0096115

SAF-RC-182
ARRA 100-F Remaining Sites Remediation – Soil In-Process
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 4/29/11
INITIAL/DATE

COMMENTS:

SDG J01056 SAF-RC-182

Rad only Chem only ☑ Rad & Chem

☑ Complete Partial

Sample Location: 100-F-57 Stain on RR Tracks

RECEIVED
MAY 11 2011
EDMC

Analytical Data Package Prepared For

Washington Closure Hanford

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.: 46163

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.
J01056	RC-182	J1FXF6	J1C310469-1	MGERE1AA	9MGERE10	1090303

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

TestAmerica Laboratories, Inc.

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

April 11, 2011

Attention: Joan Kessner

SAF Number	:	RC-182
Date SDG Closed	:	March 30, 2011
Number of Samples	:	One (1)
Sample Type	:	Soil
SDG Number	:	J01056
Data Deliverable	:	15/15 Summary

CASE NARRATIVE

I. Introduction

On March 30, 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
J1FXF6	MGERE	SOIL	3/30/11

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:

The matrix spike recovered low at 42.6%. The post digestive matrix spike recovered at 119.9% and the insoluble matrix spike recovered at 105.5%. This implies strong reducing capacity in the sample, but not enough to exhaust the insoluble matrix spike. Except as noted, the LCS, batch blank, sample, sample duplicate (J1FXF6) and sample matrix spike (J1FXF6) 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 Ritari
for Rhonda Waga
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: 09-Apr-11

Report No. : 46163

SDG No: J01056

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
1090303	7196_CR6								
J1FXF6									
	MGERE1AA	HEXCHROME	1.38E+01 +- 0.0E+00		mg/kg	N/A	1.54E-01	1.55E-01	
	MGERE1AE	HEXCHROME	1.18E+01 +- 0.0E+00		mg/kg	N/A	1.54E-01	3.50E-01	15.6

No. of Results: 2

TestAmerica **RPD** - **Relative Percent Difference.**

rptSTLRchSaSum
mary2 V5.2.12
A2002

QC Results Summary

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Date: 09-Apr-11

Report No. : 46163

SDG No.: J01056

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC|MDA
7196_CR6								
1090303 MATRIX SPIKE, J1FXF6								
MGERE1AC	HEXCHROME	4.35E+00 +- 0.0E+00		mg/kg	N/A	43%	-0.6	1.53E-01
1090303 LCS,								
MGE861AC	HEXCHROME	1.85E+01 +- 0.0E+00		mg/kg	N/A	93%	-0.1	1.55E-01
1090303 BLANK QC,								
MGE861AA	HEXCHROME	1.55E-01 +- 0.0E+00	U	mg/kg	N/A			1.55E-01

No. of Results: 3

TestAmerica
rptSTLRchQcSummary V5.2.12
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: 09-Apr-11

Lab Name:	**TestAmerica**	**SDG:**	J01056	**Collection Date:**	3/30/2011 9:45:00 AM
Lot-Sample No.:	**J1C310469-1**	**Report No. :**	46163	**Received Date:**	3/30/2011 3:50:00 PM
Client Sample ID:	**J1FXF6**	**COC No. :**	RC-182-067	**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: 1090303	7196_CR6			**Work Order:** MGERE1AA			**Report DB ID:** 9MGERE10					
HEXCHROME	***1.38E+01***			0.0E+00	1.54E-01	mg/kg	N/A	*(89.3)*	4/5/11		2.5	
							1.55E-01	*N/A*			g	

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

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

FORM I

SAMPLE RESULTS

Date: 09-Apr-11

Lab Name:	TestAmerica	**SDG:**	J01056	**Collection Date:**	3/30/2011 9:45:00 AM
Lot-Sample No.:	J1C310469-1	**Report No. :**	46163	**Received Date:**	3/30/2011 3:50:00 PM
Client Sample ID:	J1FXF6	**COC No. :**	RC-182-067	**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
V5.2.12 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.

TestAmerica Laboratories, Inc.

FORM II

Date: 09-Apr-11

DUPLICATE RESULTS

Lab Name:	TestAmerica	**SDG:**	J01056	**Collection Date:**	3/30/2011 9:45:00 AM
Lot-Sample No.:	J1C310469-1	**Report No. :**	46163	**Received Date:**	3/30/2011 3:50:00 PM
Client Sample ID:	J1FXF6	**COC No. :**	RC-182-067	**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: 1090303	7196_CR6			**Work Order:** MGERE1AE		**Report DB ID:** MGERE1ER			**Orig Sa DB ID:** 9MGERE10			
HEXCHROME	1.18E+01			0.0E+00	1.54E-01	mg/kg	N/A	(76.4)	4/5/11		2.5	
	1.38E+01		**RPD**	**15.6**		3.50E-01		N/A			g	

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

RPD - Relative Percent Difference.

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

FORM II

BLANK RESULTS

Date: 09-Apr-11

Lab Name: TestAmerica

Matrix: SOIL

SDG: J01056

Report No. : 46163

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA ,	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 1090303	7196_CR6			Work Order:	MGE861AA		Report DB ID:	MGE861AB				
HEXCHROME	1.55E-01	U		0.0E+00	1.55E-01	mg/kg	N/A	1.	4/5/11		2.5	
						1.55E-01		N/A			g	

No. of Results: 1 Comments:

TestAmerica

rptSTLRchBlank
V5.2.12 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: 09-Apr-11

Lab Name: TestAmerica

Matrix: SOIL

SDG: J01056

Report No. : 46163

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: 1090303	7196_CR6			**Work Order:**	MGE861AC		**Report DB ID:**	MGE861AS					
HEXCHROME	1.85E+01			0.0E+00	1.55E-01	mg/kg	N/A	2.00E+01		93%	4/5/11	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
V5.2.12 A2002

FORM II

MATRIX SPIKE RESULTS

Date: 09-Apr-11

Lab Name: TestAmerica **SDG:** J01056

Lot-Sample No.: J1C310469-1, J1FXF6 **Report No. :** 46163 **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: 1090303	Work Order: MGERE1AC			Report DB ID: MGERE1CW			Orig Sa DB ID: 9MGERE10					
HEXCHROME	4.35E+00			0.0E+00	1.53E-01	mg/kg	N/A	42.64%	1.02E+01	4/5/11	2.5	7196_CR6
	1.38E+01										g	

Number of Results: 1

Comments:

TestAmerica
rptSTLRchMs
V5.2.12 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

THE LEADER IN ENVIRONMENTAL TESTING

Richland Laboratory
Data Review Check List
Hexavalent Chromium

Batch Number(s): **1090303**

Lab Sample Numbers or SDG: ~~JP01056~~ J01056 WR

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

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

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

Comments on any" The MS recovered low at 42.6%. The insoluble MS recovered within limits at 105.5%. PDMS recovered at 119.9%.

Suspect reducing capacity in the sample, but not enough to exhaust the more copious insoluble MS.

