SAF-RC-108
100-H Remaining Sites Burial Grounds – Other
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 12/23/13
NITIAL/DATE

COMMENTS:

SDG JP0674 SAF-RC-108

Rad only ☑ Chem only Rad & Chem

☑ Complete Partial

Waste Site: 100-H-42 (oily sludge)

ANALYTICAL REPORT

Job Number: 280-50206-1

SDG Number: JP0674

Job Description: SAF# RC-108

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

Attention: Joan H Kessner

Approved for release.
Kae E Yoder
Senior Project Manager
12/20/2013 3:59 PM

Kae E Yoder, Senior Project Manager
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0190
kae.yoder@testamericainc.com
12/20/2013

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.

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CASE NARRATIVE

Client: Washington Closure Hanford

Project: WASHINGTON CLOSURE HANFORD

Report Number: 280-50206-1

SDG #: JP0674
SAF#: RC-108

Date SDG Closed: December 12, 2013
Data Deliverable: 7 Day / Summary

CLIENT ID	LAB ID	ANALYSES REQUESTED	ANALYSES PERFORMED
J1T6V6	280-50206-1	6010/7471/WTPH-D+/8260A/8270A/ 8081A/8082/8310	6010B/7471A/NWTPH-Dx/8260B/8270C/ 8081A/8082/8310

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.

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 sample was received on 12/12/2013 10:15 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.3º C.

GC/MS VOLATILES - SW846 8260B
Low levels of Carbon disulfide and Methylene Chloride are present in the method blank associated with batch 280-205411. Because the concentrations in the method blank are not present at levels greater than half the reporting limit, corrective action is deemed unnecessary. Associated sample results present above the MDL and/or RL have been flagged with a "B".

The MS/MSD performed on sample J1T6V6 exhibited spike compound recoveries outside the control limits, and the associated sample results have been flagged "T". 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/MS SEMIVOLATILES - SW846 8270C
Compounds Benzo(b)fluoranthene and Benzo(k)fluoranthene were unresolved in sample J1T6V6 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".

The MS/MSD performed on sample J1T6V6 exhibited spike compound recoveries outside the control limits, and the associated sample results have been flagged "T". 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 - SW846 8081A - Pesticides
The RPD between the primary and confirmation columns exceeded 40% for Dieldrin in sample J1T6V6. The lower of the two values has been reported, as matrix interference is evident. The result has been flagged with an "X".

The MS/MSD performed on sample J1T6V6 exhibited spike compound recoveries outside the control limits, 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.

No other anomalies were encountered.

GC SEMIVOLATILES - SW846 8082 - PCBs

The laboratory noted that a Sulfuric Acid clean-up and a Mercury clean-up were performed on sample J1T6V6 to reduce matrix interferences.

Surrogate Decachlorobiphenyl was recovered outside the control limits, biased low, in sample J1T6V6. The laboratory noted that evidence of matrix interference is present; therefore, corrective action is deemed unnecessary.

It can be noted that Aroclor 1221 is reported from a separate injection for sample J1T6V6 in order to acquire/maintain the associated second column confirmation chromatographic data for the sample. Due to a system limitation, this reporting style is necessary when samples are analyzed on a non-sequential injection instrument and second column confirmation is required.

Sample J1T6V6 appears to contain a mixture of Aroclor 1254 and Aroclor 1260. The sample has been quantified and reported as Aroclor 1254, as it’s the more prominent of the Aroclors; however, due to the shared peaks of these two Aroclors, there is increased qualitative and quantitative uncertainty associated with this result.

Surrogate Decachlorobiphenyl was recovered outside the control limits, biased low, in the MS/MSD performed on sample J1T6V6 in prep batch 280-205066/analysis batch 280-205341. The laboratory noted that evidence of matrix interference is present. The acceptable LCS analysis data indicated that the analytical system was operating within control.

No other anomalies were encountered.

GC SEMIVOLATILES - NWTPH-Dx - DRO

Surrogate o-Terphenyl was recovered outside the control limits, biased high, in sample J1T6V6. Surrogate o-Terphenyl was also recovered outside the control limits, biased high, in the MS/MSD performed on sample J1T6V6. This anomaly is due to obvious matrix interference; therefore, corrective action is deemed unnecessary.

The MS aliquot of the MS/MSD performed on sample J1T6V6 exhibited spike compound recoveries outside the control limits, and the associated sample results have been flagged “N”. In addition, the RPD limits were exceeded. 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.

HPLC - SW846 8310 - PAHs

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, sample J1T6V6 had to be analyzed at a dilution, and the associated results have been flagged with a “D”. The reporting limits have been adjusted relative to the dilution required.

The surrogate recovery is not considered reliable for sample J1T6V6, because the extract was diluted beyond the ability to reliably quantitate a recovery.

The RPD between the primary and confirmation columns exceeded 40% for some analytes in sample J1T6V6. The lower of the two values has been reported, as matrix interference is evident on both columns. Associated results have been flagged with an “X”.

Spike compound recoveries, RPD data and surrogate recoveries are not considered reliable for the MS/MSD performed on sample J1T6V6, because the extract was diluted beyond the ability to reliably quantitate recoveries. The acceptable LCS analysis data indicated that the analytical system was operating within control.

No other anomalies were encountered.

TOTAL METALS - SW846 6010B/7471A

Serial dilution of a digestate in batch 280-205073 indicates that physical and chemical interferences are present for Zinc. Results have been flagged with an “X”.

Low levels of Zinc and Iron are present at levels greater than half the reporting limit in the method blank associated with batch 280-205073. As the associated sample amounts are twenty times greater than the method blank concentrations, corrective action is deemed unnecessary.

Low levels of Copper are present in the method blank associated with batch 280-205073. Because the concentration in the method blank is not present at a level greater than half the reporting limit, corrective action is deemed unnecessary.

Silicon was recovered outside the control limits, biased low, in the LCS associated with batch 280-205073 and in the Matrix Spike performed on sample J1T6V6 in batch 280-205073. The associated sample result has been flagged “N”. Silicon is a poor performer and has a history of reacting inconsistently. Data are reported as is.

It can be noted that the sample amount was greater than four times the spike amount for Aluminum and Iron in the Matrix Spike performed on sample J1T6V6; therefore, control limits are not applicable.

The duplicate analysis of sample J1T6V6 exhibited RPD data outside the control limits for Beryllium, 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: 280-50206-1
Sdg Number: JP0674

Lab Section	Qualifier	Description
GC/MS VOA		
	B	Analyte was found in the associated method blank as well as in the sample.
	U	Analyzed for but not detected.
	J	Indicates an Estimated Value for TICs
	T	MS, MSD: Recovery exceeds upper or lower control limits.
	N	Presumptive evidence of material.
	E	Result exceeded calibration range.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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
	T	MS, MSD: Recovery exceeds upper or lower control limits.
	N	Presumptive evidence of material.
	E	Result exceeded calibration range.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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.
	*	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

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Lab Section	Qualifier	Description
HPLC/IC		
	U	Analyzed for but not detected.
	X	More than 40% difference between columns, lower result reported.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	D	The reported value is from a dilution.
Metals		
	U	Analyzed for but not detected.
	B	Estimated result. Result is less than the RL, but greater than MDL
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	N	Recovery exceeds upper or lower control limits
	M	Sample duplicate precision not met.
	X	Serial dilution in the analytical batch indicates that physical and chemical interferences are present.

SAMPLE SUMMARY

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-50206-1	J1T6V6	Solid	12/11/2013 0945	12/12/2013 1015

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL DEN	SW846 8260B	
Purge and Trap	TAL DEN		SW846 5030B
Semivolatile Organic Compounds (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
Northwest - Semi-Volatile Petroleum Products (GC)	TAL DEN	NWTPH NWTPH-Dx	
Ultrasonic Extraction	TAL DEN		SW846 3550C
PAHs (HPLC)	TAL DEN	SW846 8310	
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

Lab References:

TAL DEN = TestAmerica Denver

Method References:

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: 280-50206-1
Sdg Number: JP0674

Method	Analyst	Analyst ID
SW846 8260B	Seifert, Judy L	JLS
SW846 8270C	Kiekel, Daniel C	DCK
SW846 8081A	Wells, David A	DAW
SW846 8082	Jackson, Todd D	TDJ
NWTPH NWTPH-Dx	Birdsell, Matthew R	MRB
SW846 6010B	Harre, John K	JKH
SW846 7471A	Rhoades, Chris R	CRR
SW846 8310	Fiedler, Heather K	HKF

SAMPLE RESULTS

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Client Sample ID: **J1T6V6**

Lab Sample ID: 280-50206-1
Client Matrix: Solid

Date Sampled: 12/11/2013 0945
Date Received: 12/12/2013 1015

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-205354	Instrument ID:	VMS_G2
Prep Method:	5030B	Prep Batch:	280-205411	Lab File ID:	G2_6080.D
Dilution:	1.0			Initial Weight/Volume:	5.011 g
Analysis Date:	12/16/2013 1050			Final Weight/Volume:	5.0 mL
Prep Date:	12/16/2013 1032				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acetone		21		5.4	20
Benzene		0.47	U	0.47	5.0
Bromodichloromethane		0.22	U	0.22	5.0
Bromoform		0.23	U	0.23	5.0
Bromomethane		0.50	U	0.50	10
2-Butanone (MEK)		2.6	J	1.8	10
Carbon disulfide		0.42	U	0.42	5.0
Carbon tetrachloride		0.63	U	0.63	5.0
Chlorobenzene		0.54	U T	0.54	5.0
Dibromochloromethane		0.57	U	0.57	5.0
Chloroethane		0.89	U	0.89	10
Chloroform		0.29	U	0.29	5.0
Chloromethane		0.77	U	0.77	10
1,1-Dichloroethane		0.21	U	0.21	5.0
1,2-Dichloroethane		0.70	U	0.70	5.0
1,1-Dichloroethene		0.59	U	0.59	5.0
1,2-Dichloroethene, Total		0.39	U	0.39	5.0
1,2-Dichloropropane		0.55	U	0.55	5.0
cis-1,3-Dichloropropene		1.3	U	1.3	5.0
trans-1,3-Dichloropropene		0.67	U	0.67	5.0
Ethylbenzene		1.7	J	0.67	5.0
2-Hexanone		4.9	U	4.9	20
Methylene Chloride		2.4	J B T	1.6	5.0
4-Methyl-2-pentanone (MIBK)		4.4	U	4.4	10
Styrene		0.63	U T	0.63	5.0
1,1,2,2-Tetrachloroethane		0.61	U T	0.61	5.0
Tetrachloroethene		0.59	U	0.59	5.0
Toluene		0.69	U	0.69	5.0
1,1,1-Trichloroethane		0.52	U	0.52	5.0
1,1,2-Trichloroethane		0.88	U	0.88	5.0
Trichloroethene		0.23	U	0.23	5.0
Vinyl chloride		1.3	U	1.3	5.0
Xylenes, Total		2.9	J	0.61	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	93		58 - 140
Toluene-d8 (Surr)	102		80 - 126
4-Bromofluorobenzene (Surr)	97		76 - 127
Dibromofluoromethane (Surr)	96		75 - 121

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Client Sample ID: **J1T6V6**

Lab Sample ID: 280-50206-1
Client Matrix: Solid

Date Sampled: 12/11/2013 0945
Date Received: 12/12/2013 1015

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-205354	Instrument ID:	VMS_G2
Prep Method:	5030B	Prep Batch:	280-205411	Lab File ID:	G2_6080.D
Dilution:	1.0			Initial Weight/Volume:	5.011 g
Analysis Date:	12/16/2013 1050			Final Weight/Volume:	5.0 mL
Prep Date:	12/16/2013 1032				

