0098158

SAF-RC-107
100-H Remaining Sites Burial Grounds – Soil Full Protocol
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 7/7/11
NITIAL/DATE

COMMENTS:

SDG JP0208 SAF-RC-107

Rad only ☑ Chem only Rad & Chem

☑ Complete Partial

Waste Site: 600-151 verification resampling

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AUG 11 2011
EDMC

Analytical Data Package Prepared For

Washington Closure Hanford

RECEIVED
JUN 2011

Radiochemical Analysis By

TestAmerica

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

Assigned Laboratory Code: TARL

Data Package Contains 20 ***Pages***

Report No.: 47115

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

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
JP0208	RC-107	J1JW46	J1F220490-1	MKFJV1AA	9MKFJV10	1173176

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

TestAmerica Laboratories, Inc.

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

June 27, 2011

Attention: Joan Kessner

SAF Number	:	RC-107
Date SDG Closed	:	June 22, 2011
Number of Samples	:	One (1)
Sample Type	:	Soil
SDG Number	:	JP0208
Data Deliverable	:	7 Day Summary

CASE NARRATIVE

I. Introduction

On June 22, 2011, one soil sample was received at TestAmerica for chemistry analysis. Upon receipt, the sample was assigned the following laboratory ID number to correspond with the Washington Closure Hanford (WCH) specific ID:

WCH ID#	TARL ID#	MATRIX	DATE OF RECEIPT
J1JW46	MKFJV	SOIL	6/22/11

II. Sample Receipt

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

III. Analytical Results/Methodology

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

The requested analysis was:

Chemical Analysis
Hexavalent Chromium by EPA method 7196A

IV. Quality Control

The analytical results for each analysis performed includes a minimum of one laboratory control sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

V. Comments

Chemical Analysis

Hexavalent Chromium by EPA method 7196A:

Te LCS, batch blank, sample, sample duplicate (J1JW46) and the sample matrix spike (J1JW46) results are within contractual requirements.

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

Reviewed and approved:

Whitney Vitale

for Rhonda Wagar
Project Manager

Drinking Water Method Cross References

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

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

Uncertainty Estimation

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

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

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

Report Definitions

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

Sample Results Summary

TestAmerica TARL

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

Date: 27-Jun-11

Report No. : 47115

SDG No: JP0208

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
1173176	7196_CR6								
J1JW46									
	MKFJV1AA	HEXCHROME	1.54E-01 +- 0.0E+00	U	mg/kg	N/A	1.54E-01	1.55E-01	
	MKFJV1AD	HEXCHROME	1.54E-01 +- 0.0E+00	U	mg/kg	N/A	1.54E-01	3.50E-01	0.0

No. of Results: 2

TestAmerica

rptSTLRchSaSummary2 V5.2.15 A2002

RPD - Relative Percent Difference.

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

QC Results Summary

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Date: 27-Jun-11

Report No. : 47115

SDG No.: JP0208

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC|MDA
7196_CR6								
1173176 MATRIX SPIKE, J1JW46								
MKFJV1AC	HEXCHROME	8.90E+00 +- 0.0E+00		mg/kg	N/A	82%	-0.2	1.55E-01
1173176 LCS,								
MKFJ81AC	HEXCHROME	1.85E+01 +- 0.0E+00		mg/kg	N/A	92%	-0.1	1.55E-01
1173176 BLANK QC,								
MKFJ81AA	HEXCHROME	1.55E-01 +- 0.0E+00	U	mg/kg	N/A			1.55E-01

No. of Results: 3

TestAmerica

rptSTLRchQcSummary V5.2.15 A2002

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

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

FORM I

SAMPLE RESULTS

Date: 27-Jun-11

Lab Name:	TestAmerica	**SDG:**	JP0208	**Collection Date:**	6/22/2011 10:30:00 AM
Lot-Sample No.:	J1F220490-1	**Report No. :**	47115	**Received Date:**	6/22/2011 2:00:00 PM
Client Sample ID:	J1JW46	**COC No. :**	RC-107-082	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1173176	7196_CR6			**Work Order:** MKFJV1AA			**Report DB ID:** 9MKFJV10					
HEXCHROME	**1.54E-01**	U		0.0E+00	1.54E-01	mg/kg	N/A	*(1.)*	6/23/11 09:00 a		2.5	
							1.55E-01	*N/A*			g	

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

TestAmerica
rptSTLRchSample
V5.2.15 A2002

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

FORM I

SAMPLE RESULTS

Date: 27-Jun-11

Lab Name:	TestAmerica	**SDG:**	JP0208	**Collection Date:**	6/22/2011 10:30:00 AM
Lot-Sample No.:	J1F220490-1	**Report No. :**	47115	**Received Date:**	6/22/2011 2:00:00 PM
Client Sample ID:	J1JW46	**COC No. :**	RC-107-082	**Matrix:**	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

TestAmerica Laboratories, Inc.

TestAmerica
rptSTLRchSample
V5.2.15 A2002

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

FORM II

Date: 27-Jun-11

DUPLICATE RESULTS

Lab Name:	TestAmerica	**SDG:**	JP0208	**Collection Date:**	6/22/2011 10:30:00 AM
Lot-Sample No.:	J1F220490-1	**Report No. :**	47115	**Received Date:**	6/22/2011 2:00:00 PM
Client Sample ID:	J1JW46	**COC No. :**	RC-107-082	**Matrix:**	SOIL

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1173176	7196_CR6			Work Order: MKFJV1AD		Report DB ID: MKFJV1ER			Orig Sa DB ID: 9MKFJV10			
HEXCHROME	1.54E-01	U		0.0E+00	1.54E-01	mg/kg	N/A	(1.)	6/23/11 09:00 a		2.5	
	1.54E-01	U	RPD 0.0			3.50E-01		N/A			g	

No. of Results: 1 Comments:

TestAmerica rptSTLRchDupV5.2.15 A2002

RPD - Relative Percent Difference.

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

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

TestAmerica Laboratories, Inc.

FORM II

BLANK RESULTS

Date: 27-Jun-11

Lab Name: TestAmerica **SDG:** JP0208

Matrix: SOIL **Report No. :** 47115

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1173176	7196_CR6			**Work Order:**	MKFJ81AA		**Report DB ID:**	MKFJ81AB				
HEXCHROME	1.55E-01	U		0.0E+00	1.55E-01	mg/kg	N/A	1.	6/23/11 09:00 a		2.5	
						1.55E-01		N/A			g	

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

TestAmerica
rptSTLRchBlank
V5.2.15 A2002

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

FORM II

LCS RESULTS

Date: 27-Jun-11

Lab Name: TestAmerica

Matrix: SOIL

SDG: JP0208

Report No. : 47115

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 1173176	7196_CR6			**Work Order:**	MKFJ81AC		**Report DB ID:**	MKFJ81AS					
HEXCHROME	1.85E+01			0.0E+00	1.55E-01	mg/kg	N/A	2.00E+01		92%	6/23/11 09:00 a	2.5	
							Rec Limits:	80	120	-0.1		g	

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

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

rptSTLRchLcs
V5.2.15 A2002

FORM II

MATRIX SPIKE RESULTS

Date: 27-Jun-11

Lab Name: TestAmerica **SDG:** JP0208

Lot-Sample No.: J1F220490-1, J1JW46 **Report No. :** 47115 **Matrix:** SOIL

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 1173176	Work Order: MKFJV1AC			Report DB ID: MKFJV1CW			Orig Sa DB ID: 9MKFJV10					
HEXCHROME	8.90E+00			0.0E+00	1.55E-01	mg/kg	N/A	82.06%	1.08E+01	6/23/11 09:00 a	2.5	7196_CR6
	1.54E-01										g	

Number of Results: 1

Comments:

TestAmerica
rptSTLRchMs
V5.2.15 A2002

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

TestAmerica

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Richland Laboratory
Data Review Check List
Hexavalent Chromium

Batch Number(s): 1173176

Lab Sample Numbers or SDG:**Jp0208**

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

Review Item	Yes (✓)	No (✓)	N/A (✓)	2nd Level Review (✓)
A. Initial Calibration				
1. Performed at required frequency with required number of levels?	✓			✓
2. Correlation coefficient within QC limits?	✓			✓
3. Initial calibration verification (ICV) analyzed immediately after calibration and results within QC limits?	✓			✓
4. Initial calibration blank (ICB) analyzed immediately after ICV and concentrations of all parameters ≤ reporting limit?	✓			✓
B. Continuing Calibration				
1. CCV analyzed at required frequency and all parameters within QC limits?	✓			✓
2. CCB analyzed at required frequency and all results ≤ reporting limit?	✓			✓
C. Sample Analysis			✓	
1. Were any samples with concentrations above the linear range for any parameter diluted and reanalyzed?				✓
2. Were all sample holding times met?	✓			✓
D. QC Samples	✓			
1. All results for the preparation blank below limits?				✓
2. MS or MS/MSD recoveries within QC limits and %RPD (for MSD) acceptable?	✓			✓
3. LCS percent recovery within QC limits and %RPD (for LCSD) acceptable?	✓			✓
4. Analytical spikes within QC limits where applicable?	✓ TM 4/21/11			✓
5. ICP only: One serial dilution performed per SDG?			✓	
6. ICP only: CRDL standard (CRI or CRA) analyzed at required frequency?			✓	
7. ICP only: Interference check samples (ICSA, ICSAB) and HICAL analyzed at the required frequencies and within QC limits?			✓	

