 +- 0.0E+00	U	mg/kg	N/A	1.51E-01	1.55E-01	
J1B517									
	L9V3E1AA	HEXCHROME	1.51E-01 +- 0.0E+00	U	mg/kg	N/A	1.51E-01	1.55E-01	

No. of Results: 6

QC Results Summary

Date: 24-Nov-10

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Report No. : 45231

SDG No.: J00926

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC|MDA
7196_CR6								
0326264 BLANK QC,								
MAEGJ1AA	HEXCHROME	2.54E-01 +- 0.0E+00		mg/kg	N/A			1.55E-01
0326264 LCS,								
MAEGJ1AC	HEXCHROME	1.93E+01 +- 0.0E+00		mg/kg	N/A	97%	0.0	1.55E-01
0326264 MATRIX SPIKE, J1B513								
L9V2X1AC	HEXCHROME	1.62E+00 +- 0.0E+00		mg/kg	N/A	17%	-0.8	1.49E-01

No. of Results: 3

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

rptSTLRchQcSum mary V5.2.9 A2002

TestAmerica

FORM I

SAMPLE RESULTS

Date: 24-Nov-10

Lab Name:	**TestAmerica**	**SDG:**	J00926	**Collection Date:**	11/9/2010 8:45:00 AM
Lot-Sample No.:	**J0K110442-1**	**Report No. :**	45231	**Received Date:**	11/10/2010 9:30:00 AM
Client Sample ID:	**J1B513**	**COC No. :**	RC-174-010	**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: 0326264	7196_CR6			**Work Order:** L9V2X1AA			**Report DB ID:** 9L9V2X10					
HEXCHROME	***1.54E-01***	U		0.0E+00	1.54E-01	mg/kg	N/A	*(1.)*	11/22/10 10:45 a		2.5078	
							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.

TestAmerica

FORM I

SAMPLE RESULTS

Date: 24-Nov-10

Lab Name:	TestAmerica	**SDG:**	J00926	**Collection Date:**	11/9/2010 9:45:00 AM
Lot-Sample No.:	J0K110442-2	**Report No. :**	45231	**Received Date:**	11/10/2010 9:30:00 AM
Client Sample ID:	J1B514	**COC No. :**	RC-174-010	**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: 0326264	7196_CR6			**Work Order:** L9V281AA			**Report DB ID:** 9L9V2810					
HEXCHROME	***2.02E-01***			0.0E+00	1.54E-01	mg/kg	N/A	*(1.3)*	11/22/10 10:45 a		2.5197	
							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.

TestAmerica

FORM I

SAMPLE RESULTS

Date: 24-Nov-10

Lab Name:	TestAmerica	**SDG:**	J00926	**Collection Date:**	11/9/2010 9:00:00 AM
Lot-Sample No.:	J0K110442-3	**Report No. :**	45231	**Received Date:**	11/10/2010 9:30:00 AM
Client Sample ID:	J1B515	**COC No. :**	RC-174-010	**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: 0326264	7196_CR6			**Work Order:** L9V3A1AA			**Report DB ID:** 9L9V3A10					
HEXCHROME	***1.53E-01***	U		0.0E+00	1.53E-01	mg/kg	N/A	*(1.)*	11/22/10 10:45 a		2.5258	
							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.

TestAmerica

FORM I

SAMPLE RESULTS

Date: 24-Nov-10

Lab Name:	TestAmerica	**SDG:**	J00926	**Collection Date:**	11/9/2010 10:30:00 AM
Lot-Sample No.:	J0K110442-4	**Report No. :**	45231	**Received Date:**	11/10/2010 9:30:00 AM
Client Sample ID:	J1B516	**COC No. :**	RC-174-010	**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: 0326264	7196_CR6			Work Order: L9V3C1AA			Report DB ID: 9L9V3C10					
HEXCHROME	***1.51E-01***	U		0.0E+00	1.51E-01	mg/kg	N/A	*(1.)*	11/22/10 10:45 a		2.5615	
							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.

TestAmerica

FORM I

SAMPLE RESULTS

Date: 24-Nov-10

Lab Name:	TestAmerica	SDG:	J00926	Collection Date:	11/9/2010 10:30:00 AM
Lot-Sample No.:	J0K110442-5	Report No. :	45231	Received Date:	11/10/2010 9:30:00 AM
Client Sample ID:	J1B517	COC No. :	RC-174-010	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: 0326264	7196_CR6			Work Order: L9V3E1AA			Report DB ID: 9L9V3E10					
HEXCHROME	***1.51E-01***	U		0.0E+00	1.51E-01	mg/kg	N/A	*(1.)*	11/22/10 10:45 a		2.5587	
							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.

TestAmerica

FORM II

Date: 24-Nov-10

DUPLICATE RESULTS

Lab Name:	TestAmerica	SDG:	J00926	Collection Date:	11/9/2010 8:45:00 AM
Lot-Sample No.:	J0K110442-1	Report No. :	45231	Received Date:	11/10/2010 9:30:00 AM
Client Sample ID:	J1B513	COC No. :	RC-174-010	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: 0326264	7196_CR6			Work Order: L9V2X1AD		Report DB ID: L9V2X1AD			Orig Sa DB ID: 9L9V2X10			
HEXCHROME	1.50E-01	U		0.0E+00	1.50E-01	mg/kg	N/A	1.	11/22/10 10:45 a		2.587	
	1.54E-01	U	RPD 2.6			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.

TestAmerica

FORM II

BLANK RESULTS

Date: 24-Nov-10

Lab Name: TestAmerica

Matrix: SOIL

SDG: J00926

Report No. : 45231

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: 0326264	7196_CR6			Work Order:	MAEGJ1AA		Report DB ID:	MAEGJ1AA				
HEXCHROME	2.54E-01			0.0E+00	1.55E-01	mg/kg	N/A	(1.6)	11/22/10 10:45 a		2.5	
						1.55E-01		N/A			g	

No. of Results: 1 Comments:

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

rptSTLRchBlank
V5.2.9 A2002

TestAmerica

FORM II

LCS RESULTS

Date: 24-Nov-10

Lab Name: TestAmerica

Matrix: SOIL

SDG: J00926

Report No. : 45231

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: 0326264	7196_CR6			Work Order:	MAEGJ1AC		Report DB ID:	MAEGJ1AC					
HEXCHROME	1.93E+01			0.0E+00	1.55E-01	mg/kg	N/A	2.00E+01		97%	11/22/10 10:45 a	2.5	
							Rec Limits:	80	120	0.0		g	

No. of Results: 1 Comments:

18

TestAmerica

FORM II

MATRIX SPIKE RESULTS

Date: 24-Nov-10

Lab Name: TestAmerica **SDG:** J00926

Lot-Sample No.: J0K110442-1, J1B513 **Report No. :** 45231 **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: 0326264	Work Order: L9V2X1AC			Report DB ID: L9V2X1AC			Orig Sa DB ID: 9L9V2X10					
HEXCHROME	1.62E+00			0.0E+00	1.49E-01	mg/kg	N/A	17.09%	9.50E+00	11/22/10 10:45 a	2.6006	7196_CR6
	1.54E-01										g	

Number of Results: 1

Comments:

TestAmerica
rptSTLRchMs
V5.2.9 A2002

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

TestAmerica
LEADER IN ENVIRONMENTAL TESTING

Richland Laboratory
Data Review Check List
Hexavalent Chromium

Batch Number(s): 0326264

Lab Sample Numbers or SDG: J00926

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: The MS % recovery was not within QC limits (17.087%) so a PDMS was performed however it failed to bring the % recovery (27.832%) within the acceptable limits of (75%-125%). See NCM for more information.

Analyst: Dawn Ryan Date: 11/23/2010

Second-Level Review: S Segger Date: 11/23/10

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-17020**
NCM Initiated By: Dawn Lucas
Date Opened: 11/23/2010
Date Closed:

Classification: **Deficiency**
Status: **PMREVIEW**
Production Area: Classical Chemistry
Tests: 7196A
Lot #'s (Sample #'s): J0K110442 (1,2,3,4,5), J0K220000 (264),
QC Batches: 0326264,

Nonconformance: Batch Result Out of Limits
Subcategory: MS/MSD result outside acceptance limits

Problem Description / Root Cause

Name	Date	Description
Dawn Lucas	11/23/2010	The MS % recovery was low at 17.087% so a PDMS was performed. The % recovery was then 27.832%. It is still not within the acceptable range of 75%-125%. There may be a small amount of reducing capacity in the sample.

Corrective Action

Name	Date	Corrective Action
Dawn Lucas	11/23/2010	A PDMS was performed.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-174-010	Page 1 of 2

Collector: WT Sexsmith	Company Contact: Joan Kessner	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 8 ~~G~~ JEB C 11-10-10	Data Turnaround: 15 Days		
Project Designation: ARRA Remaining Sites Confirmation Sampling - Soil Full Pr	Sampling Location: 100-K-89		SAF No.: RC-174
Ice Chest No.: NA	Field Logbook No.: EL-1649	COA S10K89A000 ~~S10K85A000~~ JED 5/24/10	Method of Shipment: ~~Fed Ex~~ JEB 11-9-10 Hand-Deliver
Shipped To: TestAmerica Incorporated, Richland	Offsite Property No.: NA		Bill of Lading/Air Bill No.: ~~See OSPC~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS

NONE JEB 11-9-10

Special Handling and/or Storage

Cool 4°C
EB 11-9-10

J0K110442

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None			
Type of Container	aG	aG	aG	aG	aG	aG	P			
No. of Container(s)	1	~~JED 5/24/10~~ 1	1	1	1	1	1			
Volume	125mL	125mL	120mL	60mL	120mL	120mL	500mL			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	TPH-Diesel Range - WTPH-D +	VOA - 8260A (TCL)	Semi-VOA - 8270A (TCL)	PCBs - 8082	See item (2) in Special Instructions.			

Sample No.	Matrix *	Sample Date	Sample Time										
J1B512	SOIL	11/9/10	0830	✓				✓					EB
J1B513	SOIL	11/9/10	0845	✓	✓	✓		✓	✓	L9V2X			TT-1a surf
J1B514	SOIL	11/9/10	0945	✓	✓	✓		✓	✓	L9V2Z			TT-1b 15'
J1B515	SOIL	11/9/10	0900	✓	✓	✓		✓	✓	L9V3A			TT-2a surf
J1B516	SOIL	11/9/10	1030	✓	✓	✓		✓	✓	L9V3C			TT-2b 15'

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Wilbur Sexsmith	Date/Time 1545 11/9/10	Received By/Stored In: JRDeBruine	Date/Time 1545 11/9/10
Relinquished By/Removed From: JRDeBruine	Date/Time 1630 11/9/10	Received By/Stored In: J. E. Benbul	Date/Time 1630 11-9-10
Relinquished By/Removed From: J. E. Benbul	Date/Time 0930 11-10-10	Received By/Stored In: TABR Angela Ameen	Date/Time 0930 11-10-10
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

(1) ICP Metals - 6010TR (Close-out List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV) {Mercury}
(2) Gamma Spec (Client List) {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gross Alpha & Gross Beta

J0K110442 · DUE - 11.25.10
SDG
100926

REVIEWED BY JR DATE 11/10/10

Matrix *
S=Soil
SB=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wi=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-174-010	Page 2 of 2

Collector: Int Sexsmith	Company Contact: Joan Kessner	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 8 ~~0~~ JEB C 11-9-10	Data Turnaround: 15 Days		
Project Designation: ARRA Remaining Sites Confirmation Sampling - Soil Full Pr	Sampling Location: 100-K-89		SAF No.: RC-174
Ice Chest No.: NA	Field Logbook No.: EL-1649	COA: S18K85A000	Method of Shipment: ~~Fed Ex~~ JEB 11-9-10 Hand-Deliver
Shipped To: TestAmerica Incorporated, Richland	Offsite Property No.: NA		Bill of Lading/Air Bill No.: ~~See OSPC~~ JEB 11-9-10 NA

POSSIBLE SAMPLE HAZARDS/REMARKS

NONE
JEB 11-9-10

Special Handling and/or Storage

Cool 4°C
JEB 11-9-10

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None			
Type of Container	aG	aG	aG	aG	aG	aG	P			
No. of Container(s)	1	~~2~~ 1	1	1	1	1	1			
Volume	125mL	125mL	120mL	60mL	120mL	120mL	500mL			

SAMPLE ANALYSIS				See item (1) in Special Instructions.	Chromium Hex - 7196	TPH-Diesel Range - WTPH-D +	VOA - 8260A (TCL)	Semi-VOA - 8270A (TCL)	PCBs - 8082	See item (2) in Special Instructions.			
Sample No.	Matrix *	Sample Date	Sample Time										
J1B517	SOIL	11/9/10	1030	✓	✓	✓		✓	✓	L9/3E			D

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Whitney Sexsmith	11/9/10 1545	Received By/Stored In: JEDeBuigne	11/9/10 1545
Relinquished By/Removed From: JEDeBuigne	11/9/10 1630	Received By/Stored In: J.E. Benthal	11-9-10 1630
Relinquished By/Removed From: J.E. Benthal	11-10-10 0930	Received By/Stored In: Angela Mora	11-10-10 0930
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

(1) ICP Metals - 6010TR (Close-out List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV) {Mercury}
(2) Gamma Spec (Client List) {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gross Alpha & Gross Beta

JOK110442
SDG
J00926

DLL 11-25-10

REVIEWED BY JR
DATE 11/10/10

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wi=Wipe
Li=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

JOK110442

(1 WCH)

Sample Check-in List

Date/Time Received: 11.10.10@0930 GM Screen Result (out) .3 (in) .4 Initials [✓]

Client: WCH SDG #: J00926 NA [ ] SAF #: RC-174 NA [ ]

Work Order Number: JOK110442 Chain of Custody # RC-174-010

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: ice 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): 5
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 (Soil Hex-7196)
   - ____ 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 [✓]

See other side for additional comments

Sample Custodian: [signature] Date: 11.10.10@0930 TMR

Client Informed on _____ by _____ Person contacted _____

[✓] No action necessary; process as is

Project Manager [signature] Date 11/11/10

11/22/2010 10:44:07 AM

Sample Preparation/Analysis

127642, Washington Closure Hanford LLC
Bechtel Hanford, Inc.