Tentatively Identified Compounds **Number TIC's Found:** **10**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
544-76-3	Hexadecane	12.92	24	N J
2039-89-6	Benzene, 2-ethenyl-1,4-dimethyl-	13.05	35	N J
767-58-8	Indan, 1-methyl-	13.25	33	N J
17059-48-2	1H-Indene, 2,3-dihydro-1,6-dimethyl-	13.58	17	N J
17059-48-2	1H-Indene, 2,3-dihydro-1,6-dimethyl-	13.80	39	N J
	Unknown	13.96	17	N J
91-20-3	Naphthalene	14.09	720	E N J
270-82-6	Benzo[c]thiophene	14.27	45	N J
6682-71-9	1H-Indene, 2,3-dihydro-4,7-dimethyl-	14.50	24	N J
1075-22-5	1H-Indene, 2,3-dihydro-5,6-dimethyl-	14.80	27	N J

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Client Sample ID: **J1T6V6**

Lab Sample ID: 280-50206-1
Client Matrix: Solid

Date Sampled: 12/11/2013 0945
Date Received: 12/12/2013 1015

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-205429	Instrument ID:	SMS_K
Prep Method:	3550C	Prep Batch:	280-205050	Lab File ID:	K4896.D
Dilution:	1.0			Initial Weight/Volume:	31.7 g
Analysis Date:	12/16/2013 2100			Final Weight/Volume:	1000 uL
Prep Date:	12/12/2013 2108			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		1900		9.7	310
Acenaphthylene		54	J	16	310
Anthracene		1000		16	310
Benzo[a]anthracene		760		19	310
Benzo[a]pyrene		480		19	310
Benzo[b]fluoranthene		940	K	25	310
Benzo[ghi]perylene		230	J	15	310
Benzo[k]fluoranthene		38	U K	38	310
Bis(2-chloroethoxy)methane		22	U	22	310
Bis(2-chloroethyl)ether		16	U	16	310
bis (2-chloroisopropyl) ether		22	U	22	310
Bis(2-ethylhexyl) phthalate		120	J	44	310
4-Bromophenyl phenyl ether		18	U	18	310
Butyl benzyl phthalate		390		41	310
Carbazole		330		34	310
4-Chloroaniline		78	U	78	310
4-Chloro-3-methylphenol		62	U	62	310
2-Chloronaphthalene		9.5	U	9.5	310
2-Chlorophenol		20	U	20	310
4-Chlorophenyl phenyl ether		20	U	20	310
Chrysene		720		26	310
Dibenz(a,h)anthracene		89	J	18	310
Dibenzofuran		1000		19	310
1,2-Dichlorobenzene		21	U	21	310
1,3-Dichlorobenzene		11	U	11	310
1,4-Dichlorobenzene		13	U	13	310
3,3'-Dichlorobenzidine		85	U	85	620
2,4-Dichlorophenol		9.5	U	9.5	310
Diethyl phthalate		25	U	25	310
2,4-Dimethylphenol		62	U	62	310
Dimethyl phthalate		22	U	22	310
Di-n-butyl phthalate		27	U	27	310
4,6-Dinitro-2-methylphenol		310	U T	310	620
2,4-Dinitrophenol		320	U T	320	780
2,4-Dinitrotoluene		62	U	62	310
2,6-Dinitrotoluene		26	U	26	310
Di-n-octyl phthalate		14	U	14	310
Fluoranthene		3000	T	34	310
Fluorene		1700		17	310
Hexachlorobenzene		27	U	27	310
Hexachlorobutadiene		9.5	U	9.5	310
Hexachlorocyclopentadiene		47	U T	47	310
Hexachloroethane		20	U	20	310
Indeno[1,2,3-cd]pyrene		300	J	21	310
Isophorone		16	U	16	310
2-Methylnaphthalene		1300		18	310

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Client Sample ID: **J1T6V6**

Lab Sample ID: 280-50206-1
Client Matrix: Solid

Date Sampled: 12/11/2013 0945
Date Received: 12/12/2013 1015

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-205429	Instrument ID:	SMS_K
Prep Method:	3550C	Prep Batch:	280-205050	Lab File ID:	K4896.D
Dilution:	1.0			Initial Weight/Volume:	31.7 g
Analysis Date:	12/16/2013 2100			Final Weight/Volume:	1000 uL
Prep Date:	12/12/2013 2108			Injection Volume:	0.5 uL

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
2-Methylphenol		12	U	12	310
3 & 4 Methylphenol		31	U	31	310
Naphthalene		2800		29	310
2-Nitroaniline		47	U	47	310
3-Nitroaniline		69	U	69	310
4-Nitroaniline		69	U	69	310
Nitrobenzene		21	U	21	310
2-Nitrophenol		9.5	U	9.5	310
4-Nitrophenol		92	U	92	620
N-Nitrosodi-n-propylamine		29	U	29	310
N-Nitrosodiphenylamine		20	U	20	310
Pentachlorophenol		310	U	310	620
Phenanthrene		4800		16	310
Phenol		17	U	17	310
Pyrene		2300		11	310
1,2,4-Trichlorobenzene		26	U	26	310
2,4,5-Trichlorophenol		9.5	U	9.5	310
2,4,6-Trichlorophenol		9.5	U	9.5	310

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	86		50 - 120
2-Fluorophenol	75		53 - 120
Nitrobenzene-d5	77		50 - 120
Phenol-d5	80		52 - 120
Terphenyl-d14	92		55 - 120
2,4,6-Tribromophenol	90		51 - 120

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Client Sample ID: **J1T6V6**

Lab Sample ID: 280-50206-1
Client Matrix: Solid

Date Sampled: 12/11/2013 0945
Date Received: 12/12/2013 1015

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-205429	Instrument ID:	SMS_K
Prep Method:	3550C	Prep Batch:	280-205050	Lab File ID:	K4896.D
Dilution:	1.0			Initial Weight/Volume:	31.7 g
Analysis Date:	12/16/2013 2100			Final Weight/Volume:	1000 uL
Prep Date:	12/12/2013 2108			Injection Volume:	0.5 uL

Tentatively Identified Compounds **Number TIC's Found:** **20**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	3.24	3100	N J
90-12-0	Naphthalene, 1-methyl-	6.74	780	N J
939-27-5	Naphthalene, 2-ethyl-	7.19	360	N J
581-42-0	Naphthalene, 2,6-dimethyl-	7.26	690	N J
581-40-8	Naphthalene, 2,3-dimethyl-	7.33	870	N J
581-42-0	Naphthalene, 2,6-dimethyl-	7.36	450	N J
571-58-4	Naphthalene, 1,4-dimethyl-	7.46	410	N J
2027-17-0	Naphthalene, 2-(1-methylethyl)-	7.77	410	N J
1855-47-6	1-Isopropenylnaphthalene	8.31	370	N J
643-58-3	1,1'-Biphenyl, 2-methyl-	8.33	370	N J
981-24-8	Benzeneethanol, .alpha.,.alpha.,.beta.-t	8.38	320	N J
54105-67-8	Heptadecane, 2,6-dimethyl-	8.53	740	N J
1730-37-6	9H-Fluorene, 1-methyl-	8.79	470	N J
638-36-8	Hexadecane, 2,6,10,14-tetramethyl-	8.99	380	N J
132-65-0	Dibenzothiophene	9.09	420	N J
613-12-7	Anthracene, 2-methyl-	9.72	610	N J
832-69-9	Phenanthrene, 1-methyl-	9.75	700	N J
83469-43-6	6H-Cyclobuta[jk]phenanthrene	9.86	1400	N J
1591-30-6	[1,1'-Biphenyl]-4,4'-dicarbonitrile	11.00	590	N J
238-84-6	11H-Benzo[a]fluorene	11.59	410	N J

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Client Sample ID: **J1T6V6**

Lab Sample ID: 280-50206-1
Client Matrix: Solid

Date Sampled: 12/11/2013 0945
Date Received: 12/12/2013 1015

8081A Organochlorine Pesticides (GC)

Analysis Method:	8081A	Analysis Batch:	280-205398	Instrument ID:	SGC_P2
Prep Method:	3550C	Prep Batch:	280-205062	Initial Weight/Volume:	30.1 g
Dilution:	1.0			Final Weight/Volume:	10000 uL
Analysis Date:	12/16/2013 1803			Injection Volume:	1 uL
Prep Date:	12/12/2013 1954			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		3.0		0.54	1.7
4,4'-DDE		11		0.24	1.7
4,4'-DDT		2.0		0.59	1.7
Aldrin		0.25	U	0.25	1.6
alpha-BHC		0.21	U	0.21	1.6
beta-BHC		0.66	U N	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 N	0.21	1.6
Heptachlor epoxide		0.42	U N	0.42	1.6
Endosulfan I		0.18	U N	0.18	1.6
Endosulfan II		0.29	U N	0.29	1.7
Endosulfan sulfate		0.28	U	0.28	1.7
Endrin		0.30	U N	0.30	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		0.45	J N X	0.21	1.7
Toxaphene		16	U	16	160

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	71		59 - 115
Decachlorobiphenyl	84		63 - 124

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Client Sample ID: **J1T6V6**

Lab Sample ID: 280-50206-1
Client Matrix: Solid

Date Sampled: 12/11/2013 0945
Date Received: 12/12/2013 1015

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-205340	Instrument ID:	SGC_P3a
Prep Method:	3550C	Prep Batch:	280-205066	Initial Weight/Volume:	32.8 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	12/16/2013 1347			Injection Volume:	1 uL
Prep Date:	12/12/2013 1932			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.5	U	2.5	9.1
Aroclor 1232		1.8	U	1.8	9.1
Aroclor 1242		4.3	U	4.3	9.1
Aroclor 1248		4.3	U	4.3	9.1
Aroclor 1254		18		2.4	9.1
Aroclor 1260		2.4	U	2.4	9.1

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	58	*	59 - 130
Tetrachloro-m-xylene	74		53 - 128

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Client Sample ID: **J1T6V6**

Lab Sample ID: 280-50206-1
Client Matrix: Solid

Date Sampled: 12/11/2013 0945
Date Received: 12/12/2013 1015

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-205341	Instrument ID:	SGC_P3b
Prep Method:	3550C	Prep Batch:	280-205066	Initial Weight/Volume:	32.8 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	12/16/2013 1409			Injection Volume:	1 uL
Prep Date:	12/12/2013 1932			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1221		7.3	U	7.3	15

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Client Sample ID: **J1T6V6**

Lab Sample ID: 280-50206-1
Client Matrix: Solid

Date Sampled: 12/11/2013 0945
Date Received: 12/12/2013 1015

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-205437	Instrument ID:	SGC_U
Prep Method:	3550C	Prep Batch:	280-205065	Lab File ID:	12160019.D
Dilution:	1.0			Initial Weight/Volume:	31.0 g
Analysis Date:	12/16/2013 2130			Final Weight/Volume:	1000 uL
Prep Date:	12/12/2013 1905			Injection Volume:	1 uL

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		98000	N	960	3900
C10-C28		72000	N	660	3900

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	124	*	49 - 115

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Client Sample ID: **J1T6V6**

Lab Sample ID: 280-50206-1
Client Matrix: Solid

Date Sampled: 12/11/2013 0945
Date Received: 12/12/2013 1015

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-205557	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-205058	Initial Weight/Volume:	30.4 g
Dilution:	5.0			Final Weight/Volume:	4000 uL
Analysis Date:	12/17/2013 1524			Injection Volume:	20 uL
Prep Date:	12/12/2013 2040			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		1900	D	49	490
Acenaphthylene		44	U D	44	490
Anthracene		15	U D	15	99
Benzo[a]anthracene		680	D	16	74
Benzo[a]pyrene		270	D	32	74
Benzo[b]fluoranthene		380	D	21	74
Benzo[g,h,i]perylene		170	D X	36	150
Benzo[k]fluoranthene		190	D	19	74
Chrysene		480	X D	24	200
Dibenzo(a,h)anthracene		54	U D	54	150
Fluoranthene		2500	D	64	200
Fluorene		1400	D	26	150
Indeno[1,2,3-cd]pyrene		140	J D	59	150
Naphthalene		4600	D	59	490
Phenanthrene		4600	X D	59	200
Pyrene		2800	D	59	200

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	137	D	72 - 115

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Client Sample ID: **J1T6V6**