Analyst: H.R Date: 4-6-11

Second-Level Review: Date: 4/7/11

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-17975**
NCM Initiated By: Hooshang Rahavi
Date Opened: 04/06/2011
Date Closed:

Classification: **Anomaly**
Status: **PMREVIEW**
Production Area: Classical Chemistry
Tests: 7196A
Lot #'s (Sample #'s): J1C310000 (303), J1C310469 (1),
QC Batches: 1090303,

Nonconformance: QC data exceeded criteria
Subcategory: MS/MSD accuracy and/or precision out of control

Problem Description / Root Cause

Name	Date	Description
Hooshang Rahavi	04/06/2011	

Corrective Action

Name	Date	Corrective Action H.R
Hooshang Rahavi	04/06/2011	~~The MS recovered low at 42.6%~~. The MS recovered low at 42.6%. The insoluble MS recovered within limits at 105.5%.PDMS recovered at 119.9%. Suspect reducing capacity in the sample, but not enough to exhaust the more copious insoluble MS.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

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

Approval History

Date Approved	Approved By	Position

TestAmerica Laboratories, Inc.

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-182-067	Page 1 of 1
Collector: Ojeda, AJ	Company Contact: JL Russell; Telephone No.: 509-540-6502	Project Coordinator: KESSNER, JH	Price Code: ~~8L~~ ~~8S~~ 8K (JR 3/30/11); Data Turnaround: 15 Days (JR 3/29/11) ~~21 Days~~ (JR 3/29/11) ~~7 Days~~ (JR 3/30/11)
Project Designation: ARRA 100F Remaining Sites Remediation - Soil In-Process	Sampling Location: 100 F-57 Stain on RR Tracks	SAF No.: RC-182	
Ice Chest No.: NA	Field Logbook No.: EL-1651; COA: S00F578100	Method of Shipment: Hand Deliver	
Shipped To: TestAmerica Incorporated, Richland	Offsite Property No.: NA	Bill of Lading/Air Bill No.: NA	

POSSIBLE SAMPLE HAZARDS/REMARKS

None CK 3-31-11

Lot #JIC310469

~~Lot # JIC310420~~

~~SDG# J01039~~

Due 4.14.11

Special Handling and/or Storage

Cool 4 degrees C

RW 3/31/11

SDG #: J01056

J1C310469

SAMPLE ANALYSIS

Preservation	Cool 4C	None	Cool 4C									
Type of Container	G/P	G/P	G/P									
No. of Container(s)	1	1	1									
Volume	60mL	120mL	60mL									
	See item (1) in Special Instructions.	See item (2) in Special Instructions.	Chromium Hex - 7196									

JR 3/29/11

Sample No.	Matrix *	Sample Date	Sample Time										
J1FXF6	SOIL	3-30-11	0945			X	~~AGEGH~~ MGERE	CK 3-31-11					

17

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
AJ Ojeda	3-30-11@1020	JenRussell JenRussell	3-30-11 1020
JenRussell JenRussell	3/30/11 1550	TALR Lo Dyer	1550 3/30/11

SPECIAL INSTRUCTIONS

Please leach and hold TCLP Metals, per Joan Kessner

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

(2) Metals by ICP (TCLP) - 1311/6010 {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; Mercury (TCLP) - 1311/7470 {Mercury}

REVIEWED BY JEB DATE 3-30-11

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

J1C310469

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 3-30-11 1550 GM Screen Result (out) .3 (in) .8 Initials[ ]

Client: WCH SDG #: J01056 NA [ ] SAF #: RC-182 NA [ ]

Work Order Number: J1C310469 Chain of Custody # RC-182-067

Shipping Container ID: hand delivery NA [ ] Air Bill # _____ NA [X]

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

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

Item 6 through 10 for samples. Initial appropriate response.

6. Number of samples in shipping container (Each sample may contain multiple bottles): 1 sample @ 1X JAR 60MLG
7. Sample holding times exceeded? NA [ ] Yes [ ] No [CK]
8. Samples have:
   - ___ tape
   - CK custody seals (soil)
   - CK hazard labels
   - ___ appropriate sample labels
9. Samples:
   - CK are in good condition
   - ___ are broken
   - ___ are leaking
   - ___ have air bubbles (Only for samples requiring no head space)
10. Sample pH appropriate for analysis requested Yes [ ] No [ ] N/A [CK] (Note discrepancies in #13)
    (If acidification necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition)

    RPL ID # of preservative used : _____
11. Sample Location, Sample Collector Listed? * Yes [CK] No [ ]
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [CK]
13. Description of anomalies (include sample numbers): NA [CK] _____

See other side for additional comments

Sample Custodian: [signature] Date: 3-30-11 1550

Client Informed on _____ by _____ Person contacted _____

[ ] No action necessary; process as is

Project Manager [signature] Date 3/31/11

LS-023, Rev. 12, 10/10

04/1/2011 8:07:02 AM

Sample Preparation/Analysis

127642, Washington Closure Hanford LLC
Bechtel Hanford, Inc.

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

Balance Id:
Pipet #:

AnalyDueDate: 04/14/2011

Sep1 DT/Tm Tech:

Batch: 1090303 SOIL mg/kg PM, Quote: RW2, 27038
SEQ Batch, Test: None

Sep2 DT/Tm Tech:
Prep Tech:

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 MGERE-1-AA										
J1C310469-1-SAMP										
03/30/2011 09:45		AmtRec: 1XJAR60MLG	#Containers: 1					Scr:	Alpha:	Beta:
2 MGERE-1-AC-S										
J1C310469-1-MS										
03/30/2011 09:45		AmtRec: 1XJAR60MLG	#Containers: 1					Scr:	Alpha:	Beta:
3 MGERE-1-AD-D										
J1C310469-1-MSD										
03/30/2011 09:45		AmtRec: 1XJAR60MLG	#Containers: 1					Scr:	Alpha:	Beta:
4 MGERE-1-AE-X										
J1C310469-1-DUP										
03/30/2011 09:45		AmtRec: 1XJAR60MLG	#Containers: 1					Scr:	Alpha:	Beta:
5 MGE86-1-AA-B										
J1C310000-303-BLK										
04/01/2011 08:07 pd		AmtRec:	#Containers: 1					Scr:	Alpha:	Beta:
6 MGE86-1-AC-C										
J1C310000-303-LCS										
04/01/2011 08:07 pd		AmtRec:	#Containers: 1					Scr:	Alpha:	Beta:

TestAmerica Laboratories, Inc.

Sample Preparation/Analysis

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

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

AnalyDueDate: 04/14/2011

Batch: 1090303 mg/kg
SEQ Batch, Test: None

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

Comments:

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

MGERE1AA-SAMP Constituent List:
HEXCHROME RDL:0.1548 mg/kg LCL:80 UCL:120 RPD:20
MGERE1AC-MS Constituent List:
HEXCHROME RDL:0.35 mg/kg LCL:75 UCL:125 RPD:20
MGERE1AD-MSD:
HEXCHROME RDL:0.35 mg/kg LCL:75 UCL:125 RPD:20
MGE861AA-BLK:
HEXCHROME RDL:0.1548 mg/kg LCL: UCL: RPD:
MGE861AC-LCS:
HEXCHROME RDL:0.35 mg/kg LCL:80 UCL:120 RPD:20

MGERE1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MGERE1AC-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MGERE1AD-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MGE861AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
MGE861AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

TestAmerica Laboratories, Inc.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-14136-1

SDG Number: J01056

Job Description: SAF# RC-182

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

Attention: Joan H Kessner

Approved for release.
Michael T Dedio
Project Mgmt. Assistant
4/18/2011 3:02 PM

Designee for
Kae E Yoder
Project Manager II
kae.yoder@testamericainc.com
04/18/2011

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
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ACCREDITED IN ACCORDANCE WITH nelac

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CASE NARRATIVE

Client: Washington Closure Hanford

Project: WASHINGTON CLOSURE HANFORD

Report Number: 280-14136-1

SDG #: J01056
SAF#: RC-182

Date SDG Closed: April 1, 2011
Data Deliverable: 15 Day / Summary

CLIENT ID	LAB ID	ANALYSES REQUESTED	ANALYSES PERFORMED
J1FXF6	280-14136-1	6010/7471/1311-6010-7470	6010B/7471A

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 4/1/2011; the sample arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 3.4, 4.4, and 2.7 C.