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

Balance Id:
Pipet #:

AnalyDueDate: 11/25/2010

Sep1 DT/Tm Tech:

Batch: 0326264 SOIL mg/kg PM, Quote: SS , 27038

Sep2 DT/Tm Tech:

SDG 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:
1 L9V2X-1-AA J0K110442-1-SAMP 11/09/2010 08:45		AmtRec: 1XJAR125MLG		#Containers: 1			Scr:		Alpha:	Beta:
2 L9V2X-1-AC-S J0K110442-1-MS 11/09/2010 08:45		AmtRec: 1XJAR125MLG		#Containers: 1			Scr:		Alpha:	Beta:
3 L9V2X-1-AD-X J0K110442-1-DUP 11/09/2010 08:45		AmtRec: 1XJAR125MLG		#Containers: 1			Scr:		Alpha:	Beta:
4 L9V28-1-AA J0K110442-2-SAMP 11/09/2010 09:45		AmtRec: 1XJAR125MLG		#Containers: 1			Scr:		Alpha:	Beta:
5 L9V3A-1-AA J0K110442-3-SAMP 11/09/2010 09:00		AmtRec: 1XJAR125MLG		#Containers: 1			Scr:		Alpha:	Beta:
6 L9V3C-1-AA J0K110442-4-SAMP 11/09/2010 10:30		AmtRec: 1XJAR125MLG		#Containers: 1			Scr:		Alpha:	Beta:
7 L9V3E-1-AA J0K110442-5-SAMP 11/09/2010 10:30		AmtRec: 1XJAR125MLG		#Containers: 1			Scr:		Alpha:	Beta:

11/22/2010 10:44:07 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: 11/25/2010

Batch: 0326264 mg/kg
SDG 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:
8 MAEGJ-1-AA-B J0K220000-264-BLK 11/22/2010 10:44 pd		AmtRec:	#Containers: 1					Scr:	Alpha:	Beta:
9 MAEGJ-1-AC-C J0K220000-264-LCS 11/22/2010 10:44 pd		AmtRec:	#Containers: 1					Scr:	Alpha:	Beta:

Comments:

All Clients for Batch:
127642, Washington Closure Hanford LLC Bechtel Hanford, Inc. , SS , 27038

L9V2X1AA-SAMP Constituent List:
HEXCHROME RDL:0.1548 mg/kg LCL:80 UCL:120 RPD:20
L9V2X1AC-MS Constituent List:

MAEGJ1AA-BLK:

MAEGJ1AC-LCS:

L9V2X1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
L9V2X1AC-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MAEGJ1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MAEGJ1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

27

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-9724-1

SDG Number: J00926

Job Description: SAF# RC-174

RECEIVED
NOV 2010

For:
Washington Closure Hanford
2620 Fermi Avenue
Richland, WA 99354

Attention: Joan H Kessner

Approved for release.
Kae E Yoder
Project Manager II
11/29/2010 11:55 AM

Kae E Yoder
Project Manager II
kae.yoder@testamericainc.com
11/29/2010

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

TestAmerica Laboratories, Inc.
TestAmerica Denver 4955 Yarrow Street, Arvada, CO 80002
Tel (303) 736-0100 Fax (303) 431-7171 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

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CASE NARRATIVE

Client: Washington Closure Hanford

Project: WASHINGTON CLOSURE HANFORD

Report Number: 280-9724-1

SDG #: J00926
SAF#: RC-174

Date SDG Closed: November 12, 2010
Data Deliverable: 15 Day / Summary

CLIENT ID	LAB ID	ANALYSES REQUESTED	ANALYSES PERFORMED
J1B512	280-9724-1	6010/7471/8270A	6010B/7471A/8270C
J1B513	280-9724-2	6010/7471/WTPH-D+/8270A/8082	6010B/7471A/NWTPH-D+/8270C/8082
J1B514	280-9724-3	6010/7471/WTPH-D+/8270A/8082	6010B/7471A/NWTPH-D+/8270C/8082
J1B515	280-9724-4	6010/7471/WTPH-D+/8270A/8082	6010B/7471A/NWTPH-D+/8270C/8082
J1B516	280-9724-5	6010/7471/WTPH-D+/8270A/8082	6010B/7471A/NWTPH-D+/8270C/8082
J1B517	280-9724-6	6010/7471/WTPH-D+/8270A/8082	6010B/7471A/NWTPH-D+/8270C/8082

I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed in this Case Narrative. 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 signature on the Report Cover.

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted. Calculations are performed before rounding to avoid round-off errors in calculated results.

This report includes reporting limits (RLs) less than TestAmerica Denver's practical quantitation limits. These reporting limits are being used specifically at the client's request to meet the needs of this project. Please note that data are not normally reported to these levels without qualification, since they are inherently less reliable and potentially less defensible than required by the current NELAC standards.

The results, RLs and MDLs included in this report have been adjusted for dry weight, as appropriate.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 11/12/2010; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 1.6 C, 1.8 C and 2.0 C.

GC/MS SEMIVOLATILES - SW846 8270C
Sample J1B513 exhibited elevated detection limits, due to elevated final extract volume. The method specified final extract volume is 1000 uLs; however, the sample would not concentrate below 4000 uLs. The laboratory noted that the sample extract was very black and thick in content.

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to the nature of the sample matrix, samples J1B513 and J1B515 had to be analyzed at dilutions, and the associated results have been flagged with a "D". The reporting limits have been adjusted relative to the dilutions required. The laboratory noted that the sample extracts were viscous, and analysis at less diluted concentrations would jeopardize the integrity of the instrument.

Surrogate recoveries have been "D" flagged in samples J1B513 and J1B515, as the recoveries obtained are calculated from diluted samples and are not considered reliable.

Compounds Benzo(b)fluoranthene and Benzo(k)fluoranthene were unresolved in several samples due to matrix interferences. It can be noted that these compounds were adequately resolved in associated standards, indicating the instrument is achieving separation. The combined peak was reported as Benzo(b)fluoranthene, while Benzo(k)fluoranthene was reported as undetected even though it may be present. Associated results have been flagged with a "K".

No other anomalies were encountered.

GC SEMIVOLATILES - SW846 8082 - PCBs

The laboratory noted that one Aroclor 1254 peak appeared to be co-eluting with a non-target peak on the confirmation column for sample J1B513. This peak was dropped.

Surrogate Decachlorobiphenyl was recovered outside the control limits, biased high, in sample J1B513. Surrogate Decachlorobiphenyl was also recovered outside the control limits, biased high, in the MS/MSD performed on sample J1B513, indicating that this anomaly is most likely due to matrix interference; therefore, corrective action is deemed unnecessary.

The MS/MSD performed on sample J1B513 exhibited percent recoveries outside the control limits for Aroclor 1016 and Aroclor 1260, and the associated sample results have been flagged "N". In addition, the MS/MSD exhibited RPD data and surrogate recoveries outside the control limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

GC SEMIVOLATILES - NWTPH-Dx - DRO

Sample J1B513 exhibited elevated detection limits, due to elevated final extract volume. The method specified final extract volume is 1000 uLs; however, the sample would not concentrate below 10000 uLs.

Surrogate o-Terphenyl was recovered outside the control limits, biased high, in samples J1B513 and J1B515. This anomaly is due to obvious matrix interference; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

TOTAL METALS - SW846 6010B/7471A

Low levels of Barium and Manganese are present in the method blanks associated with batches 280-40951 and 280-41873, respectively. Because the concentrations in the method blanks are not present at levels greater than the reporting limits, corrective action is deemed unnecessary. Associated sample results present above the MDL and/or RL have been flagged with a "J".

The SW846 6010B Matrix Spike performed on sample J1B512 exhibited percent recoveries outside the control limits for Aluminum, Iron and Silicon, and the associated sample results have been flagged "N". There is no indication that the analytical system was operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

The SW846 6010B duplicate analysis of sample J1B512 exhibited RPD data outside the control limits for Nickel, and the associated sample result has been flagged "M". There is no indication that the analytical system was operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	U	Analyzed for but not detected.
	K	Benzo (b&k) fluoranthene are unresolved due to matrix, result is reported as Benzo(b)fluoranthene.
	J	Indicates an Estimated Value for TICs
	N	Presumptive evidence of material.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
GC Semi VOA		
	U	Analyzed for but not detected.
	N	MS, MSD: Spike recovery exceeds upper or lower control limits.
	*	MS/MSD RPD exceeded the control limit
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	*	Surrogate exceeds the control limit
Metals		
	U	Analyzed for but not detected.
	B	Estimated result. Result is less than the RL, but greater than MDL
	J	Method blank contamination. The assoicated method blank contains the target analyte at a reportable level.
	N	Recovery exceeds upper or lower control limits
	M	Sample duplicate precision not met.

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Lab Section	Qualifier	Description
General Chemistry		
	U	Analyzed for but not detected.

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	TAL DEN	SW846 8270C	
Ultrasonic Extraction	TAL DEN		SW846 3550C
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL DEN	SW846 8082	
Ultrasonic Extraction	TAL DEN		SW846 3550C
Northwest - Semi-Volatile Petroleum Products (GC)	TAL DEN	NWTPH NWTPH-Dx	
Ultrasonic Extraction	TAL DEN		SW846 3550C
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Metals	TAL DEN		SW846 3050B
Mercury (CVAA)	TAL DEN	SW846 7471A	
Preparation, Mercury	TAL DEN		SW846 7471A
ASTM D-2216	TAL DEN	ASTM D-2216	

Lab References:

TAL DEN = TestAmerica Denver

Method References:

ASTM = ASTM International

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Method	Analyst	Analyst ID
SW846 8270C	Kiekel, Daniel C	DCK
SW846 8082	Pavlakovich, Adam M	AMP
NWTPH NWTPH-Dx	Birdsell, Matthew R	MRB
SW846 6010B	Bowen, Heidi E	HEB
SW846 6010B	Trudell, Lynn-Anne	LT
SW846 7471A	Stoltz, Katie	KS
ASTM D-2216	Berry III, Paul B	PBB

SAMPLE SUMMARY

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-9724-1	J1B512	Solid	11/09/2010 0830	11/12/2010 0900
280-9724-2	J1B513	Solid	11/09/2010 0845	11/12/2010 0900
280-9724-3	J1B514	Solid	11/09/2010 0945	11/12/2010 0900
280-9724-4	J1B515	Solid	11/09/2010 0900	11/12/2010 0900
280-9724-5	J1B516	Solid	11/09/2010 1030	11/12/2010 0900
280-9724-6	J1B517	Solid	11/09/2010 1030	11/12/2010 0900

SAMPLE RESULTS

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B512**

Lab Sample ID: 280-9724-1
Client Matrix: Solid
% Moisture: 0.1

Date Sampled: 11/09/2010 0830
Date Received: 11/12/2010 0900

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-41546		Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-40952		Lab File ID:	B1957.D
Dilution:	1.0			Initial Weight/Volume:	31.1 g
Date Analyzed:	11/17/2010 1610			Final Weight/Volume:	1000 uL
Date Prepared:	11/15/2010 1850			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		9.9	U	9.9	320
Acenaphthylene		16	U	16	320
Anthracene		16	U	16	320
Benzo[a]anthracene		19	U	19	320
Benzo[a]pyrene		19	U	19	320
Benzo[b]fluoranthene		25	U	25	320
Benzo[ghi]perylene		15	U	15	320
Benzo[k]fluoranthene		39	U	39	320
Bis(2-chloroethoxy)methane		22	U	22	320
Bis(2-chloroethyl)ether		16	U	16	320
bis (2-chloroisopropyl) ether		22	U	22	320
Bis(2-ethylhexyl) phthalate		44	U	44	320
4-Bromophenyl phenyl ether		18	U	18	320
Butyl benzyl phthalate		42	U	42	320
Carbazole		35	U	35	320
4-Chloroaniline		79	U	79	320
4-Chloro-3-methylphenol		64	U	64	320
2-Chloronaphthalene		9.7	U	9.7	320
2-Chlorophenol		20	U	20	320
4-Chlorophenyl phenyl ether		20	U	20	320
Chrysene		26	U	26	320
Dibenz(a,h)anthracene		18	U	18	320
Dibenzofuran		19	U	19	320
1,2-Dichlorobenzene		21	U	21	320
1,3-Dichlorobenzene		12	U	12	320
1,4-Dichlorobenzene		13	U	13	320
3,3'-Dichlorobenzidine		87	U	87	640
2,4-Dichlorophenol		9.7	U	9.7	320
Diethyl phthalate		25	U	25	320
2,4-Dimethylphenol		64	U	64	320
Dimethyl phthalate		22	U	22	320
Di-n-butyl phthalate		28	U	28	320
4,6-Dinitro-2-methylphenol		320	U	320	640
2,4-Dinitrophenol		320	U	320	800
2,4-Dinitrotoluene		64	U	64	320
2,6-Dinitrotoluene		27	U	27	320
Di-n-octyl phthalate		14	U	14	320
Fluoranthene		35	U	35	320
Fluorene		17	U	17	320
Hexachlorobenzene		28	U	28	320
Hexachlorobutadiene		9.7	U	9.7	320
Hexachlorocyclopentadiene		48	U	48	320
Hexachloroethane		21	U	21	320
Indeno[1,2,3-cd]pyrene		21	U	21	320
Isophorone		16	U	16	320
2-Methylnaphthalene		18	U	18	320

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B512**

Lab Sample ID: 280-9724-1
Client Matrix: Solid
% Moisture: 0.1

Date Sampled: 11/09/2010 0830
Date Received: 11/12/2010 0900

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-41546		Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-40952		Lab File ID:	B1957.D
Dilution:	1.0			Initial Weight/Volume:	31.1 g
Date Analyzed:	11/17/2010 1610			Final Weight/Volume:	1000 uL
Date Prepared:	11/15/2010 1850			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		13	U	13	320
3 & 4 Methylphenol		32	U	32	320
Naphthalene		30	U	30	320
2-Nitroaniline		48	U	48	320
3-Nitroaniline		70	U	70	320
4-Nitroaniline		70	U	70	320
Nitrobenzene		21	U	21	320
2-Nitrophenol		9.7	U	9.7	320
4-Nitrophenol		94	U	94	640
N-Nitrosodi-n-propylamine		30	U	30	320
N-Nitrosodiphenylamine		20	U	20	320
Pentachlorophenol		320	U	320	640
Phenanthrene		16	U	16	320
Phenol		17	U	17	320
Pyrene		12	U	12	320
1,2,4-Trichlorobenzene		27	U	27	320
2,4,5-Trichlorophenol		9.7	U	9.7	320
2,4,6-Trichlorophenol		9.7	U	9.7	320

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	71		50 - 120
2-Fluorophenol	76		53 - 120
Nitrobenzene-d5	72		50 - 120
Phenol-d5	75		52 - 120
Terphenyl-d14	92		55 - 120
2,4,6-Tribromophenol	72		51 - 120

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B512**

Lab Sample ID: 280-9724-1
Client Matrix: Solid
% Moisture: 0.1

Date Sampled: 11/09/2010 0830
Date Received: 11/12/2010 0900

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-41546		Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-40952		Lab File ID:	B1957.D
Dilution:	1.0			Initial Weight/Volume:	31.1 g
Date Analyzed:	11/17/2010 1610			Final Weight/Volume:	1000 uL
Date Prepared:	11/15/2010 1850			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found:** **3**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	1.73	2600	N J
141-79-7	3-Penten-2-one, 4-methyl-	3.04	170	N J
	Unknown	3.46	4100	N J