Lab Sample ID: 280-50206-1
Client Matrix: Solid

Date Sampled: 12/11/2013 0945
Date Received: 12/12/2013 1015

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-205508	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-205073	Lab File ID:	25A5121613.asc
Dilution:	1.0			Initial Weight/Volume:	1.13 g
Analysis Date:	12/16/2013 2256			Final Weight/Volume:	100 mL
Prep Date:	12/16/2013 0730				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		8830		1.4	4.4
Antimony		0.34	U	0.34	0.53
Arsenic		3.6		0.58	0.88
Barium		263		0.067	0.44
Beryllium		0.39	M	0.029	0.18
Boron		41.5		0.87	1.8
Cadmium		0.15	B	0.036	0.18
Calcium		10900		12.5	44.2
Chromium		7.5		0.051	0.18
Cobalt		4.0		0.088	0.88
Copper		25.8		0.19	0.88
Lead		22.4		0.24	0.44
Magnesium		3470		3.3	17.7
Manganese		150		0.088	0.88
Molybdenum		0.95	B	0.23	1.8
Nickel		8.4		0.11	3.5
Potassium		899		36.3	265
Selenium		0.76	U	0.76	0.88
Silicon		214	N	5.0	8.8
Silver		0.14	U	0.14	0.18
Vanadium		27.7		0.083	1.8
Zinc		60.3	X	0.35	0.88

Analysis Method:	6010B	Analysis Batch:	280-205689	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-205073	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.13 g
Analysis Date:	12/17/2013 1255			Final Weight/Volume:	100 mL
Prep Date:	12/16/2013 0730				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Iron		10500		3.4	4.4
Sodium		639		52.2	106

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-205450	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-205339	Lab File ID:	131216aa2.txt
Dilution:	1.0			Initial Weight/Volume:	.55 g
Analysis Date:	12/16/2013 1113			Final Weight/Volume:	50 mL
Prep Date:	12/16/2013 0930				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.060		0.0060	0.019

QUALITY CONTROL RESULTS

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCA %Rec	TOL %Rec	BFB %Rec	DBFM %Rec
280-50206-1	J1T6V6	93	102	97	96
MB 280-205411/1-A		95	102	97	96
LCS 280-205411/2-A		95	100	94	99
280-50206-1 MS	J1T6V6 MS	89	102	91	97
280-50206-1 MSD	J1T6V6 MSD	86	99	89	98

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	58-140
TOL = Toluene-d8 (Surr)	80-126
BFB = 4-Bromofluorobenzene (Surr)	76-127
DBFM = Dibromofluoromethane (Surr)	75-121

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
280-50206-1	J1T6V6	86	75	77	80	92	90
MB 280-205050/1-A		79	82	83	85	95	86
LCS 280-205050/2-A		84	81	81	83	91	92
280-50206-1 MS	J1T6V6 MS	80	66	72	73	89	86
280-50206-1 MSD	J1T6V6 MSD	82	66	69	74	88	92

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl	50-120
2FP = 2-Fluorophenol	53-120
NBZ = Nitrobenzene-d5	50-120
PHL = Phenol-d5	52-120
TPH = Terphenyl-d14	55-120
TBP = 2,4,6-Tribromophenol	51-120

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Surrogate Recovery Report

8081A Organochlorine Pesticides (GC)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	TCX1 %Rec	DCB1 %Rec
280-50206-1	J1T6V6	71	84
MB 280-205062/1-A		77	79
LCS 280-205062/2-A		78	93
280-50206-1 MS	J1T6V6 MS	94	85
280-50206-1 MSD	J1T6V6 MSD	75	79

Surrogate	Acceptance Limits
TCX = Tetrachloro-m-xylene	59-115
DCB = Decachlorobiphenyl	63-124

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Surrogate Recovery Report

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCB1 %Rec	DCB2 %Rec	TCX1 %Rec	TCX2 %Rec
280-50206-1	J1T6V6	58*		74	
MB 280-205066/1-A		95		86	
MB 280-205066/1-A			93		88
LCS 280-205066/2-A		96		86	
LCS 280-205066/2-A			93		86
280-50206-1 MS	J1T6V6 MS	63		76	
280-50206-1 MS	J1T6V6 MS		55*		77
280-50206-1 MSD	J1T6V6 MSD	62		69	
280-50206-1 MSD	J1T6V6 MSD		54*		75

Surrogate	Acceptance Limits
DCB = Decachlorobiphenyl	59-130
TCX = Tetrachloro-m-xylene	53-128

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Surrogate Recovery Report

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

Client Matrix: Solid

Lab Sample ID	Client Sample ID	OTPH %Rec
280-50206-1	J1T6V6	124*
MB 280-205065/1-A		72
LCS 280-205065/2-A		72
280-50206-1 MS	J1T6V6 MS	178*
280-50206-1 MSD	J1T6V6 MSD	143*

Surrogate	Acceptance Limits
OTPH = o-Terphenyl	49-115

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Surrogate Recovery Report

8310 PAHs (HPLC)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	TPH1 %Rec
280-50206-1	J1T6V6	137D
MB 280-205058/1-A		94
LCS 280-205058/2-A		93
280-50206-1 MS	J1T6V6 MS	144D
280-50206-1 MSD	J1T6V6 MSD	166D

Surrogate	Acceptance Limits
TPH = Terphenyl-d14 (SUR)	72-115

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Method Blank - Batch: 280-205411

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 280-205411/1-A	Analysis Batch:	280-205354	Instrument ID:	VMS_G2
Client Matrix:	Solid	Prep Batch:	280-205411	Lab File ID:	G2_6078.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.0 g
Analysis Date:	12/16/2013 0950	Units:	ug/Kg	Final Weight/Volume:	5.0 mL
Prep Date:	12/16/2013 0932				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Acetone	5.4	U	5.4	20
Benzene	0.47	U	0.47	5.0
Bromodichloromethane	0.22	U	0.22	5.0
Bromoform	0.23	U	0.23	5.0
Bromomethane	0.50	U	0.50	10
2-Butanone (MEK)	1.8	U	1.8	10
Carbon disulfide	0.560	J	0.42	5.0
Carbon tetrachloride	0.63	U	0.63	5.0
Chlorobenzene	0.54	U	0.54	5.0
Dibromochloromethane	0.57	U	0.57	5.0
Chloroethane	0.89	U	0.89	10
Chloroform	0.29	U	0.29	5.0
Chloromethane	0.77	U	0.77	10
1,1-Dichloroethane	0.21	U	0.21	5.0
1,2-Dichloroethane	0.70	U	0.70	5.0
1,1-Dichloroethene	0.59	U	0.59	5.0
1,2-Dichloroethene, Total	0.39	U	0.39	5.0
1,2-Dichloropropane	0.55	U	0.55	5.0
cis-1,3-Dichloropropene	1.3	U	1.3	5.0
trans-1,3-Dichloropropene	0.67	U	0.67	5.0
Ethylbenzene	0.67	U	0.67	5.0
2-Hexanone	4.9	U	4.9	20
Methylene Chloride	2.19	J	1.6	5.0
4-Methyl-2-pentanone (MIBK)	4.4	U	4.4	10
Styrene	0.63	U	0.63	5.0
1,1,2,2-Tetrachloroethane	0.61	U	0.61	5.0
Tetrachloroethene	0.59	U	0.59	5.0
Toluene	0.69	U	0.69	5.0
1,1,1-Trichloroethane	0.52	U	0.52	5.0
1,1,2-Trichloroethane	0.88	U	0.88	5.0
Trichloroethene	0.23	U	0.23	5.0
Vinyl chloride	1.3	U	1.3	5.0
Xylenes, Total	0.61	U	0.61	5.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95	58 - 140
Toluene-d8 (Surr)	102	80 - 126
4-Bromofluorobenzene (Surr)	97	76 - 127
Dibromofluoromethane (Surr)	96	75 - 121

Method Blank TICs- Batch: 280-205411

Cas Number	Analyte	RT	Est. Result (ug/K	Qual
	Tentatively Identified Compound		None	

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Lab Control Sample - Batch: 280-205411

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 280-205411/2-A	Analysis Batch:	280-205354	Instrument ID:	VMS_G2
Client Matrix:	Solid	Prep Batch:	280-205411	Lab File ID:	G2_6079.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.0 g
Analysis Date:	12/16/2013 1010	Units:	ug/Kg	Final Weight/Volume:	5.0 mL
Prep Date:	12/16/2013 0932				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	200	172	86	65 - 150	
Benzene	50.0	44.1	88	75 - 135	
Bromodichloromethane	50.0	46.4	93	73 - 135	
Bromoform	50.0	46.2	92	77 - 135	
Bromomethane	50.0	31.4	63	52 - 135	
2-Butanone (MEK)	200	165	82	45 - 177	
Carbon disulfide	50.0	44.0	88	45 - 150	
Carbon tetrachloride	50.0	50.8	102	69 - 138	
Chlorobenzene	50.0	44.7	89	78 - 135	
Dibromochloromethane	50.0	49.0	98	77 - 135	
Chloroethane	50.0	28.6	57	51 - 145	
Chloroform	50.0	46.5	93	73 - 123	
Chloromethane	50.0	27.6	55	41 - 138	
1,1-Dichloroethane	50.0	45.7	91	70 - 135	
1,2-Dichloroethane	50.0	48.3	97	69 - 135	
1,1-Dichloroethene	50.0	43.1	86	79 - 135	
1,2-Dichloroethene, Total	100	89.7	90	78 - 135	
1,2-Dichloropropane	50.0	42.6	85	72 - 121	
cis-1,3-Dichloropropene	50.0	46.3	93	71 - 135	
trans-1,3-Dichloropropene	50.0	46.3	93	71 - 135	
Ethylbenzene	50.0	44.6	89	73 - 125	
2-Hexanone	200	166	83	67 - 150	
Methylene Chloride	50.0	42.6	85	76 - 136	
4-Methyl-2-pentanone (MIBK)	200	167	83	69 - 150	
Styrene	50.0	46.2	92	76 - 135	
1,1,2,2-Tetrachloroethane	50.0	42.5	85	65 - 135	
Tetrachloroethene	50.0	45.4	91	76 - 135	
Toluene	50.0	44.2	88	77 - 122	
1,1,1-Trichloroethane	50.0	47.6	95	70 - 135	
1,1,2-Trichloroethane	50.0	44.6	89	78 - 135	
Trichloroethene	50.0	46.1	92	77 - 135	
Vinyl chloride	50.0	28.4	57	43 - 145	
Xylenes, Total	100	89.6	90	76 - 135	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95	58 - 140
Toluene-d8 (Surr)	100	80 - 126
4-Bromofluorobenzene (Surr)	94	76 - 127
Dibromofluoromethane (Surr)	99	75 - 121

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205411

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	280-50206-1	Analysis Batch:	280-205354	Instrument ID:	VMS_G2
Client Matrix:	Solid	Prep Batch:	280-205411	Lab File ID:	G2_6081.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	4.974 g
Analysis Date:	12/16/2013 1111			Final Weight/Volume:	5.0 mL
Prep Date:	12/16/2013 1032				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50206-1	Analysis Batch:	280-205354	Instrument ID:	VMS_G2
Client Matrix:	Solid	Prep Batch:	280-205411	Lab File ID:	G2_6082.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.020 g
Analysis Date:	12/16/2013 1132			Final Weight/Volume:	5.0 mL
Prep Date:	12/16/2013 1032				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acetone	92	87	65 - 150	6	28		
Benzene	90	84	75 - 135	8	20		
Bromodichloromethane	89	83	73 - 135	8	20		
Bromoform	90	81	77 - 135	12	20		
Bromomethane	65	59	52 - 135	9	22		
2-Butanone (MEK)	82	78	45 - 177	6	32		
Carbon disulfide	85	73	45 - 150	17	24		
Carbon tetrachloride	98	86	69 - 138	13	20		
Chlorobenzene	86	75	78 - 135	15	20		T
Dibromochloromethane	99	90	77 - 135	10	20		
Chloroethane	60	55	51 - 145	10	22		
Chloroform	92	86	73 - 123	8	20		
Chloromethane	53	48	41 - 138	11	25		
1,1-Dichloroethane	92	87	70 - 135	6	20		
1,2-Dichloroethane	91	85	69 - 135	9	20		
1,1-Dichloroethene	90	85	79 - 135	6	20		
1,2-Dichloroethene, Total	92	85	78 - 135	8	20		
1,2-Dichloropropane	85	79	72 - 121	8	20		
cis-1,3-Dichloropropene	91	81	71 - 135	13	20		
trans-1,3-Dichloropropene	89	78	71 - 135	14	20		
Ethylbenzene	88	76	73 - 125	15	20		
2-Hexanone	80	73	67 - 150	9	29		
Methylene Chloride	54	50	76 - 136	5	21	T	T
4-Methyl-2-pentanone (MIBK)	81	75	69 - 150	9	25		
Styrene	89	75	76 - 135	17	20		T
1,1,2,2-Tetrachloroethane	76	64	65 - 135	19	21		T
Tetrachloroethene	90	77	76 - 135	16	20		
Toluene	88	79	77 - 122	12	20		
1,1,1-Trichloroethane	94	87	70 - 135	9	20		
1,1,2-Trichloroethane	90	84	78 - 135	7	20		
Trichloroethene	95	89	77 - 135	7	20		
Vinyl chloride	57	49	43 - 145	15	24		
Xylenes, Total	87	76	76 - 135	15	20		