Sample J1FXF6 requesting TCLP Metals 1311/6010B/7470A analyses was leached and placed on hold, as instructed on the chains-of-custody.

TOTAL METALS - SW846 6010B/7471A
Serial dilution of a digestate in batch 280-60431 indicates that physical and chemical interferences are present for several elements. Results have been flagged with an "X".

Silicon was recovered outside the control limits in the SW846 6010B LCS, and the associated sample result has been flagged "N". Silicon is not controlled for batch QC as there are no prescribed limits for LCS/MS recoveries. Limits given in the report are for guidance only.

It can be noted that the sample amount was greater than four times the spike amount for Aluminum, Chromium, Iron and Manganese in the Matrix Spike performed on sample J1FXF6; therefore, control limits are not applicable.

Boron and Lead were recovered outside the control limits in the SW846 6010B Matrix Spike performed on sample J1FXF6, and the associated sample result have been flagged "N". There is no indication that the analytical system was operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

The SW846 6010B duplicate analysis of sample J1FXF6 exhibited RPD data outside the control limits for Antimony, 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: 280-14136-1
Sdg Number: J01056

Lab Section	Qualifier	Description
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
	M	Sample duplicate precision not met.
	X	Serial dilution in the analytical batch indicates that physical and chemical interferences are present.

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Metals	TAL DEN		SW846 3050B
Mercury (CVAA)	TAL DEN	SW846 7471A	
Preparation, Mercury	TAL DEN		SW846 7471A
ASTM D-2216	TAL DEN	ASTM D-2216	

Lab References:

TAL DEN = TestAmerica Denver

Method References:

ASTM = ASTM International

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

METHOD / ANALYST SUMMARY

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Method	Analyst	Analyst ID
SW846 6010B	Bowen, Heidi E	HEB
SW846 7471A	Stoltz, Katie	KS
ASTM D-2216	Berry III, Paul B	PBB

SAMPLE SUMMARY

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-14136-1	J1FXF6	Solid	03/30/2011 0945	04/01/2011 0830

SAMPLE RESULTS

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Client Sample ID: **J1FXF6**

Lab Sample ID: 280-14136-1
Client Matrix: Solid
% Moisture: 4.7

Date Sampled: 03/30/2011 0945
Date Received: 04/01/2011 0830

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-61106	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-60431	Lab File ID:	26a040611.asc
Dilution:	1.0			Initial Weight/Volume:	1.04 g
Analysis Date:	04/06/2011 1226			Final Weight/Volume:	100 mL
Prep Date:	04/05/2011 1500				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		9650	X	1.6	5.0
Antimony		1.6	M	0.38	0.61
Arsenic		3.9		0.67	1.0
Barium		347	X	0.077	0.50
Beryllium		0.033	U	0.033	0.20
Boron		36.0	N	0.99	2.0
Cadmium		0.10	B	0.041	0.20
Calcium		11300	X	14.2	50.4
Chromium		218	X	0.059	0.20
Cobalt		7.7	X	0.10	1.0
Copper		21.7	X	0.22	1.0
Iron		20900	X	3.8	5.0
Lead		109	X N	0.27	0.50
Magnesium		4520	X	3.7	20.2
Manganese		287	X	0.10	1.0
Molybdenum		1.0	B	0.26	2.0
Nickel		11.9	X	0.12	4.0
Potassium		1130		41.4	303
Selenium		1.3		0.87	1.0
Silicon		271	N	5.7	10.1
Silver		0.16	U	0.16	0.20
Sodium		609		59.5	121
Vanadium		56.4	X	0.095	2.0
Zinc		44.1	X	0.40	1.0

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-61031	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-60716	Lab File ID:	110405AB.txt
Dilution:	1.0			Initial Weight/Volume:	0.67 g
Analysis Date:	04/05/2011 1718			Final Weight/Volume:	50 mL
Prep Date:	04/05/2011 1345				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.018		0.0052	0.016

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

General Chemistry

Client Sample ID: **J1FXF6**

Lab Sample ID: 280-14136-1
Client Matrix: Solid

Date Sampled: 03/30/2011 0945
Date Received: 04/01/2011 0830

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	4.7		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-60390 Analysis Date: 04/01/2011 1350 DryWt Corrected: N

QUALITY CONTROL RESULTS

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-60431					
LCS 280-60431/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-60431/1-A	Method Blank	T	Solid	3050B	
280-14136-1	J1FXF6	T	Solid	3050B	
280-14136-1DU	Duplicate	T	Solid	3050B	
280-14136-1MS	Matrix Spike	T	Solid	3050B	
Prep Batch: 280-60716					
LCS 280-60716/2-A	Lab Control Sample	T	Solid	7471A	
MB 280-60716/1-A	Method Blank	T	Solid	7471A	
280-14136-1	J1FXF6	T	Solid	7471A	
280-14136-1DU	Duplicate	T	Solid	7471A	
280-14136-1MS	Matrix Spike	T	Solid	7471A	
Analysis Batch:280-61031					
LCS 280-60716/2-A	Lab Control Sample	T	Solid	7471A	280-60716
MB 280-60716/1-A	Method Blank	T	Solid	7471A	280-60716
280-14136-1	J1FXF6	T	Solid	7471A	280-60716
280-14136-1DU	Duplicate	T	Solid	7471A	280-60716
280-14136-1MS	Matrix Spike	T	Solid	7471A	280-60716
Analysis Batch:280-61106					
LCS 280-60431/2-A	Lab Control Sample	T	Solid	6010B	280-60431
MB 280-60431/1-A	Method Blank	T	Solid	6010B	280-60431
280-14136-1	J1FXF6	T	Solid	6010B	280-60431
280-14136-1DU	Duplicate	T	Solid	6010B	280-60431
280-14136-1MS	Matrix Spike	T	Solid	6010B	280-60431

Report Basis
T = Total

General Chemistry

Analysis Batch:280-60390					
280-14136-1	J1FXF6	T	Solid	D-2216	
280-14136-1DU	Duplicate	T	Solid	D-2216	

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Method Blank - Batch: 280-60431

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 280-60431/1-A	Analysis Batch:	280-61106	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-60431	Lab File ID:	26a040611.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/06/2011 1222	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/05/2011 1500				
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	0.22	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: 280-14136-1
Sdg Number: J01056

Lab Control Sample - Batch: 280-60431

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 280-60431/2-A	Analysis Batch:	280-61106	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-60431	Lab File ID:	26a040611.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/06/2011 1224	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/05/2011 1500				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	189.2	95	82 - 116	
Antimony	50.0	49.22	98	82 - 110	
Arsenic	100	99.05	99	85 - 110	
Barium	200	188.0	94	87 - 112	
Beryllium	5.00	4.68	94	84 - 114	
Boron	100	92.43	92	81 - 110	
Cadmium	10.0	9.49	95	87 - 110	
Calcium	5000	4677	94	82 - 114	
Chromium	20.0	19.52	98	84 - 114	
Cobalt	50.0	47.90	96	87 - 110	
Copper	25.0	23.65	95	88 - 110	
Iron	100	97.74	98	87 - 120	
Lead	50.0	49.89	100	86 - 110	
Magnesium	5000	4535	91	90 - 110	
Manganese	50.0	45.63	91	88 - 110	
Molybdenum	100	101.1	101	86 - 110	
Nickel	50.0	48.96	98	87 - 110	
Potassium	5000	4794	96	89 - 110	
Selenium	200	195.4	98	83 - 110	
Silicon	1000	85.59	9	10 - 70	N
Silver	5.00	4.64	93	87 - 114	
Sodium	5000	4814	96	90 - 112	
Vanadium	50.0	46.27	93	88 - 110	
Zinc	50.0	45.15	90	76 - 114	