Review Item	Yes (✓)	No (✓)	N/A (✓)	2nd Level Review (✓)
E. Other			✓	
1. Are all nonconformances included and noted?				✓
2. Is the correct date and time of analysis shown?	✓			✓
3. Did the analyst sign and date the front page of the analytical run?	✓			✓
4. Correct methodology used?	✓			✓
5. Transcriptions checked?	✓			✓
6. Calculations checked at minimum frequency?	✓			✓
7. Units checked?	✓			✓

Comments on any "No" response:

Analyst: _____ Date: 6-24-11

Second-Level Review: _____ Date 6/24/11

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-107-082	Page 1 of 1
Collector: Q Stowe	Company Contact: Joan Kessner; Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~81~~ 83
Project Designation: 100-H Remaining Sites Burial Grounds - Soil Full Protocol	Sampling Location: 600-151 verification resampling	SAF No.: RC-107	Data Turnaround: ~~21~~ 7 Days
Ice Chest No.: NA	Field Logbook No.: EL 1627-05; COA: 0601512000	Method of Shipment: Government Vehicle/FedEx	
Shipped To: TestAmerica Incorporated, Richland	Offsite Property No.: NA	Bill of Lading/Air Bill No.: NA	

POSSIBLE SAMPLE HAZARDS/REMARKS
None

Special Handling and/or Storage
Cool 4 deg C

Quote # 27038
SDG # JP0208
LO # J1F220490
Report: 6/29/11

Preservation	None	Cool 4C	Cool 4C	Freeze	Cool 4C	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	G	Gs*	aG	aG	aG				
No. of Container(s)	1	1	1	5	1	1	1				
Volume	60mL	60mL	120mL	40mL	120mL	120mL	120mL				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	TPH-Diesel Range - WTPH-D +	VOA - 5035/8260 (TCL)	PCBs - 8082	PAHs - 8310	Pesticides - 8081				

J1F220490

Sample No.	Matrix *	Sample Date	Sample Time									
J1JW46 AAF UK 6/22/11	SOIL	6/22/11	1030		X							
MKFJV												

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Quincy Stowe	6/22/11 1140	A. PORTER	6-22-11 1140
A-PORTER (WCH)	6-22-11 1400	Lucas Velazquez (TALR)	6/22/11 1400

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010TR (Close-out List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 - (CV)

REVIEWED BY CMB DATE 6/22/11

JP0208

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

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

WCH-EE-011

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Sample Check-in List

Date/Time Received: 1/22/11 @ 1400 GM Screen Result: (Airlock) .07 Initials [LV]
(Sample Receiving) .03 Initials [LV]

Client: WCH SDG #: JP0208 NA [ ] SAF #: RC-107 NA [ ]

Lot Number: ~~JF~~ LV 1/22/11 JF220490

Chain of Custody # RC-107-082

Shipping Container ID: Hand Delivery NA [ ]

Samples received inside shipping container/cooler/box Yes [LV] Continue with 1 through 4. Initial appropriate response.

No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [LV]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [LV]
3. Cooler temperature: 24 °C on-Ice NA [ ]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [LV]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [LV] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 1X 60mlag
8. Sample holding times exceeded? NA [ ] Yes [ ] No [LV]
9. Samples have:
   ____ tape
   LV custody seals
   ____ hazard labels
   LV appropriate sample labels
10. Matrix:
    LV A (FLT, Wipe, Solid, Soil)
    ____ S (Air, Niosh 7400)
    ____ I (Water)
    ____ T (Biological, Ni-63)
11. Samples:
    LV are in good condition
    ____ are broken
    ____ are leaking
    ____ have air bubbles (Only for samples requiring no head space)
    ____ Other
12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [LV]
    (If acidification is necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition on table overleaf)

    RPL ID # of preservative used :
13. Were any anomalies identified in sample receipt? Yes [ ] No [LV]
14. Description of anomalies (include sample numbers): NA LV

LS-023, Rev. 14, 06/11 See over for additional information.

TestAmerica
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15. Sample Location, Sample Collector Listed on COC? * Yes [✓] No [ ]
*For documentation only. No corrective action needed.

16. Additional Information: Samples were recieved at 22C°,

[ ] Client/Courier denied temperature check. [✓] Client/Courier unpack cooler.

Sample Custodian: [signature] Date: 6/22/11

Client Informed on _____ by _____ Person contacted _____

[✓] No action necessary; process as is

Project Manager [signature] Date 6/23/11 Rw 6/23/11

SAMPLE ID	Initial pH	Acid Amt	Final pH	SAMPLE ID	Initial pH	Acid Amt	Final pH

06/23/2011 9:50:13 AM

Sample Preparation/Analysis

127642, Washington Closure Hanford LLC , Bechtel Hanford, Inc.

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

AnalyDueDate: 06/29/2011

Batch: 1173176 SOIL mg/kg PM, Quote: RW2, 27038

SEQ Batch, Test: None All Tests: 1173176 DWEA,

Balance Id:
Pipet #:
Sep1 DT/Tm Tech: JP0208
Sep2 DT/Tm Tech:
Prep Tech: 12.1

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MKFJV-1-AA J1F220490-1-SAMP 06/22/2011 10:30		2.5065 AmtRec: 1X60MLAG	#Containers: 1					Scr:	Alpha:	Beta:
2 MKFJV-1-AC-S J1F220490-1-MS 06/22/2011 10:30		2.4999 AmtRec: 1X60MLAG	#Containers: 1					Scr:	Alpha:	Beta:
3 MKFJV-1-AD-X J1F220490-1-DUP 06/22/2011 10:30		2.5066 / pbcorr: 2.5037 AmtRec: 1X60MLAG	#Containers: 1					Scr:	Alpha:	Beta:
4 MKFJ8-1-AA-B J1F220000-176-BLK 06/23/2011 09:39 pd		AmtRec:	#Containers: 1					Scr:	Alpha:	Beta:
5 MKFJ8-1-AC-C J1F220000-176-LCS 06/23/2011 09:39 pd		AmtRec:	#Containers: 1					Scr:	Alpha:	Beta:

Comments:

All Clients for Batch:
127642, Washington Closure Hanford LLC Bechtel Hanford, Inc. , RW2, 27038

MKFJV1AA-SAMP Constituent List:
HEXCHROME RDL:0.1548 mg/kg LCL:80 UCL:120 RPD:20

TestAmerica Laboratories, Inc.

Sample Preparation/Analysis

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

AnalyDueDate: 06/29/2011

Batch: 1173176 mg/kg
SEQ Batch, Test: None

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

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

```
MKFJV1AC-MS Constituent List:
  HEXCHROME   RDL:0.35        mg/kg    LCL:75      UCL:125     RPD:20
MKFJ81AA-BLK:
  HEXCHROME   RDL:0.1548      mg/kg    LCL:        UCL:        RPD:
MKFJ81AC-LCS:
  HEXCHROME   RDL:0.35        mg/kg    LCL:80      UCL:120     RPD:20
MKFJV1AA-SAMP Calc Info:
     Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
MKFJV1AC-MS Calc Info:
     Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
MKFJ81AA-BLK:
     Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
MKFJ81AC-LCS:
     Uncert Level (#s).: 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B
```

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-17357-1

SDG Number: JP0208

Job Description: SAF# RC-107

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

Attention: Joan H Kessner

RECEIVED
JUL 2011

Approved for release.
Michael T Dedio
Project Mgmt. Assistant
7/8/2011 11:34 AM

Designee for
Kae E Yoder
Project Manager II
kae.yoder@testamericainc.com
07/06/2011

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

The Lab Certification ID# is E87667.

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

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

ACCREDITED IN ACCORDANCE WITH nelac

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CASE NARRATIVE

Client: Washington Closure Hanford

Project: WASHINGTON CLOSURE HANFORD

Report Number: 280-17357-1

SDG #: JP0208
SAF#: RC-107

Date SDG Closed: June 24, 2011
Data Deliverable: 7 Day / Summary

CLIENT ID	LAB ID	ANALYSES REQUESTED	ANALYSES PERFORMED
J1JW46	280-17357-1	6010/7471/WTPH-D+/6260/8082/8310/8081	6010B/7471A/NWTPH-Dx/8260B/8082/8310/8081A

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

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

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

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

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

RECEIPT
The sample was received on 6/24/2011; the sample arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt were 4.0, 2.0, and 5.2 C.

GC/MS VOLATILES - SW846 8260B
Low levels of Carbon disulfide are present in the method blank associated with batch 280-73737. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary. Associated sample results present above the MDL and/or RL have been flagged with a "B".

The MS/MSD performed on sample J1JW46 exhibited a percent recovery outside the control limits for Methylene Chloride, and the associated sample result has 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
Low levels of Endrin aldehyde are present in the method blank associated with batch 280-73849. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary. Associated sample results present above the MDL and/or RL have been flagged with a "B".

Sample J1JW46 was re-extracted in batch 280-74249 with an LCS/LCSD as insufficient volume remained for an MS/MSD. The original batch, 280-73849, has been provided for the MS/MSD data.