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	89	86	58 - 140
Toluene-d8 (Surr)	102	99	80 - 126
4-Bromofluorobenzene (Surr)	91	89	76 - 127
Dibromofluoromethane (Surr)	97	98	75 - 121

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205411

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	280-50206-1	Units:	ug/Kg	MSD Lab Sample ID:	280-50206-1
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/16/2013 1111			Analysis Date:	12/16/2013 1132
Prep Date:	12/16/2013 1032			Prep Date:	12/16/2013 1032
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Acetone	27	U	201	199	184		174	
Benzene	2.3	U	50.3	49.8	45.0		41.6	
Bromodichloromethane	1.1	U	50.3	49.8	44.9		41.5	
Bromoform	1.1	U	50.3	49.8	45.5		40.4	
Bromomethane	2.5	U	50.3	49.8	32.4		29.6	
2-Butanone (MEK)	9.0	U	201	199	164		155	
Carbon disulfide	2.1	U	50.3	49.8	42.9		36.3	
Carbon tetrachloride	3.1	U	50.3	49.8	49.2		43.1	
Chlorobenzene	2.7	U	50.3	49.8	43.3		37.1	T
Dibromochloromethane	2.8	U	50.3	49.8	49.7		45.0	
Chloroethane	4.4	U	50.3	49.8	30.1		27.3	
Chloroform	1.4	U	50.3	49.8	46.5		42.9	
Chloromethane	3.8	U	50.3	49.8	26.8		24.0	
1,1-Dichloroethane	1.0	U	50.3	49.8	46.1		43.4	
1,2-Dichloroethane	3.4	U	50.3	49.8	46.0		42.2	
1,1-Dichloroethene	2.9	U	50.3	49.8	45.1		42.4	
1,2-Dichloroethene, Total	1.9	U	101	99.6	92.1		84.7	
1,2-Dichloropropane	2.7	U	50.3	49.8	42.5		39.3	
cis-1,3-Dichloropropene	6.4	U	50.3	49.8	45.9		40.5	
trans-1,3-Dichloropropene	3.3	U	50.3	49.8	44.6		38.9	
Ethylbenzene	3.3	U	50.3	49.8	44.3		37.9	
2-Hexanone	24	U	201	199	160		146	
Methylene Chloride	17	J	50.3	49.8	43.9	T	41.7	T
4-Methyl-2-pentanone (MIBK)	21	U	201	199	162		149	
Styrene	3.1	U	50.3	49.8	44.7		37.6	T
1,1,2,2-Tetrachloroethane	3.0	U	50.3	49.8	38.3		31.8	T
Tetrachloroethene	2.9	U	50.3	49.8	45.5		38.6	
Toluene	3.4	U	50.3	49.8	44.3		39.4	
1,1,1-Trichloroethane	2.6	U	50.3	49.8	47.4		43.1	
1,1,2-Trichloroethane	4.3	U	50.3	49.8	45.2		42.0	
Trichloroethene	1.1	U	50.3	49.8	47.7		44.3	
Vinyl chloride	6.6	U	50.3	49.8	28.5		24.4	
Xylenes, Total	3.0	U	101	99.6	87.8		75.2	

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Method Blank - Batch: 280-205050

Method: 8270C
Preparation: 3550C

Lab Sample ID:	MB 280-205050/1-A	Analysis Batch:	280-205429	Instrument ID:	SMS_K
Client Matrix:	Solid	Prep Batch:	280-205050	Lab File ID:	K4882.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.3 g
Analysis Date:	12/16/2013 1430	Units:	ug/Kg	Final Weight/Volume:	1000 uL
Prep Date:	12/12/2013 2108			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Result	Qual	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	38	U	38	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	41	U	41	320
Carbazole	35	U	35	320
4-Chloroaniline	78	U	78	320
4-Chloro-3-methylphenol	63	U	63	320
2-Chloronaphthalene	9.6	U	9.6	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	86	U	86	630
2,4-Dichlorophenol	9.6	U	9.6	320
Diethyl phthalate	25	U	25	320
2,4-Dimethylphenol	63	U	63	320
Dimethyl phthalate	22	U	22	320
Di-n-butyl phthalate	28	U	28	320
4,6-Dinitro-2-methylphenol	320	U	320	630
2,4-Dinitrophenol	320	U	320	790
2,4-Dinitrotoluene	63	U	63	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	9.6	U	9.6	320
Hexachlorocyclopentadiene	48	U	48	320
Hexachloroethane	20	U	20	320
Indeno[1,2,3-cd]pyrene	21	U	21	320
Isophorone	16	U	16	320

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Method Blank - Batch: 280-205050

Method: 8270C
Preparation: 3550C

Lab Sample ID:	MB 280-205050/1-A	Analysis Batch:	280-205429	Instrument ID:	SMS_K
Client Matrix:	Solid	Prep Batch:	280-205050	Lab File ID:	K4882.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.3 g
Analysis Date:	12/16/2013 1430	Units:	ug/Kg	Final Weight/Volume:	1000 uL
Prep Date:	12/12/2013 2108			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
2-Methylnaphthalene	18	U	18	320
2-Methylphenol	12	U	12	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	69	U	69	320
Nitrobenzene	21	U	21	320
2-Nitrophenol	9.6	U	9.6	320
4-Nitrophenol	93	U	93	630
N-Nitrosodi-n-propylamine	30	U	30	320
N-Nitrosodiphenylamine	20	U	20	320
Pentachlorophenol	320	U	320	630
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	9.6	U	9.6	320
2,4,6-Trichlorophenol	9.6	U	9.6	320

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	79	50 - 120
2-Fluorophenol	82	53 - 120
Nitrobenzene-d5	83	50 - 120
Phenol-d5	85	52 - 120
Terphenyl-d14	95	55 - 120
2,4,6-Tribromophenol	86	51 - 120

Method Blank TICs- Batch: 280-205050

Cas Number	Analyte	RT	Est. Result (ug/K	Qual
	Tentatively Identified Compound		None	

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Lab Control Sample - Batch: 280-205050

Method: 8270C
Preparation: 3550C

Lab Sample ID:	LCS 280-205050/2-A	Analysis Batch:	280-205429	Instrument ID:	SMS_K
Client Matrix:	Solid	Prep Batch:	280-205050	Lab File ID:	K4883.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.2 g
Analysis Date:	12/16/2013 1458	Units:	ug/Kg	Final Weight/Volume:	1000 uL
Prep Date:	12/12/2013 2108			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	2560	2290	89	60 - 120	
Acenaphthylene	2560	2310	90	64 - 120	
Anthracene	2560	2300	90	63 - 120	
Benzo[a]anthracene	2560	2380	93	65 - 120	
Benzo[a]pyrene	2560	2490	97	59 - 120	
Benzo[b]fluoranthene	2560	2500	97	47 - 129	
Benzo[ghi]perylene	2560	2490	97	55 - 126	
Benzo[k]fluoranthene	2560	2430	95	48 - 130	
Bis(2-chloroethoxy)methane	2560	2230	87	56 - 120	
Bis(2-chloroethyl)ether	2560	2330	91	51 - 120	
bis (2-chloroisopropyl) ether	2560	2160	84	49 - 120	
Bis(2-ethylhexyl) phthalate	2560	2710	106	65 - 120	
4-Bromophenyl phenyl ether	2560	2330	91	64 - 120	
Butyl benzyl phthalate	2560	2540	99	65 - 120	
Carbazole	2560	2310	90	64 - 120	
4-Chloroaniline	2560	1550	61	28 - 120	
4-Chloro-3-methylphenol	2560	2320	90	63 - 120	
2-Chloronaphthalene	2560	2190	85	59 - 120	
2-Chlorophenol	2560	2170	85	57 - 120	
4-Chlorophenyl phenyl ether	2560	2310	90	64 - 120	
Chrysene	2560	2350	92	64 - 120	
Dibenz(a,h)anthracene	2560	2590	101	50 - 133	
Dibenzofuran	2560	2280	89	61 - 120	
1,2-Dichlorobenzene	2560	2010	79	53 - 120	
1,3-Dichlorobenzene	2560	1980	77	52 - 120	
1,4-Dichlorobenzene	2560	1990	78	52 - 120	
3,3'-Dichlorobenzidine	2560	2210	86	30 - 120	
2,4-Dichlorophenol	2560	2290	89	60 - 120	
Diethyl phthalate	2560	2350	92	66 - 120	
2,4-Dimethylphenol	2560	2090	82	54 - 120	
Dimethyl phthalate	2560	2370	92	65 - 120	
Di-n-butyl phthalate	2560	2420	94	67 - 120	
4,6-Dinitro-2-methylphenol	5130	5140	100	57 - 120	
2,4-Dinitrophenol	5130	4900	95	46 - 120	
2,4-Dinitrotoluene	2560	2490	97	68 - 120	
2,6-Dinitrotoluene	2560	2420	94	64 - 120	
Di-n-octyl phthalate	2560	2570	100	66 - 120	
Fluoranthene	2560	2400	94	66 - 120	
Fluorene	2560	2310	90	64 - 120	
Hexachlorobenzene	2560	2360	92	62 - 120	
Hexachlorobutadiene	2560	2060	80	53 - 120	
Hexachlorocyclopentadiene	2560	2140	83	47 - 120	
Hexachloroethane	2560	1970	77	51 - 120	
Indeno[1,2,3-cd]pyrene	2560	2540	99	63 - 120	
Isophorone	2560	2140	83	56 - 120	
2-Methylnaphthalene	2560	2220	87	57 - 120	

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Lab Control Sample - Batch: 280-205050

Method: 8270C
Preparation: 3550C

Lab Sample ID:	LCS 280-205050/2-A	Analysis Batch:	280-205429	Instrument ID:	SMS_K
Client Matrix:	Solid	Prep Batch:	280-205050	Lab File ID:	K4883.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.2 g
Analysis Date:	12/16/2013 1458	Units:	ug/Kg	Final Weight/Volume:	1000 uL
Prep Date:	12/12/2013 2108			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
2-Methylphenol	2560	2210	86	56 - 120	
3 & 4 Methylphenol	2560	2220	87	53 - 120	
Naphthalene	2560	2120	83	57 - 120	
2-Nitroaniline	2560	2410	94	63 - 120	
3-Nitroaniline	2560	1830	72	47 - 120	
4-Nitroaniline	2560	2310	90	64 - 120	
Nitrobenzene	2560	2140	83	54 - 120	
2-Nitrophenol	2560	2340	91	56 - 120	
4-Nitrophenol	5130	4830	94	63 - 121	
N-Nitrosodi-n-propylamine	2560	2230	87	51 - 120	
N-Nitrosodiphenylamine	2560	2150	84	61 - 120	
Pentachlorophenol	5130	4540	89	56 - 120	
Phenanthrene	2560	2330	91	64 - 120	
Phenol	2560	2210	86	56 - 120	
Pyrene	2560	2350	92	64 - 120	
1,2,4-Trichlorobenzene	2560	2130	83	52 - 120	
2,4,5-Trichlorophenol	2560	2280	89	64 - 120	
2,4,6-Trichlorophenol	2560	2370	92	61 - 120	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	84	50 - 120
2-Fluorophenol	81	53 - 120
Nitrobenzene-d5	81	50 - 120
Phenol-d5	83	52 - 120
Terphenyl-d14	91	55 - 120
2,4,6-Tribromophenol	92	51 - 120