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Matrix Spike - Batch: 280-60431

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-14136-1	Analysis Batch:	280-61106	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-60431	Lab File ID:	26a040611.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.02 g
Analysis Date:	04/06/2011 1231	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/05/2011 1500				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	9650		206	10620	472	50 - 200	4
Antimony	1.6		51.4	26.04	48	20 - 200	
Arsenic	3.9		103	93.19	87	76 - 111	
Barium	347		206	508.6	79	52 - 159	
Beryllium	0.033	U	5.14	4.42	86	72 - 105	
Boron	36.0		103	112.0	74	75 - 107	N
Cadmium	0.10	B	10.3	8.96	86	40 - 130	
Calcium	11300		5140	15420	81	43 - 165	
Chromium	218		20.6	195.0	-112	70 - 200	4
Cobalt	7.7		51.4	51.72	85	72 - 106	
Copper	21.7		25.7	40.61	73	37 - 187	
Iron	20900		103	19940	-944	70 - 200	4
Lead	109		51.4	67.94	-80	70 - 200	N
Magnesium	4520		5140	8877	85	64 - 145	
Manganese	287		51.4	351.2	125	40 - 200	4
Molybdenum	1.0	B	103	92.64	89	75 - 103	
Nickel	11.9		51.4	54.94	84	61 - 126	
Potassium	1130		5140	5798	91	56 - 172	
Selenium	1.3		206	178.3	86	76 - 104	
Silicon	271		1030	481.1	20	20 - 200	
Silver	0.16	U	5.14	4.35	85	75 - 141	
Sodium	609		5140	5383	93	78 - 111	
Vanadium	56.4		51.4	96.66	78	50 - 169	
Zinc	44.1		51.4	82.55	75	70 - 200	

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Duplicate - Batch: 280-60431

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-14136-1	Analysis Batch:	280-61106	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-60431	Lab File ID:	26a040611.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.08 g
Analysis Date:	04/06/2011 1233	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/05/2011 1500				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	9650		9067	6	40	
Antimony	1.6		0.875	56	40	M
Arsenic	3.9		3.19	19	30	
Barium	347		320.8	8	30	
Beryllium	0.033	U	0.0622	NC	30	B
Boron	36.0		27.41	27	30	
Cadmium	0.10	B	0.100	0.2	30	B
Calcium	11300		11400	1	30	
Chromium	218		202.2	8	40	
Cobalt	7.7		7.82	0.9	30	
Copper	21.7		20.28	7	30	
Iron	20900		20080	4	40	
Lead	109		75.77	36	40	
Magnesium	4520		4775	6	30	
Manganese	287		279.2	3	40	
Molybdenum	1.0	B	0.870	14	30	B
Nickel	11.9		11.20	6	30	
Potassium	1130		1095	3	40	
Selenium	1.3		0.84	NC	30	U
Silicon	271		289.3	7	40	
Silver	0.16	U	0.16	NC	30	U
Sodium	609		555.6	9	30	
Vanadium	56.4		52.96	6	30	
Zinc	44.1		43.67	0.9	40	

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Method Blank - Batch: 280-60716

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 280-60716/1-A	Analysis Batch:	280-61031	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-60716	Lab File ID:	110405AB.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	04/05/2011 1713	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/05/2011 1345				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.0055	U	0.0055	0.017

Lab Control Sample - Batch: 280-60716

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 280-60716/2-A	Analysis Batch:	280-61031	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-60716	Lab File ID:	110405AB.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	04/05/2011 1715	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/05/2011 1345				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.417	0.420	101	87 - 111	

Matrix Spike - Batch: 280-60716

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-14136-1	Analysis Batch:	280-61031	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-60716	Lab File ID:	110405AB.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	04/05/2011 1722	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/05/2011 1345				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.018	0.437	0.438	96	87 - 111	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Duplicate - Batch: 280-60716

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-14136-1	Analysis Batch:	280-61031	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-60716	Lab File ID:	110405AB.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.66 g
Analysis Date:	04/05/2011 1720	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/05/2011 1345				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Mercury	0.018	0.0194	9	20	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Duplicate - Batch: 280-60390

Method: D-2216
Preparation: N/A

Lab Sample ID:	280-14136-1	Analysis Batch:	280-60390	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:	04/01/2011 1350	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	4.7	4.3	8	20	

3.4,4.2,2-7

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-182-067	Page 1 of 1

Collector Ojeda, AJ	Company Contact JL Russell	Telephone No. 509-540-6502	Project Coordinator KESSNER, JH
Price Code ~~8L~~ JR 3/30/11 ~~8J~~ JR 3/29/11 (8K)	Data Turnaround JR 3/29/11 ~~21 Days~~ ~~7 Days~~ 15 Days JR 3/31/11		
Project Designation ARRA 100F Remaining Sites Remediation - Soil In-Process	Sampling Location 100 F-57 Stain on RR Tracks		SAF No. RC-182
Ice Chest No. WCH-08-042	Field Logbook No. EL-1651	COA S00F578100	Method of Shipment FedEx
Shipped To JR 3/29/11 TestAmerica Incorporated, ~~Richland~~ Denver	Offsite Property No. NA		Bill of Lading/Air Bill No. 7969 3631 4598

POSSIBLE SAMPLE HAZARDS/REMARKS

None

Special Handling and/or Storage

Cool 4 degrees C

Preservation	Cool 4C	None	Cool 4C								
Type of Container	G/P	G/P	G/P								
No. of Container(s)	1	1	1								
Volume	60mL	120mL	60mL								
SAMPLE ANALYSIS	See item (1) in Special Instructions.	See item (2) in Special Instructions.	Chromium Hex - 7196 JR 3/29/11								

Sample No.	Matrix *	Sample Date	Sample Time										
J1FXF6	SOIL	3-30-11	0945	X	X								

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
AJ Ojeda	3-30-11@1020	JenRussell JenRussell	3/30/11 1020
JenRussell JenRussell	3/30/11 1550	A. Freier A. Freier	1550 3-30-11
A. Freier A. Freier	WCH 1045 3-31-11	FED EX	
			4/1/11 8:00

SPECIAL INSTRUCTIONS

Please leach and hold TCLP Metals, per Joan Kessner

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

(2) Metals by ICP (TCLP) - 1311/6010 {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; Mercury (TCLP) - 1311/7470 {Mercury}

J01056

REVIEWED BY JEB DATE 3-31-11

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Project 28002142 -60107G -S.1.