The LCS spike standard used in batch 280-73849 was made up at the wrong concentration, resulting in on column amounts above the instrument calibration range for all the spiked analytes. As a result the LCS and MS/MSD data was run at a dilution and all of the data has been flagged "D".

The MS/MSD performed on sample J1JW46 exhibited percent recoveries, and RPD data outside the control limits for Endrin aldehyde, and the associated sample result has 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

A continuing calibration verification (CCV) standard associated with samples in batch 280-73853 exhibited the %Difference (%D) value >15%, biased low, for surrogate Decachlorobiphenyl (-19.6%). Associated sample surrogates are 100% in control; therefore, data are reported as is.

No other anomalies were encountered.

GC SEMIVOLATILES - NWTPH-Dx - DRO

Low levels of C10-C36 and C10-C28 are present in the method blank associated with batch 280-73868. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary. Associated sample results present above the MDL and/or RL have been flagged with a "B".

No other anomalies were encountered.

HPLC - SW846 8310 - PAHs

No anomalies were encountered.

TOTAL METALS - SW846 6010B/7471A

Serial dilution of a digestate in batch 280-73793 indicates that physical and chemical interferences are present for Cobalt and Nickel. Results have been flagged with an "X".

Low levels of Barium are present in the method blank associated with batch 280-73793. Because the concentration in the method blank is not present at levels greater than the reporting limit, corrective action is deemed unnecessary.

It can be noted that the sample amount was greater than four times the spike amount for Aluminum, Iron and Manganese in the Matrix Spike performed on sample J1JW46; therefore, control limits are not applicable.

Silicon was recovered outside the control limits in the Matrix Spike performed on sample J1JW46, and the associated sample result has been flagged "N". There is no indication that the analytical system was operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	T	MS, MSD: Recovery exceeds upper or lower control limits.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	B	Analyte was found in the associated method blank as well as in the sample.
	U	Analyzed for but not detected.
	N	MS, MSD: Spike recovery exceeds upper or lower control limits.
	*	MS/MSD RPD exceeded the control limit
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	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 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	N	Recovery exceeds upper or lower control limits
	X	Serial dilution in the analytical batch indicates that physical and chemical interferences are present.
HPLC/IC		
	U	Analyzed for but not detected.

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL DEN	SW846 8260B	
Closed System Purge and Trap	TAL DEN		SW846 5035
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
ASTM D-2216	TAL DEN	ASTM D-2216	

Lab References:

TAL DEN = TestAmerica Denver

Method References:

ASTM = ASTM International

NWTPH = Northwest Total Petroleum Hydrocarbon

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

METHOD / ANALYST SUMMARY

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Method	Analyst	Analyst ID
SW846 8260B	Reinhardt, Jason	JR
SW846 8081A	Ream, Brian E	BER
SW846 8082	Jackson, Todd D	TDJ
NWTPH NWTPH-Dx	Birdsell, Matthew R	MRB
SW846 6010B	Trudell, Lynn-Anne	LT
SW846 7471A	Niman, Katie M	KMN
ASTM D-2216	Gomer, Matthew R	MRG
SW846 8310	Hall, Koley J	KJH

SAMPLE SUMMARY

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-17357-1	J1JW46	Solid	06/22/2011 1030	06/24/2011 0930

SAMPLE RESULTS

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Client Sample ID: **J1JW46**

Lab Sample ID: 280-17357-1
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 06/22/2011 1030
Date Received: 06/24/2011 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-74482	Instrument ID:	MSV_G2
Prep Method:	5035	Prep Batch:	280-73737	Lab File ID:	G2_6303.D
Dilution:	1.0			Initial Weight/Volume:	5.417 g
Analysis Date:	06/28/2011 1703			Final Weight/Volume:	5 mL
Prep Date:	06/24/2011 1050				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	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		0.42	U	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		11	T	0.75	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	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	70		58 - 140
Toluene-d8 (Surr)	91		80 - 126
4-Bromofluorobenzene (Surr)	93		76 - 127
Dibromofluoromethane (Surr)	82		75 - 121

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Client Sample ID: **J1JW46**

Lab Sample ID: 280-17357-1
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 06/22/2011 1030
Date Received: 06/24/2011 0930

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	280-74482	Instrument ID:	MSV_G2
Prep Method:	5035	Prep Batch:	280-73737	Lab File ID:	G2_6303.D
Dilution:	1.0			Initial Weight/Volume:	5.417 g
Analysis Date:	06/28/2011 1703			Final Weight/Volume:	5 mL
Prep Date:	06/24/2011 1050				

Tentatively Identified Compounds **Number TIC's Found:** **0**

Cas Number	Analyte	RT	Est. Result (ug/Kg)	Qualifier
	Tentatively Identified Compound		None	

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Client Sample ID: **J1JW46**

Lab Sample ID: 280-17357-1
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 06/22/2011 1030
Date Received: 06/24/2011 0930

8081A Organochlorine Pesticides (GC)

Analysis Method:	8081A	Analysis Batch:	280-74189	Instrument ID:	GCS_P1
Prep Method:	3550C	Prep Batch:	280-73849	Initial Weight/Volume:	30.6 g
Dilution:	1.0			Final Weight/Volume:	10000 uL
Analysis Date:	06/27/2011 2217			Injection Volume:	1 uL
Prep Date:	06/24/2011 2105			Result Type:	SECONDARY

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

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	88		59 - 115
Decachlorobiphenyl	107		63 - 124

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Client Sample ID: **J1JW46**

Lab Sample ID: 280-17357-1
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 06/22/2011 1030
Date Received: 06/24/2011 0930

8081A Organochlorine Pesticides (GC)

Analysis Method:	8081A	Analysis Batch:	280-74595	Instrument ID:	GCS_P1
Prep Method:	3550C	Prep Batch:	280-74249	Initial Weight/Volume:	30.9 g
Dilution:	1.0			Final Weight/Volume:	10000 uL
Analysis Date:	06/29/2011 2110	Run Type:	RE	Injection Volume:	1 uL
Prep Date:	06/28/2011 1428			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		0.57	U	0.57	1.8
4,4'-DDE		0.25	U	0.25	1.8
4,4'-DDT		0.62	U	0.62	1.8
Aldrin		0.26	U	0.26	1.7
alpha-BHC		0.23	U	0.23	1.7
beta-BHC		0.70	U	0.70	1.7
delta-BHC		0.42	U	0.42	1.7
gamma-BHC (Lindane)		0.49	U	0.49	1.7
Heptachlor		0.23	U	0.23	1.7
Heptachlor epoxide		0.45	U	0.45	1.7
Endosulfan I		0.19	U	0.19	1.7
Endosulfan II		0.30	U	0.30	1.8
Endosulfan sulfate		0.29	U	0.29	1.8
Endrin		0.32	U	0.32	1.8
Endrin aldehyde		0.18	U	0.18	1.8
Endrin ketone		0.51	U	0.51	1.8
gamma-Chlordane		0.28	U	0.28	1.8
Methoxychlor		0.47	U	0.47	3.5
alpha-Chlordane		0.34	U	0.34	1.8
Dieldrin		0.22	U	0.22	1.8
Toxaphene		17	U	17	170

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	94		59 - 115
Decachlorobiphenyl	115		63 - 124

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Client Sample ID: **J1JW46**

Lab Sample ID: 280-17357-1
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 06/22/2011 1030
Date Received: 06/24/2011 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-74196	Instrument ID:	GCS_P3
Prep Method:	3550C	Prep Batch:	280-73853	Initial Weight/Volume:	30.6 g
Dilution:	1.0			Final Weight/Volume:	5000 uL
Analysis Date:	06/27/2011 2341			Injection Volume:	1 uL
Prep Date:	06/24/2011 2110			Result Type:	PRIMARY

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

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	90		59 - 130
Tetrachloro-m-xylene	100		53 - 128

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Client Sample ID: **J1JW46**

Lab Sample ID: 280-17357-1
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 06/22/2011 1030
Date Received: 06/24/2011 0930

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-74616	Instrument ID:	GCS_U
Prep Method:	3550C	Prep Batch:	280-73868	Lab File ID:	022B2201.D
Dilution:	1.0			Initial Weight/Volume:	30.5 g
Analysis Date:	06/27/2011 1918			Final Weight/Volume:	1000 uL
Prep Date:	06/24/2011 2255			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		2400	J B	1100	4300
C10-C28		1300	J B	720	4300

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	106		49 - 115

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Client Sample ID: **J1JW46**

Lab Sample ID: 280-17357-1
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 06/22/2011 1030
Date Received: 06/24/2011 0930

8310 PAHs (HPLC)

Analysis Method:	8310	Analysis Batch:	280-73972	Instrument ID:	CHHPLC_G
Prep Method:	3550C	Prep Batch:	280-73860	Initial Weight/Volume:	30.3 g
Dilution:	1.0			Final Weight/Volume:	4000 uL
Analysis Date:	06/27/2011 1803			Injection Volume:	20 uL
Prep Date:	06/24/2011 2122			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Acenaphthene		11	U	11	110
Acenaphthylene		9.7	U	9.7	110
Anthracene		3.3	U	3.3	21
Benzo[a]anthracene		3.4	U	3.4	16
Benzo[a]pyrene		6.9	U	6.9	16
Benzo[b]fluoranthene		4.5	U	4.5	16
Benzo[g,h,i]perylene		7.7	U	7.7	32
Benzo[k]fluoranthene		4.2	U	4.2	16
Chrysene		5.2	U	5.2	43
Dibenzo(a,h)anthracene		12	U	12	32
Fluoranthene		14	U	14	43
Fluorene		5.7	U	5.7	32
Indeno[1,2,3-cd]pyrene		13	U	13	32
Naphthalene		13	U	13	110
Phenanthrene		13	U	13	43
Pyrene		13	U	13	43