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205050

Method: 8270C
Preparation: 3550C

MS Lab Sample ID:	280-50206-1	Analysis Batch:	280-205429	Instrument ID:	SMS_K
Client Matrix:	Solid	Prep Batch:	280-205050	Lab File ID:	K4897.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.0 g
Analysis Date:	12/16/2013 2127			Final Weight/Volume:	1000 uL
Prep Date:	12/12/2013 2108			Injection Volume:	0.5 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-50206-1	Analysis Batch:	280-205429	Instrument ID:	SMS_K
Client Matrix:	Solid	Prep Batch:	280-205050	Lab File ID:	K4898.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.5 g
Analysis Date:	12/16/2013 2155			Final Weight/Volume:	1000 uL
Prep Date:	12/12/2013 2108			Injection Volume:	0.5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	81	99	60 - 120	10	30		
Acenaphthylene	88	91	64 - 120	2	30		
Anthracene	84	98	63 - 120	9	30		
Benzo[a]anthracene	93	110	65 - 120	12	30		
Benzo[a]pyrene	93	106	59 - 120	10	30		
Benzo[b]fluoranthene	84	96	47 - 129	9	44		
Benzo[ghi]perylene	89	95	55 - 126	4	31		
Benzo[k]fluoranthene	97	109	48 - 130	10	30		
Bis(2-chloroethoxy)methane	78	77	56 - 120	4	30		
Bis(2-chloroethyl)ether	74	73	51 - 120	3	30		
bis (2-chloroisopropyl) ether	71	70	49 - 120	3	30		
Bis(2-ethylhexyl) phthalate	105	106	65 - 120	1	30		
4-Bromophenyl phenyl ether	91	91	64 - 120	1	30		
Butyl benzyl phthalate	94	100	65 - 120	4	30		
Carbazole	94	102	64 - 120	6	30		
4-Chloroaniline	62	63	28 - 120	0	30		
4-Chloro-3-methylphenol	88	91	63 - 120	3	30		
2-Chloronaphthalene	83	86	59 - 120	1	30		
2-Chlorophenol	71	73	57 - 120	1	30		
4-Chlorophenyl phenyl ether	89	93	64 - 120	3	30		
Chrysene	90	105	64 - 120	10	35		
Dibenz(a,h)anthracene	96	97	50 - 133	0	30		
Dibenzofuran	84	97	61 - 120	9	30		
1,2-Dichlorobenzene	65	65	53 - 120	2	30		
1,3-Dichlorobenzene	64	64	52 - 120	1	32		
1,4-Dichlorobenzene	65	64	52 - 120	2	30		
3,3'-Dichlorobenzidine	86	85	30 - 120	3	30		
2,4-Dichlorophenol	86	86	60 - 120	2	30		
Diethyl phthalate	93	97	66 - 120	3	30		
2,4-Dimethylphenol	84	85	54 - 120	1	30		
Dimethyl phthalate	94	98	65 - 120	3	30		
Di-n-butyl phthalate	97	99	67 - 120	1	30		
4,6-Dinitro-2-methylphenol	48	47	57 - 120	3	30	T	T

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205050

Method: 8270C
Preparation: 3550C

MS Lab Sample ID:	280-50206-1	Analysis Batch:	280-205429	Instrument ID:	SMS_K
Client Matrix:	Solid	Prep Batch:	280-205050	Lab File ID:	K4897.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.0 g
Analysis Date:	12/16/2013 2127			Final Weight/Volume:	1000 uL
Prep Date:	12/12/2013 2108			Injection Volume:	0.5 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-50206-1	Analysis Batch:	280-205429	Instrument ID:	SMS_K
Client Matrix:	Solid	Prep Batch:	280-205050	Lab File ID:	K4898.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.5 g
Analysis Date:	12/16/2013 2155			Final Weight/Volume:	1000 uL
Prep Date:	12/12/2013 2108			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
2,4-Dinitrophenol	36	37	46 - 120	0	34	T	T
2,4-Dinitrotoluene	99	101	68 - 120	1	30		
2,6-Dinitrotoluene	93	96	64 - 120	2	30		
Di-n-octyl phthalate	106	108	66 - 120	1	30		
Fluoranthene	91	136	66 - 120	19	30		T
Fluorene	84	102	64 - 120	10	30		
Hexachlorobenzene	90	91	62 - 120	1	30		
Hexachlorobutadiene	71	69	53 - 120	5	30		
Hexachlorocyclopentadiene	20	21	47 - 120	1	30	T	T
Hexachloroethane	60	61	51 - 120	1	30		
Indeno[1,2,3-cd]pyrene	100	104	63 - 120	1	30		
Isophorone	77	76	56 - 120	4	30		
2-Methylnaphthalene	79	87	57 - 120	5	30		
2-Methylphenol	76	80	56 - 120	3	30		
3 & 4 Methylphenol	81	83	53 - 120	2	30		
Naphthalene	69	88	57 - 120	9	30		
2-Nitroaniline	95	99	63 - 120	2	30		
3-Nitroaniline	80	87	47 - 120	6	30		
4-Nitroaniline	89	97	64 - 120	7	30		
Nitrobenzene	73	72	54 - 120	3	30		
2-Nitrophenol	81	81	56 - 120	2	30		
4-Nitrophenol	95	102	63 - 121	5	30		
N-Nitrosodi-n-propylamine	74	76	51 - 120	1	30		
N-Nitrosodiphenylamine	90	93	61 - 120	2	36		
Pentachlorophenol	84	90	56 - 120	6	30		
Phenanthrene	78	118	64 - 120	14	30	E	E
Phenol	77	78	56 - 120	0	30		
Pyrene	87	119	64 - 120	16	38		
1,2,4-Trichlorobenzene	74	74	52 - 120	1	30		
2,4,5-Trichlorophenol	88	93	64 - 120	4	30		
2,4,6-Trichlorophenol	90	94	61 - 120	3	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl	80	82	50 - 120

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorophenol	66	66	53 - 120
Nitrobenzene-d5	72	69	50 - 120
Phenol-d5	73	74	52 - 120
Terphenyl-d14	89	88	55 - 120
2,4,6-Tribromophenol	86	92	51 - 120

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205050

Method: 8270C
Preparation: 3550C

MS Lab Sample ID:	280-50206-1	Units:	ug/Kg	MSD Lab Sample ID:	280-50206-1
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/16/2013 2127			Analysis Date:	12/16/2013 2155
Prep Date:	12/12/2013 2108			Prep Date:	12/12/2013 2108
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Acenaphthene	1900		2670	2620	4050		4480	
Acenaphthylene	54	J	2670	2620	2390		2440	
Anthracene	1000		2670	2620	3290		3610	
Benzo[a]anthracene	760		2670	2620	3230		3640	
Benzo[a]pyrene	480		2670	2620	2950		3250	
Benzo[b]fluoranthene	940		2670	2620	3170		3460	
Benzo[ghi]perylene	230	J	2670	2620	2600		2720	
Benzo[k]fluoranthene	38	U	2670	2620	2590		2850	
Bis(2-chloroethoxy)methane	22	U	2670	2620	2090		2010	
Bis(2-chloroethyl)ether	16	U	2670	2620	1970		1910	
bis (2-chloroisopropyl) ether	22	U	2670	2620	1880		1830	
Bis(2-ethylhexyl) phthalate	120	J	2670	2620	2920		2900	
4-Bromophenyl phenyl ether	18	U	2670	2620	2420		2390	
Butyl benzyl phthalate	390		2670	2620	2890		3010	
Carbazole	330		2670	2620	2830		3000	
4-Chloroaniline	78	U	2670	2620	1660		1660	
4-Chloro-3-methylphenol	62	U	2670	2620	2340		2400	
2-Chloronaphthalene	9.5	U	2670	2620	2220		2240	
2-Chlorophenol	20	U	2670	2620	1910		1920	
4-Chlorophenyl phenyl ether	20	U	2670	2620	2380		2450	
Chrysene	720		2670	2620	3120		3470	
Dibenz(a,h)anthracene	89	J	2670	2620	2650		2640	
Dibenzofuran	1000		2670	2620	3240		3560	
1,2-Dichlorobenzene	21	U	2670	2620	1730		1700	
1,3-Dichlorobenzene	11	U	2670	2620	1710		1690	
1,4-Dichlorobenzene	13	U	2670	2620	1720		1680	
3,3'-Dichlorobenzidine	85	U	2670	2620	2290		2230	
2,4-Dichlorophenol	9.5	U	2670	2620	2300		2270	
Diethyl phthalate	25	U	2670	2620	2470		2540	
2,4-Dimethylphenol	62	U	2670	2620	2250		2220	
Dimethyl phthalate	22	U	2670	2620	2500		2580	
Di-n-butyl phthalate	27	U	2670	2620	2580		2610	
4,6-Dinitro-2-methylphenol	310	U	5330	5250	2550	T	2480	T
2,4-Dinitrophenol	320	U	5330	5250	1920	T	1920	T
2,4-Dinitrotoluene	62	U	2670	2620	2630		2650	
2,6-Dinitrotoluene	26	U	2670	2620	2470		2530	
Di-n-octyl phthalate	14	U	2670	2620	2840		2820	
Fluoranthene	3000		2670	2620	5390		6540	T
Fluorene	1700		2670	2620	3960		4390	
Hexachlorobenzene	27	U	2670	2620	2400		2380	
Hexachlorobutadiene	9.5	U	2670	2620	1900		1810	
Hexachlorocyclopentadiene	47	U	2670	2620	542	T	548	T
Hexachloroethane	20	U	2670	2620	1600		1590	

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205050

Method: 8270C
Preparation: 3550C

MS Lab Sample ID:	280-50206-1	Units:	ug/Kg	MSD Lab Sample ID:	280-50206-1
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/16/2013 2127			Analysis Date:	12/16/2013 2155
Prep Date:	12/12/2013 2108			Prep Date:	12/12/2013 2108
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Indeno[1,2,3-cd]pyrene	300	J	2670	2620	2970		3020	
Isophorone	16	U	2670	2620	2070		1980	
2-Methylnaphthalene	1300		2670	2620	3390		3580	
2-Methylphenol	12	U	2670	2620	2030		2090	
3 & 4 Methylphenol	31	U	2670	2620	2160		2190	
Naphthalene	2800		2670	2620	4620		5070	
2-Nitroaniline	47	U	2670	2620	2530		2590	
3-Nitroaniline	69	U	2670	2620	2140		2270	
4-Nitroaniline	69	U	2670	2620	2370		2560	
Nitrobenzene	21	U	2670	2620	1940		1890	
2-Nitrophenol	9.5	U	2670	2620	2170		2130	
4-Nitrophenol	92	U	5330	5250	5080		5320	
N-Nitrosodi-n-propylamine	29	U	2670	2620	1980		1990	
N-Nitrosodiphenylamine	20	U	2670	2620	2400		2450	
Pentachlorophenol	310	U	5330	5250	4480		4740	
Phenanthrene	4800		2670	2620	6890	E	7920	E
Phenol	17	U	2670	2620	2040		2030	
Pyrene	2300		2670	2620	4640		5440	
1,2,4-Trichlorobenzene	26	U	2670	2620	1970		1940	
2,4,5-Trichlorophenol	9.5	U	2670	2620	2340		2430	
2,4,6-Trichlorophenol	9.5	U	2670	2620	2400		2470	

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Method Blank - Batch: 280-205062

