0092163

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 11/22/10
INITIAL/DATE

COMMENTS:

SDG J00907 SAF-RC-174

Rad only ☑ Chem only Rad & Chem

☑ Complete Partial

Sample Location: 600-322 Test Pit

RECEIVED
DEC 02 2010
EDMC

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-9362-1

SDG Number: J00907

Job Description: SAF# RC-174

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

Attention: Joan H Kessner

RECEIVED

Approved for release.
Kae E Yoder
Project Manager II
11/19/2010 3:26 PM

Kae E Yoder
Project Manager II
kae.yoder@testamericainc.com
11/19/2010

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.

Table of Contents

Cover Title Page 1

Report Narrative 3

Data Qualifiers 5

Method Summary 7

Method / Analyst Summary 8

Sample Summary 9

Sample Results 10

Sample Datasheets 11

QC Results 38

Qc Association Summary 39

Qc Reports 44

Client Chain of Custody 64

Sample Receipt Checklist 65

CASE NARRATIVE

Client: Washington Closure Hanford

Project: WASHINGTON CLOSURE HANFORD

Report Number: 280-9362-1

SDG #: J00907
SAF#: RC-174

Date SDG Closed: November 4, 2010
Data Deliverable: 15 Day / Summary

CLIENT ID	LAB ID	ANALYSES REQUESTED	ANALYSES PERFORMED
J1C2K1	280-9362-1	6010/7471/8270A	6010B/7471A/8270C
J1C2K2	280-9362-2	6010/7471/8270A/8082/8081	6010B/7471A/8270C/8082/8081A
J1C2K3	280-9362-3	6010/7471/8270A/8082/8081	6010B/7471A/8270C/8082/8081A
J1C2K4	280-9362-4	6010/7471/8270A/8082/8081	6010B/7471A/8270C/8082/8081A

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 11/4/2010; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 3.5 C.

GC/MS SEMIVOLATILES - SW846 8270C
Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to matrix interferences, samples J1C2K2 and J1C2K3 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 J1C2K2 and J1C2K3, as the recoveries obtained are calculated from diluted samples and are not considered reliable.

No other anomalies were encountered.

GC SEMIVOLATILES - SW846 8081A - PESTICIDEs
The RPD between the primary and confirmation columns exceeded 40% for Endosulfan sulfate in sample J1C2K2. The lower of the two values has been reported, as matrix interference is evident. The result has been flagged with an "X".

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to matrix interferences, sample J1C2K2 required a dilution prior to the analysis of 4,4'-DDT, and the result has been flagged with a "D". The reporting limit has been adjusted relative to the dilution required. To provide the lowest possible detection limits, multiple dilutions are reported.

Surrogate Decachlorobiphenyl was recovered outside the control limits, biased high, in sample J1C2K2. This anomaly is due to obvious matrix interference; therefore, corrective action is deemed unnecessary.

Surrogate recoveries have been "D" flagged in the diluted analysis of sample J1C2K2, as the recoveries obtained are calculated from a diluted sample and are not considered reliable.

The MS/MSD performed on sample J1C2K4 exhibited percent recoveries outside the control limits for 4,4'-DDT and Methoxychlor, and the associated sample results have been flagged "N". The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

The closing Continuing Calibration Verification (CCV) standard exhibited %Difference (%D) values >15%, biased high and low, as detailed below. The overall mean %D is ≤15%; therefore, method criteria have been met and corrective action is deemed unnecessary. It can be noted that a bracketing RL standard was used to demonstrate acceptable instrument sensitivity, despite %D values greater than 30% negative drift.

Sequence: CCV1, J1C2K2(DL), CCV2, CCV3, J1C2K2, J1C2K3, J1C2K4, MS, MSD, CCV4

CCV4 primary column	CCV4 secondary column
4,4'-DDD +28.4%	4,4'-DDD +19.3%
4,4'-DDT -60.4%	4,4'-DDT -62.1%
Endrin ketone -22.2%	Methoxychlor -60.4%
Methoxychlor -61.8%	Decachlorobiphenyl -25.1%
Decachlorobiphenyl -22.4%	

No other anomalies were encountered.

GC SEMIVOLATILES - SW846 8082 - PCBs

Surrogate Decachlorobiphenyl was recovered outside the control limits, biased high, in sample J1C2K2. This anomaly is due to obvious matrix interference; therefore, corrective action is deemed unnecessary. It can be noted that no detectable concentrations are present in the sample.

Surrogate Decachlorobiphenyl was recovered outside the control limits, biased low, in the MS performed on sample J1C2K4. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary. The laboratory noted that this anomaly is due to obvious matrix interference.

No other anomalies were encountered.

TOTAL METALS - SW846 6010B/7471A

Serial dilution of a digestate in batch 280-39952 indicates that physical and chemical interferences are present for several elements. Results have been flagged with an "L".

Low levels of Barium are present in the method blank associated with batch 280-39952. Because the concentration in the method blank is not present at a level greater than the reporting limit, 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 J1C2K4 exhibited percent recoveries outside the control limits for Arsenic and Selenium, 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.

It can be noted that the sample amount was greater than four times the spike amount for Aluminum, Iron, and Manganese in the Matrix Spike performed on sample J1C2K4; therefore, control limits are not applicable.

No other anomalies were encountered.

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	U	Analyzed for but not detected.
	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.
	X	More than 40% difference between columns, lower result reported.
	N	MS, MSD: Spike recovery exceeds upper or lower control limits.
	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.
	*	Surrogate exceeds the control limit

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Lab Section	Qualifier	Description
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.
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	N	Recovery exceeds upper or lower control limits
	L	Serial dilution in the analytical batch indicates that physical and chemical interferences are present.
General Chemistry		
	U	Analyzed for but not detected.

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

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
Organochlorine Pesticides (GC)	TAL DEN	SW846 8081A	
Ultrasonic Extraction	TAL DEN		SW846 3550C
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL DEN	SW846 8082	
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

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: 280-9362-1
Sdg Number: J00907

Method	Analyst	Analyst ID
SW846 8270C	Kiekel, Daniel C	DCK
SW846 8081A	Ream, Brian E	BER
SW846 8082	Pavlakovich, Adam M	AMP
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: 280-9362-1
Sdg Number: J00907

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-9362-1	J1C2K1	Solid	11/02/2010 13:15	11/04/2010 09:00
280-9362-2	J1C2K2	Solid	11/02/2010 13:25	11/04/2010 09:00
280-9362-3	J1C2K3	Solid	11/02/2010 13:50	11/04/2010 09:00
280-9362-4	J1C2K4	Solid	11/02/2010 13:50	11/04/2010 09:00

SAMPLE RESULTS

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K1**

Lab Sample ID: 280-9362-1
Client Matrix: Solid
% Moisture: 0.0

Date Sampled: 11/02/2010 1315
Date Received: 11/04/2010 0900

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

Method:	8270C	Analysis Batch: 280-41180		Instrument ID:	MSS_K
Preparation:	3550C	Prep Batch: 280-40136		Lab File ID:	K7884.D
Dilution:	1.0			Initial Weight/Volume:	30.3 g
Date Analyzed:	11/15/2010 1402			Final Weight/Volume:	1000 uL
Date Prepared:	11/10/2010 1330			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		16	U	16	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		81	U	81	330
4-Chloro-3-methylphenol		65	U	65	330
2-Chloronaphthalene		9.9	U	9.9	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		13	U	13	330
3,3'-Dichlorobenzidine		89	U	89	650
2,4-Dichlorophenol		9.9	U	9.9	330
Diethyl phthalate		26	U	26	330
2,4-Dimethylphenol		65	U	65	330
Dimethyl phthalate		23	U	23	330
Di-n-butyl phthalate		29	U	29	330
4,6-Dinitro-2-methylphenol		330	U	330	650
2,4-Dinitrophenol		330	U	330	820
2,4-Dinitrotoluene		65	U	65	330
2,6-Dinitrotoluene		28	U	28	330
Di-n-octyl phthalate		14	U	14	330
Fluoranthene		36	U	36	330
Fluorene		18	U	18	330
Hexachlorobenzene		29	U	29	330
Hexachlorobutadiene		9.9	U	9.9	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: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K1**

Lab Sample ID: 280-9362-1
Client Matrix: Solid
% Moisture: 0.0

Date Sampled: 11/02/2010 1315
Date Received: 11/04/2010 0900

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

Method:	8270C	Analysis Batch: 280-41180		Instrument ID:	MSS_K
Preparation:	3550C	Prep Batch: 280-40136		Lab File ID:	K7884.D
Dilution:	1.0			Initial Weight/Volume:	30.3 g
Date Analyzed:	11/15/2010 1402			Final Weight/Volume:	1000 uL
Date Prepared:	11/10/2010 1330			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		72	U	72	330
4-Nitroaniline		72	U	72	330
Nitrobenzene		22	U	22	330
2-Nitrophenol		9.9	U	9.9	330
4-Nitrophenol		96	U	96	650
N-Nitrosodi-n-propylamine		31	U	31	330
N-Nitrosodiphenylamine		21	U	21	330
Pentachlorophenol		330	U	330	650
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		9.9	U	9.9	330
2,4,6-Trichlorophenol		9.9	U	9.9	330

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	73		50 - 120
2-Fluorophenol	72		53 - 120
Nitrobenzene-d5	69		50 - 120
Phenol-d5	74		52 - 120
Terphenyl-d14	84		55 - 120
2,4,6-Tribromophenol	80		51 - 120

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K1**

Lab Sample ID: 280-9362-1
Client Matrix: Solid
% Moisture: 0.0

Date Sampled: 11/02/2010 1315
Date Received: 11/04/2010 0900

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

Method:	8270C	Analysis Batch: 280-41180	Instrument ID:	MSS_K
Preparation:	3550C	Prep Batch: 280-40136	Lab File ID:	K7884.D
Dilution:	1.0		Initial Weight/Volume:	30.3 g
Date Analyzed:	11/15/2010 1402		Final Weight/Volume:	1000 uL
Date Prepared:	11/10/2010 1330		Injection Volume:	0.5 uL

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

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
141-79-7	3-Penten-2-one, 4-methyl-	2.92	280	N J
2216-30-0	Heptane, 2,5-dimethyl-	3.21	150	N J
	Unknown	3.31	6400	N J
544-76-3	Hexadecane	8.03	200	J N