Surrogate	%Rec	Qualifier	Acceptance Limits
Terphenyl-d14 (SUR)	97		72 - 115

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Client Sample ID: **J1JW46**

Lab Sample ID: 280-17357-1
Client Matrix: Solid
% Moisture: 7.8

Date Sampled: 06/22/2011 1030
Date Received: 06/24/2011 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-74176	Instrument ID:	MT_025
Prep Method:	3050B	Prep Batch:	280-73793	Lab File ID:	25a062711.asc
Dilution:	1.0			Initial Weight/Volume:	1.17 g
Analysis Date:	06/27/2011 1804			Final Weight/Volume:	100 mL
Prep Date:	06/27/2011 0715				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6640		1.4	4.6
Antimony		0.35	U	0.35	0.56
Arsenic		19.9		0.61	0.93
Barium		47.2		0.070	0.46
Beryllium		0.069	B	0.031	0.19
Boron		1.0	B	0.91	1.9
Cadmium		0.12	B	0.038	0.19
Calcium		3540		13.1	46.3
Chromium		9.4		0.054	0.19
Cobalt		6.1	X	0.093	0.93
Copper		14.7		0.20	0.93
Iron		14800		3.5	4.6
Lead		12.0		0.25	0.46
Magnesium		3790		3.4	18.5
Manganese		231		0.093	0.93
Molybdenum		0.24	U	0.24	1.9
Nickel		10.0	X	0.11	3.7
Potassium		899		38.0	278
Selenium		0.80	U	0.80	0.93
Silicon		230	N	5.2	9.3
Silver		0.15	U	0.15	0.19
Sodium		222		54.7	111
Vanadium		38.0		0.087	1.9
Zinc		30.7		0.37	0.93

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-74195	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-73804	Lab File ID:	110627AA.txt
Dilution:	1.0			Initial Weight/Volume:	0.66 g
Analysis Date:	06/28/2011 0049			Final Weight/Volume:	50 mL
Prep Date:	06/27/2011 1325				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0055	U	0.0055	0.017

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

General Chemistry

Client Sample ID: **J1JW46**

Lab Sample ID: 280-17357-1
Client Matrix: Solid

Date Sampled: 06/22/2011 1030
Date Received: 06/24/2011 0930

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

Analysis Batch: 280-73740 Analysis Date: 06/24/2011 1059 DryWt Corrected: N

QUALITY CONTROL RESULTS

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 280-73737					
LCS 280-73737/3-A	Lab Control Sample	T	Solid	5035	
MB 280-73737/1-A	Method Blank	T	Solid	5035	
280-17357-1	J1JW46	T	Solid	5035	
280-17357-1MS	Matrix Spike	T	Solid	5035	
280-17357-1MSD	Matrix Spike Duplicate	T	Solid	5035	
Analysis Batch:280-74482					
LCS 280-73737/3-A	Lab Control Sample	T	Solid	8260B	280-73737
MB 280-73737/1-A	Method Blank	T	Solid	8260B	280-73737
280-17357-1	J1JW46	T	Solid	8260B	280-73737
280-17357-1MS	Matrix Spike	T	Solid	8260B	280-73737
280-17357-1MSD	Matrix Spike Duplicate	T	Solid	8260B	280-73737

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 280-73849					
LCS 280-73849/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-73849/1-A	Method Blank	T	Solid	3550C	
280-17357-1	J1JW46	T	Solid	3550C	
280-17357-1MS	Matrix Spike	T	Solid	3550C	
280-17357-1MSD	Matrix Spike Duplicate	T	Solid	3550C	
Prep Batch: 280-73853					
LCS 280-73853/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-73853/1-A	Method Blank	T	Solid	3550C	
280-17357-1	J1JW46	T	Solid	3550C	
280-17357-1MS	Matrix Spike	T	Solid	3550C	
280-17357-1MSD	Matrix Spike Duplicate	T	Solid	3550C	
Prep Batch: 280-73868					
LCS 280-73868/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-73868/1-A	Method Blank	T	Solid	3550C	
280-17357-1	J1JW46	T	Solid	3550C	
280-17357-1MS	Matrix Spike	T	Solid	3550C	
280-17357-1MSD	Matrix Spike Duplicate	T	Solid	3550C	
Analysis Batch:280-74189					
LCS 280-73849/2-A	Lab Control Sample	T	Solid	8081A	280-73849
MB 280-73849/1-A	Method Blank	T	Solid	8081A	280-73849
280-17357-1	J1JW46	T	Solid	8081A	280-73849
280-17357-1MS	Matrix Spike	T	Solid	8081A	280-73849
280-17357-1MSD	Matrix Spike Duplicate	T	Solid	8081A	280-73849
Analysis Batch:280-74196					
LCS 280-73853/2-A	Lab Control Sample	T	Solid	8082	280-73853
MB 280-73853/1-A	Method Blank	T	Solid	8082	280-73853
280-17357-1	J1JW46	T	Solid	8082	280-73853
280-17357-1MS	Matrix Spike	T	Solid	8082	280-73853
280-17357-1MSD	Matrix Spike Duplicate	T	Solid	8082	280-73853
Prep Batch: 280-74249					
LCS 280-74249/2-A	Lab Control Sample	T	Solid	3550C	
LCSD 280-74249/3-A	Lab Control Sample Duplicate	T	Solid	3550C	
MB 280-74249/1-A	Method Blank	T	Solid	3550C	
280-17357-1RE	J1JW46	T	Solid	3550C	
Analysis Batch:280-74595					
LCS 280-74249/2-A	Lab Control Sample	T	Solid	8081A	280-74249
LCSD 280-74249/3-A	Lab Control Sample Duplicate	T	Solid	8081A	280-74249
MB 280-74249/1-A	Method Blank	T	Solid	8081A	280-74249
280-17357-1RE	J1JW46	T	Solid	8081A	280-74249

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:280-74616					
LCS 280-73868/2-A	Lab Control Sample	T	Solid	NWTPH-Dx	280-73868
MB 280-73868/1-A	Method Blank	T	Solid	NWTPH-Dx	280-73868
280-17357-1	J1JW46	T	Solid	NWTPH-Dx	280-73868
280-17357-1MS	Matrix Spike	T	Solid	NWTPH-Dx	280-73868
280-17357-1MSD	Matrix Spike Duplicate	T	Solid	NWTPH-Dx	280-73868
Analysis Batch:280-74798					
LCS 280-73849/2-A	Lab Control Sample	T	Solid	8081A	280-73849
280-17357-1MS	Matrix Spike	T	Solid	8081A	280-73849
280-17357-1MSD	Matrix Spike Duplicate	T	Solid	8081A	280-73849

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-73793					
LCS 280-73793/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-73793/1-A	Method Blank	T	Solid	3050B	
280-17357-1	J1JW46	T	Solid	3050B	
280-17357-1DU	Duplicate	T	Solid	3050B	
280-17357-1MS	Matrix Spike	T	Solid	3050B	
Prep Batch: 280-73804					
LCS 280-73804/2-A	Lab Control Sample	T	Solid	7471A	
MB 280-73804/1-A	Method Blank	T	Solid	7471A	
280-17357-1	J1JW46	T	Solid	7471A	
280-17357-1DU	Duplicate	T	Solid	7471A	
280-17357-1MS	Matrix Spike	T	Solid	7471A	
Analysis Batch:280-74176					
LCS 280-73793/2-A	Lab Control Sample	T	Solid	6010B	280-73793
MB 280-73793/1-A	Method Blank	T	Solid	6010B	280-73793
280-17357-1	J1JW46	T	Solid	6010B	280-73793
280-17357-1DU	Duplicate	T	Solid	6010B	280-73793
280-17357-1MS	Matrix Spike	T	Solid	6010B	280-73793
Analysis Batch:280-74195					
LCS 280-73804/2-A	Lab Control Sample	T	Solid	7471A	280-73804
MB 280-73804/1-A	Method Blank	T	Solid	7471A	280-73804
280-17357-1	J1JW46	T	Solid	7471A	280-73804
280-17357-1DU	Duplicate	T	Solid	7471A	280-73804
280-17357-1MS	Matrix Spike	T	Solid	7471A	280-73804

Report Basis
T = Total

General Chemistry

Analysis Batch:280-73740					
280-17357-1	J1JW46	T	Solid	D-2216	
280-17357-1DU	Duplicate	T	Solid	D-2216	

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
HPLC/IC					
Prep Batch: 280-73860					
LCS 280-73860/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-73860/1-A	Method Blank	T	Solid	3550C	
280-17357-1	J1JW46	T	Solid	3550C	
280-17357-1MS	Matrix Spike	T	Solid	3550C	
280-17357-1MSD	Matrix Spike Duplicate	T	Solid	3550C	
Analysis Batch:280-73972					
LCS 280-73860/2-A	Lab Control Sample	T	Solid	8310	280-73860
MB 280-73860/1-A	Method Blank	T	Solid	8310	280-73860
280-17357-1	J1JW46	T	Solid	8310	280-73860
280-17357-1MS	Matrix Spike	T	Solid	8310	280-73860
280-17357-1MSD	Matrix Spike Duplicate	T	Solid	8310	280-73860