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B513**

Lab Sample ID: 280-9724-2
Client Matrix: Solid
% Moisture: 17.6

Date Sampled: 11/09/2010 0845
Date Received: 11/12/2010 0900

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-41546		Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-40952		Lab File ID:	B1958.D
Dilution:	20			Initial Weight/Volume:	30.9 g
Date Analyzed:	11/17/2010 1631			Final Weight/Volume:	4000 uL
Date Prepared:	11/15/2010 1850			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		13000	J D	970	31000
Acenaphthylene		1800	J D	1600	31000
Anthracene		39000	D	1600	31000
Benzo[a]anthracene		180000	D	1900	31000
Benzo[a]pyrene		100000	D	1900	31000
Benzo[b]fluoranthene		270000	K D	2500	31000
Benzo[ghi]perylene		71000	D	1500	31000
Benzo[k]fluoranthene		3800	U K D	3800	31000
Bis(2-chloroethoxy)methane		2200	U D	2200	31000
Bis(2-chloroethyl)ether		1600	U D	1600	31000
bis (2-chloroisopropyl) ether		2200	U D	2200	31000
Bis(2-ethylhexyl) phthalate		4300	U D	4300	31000
4-Bromophenyl phenyl ether		1800	U D	1800	31000
Butyl benzyl phthalate		4100	U D	4100	31000
Carbazole		50000	D	3400	31000
4-Chloroaniline		7700	U D	7700	31000
4-Chloro-3-methylphenol		6200	U D	6200	31000
2-Chloronaphthalene		940	U D	940	31000
2-Chlorophenol		2000	U D	2000	31000
4-Chlorophenyl phenyl ether		2000	U D	2000	31000
Chrysene		210000	D	2500	31000
Dibenz(a,h)anthracene		30000	J D	1800	31000
Dibenzofuran		5200	J D	1900	31000
1,2-Dichlorobenzene		2100	U D	2100	31000
1,3-Dichlorobenzene		1100	U D	1100	31000
1,4-Dichlorobenzene		1300	U D	1300	31000
3,3'-Dichlorobenzidine		8500	U D	8500	62000
2,4-Dichlorophenol		940	U D	940	31000
Diethyl phthalate		2500	U D	2500	31000
2,4-Dimethylphenol		6200	U D	6200	31000
Dimethyl phthalate		2200	U D	2200	31000
Di-n-butyl phthalate		2700	J D	2700	31000
4,6-Dinitro-2-methylphenol		31000	U D	31000	62000
2,4-Dinitrophenol		31000	U D	31000	78000
2,4-Dinitrotoluene		6200	U D	6200	31000
2,6-Dinitrotoluene		2600	U D	2600	31000
Di-n-octyl phthalate		1400	U D	1400	31000
Fluoranthene		390000	D	3400	31000
Fluorene		9600	J D	1700	31000
Hexachlorobenzene		2700	U D	2700	31000
Hexachlorobutadiene		940	U D	940	31000
Hexachlorocyclopentadiene		4700	U D	4700	31000
Hexachloroethane		2000	U D	2000	31000
Indeno[1,2,3-cd]pyrene		71000	D	2100	31000
Isophorone		1600	U D	1600	31000
2-Methylnaphthalene		1800	U D	1800	31000

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B513**

Lab Sample ID: 280-9724-2
Client Matrix: Solid
% Moisture: 17.6

Date Sampled: 11/09/2010 0845
Date Received: 11/12/2010 0900

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-41546		Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-40952		Lab File ID:	B1958.D
Dilution:	20			Initial Weight/Volume:	30.9 g
Date Analyzed:	11/17/2010 1631			Final Weight/Volume:	4000 uL
Date Prepared:	11/15/2010 1850			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		1200	U D	1200	31000
3 & 4 Methylphenol		3300	J D	3100	31000
Naphthalene		2900	U D	2900	31000
2-Nitroaniline		4700	U D	4700	31000
3-Nitroaniline		6900	U D	6900	31000
4-Nitroaniline		6800	U D	6800	31000
Nitrobenzene		2100	U D	2100	31000
2-Nitrophenol		940	U D	940	31000
4-Nitrophenol		9100	U D	9100	62000
N-Nitrosodi-n-propylamine		2900	U D	2900	31000
N-Nitrosodiphenylamine		2000	U D	2000	31000
Pentachlorophenol		31000	U D	31000	62000
Phenanthrene		200000	D	1600	31000
Phenol		1700	U D	1700	31000
Pyrene		290000	D	1100	31000
1,2,4-Trichlorobenzene		2600	U D	2600	31000
2,4,5-Trichlorophenol		940	U D	940	31000
2,4,6-Trichlorophenol		940	U D	940	31000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	81	D	50 - 120
2-Fluorophenol	80	D	53 - 120
Nitrobenzene-d5	80	D	50 - 120
Phenol-d5	75	D	52 - 120
Terphenyl-d14	97	D	55 - 120
2,4,6-Tribromophenol	289	D	51 - 120

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B513**

Lab Sample ID: 280-9724-2
Client Matrix: Solid
% Moisture: 17.6

Date Sampled: 11/09/2010 0845
Date Received: 11/12/2010 0900

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-41546		Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-40952		Lab File ID:	B1958.D
Dilution:	20			Initial Weight/Volume:	30.9 g
Date Analyzed:	11/17/2010 1631			Final Weight/Volume:	4000 uL
Date Prepared:	11/15/2010 1850			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found:** **15**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
108-39-4	3-Methylphenol	5.39	3300	J N
106-44-5	4-Methylphenol	5.39	3300	J N
	Unknown	9.76	49000	N J
612-94-2	Naphthalene, 2-phenyl-	9.88	19000	N J
84-65-1	9,10-Anthracenedione	9.91	25000	N J
5737-13-3	Cyclopenta(def)phenanthrenone	10.17	20000	N J
243-42-5	Benzo[b]naphtho[2,3-d]furan	10.39	16000	N J
243-17-4	11H-Benzo[b]fluorene	10.65	13000	N J
82-05-3	7H-Benz[de]anthracen-7-one	11.06	19000	N J
	Unknown	11.15	20000	N J
82-05-3	7H-Benz[de]anthracen-7-one	11.23	19000	N J
	Unknown	11.55	13000	N J
	Unknown	12.14	30000	N J
50-32-8	Benzo[a]pyrene	12.40	24000	N J
205-82-3	Benzo[j]fluoranthene	12.59	110000	N J

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B514**

Lab Sample ID: 280-9724-3
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 11/09/2010 0945
Date Received: 11/12/2010 0900

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-41546		Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-40952		Lab File ID:	B1959.D
Dilution:	1.0			Initial Weight/Volume:	30.5 g
Date Analyzed:	11/17/2010 1651			Final Weight/Volume:	1000 uL
Date Prepared:	11/15/2010 1850			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		11	U	11	350
Acenaphthylene		18	U	18	350
Anthracene		18	U	18	350
Benzo[a]anthracene		65	J	21	350
Benzo[a]pyrene		56	J	21	350
Benzo[b]fluoranthene		110	J K	28	350
Benzo[ghi]perylene		37	J	17	350
Benzo[k]fluoranthene		43	U K	43	350
Bis(2-chloroethoxy)methane		25	U	25	350
Bis(2-chloroethyl)ether		18	U	18	350
bis (2-chloroisopropyl) ether		25	U	25	350
Bis(2-ethylhexyl) phthalate		49	U	49	350
4-Bromophenyl phenyl ether		20	U	20	350
Butyl benzyl phthalate		46	U	46	350
Carbazole		38	U	38	350
4-Chloroaniline		87	U	87	350
4-Chloro-3-methylphenol		70	U	70	350
2-Chloronaphthalene		11	U	11	350
2-Chlorophenol		22	U	22	350
4-Chlorophenyl phenyl ether		22	U	22	350
Chrysene		78	J	29	350
Dibenz(a,h)anthracene		20	U	20	350
Dibenzofuran		21	U	21	350
1,2-Dichlorobenzene		23	U	23	350
1,3-Dichlorobenzene		13	U	13	350
1,4-Dichlorobenzene		15	U	15	350
3,3'-Dichlorobenzidine		96	U	96	700
2,4-Dichlorophenol		11	U	11	350
Diethyl phthalate		28	U	28	350
2,4-Dimethylphenol		70	U	70	350
Dimethyl phthalate		25	U	25	350
Di-n-butyl phthalate		31	U	31	350
4,6-Dinitro-2-methylphenol		350	U	350	700
2,4-Dinitrophenol		360	U	360	880
2,4-Dinitrotoluene		70	U	70	350
2,6-Dinitrotoluene		30	U	30	350
Di-n-octyl phthalate		15	U	15	350
Fluoranthene		91	J	38	350
Fluorene		19	U	19	350
Hexachlorobenzene		31	U	31	350
Hexachlorobutadiene		11	U	11	350
Hexachlorocyclopentadiene		53	U	53	350
Hexachloroethane		23	U	23	350
Indeno[1,2,3-cd]pyrene		38	J	23	350
Isophorone		18	U	18	350
2-Methylnaphthalene		20	U	20	350

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B514**

Lab Sample ID: 280-9724-3
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 11/09/2010 0945
Date Received: 11/12/2010 0900

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-41546		Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-40952		Lab File ID:	B1959.D
Dilution:	1.0			Initial Weight/Volume:	30.5 g
Date Analyzed:	11/17/2010 1651			Final Weight/Volume:	1000 uL
Date Prepared:	11/15/2010 1850			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		14	U	14	350
3 & 4 Methylphenol		35	U	35	350
Naphthalene		33	U	33	350
2-Nitroaniline		53	U	53	350
3-Nitroaniline		78	U	78	350
4-Nitroaniline		77	U	77	350
Nitrobenzene		23	U	23	350
2-Nitrophenol		11	U	11	350
4-Nitrophenol		100	U	100	700
N-Nitrosodi-n-propylamine		33	U	33	350
N-Nitrosodiphenylamine		22	U	22	350
Pentachlorophenol		350	U	350	700
Phenanthrene		22	J	18	350
Phenol		19	U	19	350
Pyrene		89	J	13	350
1,2,4-Trichlorobenzene		30	U	30	350
2,4,5-Trichlorophenol		11	U	11	350
2,4,6-Trichlorophenol		11	U	11	350

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	65		50 - 120
2-Fluorophenol	71		53 - 120
Nitrobenzene-d5	68		50 - 120
Phenol-d5	69		52 - 120
Terphenyl-d14	86		55 - 120
2,4,6-Tribromophenol	66		51 - 120

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B514**

Lab Sample ID: 280-9724-3
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 11/09/2010 0945
Date Received: 11/12/2010 0900

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-41546	Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-40952	Lab File ID:	B1959.D
Dilution:	1.0		Initial Weight/Volume:	30.5 g
Date Analyzed:	11/17/2010 1651		Final Weight/Volume:	1000 uL
Date Prepared:	11/15/2010 1850		Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found:** **4**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	1.73	1300	N J
	Unknown	2.96	540	N J
141-79-7	3-Penten-2-one, 4-methyl-	3.04	230	N J
	Unknown	3.46	4500	N J

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B515**

Lab Sample ID: 280-9724-4
Client Matrix: Solid
% Moisture: 18.9

Date Sampled: 11/09/2010 0900
Date Received: 11/12/2010 0900

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-41546		Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-40952		Lab File ID:	B1960.D
Dilution:	10			Initial Weight/Volume:	30.8 g
Date Analyzed:	11/17/2010 1712			Final Weight/Volume:	1000 uL
Date Prepared:	11/15/2010 1850			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		120	U D	120	4000
Acenaphthylene		200	U D	200	4000
Anthracene		270	J D	200	4000
Benzo[a]anthracene		4200	D	240	4000
Benzo[a]pyrene		6700	D	240	4000
Benzo[b]fluoranthene		17000	K D	310	4000
Benzo[ghi]perylene		10000	D	190	4000
Benzo[k]fluoranthene		480	U K D	480	4000
Bis(2-chloroethoxy)methane		280	U D	280	4000
Bis(2-chloroethyl)ether		200	U D	200	4000
bis (2-chloroisopropyl) ether		280	U D	280	4000
Bis(2-ethylhexyl) phthalate		550	U D	550	4000
4-Bromophenyl phenyl ether		230	U D	230	4000
Butyl benzyl phthalate		520	U D	520	4000
Carbazole		550	J D	430	4000
4-Chloroaniline		980	U D	980	4000
4-Chloro-3-methylphenol		790	U D	790	4000
2-Chloronaphthalene		120	U D	120	4000
2-Chlorophenol		250	U D	250	4000
4-Chlorophenyl phenyl ether		250	U D	250	4000
Chrysene		6400	D	320	4000
Dibenz(a,h)anthracene		230	U D	230	4000
Dibenzofuran		240	U D	240	4000
1,2-Dichlorobenzene		260	U D	260	4000
1,3-Dichlorobenzene		140	U D	140	4000
1,4-Dichlorobenzene		160	U D	160	4000
3,3'-Dichlorobenzidine		1100	U D	1100	7900
2,4-Dichlorophenol		120	U D	120	4000
Diethyl phthalate		310	U D	310	4000
2,4-Dimethylphenol		790	U D	790	4000
Dimethyl phthalate		280	U D	280	4000
Di-n-butyl phthalate		350	U D	350	4000
4,6-Dinitro-2-methylphenol		4000	U D	4000	7900
2,4-Dinitrophenol		4000	U D	4000	9900
2,4-Dinitrotoluene		790	U D	790	4000
2,6-Dinitrotoluene		340	U D	340	4000
Di-n-octyl phthalate		170	U D	170	4000
Fluoranthene		5500	D	430	4000
Fluorene		220	U D	220	4000
Hexachlorobenzene		350	U D	350	4000
Hexachlorobutadiene		120	U D	120	4000
Hexachlorocyclopentadiene		600	U D	600	4000
Hexachloroethane		260	U D	260	4000
Indeno[1,2,3-cd]pyrene		8300	D	260	4000
Isophorone		200	U D	200	4000
2-Methylnaphthalene		230	U D	230	4000

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B515**

Lab Sample ID: 280-9724-4
Client Matrix: Solid
% Moisture: 18.9

Date Sampled: 11/09/2010 0900
Date Received: 11/12/2010 0900

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-41546		Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-40952		Lab File ID:	B1960.D
Dilution:	10			Initial Weight/Volume:	30.8 g
Date Analyzed:	11/17/2010 1712			Final Weight/Volume:	1000 uL
Date Prepared:	11/15/2010 1850			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		160	U D	160	4000
3 & 4 Methylphenol		400	U D	400	4000
Naphthalene		370	U D	370	4000
2-Nitroaniline		600	U D	600	4000
3-Nitroaniline		880	U D	880	4000
4-Nitroaniline		870	U D	870	4000
Nitrobenzene		260	U D	260	4000
2-Nitrophenol		120	U D	120	4000
4-Nitrophenol		1200	U D	1200	7900
N-Nitrosodi-n-propylamine		370	U D	370	4000
N-Nitrosodiphenylamine		250	U D	250	4000
Pentachlorophenol		4000	U D	4000	7900
Phenanthrene		2000	J D	200	4000
Phenol		220	U D	220	4000
Pyrene		4800	D	150	4000
1,2,4-Trichlorobenzene		340	U D	340	4000
2,4,5-Trichlorophenol		120	U D	120	4000
2,4,6-Trichlorophenol		120	U D	120	4000