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K2**

Lab Sample ID: 280-9362-2
Client Matrix: Solid
% Moisture: 3.1

Date Sampled: 11/02/2010 1325
Date Received: 11/04/2010 0900

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

Method:	8270C	Analysis Batch: 280-41180		Instrument ID:	MSS_K
Preparation:	3550C	Prep Batch: 280-40136		Lab File ID:	K7885.D
Dilution:	10			Initial Weight/Volume:	30.2 g
Date Analyzed:	11/15/2010 1423			Final Weight/Volume:	1000 uL
Date Prepared:	11/10/2010 1330			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		110	U	110	3400
Acenaphthylene		170	U	170	3400
Anthracene		170	U	170	3400
Benzo[a]anthracene		200	U	200	3400
Benzo[a]pyrene		200	U	200	3400
Benzo[b]fluoranthene		270	U	270	3400
Benzo[ghi]perylene		160	U	160	3400
Benzo[k]fluoranthene		410	U	410	3400
Bis(2-chloroethoxy)methane		240	U	240	3400
Bis(2-chloroethyl)ether		170	U	170	3400
bis (2-chloroisopropyl) ether		240	U	240	3400
Bis(2-ethylhexyl) phthalate		470	U	470	3400
4-Bromophenyl phenyl ether		190	U	190	3400
Butyl benzyl phthalate		440	U	440	3400
Carbazole		370	U	370	3400
4-Chloroaniline		840	U	840	3400
4-Chloro-3-methylphenol		680	U	680	3400
2-Chloronaphthalene		100	U	100	3400
2-Chlorophenol		220	U	220	3400
4-Chlorophenyl phenyl ether		220	U	220	3400
Chrysene		280	U	280	3400
Dibenz(a,h)anthracene		190	U	190	3400
Dibenzofuran		200	U	200	3400
1,2-Dichlorobenzene		230	U	230	3400
1,3-Dichlorobenzene		120	U	120	3400
1,4-Dichlorobenzene		140	U	140	3400
3,3'-Dichlorobenzidine		920	U	920	6800
2,4-Dichlorophenol		100	U	100	3400
Diethyl phthalate		270	U	270	3400
2,4-Dimethylphenol		680	U	680	3400
Dimethyl phthalate		240	U	240	3400
Di-n-butyl phthalate		300	U	300	3400
4,6-Dinitro-2-methylphenol		3400	U	3400	6800
2,4-Dinitrophenol		3400	U	3400	8500
2,4-Dinitrotoluene		680	U	680	3400
2,6-Dinitrotoluene		290	U	290	3400
Di-n-octyl phthalate		150	U	150	3400
Fluoranthene		370	U	370	3400
Fluorene		180	U	180	3400
Hexachlorobenzene		300	U	300	3400
Hexachlorobutadiene		100	U	100	3400
Hexachlorocyclopentadiene		510	U	510	3400
Hexachloroethane		220	U	220	3400
Indeno[1,2,3-cd]pyrene		230	U	230	3400
Isophorone		170	U	170	3400
2-Methylnaphthalene		190	U	190	3400

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K2**

Lab Sample ID: 280-9362-2
Client Matrix: Solid
% Moisture: 3.1

Date Sampled: 11/02/2010 1325
Date Received: 11/04/2010 0900

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

Method:	8270C	Analysis Batch: 280-41180		Instrument ID:	MSS_K
Preparation:	3550C	Prep Batch: 280-40136		Lab File ID:	K7885.D
Dilution:	10			Initial Weight/Volume:	30.2 g
Date Analyzed:	11/15/2010 1423			Final Weight/Volume:	1000 uL
Date Prepared:	11/10/2010 1330			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		130	U	130	3400
3 & 4 Methylphenol		340	U	340	3400
Naphthalene		320	U	320	3400
2-Nitroaniline		510	U	510	3400
3-Nitroaniline		750	U	750	3400
4-Nitroaniline		740	U	740	3400
Nitrobenzene		230	U	230	3400
2-Nitrophenol		100	U	100	3400
4-Nitrophenol		990	U	990	6800
N-Nitrosodi-n-propylamine		320	U	320	3400
N-Nitrosodiphenylamine		220	U	220	3400
Pentachlorophenol		3400	U	3400	6800
Phenanthrene		170	U	170	3400
Phenol		180	U	180	3400
Pyrene		120	U	120	3400
1,2,4-Trichlorobenzene		290	U	290	3400
2,4,5-Trichlorophenol		100	U	100	3400
2,4,6-Trichlorophenol		100	U	100	3400

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	90	D	50 - 120
2-Fluorophenol	78	D	53 - 120
Nitrobenzene-d5	73	D	50 - 120
Phenol-d5	83	D	52 - 120
Terphenyl-d14	96	D	55 - 120
2,4,6-Tribromophenol	81	D	51 - 120

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K2**

Lab Sample ID: 280-9362-2
Client Matrix: Solid
% Moisture: 3.1

Date Sampled: 11/02/2010 1325
Date Received: 11/04/2010 0900

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

Method:	8270C	Analysis Batch: 280-41180	Instrument ID:	MSS_K
Preparation:	3550C	Prep Batch: 280-40136	Lab File ID:	K7885.D
Dilution:	10		Initial Weight/Volume:	30.2 g
Date Analyzed:	11/15/2010 1423		Final Weight/Volume:	1000 uL
Date Prepared:	11/10/2010 1330		Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found:** **2**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	3.30	8200	N J
544-76-3	Hexadecane	8.03	2000	J N

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K3**

Lab Sample ID: 280-9362-3
Client Matrix: Solid
% Moisture: 6.6

Date Sampled: 11/02/2010 1350
Date Received: 11/04/2010 0900

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

Method:	8270C	Analysis Batch: 280-41180		Instrument ID:	MSS_K
Preparation:	3550C	Prep Batch: 280-40136		Lab File ID:	K7886.D
Dilution:	10			Initial Weight/Volume:	33.0 g
Date Analyzed:	11/15/2010 1444			Final Weight/Volume:	1000 uL
Date Prepared:	11/10/2010 1330			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		100	U	100	3200
Acenaphthylene		170	U	170	3200
Anthracene		170	U	170	3200
Benzo[a]anthracene		190	U	190	3200
Benzo[a]pyrene		190	U	190	3200
Benzo[b]fluoranthene		260	U	260	3200
Benzo[ghi]perylene		160	U	160	3200
Benzo[k]fluoranthene		390	U	390	3200
Bis(2-chloroethoxy)methane		220	U	220	3200
Bis(2-chloroethyl)ether		160	U	160	3200
bis (2-chloroisopropyl) ether		220	U	220	3200
Bis(2-ethylhexyl) phthalate		450	U	450	3200
4-Bromophenyl phenyl ether		180	U	180	3200
Butyl benzyl phthalate		420	U	420	3200
Carbazole		350	U	350	3200
4-Chloroaniline		800	U	800	3200
4-Chloro-3-methylphenol		640	U	640	3200
2-Chloronaphthalene		97	U	97	3200
2-Chlorophenol		200	U	200	3200
4-Chlorophenyl phenyl ether		200	U	200	3200
Chrysene		260	U	260	3200
Dibenz(a,h)anthracene		180	U	180	3200
Dibenzofuran		190	U	190	3200
1,2-Dichlorobenzene		210	U	210	3200
1,3-Dichlorobenzene		120	U	120	3200
1,4-Dichlorobenzene		130	U	130	3200
3,3'-Dichlorobenzidine		880	U	880	6400
2,4-Dichlorophenol		97	U	97	3200
Diethyl phthalate		250	U	250	3200
2,4-Dimethylphenol		640	U	640	3200
Dimethyl phthalate		220	U	220	3200
Di-n-butyl phthalate		280	U	280	3200
4,6-Dinitro-2-methylphenol		3200	U	3200	6400
2,4-Dinitrophenol		3200	U	3200	8000
2,4-Dinitrotoluene		640	U	640	3200
2,6-Dinitrotoluene		270	U	270	3200
Di-n-octyl phthalate		140	U	140	3200
Fluoranthene		350	U	350	3200
Fluorene		180	U	180	3200
Hexachlorobenzene		280	U	280	3200
Hexachlorobutadiene		97	U	97	3200
Hexachlorocyclopentadiene		490	U	490	3200
Hexachloroethane		210	U	210	3200
Indeno[1,2,3-cd]pyrene		210	U	210	3200
Isophorone		170	U	170	3200
2-Methylnaphthalene		180	U	180	3200

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K3**

Lab Sample ID: 280-9362-3
Client Matrix: Solid
% Moisture: 6.6

Date Sampled: 11/02/2010 1350
Date Received: 11/04/2010 0900

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

Method:	8270C	Analysis Batch: 280-41180		Instrument ID:	MSS_K
Preparation:	3550C	Prep Batch: 280-40136		Lab File ID:	K7886.D
Dilution:	10			Initial Weight/Volume:	33.0 g
Date Analyzed:	11/15/2010 1444			Final Weight/Volume:	1000 uL
Date Prepared:	11/10/2010 1330			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		130	U	130	3200
3 & 4 Methylphenol		320	U	320	3200
Naphthalene		300	U	300	3200
2-Nitroaniline		490	U	490	3200
3-Nitroaniline		710	U	710	3200
4-Nitroaniline		710	U	710	3200
Nitrobenzene		210	U	210	3200
2-Nitrophenol		97	U	97	3200
4-Nitrophenol		940	U	940	6400
N-Nitrosodi-n-propylamine		300	U	300	3200
N-Nitrosodiphenylamine		200	U	200	3200
Pentachlorophenol		3200	U	3200	6400
Phenanthrene		170	U	170	3200
Phenol		180	U	180	3200
Pyrene		120	U	120	3200
1,2,4-Trichlorobenzene		270	U	270	3200
2,4,5-Trichlorophenol		97	U	97	3200
2,4,6-Trichlorophenol		97	U	97	3200

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	89	D	50 - 120
2-Fluorophenol	77	D	53 - 120
Nitrobenzene-d5	70	D	50 - 120
Phenol-d5	81	D	52 - 120
Terphenyl-d14	98	D	55 - 120
2,4,6-Tribromophenol	83	D	51 - 120

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K3**

Lab Sample ID: 280-9362-3
Client Matrix: Solid
% Moisture: 6.6

Date Sampled: 11/02/2010 1350
Date Received: 11/04/2010 0900

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

Method:	8270C	Analysis Batch: 280-41180	Instrument ID:	MSS_K
Preparation:	3550C	Prep Batch: 280-40136	Lab File ID:	K7886.D
Dilution:	10		Initial Weight/Volume:	33.0 g
Date Analyzed:	11/15/2010 1444		Final Weight/Volume:	1000 uL
Date Prepared:	11/10/2010 1330		Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found:** 1