Method: 8081A
Preparation: 3550C

Lab Sample ID:	MB 280-205062/1-A	Analysis Batch:	280-205398	Instrument ID:	SGC_P2
Client Matrix:	Solid	Prep Batch:	280-205062	Lab File ID:	12160032.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.6 g
Analysis Date:	12/16/2013 1853	Units:	ug/Kg	Final Weight/Volume:	10000 uL
Prep Date:	12/12/2013 1954			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	0.52	U	0.52	1.6
4,4'-DDE	0.23	U	0.23	1.6
4,4'-DDT	0.56	U	0.56	1.6
Aldrin	0.24	U	0.24	1.6
alpha-BHC	0.20	U	0.20	1.6
beta-BHC	0.63	U	0.63	1.6
delta-BHC	0.38	U	0.38	1.6
gamma-BHC (Lindane)	0.44	U	0.44	1.6
Heptachlor	0.20	U	0.20	1.6
Heptachlor epoxide	0.40	U	0.40	1.6
Endosulfan I	0.17	U	0.17	1.6
Endosulfan II	0.27	U	0.27	1.6
Endosulfan sulfate	0.26	U	0.26	1.6
Endrin	0.29	U	0.29	1.6
Endrin aldehyde	0.16	U	0.16	1.6
Endrin ketone	0.46	U	0.46	1.6
gamma-Chlordane	0.25	U	0.25	1.6
Methoxychlor	0.43	U	0.43	3.1
alpha-Chlordane	0.31	U	0.31	1.6
Dieldrin	0.20	U	0.20	1.6
Toxaphene	15	U	15	160

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	77	59 - 115
Decachlorobiphenyl	79	63 - 124

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Lab Control Sample - Batch: 280-205062

Method: 8081A
Preparation: 3550C

Lab Sample ID:	LCS 280-205062/2-A	Analysis Batch:	280-205398	Instrument ID:	SGC_P2
Client Matrix:	Solid	Prep Batch:	280-205062	Lab File ID:	12160028.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.9 g
Analysis Date:	12/16/2013 1747	Units:	ug/Kg	Final Weight/Volume:	10000 uL
Prep Date:	12/12/2013 1954			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	15.7	15.8	101	54 - 130	
4,4'-DDE	15.7	15.1	96	58 - 121	
4,4'-DDT	15.7	16.0	102	57 - 133	
Aldrin	15.7	14.5	92	63 - 115	
alpha-BHC	15.7	14.6	93	64 - 116	
beta-BHC	15.7	12.2	78	67 - 115	
delta-BHC	15.7	14.9	95	67 - 115	
gamma-BHC (Lindane)	15.7	14.4	92	63 - 118	
Heptachlor	15.7	14.8	95	68 - 115	
Heptachlor epoxide	15.7	15.4	98	66 - 117	
Endosulfan I	15.7	13.7	87	65 - 118	
Endosulfan II	15.7	15.1	96	71 - 118	
Endosulfan sulfate	15.7	16.5	106	67 - 123	
Endrin	15.7	15.8	101	77 - 134	
Endrin aldehyde	15.7	12.4	79	47 - 115	
Endrin ketone	15.7	16.2	104	62 - 115	
gamma-Chlordane	15.7	15.2	97	65 - 117	
Methoxychlor	15.7	15.9	102	67 - 130	
alpha-Chlordane	15.7	15.2	97	63 - 120	
Dieldrin	15.7	15.7	100	65 - 127	

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	78	59 - 115
Decachlorobiphenyl	93	63 - 124

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205062

Method: 8081A
Preparation: 3550C

MS Lab Sample ID:	280-50206-1	Analysis Batch:	280-205398	Instrument ID:	SGC_P2
Client Matrix:	Solid	Prep Batch:	280-205062	Lab File ID:	12160030.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.4 g
Analysis Date:	12/16/2013 1820			Final Weight/Volume:	10000 uL
Prep Date:	12/12/2013 1954			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	280-50206-1	Analysis Batch:	280-205398	Instrument ID:	SGC_P2
Client Matrix:	Solid	Prep Batch:	280-205062	Lab File ID:	12160031.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.3 g
Analysis Date:	12/16/2013 1836			Final Weight/Volume:	10000 uL
Prep Date:	12/12/2013 1954			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
4,4'-DDD	64	62	54 - 130	1	20		
4,4'-DDE	100	95	58 - 121	1	15		
4,4'-DDT	71	72	57 - 133	5	29		
Aldrin	65	63	63 - 115	1	50		
alpha-BHC	69	69	64 - 116	3	17		
beta-BHC	52	53	67 - 115	5	17	N	N
delta-BHC	73	71	67 - 115	0	19		
gamma-BHC (Lindane)	70	69	63 - 118	3	24		
Heptachlor	55	54	68 - 115	3	18	N	N
Heptachlor epoxide	49	48	66 - 117	2	18	N	N
Endosulfan I	61	60	65 - 118	1	26	N	N
Endosulfan II	66	65	71 - 118	2	20	N	N
Endosulfan sulfate	73	71	67 - 123	1	22		
Endrin	73	71	77 - 134	2	30	N	N
Endrin aldehyde	57	53	47 - 115	4	29		
Endrin ketone	73	73	62 - 115	4	20		
gamma-Chlordane	75	75	65 - 117	3	21		
Methoxychlor	89	89	67 - 130	4	23		
alpha-Chlordane	67	66	63 - 120	2	18		
Dieldrin	56	55	65 - 127	1	25	N	N

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	94	75	59 - 115
Decachlorobiphenyl	85	79	63 - 124

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205062

Method: 8081A
Preparation: 3550C

MS Lab Sample ID:	280-50206-1	Units:	ug/Kg	MSD Lab Sample ID:	280-50206-1
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/16/2013 1820			Analysis Date:	12/16/2013 1836
Prep Date:	12/12/2013 1954			Prep Date:	12/12/2013 1954
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
4,4'-DDD	3.0		15.9	16.5	13.1		13.3	
4,4'-DDE	11		15.9	16.5	27.3		27.1	
4,4'-DDT	2.0		15.9	16.5	13.2		13.9	
Aldrin	0.25	U	15.9	16.5	10.3		10.4	
alpha-BHC	0.21	U	15.9	16.5	11.0		11.3	
beta-BHC	0.66	U	15.9	16.5	8.34	N	8.80	N
delta-BHC	0.40	U	15.9	16.5	11.7		11.7	
gamma-BHC (Lindane)	0.46	U	15.9	16.5	11.1		11.4	
Heptachlor	0.29	J	15.9	16.5	8.98	N	9.26	N
Heptachlor epoxide	0.80	J	15.9	16.5	8.58	N	8.75	N
Endosulfan I	0.18	U	15.9	16.5	9.73	N	9.87	N
Endosulfan II	0.29	U	15.9	16.5	10.5	N	10.7	N
Endosulfan sulfate	0.28	U	15.9	16.5	11.6		11.7	
Endrin	0.30	U	15.9	16.5	11.6	N	11.8	N
Endrin aldehyde	0.17	U	15.9	16.5	9.06		8.70	
Endrin ketone	0.49	U	15.9	16.5	11.6		12.0	
gamma-Chlordane	0.27	U	15.9	16.5	12.0		12.3	
Methoxychlor	0.45	U	15.9	16.5	14.1		14.8	
alpha-Chlordane	0.32	U	15.9	16.5	10.7		10.9	
Dieldrin	0.45	J	15.9	16.5	9.41	N	9.52	N

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Method Blank - Batch: 280-205066

Method: 8082
Preparation: 3550C

Lab Sample ID:	MB 280-205066/1-A	Analysis Batch:	280-205340	Instrument ID:	SGC_P3a
Client Matrix:	Solid	Prep Batch:	280-205066	Lab File ID:	1216A004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.2 g
Analysis Date:	12/16/2013 1304	Units:	ug/Kg	Final Weight/Volume:	5000 uL
Prep Date:	12/12/2013 1932			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	2.8	U	2.8	9.9
Aroclor 1221	8.0	U	8.0	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	Acceptance Limits
Decachlorobiphenyl	95	59 - 130
Tetrachloro-m-xylene	86	53 - 128

Method Blank - Batch: 280-205066

Method: 8082
Preparation: 3550C

Lab Sample ID:	MB 280-205066/1-A	Analysis Batch:	280-205341	Instrument ID:	SGC_P3b
Client Matrix:	Solid	Prep Batch:	280-205066	Lab File ID:	1216B004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.2 g
Analysis Date:	12/16/2013 1326	Units:	ug/Kg	Final Weight/Volume:	5000 uL
Prep Date:	12/12/2013 1932			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	2.8	U	2.8	9.9
Aroclor 1221	8.0	U	8.0	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	Acceptance Limits
Decachlorobiphenyl	93	59 - 130
Tetrachloro-m-xylene	88	53 - 128

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Lab Control Sample - Batch: 280-205066

Method: 8082
Preparation: 3550C

Lab Sample ID:	LCS 280-205066/2-A	Analysis Batch:	280-205340	Instrument ID:	SGC_P3a
Client Matrix:	Solid	Prep Batch:	280-205066	Lab File ID:	1216A005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.4 g
Analysis Date:	12/16/2013 1326	Units:	ug/Kg	Final Weight/Volume:	5000 uL
Prep Date:	12/12/2013 1932			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	32.9	30.5	93	54 - 132	
Aroclor 1260	32.9	31.4	95	62 - 129	

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	96	59 - 130
Tetrachloro-m-xylene	86	53 - 128

Lab Control Sample - Batch: 280-205066

Method: 8082
Preparation: 3550C

Lab Sample ID:	LCS 280-205066/2-A	Analysis Batch:	280-205341	Instrument ID:	SGC_P3b
Client Matrix:	Solid	Prep Batch:	280-205066	Lab File ID:	1216B005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.4 g
Analysis Date:	12/16/2013 1347	Units:	ug/Kg	Final Weight/Volume:	5000 uL
Prep Date:	12/12/2013 1932			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	32.9	28.7	87	54 - 132	
Aroclor 1260	32.9	29.3	89	62 - 129	

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	93	59 - 130
Tetrachloro-m-xylene	86	53 - 128

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205066

Method: 8082
Preparation: 3550C

MS Lab Sample ID:	280-50206-1	Analysis Batch:	280-205340	Instrument ID:	SGC_P3a
Client Matrix:	Solid	Prep Batch:	280-205066	Lab File ID:	1216A007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.9 g
Analysis Date:	12/16/2013 1409			Final Weight/Volume:	5000 uL
Prep Date:	12/12/2013 1932			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	280-50206-1	Analysis Batch:	280-205340	Instrument ID:	SGC_P3a
Client Matrix:	Solid	Prep Batch:	280-205066	Lab File ID:	1216A008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.1 g
Analysis Date:	12/16/2013 1430			Final Weight/Volume:	5000 uL
Prep Date:	12/12/2013 1932			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aroclor 1016	94	76	54 - 132	18	26		
Aroclor 1260	78	80	62 - 129	6	26		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Decachlorobiphenyl	63	62	59 - 130
Tetrachloro-m-xylene	76	69	53 - 128

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205066

Method: 8082
Preparation: 3550C

MS Lab Sample ID:	280-50206-1	Analysis Batch:	280-205341	Instrument ID:	SGC_P3b
Client Matrix:	Solid	Prep Batch:	280-205066	Lab File ID:	1216B007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.9 g
Analysis Date:	12/16/2013 1430			Final Weight/Volume:	5000 uL
Prep Date:	12/12/2013 1932			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	280-50206-1	Analysis Batch:	280-205341	Instrument ID:	SGC_P3b
Client Matrix:	Solid	Prep Batch:	280-205066	Lab File ID:	1216B008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.1 g
Analysis Date:	12/16/2013 1451			Final Weight/Volume:	5000 uL
Prep Date:	12/12/2013 1932			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aroclor 1016	103	99	54 - 132	1	26		
Aroclor 1260	67	67	62 - 129	3	26		

Surrogate	MS % Rec		MSD % Rec		Acceptance Limits
Decachlorobiphenyl	55	*	54	*	59 - 130
Tetrachloro-m-xylene	77		75		53 - 128