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	76	D	50 - 120
2-Fluorophenol	77	D	53 - 120
Nitrobenzene-d5	72	D	50 - 120
Phenol-d5	81	D	52 - 120
Terphenyl-d14	86	D	55 - 120
2,4,6-Tribromophenol	92	D	51 - 120

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B515**

Lab Sample ID: 280-9724-4
Client Matrix: Solid
% Moisture: 18.9

Date Sampled: 11/09/2010 0900
Date Received: 11/12/2010 0900

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-41546	Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-40952	Lab File ID:	B1960.D
Dilution:	10		Initial Weight/Volume:	30.8 g
Date Analyzed:	11/17/2010 1712		Final Weight/Volume:	1000 uL
Date Prepared:	11/15/2010 1850		Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found:** 3

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	3.46	5300	N J
	Unknown	11.55	1700	N J
192-97-2	Benzo[e]pyrene	12.59	8900	N J

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B516**

Lab Sample ID: 280-9724-5
Client Matrix: Solid
% Moisture: 6.2

Date Sampled: 11/09/2010 1030
Date Received: 11/12/2010 0900

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-41546		Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-40952		Lab File ID:	B1961.D
Dilution:	1.0			Initial Weight/Volume:	31.0 g
Date Analyzed:	11/17/2010 1732			Final Weight/Volume:	1000 uL
Date Prepared:	11/15/2010 1850			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		11	U	11	340
Acenaphthylene		18	U	18	340
Anthracene		18	U	18	340
Benzo[a]anthracene		110	J	21	340
Benzo[a]pyrene		74	J	21	340
Benzo[b]fluoranthene		160	J K	27	340
Benzo[ghi]perylene		47	J	17	340
Benzo[k]fluoranthene		41	U K	41	340
Bis(2-chloroethoxy)methane		24	U	24	340
Bis(2-chloroethyl)ether		17	U	17	340
bis (2-chloroisopropyl) ether		24	U	24	340
Bis(2-ethylhexyl) phthalate		47	U	47	340
4-Bromophenyl phenyl ether		20	U	20	340
Butyl benzyl phthalate		44	U	44	340
Carbazole		37	U	37	340
4-Chloroaniline		85	U	85	340
4-Chloro-3-methylphenol		68	U	68	340
2-Chloronaphthalene		10	U	10	340
2-Chlorophenol		22	U	22	340
4-Chlorophenyl phenyl ether		22	U	22	340
Chrysene		120	J	28	340
Dibenz(a,h)anthracene		20	U	20	340
Dibenzofuran		21	U	21	340
1,2-Dichlorobenzene		23	U	23	340
1,3-Dichlorobenzene		12	U	12	340
1,4-Dichlorobenzene		14	U	14	340
3,3'-Dichlorobenzidine		93	U	93	680
2,4-Dichlorophenol		10	U	10	340
Diethyl phthalate		27	U	27	340
2,4-Dimethylphenol		68	U	68	340
Dimethyl phthalate		24	U	24	340
Di-n-butyl phthalate		30	U	30	340
4,6-Dinitro-2-methylphenol		340	U	340	680
2,4-Dinitrophenol		340	U	340	850
2,4-Dinitrotoluene		68	U	68	340
2,6-Dinitrotoluene		29	U	29	340
Di-n-octyl phthalate		15	U	15	340
Fluoranthene		170	J	37	340
Fluorene		19	U	19	340
Hexachlorobenzene		30	U	30	340
Hexachlorobutadiene		10	U	10	340
Hexachlorocyclopentadiene		52	U	52	340
Hexachloroethane		22	U	22	340
Indeno[1,2,3-cd]pyrene		44	J	23	340
Isophorone		18	U	18	340
2-Methylnaphthalene		20	U	20	340

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B516**

Lab Sample ID: 280-9724-5
Client Matrix: Solid
% Moisture: 6.2

Date Sampled: 11/09/2010 1030
Date Received: 11/12/2010 0900

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-41546		Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-40952		Lab File ID:	B1961.D
Dilution:	1.0			Initial Weight/Volume:	31.0 g
Date Analyzed:	11/17/2010 1732			Final Weight/Volume:	1000 uL
Date Prepared:	11/15/2010 1850			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		13	U	13	340
3 & 4 Methylphenol		34	U	34	340
Naphthalene		32	U	32	340
2-Nitroaniline		52	U	52	340
3-Nitroaniline		75	U	75	340
4-Nitroaniline		75	U	75	340
Nitrobenzene		23	U	23	340
2-Nitrophenol		10	U	10	340
4-Nitrophenol		100	U	100	680
N-Nitrosodi-n-propylamine		32	U	32	340
N-Nitrosodiphenylamine		22	U	22	340
Pentachlorophenol		340	U	340	680
Phenanthrene		42	J	18	340
Phenol		19	U	19	340
Pyrene		150	J	12	340
1,2,4-Trichlorobenzene		29	U	29	340
2,4,5-Trichlorophenol		10	U	10	340
2,4,6-Trichlorophenol		10	U	10	340

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	74		50 - 120
2-Fluorophenol	77		53 - 120
Nitrobenzene-d5	74		50 - 120
Phenol-d5	77		52 - 120
Terphenyl-d14	95		55 - 120
2,4,6-Tribromophenol	76		51 - 120

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B516**

Lab Sample ID: 280-9724-5
Client Matrix: Solid % Moisture: 6.2

Date Sampled: 11/09/2010 1030
Date Received: 11/12/2010 0900

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-41546		Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-40952		Lab File ID:	B1961.D
Dilution:	1.0			Initial Weight/Volume:	31.0 g
Date Analyzed:	11/17/2010 1732			Final Weight/Volume:	1000 uL
Date Prepared:	11/15/2010 1850			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found:** **5**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	1.73	1400	N J
	Unknown	2.96	340	N J
141-79-7	3-Penten-2-one, 4-methyl-	3.04	220	N J
	Unknown	3.46	4900	N J
	Unknown	11.86	520	N J

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B517**

Lab Sample ID: 280-9724-6
Client Matrix: Solid
% Moisture: 6.2

Date Sampled: 11/09/2010 1030
Date Received: 11/12/2010 0900

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-41546		Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-40952		Lab File ID:	B1964.D
Dilution:	1.0			Initial Weight/Volume:	31.7 g
Date Analyzed:	11/17/2010 1833			Final Weight/Volume:	1000 uL
Date Prepared:	11/15/2010 1850			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	330
Acenaphthylene		17	U	17	330
Anthracene		17	U	17	330
Benzo[a]anthracene		20	U	20	330
Benzo[a]pyrene		20	U	20	330
Benzo[b]fluoranthene		26	U	26	330
Benzo[ghi]perylene		16	U	16	330
Benzo[k]fluoranthene		40	U	40	330
Bis(2-chloroethoxy)methane		23	U	23	330
Bis(2-chloroethyl)ether		17	U	17	330
bis (2-chloroisopropyl) ether		23	U	23	330
Bis(2-ethylhexyl) phthalate		46	U	46	330
4-Bromophenyl phenyl ether		19	U	19	330
Butyl benzyl phthalate		43	U	43	330
Carbazole		36	U	36	330
4-Chloroaniline		83	U	83	330
4-Chloro-3-methylphenol		67	U	67	330
2-Chloronaphthalene		10	U	10	330
2-Chlorophenol		21	U	21	330
4-Chlorophenyl phenyl ether		21	U	21	330
Chrysene		27	U	27	330
Dibenz(a,h)anthracene		19	U	19	330
Dibenzofuran		20	U	20	330
1,2-Dichlorobenzene		22	U	22	330
1,3-Dichlorobenzene		12	U	12	330
1,4-Dichlorobenzene		14	U	14	330
3,3'-Dichlorobenzidine		91	U	91	670
2,4-Dichlorophenol		10	U	10	330
Diethyl phthalate		26	U	26	330
2,4-Dimethylphenol		67	U	67	330
Dimethyl phthalate		23	U	23	330
Di-n-butyl phthalate		54	J	29	330
4,6-Dinitro-2-methylphenol		330	U	330	670
2,4-Dinitrophenol		340	U	340	830
2,4-Dinitrotoluene		67	U	67	330
2,6-Dinitrotoluene		28	U	28	330
Di-n-octyl phthalate		15	U	15	330
Fluoranthene		36	U	36	330
Fluorene		18	U	18	330
Hexachlorobenzene		29	U	29	330
Hexachlorobutadiene		10	U	10	330
Hexachlorocyclopentadiene		50	U	50	330
Hexachloroethane		21	U	21	330
Indeno[1,2,3-cd]pyrene		22	U	22	330
Isophorone		17	U	17	330
2-Methylnaphthalene		19	U	19	330

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B517**

Lab Sample ID: 280-9724-6
Client Matrix: Solid
% Moisture: 6.2

Date Sampled: 11/09/2010 1030
Date Received: 11/12/2010 0900

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-41546		Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-40952		Lab File ID:	B1964.D
Dilution:	1.0			Initial Weight/Volume:	31.7 g
Date Analyzed:	11/17/2010 1833			Final Weight/Volume:	1000 uL
Date Prepared:	11/15/2010 1850			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		13	U	13	330
3 & 4 Methylphenol		33	U	33	330
Naphthalene		31	U	31	330
2-Nitroaniline		50	U	50	330
3-Nitroaniline		74	U	74	330
4-Nitroaniline		73	U	73	330
Nitrobenzene		22	U	22	330
2-Nitrophenol		10	U	10	330
4-Nitrophenol		98	U	98	670
N-Nitrosodi-n-propylamine		31	U	31	330
N-Nitrosodiphenylamine		21	U	21	330
Pentachlorophenol		330	U	330	670
Phenanthrene		17	U	17	330
Phenol		18	U	18	330
Pyrene		12	U	12	330
1,2,4-Trichlorobenzene		28	U	28	330
2,4,5-Trichlorophenol		10	U	10	330
2,4,6-Trichlorophenol		10	U	10	330

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	63		50 - 120
2-Fluorophenol	69		53 - 120
Nitrobenzene-d5	65		50 - 120
Phenol-d5	66		52 - 120
Terphenyl-d14	90		55 - 120
2,4,6-Tribromophenol	66		51 - 120

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B517**

Lab Sample ID: 280-9724-6
Client Matrix: Solid
% Moisture: 6.2

Date Sampled: 11/09/2010 1030
Date Received: 11/12/2010 0900

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 280-41546		Instrument ID:	MSS_B
Preparation:	3550C	Prep Batch: 280-40952		Lab File ID:	B1964.D
Dilution:	1.0			Initial Weight/Volume:	31.7 g
Date Analyzed:	11/17/2010 1833			Final Weight/Volume:	1000 uL
Date Prepared:	11/15/2010 1850			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found:** **5**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	1.72	1400	N J
	Unknown	2.96	470	N J
10574-37-5	2-Pentene, 2,3-dimethyl-	3.04	180	N J
	Unknown	3.46	4000	N J
	Unknown	11.84	520	N J

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B513**

Lab Sample ID: 280-9724-2
Client Matrix: Solid
% Moisture: 17.6

Date Sampled: 11/09/2010 0845
Date Received: 11/12/2010 0900

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method:	8082	Analysis Batch: 280-41488		Instrument ID:	GCS_W
Preparation:	3550C	Prep Batch: 280-40824		Initial Weight/Volume:	30.2 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Date Analyzed:	11/16/2010 1410			Injection Volume:	1 uL
Date Prepared:	11/14/2010 0859			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		3.3	U N	3.3	12
Aroclor 1221		9.7	U	9.7	20
Aroclor 1232		2.4	U	2.4	12
Aroclor 1242		5.6	U	5.6	12
Aroclor 1248		5.6	U	5.6	12
Aroclor 1254		30		3.1	12
Aroclor 1260		3.1	U N	3.1	12

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	503	*	59 - 130
Tetrachloro-m-xylene	67		53 - 128

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B514**

Lab Sample ID: 280-9724-3
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 11/09/2010 0945
Date Received: 11/12/2010 0900

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method:	8082	Analysis Batch: 280-41488		Instrument ID:	GCS_W
Preparation:	3550C	Prep Batch: 280-40824		Initial Weight/Volume:	30.6 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Date Analyzed:	11/16/2010 1546			Injection Volume:	1 uL
Date Prepared:	11/14/2010 0859			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.9	U	2.9	11
Aroclor 1221		8.5	U	8.5	18
Aroclor 1232		2.1	U	2.1	11
Aroclor 1242		5.0	U	5.0	11
Aroclor 1248		5.0	U	5.0	11
Aroclor 1254		2.8	U	2.8	11
Aroclor 1260		2.8	U	2.8	11

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	63		59 - 130
Tetrachloro-m-xylene	75		53 - 128

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B515**

Lab Sample ID: 280-9724-4
Client Matrix: Solid
% Moisture: 18.9

Date Sampled: 11/09/2010 0900
Date Received: 11/12/2010 0900

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method:	8082	Analysis Batch: 280-41488		Instrument ID:	GCS_W
Preparation:	3550C	Prep Batch: 280-40824		Initial Weight/Volume:	30.5 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Date Analyzed:	11/16/2010 1618			Injection Volume:	1 uL
Date Prepared:	11/14/2010 0859			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		3.4	U	3.4	12
Aroclor 1221		9.7	U	9.7	20
Aroclor 1232		2.4	U	2.4	12
Aroclor 1242		5.7	U	5.7	12
Aroclor 1248		5.7	U	5.7	12
Aroclor 1254		3.2	U	3.2	12
Aroclor 1260		3.2	U	3.2	12

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	68		59 - 130
Tetrachloro-m-xylene	75		53 - 128

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B516**

Lab Sample ID: 280-9724-5
Client Matrix: Solid
% Moisture: 6.2

Date Sampled: 11/09/2010 1030
Date Received: 11/12/2010 0900

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method:	8082	Analysis Batch: 280-41654		Instrument ID:	GCS_W
Preparation:	3550C	Prep Batch: 280-40824		Initial Weight/Volume:	30.8 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Date Analyzed:	11/17/2010 1459			Injection Volume:	1 uL
Date Prepared:	11/14/2010 0859			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.9	U	2.9	10
Aroclor 1221		8.3	U	8.3	17
Aroclor 1232		2.1	U	2.1	10
Aroclor 1242		4.8	U	4.8	10
Aroclor 1248		4.8	U	4.8	10
Aroclor 1254		2.7	U	2.7	10
Aroclor 1260		2.7	U	2.7	10

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	78		59 - 130
Tetrachloro-m-xylene	81		53 - 128