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Unknown	3.30	7900	N J

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K4**

Lab Sample ID: 280-9362-4
Client Matrix: Solid
% Moisture: 6.5

Date Sampled: 11/02/2010 1350
Date Received: 11/04/2010 0900

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

Method:	8270C	Analysis Batch: 280-41180		Instrument ID:	MSS_K
Preparation:	3550C	Prep Batch: 280-40136		Lab File ID:	K7887.D
Dilution:	1.0			Initial Weight/Volume:	31.5 g
Date Analyzed:	11/15/2010 1505			Final Weight/Volume:	1000 uL
Date Prepared:	11/10/2010 1330			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		10	U	10	340
Acenaphthylene		17	U	17	340
Anthracene		17	U	17	340
Benzo[a]anthracene		20	U	20	340
Benzo[a]pyrene		20	U	20	340
Benzo[b]fluoranthene		27	U	27	340
Benzo[ghi]perylene		16	U	16	340
Benzo[k]fluoranthene		41	U	41	340
Bis(2-chloroethoxy)methane		23	U	23	340
Bis(2-chloroethyl)ether		17	U	17	340
bis (2-chloroisopropyl) ether		23	U	23	340
Bis(2-ethylhexyl) phthalate		47	U	47	340
4-Bromophenyl phenyl ether		19	U	19	340
Butyl benzyl phthalate		44	U	44	340
Carbazole		37	U	37	340
4-Chloroaniline		83	U	83	340
4-Chloro-3-methylphenol		67	U	67	340
2-Chloronaphthalene		10	U	10	340
2-Chlorophenol		21	U	21	340
4-Chlorophenyl phenyl ether		21	U	21	340
Chrysene		27	U	27	340
Dibenz(a,h)anthracene		19	U	19	340
Dibenzofuran		20	U	20	340
1,2-Dichlorobenzene		22	U	22	340
1,3-Dichlorobenzene		12	U	12	340
1,4-Dichlorobenzene		14	U	14	340
3,3'-Dichlorobenzidine		92	U	92	670
2,4-Dichlorophenol		10	U	10	340
Diethyl phthalate		26	U	26	340
2,4-Dimethylphenol		67	U	67	340
Dimethyl phthalate		23	U	23	340
Di-n-butyl phthalate		30	U	30	340
4,6-Dinitro-2-methylphenol		340	U	340	670
2,4-Dinitrophenol		340	U	340	840
2,4-Dinitrotoluene		67	U	67	340
2,6-Dinitrotoluene		29	U	29	340
Di-n-octyl phthalate		15	U	15	340
Fluoranthene		37	U	37	340
Fluorene		18	U	18	340
Hexachlorobenzene		30	U	30	340
Hexachlorobutadiene		10	U	10	340
Hexachlorocyclopentadiene		51	U	51	340
Hexachloroethane		22	U	22	340
Indeno[1,2,3-cd]pyrene		22	U	22	340
Isophorone		17	U	17	340
2-Methylnaphthalene		19	U	19	340

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K4**

Lab Sample ID: 280-9362-4
Client Matrix: Solid
% Moisture: 6.5

Date Sampled: 11/02/2010 1350
Date Received: 11/04/2010 0900

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

Method:	8270C	Analysis Batch: 280-41180		Instrument ID:	MSS_K
Preparation:	3550C	Prep Batch: 280-40136		Lab File ID:	K7887.D
Dilution:	1.0			Initial Weight/Volume:	31.5 g
Date Analyzed:	11/15/2010 1505			Final Weight/Volume:	1000 uL
Date Prepared:	11/10/2010 1330			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		51	U	51	340
3-Nitroaniline		74	U	74	340
4-Nitroaniline		74	U	74	340
Nitrobenzene		22	U	22	340
2-Nitrophenol		10	U	10	340
4-Nitrophenol		99	U	99	670
N-Nitrosodi-n-propylamine		32	U	32	340
N-Nitrosodiphenylamine		21	U	21	340
Pentachlorophenol		340	U	340	670
Phenanthrene		17	U	17	340
Phenol		18	U	18	340
Pyrene		12	U	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	78		50 - 120
2-Fluorophenol	72		53 - 120
Nitrobenzene-d5	72		50 - 120
Phenol-d5	73		52 - 120
Terphenyl-d14	86		55 - 120
2,4,6-Tribromophenol	85		51 - 120

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K4**

Lab Sample ID: 280-9362-4
Client Matrix: Solid
% Moisture: 6.5

Date Sampled: 11/02/2010 1350
Date Received: 11/04/2010 0900

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

Method:	8270C	Analysis Batch: 280-41180		Instrument ID:	MSS_K
Preparation:	3550C	Prep Batch: 280-40136		Lab File ID:	K7887.D
Dilution:	1.0			Initial Weight/Volume:	31.5 g
Date Analyzed:	11/15/2010 1505			Final Weight/Volume:	1000 uL
Date Prepared:	11/10/2010 1330			Injection Volume:	0.5 uL

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

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
141-79-7	3-Penten-2-one, 4-methyl-	2.92	320	N J
2216-30-0	Heptane, 2,5-dimethyl-	3.22	180	N J
	Unknown	3.32	7200	N J
544-76-3	Hexadecane	8.03	200	J N
301-02-0	9-Octadecenamide, (Z)-	11.57	180	N J

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K2**

Lab Sample ID: 280-9362-2
Client Matrix: Solid
% Moisture: 3.1

Date Sampled: 11/02/2010 1325
Date Received: 11/04/2010 0900

8081A Organochlorine Pesticides (GC)

Method:	8081A	Analysis Batch: 280-41679		Instrument ID:	GCS_C
Preparation:	3550C	Prep Batch: 280-40139		Initial Weight/Volume:	30.9 g
Dilution:	1.0			Final Weight/Volume:	10000 uL
Date Analyzed:	11/18/2010 0401			Injection Volume:	1 uL
Date Prepared:	11/10/2010 1330			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		0.55	U	0.55	1.7
4,4'-DDE		2.6		0.24	1.7
Aldrin		0.25	U	0.25	1.7
alpha-BHC		0.21	U	0.21	1.7
beta-BHC		0.67	U	0.67	1.7
delta-BHC		0.40	U	0.40	1.7
gamma-BHC (Lindane)		0.46	U	0.46	1.7
Heptachlor		0.21	U	0.21	1.7
Heptachlor epoxide		0.43	U	0.43	1.7
Endosulfan I		0.18	U	0.18	1.7
Endosulfan II		0.29	U	0.29	1.7
Endosulfan sulfate		0.35	J X	0.28	1.7
Endrin		0.31	U	0.31	1.7
Endrin aldehyde		0.17	U	0.17	1.7
Endrin ketone		0.49	U	0.49	1.7
gamma-Chlordane		0.27	U	0.27	1.7
Methoxychlor		0.45	U	0.45	3.3
alpha-Chlordane		0.32	U	0.32	1.7
Dieldrin		0.21	U	0.21	1.7
Toxaphene		16	U	16	170

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	59		59 - 115
Decachlorobiphenyl	5457	*	63 - 124

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K2**

Lab Sample ID: 280-9362-2
Client Matrix: Solid
% Moisture: 3.1

Date Sampled: 11/02/2010 1325
Date Received: 11/04/2010 0900

8081A Organochlorine Pesticides (GC)

Method:	8081A	Analysis Batch: 280-41679	Instrument ID:	GCS_C
Preparation:	3550C	Prep Batch: 280-40139	Initial Weight/Volume:	30.9 g
Dilution:	10		Final Weight/Volume:	10000 uL
Date Analyzed:	11/17/2010 2343	Run Type: DL	Injection Volume:	1 uL
Date Prepared:	11/10/2010 1330		Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDT		5.9	U D	5.9	17

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	28	D	59 - 115
Decachlorobiphenyl	3302	D	63 - 124

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K3**

Lab Sample ID: 280-9362-3
Client Matrix: Solid
% Moisture: 6.6

Date Sampled: 11/02/2010 1350
Date Received: 11/04/2010 0900

8081A Organochlorine Pesticides (GC)

Method:	8081A	Analysis Batch: 280-41679	Instrument ID:	GCS_C
Preparation:	3550C	Prep Batch: 280-40139	Initial Weight/Volume:	30.2 g
Dilution:	1.0		Final Weight/Volume:	10000 uL
Date Analyzed:	11/18/2010 0418		Injection Volume:	1 uL
Date Prepared:	11/10/2010 1330		Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		0.58	U	0.58	1.8
4,4'-DDE		0.25	U	0.25	1.8
4,4'-DDT		0.63	U	0.63	1.8
Aldrin		0.27	U	0.27	1.8
alpha-BHC		0.23	U	0.23	1.8
beta-BHC		0.71	U	0.71	1.8
delta-BHC		0.43	U	0.43	1.8
gamma-BHC (Lindane)		0.49	U	0.49	1.8
Heptachlor		0.23	U	0.23	1.8
Heptachlor epoxide		0.45	U	0.45	1.8
Endosulfan I		0.19	U	0.19	1.8
Endosulfan II		0.31	U	0.31	1.8
Endosulfan sulfate		0.29	U	0.29	1.8
Endrin		0.33	U	0.33	1.8
Endrin aldehyde		0.18	U	0.18	1.8
Endrin ketone		0.52	U	0.52	1.8
gamma-Chlordane		0.28	U	0.28	1.8
Methoxychlor		0.48	U	0.48	3.5
alpha-Chlordane		0.34	U	0.34	1.8
Dieldrin		0.22	U	0.22	1.8
Toxaphene		17	U	17	180

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	67		59 - 115
Decachlorobiphenyl	96		63 - 124

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K4**

Lab Sample ID: 280-9362-4
Client Matrix: Solid
% Moisture: 6.5

Date Sampled: 11/02/2010 1350
Date Received: 11/04/2010 0900

8081A Organochlorine Pesticides (GC)

Method:	8081A	Analysis Batch: 280-41679		Instrument ID:	GCS_C
Preparation:	3550C	Prep Batch: 280-40139		Initial Weight/Volume:	31.4 g
Dilution:	1.0			Final Weight/Volume:	10000 uL
Date Analyzed:	11/18/2010 0436			Injection Volume:	1 uL
Date Prepared:	11/10/2010 1330			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		0.56	U	0.56	1.7
4,4'-DDE		0.24	U	0.24	1.7
4,4'-DDT		0.60	U N	0.60	1.7
Aldrin		0.26	U	0.26	1.7
alpha-BHC		0.22	U	0.22	1.7
beta-BHC		0.68	U	0.68	1.7
delta-BHC		0.41	U	0.41	1.7
gamma-BHC (Lindane)		0.47	U	0.47	1.7
Heptachlor		0.22	U	0.22	1.7
Heptachlor epoxide		0.44	U	0.44	1.7
Endosulfan I		0.18	U	0.18	1.7
Endosulfan II		0.29	U	0.29	1.7
Endosulfan sulfate		0.28	U	0.28	1.7
Endrin		0.31	U	0.31	1.7
Endrin aldehyde		0.17	U	0.17	1.7
Endrin ketone		0.50	U	0.50	1.7
gamma-Chlordane		0.27	U	0.27	1.7
Methoxychlor		0.46	U N	0.46	3.4
alpha-Chlordane		0.33	U	0.33	1.7
Dieldrin		0.21	U	0.21	1.7
Toxaphene		16	U	16	170