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Method Blank - Batch: 280-73737

Method: 8260B
Preparation: 5035

Lab Sample ID:	MB 280-73737/1-A	Analysis Batch:	280-74482	Instrument ID:	MSV_G2
Client Matrix:	Solid	Prep Batch:	280-73737	Lab File ID:	G2_6302.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.027 g
Analysis Date:	06/28/2011 1643	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/24/2011 1050				
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
Bromomethane	0.50	U	0.50	9.9
2-Butanone (MEK)	1.8	U	1.8	9.9
Carbon disulfide	0.869	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	9.9
Chloroform	0.29	U	0.29	5.0
Chloromethane	0.77	U	0.77	9.9
1,3-Dichlorobenzene	0.48	U	0.48	5.0
1,1-Dichloroethane	0.21	U	0.21	5.0
1,2-Dichloroethane	0.70	U	0.70	5.0
trans-1,2-Dichloroethene	0.39	U	0.39	2.5
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	0.75	U	0.75	5.0
4-Methyl-2-pentanone (MIBK)	4.3	U	4.3	9.9
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)	70	58 - 140
Toluene-d8 (Surr)	92	80 - 126
4-Bromofluorobenzene (Surr)	94	76 - 127
Dibromofluoromethane (Surr)	83	75 - 121

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Method Blank TICs- Batch: 280-73737

Cas Number	Analyte	RT	Est. Result	Qual
	Tentatively Identified Compound		None	

Lab Control Sample - Batch: 280-73737

Method: 8260B
Preparation: 5035

Lab Sample ID:	LCS 280-73737/3-A	Analysis Batch:	280-74482	Instrument ID:	MSV_G2
Client Matrix:	Solid	Prep Batch:	280-73737	Lab File ID:	G2_6282.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	06/28/2011 0919	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	06/24/2011 1050				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	50.0	44.8	90	76 - 120	
Bromodichloromethane	50.0	45.2	90	74 - 125	
Carbon tetrachloride	50.0	47.4	95	69 - 147	
Chlorobenzene	50.0	45.7	91	74 - 120	
Chloroform	50.0	43.8	88	77 - 125	
1,3-Dichlorobenzene	50.0	48.0	96	74 - 120	
1,1-Dichloroethane	50.0	44.5	89	74 - 120	
trans-1,2-Dichloroethene	50.0	46.1	92	80 - 127	
1,1-Dichloroethene	50.0	51.2	102	77 - 143	
1,2-Dichloropropane	50.0	43.2	86	74 - 120	
Ethylbenzene	50.0	47.6	95	78 - 120	
Methylene Chloride	50.0	48.2	96	76 - 137	
Tetrachloroethene	50.0	48.7	97	71 - 120	
Toluene	50.0	46.1	92	72 - 120	
1,1,1-Trichloroethane	50.0	44.3	89	67 - 143	
Trichloroethene	50.0	44.5	89	78 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	71	58 - 140
Toluene-d8 (Surr)	93	80 - 126
4-Bromofluorobenzene (Surr)	97	76 - 127
Dibromofluoromethane (Surr)	84	75 - 121

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-73737

Method: 8260B
Preparation: 5035

MS Lab Sample ID:	280-17357-1	Analysis Batch:	280-74482	Instrument ID:	MSV_G2
Client Matrix:	Solid	Prep Batch:	280-73737	Lab File ID:	G2_6304.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.647 g
Analysis Date:	06/28/2011 1722			Final Weight/Volume:	5 mL
Prep Date:	06/24/2011 1050				
Leach Date:	N/A				

MSD Lab Sample ID:	280-17357-1	Analysis Batch:	280-74482	Instrument ID:	MSV_G2
Client Matrix:	Solid	Prep Batch:	280-73737	Lab File ID:	G2_6305.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.118 g
Analysis Date:	06/28/2011 1742			Final Weight/Volume:	5 mL
Prep Date:	06/24/2011 1050				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	83	81	76 - 120	7	20		
Bromodichloromethane	87	88	74 - 125	11	20		
Carbon tetrachloride	86	80	69 - 147	2	20		
Chlorobenzene	84	83	74 - 120	8	20		
Chloroform	84	83	77 - 125	9	20		
1,3-Dichlorobenzene	86	83	74 - 120	7	20		
1,1-Dichloroethane	84	82	74 - 120	6	20		
trans-1,2-Dichloroethene	88	83	80 - 127	4	20		
1,1-Dichloroethene	96	90	77 - 143	3	20		
1,2-Dichloropropane	82	82	74 - 120	9	20		
Ethylbenzene	87	82	78 - 120	4	20		
Methylene Chloride	75	63	76 - 137	5	21	T	T
Tetrachloroethene	85	81	71 - 120	4	20		
Toluene	87	83	72 - 120	6	20		
1,1,1-Trichloroethane	83	78	67 - 143	3	20		
Trichloroethene	83	82	78 - 120	8	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	70	73	58 - 140
Toluene-d8 (Surr)	90	90	80 - 126
4-Bromofluorobenzene (Surr)	94	93	76 - 127
Dibromofluoromethane (Surr)	85	87	75 - 121

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Method Blank - Batch: 280-73849

Method: 8081A
Preparation: 3550C

Lab Sample ID:	MB 280-73849/1-A	Analysis Batch:	280-74189	Instrument ID:	GCS_P1
Client Matrix:	Solid	Prep Batch:	280-73849	Lab File ID:	029F2901.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	32.4 g
Analysis Date:	06/27/2011 2306	Units:	ug/Kg	Final Weight/Volume:	10000 uL
Prep Date:	06/24/2011 2105			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	0.51	U	0.51	1.6
4,4'-DDE	0.22	U	0.22	1.6
4,4'-DDT	0.55	U	0.55	1.6
Aldrin	0.23	U	0.23	1.5
alpha-BHC	0.20	U	0.20	1.5
beta-BHC	0.61	U	0.61	1.5
delta-BHC	0.37	U	0.37	1.5
gamma-BHC (Lindane)	0.43	U	0.43	1.5
Heptachlor	0.20	U	0.20	1.5
Heptachlor epoxide	0.39	U	0.39	1.5
Endosulfan I	0.16	U	0.16	1.5
Endosulfan II	0.27	U	0.27	1.6
Endosulfan sulfate	0.26	U	0.26	1.6
Endrin	0.28	U	0.28	1.6
Endrin aldehyde	0.219	J	0.16	1.6
Endrin ketone	0.45	U	0.45	1.6
gamma-Chlordane	0.25	U	0.25	1.6
Methoxychlor	0.42	U	0.42	3.1
alpha-Chlordane	0.30	U	0.30	1.6
Dieldrin	0.19	U	0.19	1.6
Toxaphene	15	U	15	150

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	89	59 - 115
Decachlorobiphenyl	99	63 - 124

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Lab Control Sample - Batch: 280-73849

Method: 8081A
Preparation: 3550C

Lab Sample ID:	LCS 280-73849/2-A	Analysis Batch:	280-74798	Instrument ID:	GCS_P1
Client Matrix:	Solid	Prep Batch:	280-73849	Lab File ID:	007F0701.D
Dilution:	20	Leach Batch:	N/A	Initial Weight/Volume:	32.8 g
Analysis Date:	06/30/2011 1819	Units:	ug/Kg	Final Weight/Volume:	10000 uL
Prep Date:	06/24/2011 2105			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	305	291	96	57 - 118	D
4,4'-DDE	305	273	89	61 - 115	D
4,4'-DDT	305	290	95	53 - 125	D
Aldrin	305	284	93	60 - 115	D
alpha-BHC	305	289	95	54 - 115	D
beta-BHC	305	298	98	58 - 115	D
delta-BHC	305	286	94	62 - 115	D
gamma-BHC (Lindane)	305	292	96	59 - 115	D
Heptachlor	305	294	96	61 - 115	D
Heptachlor epoxide	305	300	98	62 - 112	D
Endosulfan I	305	307	101	55 - 115	D
Endosulfan II	305	303	99	60 - 115	D
Endosulfan sulfate	305	300	99	58 - 118	D
Endrin	305	315	103	61 - 121	D
Endrin aldehyde	305	280	92	54 - 115	D
Endrin ketone	305	258	85	61 - 118	D
gamma-Chlordane	305	290	95	60 - 115	D
Methoxychlor	305	295	97	52 - 123	D
alpha-Chlordane	305	287	94	60 - 115	D
Dieldrin	305	298	98	63 - 117	D

Surrogate	% Rec		Acceptance Limits
Tetrachloro-m-xylene	48	D	59 - 115
Decachlorobiphenyl	14	D	63 - 124