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B517**

Lab Sample ID: 280-9724-6
Client Matrix: Solid % Moisture: 6.2

Date Sampled: 11/09/2010 1030
Date Received: 11/12/2010 0900

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method:	8082	Analysis Batch: 280-41488		Instrument ID:	GCS_W
Preparation:	3550C	Prep Batch: 280-40824		Initial Weight/Volume:	32.3 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Date Analyzed:	11/16/2010 1722			Injection Volume:	1 uL
Date Prepared:	11/14/2010 0859			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.7	U	2.7	9.9
Aroclor 1221		7.9	U	7.9	16
Aroclor 1232		2.0	U	2.0	9.9
Aroclor 1242		4.6	U	4.6	9.9
Aroclor 1248		4.6	U	4.6	9.9
Aroclor 1254		2.6	U	2.6	9.9
Aroclor 1260		2.6	U	2.6	9.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	61		59 - 130
Tetrachloro-m-xylene	83		53 - 128

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B513**

Lab Sample ID: 280-9724-2
Client Matrix: Solid
% Moisture: 17.6

Date Sampled: 11/09/2010 0845
Date Received: 11/12/2010 0900

NWTPH-Dx Northwest - Semi-Volatile Petroleum Products (GC)

Method:	NWTPH-Dx	Analysis Batch: 280-41720		Instrument ID:	GCS_U
Preparation:	3550C	Prep Batch: 280-40839		Lab File ID:	013B1301.D
Dilution:	1.0			Initial Weight/Volume:	30.8 g
Date Analyzed:	11/17/2010 2200			Final Weight/Volume:	10000 uL
Date Prepared:	11/14/2010 1410			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		2800000		12000	47000
C10-C28		1700000		8000	47000

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	314	*	49 - 115

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B514**

Lab Sample ID: 280-9724-3
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 11/09/2010 0945
Date Received: 11/12/2010 0900

NWTPH-Dx Northwest - Semi-Volatile Petroleum Products (GC)

Method:	NWTPH-Dx	Analysis Batch: 280-41720		Instrument ID:	GCS_U
Preparation:	3550C	Prep Batch: 280-40839		Lab File ID:	014B1401.D
Dilution:	1.0			Initial Weight/Volume:	30.0 g
Date Analyzed:	11/17/2010 2228			Final Weight/Volume:	1000 uL
Date Prepared:	11/14/2010 1410			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		2600	J	1100	4300
C10-C28		1600	J	740	4300

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	75		49 - 115

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B515**

Lab Sample ID: 280-9724-4
Client Matrix: Solid
% Moisture: 18.9

Date Sampled: 11/09/2010 0900
Date Received: 11/12/2010 0900

NWTPH-Dx Northwest - Semi-Volatile Petroleum Products (GC)

Method:	NWTPH-Dx	Analysis Batch: 280-41720		Instrument ID:	GCS_U
Preparation:	3550C	Prep Batch: 280-40839		Lab File ID:	018B1801.D
Dilution:	1.0			Initial Weight/Volume:	31.6 g
Date Analyzed:	11/18/2010 0020			Final Weight/Volume:	1000 uL
Date Prepared:	11/14/2010 1410			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		520000		1200	4700
C10-C28		310000		790	4700

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	149	*	49 - 115

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B516**

Lab Sample ID: 280-9724-5
Client Matrix: Solid
% Moisture: 6.2

Date Sampled: 11/09/2010 1030
Date Received: 11/12/2010 0900

NWTPH-Dx Northwest - Semi-Volatile Petroleum Products (GC)

Method:	NWTPH-Dx	Analysis Batch: 280-41720		Instrument ID:	GCS_U
Preparation:	3550C	Prep Batch: 280-40839		Lab File ID:	019B1901.D
Dilution:	1.0			Initial Weight/Volume:	32.5 g
Date Analyzed:	11/18/2010 0049			Final Weight/Volume:	1000 uL
Date Prepared:	11/14/2010 1410			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		4400		980	3900
C10-C28		2600	J	670	3900

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	76		49 - 115

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B517**

Lab Sample ID: 280-9724-6
Client Matrix: Solid
% Moisture: 6.2

Date Sampled: 11/09/2010 1030
Date Received: 11/12/2010 0900

NWTPH-Dx Northwest - Semi-Volatile Petroleum Products (GC)

Method:	NWTPH-Dx	Analysis Batch: 280-41720		Instrument ID:	GCS_U
Preparation:	3550C	Prep Batch: 280-40839		Lab File ID:	020B2001.D
Dilution:	1.0			Initial Weight/Volume:	31.0 g
Date Analyzed:	11/18/2010 0117			Final Weight/Volume:	1000 uL
Date Prepared:	11/14/2010 1410			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		2600	J	1000	4100
C10-C28		1700	J	700	4100

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	80		49 - 115

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B512**

Lab Sample ID: 280-9724-1
Client Matrix: Solid
% Moisture: 0.1

Date Sampled: 11/09/2010 0830
Date Received: 11/12/2010 0900

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 280-41820		Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-40951		Lab File ID:	26a111810.asc
Dilution:	1.0			Initial Weight/Volume:	1.01 g
Date Analyzed:	11/18/2010 1446			Final Weight/Volume:	100 mL
Date Prepared:	11/17/2010 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		196	N	1.5	5.0
Antimony		0.38	U	0.38	0.59
Arsenic		0.65	U	0.65	0.99
Barium		2.4	J	0.075	0.50
Beryllium		0.033	U	0.033	0.20
Boron		0.97	U	0.97	2.0
Cadmium		0.041	U	0.041	0.20
Chromium		0.22		0.057	0.20
Cobalt		0.12	B	0.099	0.99
Copper		0.38	B	0.21	0.99
Iron		359	N	3.8	5.0
Lead		0.73		0.27	0.50
Magnesium		31.4		3.7	19.8
Molybdenum		0.40	B	0.26	2.0
Nickel		0.33	B M	0.12	4.0
Potassium		56.5	B	40.6	297
Selenium		0.85	U	0.85	0.99
Silicon		119	N	2.1	9.9
Silver		0.16	U	0.16	0.20
Sodium		58.5	U	58.5	119
Vanadium		0.30	B	0.093	2.0
Zinc		1.4		0.39	0.99
Calcium		55.3		14.0	49.5

Method:	6010B	Analysis Batch: 280-42180		Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-41873		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.19 g
Date Analyzed:	11/21/2010 1415			Final Weight/Volume:	100 mL
Date Prepared:	11/19/2010 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Manganese		6.2	J	0.084	0.84

7471A Mercury (CVAA)

Method:	7471A	Analysis Batch: 280-41892		Instrument ID:	MT_033
Preparation:	7471A	Prep Batch: 280-40977		Lab File ID:	101118AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Date Analyzed:	11/18/2010 1257			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2010 0900				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0054	U	0.0054	0.016

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B513**

Lab Sample ID: 280-9724-2
Client Matrix: Solid
% Moisture: 17.6

Date Sampled: 11/09/2010 0845
Date Received: 11/12/2010 0900

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 280-41820		Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-40951		Lab File ID:	26a111810.asc
Dilution:	1.0			Initial Weight/Volume:	1.07 g
Date Analyzed:	11/18/2010 1455			Final Weight/Volume:	100 mL
Date Prepared:	11/17/2010 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4100		1.8	5.7
Antimony		0.43	U	0.43	0.68
Arsenic		2.3		0.75	1.1
Barium		48.5	J	0.086	0.57
Beryllium		0.095	B	0.037	0.23
Boron		1.9	B	1.1	2.3
Cadmium		0.30		0.047	0.23
Chromium		10.0		0.066	0.23
Cobalt		3.8		0.11	1.1
Copper		21.7		0.25	1.1
Iron		11600		4.3	5.7
Lead		30.6		0.31	0.57
Magnesium		2380		4.2	22.7
Molybdenum		1.3	B	0.29	2.3
Nickel		27.0		0.14	4.5
Potassium		763		46.5	340
Selenium		1.8		0.98	1.1
Silicon		147		2.4	11.3
Silver		0.18	U	0.18	0.23
Sodium		222		66.9	136
Vanadium		55.8		0.11	2.3
Zinc		196		0.45	1.1
Calcium		2770		16.0	56.7

Method:	6010B	Analysis Batch: 280-42180		Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-41873		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.14 g
Date Analyzed:	11/21/2010 1417			Final Weight/Volume:	100 mL
Date Prepared:	11/19/2010 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Manganese		126	J	0.11	1.1

7471A Mercury (CVAA)

Method:	7471A	Analysis Batch: 280-41892		Instrument ID:	MT_033
Preparation:	7471A	Prep Batch: 280-40977		Lab File ID:	101118AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.65 g
Date Analyzed:	11/18/2010 1304			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2010 0900				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.045		0.0062	0.019

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B514**

Lab Sample ID: 280-9724-3
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 11/09/2010 0945
Date Received: 11/12/2010 0900

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 280-41820		Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-40951		Lab File ID:	26a111810.asc
Dilution:	1.0			Initial Weight/Volume:	1.14 g
Date Analyzed:	11/18/2010 1457			Final Weight/Volume:	100 mL
Date Prepared:	11/17/2010 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		7190		1.5	4.8
Antimony		0.36	U	0.36	0.57
Arsenic		6.6		0.63	0.95
Barium		46.2	J	0.072	0.48
Beryllium		0.24		0.031	0.19
Boron		0.93	U	0.93	1.9
Cadmium		0.039	U	0.039	0.19
Chromium		8.3		0.055	0.19
Cobalt		6.5		0.095	0.95
Copper		16.4		0.21	0.95
Iron		17200		3.6	4.8
Lead		7.0		0.26	0.48
Magnesium		5680		3.5	19.0
Molybdenum		0.25	U	0.25	1.9
Nickel		9.5		0.12	3.8
Potassium		1060		39.0	285
Selenium		0.82	U	0.82	0.95
Silicon		162		2.0	9.5
Silver		0.15	U	0.15	0.19
Sodium		373		56.1	114
Vanadium		39.1		0.089	1.9
Zinc		38.5		0.38	0.95
Calcium		22100		13.4	47.6

Method:	6010B	Analysis Batch: 280-42180		Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-41873		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.00 g
Date Analyzed:	11/21/2010 1435			Final Weight/Volume:	100 mL
Date Prepared:	11/19/2010 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Manganese		320	J	0.11	1.1

7471A Mercury (CVAA)

Method:	7471A	Analysis Batch: 280-41892		Instrument ID:	MT_033
Preparation:	7471A	Prep Batch: 280-40977		Lab File ID:	101118AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.63 g
Date Analyzed:	11/18/2010 1306			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2010 0900				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.013	B	0.0057	0.018

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B515**

Lab Sample ID: 280-9724-4
Client Matrix: Solid
% Moisture: 18.9

Date Sampled: 11/09/2010 0900
Date Received: 11/12/2010 0900

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 280-41820		Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-40951		Lab File ID:	26a111810.asc
Dilution:	1.0			Initial Weight/Volume:	1.05 g
Date Analyzed:	11/18/2010 1500			Final Weight/Volume:	100 mL
Date Prepared:	11/17/2010 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4340		1.8	5.9
Antimony		0.57	B	0.45	0.70
Arsenic		3.1		0.78	1.2
Barium		91.8	J	0.089	0.59
Beryllium		0.13	B	0.039	0.23
Boron		4.0		1.2	2.3
Cadmium		0.33		0.048	0.23
Chromium		13.0		0.068	0.23
Cobalt		4.4		0.12	1.2
Copper		21.8		0.25	1.2
Iron		11200		4.5	5.9
Lead		84.4		0.32	0.59
Magnesium		2870		4.3	23.5
Molybdenum		0.49	B	0.31	2.3
Nickel		25.6		0.14	4.7
Potassium		1280		48.2	352
Selenium		1.0	U	1.0	1.2
Silicon		186		2.5	11.7
Silver		0.19	U	0.19	0.23
Sodium		323		69.3	141
Vanadium		46.9		0.11	2.3
Zinc		179		0.47	1.2
Calcium		7340		16.6	58.7

Method:	6010B	Analysis Batch: 280-42180		Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-41873		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.17 g
Date Analyzed:	11/21/2010 1437			Final Weight/Volume:	100 mL
Date Prepared:	11/19/2010 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Manganese		198	J	0.11	1.1

7471A Mercury (CVAA)

Method:	7471A	Analysis Batch: 280-41892		Instrument ID:	MT_033
Preparation:	7471A	Prep Batch: 280-40977		Lab File ID:	101118AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.61 g
Date Analyzed:	11/18/2010 1309			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2010 0900				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.023		0.0067	0.021

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B516**

Lab Sample ID: 280-9724-5
Client Matrix: Solid
% Moisture: 6.2

Date Sampled: 11/09/2010 1030
Date Received: 11/12/2010 0900

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 280-41820		Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-40951		Lab File ID:	26a111810.asc
Dilution:	1.0			Initial Weight/Volume:	1.10 g
Date Analyzed:	11/18/2010 1502			Final Weight/Volume:	100 mL
Date Prepared:	11/17/2010 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		5250		1.5	4.8
Antimony		0.37	U	0.37	0.58
Arsenic		3.7		0.64	0.97
Barium		38.5	J	0.074	0.48
Beryllium		0.19		0.032	0.19
Boron		0.95	U	0.95	1.9
Cadmium		0.040	U	0.040	0.19
Chromium		5.5		0.056	0.19
Cobalt		6.7		0.097	0.97
Copper		14.3		0.21	0.97
Iron		18200		3.7	4.8
Lead		4.4		0.26	0.48
Magnesium		4490		3.6	19.4
Molybdenum		0.25	U	0.25	1.9
Nickel		7.1		0.12	3.9
Potassium		772		39.7	291
Selenium		0.83	U	0.83	0.97
Silicon		146		2.0	9.7
Silver		0.16	U	0.16	0.19
Sodium		212		57.2	116
Vanadium		39.4		0.091	1.9
Zinc		34.7		0.39	0.97
Calcium		8480		13.7	48.5

Method:	6010B	Analysis Batch: 280-42180		Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-41873		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.18 g
Date Analyzed:	11/21/2010 1439			Final Weight/Volume:	100 mL
Date Prepared:	11/19/2010 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Manganese		211	J	0.090	0.90

7471A Mercury (CVAA)

Method:	7471A	Analysis Batch: 280-41892		Instrument ID:	MT_033
Preparation:	7471A	Prep Batch: 280-40977		Lab File ID:	101118AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.63 g
Date Analyzed:	11/18/2010 1311			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2010 0900				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0092	B	0.0056	0.017

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Client Sample ID: **J1B517**