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	76		59 - 115
Decachlorobiphenyl	69		63 - 124

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K2**

Lab Sample ID: 280-9362-2
Client Matrix: Solid
% Moisture: 3.1

Date Sampled: 11/02/2010 1325
Date Received: 11/04/2010 0900

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method:	8082	Analysis Batch: 280-40814		Instrument ID:	GCS_W
Preparation:	3550C	Prep Batch: 280-39834		Initial Weight/Volume:	30.8 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Date Analyzed:	11/12/2010 0816			Injection Volume:	1 uL
Date Prepared:	11/08/2010 1900			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.8	U	2.8	10
Aroclor 1221		8.1	U	8.1	17
Aroclor 1232		2.0	U	2.0	10
Aroclor 1242		4.7	U	4.7	10
Aroclor 1248		4.7	U	4.7	10
Aroclor 1254		2.6	U	2.6	10
Aroclor 1260		2.6	U	2.6	10

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	3570	*	59 - 130
Tetrachloro-m-xylene	77		53 - 128

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: JU0907

Client Sample ID: **J1C2K3**

Lab Sample ID: 280-9362-3
Client Matrix: Solid
% Moisture: 6.6

Date Sampled: 11/02/2010 1350
Date Received: 11/04/2010 0900

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method:	8082	Analysis Batch: 280-40814		Instrument ID:	GCS_W
Preparation:	3550C	Prep Batch: 280-39834		Initial Weight/Volume:	30.9 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Date Analyzed:	11/12/2010 0848			Injection Volume:	1 uL
Date Prepared:	11/08/2010 1900			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	59		53 - 130
Tetrachloro-m-xylene	83		53 - 128

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K4**

Lab Sample ID: 280-9362-4
Client Matrix: Solid
% Moisture: 6.5

Date Sampled: 11/02/2010 1350
Date Received: 11/04/2010 0900

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method:	8082	Analysis Batch: 280-41160		Instrument ID:	GCS_W
Preparation:	3550C	Prep Batch: 280-40821		Initial Weight/Volume:	32.8 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Date Analyzed:	11/15/2010 2205	Run Type:	RE	Injection Volume:	1 uL
Date Prepared:	11/14/2010 0820			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.7	U	2.7	9.8
Aroclor 1221		7.8	U	7.8	16
Aroclor 1232		2.0	U	2.0	9.8
Aroclor 1242		4.6	U	4.6	9.8
Aroclor 1248		4.6	U	4.6	9.8
Aroclor 1254		2.5	U	2.5	9.8
Aroclor 1260		2.5	U	2.5	9.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	59		59 - 130
Tetrachloro-m-xylene	85		53 - 128

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K1**

Lab Sample ID: 280-9362-1
Client Matrix: Solid
% Moisture: 0.0

Date Sampled: 11/02/2010 1315
Date Received: 11/04/2010 0900

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 280-40881		Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-39952		Lab File ID:	26A111310.asc
Dilution:	1.0			Initial Weight/Volume:	1.11 g
Date Analyzed:	11/13/2010 1517			Final Weight/Volume:	100 mL
Date Prepared:	11/12/2010 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		151	L	1.4	4.5
Antimony		0.34	U	0.34	0.54
Arsenic		0.59	U	0.59	0.90
Barium		1.9	J L	0.068	0.45
Beryllium		0.030	U	0.030	0.18
Boron		0.88	U	0.88	1.8
Cadmium		0.037	U	0.037	0.18
Calcium		119	L	12.7	45.0
Cobalt		0.090	U	0.090	0.90
Copper		0.20	U	0.20	0.90
Iron		215	L	3.4	4.5
Lead		0.37	B	0.24	0.45
Magnesium		19.3	L	3.3	18.0
Manganese		4.7	L	0.090	0.90
Molybdenum		0.32	B	0.23	1.8
Nickel		0.12	B L	0.11	3.6
Potassium		48.1	B	36.9	270
Selenium		0.89	B	0.77	0.90
Silver		0.14	U	0.14	0.18
Sodium		53.2	U	53.2	108
Vanadium		0.18	B L	0.085	1.8
Zinc		1.0	L	0.36	0.90
Chromium		0.13	B	0.052	0.18

Method:	6010B	Analysis Batch: 280-41154		Instrument ID:	MT_025
Preparation:	3050B	Prep Batch: 280-40905		Lab File ID:	25b111510.asc
Dilution:	1.0			Initial Weight/Volume:	1.02 g
Date Analyzed:	11/16/2010 0000			Final Weight/Volume:	100 mL
Date Prepared:	11/15/2010 1000				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silicon		132		2.1	9.8

7471A Mercury (CVAA)

Method:	7471A	Analysis Batch: 280-39932		Instrument ID:	MT_033
Preparation:	7471A	Prep Batch: 280-39287		Lab File ID:	101109AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.61 g
Date Analyzed:	11/08/2010 1231			Final Weight/Volume:	50 mL
Date Prepared:	11/08/2010 0900				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0054	U	0.0054	0.017

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K2**

Lab Sample ID: 280-9362-2
Client Matrix: Solid
% Moisture: 3.1

Date Sampled: 11/02/2010 1325
Date Received: 11/04/2010 0900

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 280-40881		Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-39952		Lab File ID:	26A111310.asc
Dilution:	1.0			Initial Weight/Volume:	1.03 g
Date Analyzed:	11/13/2010 1520			Final Weight/Volume:	100 mL
Date Prepared:	11/12/2010 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		4350	L	1.6	5.0
Antimony		1.1		0.38	0.60
Arsenic		4.9		0.66	1.0
Barium		56.2	J L	0.076	0.50
Beryllium		0.068	B	0.033	0.20
Boron		1.5	B	0.98	2.0
Cadmium		0.25		0.041	0.20
Calcium		3000	L	14.1	50.1
Cobalt		7.7		0.10	1.0
Copper		57.4		0.22	1.0
Iron		94600	L	3.8	5.0
Lead		72.2		0.27	0.50
Magnesium		2770	L	3.7	20.0
Manganese		556	L	0.10	1.0
Molybdenum		4.3		0.26	2.0
Nickel		35.4	L	0.12	4.0
Potassium		1180		41.1	301
Selenium		0.86	U	0.86	1.0
Silver		0.21		0.16	0.20
Sodium		1310		59.1	120
Vanadium		33.7	L	0.094	2.0
Zinc		62.9	L	0.40	1.0
Chromium		32.8		0.058	0.20

Method:	6010B	Analysis Batch: 280-41154		Instrument ID:	MT_025
Preparation:	3050B	Prep Batch: 280-40905		Lab File ID:	25b111510.asc
Dilution:	1.0			Initial Weight/Volume:	1.14 g
Date Analyzed:	11/16/2010 0002			Final Weight/Volume:	100 mL
Date Prepared:	11/15/2010 1000				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silicon		268		1.9	9.1

7471A Mercury (CVAA)

Method:	7471A	Analysis Batch: 280-39932		Instrument ID:	MT_033
Preparation:	7471A	Prep Batch: 280-39287		Lab File ID:	101109AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.60 g
Date Analyzed:	11/08/2010 1238			Final Weight/Volume:	50 mL
Date Prepared:	11/08/2010 0900				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.037		0.0057	0.018

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K3**

Lab Sample ID: 280-9362-3
Client Matrix: Solid
% Moisture: 6.6

Date Sampled: 11/02/2010 1350
Date Received: 11/04/2010 0900

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 280-40881		Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-39952		Lab File ID:	26A111310.asc
Dilution:	1.0			Initial Weight/Volume:	1.07 g
Date Analyzed:	11/13/2010 1522			Final Weight/Volume:	100 mL
Date Prepared:	11/12/2010 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6210	L	1.6	5.0
Antimony		0.38	U	0.38	0.60
Arsenic		2.0		0.66	1.0
Barium		71.8	J L	0.076	0.50
Beryllium		0.10	B	0.033	0.20
Boron		0.98	U	0.98	2.0
Cadmium		0.088	B	0.041	0.20
Calcium		2820	L	14.1	50.0
Cobalt		6.3		0.10	1.0
Copper		8.8		0.22	1.0
Iron		19000	L	3.8	5.0
Lead		3.5		0.27	0.50
Magnesium		3670	L	3.7	20.0
Manganese		315	L	0.10	1.0
Molybdenum		0.26	U	0.26	2.0
Nickel		8.2	L	0.12	4.0
Potassium		1330		41.0	300
Selenium		0.86	U	0.86	1.0
Silver		0.16	U	0.16	0.20
Sodium		114	B	59.0	120
Vanadium		45.9	L	0.094	2.0
Zinc		39.3	L	0.40	1.0
Chromium		7.0		0.058	0.20

Method:	6010B	Analysis Batch: 280-41154		Instrument ID:	MT_025
Preparation:	3050B	Prep Batch: 280-40905		Lab File ID:	25b111510.asc
Dilution:	1.0			Initial Weight/Volume:	1.07 g
Date Analyzed:	11/16/2010 0005			Final Weight/Volume:	100 mL
Date Prepared:	11/15/2010 1000				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silicon		233		2.1	10.0

7471A Mercury (CVAA)

Method:	7471A	Analysis Batch: 280-39932		Instrument ID:	MT_033
Preparation:	7471A	Prep Batch: 280-39287		Lab File ID:	101109AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.63 g
Date Analyzed:	11/08/2010 1240			Final Weight/Volume:	50 mL
Date Prepared:	11/08/2010 0900				

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

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Client Sample ID: **J1C2K4**