Analytical Due:

Report Due: 4/15/11 Rush 10d TAT

Sample Check-in List

Date/Time Received: 4/1/11 830 GM Screen Result 12 microR/hr

Client: Washington Closure Hanford SDG #: J 01056 NA[ ] SAF #: RC-182 NA [ ]

Job Number: 14136 Chain of Custody # RC-182-067

Shipping Container ID: WCH-08-042 WCH-08-072 WCH-11-019 Air Bill # 7969 3631 4598

1. Custody Seals on shipping container intact? NA [ ] Yes [✓] No [ ] 7969 3631 4690 7969 3631 4680
2. Custody Seals dated and signed? NA [ ] Yes [✓] No [ ]
3. Chain of Custody record present? NA [ ] Yes [✓] No [ ]
4. Cooler Temperature °C: 3, 4, 4.2, 2.7 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: 4/1/11

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager [signature] Date 4/4/11

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

RICHLAND, WA 99354

FedEx. Express

J11151102250225

Ship Date: 31MAR11
ActWgt: 84.0 LB
CAD: 8897843/INET3130

Delivery Address Bar Code

SHIP TO: (303) 736-0100 BILL SENDER

Sample Recieving
Test America Denver
4955 YARROW ST

ARVADA, CO 80002

Ref #
Invoice #
PO #
Dept #

1 of 3

FRI - 01 APR A1
PRIORITY OVERNIGHT

TRK# 7969 3631 4598
0201

MASTER

XH WHHA

80002
CO-US
DEN

50DG3/26A8/7EFB

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WASHINGTON CLOSURE HANFORD
2620 FERMI AVE

RICHLAND, WA 99354

FedEx. Express

J11151102250225

Ship Date: 31MAR11
ActWgt: 70.0 LB
CAD: 8897843/INET3130

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 3

FRI - 01 APR A1
PRIORITY OVERNIGHT

MPS# 7969 3631 4690
0263
Mstr# 7969 3631 4598 0201

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50DG3/26A8/7EFB

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

RICHLAND, WA 99354

J11151102250225

Ship Date: 31MAR11
ActWgt: 31.0 LB
CAD: 8897843/INET3130

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

3 of 3

FRI - 01 APR A1
PRIORITY OVERNIGHT

MPS# 7969 3631 4680
0263
Mstr# 7969 3631 4598 0201

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TestAmerica

ANALYTICAL REPORT

Job Number: 280-14136-1

SDG Number: J01056

Job Description: SAF# RC-182

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

Attention: Joan H Kessner

Approved for release
Michael T Dedio
Project Mgmt. Assistant
4/26/2011 2:16 PM

Designee for
Kae E Yoder
Project Manager II
kae.yoder@testamericainc.com
04/26/2011

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

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CASE NARRATIVE

Client: Washington Closure Hanford

Project: WASHINGTON CLOSURE HANFORD

Report Number: 280-14136-1

SDG #: J01056
SAF#: RC-182

Date SDG Closed: April 1, 2011
Data Deliverable: 15 Day / Summary

CLIENT ID	LAB ID	ANALYSES REQUESTED	ANALYSES PERFORMED
J1FXF6	280-14136-1	6010/7471/1311-6010-7470	6010B/7471A/1311-6010B-7470A

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 4/1/2011; the sample arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 3.4, 4.4, and 2.7 C.

Sample J1FXF6 requesting TCLP Metals 1311/6010B/7470A analyses was leached and placed on hold, as instructed on the chains-of-custody. On 4/19/2011, the client instructed the laboratory to proceed with the requested TCLP Metals 1311/6010B/7470A analyses. Those results are included in this report.

TOTAL METALS - SW846 6010B/7471A
Serial dilution of a digestate in batch 280-60431 indicates that physical and chemical interferences are present for several elements. Results have been flagged with an "X".

Silicon was recovered outside the control limits in the SW846 6010B LCS, and the associated sample result has been flagged "N". Silicon is not controlled for batch QC as there are no prescribed limits for LCS/MS recoveries. Limits given in the report are for guidance only.

It can be noted that the sample amount was greater than four times the spike amount for Aluminum, Chromium, Iron and Manganese in the Matrix Spike performed on sample J1FXF6; therefore, control limits are not applicable.

Boron and Lead were recovered outside the control limits in the SW846 6010B Matrix Spike performed on sample J1FXF6, and the associated sample result have been flagged "N". There is no indication that the analytical system was operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

The SW846 6010B duplicate analysis of sample J1FXF6 exhibited RPD data outside the control limits for Antimony, 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.

TCLP METALS - SW846 1311/6010B/7470A

Low levels of Silver are present in the method blank associated with batch 280-63092. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

No other anomalies were encountered.

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Lab Section	Qualifier	Description
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
	M	Sample duplicate precision not met.
	X	Serial dilution in the analytical batch indicates that physical and chemical interferences are present.

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Metals	TAL DEN		SW846 3050B
TCLP Metals (ICP)	TAL DEN	SW846 6010B	
TCLP Extraction	TAL DEN		SW846 1311
Preparation, Total Metals	TAL DEN		SW846 3010A
TCLP Mercury	TAL DEN	SW846 7470A	
TCLP Extraction	TAL DEN		SW846 1311
Preparation, Mercury	TAL DEN		SW846 7470A
Mercury (CVAA)	TAL DEN	SW846 7471A	
Preparation, Mercury	TAL DEN		SW846 7471A
ASTM D-2216	TAL DEN	ASTM D-2216	

Lab References:

TAL DEN = TestAmerica Denver

Method References:

ASTM = ASTM International

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

METHOD / ANALYST SUMMARY

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Method	Analyst	Analyst ID
SW846 6010B	Bowen, Heidi E	HEB
SW846 6010B	Harre, John K	JKH
SW846 7470A	Stoltz, Katie	KS
SW846 7471A	Stoltz, Katie	KS
ASTM D-2216	Berry III, Paul B	PBB

SAMPLE SUMMARY

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-14136-1	J1FXF6	Solid	03/30/2011 0945	04/01/2011 0830

SAMPLE RESULTS

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Client Sample ID: **J1FXF6**

Lab Sample ID: 280-14136-1
Client Matrix: Solid

% Moisture: 4.7

Date Sampled: 03/30/2011 0945
Date Received: 04/01/2011 0830

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-61106	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-60431	Lab File ID:	26a040611.asc
Dilution:	1.0			Initial Weight/Volume:	1.04 g
Analysis Date:	04/06/2011 1226			Final Weight/Volume:	100 mL
Prep Date:	04/05/2011 1500				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		9650	X	1.6	5.0
Antimony		1.6	M	0.38	0.61
Arsenic		3.9		0.67	1.0
Barium		347	X	0.077	0.50
Beryllium		0.033	U	0.033	0.20
Boron		36.0	N	0.99	2.0
Cadmium		0.10	B	0.041	0.20
Calcium		11300	X	14.2	50.4
Chromium		218	X	0.059	0.20
Cobalt		7.7	X	0.10	1.0
Copper		21.7	X	0.22	1.0
Iron		20900	X	3.8	5.0
Lead		109	X N	0.27	0.50
Magnesium		4520	X	3.7	20.2
Manganese		287	X	0.10	1.0
Molybdenum		1.0	B	0.26	2.0
Nickel		11.9	X	0.12	4.0
Potassium		1130		41.4	303
Selenium		1.3		0.87	1.0
Silicon		271	N	5.7	10.1
Silver		0.16	U	0.16	0.20
Sodium		609		59.5	121
Vanadium		56.4	X	0.095	2.0
Zinc		44.1	X	0.40	1.0