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-73849

Method: 8081A
Preparation: 3550C

MS Lab Sample ID:	280-17357-1	Analysis Batch:	280-74798	Instrument ID:	GCS_P1
Client Matrix:	Solid	Prep Batch:	280-73849	Lab File ID:	008F0801.D
Dilution:	20	Leach Batch:	N/A	Initial Weight/Volume:	30.1 g
Analysis Date:	06/30/2011 1836			Final Weight/Volume:	10000 uL
Prep Date:	06/24/2011 2105			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	280-17357-1	Analysis Batch:	280-74798	Instrument ID:	GCS_P1
Client Matrix:	Solid	Prep Batch:	280-73849	Lab File ID:	009F0901.D
Dilution:	20	Leach Batch:	N/A	Initial Weight/Volume:	32.3 g
Analysis Date:	06/30/2011 1852			Final Weight/Volume:	10000 uL
Prep Date:	06/24/2011 2105			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	94	95	57 - 118	7	20	D	D
4,4'-DDE	89	89	61 - 115	7	15	D	D
4,4'-DDT	94	94	53 - 125	7	29	D	D
Aldrin	92	92	60 - 115	7	50	D	D
alpha-BHC	92	93	54 - 115	6	17	D	D
beta-BHC	96	95	58 - 115	8	17	D	D
delta-BHC	92	92	62 - 115	7	19	D	D
gamma-BHC (Lindane)	94	94	59 - 115	7	24	D	D
Heptachlor	94	95	61 - 115	6	18	D	D
Heptachlor epoxide	97	97	62 - 112	7	18	D	D
Endosulfan I	99	99	55 - 115	6	26	D	D
Endosulfan II	98	98	60 - 115	7	20	D	D
Endosulfan sulfate	97	98	58 - 118	6	22	D	D
Endrin	103	103	61 - 121	7	30	D	D
Endrin aldehyde	37	66	54 - 115	49	29	D N	D *
Endrin ketone	83	83	61 - 118	7	20	D	D
gamma-Chlordane	94	94	60 - 115	7	21	D	D
Methoxychlor	96	96	52 - 123	7	23	D	D
alpha-Chlordane	93	93	60 - 115	6	18	D	D
Dieldrin	96	97	63 - 117	6	25	D	D

Surrogate	MS % Rec		MSD % Rec		Acceptance Limits
Tetrachloro-m-xylene	48	D	49	D	59 - 115
Decachlorobiphenyl	6	D	11	D	63 - 124

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Method Blank - Batch: 280-74249

Method: 8081A
Preparation: 3550C

Lab Sample ID:	MB 280-74249/1-A	Analysis Batch:	280-74595	Instrument ID:	GCS_P1
Client Matrix:	Solid	Prep Batch:	280-74249	Lab File ID:	022F2201.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.0 g
Analysis Date:	06/29/2011 2127	Units:	ug/Kg	Final Weight/Volume:	10000 uL
Prep Date:	06/28/2011 1428			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	0.55	U	0.55	1.7
4,4'-DDE	0.24	U	0.24	1.7
4,4'-DDT	0.59	U	0.59	1.7
Aldrin	0.25	U	0.25	1.7
alpha-BHC	0.21	U	0.21	1.7
beta-BHC	0.66	U	0.66	1.7
delta-BHC	0.40	U	0.40	1.7
gamma-BHC (Lindane)	0.46	U	0.46	1.7
Heptachlor	0.21	U	0.21	1.7
Heptachlor epoxide	0.43	U	0.43	1.7
Endosulfan I	0.18	U	0.18	1.7
Endosulfan II	0.29	U	0.29	1.7
Endosulfan sulfate	0.28	U	0.28	1.7
Endrin	0.31	U	0.31	1.7
Endrin aldehyde	0.17	U	0.17	1.7
Endrin ketone	0.49	U	0.49	1.7
gamma-Chlordane	0.27	U	0.27	1.7
Methoxychlor	0.45	U	0.45	3.3
alpha-Chlordane	0.32	U	0.32	1.7
Dieldrin	0.21	U	0.21	1.7
Toxaphene	16	U	16	170

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	98	59 - 115
Decachlorobiphenyl	111	63 - 124

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-74249

Method: 8081A
Preparation: 3550C

LCS Lab Sample ID:	LCS 280-74249/2-A	Analysis Batch:	280-74595	Instrument ID:	GCS_P1
Client Matrix:	Solid	Prep Batch:	280-74249	Lab File ID:	019F1901.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.7 g
Analysis Date:	06/29/2011 2037	Units:	ug/Kg	Final Weight/Volume:	10000 uL
Prep Date:	06/28/2011 1428			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 280-74249/3-A	Analysis Batch:	280-74595	Instrument ID:	GCS_P1
Client Matrix:	Solid	Prep Batch:	280-74249	Lab File ID:	020F2001.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.0 g
Analysis Date:	06/29/2011 2054	Units:	ug/Kg	Final Weight/Volume:	10000 uL
Prep Date:	06/28/2011 1428			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
4,4'-DDD	99	98	57 - 118	5	20		
4,4'-DDE	95	95	61 - 115	5	15		
4,4'-DDT	100	103	53 - 125	8	29		
Aldrin	94	92	60 - 115	3	50		
alpha-BHC	94	93	54 - 115	5	17		
beta-BHC	95	96	58 - 115	7	17		
delta-BHC	96	95	62 - 115	5	19		
gamma-BHC (Lindane)	95	95	59 - 115	5	24		
Heptachlor	97	97	61 - 115	6	18		
Heptachlor epoxide	99	98	62 - 112	5	18		
Endosulfan I	98	97	55 - 115	5	26		
Endosulfan II	102	101	60 - 115	5	20		
Endosulfan sulfate	102	103	58 - 118	6	22		
Endrin	112	112	61 - 121	6	30		
Endrin aldehyde	90	90	54 - 115	5	29		
Endrin ketone	90	90	61 - 118	6	20		
gamma-Chlordane	96	97	60 - 115	6	21		
Methoxychlor	106	106	52 - 123	5	23		
alpha-Chlordane	95	94	60 - 115	5	18		
Dieldrin	99	98	63 - 117	5	25		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	95	95	59 - 115
Decachlorobiphenyl	111	110	63 - 124

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Method Blank - Batch: 280-73853

Method: 8082
Preparation: 3550C

Lab Sample ID:	MB 280-73853/1-A	Analysis Batch:	280-74196	Instrument ID:	GCS_P3
Client Matrix:	Solid	Prep Batch:	280-73853	Lab File ID:	033B3301.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.0 g
Analysis Date:	06/27/2011 2258	Units:	ug/Kg	Final Weight/Volume:	5000 uL
Prep Date:	06/24/2011 2110			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	2.7	U	2.7	9.7
Aroclor 1221	7.8	U	7.8	16
Aroclor 1232	1.9	U	1.9	9.7
Aroclor 1242	4.5	U	4.5	9.7
Aroclor 1248	4.5	U	4.5	9.7
Aroclor 1254	2.5	U	2.5	9.7
Aroclor 1260	2.5	U	2.5	9.7

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	83	59 - 130
Tetrachloro-m-xylene	93	53 - 128

Lab Control Sample - Batch: 280-73853

Method: 8082
Preparation: 3550C

Lab Sample ID:	LCS 280-73853/2-A	Analysis Batch:	280-74196	Instrument ID:	GCS_P3
Client Matrix:	Solid	Prep Batch:	280-73853	Lab File ID:	034B3401.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.2 g
Analysis Date:	06/27/2011 2320	Units:	ug/Kg	Final Weight/Volume:	5000 uL
Prep Date:	06/24/2011 2110			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	33.1	31.0	94	54 - 132	
Aroclor 1260	33.1	29.2	88	62 - 129	

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	87	59 - 130
Tetrachloro-m-xylene	104	53 - 128

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-73853

Method: 8082
Preparation: 3550C

MS Lab Sample ID:	280-17357-1	Analysis Batch:	280-74196	Instrument ID:	GCS_P3
Client Matrix:	Solid	Prep Batch:	280-73853	Lab File ID:	037B3701.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.5 g
Analysis Date:	06/28/2011 0024			Final Weight/Volume:	5000 uL
Prep Date:	06/24/2011 2110			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	280-17357-1	Analysis Batch:	280-74196	Instrument ID:	GCS_P3
Client Matrix:	Solid	Prep Batch:	280-73853	Lab File ID:	038B3801.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.0 g
Analysis Date:	06/28/2011 0045			Final Weight/Volume:	5000 uL
Prep Date:	06/24/2011 2110			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aroclor 1016	88	97	54 - 132	11	26		
Aroclor 1260	94	90	62 - 129	2	26		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Decachlorobiphenyl	85	91	59 - 130
Tetrachloro-m-xylene	90	94	53 - 128

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Method Blank - Batch: 280-73868

Method: NWTPH-Dx
Preparation: 3550C

Lab Sample ID:	MB 280-73868/1-A	Analysis Batch:	280-74616	Instrument ID:	GCS_U
Client Matrix:	Solid	Prep Batch:	280-73868	Lab File ID:	020B2001.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.9 g
Analysis Date:	06/27/2011 1822	Units:	ug/Kg	Final Weight/Volume:	1000 uL
Prep Date:	06/24/2011 2255			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
C10-C36	2490	J	970	3900
C10-C28	2020	J	660	3900

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	89	49 - 115

Lab Control Sample - Batch: 280-73868

Method: NWTPH-Dx
Preparation: 3550C

Lab Sample ID:	LCS 280-73868/2-A	Analysis Batch:	280-74616	Instrument ID:	GCS_U
Client Matrix:	Solid	Prep Batch:	280-73868	Lab File ID:	021B2101.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.1 g
Analysis Date:	06/27/2011 1850	Units:	ug/Kg	Final Weight/Volume:	1000 uL
Prep Date:	06/24/2011 2255			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
C10-C36	66400	55500	84	57 - 115	
C10-C28	66400	55300	83	53 - 115	