Lab Sample ID: 280-9362-4
Client Matrix: Solid
% Moisture: 6.5

Date Sampled: 11/02/2010 1350
Date Received: 11/04/2010 0900

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 280-40881		Instrument ID:	MT_026
Preparation:	3050B	Prep Batch: 280-39952		Lab File ID:	26A111310.asc
Dilution:	1.0			Initial Weight/Volume:	1.05 g
Date Analyzed:	11/13/2010 1525			Final Weight/Volume:	100 mL
Date Prepared:	11/12/2010 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6900	L	1.6	5.1
Antimony		0.39	U	0.39	0.61
Arsenic		2.2	N	0.67	1.0
Barium		77.5	J L	0.077	0.51
Beryllium		0.12	B	0.034	0.20
Boron		1.0	U	1.0	2.0
Cadmium		0.10	B	0.042	0.20
Calcium		3120	L	14.4	50.9
Cobalt		7.0		0.10	1.0
Copper		9.9		0.22	1.0
Iron		20800	L	3.9	5.1
Lead		4.1		0.27	0.51
Magnesium		3890	L	3.8	20.4
Manganese		338	L	0.10	1.0
Molybdenum		0.26	U	0.26	2.0
Nickel		8.8	L	0.13	4.1
Potassium		1490		41.7	305
Selenium		0.88	U N	0.88	1.0
Silver		0.16	U	0.16	0.20
Sodium		138		60.1	122
Vanadium		50.2	L	0.096	2.0
Zinc		42.8	L	0.41	1.0
Chromium		8.6		0.059	0.20

Method:	6010B	Analysis Batch: 280-41154		Instrument ID:	MT_025
Preparation:	3050B	Prep Batch: 280-40905		Lab File ID:	25b111510.asc
Dilution:	1.0			Initial Weight/Volume:	1.02 g
Date Analyzed:	11/16/2010 0008			Final Weight/Volume:	100 mL
Date Prepared:	11/15/2010 1000				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Silicon		199		2.2	10.5

7471A Mercury (CVAA)

Method:	7471A	Analysis Batch: 280-39932		Instrument ID:	MT_033
Preparation:	7471A	Prep Batch: 280-39287		Lab File ID:	101109AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.62 g
Date Analyzed:	11/08/2010 1242			Final Weight/Volume:	50 mL
Date Prepared:	11/08/2010 0900				

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

General Chemistry

Client Sample ID: **J1C2K1**

Lab Sample ID: 280-9362-1
Client Matrix: Solid

Date Sampled: 11/02/2010 1315
Date Received: 11/04/2010 0900

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

Analysis Batch: 280-39337 Date Analyzed: 11/05/2010 1035 DryWt Corrected: N

General Chemistry

Client Sample ID: **J1C2K2**

Lab Sample ID: 280-9362-2
Client Matrix: Solid

Date Sampled: 11/02/2010 1325
Date Received: 11/04/2010 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	3.1		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-39337 Date Analyzed: 11/05/2010 1035 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

General Chemistry

Client Sample ID: **J1C2K3**

Lab Sample ID: 280-9362-3
Client Matrix: Solid

Date Sampled: 11/02/2010 1350
Date Received: 11/04/2010 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	6.6		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-39337 Date Analyzed: 11/05/2010 1035 DryWt Corrected: N

General Chemistry

Client Sample ID: **J1C2K4**

Lab Sample ID: 280-9362-4
Client Matrix: Solid

Date Sampled: 11/02/2010 1350
Date Received: 11/04/2010 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	6.5		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-39337 Date Analyzed: 11/05/2010 1035 DryWt Corrected: N

QUALITY CONTROL RESULTS

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 280-40136					
LCS 280-40136/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-40136/1-A	Method Blank	T	Solid	3550C	
280-9362-1	J1C2K1	T	Solid	3550C	
280-9362-2	J1C2K2	T	Solid	3550C	
280-9362-3	J1C2K3	T	Solid	3550C	
280-9362-4	J1C2K4	T	Solid	3550C	
280-9362-4MS	Matrix Spike	T	Solid	3550C	
280-9362-4MSD	Matrix Spike Duplicate	T	Solid	3550C	
Analysis Batch:280-41180					
LCS 280-40136/2-A	Lab Control Sample	T	Solid	8270C	280-40136
MB 280-40136/1-A	Method Blank	T	Solid	8270C	280-40136
280-9362-1	J1C2K1	T	Solid	8270C	280-40136
280-9362-2	J1C2K2	T	Solid	8270C	280-40136
280-9362-3	J1C2K3	T	Solid	8270C	280-40136
280-9362-4	J1C2K4	T	Solid	8270C	280-40136
280-9362-4MS	Matrix Spike	T	Solid	8270C	280-40136
280-9362-4MSD	Matrix Spike Duplicate	T	Solid	8270C	280-40136

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 280-39834					
LCS 280-39834/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-39834/1-A	Method Blank	T	Solid	3550C	
280-9362-2	J1C2K2	T	Solid	3550C	
280-9362-3	J1C2K3	T	Solid	3550C	
280-9362-A-4-C MSMS	Matrix Spike	T	Solid	3550C	
280-9362-A-4-D MSDMSD	Matrix Spike Duplicate	T	Solid	3550C	
Prep Batch: 280-40139					
LCS 280-40139/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-40139/1-A	Method Blank	T	Solid	3550C	
280-9362-2	J1C2K2	T	Solid	3550C	
280-9362-2DL	J1C2K2	T	Solid	3550C	
280-9362-3	J1C2K3	T	Solid	3550C	
280-9362-4	J1C2K4	T	Solid	3550C	
280-9362-4MS	Matrix Spike	T	Solid	3550C	
280-9362-4MSD	Matrix Spike Duplicate	T	Solid	3550C	
Analysis Batch:280-40814					
LCS 280-39834/2-A	Lab Control Sample	T	Solid	8082	280-39834
MB 280-39834/1-A	Method Blank	T	Solid	8082	280-39834
280-9362-2	J1C2K2	T	Solid	8082	280-39834
280-9362-3	J1C2K3	T	Solid	8082	280-39834
280-9362-A-4-C MSMS	Matrix Spike	T	Solid	8082	280-39834
280-9362-A-4-D MSDMSD	Matrix Spike Duplicate	T	Solid	8082	280-39834
Prep Batch: 280-40821					
LCS 280-40821/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-40821/1-A	Method Blank	T	Solid	3550C	
280-9362-4RE	J1C2K4	T	Solid	3550C	
280-9362-4MSRE	Matrix Spike	T	Solid	3550C	
280-9362-4MSDRE	Matrix Spike Duplicate	T	Solid	3550C	
Analysis Batch:280-41160					
LCS 280-40821/2-A	Lab Control Sample	T	Solid	8082	280-40821
MB 280-40821/1-A	Method Blank	T	Solid	8082	280-40821
280-9362-4RE	J1C2K4	T	Solid	8082	280-40821
280-9362-4MSRE	Matrix Spike	T	Solid	8082	280-40821
280-9362-4MSDRE	Matrix Spike Duplicate	T	Solid	8082	280-40821

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:280-41679					
LCS 280-40139/2-A	Lab Control Sample	T	Solid	8081A	280-40139
MB 280-40139/1-A	Method Blank	T	Solid	8081A	280-40139
280-9362-2	J1C2K2	T	Solid	8081A	280-40139
280-9362-2DL	J1C2K2	T	Solid	8081A	280-40139
280-9362-3	J1C2K3	T	Solid	8081A	280-40139
280-9362-4	J1C2K4	T	Solid	8081A	280-40139
280-9362-4MS	Matrix Spike	T	Solid	8081A	280-40139
280-9362-4MSD	Matrix Spike Duplicate	T	Solid	8081A	280-40139

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-39287					
LCS 280-39287/2-A	Lab Control Sample	T	Solid	7471A	
MB 280-39287/1-A	Method Blank	T	Solid	7471A	
280-9362-1	J1C2K1	T	Solid	7471A	
280-9362-1DU	Duplicate	T	Solid	7471A	
280-9362-1MS	Matrix Spike	T	Solid	7471A	
280-9362-2	J1C2K2	T	Solid	7471A	
280-9362-3	J1C2K3	T	Solid	7471A	
280-9362-4	J1C2K4	T	Solid	7471A	
Analysis Batch:280-39932					
LCS 280-39287/2-A	Lab Control Sample	T	Solid	7471A	280-39287
MB 280-39287/1-A	Method Blank	T	Solid	7471A	280-39287
280-9362-1	J1C2K1	T	Solid	7471A	280-39287
280-9362-1DU	Duplicate	T	Solid	7471A	280-39287
280-9362-1MS	Matrix Spike	T	Solid	7471A	280-39287
280-9362-2	J1C2K2	T	Solid	7471A	280-39287
280-9362-3	J1C2K3	T	Solid	7471A	280-39287
280-9362-4	J1C2K4	T	Solid	7471A	280-39287
Prep Batch: 280-39952					
LCS 280-39952/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-39952/1-A	Method Blank	T	Solid	3050B	
280-9362-1	J1C2K1	T	Solid	3050B	
280-9362-2	J1C2K2	T	Solid	3050B	
280-9362-3	J1C2K3	T	Solid	3050B	
280-9362-4	J1C2K4	T	Solid	3050B	
280-9362-4DU	Duplicate	T	Solid	3050B	
280-9362-4MS	Matrix Spike	T	Solid	3050B	
Analysis Batch:280-40881					
LCS 280-39952/2-A	Lab Control Sample	T	Solid	6010B	280-39952
MB 280-39952/1-A	Method Blank	T	Solid	6010B	280-39952
280-9362-1	J1C2K1	T	Solid	6010B	280-39952
280-9362-2	J1C2K2	T	Solid	6010B	280-39952
280-9362-3	J1C2K3	T	Solid	6010B	280-39952
280-9362-4	J1C2K4	T	Solid	6010B	280-39952
280-9362-4DU	Duplicate	T	Solid	6010B	280-39952
280-9362-4MS	Matrix Spike	T	Solid	6010B	280-39952

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-40905					
LCS 280-40905/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-40905/1-A	Method Blank	T	Solid	3050B	
280-9362-1	J1C2K1	T	Solid	3050B	
280-9362-2	J1C2K2	T	Solid	3050B	
280-9362-3	J1C2K3	T	Solid	3050B	
280-9362-4	J1C2K4	T	Solid	3050B	
280-9362-4DU	Duplicate	T	Solid	3050B	
280-9362-4MS	Matrix Spike	T	Solid	3050B	
Analysis Batch:280-41154					
LCS 280-40905/2-A	Lab Control Sample	T	Solid	6010B	280-40905
MB 280-40905/1-A	Method Blank	T	Solid	6010B	280-40905
280-9362-1	J1C2K1	T	Solid	6010B	280-40905
280-9362-2	J1C2K2	T	Solid	6010B	280-40905
280-9362-3	J1C2K3	T	Solid	6010B	280-40905
280-9362-4	J1C2K4	T	Solid	6010B	280-40905
280-9362-4DU	Duplicate	T	Solid	6010B	280-40905
280-9362-4MS	Matrix Spike	T	Solid	6010B	280-40905