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205066

Method: 8082
Preparation: 3550C

MS Lab Sample ID:	280-50206-1	Units:	ug/Kg	MSD Lab Sample ID:	280-50206-1
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/16/2013 1409			Analysis Date:	12/16/2013 1430
Prep Date:	12/12/2013 1932			Prep Date:	12/12/2013 1932
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Aroclor 1016	2.5	U	32.4	33.2	30.3	25.3
Aroclor 1260	2.4	U	32.4	33.2	25.1	26.6

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205066

Method: 8082
Preparation: 3550C

MS Lab Sample ID:	280-50206-1	Units:	ug/Kg	MSD Lab Sample ID:	280-50206-1
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/16/2013 1430			Analysis Date:	12/16/2013 1451
Prep Date:	12/12/2013 1932			Prep Date:	12/12/2013 1932
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Aroclor 1016	2.5	U	32.4	33.2	33.3	32.9
Aroclor 1260	2.4	U	32.4	33.2	21.7	22.3

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Method Blank - Batch: 280-205065

Method: NWTPH-Dx
Preparation: 3550C

Lab Sample ID:	MB 280-205065/1-A	Analysis Batch:	280-205437	Instrument ID:	SGC_U
Client Matrix:	Solid	Prep Batch:	280-205065	Lab File ID:	12160026.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.8 g
Analysis Date:	12/17/2013 0955	Units:	ug/Kg	Final Weight/Volume:	1000 uL
Prep Date:	12/12/2013 1905			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
C10-C36	970	U	970	3900
C10-C28	660	U	660	3900

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

Lab Control Sample - Batch: 280-205065

Method: NWTPH-Dx
Preparation: 3550C

Lab Sample ID:	LCS 280-205065/2-A	Analysis Batch:	280-205437	Instrument ID:	SGC_U
Client Matrix:	Solid	Prep Batch:	280-205065	Lab File ID:	12160018.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.3 g
Analysis Date:	12/16/2013 2101	Units:	ug/Kg	Final Weight/Volume:	1000 uL
Prep Date:	12/12/2013 1905			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
C10-C36	63900	53700	84	57 - 115	
C10-C28	63900	53400	84	53 - 115	

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

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205065

Method: NWTPH-Dx
Preparation: 3550C

MS Lab Sample ID:	280-50206-1	Analysis Batch:	280-205437	Instrument ID:	SGC_U
Client Matrix:	Solid	Prep Batch:	280-205065	Lab File ID:	12160020.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.5 g
Analysis Date:	12/16/2013 2159			Final Weight/Volume:	1000 uL
Prep Date:	12/12/2013 1905			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-50206-1	Analysis Batch:	280-205437	Instrument ID:	SGC_U
Client Matrix:	Solid	Prep Batch:	280-205065	Lab File ID:	12160021.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.1 g
Analysis Date:	12/16/2013 2228			Final Weight/Volume:	1000 uL
Prep Date:	12/12/2013 1905			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
C10-C36	205	101	57 - 115	34	23	N	*
C10-C28	171	99	56 - 115	29	23	N	*

Surrogate	MS % Rec		MSD % Rec		Acceptance Limits
o-Terphenyl	178	*	143	*	49 - 115

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205065

Method: NWTPH-Dx
Preparation: 3550C

MS Lab Sample ID:	280-50206-1	Units:	ug/Kg	MSD Lab Sample ID:	280-50206-1
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/16/2013 2159			Analysis Date:	12/16/2013 2228
Prep Date:	12/12/2013 1905			Prep Date:	12/12/2013 1905
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
C10-C36	98000	65600	66500	233000	N	165000	*
C10-C28	72000	65600	66500	184000	N	137000	*

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Method Blank - Batch: 280-205058

Method: 8310
Preparation: 3550C

Lab Sample ID:	MB 280-205058/1-A	Analysis Batch:	280-205557	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-205058	Lab File ID:	G1217008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.3 g
Analysis Date:	12/17/2013 1423	Units:	ug/Kg	Final Weight/Volume:	4000 uL
Prep Date:	12/12/2013 2040			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Acenaphthene	9.9	U	9.9	99
Acenaphthylene	8.9	U	8.9	99
Anthracene	3.0	U	3.0	20
Benzo[a]anthracene	3.2	U	3.2	15
Benzo[a]pyrene	6.3	U	6.3	15
Benzo[b]fluoranthene	4.2	U	4.2	15
Benzo[g,h,i]perylene	7.1	U	7.1	30
Benzo[k]fluoranthene	3.9	U	3.9	15
Chrysene	4.8	U	4.8	40
Dibenzo(a,h)anthracene	11	U	11	30
Fluoranthene	13	U	13	40
Fluorene	5.2	U	5.2	30
Indeno[1,2,3-cd]pyrene	12	U	12	30
Naphthalene	12	U	12	99
Phenanthrene	12	U	12	40
Pyrene	12	U	12	40

Surrogate	% Rec	Acceptance Limits
Terphenyl-d14 (SUR)	94	72 - 115

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Lab Control Sample - Batch: 280-205058

Method: 8310
Preparation: 3550C

Lab Sample ID:	LCS 280-205058/2-A	Analysis Batch:	280-205557	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-205058	Lab File ID:	G1217009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.4 g
Analysis Date:	12/17/2013 1454	Units:	ug/Kg	Final Weight/Volume:	4000 uL
Prep Date:	12/12/2013 2040			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	1910	1740	91	78 - 116	
Acenaphthylene	1910	1650	86	76 - 115	
Anthracene	1910	1730	91	74 - 115	
Benzo[a]anthracene	1910	1740	91	85 - 120	
Benzo[a]pyrene	1910	1720	90	74 - 121	
Benzo[b]fluoranthene	1910	1810	95	85 - 115	
Benzo[g,h,i]perylene	1910	1770	93	85 - 120	
Benzo[k]fluoranthene	1910	1830	96	85 - 115	
Chrysene	1910	1760	92	83 - 115	
Dibenzo(a,h)anthracene	1910	1780	93	83 - 115	
Fluoranthene	1910	1810	95	83 - 115	
Fluorene	1910	1740	91	80 - 115	
Indeno[1,2,3-cd]pyrene	1910	1770	93	85 - 123	
Naphthalene	1910	1770	93	80 - 121	
Phenanthrene	1910	1810	95	80 - 115	
Pyrene	1910	1700	89	75 - 116	

Surrogate	% Rec	Acceptance Limits
Terphenyl-d14 (SUR)	93	72 - 115

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205058

Method: 8310
Preparation: 3550C

MS Lab Sample ID:	280-50206-1	Analysis Batch:	280-205557	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-205058	Lab File ID:	G1217011.D
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	30.2 g
Analysis Date:	12/17/2013 1555			Final Weight/Volume:	4000 uL
Prep Date:	12/12/2013 2040			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	280-50206-1	Analysis Batch:	280-205557	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-205058	Lab File ID:	G1217012.D
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	30.1 g
Analysis Date:	12/17/2013 1626			Final Weight/Volume:	4000 uL
Prep Date:	12/12/2013 2040			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	100	158	78 - 116	26	20	D	D
Acenaphthylene	84	89	76 - 115	6	21	D	D
Anthracene	164	235	74 - 115	36	20	D	D
Benzo[a]anthracene	101	178	85 - 120	45	20	D	D
Benzo[a]pyrene	113	110	74 - 121	3	20	D	D
Benzo[b]fluoranthene	94	97	85 - 115	3	20	D	D
Benzo[g,h,i]perylene	87	93	85 - 120	6	20	D	D
Benzo[k]fluoranthene	97	92	85 - 115	4	20	D	D
Chrysene	124	211	83 - 115	46	20	D	D
Dibenzo(a,h)anthracene	92	106	83 - 115	14	20	D	D
Fluoranthene	155	244	83 - 115	28	20	D	D
Fluorene	95	142	80 - 115	25	20	D	D
Indeno[1,2,3-cd]pyrene	100	116	85 - 123	14	20	D	D
Naphthalene	84	231	80 - 121	38	20	D	D
Phenanthrene	207	399	80 - 115	36	20	D	D
Pyrene	131	204	75 - 116	24	20	D	D

Surrogate	MS % Rec		MSD % Rec		Acceptance Limits
Terphenyl-d14 (SUR)	144	D	166	D	72 - 115

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205058

Method: 8310
Preparation: 3550C

MS Lab Sample ID:	280-50206-1	Units:	ug/Kg	MSD Lab Sample ID:	280-50206-1
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	5.0			Dilution:	5.0
Analysis Date:	12/17/2013 1555			Analysis Date:	12/17/2013 1626
Prep Date:	12/12/2013 2040			Prep Date:	12/12/2013 2040
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Acenaphthene	1900		1990	1990	3920	D	5080	D
Acenaphthylene	44	U	1990	1990	1670	D	1770	D
Anthracene	15	U	1990	1990	3260	D	4690	D
Benzo[a]anthracene	680		1990	1990	2680	D	4220	D
Benzo[a]pyrene	270		1990	1990	2520	D	2460	D
Benzo[b]fluoranthene	380		1990	1990	2240	D	2310	D
Benzo[g,h,i]perylene	170		1990	1990	1900	D	2020	D
Benzo[k]fluoranthene	190		1990	1990	2120	D	2030	D
Chrysene	480		1990	1990	2940	D	4690	D
Dibenzo(a,h)anthracene	54	U	1990	1990	1830	D	2100	D
Fluoranthene	2500		1990	1990	5550	D	7330	D
Fluorene	1400		1990	1990	3270	D	4210	D
Indeno[1,2,3-cd]pyrene	140	J	1990	1990	2120	D	2450	D
Naphthalene	4600		1990	1990	6240	D	9180	D
Phenanthrene	4600		1990	1990	8670	D	12500	D
Pyrene	2800		1990	1990	5400	D	6880	D

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Method Blank - Batch: 280-205073

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 280-205073/1-A	Analysis Batch:	280-205508	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-205073	Lab File ID:	25A5121613.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	12/16/2013 2251	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/16/2013 0730				
Leach Date:	N/A				

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	0.076	U	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
Chromium	0.058	U	0.058	0.20
Cobalt	0.10	U	0.10	1.0
Copper	0.303	B	0.22	1.0
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
Silicon	5.7	U	5.7	10.0
Silver	0.16	U	0.16	0.20
Vanadium	0.094	U	0.094	2.0
Zinc	0.509	B	0.40	1.0

Method Blank - Batch: 280-205073

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 280-205073/1-A	Analysis Batch:	280-205689	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-205073	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	12/17/2013 1251	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/16/2013 0730				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Iron	4.06	B	3.8	5.0
Sodium	59.0	U	59.0	120

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Lab Control Sample - Batch: 280-205073

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 280-205073/2-A	Analysis Batch:	280-205508	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-205073	Lab File ID:	25A5121613.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	12/16/2013 2254	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/16/2013 0730				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	189.3	95	82 - 116	
Antimony	50.0	48.93	98	82 - 110	
Arsenic	100	97.88	98	85 - 110	
Barium	200	204.9	102	87 - 112	
Beryllium	5.00	4.54	91	84 - 114	
Boron	100	95.98	96	80 - 120	
Cadmium	10.0	10.18	102	87 - 110	
Calcium	5000	4549	91	82 - 114	
Chromium	20.0	19.64	98	84 - 114	
Cobalt	50.0	48.27	97	87 - 110	
Copper	25.0	25.24	101	88 - 110	
Lead	50.0	48.29	97	86 - 110	
Magnesium	5000	4968	99	90 - 110	
Manganese	50.0	48.91	98	88 - 110	
Molybdenum	100	98.10	98	86 - 110	
Nickel	50.0	47.65	95	87 - 110	
Potassium	5000	5214	104	89 - 110	
Selenium	200	195.4	98	83 - 110	
Silicon	1000	69.09	7	10 - 70	N
Silver	5.00	5.08	102	87 - 114	
Vanadium	50.0	49.18	98	88 - 110	
Zinc	50.0	48.76	98	76 - 114	

Lab Control Sample - Batch: 280-205073

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 280-205073/2-A	Analysis Batch:	280-205689	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-205073	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	12/17/2013 1253	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/16/2013 0730				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Iron	100	112.3	112	87 - 120	
Sodium	5000	4770	95	90 - 112	