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	91	49 - 115

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-73868

Method: NWTPH-Dx
Preparation: 3550C

MS Lab Sample ID:	280-17357-1	Analysis Batch:	280-74616	Instrument ID:	GCS_U
Client Matrix:	Solid	Prep Batch:	280-73868	Lab File ID:	023B2301.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.3 g
Analysis Date:	06/27/2011 1946			Final Weight/Volume:	1000 uL
Prep Date:	06/24/2011 2255			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-17357-1	Analysis Batch:	280-74616	Instrument ID:	GCS_U
Client Matrix:	Solid	Prep Batch:	280-73868	Lab File ID:	024B2401.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.2 g
Analysis Date:	06/27/2011 2013			Final Weight/Volume:	1000 uL
Prep Date:	06/24/2011 2255			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
C10-C36	86	85	57 - 115	1	23		
C10-C28	86	85	56 - 115	1	23		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
o-Terphenyl	85	88	49 - 115

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Method Blank - Batch: 280-73860

Method: 8310
Preparation: 3550C

Lab Sample ID:	MB 280-73860/1-A	Analysis Batch:	280-73972	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-73860	Lab File ID:	G0627015.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.6 g
Analysis Date:	06/27/2011 1702	Units:	ug/Kg	Final Weight/Volume:	4000 uL
Prep Date:	06/24/2011 2122			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Acenaphthene	9.8	U	9.8	98
Acenaphthylene	8.8	U	8.8	98
Anthracene	3.0	U	3.0	20
Benzo[a]anthracene	3.1	U	3.1	15
Benzo[a]pyrene	6.3	U	6.3	15
Benzo[b]fluoranthene	4.1	U	4.1	15
Benzo[g,h,i]perylene	7.1	U	7.1	29
Benzo[k]fluoranthene	3.9	U	3.9	15
Chrysene	4.7	U	4.7	39
Dibenzo(a,h)anthracene	11	U	11	29
Fluoranthene	13	U	13	39
Fluorene	5.2	U	5.2	29
Indeno[1,2,3-cd]pyrene	12	U	12	29
Naphthalene	12	U	12	98
Phenanthrene	12	U	12	39
Pyrene	12	U	12	39

Surrogate	% Rec	Acceptance Limits
Terphenyl-d14 (SUR)	97	72 - 115

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Lab Control Sample - Batch: 280-73860

Method: 8310
Preparation: 3550C

Lab Sample ID:	LCS 280-73860/2-A	Analysis Batch:	280-73972	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-73860	Lab File ID:	G0627016.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.8 g
Analysis Date:	06/27/2011 1733	Units:	ug/Kg	Final Weight/Volume:	4000 uL
Prep Date:	06/24/2011 2122			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	1950	1860	96	72 - 115	
Acenaphthylene	1950	1890	97	60 - 115	
Anthracene	1950	1780	91	61 - 115	
Benzo[a]anthracene	1950	2130	109	76 - 115	
Benzo[a]pyrene	1950	2130	109	69 - 115	
Benzo[b]fluoranthene	1950	2020	104	81 - 115	
Benzo[g,h,i]perylene	1950	2070	106	71 - 115	
Benzo[k]fluoranthene	1950	2000	103	85 - 115	
Chrysene	1950	1960	101	70 - 115	
Dibenzo(a,h)anthracene	1950	2020	104	79 - 115	
Fluoranthene	1950	1980	102	67 - 115	
Fluorene	1950	1920	98	72 - 115	
Indeno[1,2,3-cd]pyrene	1950	2170	111	76 - 115	
Naphthalene	1950	1960	101	77 - 115	
Phenanthrene	1950	1960	101	79 - 115	
Pyrene	1950	2040	105	77 - 115	

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

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-73860

Method: 8310
Preparation: 3550C

MS Lab Sample ID:	280-17357-1	Analysis Batch:	280-73972	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-73860	Lab File ID:	G0627018.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.5 g
Analysis Date:	06/27/2011 1834			Final Weight/Volume:	4000 uL
Prep Date:	06/24/2011 2122			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	280-17357-1	Analysis Batch:	280-73972	Instrument ID:	CHHPLC_G
Client Matrix:	Solid	Prep Batch:	280-73860	Lab File ID:	G0627019.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.4 g
Analysis Date:	06/27/2011 1904			Final Weight/Volume:	4000 uL
Prep Date:	06/24/2011 2122			Injection Volume:	20 uL
Leach Date:	N/A			Column ID:	PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	98	100	72 - 115	3	20		
Acenaphthylene	100	102	60 - 115	3	21		
Anthracene	93	95	61 - 115	3	20		
Benzo[a]anthracene	112	114	76 - 115	2	20		
Benzo[a]pyrene	112	114	69 - 115	3	20		
Benzo[b]fluoranthene	106	108	81 - 115	2	20		
Benzo[g,h,i]perylene	109	111	71 - 115	2	20		
Benzo[k]fluoranthene	106	108	85 - 115	2	20		
Chrysene	103	105	70 - 115	2	20		
Dibenzo(a,h)anthracene	106	109	79 - 115	2	20		
Fluoranthene	104	107	67 - 115	3	20		
Fluorene	100	103	72 - 115	3	20		
Indeno[1,2,3-cd]pyrene	114	113	76 - 115	3	20		
Naphthalene	102	105	77 - 115	2	20		
Phenanthrene	103	105	79 - 115	3	20		
Pyrene	107	110	77 - 115	3	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Terphenyl-d14 (SUR)	98	99	72 - 115

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Method Blank - Batch: 280-73793

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 280-73793/1-A	Analysis Batch:	280-74176	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-73793	Lab File ID:	25a062711.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	06/27/2011 1800	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/27/2011 0715				
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	0.114	B	0.076	0.50
Beryllium	0.033	U	0.033	0.20
Boron	0.98	U	0.98	2.0
Cadmium	0.041	U	0.041	0.20
Calcium	14.1	U	14.1	50.0
Chromium	0.058	U	0.058	0.20
Cobalt	0.10	U	0.10	1.0
Copper	0.22	U	0.22	1.0
Iron	3.8	U	3.8	5.0
Lead	0.27	U	0.27	0.50
Magnesium	3.7	U	3.7	20.0
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
Sodium	59.0	U	59.0	120
Vanadium	0.094	U	0.094	2.0
Zinc	0.40	U	0.40	1.0

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Lab Control Sample - Batch: 280-73793

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 280-73793/2-A	Analysis Batch:	280-74176	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-73793	Lab File ID:	25a062711.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	06/27/2011 1802	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/27/2011 0715				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	185.6	93	82 - 116	
Antimony	50.0	47.08	94	82 - 110	
Arsenic	100	98.24	98	85 - 110	
Barium	200	193.0	96	87 - 112	
Beryllium	5.00	4.64	93	84 - 114	
Boron	100	93.87	94	81 - 110	
Cadmium	10.0	9.89	99	87 - 110	
Calcium	5000	4523	90	82 - 114	
Chromium	20.0	19.29	96	84 - 114	
Cobalt	50.0	47.40	95	87 - 110	
Copper	25.0	24.38	98	88 - 110	
Iron	100	92.04	92	87 - 120	
Lead	50.0	47.95	96	86 - 110	
Magnesium	5000	4529	91	90 - 110	
Manganese	50.0	46.02	92	88 - 110	
Molybdenum	100	97.22	97	86 - 110	
Nickel	50.0	47.13	94	87 - 110	
Potassium	5000	4689	94	89 - 110	
Selenium	200	193.5	97	83 - 110	
Silicon	1000	157.9	16	10 - 70	
Silver	5.00	4.90	98	87 - 114	
Sodium	5000	4898	98	90 - 112	
Vanadium	50.0	47.10	94	88 - 110	
Zinc	50.0	45.29	91	76 - 114	

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Matrix Spike - Batch: 280-73793

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-17357-1	Analysis Batch:	280-74176	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-73793	Lab File ID:	25a062711.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.13 g
Analysis Date:	06/27/2011 1811	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/27/2011 0715				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	6640		192	8560	999	50 - 200	4
Antimony	0.35	U	48.0	24.39	51	20 - 200	
Arsenic	19.9		95.9	107.4	91	76 - 111	
Barium	47.2		192	223.0	92	52 - 159	
Beryllium	0.069	B	4.80	4.21	86	72 - 105	
Boron	1.0	B	95.9	83.15	86	75 - 107	
Cadmium	0.12	B	9.59	9.05	93	40 - 130	
Calcium	3540		4800	8480	103	43 - 165	
Chromium	9.4		19.2	28.73	101	70 - 200	
Cobalt	6.1		48.0	47.76	87	72 - 106	
Copper	14.7		24.0	37.09	93	37 - 187	
Iron	14800		95.9	15810	1012	70 - 200	4
Lead	12.0		48.0	54.12	88	70 - 200	
Magnesium	3790		4800	8494	98	64 - 145	
Manganese	231		48.0	319.4	184	40 - 200	4
Molybdenum	0.24	U	95.9	84.41	88	75 - 103	
Nickel	10.0		48.0	52.64	89	61 - 126	
Potassium	899		4800	5327	92	56 - 172	
Selenium	0.80	U	192	171.5	89	76 - 104	
Silicon	230		959	356.6	13	20 - 200	N
Silver	0.15	U	4.80	4.51	94	75 - 141	
Sodium	222		4800	4812	96	78 - 111	
Vanadium	38.0		48.0	83.86	95	50 - 169	
Zinc	30.7		48.0	71.49	85	70 - 200	