Lab Sample ID: 280-9724-6
Client Matrix: Solid
% Moisture: 6.2

Date Sampled: 11/09/2010 1030
Date Received: 11/12/2010 0900

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 280-41820		Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-40951		Lab File ID:	26a111810.asc
Dilution:	1.0			Initial Weight/Volume:	1.01 g
Date Analyzed:	11/18/2010 1513			Final Weight/Volume:	100 mL
Date Prepared:	11/17/2010 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6560		1.6	5.3
Antimony		0.40	U	0.40	0.63
Arsenic		4.4		0.70	1.1
Barium		46.5	J	0.080	0.53
Beryllium		0.23		0.035	0.21
Boron		1.0	U	1.0	2.1
Cadmium		0.043	U	0.043	0.21
Chromium		7.4		0.061	0.21
Cobalt		8.0		0.11	1.1
Copper		16.1		0.23	1.1
Iron		20600		4.0	5.3
Lead		5.8		0.28	0.53
Magnesium		5340		3.9	21.1
Molybdenum		0.27	U	0.27	2.1
Nickel		9.4		0.13	4.2
Potassium		1010		43.3	317
Selenium		0.91	U	0.91	1.1
Silicon		185		2.2	10.6
Silver		0.17	U	0.17	0.21
Sodium		246		62.3	127
Vanadium		48.7		0.099	2.1
Zinc		42.5		0.42	1.1
Calcium		10300		14.9	52.8

Method:	6010B	Analysis Batch: 280-42180		Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-41873		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.20 g
Date Analyzed:	11/21/2010 1442			Final Weight/Volume:	100 mL
Date Prepared:	11/19/2010 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Manganese		334	J	0.089	0.89

7471A Mercury (CVAA)

Method:	7471A	Analysis Batch: 280-41892		Instrument ID:	MT_033
Preparation:	7471A	Prep Batch: 280-40977		Lab File ID:	101118AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.61 g
Date Analyzed:	11/18/2010 1313			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2010 0900				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.012	B	0.0058	0.018

General Chemistry

Client Sample ID: **J1B512**

Lab Sample ID: 280-9724-1
Client Matrix: Solid

Date Sampled: 11/09/2010 0830
Date Received: 11/12/2010 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	0.10	U	%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-40928 Date Analyzed: 11/15/2010 0952 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

General Chemistry

Client Sample ID: **J1B513**

Lab Sample ID: 280-9724-2
Client Matrix: Solid

Date Sampled: 11/09/2010 0845
Date Received: 11/12/2010 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	17.6		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-40928 Date Analyzed: 11/15/2010 0952 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

General Chemistry

Client Sample ID: **J1B514**

Lab Sample ID: 280-9724-3
Client Matrix: Solid

Date Sampled: 11/09/2010 0945
Date Received: 11/12/2010 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	7.8		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-40928 Date Analyzed: 11/15/2010 0952 DryWt Corrected: N

General Chemistry

Client Sample ID: **J1B515**

Lab Sample ID: 280-9724-4
Client Matrix: Solid

Date Sampled: 11/09/2010 0900
Date Received: 11/12/2010 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	18.9		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-40928 Date Analyzed: 11/15/2010 0952 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

General Chemistry

Client Sample ID: **J1B516**

Lab Sample ID: 280-9724-5
Client Matrix: Solid

Date Sampled: 11/09/2010 1030
Date Received: 11/12/2010 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	6.2		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-40928 Date Analyzed: 11/15/2010 0952 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

General Chemistry

Client Sample ID: **J1B517**

Lab Sample ID: 280-9724-6
Client Matrix: Solid

Date Sampled: 11/09/2010 1030
Date Received: 11/12/2010 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	6.2		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-40928 Date Analyzed: 11/15/2010 0952 DryWt Corrected: N

QUALITY CONTROL RESULTS

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 280-40952					
LCS 280-40952/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-40952/1-A	Method Blank	T	Solid	3550C	
280-9724-1	J1B512	T	Solid	3550C	
280-9724-2	J1B513	T	Solid	3550C	
280-9724-3	J1B514	T	Solid	3550C	
280-9724-4	J1B515	T	Solid	3550C	
280-9724-5	J1B516	T	Solid	3550C	
280-9724-5MS	Matrix Spike	T	Solid	3550C	
280-9724-5MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-9724-6	J1B517	T	Solid	3550C	
Analysis Batch:280-41546					
LCS 280-40952/2-A	Lab Control Sample	T	Solid	8270C	280-40952
MB 280-40952/1-A	Method Blank	T	Solid	8270C	280-40952
280-9724-1	J1B512	T	Solid	8270C	280-40952
280-9724-2	J1B513	T	Solid	8270C	280-40952
280-9724-3	J1B514	T	Solid	8270C	280-40952
280-9724-4	J1B515	T	Solid	8270C	280-40952
280-9724-5	J1B516	T	Solid	8270C	280-40952
280-9724-5MS	Matrix Spike	T	Solid	8270C	280-40952
280-9724-5MSD	Matrix Spike Duplicate	T	Solid	8270C	280-40952
280-9724-6	J1B517	T	Solid	8270C	280-40952

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 280-40824					
LCS 280-40824/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-40824/1-A	Method Blank	T	Solid	3550C	
280-9724-2	J1B513	T	Solid	3550C	
280-9724-2MS	Matrix Spike	T	Solid	3550C	
280-9724-2MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-9724-3	J1B514	T	Solid	3550C	
280-9724-4	J1B515	T	Solid	3550C	
280-9724-5	J1B516	T	Solid	3550C	
280-9724-6	J1B517	T	Solid	3550C	
Prep Batch: 280-40839					
LCS 280-40839/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-40839/1-A	Method Blank	T	Solid	3550C	
280-9724-2	J1B513	T	Solid	3550C	
280-9724-3	J1B514	T	Solid	3550C	
280-9724-3MS	Matrix Spike	T	Solid	3550C	
280-9724-3MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-9724-4	J1B515	T	Solid	3550C	
280-9724-5	J1B516	T	Solid	3550C	
280-9724-6	J1B517	T	Solid	3550C	
Analysis Batch:280-41488					
LCS 280-40824/2-A	Lab Control Sample	T	Solid	8082	280-40824
MB 280-40824/1-A	Method Blank	T	Solid	8082	280-40824
280-9724-2	J1B513	T	Solid	8082	280-40824
280-9724-2MS	Matrix Spike	T	Solid	8082	280-40824
280-9724-2MSD	Matrix Spike Duplicate	T	Solid	8082	280-40824
280-9724-3	J1B514	T	Solid	8082	280-40824
280-9724-4	J1B515	T	Solid	8082	280-40824
280-9724-6	J1B517	T	Solid	8082	280-40824
Analysis Batch:280-41654					
280-9724-5	J1B516	T	Solid	8082	280-40824
Analysis Batch:280-41720					
LCS 280-40839/2-A	Lab Control Sample	T	Solid	NWTPH-Dx	280-40839
MB 280-40839/1-A	Method Blank	T	Solid	NWTPH-Dx	280-40839
280-9724-2	J1B513	T	Solid	NWTPH-Dx	280-40839
280-9724-3	J1B514	T	Solid	NWTPH-Dx	280-40839
280-9724-3MS	Matrix Spike	T	Solid	NWTPH-Dx	280-40839
280-9724-3MSD	Matrix Spike Duplicate	T	Solid	NWTPH-Dx	280-40839
280-9724-4	J1B515	T	Solid	NWTPH-Dx	280-40839
280-9724-5	J1B516	T	Solid	NWTPH-Dx	280-40839
280-9724-6	J1B517	T	Solid	NWTPH-Dx	280-40839

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-40951					
LCS 280-40951/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-40951/1-A	Method Blank	T	Solid	3050B	
280-9724-1	J1B512	T	Solid	3050B	
280-9724-1DU	Duplicate	T	Solid	3050B	
280-9724-1MS	Matrix Spike	T	Solid	3050B	
280-9724-2	J1B513	T	Solid	3050B	
280-9724-3	J1B514	T	Solid	3050B	
280-9724-4	J1B515	T	Solid	3050B	
280-9724-5	J1B516	T	Solid	3050B	
280-9724-6	J1B517	T	Solid	3050B	
Prep Batch: 280-40977					
LCS 280-40977/2-A	Lab Control Sample	T	Solid	7471A	
MB 280-40977/1-A	Method Blank	T	Solid	7471A	
280-9724-1	J1B512	T	Solid	7471A	
280-9724-1DU	Duplicate	T	Solid	7471A	
280-9724-1MS	Matrix Spike	T	Solid	7471A	
280-9724-2	J1B513	T	Solid	7471A	
280-9724-3	J1B514	T	Solid	7471A	
280-9724-4	J1B515	T	Solid	7471A	
280-9724-5	J1B516	T	Solid	7471A	
280-9724-6	J1B517	T	Solid	7471A	
Analysis Batch:280-41820					
LCS 280-40951/2-A	Lab Control Sample	T	Solid	6010B	280-40951
MB 280-40951/1-A	Method Blank	T	Solid	6010B	280-40951
280-9724-1	J1B512	T	Solid	6010B	280-40951
280-9724-1DU	Duplicate	T	Solid	6010B	280-40951
280-9724-1MS	Matrix Spike	T	Solid	6010B	280-40951
280-9724-2	J1B513	T	Solid	6010B	280-40951
280-9724-3	J1B514	T	Solid	6010B	280-40951
280-9724-4	J1B515	T	Solid	6010B	280-40951
280-9724-5	J1B516	T	Solid	6010B	280-40951
280-9724-6	J1B517	T	Solid	6010B	280-40951

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-41873					
LCS 280-41873/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-41873/1-A	Method Blank	T	Solid	3050B	
280-9724-1	J1B512	T	Solid	3050B	
280-9724-2	J1B513	T	Solid	3050B	
280-9724-2DU	Duplicate	T	Solid	3050B	
280-9724-2MS	Matrix Spike	T	Solid	3050B	
280-9724-3	J1B514	T	Solid	3050B	
280-9724-4	J1B515	T	Solid	3050B	
280-9724-5	J1B516	T	Solid	3050B	
280-9724-6	J1B517	T	Solid	3050B	
Analysis Batch:280-41892					
LCS 280-40977/2-A	Lab Control Sample	T	Solid	7471A	280-40977
MB 280-40977/1-A	Method Blank	T	Solid	7471A	280-40977
280-9724-1	J1B512	T	Solid	7471A	280-40977
280-9724-1DU	Duplicate	T	Solid	7471A	280-40977
280-9724-1MS	Matrix Spike	T	Solid	7471A	280-40977
280-9724-2	J1B513	T	Solid	7471A	280-40977
280-9724-3	J1B514	T	Solid	7471A	280-40977
280-9724-4	J1B515	T	Solid	7471A	280-40977
280-9724-5	J1B516	T	Solid	7471A	280-40977
280-9724-6	J1B517	T	Solid	7471A	280-40977
Analysis Batch:280-42180					
LCS 280-41873/2-A	Lab Control Sample	T	Solid	6010B	280-41873
MB 280-41873/1-A	Method Blank	T	Solid	6010B	280-41873
280-9724-1	J1B512	T	Solid	6010B	280-41873
280-9724-2	J1B513	T	Solid	6010B	280-41873
280-9724-2DU	Duplicate	T	Solid	6010B	280-41873
280-9724-2MS	Matrix Spike	T	Solid	6010B	280-41873
280-9724-3	J1B514	T	Solid	6010B	280-41873
280-9724-4	J1B515	T	Solid	6010B	280-41873
280-9724-5	J1B516	T	Solid	6010B	280-41873
280-9724-6	J1B517	T	Solid	6010B	280-41873

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-40928					
280-9724-1	J1B512	T	Solid	D-2216	
280-9724-1DU	Duplicate	T	Solid	D-2216	
280-9724-2	J1B513	T	Solid	D-2216	
280-9724-3	J1B514	T	Solid	D-2216	
280-9724-4	J1B515	T	Solid	D-2216	
280-9724-5	J1B516	T	Solid	D-2216	
280-9724-6	J1B517	T	Solid	D-2216	

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Method Blank - Batch: 280-40952

Method: 8270C
Preparation: 3550C

Lab Sample ID:	MB 280-40952/1-A	Analysis Batch:	280-41546	Instrument ID:	MSS_B
Client Matrix:	Solid	Prep Batch:	280-40952	Lab File ID:	B1940.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	32.8 g
Date Analyzed:	11/17/2010 1023			Final Weight/Volume:	1000 uL
Date Prepared:	11/15/2010 1850			Injection Volume:	0.5 uL

Analyte	Result	Qual	MDL	RL
Acenaphthene	9.4	U	9.4	300
Acenaphthylene	16	U	16	300
Anthracene	16	U	16	300
Benzo[a]anthracene	18	U	18	300
Benzo[a]pyrene	18	U	18	300
Benzo[b]fluoranthene	24	U	24	300
Benzo[ghi]perylene	15	U	15	300
Benzo[k]fluoranthene	37	U	37	300
Bis(2-chloroethoxy)methane	21	U	21	300
Bis(2-chloroethyl)ether	15	U	15	300
bis (2-chloroisopropyl) ether	21	U	21	300
Bis(2-ethylhexyl) phthalate	42	U	42	300
4-Bromophenyl phenyl ether	17	U	17	300
Butyl benzyl phthalate	39	U	39	300
Carbazole	33	U	33	300
4-Chloroaniline	75	U	75	300
4-Chloro-3-methylphenol	60	U	60	300
2-Chloronaphthalene	9.1	U	9.1	300
2-Chlorophenol	19	U	19	300
4-Chlorophenyl phenyl ether	19	U	19	300
Chrysene	25	U	25	300
Dibenz(a,h)anthracene	17	U	17	300
Dibenzofuran	18	U	18	300
1,2-Dichlorobenzene	20	U	20	300
1,3-Dichlorobenzene	11	U	11	300
1,4-Dichlorobenzene	12	U	12	300
3,3'-Dichlorobenzidine	82	U	82	600
2,4-Dichlorophenol	9.1	U	9.1	300
Diethyl phthalate	24	U	24	300
2,4-Dimethylphenol	60	U	60	300
Dimethyl phthalate	21	U	21	300
Di-n-butyl phthalate	27	U	27	300
4,6-Dinitro-2-methylphenol	300	U	300	600
2,4-Dinitrophenol	300	U	300	750
2,4-Dinitrotoluene	60	U	60	300
2,6-Dinitrotoluene	26	U	26	300
Di-n-octyl phthalate	13	U	13	300
Fluoranthene	33	U	33	300
Fluorene	16	U	16	300
Hexachlorobenzene	27	U	27	300
Hexachlorobutadiene	9.1	U	9.1	300
Hexachlorocyclopentadiene	46	U	46	300
Hexachloroethane	19	U	19	300

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Method Blank - Batch: 280-40952

Method: 8270C
Preparation: 3550C

Lab Sample ID:	MB 280-40952/1-A	Analysis Batch:	280-41546	Instrument ID:	MSS_B
Client Matrix:	Solid	Prep Batch:	280-40952	Lab File ID:	B1940.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	32.8 g
Date Analyzed:	11/17/2010 1023			Final Weight/Volume:	1000 uL
Date Prepared:	11/15/2010 1850			Injection Volume:	0.5 uL