Report Basis
T = Total

General Chemistry

Analysis Batch:280-39337					
280-9362-1	J1C2K1	T	Solid	D-2216	
280-9362-1DU	Duplicate	T	Solid	D-2216	
280-9362-2	J1C2K2	T	Solid	D-2216	
280-9362-3	J1C2K3	T	Solid	D-2216	
280-9362-4	J1C2K4	T	Solid	D-2216	

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Method Blank - Batch: 280-40136

Method: 8270C
Preparation: 3550C

Lab Sample ID: MB 280-40136/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/15/2010 1218
Date Prepared: 11/10/2010 1330

Analysis Batch: 280-41180
Prep Batch: 280-40136
Units: ug/Kg

Instrument ID: MSS_K
Lab File ID: K7879.D
Initial Weight/Volume: 30.4 g
Final Weight/Volume: 1000 uL
Injection Volume: 0.5 uL

Analyte	Result	Qual	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	39	U	39	330
Bis(2-chloroethoxy)methane	23	U	23	330
Bis(2-chloroethyl)ether	16	U	16	330
bis (2-chloroisopropyl) ether	23	U	23	330
Bis(2-ethylhexyl) phthalate	45	U	45	330
4-Bromophenyl phenyl ether	19	U	19	330
Butyl benzyl phthalate	42	U	42	330
Carbazole	36	U	36	330
4-Chloroaniline	81	U	81	330
4-Chloro-3-methylphenol	65	U	65	330
2-Chloronaphthalene	9.9	U	9.9	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	13	U	13	330
3,3'-Dichlorobenzidine	89	U	89	650
2,4-Dichlorophenol	9.9	U	9.9	330
Diethyl phthalate	26	U	26	330
2,4-Dimethylphenol	65	U	65	330
Dimethyl phthalate	23	U	23	330
Di-n-butyl phthalate	29	U	29	330
4,6-Dinitro-2-methylphenol	330	U	330	650
2,4-Dinitrophenol	330	U	330	810
2,4-Dinitrotoluene	65	U	65	330
2,6-Dinitrotoluene	28	U	28	330
Di-n-octyl phthalate	14	U	14	330
Fluoranthene	36	U	36	330
Fluorene	18	U	18	330
Hexachlorobenzene	29	U	29	330
Hexachlorobutadiene	9.9	U	9.9	330
Hexachlorocyclopentadiene	49	U	49	330
Hexachloroethane	21	U	21	330

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Method Blank - Batch: 280-40136

Method: 8270C
Preparation: 3550C

Lab Sample ID:	MB 280-40136/1-A	Analysis Batch:	280-41180	Instrument ID:	MSS_K
Client Matrix:	Solid	Prep Batch:	280-40136	Lab File ID:	K7879.D
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	30.4 g
Date Analyzed:	11/15/2010 1218			Final Weight/Volume:	1000 uL
Date Prepared:	11/10/2010 1330			Injection Volume:	0.5 uL

Analyte	Result	Qual	MDL	RL
Indeno[1,2,3-cd]pyrene	22	U	22	330
Isophorone	17	U	17	330
2-Methylnaphthalene	19	U	19	330
2-Methylphenol	13	U	13	330
3 & 4 Methylphenol	33	U	33	330
Naphthalene	31	U	31	330
2-Nitroaniline	49	U	49	330
3-Nitroaniline	72	U	72	330
4-Nitroaniline	72	U	72	330
Nitrobenzene	22	U	22	330
2-Nitrophenol	9.9	U	9.9	330
4-Nitrophenol	96	U	96	650
N-Nitrosodi-n-propylamine	31	U	31	330
N-Nitrosodiphenylamine	21	U	21	330
Pentachlorophenol	330	U	330	650
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	9.9	U	9.9	330
2,4,6-Trichlorophenol	9.9	U	9.9	330

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	77	50 - 120
2-Fluorophenol	78	53 - 120
Nitrobenzene-d5	77	50 - 120
Phenol-d5	79	52 - 120
Terphenyl-d14	84	55 - 120
2,4,6-Tribromophenol	79	51 - 120

Method Blank TICs- Batch: 280-40136

Cas Number	Analyte	RT	Est. Result	Qual
141-79-7	3-Penten-2-one, 4-methyl-	2.92	278	N J
2216-30-0	Heptane, 2,5-dimethyl-	3.21	157	N J
	Unknown	3.31	6060	N J

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Lab Control Sample - Batch: 280-40136

Method: 8270C
Preparation: 3550C

Lab Sample ID: LCS 280-40136/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/15/2010 1239
Date Prepared: 11/10/2010 1330

Analysis Batch: 280-41180
Prep Batch: 280-40136
Units: ug/Kg

Instrument ID: MSS_K
Lab File ID: K7880.D
Initial Weight/Volume: 30.9 g
Final Weight/Volume: 1000 uL
Injection Volume: 0.5 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	2590	1920	74	52 - 120	
Anthracene	2590	2060	80	57 - 120	
Carbazole	2590	2080	80	54 - 120	
4-Chloro-3-methylphenol	2590	2120	82	57 - 120	
2-Chlorophenol	2590	1970	76	53 - 120	
1,4-Dichlorobenzene	2590	1820	70	46 - 120	
2,4-Dinitrotoluene	2590	2240	86	53 - 120	
2-Methylnaphthalene	2590	1910	74	55 - 120	
2-Methylphenol	2590	1940	75	51 - 120	
4-Nitrophenol	2590	2320	89	41 - 120	
N-Nitrosodi-n-propylamine	2590	1940	75	51 - 120	
Pentachlorophenol	2590	2140	83	30 - 120	
Phenol	2590	1990	77	54 - 120	
Pyrene	2590	2170	84	50 - 120	
1,2,4-Trichlorobenzene	2590	1760	68	50 - 120	
2,4,6-Trichlorophenol	2590	2110	81	50 - 120	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	75	50 - 120
2-Fluorophenol	73	53 - 120
Nitrobenzene-d5	72	50 - 120
Phenol-d5	75	52 - 120
Terphenyl-d14	84	55 - 120
2,4,6-Tribromophenol	86	51 - 120

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-40136

Method: 8270C
Preparation: 3550C

MS Lab Sample ID:	280-9362-4	Analysis Batch: 280-41180	Instrument ID: MSS_K
Client Matrix:	Solid	Prep Batch: 280-40136	Lab File ID: K7888.D
Dilution:	1.0		Initial Weight/Volume: 31.2 g
Date Analyzed:	11/15/2010 1526		Final Weight/Volume: 1000 uL
Date Prepared:	11/10/2010 1330		Injection Volume: 0.5 uL

MSD Lab Sample ID:	280-9362-4	Analysis Batch: 280-41180	Instrument ID: MSS_K
Client Matrix:	Solid	Prep Batch: 280-40136	Lab File ID: K7889.D
Dilution:	1.0		Initial Weight/Volume: 30.2 g
Date Analyzed:	11/15/2010 1547		Final Weight/Volume: 1000 uL
Date Prepared:	11/10/2010 1330		Injection Volume: 0.5 uL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	76	76	52 - 120	4	30		
Anthracene	81	81	57 - 120	4	30		
Carbazole	79	80	54 - 120	4	30		
4-Chloro-3-methylphenol	83	83	57 - 120	3	30		
2-Chlorophenol	73	76	53 - 120	7	30		
1,4-Dichlorobenzene	65	70	46 - 120	12	30		
2,4-Dinitrotoluene	85	84	53 - 120	3	30		
2-Methylnaphthalene	72	73	55 - 120	5	30		
2-Methylphenol	77	77	51 - 120	3	30		
4-Nitrophenol	85	85	41 - 120	4	30		
N-Nitrosodi-n-propylamine	70	74	51 - 120	10	30		
Pentachlorophenol	82	82	30 - 120	3	30		
Phenol	76	78	54 - 120	6	30		
Pyrene	87	86	50 - 120	2	38		
1,2,4-Trichlorobenzene	64	68	50 - 120	9	30		
2,4,6-Trichlorophenol	86	86	50 - 120	3	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl	76	76	50 - 120
2-Fluorophenol	68	73	53 - 120
Nitrobenzene-d5	68	73	50 - 120
Phenol-d5	73	75	52 - 120
Terphenyl-d14	87	86	55 - 120
2,4,6-Tribromophenol	85	85	51 - 120

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Method Blank - Batch: 280-40139

Method: 8081A
Preparation: 3550C

Lab Sample ID: MB 280-40139/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/18/2010 0017
Date Prepared: 11/10/2010 1330

Analysis Batch: 280-41679
Prep Batch: 280-40139
Units: ug/Kg

Instrument ID: GCS_C
Lab File ID: 041F4101.D
Initial Weight/Volume: 30.3 g
Final Weight/Volume: 10000 uL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	0.54	U	0.54	1.7
4,4'-DDE	0.24	U	0.24	1.7
4,4'-DDT	0.58	U	0.58	1.7
Aldrin	0.25	U	0.25	1.6
alpha-BHC	0.21	U	0.21	1.6
beta-BHC	0.66	U	0.66	1.6
delta-BHC	0.40	U	0.40	1.6
gamma-BHC (Lindane)	0.46	U	0.46	1.6
Heptachlor	0.21	U	0.21	1.6
Heptachlor epoxide	0.42	U	0.42	1.6
Endosulfan I	0.17	U	0.17	1.6
Endosulfan II	0.28	U	0.28	1.7
Endosulfan sulfate	0.27	U	0.27	1.7
Endrin	0.30	U	0.30	1.7
Endrin aldehyde	0.17	U	0.17	1.7
Endrin ketone	0.48	U	0.48	1.7
gamma-Chlordane	0.26	U	0.26	1.7
Methoxychlor	0.45	U	0.45	3.3
alpha-Chlordane	0.32	U	0.32	1.7
Dieldrin	0.21	U	0.21	1.7
Toxaphene	16	U	16	160

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	68	59 - 115
Decachlorobiphenyl	71	63 - 124

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Lab Control Sample - Batch: 280-40139

Method: 8081A
Preparation: 3550C

Lab Sample ID: LCS 280-40139/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/17/2010 2326
Date Prepared: 11/10/2010 1330