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Duplicate - Batch: 280-73793

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-17357-1	Analysis Batch:	280-74176	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-73793	Lab File ID:	25a062711.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.05 g
Analysis Date:	06/27/2011 1809	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	06/27/2011 0715				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	6640		6906	4	40	
Antimony	0.35	U	0.39	NC	40	U
Arsenic	19.9		20.02	0.6	30	
Barium	47.2		48.41	3	30	
Beryllium	0.069	B	0.0774	12	30	B
Boron	1.0	B	1.0	NC	30	U
Cadmium	0.12	B	0.116	3	30	B
Calcium	3540		3608	2	30	
Chromium	9.4		10.91	15	40	
Cobalt	6.1		5.95	2	30	
Copper	14.7		14.51	1	30	
Iron	14800		14370	3	40	
Lead	12.0		13.91	15	40	
Magnesium	3790		3875	2	30	
Manganese	231		231.6	0.3	40	
Molybdenum	0.24	U	0.27	NC	30	U
Nickel	10.0		10.63	6	30	
Potassium	899		930.7	3	40	
Selenium	0.80	U	0.89	NC	30	U
Silicon	230		180.8	24	40	
Silver	0.15	U	0.17	NC	30	U
Sodium	222		222.5	0.4	30	
Vanadium	38.0		36.23	5	30	
Zinc	30.7		30.12	2	40	

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Method Blank - Batch: 280-73804

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 280-73804/1-A	Analysis Batch:	280-74195	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-73804	Lab File ID:	110627AA.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/28/2011 0044	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	06/27/2011 1325				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.0055	U	0.0055	0.017

Lab Control Sample - Batch: 280-73804

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 280-73804/2-A	Analysis Batch:	280-74195	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-73804	Lab File ID:	110627AA.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	06/28/2011 0047	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	06/27/2011 1325				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.417	0.394	95	87 - 111	

Matrix Spike - Batch: 280-73804

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-17357-1	Analysis Batch:	280-74195	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-73804	Lab File ID:	110627AA.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.63 g
Analysis Date:	06/28/2011 0054	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	06/27/2011 1325				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.0055	U	0.430	0.415	96	87 - 111	

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Duplicate - Batch: 280-73804

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-17357-1	Analysis Batch:	280-74195	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-73804	Lab File ID:	110627AA.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.64 g
Analysis Date:	06/28/2011 0051	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	06/27/2011 1325				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.0055	U	0.0056	NC	20	U

Client: Washington Closure Hanford

Job Number: 280-17357-1
Sdg Number: JP0208

Duplicate - Batch: 280-73740

Method: D-2216
Preparation: N/A

Lab Sample ID:	280-17357-1	Analysis Batch:	280-73740	Instrument ID:	No Equipment
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	06/24/2011 1059	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	7.8	8.4	8	20	

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-107-082	Page 1 of 1

Collector Q Stowe	Company Contact Joan Kessner	Telephone No. 509-375-4688	Project Coordinator KESSNER, JH
Price Code 8L 83	Data Turnaround 21 Days		
Project Designation 100-H Remaining Sites Burial Grounds - Soil Full Protocol	Sampling Location 600-151 verification resampling		SAF No. RC-107
Ice Chest No. ERC-96-511	Field Logbook No. EL 1627-05	COA 0601512000	Method of Shipment Government Vehicle FedEx
Shipped To TestAmerica Incorporated, ~~Richland~~ Denver	Offsite Property No. NA		Bill of Lading/Air Bill No. 7949 0097 4232

POSSIBLE SAMPLE HAZARDS/REMARKS

None

Special Handling and/or Storage

Cool 4 deg C

Preservation	None	Cool 4C	Cool 4C	Freeze	Cool 4C	Cool 4C	Cool 4C			
Type of Container	G/P	G/P	G	Gs*	aG	aG	aG			
No. of Container(s)	1	1	1	5	1	1	1			
Volume	60mL	60mL	120mL	40mL	120mL	120mL	120mL			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	TPH-Diesel Range - WTPH-D +	VOA - 5035/8260 (TCL) * **	PCBs - 8082	PAHs - 8310	Pesticides - 8081			

Sample No.	Matrix *	Sample Date	Sample Time										
J1JW46	SOIL	6/22/11	1030	X		X	X	X	X	X			

CHAIN OF POSSESSION

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Quincy Stowe	6/22/11 1140	1060#1 FRZ A. PORTER	1140 6-22-11
1060#1 A. PORTER	6-23-11 1100 WCH	Fed Ex	
		6/24/11 0930	

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010TR (Close-out List) (Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc); Mercury - 7471 - (CV)

* 20 mL vial → % moisture

** freeze upon receipt

ap 6-22-11

Voa Samples Frozen Upon Collection

JP0208

Matrix *

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

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

REVIEWED BY JRE DATE 6-23-11

WCH-EE-011

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Project 28002142
Analytical Due: 07/01/11 5BD RUSH
Report Due: "SOLID ICP METALS 6010TR" "SOLID ANALYSES"

Sample Check-in List

Date/Time Received: 6/24/11 0930 GM Screen Result ~~60~~ 12 AB 6/24/11 microR/hr

Client: Washington Closure Hanford SDG #: JP0208 NA[ ] SAF #: RC-107 NA [ ]

Job Number: 17357 Chain of Custody # RC-107-082

Shipping Container ID: ERC-96-511 Air Bill # 7949 0097 4232

1. Custody Seals on shipping container intact? NA [ ] Yes [✓] No [ ]
2. Custody Seals dated and signed? NA [ ] Yes [✓] No [ ]
3. Chain of Custody record present? NA [ ] Yes [✓] No [ ]
4. Cooler Temperature °C: ~~4.0, 3.0~~, 5.2 4.0, 2.0, 5.2 NA [ ] 5. Vermiculite/packing materials is NA [ ] Wet [✓] Dry [ ]
6. Number of samples in shipping container: 1
7. Sample holding times exceeded? NA [ ] Yes [ ] No [✓]
8. Samples have:
   - [✓] Tape
   - [✓] Custody Seals
   - [ ] Hazard Lables
   - [✓] Appropriate Sample Lables
9. Samples are:
   - [✓] In Good Condition
   - [ ] Broken
   - [ ] Leaking
   - [ ] Have Air Bubbles (Only for samples requiring no head space.)
10. Sample pH taken? NA [✓] pH<2 [ ] pH>2 [ ] pH>9 [ ] Amount HNO_3 Added
11. Sample Location, Sample Collector Listed? *
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers):

Sample Custodian: [signature] Date: 6/24/11

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager [signature] Date 06/24/11

LS-023, Rev. 7, 1/08

From: (509) 375-4640 Origin ID: PSCA
WCH MAILROOM
WASHINGTON CLOSURE HANFORD
2620 FERMI AVE

RICHLAND, WA 99354

J11201104290225

Ship Date: 23JUN11
ActWgt: 65.0 LB
CAD: 8897843/INET3180

Delivery Address Bar Code

Ref #
Invoice #
PO #
Dept #

SHIP TO: (303) 736-0100 BILL SENDER

Sample Recieving
Test America Denver
4955 YARROW ST

ARVADA, CO 80002

FRI - 24 JUN A1
PRIORITY OVERNIGHT

TRK# 7949 0178 9052
0201

80002
CO-US
DEN

XH WHHA

50FG1/0C80/F5F4

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

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

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From: (509) 375-4640 Origin ID: PSCA
WCH MAILROOM
WASHINGTON CLOSURE HANFORD
2620 FERMI AVE

RICHLAND, WA 99354

J1120110429022 5

Ship Date: 23JUN11
ActWgt: 52.0 LB
CAD: 8897843/INET3180

Delivery Address Bar Code

Ref #
Invoice #
PO #
Dept #

SHIP TO: (303) 736-0100 BILL SENDER

Sample Recieving
Test America Denver
4955 YARROW ST

ARVADA, CO 80002

1 of 2

FRI - 24 JUN A1
PRIORITY OVERNIGHT

TRK# 7949 0097 4232
0201

MASTER

XH WHHA

80002
CO-US
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50FG1/0C80/F5F4

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From: (509) 375-4640 Origin ID: PSCA
WCH MAILROOM
WASHINGTON CLOSURE HANFORD
2620 FERMI AVE

RICHLAND, WA 99354

J112011042902 25

Ship Date: 23JUN11
ActWgt: 45.0 LB
CAD: 8897843/INET3180

Delivery Address Bar Code

Ref #
Invoice #
PO #
Dept #

SHIP TO: (303) 736-0100 BILL SENDER

Sample Recieving
Test America Denver
4955 YARROW ST

ARVADA, CO 80002

2 of 2

MPS# 7949 0097 4380
0263
Mstr# 7949 0097 4232 0201

FRI - 24 JUN A1
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CO-US
DEN

XH WHHA

50FG1/0CB0/F5F4

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