6010B TCLP Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	280-63626	Instrument ID:	MT_025
Prep Method:	3010A	Prep Batch:	280-63092	Lab File ID:	25c042111.asc
Dilution:	1.0	Leach Batch:	280-60466	Initial Weight/Volume:	10 mL
Analysis Date:	04/22/2011 0056			Final Weight/Volume:	50 mL
Prep Date:	04/20/2011 1500				
Leach Date:	04/01/2011 1935				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.022	U	0.022	0.50
Barium		0.66	B	0.0020	1.0
Cadmium		0.0020	U	0.0020	0.10
Chromium		0.47	B	0.0030	0.50
Lead		0.094	B	0.013	0.50
Selenium		0.024	U	0.024	0.10
Silver		0.0040	U	0.0040	0.50

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Client Sample ID: **J1FXF6**

Lab Sample ID: 280-14136-1
Client Matrix: Solid

Date Sampled: 03/30/2011 0945
Date Received: 04/01/2011 0830

7470A TCLP Mercury-TCLP

Analysis Method:	7470A	Analysis Batch:	280-63586	Instrument ID:	MT_033
Prep Method:	7470A	Prep Batch:	280-63066	Lab File ID:	110421AA.txt
Dilution:	1.0	Leach Batch:	280-60466	Initial Weight/Volume:	30 mL
Analysis Date:	04/21/2011 1913			Final Weight/Volume:	30 mL
Prep Date:	04/21/2011 0845				
Leach Date:	04/01/2011 1935				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		0.000030	U	0.000030	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-61031	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-60716	Lab File ID:	110405AB.txt
Dilution:	1.0			Initial Weight/Volume:	0.67 g
Analysis Date:	04/05/2011 1718			Final Weight/Volume:	50 mL
Prep Date:	04/05/2011 1345				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.018		0.0052	0.016

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

General Chemistry

Client Sample ID: **J1FXF6**

Lab Sample ID: 280-14136-1
Client Matrix: Solid

Date Sampled: 03/30/2011 0945
Date Received: 04/01/2011 0830

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	4.7		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-60390 Analysis Date: 04/01/2011 1350 DryWt Corrected: N

QUALITY CONTROL RESULTS

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-60431					
LCS 280-60431/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-60431/1-A	Method Blank	T	Solid	3050B	
280-14136-1	J1FXF6	T	Solid	3050B	
280-14136-1DU	Duplicate	T	Solid	3050B	
280-14136-1MS	Matrix Spike	T	Solid	3050B	
Prep Batch: 280-60466					
LCS 280-60466/2-B	Lab Control Sample	P	Solid	1311	
LCS 280-60466/2-C	Lab Control Sample	P	Solid	1311	
LB 280-60466/1-B	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 280-60466/1-C	TCLP SPLPE Leachate Blank	P	Solid	1311	
280-14136-1	J1FXF6	P	Solid	1311	
280-14136-1DU	Duplicate	P	Solid	1311	
280-14136-1MS	Matrix Spike	P	Solid	1311	
Prep Batch: 280-60716					
LCS 280-60716/2-A	Lab Control Sample	T	Solid	7471A	
MB 280-60716/1-A	Method Blank	T	Solid	7471A	
280-14136-1	J1FXF6	T	Solid	7471A	
280-14136-1DU	Duplicate	T	Solid	7471A	
280-14136-1MS	Matrix Spike	T	Solid	7471A	
Analysis Batch:280-61031					
LCS 280-60716/2-A	Lab Control Sample	T	Solid	7471A	280-60716
MB 280-60716/1-A	Method Blank	T	Solid	7471A	280-60716
280-14136-1	J1FXF6	T	Solid	7471A	280-60716
280-14136-1DU	Duplicate	T	Solid	7471A	280-60716
280-14136-1MS	Matrix Spike	T	Solid	7471A	280-60716
Analysis Batch:280-61106					
LCS 280-60431/2-A	Lab Control Sample	T	Solid	6010B	280-60431
MB 280-60431/1-A	Method Blank	T	Solid	6010B	280-60431
280-14136-1	J1FXF6	T	Solid	6010B	280-60431
280-14136-1DU	Duplicate	T	Solid	6010B	280-60431
280-14136-1MS	Matrix Spike	T	Solid	6010B	280-60431
Prep Batch: 280-63066					
LCS 280-60466/2-B	Lab Control Sample	P	Solid	7470A	280-60466
LB 280-60466/1-B	TCLP SPLPE Leachate Blank	P	Solid	7470A	280-60466
280-14136-1	J1FXF6	P	Solid	7470A	280-60466
280-14136-1DU	Duplicate	P	Solid	7470A	280-60466
280-14136-1MS	Matrix Spike	P	Solid	7470A	280-60466

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-63092					
LCS 280-60466/2-C	Lab Control Sample	P	Solid	3010A	280-60466
LB 280-60466/1-C	TCLP SPLPE Leachate Blank	P	Solid	3010A	280-60466
280-14136-1	J1FXF6	P	Solid	3010A	280-60466
280-14136-1DU	Duplicate	P	Solid	3010A	280-60466
280-14136-1MS	Matrix Spike	P	Solid	3010A	280-60466
Analysis Batch:280-63586					
LCS 280-60466/2-B	Lab Control Sample	P	Solid	7470A	280-63066
LB 280-60466/1-B	TCLP SPLPE Leachate Blank	P	Solid	7470A	280-63066
280-14136-1	J1FXF6	P	Solid	7470A	280-63066
280-14136-1DU	Duplicate	P	Solid	7470A	280-63066
280-14136-1MS	Matrix Spike	P	Solid	7470A	280-63066
Analysis Batch:280-63626					
LCS 280-60466/2-C	Lab Control Sample	P	Solid	6010B	280-63092
LB 280-60466/1-C	TCLP SPLPE Leachate Blank	P	Solid	6010B	280-63092
280-14136-1	J1FXF6	P	Solid	6010B	280-63092
280-14136-1DU	Duplicate	P	Solid	6010B	280-63092
280-14136-1MS	Matrix Spike	P	Solid	6010B	280-63092

Report Basis
P = TCLP
T = Total

General Chemistry

Analysis Batch:280-60390					
280-14136-1	J1FXF6	T	Solid	D-2216	
280-14136-1DU	Duplicate	T	Solid	D-2216	

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Method Blank - Batch: 280-60431

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 280-60431/1-A	Analysis Batch:	280-61106	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-60431	Lab File ID:	26a040611.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/06/2011 1222	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/05/2011 1500				
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	0.22	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: 280-14136-1
Sdg Number: J01056

Lab Control Sample - Batch: 280-60431

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 280-60431/2-A	Analysis Batch:	280-61106	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-60431	Lab File ID:	26a040611.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	04/06/2011 1224	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/05/2011 1500				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	189.2	95	82 - 116	
Antimony	50.0	49.22	98	82 - 110	
Arsenic	100	99.05	99	85 - 110	
Barium	200	188.0	94	87 - 112	
Beryllium	5.00	4.68	94	84 - 114	
Boron	100	92.43	92	81 - 110	
Cadmium	10.0	9.49	95	87 - 110	
Calcium	5000	4677	94	82 - 114	
Chromium	20.0	19.52	98	84 - 114	
Cobalt	50.0	47.90	96	87 - 110	
Copper	25.0	23.65	95	88 - 110	
Iron	100	97.74	98	87 - 120	
Lead	50.0	49.89	100	86 - 110	
Magnesium	5000	4535	91	90 - 110	
Manganese	50.0	45.63	91	88 - 110	
Molybdenum	100	101.1	101	86 - 110	
Nickel	50.0	48.96	98	87 - 110	
Potassium	5000	4794	96	89 - 110	
Selenium	200	195.4	98	83 - 110	
Silicon	1000	85.59	9	10 - 70	N
Silver	5.00	4.64	93	87 - 114	
Sodium	5000	4814	96	90 - 112	
Vanadium	50.0	46.27	93	88 - 110	
Zinc	50.0	45.15	90	76 - 114	