Analysis Batch: 280-41679
Prep Batch: 280-40139
Units: ug/Kg

Instrument ID: GCS_C
Lab File ID: 038F3801.D
Initial Weight/Volume: 30.7 g
Final Weight/Volume: 10000 uL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	16.3	13.1	80	57 - 118	
4,4'-DDE	16.3	12.8	79	61 - 115	
4,4'-DDT	16.3	12.9	79	53 - 125	
Aldrin	16.3	13.0	80	60 - 115	
alpha-BHC	16.3	14.0	86	54 - 115	
beta-BHC	16.3	13.2	81	58 - 115	
delta-BHC	16.3	14.6	89	62 - 115	
gamma-BHC (Lindane)	16.3	14.0	86	59 - 115	
Heptachlor	16.3	13.9	85	61 - 115	
Heptachlor epoxide	16.3	13.6	84	62 - 112	
Endosulfan I	16.3	13.3	82	55 - 115	
Endosulfan II	16.3	14.8	91	60 - 115	
Endosulfan sulfate	16.3	14.2	87	58 - 118	
Endrin	16.3	14.3	88	61 - 121	
Endrin aldehyde	16.3	13.1	80	54 - 115	
Endrin ketone	16.3	14.5	89	61 - 118	
gamma-Chlordane	16.3	13.6	83	60 - 115	
Methoxychlor	16.3	13.9	85	52 - 123	
alpha-Chlordane	16.3	13.6	84	60 - 115	
Dieldrin	16.3	14.3	88	63 - 117	

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	72	59 - 115
Decachlorobiphenyl	74	63 - 124

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-40139

Method: 8081A
Preparation: 3550C

MS Lab Sample ID:	280-9362-4	Analysis Batch: 280-41679	Instrument ID: GCS_C
Client Matrix:	Solid	Prep Batch: 280-40139	Lab File ID: 057F5701.D
Dilution:	1.0		Initial Weight/Volume: 30.6 g
Date Analyzed:	11/18/2010 0453		Final Weight/Volume: 10000 uL
Date Prepared:	11/10/2010 1330		Injection Volume: 1 uL
			Column ID: PRIMARY

MSD Lab Sample ID:	280-9362-4	Analysis Batch: 280-41679	Instrument ID: GCS_C
Client Matrix:	Solid	Prep Batch: 280-40139	Lab File ID: 058F5801.D
Dilution:	1.0		Initial Weight/Volume: 30.1 g
Date Analyzed:	11/18/2010 0510		Final Weight/Volume: 10000 uL
Date Prepared:	11/10/2010 1330		Injection Volume: 1 uL
			Column ID: PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
4,4'-DDD	70	78	57 - 118	13	20		
4,4'-DDE	64	65	61 - 115	3	15		
4,4'-DDT	49	45	53 - 125	7	29	N	N
Aldrin	72	73	60 - 115	3	50		
alpha-BHC	77	80	54 - 115	5	17		
beta-BHC	63	65	58 - 115	6	17		
delta-BHC	70	72	62 - 115	4	19		
gamma-BHC (Lindane)	76	76	59 - 115	2	24		
Heptachlor	75	74	61 - 115	1	18		
Heptachlor epoxide	73	75	62 - 112	3	18		
Endosulfan I	71	72	55 - 115	4	26		
Endosulfan II	70	74	60 - 115	7	20		
Endosulfan sulfate	64	67	58 - 118	5	22		
Endrin	72	76	61 - 121	7	30		
Endrin aldehyde	55	59	54 - 115	8	29		
Endrin ketone	64	65	61 - 118	2	20		
gamma-Chlordane	71	73	60 - 115	4	21		
Methoxychlor	50	43	52 - 123	13	23	N	N
alpha-Chlordane	69	72	60 - 115	6	18		
Dieldrin	75	76	63 - 117	4	25		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	63	63	59 - 115
Decachlorobiphenyl	67	68	63 - 124

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Method Blank - Batch: 280-39834

Method: 8082
Preparation: 3550C

Lab Sample ID: MB 280-39834/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/12/2010 0712
Date Prepared: 11/08/2010 1900

Analysis Batch: 280-40814
Prep Batch: 280-39834
Units: ug/Kg

Instrument ID: GCS_W
Lab File ID: 027F2701.D
Initial Weight/Volume: 30 g
Final Weight/Volume: 5000 uL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	2.8	U	2.8	10
Aroclor 1221	8.0	U	8.0	17
Aroclor 1232	2.0	U	2.0	10
Aroclor 1242	4.7	U	4.7	10
Aroclor 1248	4.7	U	4.7	10
Aroclor 1254	2.6	U	2.6	10
Aroclor 1260	2.6	U	2.6	10

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	85	59 - 130
Tetrachloro-m-xylene	79	53 - 128

Lab Control Sample - Batch: 280-39834

Method: 8082
Preparation: 3550C

Lab Sample ID: LCS 280-39834/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/12/2010 0744
Date Prepared: 11/08/2010 1900

Analysis Batch: 280-40814
Prep Batch: 280-39834
Units: ug/Kg

Instrument ID: GCS_W
Lab File ID: 028F2801.D
Initial Weight/Volume: 30 g
Final Weight/Volume: 5000 uL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	33.3	28.1	84	54 - 132	
Aroclor 1260	33.3	31.6	95	62 - 129	

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	84	59 - 130
Tetrachloro-m-xylene	77	53 - 128

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-39834

Method: 8082
Preparation: 3550C

MS Lab Sample ID:	280-9362-A-4-C MS	Analysis Batch: 280-40814	Instrument ID: GCS_W
Client Matrix:	Solid	Prep Batch: 280-39834	Lab File ID: 048F4801.D
Dilution:	1.0		Initial Weight/Volume: 30.1 g
Date Analyzed:	11/12/2010 1819		Final Weight/Volume: 5000 uL
Date Prepared:	11/08/2010 1900		Injection Volume: 1 uL
			Column ID: PRIMARY

MSD Lab Sample ID:	280-9362-A-4-D MSD	Analysis Batch: 280-40814	Instrument ID: GCS_W
Client Matrix:	Solid	Prep Batch: 280-39834	Lab File ID: 033F3301.D
Dilution:	1.0		Initial Weight/Volume: 32.1 g
Date Analyzed:	11/12/2010 1023		Final Weight/Volume: 5000 uL
Date Prepared:	11/08/2010 1900		Injection Volume: 1 uL
			Column ID: PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aroclor 1016	90	86	54 - 132	11	26		
Aroclor 1260	87	82	62 - 129	13	26		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Decachlorobiphenyl	67	62	59 - 130
Tetrachloro-m-xylene	86	80	53 - 128

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Method Blank - Batch: 280-40821

Method: 8082
Preparation: 3550C

Lab Sample ID: MB 280-40821/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/15/2010 2101
Date Prepared: 11/14/2010 0820

Analysis Batch: 280-41160
Prep Batch: 280-40821
Units: ug/Kg

Instrument ID: GCS_W
Lab File ID: 018F1801.D
Initial Weight/Volume: 32.2 g
Final Weight/Volume: 5000 uL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	2.6	U	2.6	9.3
Aroclor 1221	7.5	U	7.5	15
Aroclor 1232	1.9	U	1.9	9.3
Aroclor 1242	4.3	U	4.3	9.3
Aroclor 1248	4.3	U	4.3	9.3
Aroclor 1254	2.4	U	2.4	9.3
Aroclor 1260	2.4	U	2.4	9.3

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	90	59 - 130
Tetrachloro-m-xylene	83	53 - 128

Lab Control Sample - Batch: 280-40821

Method: 8082
Preparation: 3550C

Lab Sample ID: LCS 280-40821/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/15/2010 2133
Date Prepared: 11/14/2010 0820

Analysis Batch: 280-41160
Prep Batch: 280-40821
Units: ug/Kg

Instrument ID: GCS_W
Lab File ID: 019F1901.D
Initial Weight/Volume: 32.2 g
Final Weight/Volume: 5000 uL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	31.1	28.5	92	54 - 132	
Aroclor 1260	31.1	31.2	100	62 - 129	

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	94	59 - 130
Tetrachoro-m-xylene	90	53 - 128

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-40821

Method: 8082
Preparation: 3550C

MS Lab Sample ID:	280-9362-4RE	Analysis Batch: 280-41160	Instrument ID: GCS_W
Client Matrix:	Solid	Prep Batch: 280-40821	Lab File ID: 021F2101.D
Dilution:	1.0	Run Type: RE	Initial Weight/Volume: 30.2 g
Date Analyzed:	11/15/2010 2237		Final Weight/Volume: 5000 uL
Date Prepared:	11/14/2010 0820		Injection Volume: 1 uL
			Column ID: PRIMARY

MSD Lab Sample ID:	280-9362-4RE	Analysis Batch: 280-41160	Instrument ID: GCS_W
Client Matrix:	Solid	Prep Batch: 280-40821	Lab File ID: 022F2201.D
Dilution:	1.0	Run Type: RE	Initial Weight/Volume: 30.1 g
Date Analyzed:	11/15/2010 2308		Final Weight/Volume: 5000 uL
Date Prepared:	11/14/2010 0820		Injection Volume: 1 uL
			Column ID: PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aroclor 1016	79	86	54 - 132	9	26		
Aroclor 1260	68	80	62 - 129	17	26		

Surrogate	MS % Rec		MSD % Rec	Acceptance Limits
Decachlorobiphenyl	58	*	63	59 - 130
Tetrachloro-m-xylene	84		86	53 - 128

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Method Blank - Batch: 280-39952

Method: 6010B
Preparation: 3050B

Lab Sample ID: MB 280-39952/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/13/2010 1513
Date Prepared: 11/12/2010 1400

Analysis Batch: 280-40881
Prep Batch: 280-39952
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: 26A111310.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	0.0890	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
Calcium	14.1	U	14.1	50.0
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
Manganese	0.10	U	0.10	1.0
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
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
Chromium	0.058	U	0.058	0.20

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Lab Control Sample - Batch: 280-39952

Method: 6010B
Preparation: 3050B

Lab Sample ID: LCS 280-39952/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/13/2010 1515
Date Prepared: 11/12/2010 1400

Analysis Batch: 280-40881
Prep Batch: 280-39952
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: 26A111310.asc
Initial Weight/Volume: 1 g
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	193.6	97	82 - 116	
Antimony	50.0	49.34	99	82 - 110	
Arsenic	100	98.73	99	85 - 110	
Barium	200	203.3	102	87 - 112	
Beryllium	5.00	4.92	98	84 - 114	
Boron	100	95.80	96	81 - 110	
Cadmium	10.0	10.01	100	87 - 110	
Calcium	5000	4942	99	82 - 114	
Cobalt	50.0	49.21	98	87 - 110	
Copper	25.0	24.43	98	88 - 110	
Iron	100	98.61	99	87 - 120	
Lead	50.0	48.61	97	86 - 110	
Magnesium	5000	4788	96	90 - 110	
Manganese	50.0	48.76	98	88 - 110	
Molybdenum	100	97.78	98	86 - 110	
Nickel	50.0	47.24	94	87 - 110	
Potassium	5000	5177	104	89 - 110	
Selenium	200	198.1	99	83 - 110	
Silver	5.00	5.24	105	87 - 114	
Sodium	5000	4884	98	90 - 112	
Vanadium	50.0	48.18	96	88 - 110	
Zinc	50.0	49.99	100	76 - 114	
Chromium	20.0	19.96	100	84 - 114	