Analyte	Result	Qual	MDL	RL
Indeno[1,2,3-cd]pyrene	20	U	20	300
Isophorone	16	U	16	300
2-Methylnaphthalene	17	U	17	300
2-Methylphenol	12	U	12	300
3 & 4 Methylphenol	30	U	30	300
Naphthalene	28	U	28	300
2-Nitroaniline	46	U	46	300
3-Nitroaniline	67	U	67	300
4-Nitroaniline	66	U	66	300
Nitrobenzene	20	U	20	300
2-Nitrophenol	9.1	U	9.1	300
4-Nitrophenol	89	U	89	600
N-Nitrosodi-n-propylamine	28	U	28	300
N-Nitrosodiphenylamine	19	U	19	300
Pentachlorophenol	300	U	300	600
Phenanthrene	16	U	16	300
Phenol	16	U	16	300
Pyrene	11	U	11	300
1,2,4-Trichlorobenzene	26	U	26	300
2,4,5-Trichlorophenol	9.1	U	9.1	300
2,4,6-Trichlorophenol	9.1	U	9.1	300

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	77	50 - 120
2-Fluorophenol	76	53 - 120
Nitrobenzene-d5	74	50 - 120
Phenol-d5	72	52 - 120
Terphenyl-d14	103	55 - 120
2,4,6-Tribromophenol	66	51 - 120

Method Blank TICs- Batch: 280-40952

Cas Number	Analyte	RT	Est. Result	Qual
	Unknown	3.04	188	N J
	Unknown	3.46	4220	N J
	Unknown	1.73	4260	N J

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Lab Control Sample - Batch: 280-40952

Method: 8270C
Preparation: 3550C

Lab Sample ID: LCS 280-40952/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/17/2010 1044
Date Prepared: 11/15/2010 1850

Analysis Batch: 280-41546
Prep Batch: 280-40952
Units: ug/Kg

Instrument ID: MSS_B
Lab File ID: B1941.D
Initial Weight/Volume: 32.1 g
Final Weight/Volume: 1000 uL
Injection Volume: 0.5 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	2490	1880	75	52 - 120	
Anthracene	2490	2110	85	57 - 120	
Carbazole	2490	2120	85	54 - 120	
4-Chloro-3-methylphenol	2490	1970	79	57 - 120	
2-Chlorophenol	2490	1850	74	53 - 120	
1,4-Dichlorobenzene	2490	1800	72	46 - 120	
2,4-Dinitrotoluene	2490	2240	90	53 - 120	
2-Methylnaphthalene	2490	1820	73	55 - 120	
2-Methylphenol	2490	1830	74	51 - 120	
4-Nitrophenol	2490	2250	90	41 - 120	
N-Nitrosodi-n-propylamine	2490	1880	76	51 - 120	
Pentachlorophenol	2490	1960	78	30 - 120	
Phenol	2490	1890	76	54 - 120	
Pyrene	2490	2180	87	50 - 120	
1,2,4-Trichlorobenzene	2490	1760	71	50 - 120	
2,4,6-Trichlorophenol	2490	1920	77	50 - 120	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	75	50 - 120
2-Fluorophenol	77	53 - 120
Nitrobenzene-d5	77	50 - 120
Phenol-d5	77	52 - 120
Terphenyl-d14	90	55 - 120
2,4,6-Tribromophenol	75	51 - 120

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-40952

Method: 8270C
Preparation: 3550C

MS Lab Sample ID:	280-9724-5	Analysis Batch: 280-41546	Instrument ID: MSS_B
Client Matrix:	Solid	Prep Batch: 280-40952	Lab File ID: B1962.D
Dilution:	1.0		Initial Weight/Volume: 31.0 g
Date Analyzed:	11/17/2010 1753		Final Weight/Volume: 1000 uL
Date Prepared:	11/15/2010 1850		Injection Volume: 0.5 uL

MSD Lab Sample ID:	280-9724-5	Analysis Batch: 280-41546	Instrument ID: MSS_B
Client Matrix:	Solid	Prep Batch: 280-40952	Lab File ID: B1963.D
Dilution:	1.0		Initial Weight/Volume: 31.1 g
Date Analyzed:	11/17/2010 1813		Final Weight/Volume: 1000 uL
Date Prepared:	11/15/2010 1850		Injection Volume: 0.5 uL

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	76	68	52 - 120	11	30		
Anthracene	86	80	57 - 120	7	30		
Carbazole	86	80	54 - 120	9	30		
4-Chloro-3-methylphenol	86	76	57 - 120	12	30		
2-Chlorophenol	72	69	53 - 120	6	30		
1,4-Dichlorobenzene	68	67	46 - 120	3	30		
2,4-Dinitrotoluene	70	66	53 - 120	7	30		
2-Methylnaphthalene	70	66	55 - 120	6	30		
2-Methylphenol	75	69	51 - 120	8	30		
4-Nitrophenol	77	69	41 - 120	11	30		
N-Nitrosodi-n-propylamine	74	71	51 - 120	6	30		
Pentachlorophenol	71	67	30 - 120	6	30		
Phenol	77	70	54 - 120	9	30		
Pyrene	85	78	50 - 120	9	38		
1,2,4-Trichlorobenzene	66	61	50 - 120	7	30		
2,4,6-Trichlorophenol	81	72	50 - 120	12	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl	75	69	50 - 120
2-Fluorophenol	76	72	53 - 120
Nitrobenzene-d5	75	70	50 - 120
Phenol-d5	75	71	52 - 120
Terphenyl-d14	94	86	55 - 120
2,4,6-Tribromophenol	78	71	51 - 120

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Method Blank - Batch: 280-40824

Method: 8082
Preparation: 3550C

Lab Sample ID:	MB 280-40824/1-A	Analysis Batch:	280-41488	Instrument ID:	GCS_W
Client Matrix:	Solid	Prep Batch:	280-40824	Lab File ID:	004F0401.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	31.4 g
Date Analyzed:	11/16/2010 1307			Final Weight/Volume:	5000 uL
Date Prepared:	11/14/2010 0859			Injection Volume:	1 uL
				Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	2.6	U	2.6	9.6
Aroclor 1221	7.7	U	7.7	16
Aroclor 1232	1.9	U	1.9	9.6
Aroclor 1242	4.5	U	4.5	9.6
Aroclor 1248	4.5	U	4.5	9.6
Aroclor 1254	2.5	U	2.5	9.6
Aroclor 1260	2.5	U	2.5	9.6

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	81	59 - 130
Tetrachloro-m-xylene	76	53 - 128

Lab Control Sample - Batch: 280-40824

Method: 8082
Preparation: 3550C

Lab Sample ID:	LCS 280-40824/2-A	Analysis Batch:	280-41488	Instrument ID:	GCS_W
Client Matrix:	Solid	Prep Batch:	280-40824	Lab File ID:	005F0501.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	31.2 g
Date Analyzed:	11/16/2010 1339			Final Weight/Volume:	5000 uL
Date Prepared:	11/14/2010 0859			Injection Volume:	1 uL
				Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	32.1	27.5	86	54 - 132	
Aroclor 1260	32.1	30.7	96	62 - 129	

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	91	59 - 130
Tetrachloro-m-xylene	82	53 - 128

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-40824

Method: 8082
Preparation: 3550C

MS Lab Sample ID:	280-9724-2	Analysis Batch: 280-41488	Instrument ID: GCS_W
Client Matrix:	Solid	Prep Batch: 280-40824	Lab File ID: 007F0701.D
Dilution:	1.0		Initial Weight/Volume: 32.5 g
Date Analyzed:	11/16/2010 1442		Final Weight/Volume: 5000 uL
Date Prepared:	11/14/2010 0859		Injection Volume: 1 uL
			Column ID: PRIMARY

MSD Lab Sample ID:	280-9724-2	Analysis Batch: 280-41488	Instrument ID: GCS_W
Client Matrix:	Solid	Prep Batch: 280-40824	Lab File ID: 008F0801.D
Dilution:	1.0		Initial Weight/Volume: 31.9 g
Date Analyzed:	11/16/2010 1514		Final Weight/Volume: 5000 uL
Date Prepared:	11/14/2010 0859		Injection Volume: 1 uL
			Column ID: PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aroclor 1016	626	225	54 - 132	93	26	N	N *
Aroclor 1260	150	58	62 - 129	87	26	N	N *

Surrogate	MS % Rec		MSD % Rec		Acceptance Limits
Decachlorobiphenyl	1636	*	553	*	59 - 130
Tetrachloro-m-xylene	79		61		53 - 128

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Method Blank - Batch: 280-40839

Method: NWTPH-Dx
Preparation: 3550C

Lab Sample ID:	MB 280-40839/1-A	Analysis Batch:	280-41720	Instrument ID:	GCS_U
Client Matrix:	Solid	Prep Batch:	280-40839	Lab File ID:	011B1101.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	32.2 g
Date Analyzed:	11/17/2010 2103			Final Weight/Volume:	1000 uL
Date Prepared:	11/14/2010 1410			Injection Volume:	1 uL

Analyte	Result	Qual	MDL	RL
C10-C36	930	U	930	3700
C10-C28	630	U	630	3700

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	77	49 - 115

Lab Control Sample - Batch: 280-40839

Method: NWTPH-Dx
Preparation: 3550C

Lab Sample ID:	LCS 280-40839/2-A	Analysis Batch:	280-41720	Instrument ID:	GCS_U
Client Matrix:	Solid	Prep Batch:	280-40839	Lab File ID:	012B1201.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	30.6 g
Date Analyzed:	11/17/2010 2131			Final Weight/Volume:	1000 uL
Date Prepared:	11/14/2010 1410			Injection Volume:	1 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
C10-C36	65400	59100	90	57 - 115	
C10-C28	65400	59000	90	53 - 115	

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	72	49 - 115

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-40839

Method: NWTPH-Dx
Preparation: 3550C

MS Lab Sample ID:	280-9724-3	Analysis Batch: 280-41720	Instrument ID:	GCS_U	
Client Matrix:	Solid	Prep Batch: 280-40839	Lab File ID:	016B1601.D	
Dilution:	1.0		Initial Weight/Volume:	30.5	g
Date Analyzed:	11/17/2010 2324		Final Weight/Volume:	1000	uL
Date Prepared:	11/14/2010 1410		Injection Volume:	1	uL

MSD Lab Sample ID:	280-9724-3	Analysis Batch: 280-41720	Instrument ID:	GCS_U	
Client Matrix:	Solid	Prep Batch: 280-40839	Lab File ID:	017B1701.D	
Dilution:	1.0		Initial Weight/Volume:	30.1	g
Date Analyzed:	11/17/2010 2352		Final Weight/Volume:	1000	uL
Date Prepared:	11/14/2010 1410		Injection Volume:	1	uL

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
C10-C36	94	88	57 - 115	5	23		
C10-C28	95	89	56 - 115	5	23		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
o-Terphenyl	74	77	49 - 115

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Method Blank - Batch: 280-40951

Method: 6010B
Preparation: 3050B

Lab Sample ID: MB 280-40951/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/18/2010 1441
Date Prepared: 11/17/2010 1400

Analysis Batch: 280-41820
Prep Batch: 280-40951
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: 26a111810.asc
Initial Weight/Volume: 1 g
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDL	RL
Aluminum	1.6	U	1.6	5.0
Antimony	0.38	U	0.38	0.60
Arsenic	0.66	U	0.66	1.0
Barium	0.0970	B	0.076	0.50
Beryllium	0.033	U	0.033	0.20
Boron	0.98	U	0.98	2.0
Cadmium	0.041	U	0.041	0.20
Chromium	0.058	U	0.058	0.20
Cobalt	0.10	U	0.10	1.0
Copper	0.22	U	0.22	1.0
Iron	3.8	U	3.8	5.0
Lead	0.27	U	0.27	0.50
Magnesium	3.7	U	3.7	20.0
Molybdenum	0.26	U	0.26	2.0
Nickel	0.12	U	0.12	4.0
Potassium	41.0	U	41.0	300
Selenium	0.86	U	0.86	1.0
Silicon	2.1	U	2.1	10.0
Silver	0.16	U	0.16	0.20
Sodium	59.0	U	59.0	120
Vanadium	0.094	U	0.094	2.0
Zinc	0.40	U	0.40	1.0
Calcium	14.1	U	14.1	50.0

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Lab Control Sample - Batch: 280-40951

Method: 6010B
Preparation: 3050B

Lab Sample ID: LCS 280-40951/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/18/2010 1444
Date Prepared: 11/17/2010 1400

Analysis Batch: 280-41820
Prep Batch: 280-40951
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: 26a111810.asc
Initial Weight/Volume: 1 g
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	196.6	98	82 - 116	
Antimony	50.0	51.55	103	82 - 110	
Arsenic	100	101.6	102	85 - 110	
Barium	200	195.2	98	87 - 112	
Beryllium	5.00	4.80	96	84 - 114	
Boron	100	99.12	99	81 - 110	
Cadmium	10.0	10.24	102	87 - 110	
Chromium	20.0	20.18	101	84 - 114	
Cobalt	50.0	49.78	100	87 - 110	
Copper	25.0	24.90	100	88 - 110	
Iron	100	97.03	97	87 - 120	
Lead	50.0	50.09	100	86 - 110	
Magnesium	5000	4846	97	90 - 110	
Molybdenum	100	99.78	100	86 - 110	
Nickel	50.0	48.93	98	87 - 110	
Potassium	5000	4983	100	89 - 110	
Selenium	200	206.2	103	83 - 110	
Silicon	1000	122.3	12	10 - 70	
Silver	5.00	4.75	95	87 - 114	
Sodium	5000	4910	98	90 - 112	
Vanadium	50.0	49.24	98	88 - 110	
Zinc	50.0	49.28	99	76 - 114	
Calcium	5000	4853	97	82 - 114	

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Matrix Spike - Batch: 280-40951

Method: 6010B
Preparation: 3050B

Lab Sample ID: 280-9724-1
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/18/2010 1453
Date Prepared: 11/17/2010 1400

Analysis Batch: 280-41820
Prep Batch: 280-40951
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: 26a111810.asc
Initial Weight/Volume: 1.07 g
Final Weight/Volume: 100 mL

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	196		187	828.0	338	50 - 200	N
Antimony	0.38	U	46.8	44.85	96	20 - 200	
Arsenic	0.65	U	93.5	90.51	97	76 - 111	
Barium	2.4		187	177.2	93	52 - 159	
Beryllium	0.033	U	4.68	4.27	91	72 - 105	
Boron	0.97	U	93.5	87.92	94	75 - 107	
Cadmium	0.041	U	9.35	9.15	98	40 - 130	
Chromium	0.22		18.7	17.94	95	70 - 200	
Cobalt	0.12	B	46.8	44.12	94	72 - 106	
Copper	0.38	B	23.4	22.30	94	37 - 187	
Iron	359		93.5	358.6	-0.7	70 - 200	N
Lead	0.73		46.8	44.86	94	70 - 200	
Magnesium	31.4		4680	4382	93	64 - 145	
Molybdenum	0.40	B	93.5	86.07	92	75 - 103	
Nickel	0.33	B	46.8	42.74	91	61 - 126	
Potassium	56.5	B	4680	4561	96	56 - 172	
Selenium	0.85	U	187	184.6	99	76 - 104	
Silicon	119		935	260.7	15	20 - 200	N
Silver	0.16	U	4.68	4.31	92	75 - 141	
Sodium	58.5	U	4680	4436	95	78 - 111	
Vanadium	0.30	B	46.8	43.29	92	50 - 169	
Zinc	1.4		46.8	45.55	94	70 - 200	
Calcium	55.3		4680	4352	92	43 - 165	