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Matrix Spike - Batch: 280-60431

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-14136-1	Analysis Batch:	280-61106	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-60431	Lab File ID:	26a040611.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.02 g
Analysis Date:	04/06/2011 1231	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/05/2011 1500				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	9650		206	10620	472	50 - 200	4
Antimony	1.6		51.4	26.04	48	20 - 200	
Arsenic	3.9		103	93.19	87	76 - 111	
Barium	347		206	508.6	79	52 - 159	
Beryllium	0.033	U	5.14	4.42	86	72 - 105	
Boron	36.0		103	112.0	74	75 - 107	N
Cadmium	0.10	B	10.3	8.96	86	40 - 130	
Calcium	11300		5140	15420	81	43 - 165	
Chromium	218		20.6	195.0	-112	70 - 200	4
Cobalt	7.7		51.4	51.72	85	72 - 106	
Copper	21.7		25.7	40.61	73	37 - 187	
Iron	20900		103	19940	-944	70 - 200	4
Lead	109		51.4	67.94	-80	70 - 200	N
Magnesium	4520		5140	8877	85	64 - 145	
Manganese	287		51.4	351.2	125	40 - 200	4
Molybdenum	1.0	B	103	92.64	89	75 - 103	
Nickel	11.9		51.4	54.94	84	61 - 126	
Potassium	1130		5140	5798	91	56 - 172	
Selenium	1.3		206	178.3	86	76 - 104	
Silicon	271		1030	481.1	20	20 - 200	
Silver	0.16	U	5.14	4.35	85	75 - 141	
Sodium	609		5140	5383	93	78 - 111	
Vanadium	56.4		51.4	96.66	78	50 - 169	
Zinc	44.1		51.4	82.55	75	70 - 200	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Duplicate - Batch: 280-60431

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-14136-1	Analysis Batch:	280-61106	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-60431	Lab File ID:	26a040611.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.08 g
Analysis Date:	04/06/2011 1233	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	04/05/2011 1500				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	9650		9067	6	40	
Antimony	1.6		0.875	56	40	M
Arsenic	3.9		3.19	19	30	
Barium	347		320.8	8	30	
Beryllium	0.033	U	0.0622	NC	30	B
Boron	36.0		27.41	27	30	
Cadmium	0.10	B	0.100	0.2	30	B
Calcium	11300		11400	1	30	
Chromium	218		202.2	8	40	
Cobalt	7.7		7.82	0.9	30	
Copper	21.7		20.28	7	30	
Iron	20900		20080	4	40	
Lead	109		75.77	36	40	
Magnesium	4520		4775	6	30	
Manganese	287		279.2	3	40	
Molybdenum	1.0	B	0.870	14	30	B
Nickel	11.9		11.20	6	30	
Potassium	1130		1095	3	40	
Selenium	1.3		0.84	NC	30	U
Silicon	271		289.3	7	40	
Silver	0.16	U	0.16	NC	30	U
Sodium	609		555.6	9	30	
Vanadium	56.4		52.96	6	30	
Zinc	44.1		43.67	0.9	40	

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

TCLP SPLPE Leachate Blank - Batch: 280-63092

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 280-60466/1-C	Analysis Batch:	280-63626	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-63092	Lab File ID:	25c042111.asc
Dilution:	1.0	Leach Batch:	280-60466	Initial Weight/Volume:	10 mL
Analysis Date:	04/22/2011 0052	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	04/20/2011 1500				
Leach Date:	04/01/2011 1935				

Analyte	Result	Qual	MDL	RL
Arsenic	0.022	U	0.022	0.50
Barium	0.0020	U	0.0020	1.0
Cadmium	0.0020	U	0.0020	0.10
Chromium	0.0030	U	0.0030	0.50
Lead	0.013	U	0.013	0.50
Selenium	0.024	U	0.024	0.10
Silver	0.00505	B	0.0040	0.50

Lab Control Sample - Batch: 280-63092

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LCS 280-60466/2-C	Analysis Batch:	280-63626	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-63092	Lab File ID:	25c042111.asc
Dilution:	1.0	Leach Batch:	280-60466	Initial Weight/Volume:	10 mL
Analysis Date:	04/22/2011 0054	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	04/20/2011 1500				
Leach Date:	04/01/2011 1935				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	4.00	3.97	99	80 - 120	
Barium	12.0	12.76	106	80 - 120	
Cadmium	1.10	1.15	105	80 - 120	
Chromium	5.20	5.45	105	80 - 120	
Lead	5.50	5.70	104	80 - 120	
Selenium	3.00	3.10	103	80 - 120	
Silver	1.05	1.12	106	80 - 120	

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Matrix Spike - Batch: 280-63092

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	280-14136-1	Analysis Batch:	280-63626	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-63092	Lab File ID:	25c042111.asc
Dilution:	1.0	Leach Batch:	280-60466	Initial Weight/Volume:	10 mL
Analysis Date:	04/22/2011 0104	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	04/20/2011 1500				
Leach Date:	04/01/2011 1935				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	0.022	U	4.00	4.17	104	80 - 120	
Barium	0.66	B	12.0	13.85	110	80 - 120	
Cadmium	0.0020	U	1.10	1.19	108	80 - 120	
Chromium	0.47	B	5.20	6.16	109	80 - 120	
Lead	0.094	B	5.50	5.98	107	80 - 120	
Selenium	0.024	U	3.00	3.23	108	80 - 120	
Silver	0.0040	U	1.05	1.15	110	80 - 120	

Duplicate - Batch: 280-63092

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	280-14136-1	Analysis Batch:	280-63626	Instrument ID:	MT_025
Client Matrix:	Solid	Prep Batch:	280-63092	Lab File ID:	25c042111.asc
Dilution:	1.0	Leach Batch:	280-60466	Initial Weight/Volume:	10 mL
Analysis Date:	04/22/2011 0101	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	04/20/2011 1500				
Leach Date:	04/01/2011 1935				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Arsenic	0.022	U	0.022	NC	20	U
Barium	0.66	B	0.713	8	20	B
Cadmium	0.0020	U	0.0020	NC	20	U
Chromium	0.47	B	0.513	9	20	
Lead	0.094	B	0.0970	3	20	B
Selenium	0.024	U	0.024	NC	20	U
Silver	0.0040	U	0.0040	NC	20	U

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

TCLP SPLPE Leachate Blank - Batch: 280-63066

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LB 280-60466/1-B	Analysis Batch:	280-63586	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-63066	Lab File ID:	110421AA.txt
Dilution:	1.0	Leach Batch:	280-60466	Initial Weight/Volume:	30 mL
Analysis Date:	04/21/2011 1903	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	04/21/2011 0845				
Leach Date:	04/01/2011 1935				

Analyte	Result	Qual	MDL	RL
Mercury	0.000030	U	0.000030	0.0020

Lab Control Sample - Batch: 280-63066

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LCS 280-60466/2-B	Analysis Batch:	280-63586	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-63066	Lab File ID:	110421AA.txt
Dilution:	1.0	Leach Batch:	280-60466	Initial Weight/Volume:	30 mL
Analysis Date:	04/21/2011 1906	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	04/21/2011 0845				
Leach Date:	04/01/2011 1935				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00490	98	90 - 116	