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Matrix Spike - Batch: 280-39952

Method: 6010B
Preparation: 3050B

Lab Sample ID: 280-9362-4
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/13/2010 1529
Date Prepared: 11/12/2010 1400

Analysis Batch: 280-40881
Prep Batch: 280-39952
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: 26A111310.asc
Initial Weight/Volume: 1.10 g
Final Weight/Volume: 100 mL

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	6900		194	9062	1112	50 - 200	4
Antimony	0.39	U	48.6	20.74	43	20 - 200	
Arsenic	2.2		97.2	69.84	70	76 - 111	N
Barium	77.5		194	249.8	89	52 - 159	
Beryllium	0.12	B	4.86	4.09	82	72 - 105	
Boron	1.0	U	97.2	73.73	76	75 - 107	
Cadmium	0.10	B	9.72	8.17	83	40 - 130	
Calcium	3120		4860	7965	100	43 - 165	
Cobalt	7.0		48.6	46.45	81	72 - 106	
Copper	9.9		24.3	30.07	83	37 - 187	
Iron	20800		97.2	22570	1797	70 - 200	4
Lead	4.1		48.6	42.32	79	70 - 200	
Magnesium	3890		4860	8090	86	64 - 145	
Manganese	338		48.6	395.0	118	40 - 200	4
Molybdenum	0.26	U	97.2	74.35	76	75 - 103	
Nickel	8.8		48.6	46.34	77	61 - 126	
Potassium	1490		4860	5916	91	56 - 172	
Selenium	0.88	U	194	141.9	73	76 - 104	N
Silver	0.16	U	4.86	4.29	88	75 - 141	
Sodium	138		4860	4437	88	78 - 111	
Vanadium	50.2		48.6	93.16	88	50 - 169	
Zinc	42.8		48.6	83.14	83	70 - 200	
Chromium	8.6		19.4	25.40	86	70 - 200	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Duplicate - Batch: 280-39952

Method: 6010B
Preparation: 3050B

Lab Sample ID: 280-9362-4
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/13/2010 1532
Date Prepared: 11/12/2010 1400

Analysis Batch: 280-40881
Prep Batch: 280-39952
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: 26A111310.asc
Initial Weight/Volume: 1.02 g
Final Weight/Volume: 100 mL

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	6900		6971	1	40	
Antimony	0.39	U	0.40	NC	40	U
Arsenic	2.2		2.21	1	30	
Barium	77.5		81.40	5	30	
Beryllium	0.12	B	0.0975	22	30	B
Boron	1.0	U	1.0	NC	30	U
Cadmium	0.10	B	0.0996	2	30	B
Calcium	3120		3213	3	30	
Cobalt	7.0		7.00	0.5	30	
Copper	9.9		10.01	2	30	
Iron	20800		21770	4	40	
Lead	4.1		4.01	2	40	
Magnesium	3890		3846	1	30	
Manganese	338		347.0	3	40	
Molybdenum	0.26	U	0.414	NC	30	B
Nickel	8.8		8.42	5	30	
Potassium	1490		1497	0.8	40	
Selenium	0.88	U	1.03	NC	30	
Silver	0.16	U	0.17	NC	30	U
Sodium	138		141.5	2	30	
Vanadium	50.2		52.82	5	30	
Zinc	42.8		43.10	0.6	40	
Chromium	8.6		8.00	7	40	

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Method Blank - Batch: 280-40905

Method: 6010B
Preparation: 3050B

Lab Sample ID: MB 280-40905/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/15/2010 2355
Date Prepared: 11/15/2010 1000

Analysis Batch: 280-41154
Prep Batch: 280-40905
Units: mg/Kg

Instrument ID: MT_025
Lab File ID: 25b111510.asc
Initial Weight/Volume: 1 g
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDL	RL
Silicon	2.1	U	2.1	10.0

Lab Control Sample - Batch: 280-40905

Method: 6010B
Preparation: 3050B

Lab Sample ID: LCS 280-40905/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/15/2010 2358
Date Prepared: 11/15/2010 1000

Analysis Batch: 280-41154
Prep Batch: 280-40905
Units: mg/Kg

Instrument ID: MT_025
Lab File ID: 25b111510.asc
Initial Weight/Volume: 1 g
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Silicon	1000	293.5	29	10 - 70	

Matrix Spike - Batch: 280-40905

Method: 6010B
Preparation: 3050B

Lab Sample ID: 280-9362-4
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/16/2010 0013
Date Prepared: 11/15/2010 1000

Analysis Batch: 280-41154
Prep Batch: 280-40905
Units: mg/Kg

Instrument ID: MT_025
Lab File ID: 25b111510.asc
Initial Weight/Volume: 1.15 g
Final Weight/Volume: 100 mL

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Silicon	199	930	482.6	31	20 - 200	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Duplicate - Batch: 280-40905

Method: 6010B
Preparation: 3050B

Lab Sample ID: 280-9362-4
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/16/2010 0015
Date Prepared: 11/15/2010 1000

Analysis Batch: 280-41154
Prep Batch: 280-40905
Units: mg/Kg

Instrument ID: MT_025
Lab File ID: 25b111510.asc
Initial Weight/Volume: 1.12 g
Final Weight/Volume: 100 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Silicon	199	210.5	6	40	

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Method Blank - Batch: 280-39287

Method: 7471A
Preparation: 7471A

Lab Sample ID: MB 280-39287/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/08/2010 1226
Date Prepared: 11/08/2010 0900

Analysis Batch: 280-39932
Prep Batch: 280-39287
Units: mg/Kg

Instrument ID: MT_033
Lab File ID: 101109AA.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: 280-39287

Method: 7471A
Preparation: 7471A

Lab Sample ID: LCS 280-39287/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/08/2010 1228
Date Prepared: 11/08/2010 0900

Analysis Batch: 280-39932
Prep Batch: 280-39287
Units: mg/Kg

Instrument ID: MT_033
Lab File ID: 101109AA.txt
Initial Weight/Volume: 0.60 g
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.417	0.398	95	87 - 111	

Matrix Spike - Batch: 280-39287

Method: 7471A
Preparation: 7471A

Lab Sample ID: 280-9362-1
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/08/2010 1235
Date Prepared: 11/08/2010 0900

Analysis Batch: 280-39932
Prep Batch: 280-39287
Units: mg/Kg

Instrument ID: MT_033
Lab File ID: 101109AA.txt
Initial Weight/Volume: 0.62 g
Final Weight/Volume: 50 mL

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.0054	U	0.403	0.417	103	87 - 111	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Duplicate - Batch: 280-39287

Method: 7471A
Preparation: 7471A

Lab Sample ID: 280-9362-1
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/08/2010 1233
Date Prepared: 11/08/2010 0900

Analysis Batch: 280-39932
Prep Batch: 280-39287
Units: mg/Kg

Instrument ID: MT_033
Lab File ID: 101109AA.txt
Initial Weight/Volume: 0.63 g
Final Weight/Volume: 50 mL

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.0054	U	0.0053	NC	20	U

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-9362-1
Sdg Number: J00907

Duplicate - Batch: 280-39337

Method: D-2216
Preparation: N/A

Lab Sample ID: 280-9362-1
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/05/2010 1035
Date Prepared: N/A

Analysis Batch: 280-39337
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

35°C

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-174-038	Page 1 of 1

Collector WT Sexsmith	Company Contact Joan Kessner	Telephone No. 375-4688	Project Coordinator KESSNER, JH
Project Designation ARRA Remaining Sites Confirmation Sampling - Soil Full Pr	Sampling Location 600-322 Test Pit		SAF No. RC-174
Ice Chest No. N/A	Field Logbook No. EL-1649	COA S60322A000	Method of Shipment Hand Deliver
Shipped To TestAmerica Incorporated, Richland	Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A

Price Code 8G

Data Turnaround 15 Days

POSSIBLE SAMPLE HAZARDS/REMARKS

None

Special Handling and/or Storage

Cool 4 C

Preservation	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	
Type of Container	G/P	aG	aG	aG	aG	P	
No. of Container(s)	1	1	1	1	1	1	
Volume	60mL	60mL	120mL	120mL	120mL	500mL	
SAMPLE ANALYSIS	See item (1) in Special Instructions.	VOA - 8260A (TCL)	Semi-VOA - 8270A (TCL)	PCBs - 8082	Pesticides - 8081	See item (2) in Special Instructions.	

Sample No.	Matrix *	Sample Date	Sample Time										
J1C2K1	SOIL	11/2/10	1315	✓		✓							EB
J1C2K2	SOIL	11/2/10	1325	✓		✓	✓	✓					Pipe
J1C2K3	SOIL	11/2/10	1350	✓		✓	✓	✓					under
J1C2K4	SOIL	11/2/10	1350	✓		✓	✓	✓					D

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By/Removed From: Whitney T. Sexsmith — Date/Time 1600 11/2/10	Received By/Stored In: JR DeBruijne — Date/Time 1600 11/2/10	
Relinquished By/Removed From: JR DeBruijne — Date/Time 1645 11/2/10	Received By/Stored In: J.E. Bechtel — Date/Time 1645 11-2-10	
Relinquished By/Removed From: J.E. Bechtel WCH — Date/Time 0945 11-3-10	Received By/Stored In: TRIR ANGEL — Date/Time 0945 11-3-10	
Relinquished By/Removed From: TRIR ANGEL — Date/Time 1100 11-3-10	Received By/Stored In: — Date/Time 11-4-10 0900	
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

SDG1J00907

REVIEWED BY JRE DATE 11-3-10

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	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Project 28002142 - 6010B Solid

Analytical Due:

Report Due: 11/19/10

Sample Check-in List

Date/Time Received: 11.4.10 0400 GM Screen Result 13 microR/hr

Client: Washington Closure Hanford SDG #: J00907 NA[ ] SAF #: RC-174 NA [ ]

Job Number: 9362 Chain of Custody # RC-174-038

Shipping Container ID: _____ Air Bill # 7940 8021 7939

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: 3.5 NA [ ] 5. Vermiculite/packing materials is NA [ ] Wet [✓] Dry [ ]
6. Number of samples in shipping container: 4
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: 11.4.10

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager [signature] Date 11/5/10

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

RICHLAND, WA 99354

FedEx Express

J10301010040225

Ship Date: 03NOV10
ActWgt: 35.0 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 7940 8021 7939

THU - 04 NOV A1
PRIORITY OVERNIGHT

80002
CO-US
DEN

XH WHHA

50A01/26EF/27BD

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
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.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss end file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic valueof the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $500, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.