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Duplicate - Batch: 280-40951

Method: 6010B
Preparation: 3050B

Lab Sample ID: 280-9724-1
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/18/2010 1450
Date Prepared: 11/17/2010 1400

Analysis Batch: 280-41820
Prep Batch: 280-40951
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: 26a111810.asc
Initial Weight/Volume: 1.01 g
Final Weight/Volume: 100 mL

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	196		226.8	15	40	
Antimony	0.38	U	0.38	NC	40	U
Arsenic	0.65	U	0.65	NC	30	U
Barium	2.4		2.56	6	30	
Beryllium	0.033	U	0.033	NC	30	U
Boron	0.97	U	0.97	NC	30	U
Cadmium	0.041	U	0.041	NC	30	U
Chromium	0.22		0.161	32	40	B
Cobalt	0.12	B	0.128	4	30	B
Copper	0.38	B	0.319	18	30	B
Iron	359		330.1	8	40	
Lead	0.73		0.590	22	40	
Magnesium	31.4		30.93	1	30	
Molybdenum	0.40	B	0.26	NC	30	U
Nickel	0.33	B	0.135	84	30	B M
Potassium	56.5	B	57.00	0.9	40	B
Selenium	0.85	U	0.85	NC	30	U
Silicon	119		158.7	29	40	
Silver	0.16	U	0.16	NC	30	U
Sodium	58.5	U	58.5	NC	30	U
Vanadium	0.30	B	0.294	3	30	B
Zinc	1.4		1.02	33	40	
Calcium	55.3		54.62	1	30	

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Method Blank - Batch: 280-41873

Method: 6010B
Preparation: 3050B

Lab Sample ID: MB 280-41873/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/21/2010 1410
Date Prepared: 11/19/2010 1400

Analysis Batch: 280-42180
Prep Batch: 280-41873
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: N/A
Initial Weight/Volume: 1 g
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDL	RL
Manganese	0.139	B	0.10	1.0

Lab Control Sample - Batch: 280-41873

Method: 6010B
Preparation: 3050B

Lab Sample ID: LCS 280-41873/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/21/2010 1412
Date Prepared: 11/19/2010 1400

Analysis Batch: 280-42180
Prep Batch: 280-41873
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: N/A
Initial Weight/Volume: 1 g
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Manganese	50.0	48.16	96	88 - 110	

Matrix Spike - Batch: 280-41873

Method: 6010B
Preparation: 3050B

Lab Sample ID: 280-9724-2
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/21/2010 1424
Date Prepared: 11/19/2010 1400

Analysis Batch: 280-42180
Prep Batch: 280-41873
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: N/A
Initial Weight/Volume: 1.02 g
Final Weight/Volume: 100 mL

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Manganese	126	59.5	180.2	91	40 - 200	

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Duplicate - Batch: 280-41873

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-9724-2	Analysis Batch:	280-42180	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-41873	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/Kg	Initial Weight/Volume:	1.02 g
Date Analyzed:	11/21/2010 1421			Final Weight/Volume:	100 mL
Date Prepared:	11/19/2010 1400				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Manganese	126	116.6	8	40	

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Method Blank - Batch: 280-40977

Method: 7471A
Preparation: 7471A

Lab Sample ID: MB 280-40977/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/18/2010 1248
Date Prepared: 11/18/2010 0900

Analysis Batch: 280-41892
Prep Batch: 280-40977
Units: mg/Kg

Instrument ID: MT_033
Lab File ID: 101118AA.txt
Initial Weight/Volume: 0.60 g
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Mercury	0.0055	U	0.0055	0.017

Lab Control Sample - Batch: 280-40977

Method: 7471A
Preparation: 7471A

Lab Sample ID: LCS 280-40977/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/18/2010 1250
Date Prepared: 11/18/2010 0900

Analysis Batch: 280-41892
Prep Batch: 280-40977
Units: mg/Kg

Instrument ID: MT_033
Lab File ID: 101118AA.txt
Initial Weight/Volume: 0.60 g
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.417	0.430	103	87 - 111	

Matrix Spike - Batch: 280-40977

Method: 7471A
Preparation: 7471A

Lab Sample ID: 280-9724-1
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/18/2010 1302
Date Prepared: 11/18/2010 0900

Analysis Batch: 280-41892
Prep Batch: 280-40977
Units: mg/Kg

Instrument ID: MT_033
Lab File ID: 101118AA.txt
Initial Weight/Volume: 0.65 g
Final Weight/Volume: 50 mL

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.0054	U	0.385	0.371	96	87 - 111	

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Duplicate - Batch: 280-40977

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-9724-1	Analysis Batch:	280-41892	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-40977	Lab File ID:	101118AA.txt
Dilution:	1.0	Units:	mg/Kg	Initial Weight/Volume:	0.64 g
Date Analyzed:	11/18/2010 1259			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2010 0900				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.0054	U	0.0052	NC	20	U

Client: Washington Closure Hanford

Job Number: 280-9724-1
Sdg Number: J00926

Duplicate - Batch: 280-40928

Method: D-2216
Preparation: N/A

Lab Sample ID: 280-9724-1
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/15/2010 0952
Date Prepared: N/A

Analysis Batch: 280-40928
Prep Batch: N/A
Units: %

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume:

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Percent Moisture	0.10	U	0.10	NC	20	U

1.6 1.8 2.0 IRFP 11/12/10

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-174-010	Page 1 of 2

Collector: WT Sexsmith	Company Contact: Joan Kessner	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 8 ~~G~~ JEB C 11-10-10	Data Turnaround: 15 Days		
Project Designation: ARRA Remaining Sites Confirmation Sampling - Soil Full Pr	Sampling Location: 100-K-89		SAF No.: RC-174
Ice Chest No.: NA	Field Logbook No.: EL-1649	COA S10K89A000 ~~S18K85A000~~ JED 5/24/10	Method of Shipment: ~~Fed Ex~~ JEB 11-9-10 Hand-Deliver
Shipped To: TestAmerica Incorporated, Richland	Offsite Property No.: NA		Bill of Lading/Air Bill No.: ~~See OSPC~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS

NONE JEB 11-9-10

Special Handling and/or Storage

Cool 4°C JEB 11-9-10

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
Type of Container	aG	aG	aG	aG	aG	aG	P				
No. of Container(s)	1	~~JED 11/10~~ 1	1	1	1	1	1				
Volume	125mL	125mL	120mL	60mL	120mL	120mL	500mL				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	TPH-Diesel Range - WTPH-D+	VOA - 8260A (TCL)	Semi-VOA - 8270A (TCL)	PCBs - 8082	See item (2) in Special Instructions.				
Sample No. / Matrix * / Sample Date / Sample Time											
J1B512 / SOIL / 11/9/10 / 0830	✓				✓						EB
J1B513 / SOIL / 11/9/10 / 0845	✓	✓	✓		✓	✓					TT-1a SUR
J1B514 / SOIL / 11/9/10 / 0945	✓	✓	✓		✓	✓					TT-1b 15'
J1B515 / SOIL / 11/9/10 / 0980	✓	✓	✓		✓	✓					TT-2a SUR
J1B516 / SOIL / 11/9/10 / 1030	✓	✓	✓		✓	✓					TT-2b 15

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
WT Sexsmith	1545 11/9/10	JR DeBruine	545 11/9/10
JR DeBruine	1630 11/9/10	J. E. Benbul	1630 11-9-10
J. E. Benbul WCH	0930 11-10-10	TAIR Angel Lara ANGEL	0930 11.10.10
TAIR Angel Lara ANGEL	1400 11.10.10		

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010TR (Close-out List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV) {Mercury}
(2) Gamma Spec (Client List) {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gross Alpha & Gross Beta

SDG J00926

REVIEWED BY JR DATE 11/10/10

Matrix *: S=Soil, SE=Sediment, SO=Solid, Sl=Sludge, W=Water, O=Oil, A=Air, DS=Drum Solids, DL=Drum Liquids, Ti=Tissue, Wi=Wipe, L=Liquid, Ve=Vegetation, X=Other

LABORATORY SECTION	Received By: Tammy Dindall	Title	Date/Time: 11/10/10 0900
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-174-010	Page 2 of 2

Collector: WT Sexsmith	Company Contact: Joan Kessner	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 8G JEB C 11-9-10	Data Turnaround: 15 Days		
Project Designation: ARRA Remaining Sites Confirmation Sampling - Soil Full Pr	Sampling Location: 100-K-89		SAF No.: RC-174
Ice Chest No.: NA	Field Logbook No.: EL-1649	COA: S18K85A000	Method of Shipment: ~~Fed Ex~~ JEB 11-9-10 Hand-Deliver
Shipped To: TestAmerica Incorporated, Richland	Offsite Property No.: NA		Bill of Lading/Air Bill No.: ~~See OSPC~~ JEB 11-9-10 NA

POSSIBLE SAMPLE HAZARDS/REMARKS

NONE
JEB 11-9-10

Special Handling and/or Storage

Cool 4°C
JEB 11-9-10

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
Type of Container	aG	aG	aG	aG	aG	aG	P				
No. of Container(s)	1	~~2~~ 1	1	1	1	1	1				
Volume	125mL	125mL	120mL	60mL	120mL	120mL	500mL				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	TPH-Diesel Range - WTPH-D +	VOA - 8260A (TCL)	Semi-VOA 8270A (TCL)	~~PCBs - 8082~~	See item (2) in Special Instructions.				

Sample No.	Matrix *	Sample Date	Sample Time										
J1B517	SOIL	11/9/10	1030	✓	✓	✓		✓	✓				D

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Whitney Sexsmith WTS	1545 11/9/10	JDeBruyne JDeBruyne	1545 11/9/10
JDeBruyne JDeBruyne	1630 11/9/10	J.E. Beuhl	1630 11-9-10
J.E. Beuhl WCH	0930 11-10-10	Angela Garcia AMGarcia	0930 11-10-10
Angela Garcia AMGarcia	1400 11-10-10		

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010TR (Close-out List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV) {Mercury}
(2) Gamma Spec (Client List) {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154 Europium-155}; Gross Alpha & Gross Beta

SDG
J00926

REVIEWED BY JR DATE 11/10/10

Matrix *: S=Soil, SE=Sediment, SO=Solid, Sl=Sludge, W=Water, O=Oil, A=Air, DS=Drum Solids, DL=Drum Liquids, T=Tissue, Wi=Wipe, L=Liquid, V=Vegetation, X=Other

LABORATORY SECTION	Received By: Amy Rindell	Title	Date/Time: 11/12/10 0900
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Project 28002142 6010TR 6010

Analytical Due:

Report Due: 11/29/10

Sample Check-in List

Date/Time Received: 11/2/10 900 GM Screen Result 60 microR/hr

Client: Washington Closure Hanford SDG #: J00926 NA[ ] SAF #: RC-174 NA [ ]

Job Number: 9724 Chain of Custody # RC-174-010

Shipping Container ID: Air Bill # 7941 8805 2324 7964 4050 0494 7941 0803 4533

1. Custody Seals on shipping container intact? NA [ ] Yes [✓] No [ ]
2. Custody Seals dated and signed? NA [ ] Yes [✓] No [ ]
3. Chain of Custody record present? NA [ ] Yes [✓] No [ ]
4. Cooler Temperature °C: 1-6, 1-8, 2-0 NA [ ] 5. Vermiculite/packing materials is NA [✓] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 21
7. Sample holding times exceeded? NA [ ] Yes [ ] No [✓]
8. Samples have:
   - ✓ Tape
   - ✓ Custody Seals
   - ✓ Hazard Lables
   - ✓ Appropriate Sample Lables
9. Samples are:
   - ✓ In Good Condition
   - ✓ Broken
   - ____ Leaking
   - ____ Have Air Bubbles (Only for samples requiring no head space.)
10. Sample pH taken? NA [✓] pH<2 [ ] pH>2 [ ] pH>9 [ ] Amount HNO_3 Added ____
11. Sample Location, Sample Collector Listed? *
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers): ____

Sample Custodian: [signature] Date: 11/12/10

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on ____ by ____ Person Contacted ____

[ ] No action necessary; process as is.

Project Manager [signature] Date 11/15/10

From: Origin ID: PSCA (509) 375-3131
Shipping Dept.
TESTAMERICA LABORATORIES
2800 GEORGE WASHINGTON WAY

RICHLAND, WA 99354

FedEx Express

Ship Date: 11NOV10
ActWgt: 24.0 LB
CAD: 1033413/INET3090

Delivery Address Bar Code

Ref # WCH/RC-119-041
Invoice #
PO #
Dept #

SHIP TO: (303) 736-0100 BILL SENDER

SAMPLE RECEIVING DENVER_WCH
TESTAMERICA DENVER (WCH)
4955 YARROW ST

ARVADA, CO 80002

TRK# 0201 7941 0805 2324

FRI - 12 NOV A1
PRIORITY OVERNIGHT

80002
CO-US
DEN

XH WHHA

After printing this label:
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3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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From: Origin ID: PSCA (509) 375-3131
Shipping Dept.
TESTAMERICA LABORATORIES
2800 GEORGE WASHINGTON WAY

RICHLAND, WA 99354

FedEx. Express

Ship Date: 11NOV10
ActWgt: 25.0 LB
CAD: 1033413/INET3090

Delivery Address Bar Code

SHIP TO: (303) 736-0100 BILL SENDER
SAMPLE RECEIVING DENVER_WCH
TESTAMERICA DENVER (WCH)
4955 YARROW ST

ARVADA, CO 80002

Ref # WCH/RC-119-041
Invoice #
PO #
Dept #

TRK# 0201 7964 4090 0494

FRI - 12 NOV A1
PRIORITY OVERNIGHT

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CO-US
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From: Origin ID: PSCA (509) 375-3131
Shipping Dept.
TESTAMERICA LABORATORIES
2800 GEORGE WASHINGTON WAY

RICHLAND, WA 99354

FedEx. Express

J1030101060225

Ship Date: 11NOV10
ActWgt: 43.0 LB
CAD: 1033413/INET3090

Delivery Address Bar Code

Ref # WCH/RC-119-041
Invoice #
PO #
Dept #

SHIP TO: (303) 736-0100 BILL SENDER

SAMPLE RECEIVING DENVER_WCH
TESTAMERICA DENVER (WCH)
4955 YARROW ST

ARVADA, CO 80002

TRK# 0201 7941 0803 9533

FRI - 12 NOV A1
PRIORITY OVERNIGHT

80002
CO-US
DEN

XH WHHA

69AG1/SCDA/2780

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