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Matrix Spike - Batch: 280-205073

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-50206-1	Analysis Batch:	280-205508	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-205073	Lab File ID:	25A5121613.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.13 g
Analysis Date:	12/16/2013 2303	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/16/2013 0730				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	8830		177	9019	109	50 - 200	4
Antimony	0.34	U	44.2	23.94	54	20 - 200	
Arsenic	3.6		88.5	82.47	89	76 - 111	
Barium	263		177	427.6	93	52 - 159	
Beryllium	0.39		4.42	3.84	78	72 - 105	
Boron	41.5		88.5	113.9	82	80 - 120	
Cadmium	0.15	B	8.85	8.43	94	40 - 130	
Calcium	10900		4420	15010	92	43 - 165	
Chromium	7.5		17.7	24.82	98	70 - 200	
Cobalt	4.0		44.2	42.50	87	72 - 106	
Copper	25.8		22.1	45.76	90	37 - 187	
Lead	22.4		44.2	57.07	78	70 - 200	
Magnesium	3470		4420	7975	102	64 - 145	
Manganese	150		44.2	224.7	169	40 - 200	
Molybdenum	0.95	B	88.5	76.61	85	75 - 103	
Nickel	8.4		44.2	46.84	87	61 - 126	
Potassium	899		4420	5442	103	56 - 172	
Selenium	0.76	U	177	155.1	88	76 - 104	
Silicon	214		885	313.7	11	20 - 200	N
Silver	0.14	U	4.42	4.30	97	75 - 141	
Vanadium	27.7		44.2	74.33	105	50 - 169	
Zinc	60.3		44.2	101.8	94	70 - 200	

Matrix Spike - Batch: 280-205073

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-50206-1	Analysis Batch:	280-205689	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-205073	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.13 g
Analysis Date:	12/17/2013 1302	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/16/2013 0730				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Iron	10500	88.5	12430	2169	70 - 200	4
Sodium	639	4420	5016	99	78 - 111	

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Duplicate - Batch: 280-205073

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-50206-1	Analysis Batch:	280-205508	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-205073	Lab File ID:	25A5121613.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.03 g
Analysis Date:	12/16/2013 2300	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/16/2013 0730				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	8830		7475	17	40	
Antimony	0.34	U	0.37	NC	40	U
Arsenic	3.6		3.86	8	30	
Barium	263		308.6	16	30	
Beryllium	0.39		0.181	73	30	B M
Boron	41.5		36.12	14	30	
Cadmium	0.15	B	0.159	7	30	B
Calcium	10900		12880	16	30	
Chromium	7.5		7.90	5	40	
Cobalt	4.0		5.01	22	30	
Copper	25.8		25.21	2	30	
Lead	22.4		25.17	12	40	
Magnesium	3470		3595	4	30	
Manganese	150		177.7	17	40	
Molybdenum	0.95	B	0.742	25	30	B
Nickel	8.4		9.13	9	30	
Potassium	899		928.8	3	40	
Selenium	0.76	U	0.83	NC	30	U
Silicon	214		247.8	15	40	N
Silver	0.14	U	0.16	NC	30	U
Vanadium	27.7		33.74	20	30	
Zinc	60.3		59.56	1	40	

Duplicate - Batch: 280-205073

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-50206-1	Analysis Batch:	280-205689	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-205073	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.03 g
Analysis Date:	12/17/2013 1300	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	12/16/2013 0730				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Iron	10500	12720	19	40	
Sodium	639	742.6	15	30	

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Method Blank - Batch: 280-205339

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 280-205339/1-A	Analysis Batch:	280-205450	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-205339	Lab File ID:	131216aa2.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	.6 g
Analysis Date:	12/16/2013 1108	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	12/16/2013 0930				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.0055	U	0.0055	0.017

Lab Control Sample - Batch: 280-205339

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 280-205339/2-A	Analysis Batch:	280-205450	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-205339	Lab File ID:	131216aa2.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	.6 g
Analysis Date:	12/16/2013 1111	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	12/16/2013 0930				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.417	0.408	98	87 - 111	

Matrix Spike - Batch: 280-205339

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-50206-1	Analysis Batch:	280-205450	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-205339	Lab File ID:	131216aa2.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	.53 g
Analysis Date:	12/16/2013 1118	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	12/16/2013 0930				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.060	0.472	0.506	95	87 - 111	

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

Duplicate - Batch: 280-205339

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-50206-1	Analysis Batch:	280-205450	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-205339	Lab File ID:	131216aa2.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	.62 g
Analysis Date:	12/16/2013 1115	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	12/16/2013 0930				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Mercury	0.060	0.0633	6	20	

Client: Washington Closure Hanford

Job Number: 280-50206-1
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QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:280-205354					
LCS 280-205411/2-A	Lab Control Sample	T	Solid	8260B	280-205411
MB 280-205411/1-A	Method Blank	T	Solid	8260B	280-205411
280-50206-1	J1T6V6	T	Solid	8260B	280-205411
280-50206-1MS	Matrix Spike	T	Solid	8260B	280-205411
280-50206-1MSD	Matrix Spike Duplicate	T	Solid	8260B	280-205411
Prep Batch: 280-205411					
LCS 280-205411/2-A	Lab Control Sample	T	Solid	5030B	
MB 280-205411/1-A	Method Blank	T	Solid	5030B	
280-50206-1	J1T6V6	T	Solid	5030B	
280-50206-1MS	Matrix Spike	T	Solid	5030B	
280-50206-1MSD	Matrix Spike Duplicate	T	Solid	5030B	

Report Basis
T = Total

GC/MS Semi VOA					
Prep Batch: 280-205050					
LCS 280-205050/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-205050/1-A	Method Blank	T	Solid	3550C	
280-50206-1	J1T6V6	T	Solid	3550C	
280-50206-1MS	Matrix Spike	T	Solid	3550C	
280-50206-1MSD	Matrix Spike Duplicate	T	Solid	3550C	
Analysis Batch:280-205429					
LCS 280-205050/2-A	Lab Control Sample	T	Solid	8270C	280-205050
MB 280-205050/1-A	Method Blank	T	Solid	8270C	280-205050
280-50206-1	J1T6V6	T	Solid	8270C	280-205050
280-50206-1MS	Matrix Spike	T	Solid	8270C	280-205050
280-50206-1MSD	Matrix Spike Duplicate	T	Solid	8270C	280-205050

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 280-205062					
LCS 280-205062/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-205062/1-A	Method Blank	T	Solid	3550C	
280-50206-1	J1T6V6	T	Solid	3550C	
280-50206-1MS	Matrix Spike	T	Solid	3550C	
280-50206-1MSD	Matrix Spike Duplicate	T	Solid	3550C	
Prep Batch: 280-205065					
LCS 280-205065/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-205065/1-A	Method Blank	T	Solid	3550C	
280-50206-1	J1T6V6	T	Solid	3550C	
280-50206-1MS	Matrix Spike	T	Solid	3550C	
280-50206-1MSD	Matrix Spike Duplicate	T	Solid	3550C	
Prep Batch: 280-205066					
LCS 280-205066/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-205066/1-A	Method Blank	T	Solid	3550C	
280-50206-1	J1T6V6	T	Solid	3550C	
280-50206-1MS	Matrix Spike	T	Solid	3550C	
280-50206-1MSD	Matrix Spike Duplicate	T	Solid	3550C	
Analysis Batch:280-205340					
LCS 280-205066/2-A	Lab Control Sample	T	Solid	8082	280-205066
MB 280-205066/1-A	Method Blank	T	Solid	8082	280-205066
280-50206-1	J1T6V6	T	Solid	8082	280-205066
280-50206-1MS	Matrix Spike	T	Solid	8082	280-205066
280-50206-1MSD	Matrix Spike Duplicate	T	Solid	8082	280-205066
Analysis Batch:280-205341					
LCS 280-205066/2-A	Lab Control Sample	T	Solid	8082	280-205066
MB 280-205066/1-A	Method Blank	T	Solid	8082	280-205066
280-50206-1	J1T6V6	T	Solid	8082	280-205066
280-50206-1MS	Matrix Spike	T	Solid	8082	280-205066
280-50206-1MSD	Matrix Spike Duplicate	T	Solid	8082	280-205066
Analysis Batch:280-205398					
LCS 280-205062/2-A	Lab Control Sample	T	Solid	8081A	280-205062
MB 280-205062/1-A	Method Blank	T	Solid	8081A	280-205062
280-50206-1	J1T6V6	T	Solid	8081A	280-205062
280-50206-1MS	Matrix Spike	T	Solid	8081A	280-205062
280-50206-1MSD	Matrix Spike Duplicate	T	Solid	8081A	280-205062

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:280-205437					
LCS 280-205065/2-A	Lab Control Sample	T	Solid	NWTPH-Dx	280-205065
MB 280-205065/1-A	Method Blank	T	Solid	NWTPH-Dx	280-205065
280-50206-1	J1T6V6	T	Solid	NWTPH-Dx	280-205065
280-50206-1MS	Matrix Spike	T	Solid	NWTPH-Dx	280-205065
280-50206-1MSD	Matrix Spike Duplicate	T	Solid	NWTPH-Dx	280-205065

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-205073					
LCS 280-205073/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-205073/1-A	Method Blank	T	Solid	3050B	
280-50206-1	J1T6V6	T	Solid	3050B	
280-50206-1DU	Duplicate	T	Solid	3050B	
280-50206-1MS	Matrix Spike	T	Solid	3050B	
Prep Batch: 280-205339					
LCS 280-205339/2-A	Lab Control Sample	T	Solid	7471A	
MB 280-205339/1-A	Method Blank	T	Solid	7471A	
280-50206-1	J1T6V6	T	Solid	7471A	
280-50206-1DU	Duplicate	T	Solid	7471A	
280-50206-1MS	Matrix Spike	T	Solid	7471A	
Analysis Batch:280-205450					
LCS 280-205339/2-A	Lab Control Sample	T	Solid	7471A	280-205339
MB 280-205339/1-A	Method Blank	T	Solid	7471A	280-205339
280-50206-1	J1T6V6	T	Solid	7471A	280-205339
280-50206-1DU	Duplicate	T	Solid	7471A	280-205339
280-50206-1MS	Matrix Spike	T	Solid	7471A	280-205339
Analysis Batch:280-205508					
LCS 280-205073/2-A	Lab Control Sample	T	Solid	6010B	280-205073
MB 280-205073/1-A	Method Blank	T	Solid	6010B	280-205073
280-50206-1	J1T6V6	T	Solid	6010B	280-205073
280-50206-1DU	Duplicate	T	Solid	6010B	280-205073
280-50206-1MS	Matrix Spike	T	Solid	6010B	280-205073
Analysis Batch:280-205689					
LCS 280-205073/2-A	Lab Control Sample	T	Solid	6010B	280-205073
MB 280-205073/1-A	Method Blank	T	Solid	6010B	280-205073
280-50206-1	J1T6V6	T	Solid	6010B	280-205073
280-50206-1DU	Duplicate	T	Solid	6010B	280-205073
280-50206-1MS	Matrix Spike	T	Solid	6010B	280-205073

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-50206-1
Sdg Number: JP0674

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
HPLC/IC					
Prep Batch: 280-205058					
LCS 280-205058/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-205058/1-A	Method Blank	T	Solid	3550C	
280-50206-1	J1T6V6	T	Solid	3550C	
280-50206-1MS	Matrix Spike	T	Solid	3550C	
280-50206-1MSD	Matrix Spike Duplicate	T	Solid	3550C	
Analysis Batch:280-205557					
LCS 280-205058/2-A	Lab Control Sample	T	Solid	8310	280-205058
MB 280-205058/1-A	Method Blank	T	Solid	8310	280-205058
280-50206-1	J1T6V6	T	Solid	8310	280-205058
280-50206-1MS	Matrix Spike	T	Solid	8310	280-205058
280-50206-1MSD	Matrix Spike Duplicate	T	Solid	8310	280-205058

Report Basis
T = Total