Matrix Spike - Batch: 280-63066

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	280-14136-1	Analysis Batch:	280-63586	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-63066	Lab File ID:	110421AA.txt
Dilution:	1.0	Leach Batch:	280-60466	Initial Weight/Volume:	30 mL
Analysis Date:	04/21/2011 1917	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	04/21/2011 0845				
Leach Date:	04/01/2011 1935				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.000030	U	0.00500	0.00506	101	90 - 116	

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Duplicate - Batch: 280-63066

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	280-14136-1	Analysis Batch:	280-63586	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-63066	Lab File ID:	110421AA.txt
Dilution:	1.0	Leach Batch:	280-60466	Initial Weight/Volume:	30 mL
Analysis Date:	04/21/2011 1915	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	04/21/2011 0845				
Leach Date:	04/01/2011 1935				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.000030	U	0.000030	NC	20	U

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Method Blank - Batch: 280-60716

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 280-60716/1-A	Analysis Batch:	280-61031	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-60716	Lab File ID:	110405AB.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	04/05/2011 1713	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/05/2011 1345				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.0055	U	0.0055	0.017

Lab Control Sample - Batch: 280-60716

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 280-60716/2-A	Analysis Batch:	280-61031	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-60716	Lab File ID:	110405AB.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	04/05/2011 1715	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/05/2011 1345				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.417	0.420	101	87 - 111	

Matrix Spike - Batch: 280-60716

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-14136-1	Analysis Batch:	280-61031	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-60716	Lab File ID:	110405AB.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	04/05/2011 1722	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/05/2011 1345				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.018	0.437	0.438	96	87 - 111	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Duplicate - Batch: 280-60716

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-14136-1	Analysis Batch:	280-61031	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-60716	Lab File ID:	110405AB.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.66 g
Analysis Date:	04/05/2011 1720	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/05/2011 1345				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Mercury	0.018	0.0194	9	20	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-14136-1
Sdg Number: J01056

Duplicate - Batch: 280-60390

Method: D-2216
Preparation: N/A

Lab Sample ID:	280-14136-1	Analysis Batch:	280-60390	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:	04/01/2011 1350	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	4.7	4.3	8	20	

3.4.4.2.2-7

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-182-067	Page 1 of 1

Collector Ojeda, AJ	Company Contact JL Russell	Telephone No. 509-540-6502	Project Coordinator KESSNER, JH
Price Code ~~8L~~ JR 3/30/11 ~~8J~~ (8K) JR 3/29/11	Data Turnaround JR 3/29/11 ~~21 Days~~ ~~7 Days~~ 15 Days JR 3/31/11		
Project Designation ARRA 100F Remaining Sites Remediation - Soil In-Process	Sampling Location 100 F-57 Stain on RR Tracks		SAF No. RC-182
Ice Chest No. WCH-08-042	Field Logbook No. EL-1651	COA S00F578100	Method of Shipment FedEx
Shipped To JR 3/29/11 TestAmerica Incorporated, ~~Richland~~ Denver	Offsite Property No. NA		Bill of Lading/Air Bill No. 7969 3631 4598

POSSIBLE SAMPLE HAZARDS/REMARKS

None

Special Handling and/or Storage

Cool 4 degrees C

Preservation	Cool 4C	None	Cool 4C									
Type of Container	G/P	G/P	G/P									
No. of Container(s)	1	1	1									
Volume	60mL	120mL	60mL									
SAMPLE ANALYSIS	See item (1) in Special Instructions.	See item (2) in Special Instructions.	Chromium Hex - 7196 JR 3/29/11									
Sample No. / Matrix * / Sample Date / Sample Time												
J1FXF6 / SOIL / 3-30-11 / 0945	X	X										

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
A.J. Ojeda	3-30-11 @1020	Jen Russell Jen Russell	3/30/11 1020
Jen Russell Jen Russell	3/30/11 1550	A. Freier A. Freier	1550 3-30-11
A. Freier A. Freier	WCH 1045 3-31-11	FED EX	
		~~Received By/Stored In~~	4/1/11 8:20

SPECIAL INSTRUCTIONS

Please leach and hold TCLP Metals, per Joan Kessner

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

(2) Metals by ICP (TCLP) - 1311/6010 {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; Mercury (TCLP) - 1311/7470 {Mercury}

J01056

REVIEWED BY JEB DATE 3-31-11

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

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

WCH-EE-011

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Project 28002142 -6010TG -S.1.

Analytical Due:

Report Due: 4/15/11 Rush 10d TAT

Sample Check-in List

Date/Time Received: 4/1/11 830 GM Screen Result 12 microR/hr

Client: Washington Closure Hanford SDG #: J 01056 NA[ ] SAF #: RC-182 NA [ ]

Job Number: 14136 Chain of Custody # RC-182-067

Shipping Container ID: WCH-08-042 WCH-08-072 WCH-11-019 Air Bill # 7969 3631 4598

1. Custody Seals on shipping container intact? NA [ ] Yes [✓] No [ ] 7969 3631 4690 7969 3631 4680
2. Custody Seals dated and signed? NA [ ] Yes [✓] No [ ]
3. Chain of Custody record present? NA [ ] Yes [✓] No [ ]
4. Cooler Temperature °C: 3.4, 4.2, 2.7 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: 4/1/11

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager [signature] Date 4/4/11

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

RICHLAND, WA 99354

FedEx Express

J11151102250225

Ship Date: 31MAR11
ActWgt: 84.0 LB
CAD: 8897843/INET3130

Delivery Address Bar Code

SHIP TO: (303) 736-0100 BILL SENDER

Sample Recieving
Test America Denver
4955 YARROW ST

ARVADA, CO 80002

Ref #
Invoice #
PO #
Dept #

1 of 3

FRI - 01 APR A1
PRIORITY OVERNIGHT

TRK# 7969 3631 4598
0201

MASTER

XH WHHA

80002
CO-US
DEN

50DG3/26A8/7EFB

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2. Fold the printed page along the horizontal line.
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WCH MAILROOM
WASHINGTON CLOSURE HANFORD
2620 FERMI AVE

RICHLAND, WA 99354

FedEx. Express

J11151102250225

Ship Date: 31MAR11
ActWgt: 70.0 LB
CAD: 8897843/INET3130

Delivery Address Bar Code

SHIP TO: (303) 736-0100 BILL SENDER

Sample Recieving
Test America Denver
4955 YARROW ST

ARVADA, CO 80002

Ref #
Invoice #
PO #
Dept #

2 of 3

FRI - 01 APR A1
PRIORITY OVERNIGHT

MPS# 7969 3631 4690
0263

Mstr# 7969 3631 4598 0201

XH WHHA

80002
CO-US
DEN

50DG3/26A8/7EFB

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WCH MAILROOM
WASHINGTON CLOSURE HANFORD
2620 FERMI AVE

RICHLAND, WA 99354

FedEx. Express

J1115110225025

Ship Date: 31MAR11
ActWgt: 31.0 LB
CAD: 8897843/INET3130

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

3 of 3

FRI - 01 APR A1
PRIORITY OVERNIGHT

MPS# 7969 3631 4680
0263
Mstr# 7969 3631 4598 0201

XH WHHA

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CO-US
DEN

50DG3/26A8/7EFB

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