

**SAF-RC-233**  
**100-IU-2 & 100-IU-6 Remaining**  
**Waste Sites – Soil In-Process**  
**FINAL DATA PACKAGE**

**COMPLETE COPY OF DATA PACKAGE TO:**

Kathy Wendt

H4-21

KW 3/4/13  
INITIAL/DATE

**COMMENTS:**

**SDG J01722**

**SAF-RC-233**

Rad only

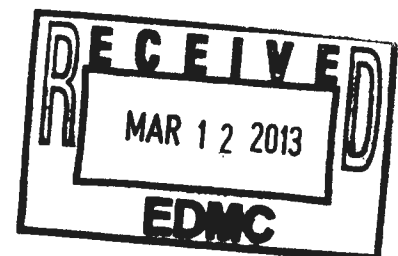
Chem only

Rad & Chem

Complete

Partial

**Sample Location: 600-377**



Analytical Data Package Prepared For

## Washington Closure Hanford

Analysis Provided By

*TestAmerica Richland*  
2800 George Washington Way  
Richland WA, 99354  
(509)375-3131  
Assigned Laboratory Code: TARL

SDG Number: J01722

Data Package Contains 8 Pages

## Certificate of Analysis

TestAmerica Laboratories, Inc.

Washington Closure Hanford  
2620 Fermi Avenue  
Richland, WA 99354

February 28, 2013

Attention: Joan Kessner

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SAF Number	:	RC-233
Date SDG Closed	:	February 28, 2013
Number of Samples	:	One (1)
Sample Type	:	Soil
SDG Number	:	J01722
Data Deliverable	:	Quick Turn Metals / Summary

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### CASE NARRATIVE

#### **I. Introduction**

On February 25, 2013, one soil sample was received at TestAmerica for analysis. Upon receipt, the sample was assigned the following laboratory ID number to correspond with the Washington Closure Hanford (WCH) specific ID;

<u>WCH ID#</u>	<u>TARL ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
J1RFV2	MX7RR	SOIL	2/25/13

#### **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 analyses were:

**ICP Metals**  
ICP Metals by method SW-846 6010A

#### **IV. Quality Control**

SDG J01722 includes a minimum of one Laboratory Control Samples (LCS) and one method (reagent) blank. A duplicate sample, matrix spike sample and a matrix spike duplicate sample will be analyzed per 20 samples or per month, whichever is more frequent. Any exceptions have been noted in the "Comments" section.

Blanks and LCS are reported in mg/L units, other QC and sample results are reported in the same units.

Washington Closure Hanford  
February 28, 2013

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**V. Comments**

**ICP Metals**

ICP Metals by method SW-846 6010A

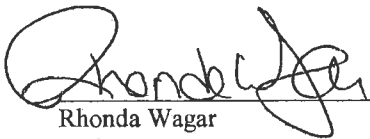
One batch was analyzed for the samples with the standard metal request list.

Batch 3056084:

The LCS, batch blank, sample, sample duplicate, MS, MSD, ICB, ICV, CCB and CCV results are within contractual limits.

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:



Rhonda Wagar  
Project Manager

SDG: J01722  
 SAF: RC-233  
 BATCH: 3056084  
 MATRIX: SOIL  
 ANALYSIS DATE: 2/25/13

TeslaAmerica Laboratories, Inc.

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Client_id	Matrix	Result_Cas_nbr	Parameter	Result	Qualifier	Units	Reporting_Limits_S	Reporting_Limits	Uncertainty_1s	Analyzed_Analy	Decision_Level	LCS	Reco	Adde	Analysis_date	time	Batch_nbr	Test_Meth	Lab_sample_id	
J1RFV2	SOIL	CS	7440-22-4	Ag	-4.20E-01	U	1.00E+01	1.00E+01	8.00E-02	0.2489	G				2/25/2013 21:31		3056084	46DQ	MX7RR1A0	
J1RFV2	SOIL	CS	7440-38-2	As	2.16E+00	U	1.00E+01	1.00E+01	1.90E-01	0.2489	G				2/25/2013 21:31		3056084	46DQ	MX7RR1A0	
J1RFV2	SOIL	CS	7440-39-3	Ba	1.59E+02	U	2.01E+00	2.01E+00	1.40E+00	0.2489	G				2/25/2013 21:31		3056084	46DQ	MX7RR1A0	
J1RFV2	SOIL	CS	7440-41-7	Beryllium	2.55E-01	U	1.00E-01	1.00E-01	3.50E-03	0.2489	G				2/25/2013 21:31		3056084	46DQ	MX7RR1A0	
J1RFV2	SOIL	CS	7440-43-9	Cadmium	5.05E-01	U	2.01E+00	2.01E+00	6.60E-02	0.2489	G				2/25/2013 21:31		3056084	46DQ	MX7RR1A0	
J1RFV2	SOIL	CS	7440-47-3	Chromium	9.10E+00	U	1.00E+01	1.00E+01	1.30E-01	0.2489	G				2/25/2013 21:31		3056084	46DQ	MX7RR1A0	
J1RFV2	SOIL	CS	7439-92-1	Lead	1.95E+02	U	1.00E+01	1.00E+01	1.10E+00	0.2489	G				2/25/2013 21:31		3056084	46DQ	MX7RR1A0	
J1RFV2	SOIL	CS	7782-49-2	Se	9.44E-02	U	1.00E+01	1.00E+01	7.70E-01	0.2489	G				2/25/2013 21:31		3056084	46DQ	MX7RR1A0	
INTRA-LAB BLANK	SOIL	BLK	7440-22-4	Ag	-4.17E-04	U	5.00E-02	5.00E-02	4.40E-04	0.2514	L				2/25/2013 20:36		3056084	46DQ	MX7R01AA	
INTRA-LAB BLANK	SOIL	BLK	7440-38-2	As	8.31E-04	U	5.00E-02	5.00E-02	2.10E-04	0.2514	L				2/25/2013 20:36		3056084	46DQ	MX7R01AA	
INTRA-LAB BLANK	SOIL	BLK	7440-39-3	Ba	6.91E-05	U	1.00E-02	1.00E-02	2.90E-05	0.2514	L				2/25/2013 20:36		3056084	46DQ	MX7R01AA	
INTRA-LAB BLANK	SOIL	BLK	7440-41-7	Beryllium	5.85E-05	U	5.00E-04	5.00E-04	9.10E-05	0.2514	L				2/25/2013 20:36		3056084	46DQ	MX7R01AA	
INTRA-LAB BLANK	SOIL	BLK	7440-43-9	Cadmium	7.59E-05	U	1.00E-02	1.00E-02	7.60E-05	0.2514	L				2/25/2013 20:36		3056084	46DQ	MX7R01AA	
INTRA-LAB BLANK	SOIL	BLK	7440-47-3	Chromium	-7.26E-05	U	5.00E-02	5.00E-02	2.30E-04	0.2514	L				2/25/2013 20:36		3056084	46DQ	MX7R01AA	
INTRA-LAB BLANK	SOIL	BLK	7439-92-1	Lead	2.66E-05	U	5.00E-02	5.00E-02	1.70E-03	0.2514	L				2/25/2013 20:36		3056084	46DQ	MX7R01AA	
INTRA-LAB BLANK	SOIL	BLK	7782-49-2	Se	6.14E-04	U	5.00E-02	5.00E-02	1.30E-03	0.2514	L				2/25/2013 20:36		3056084	46DQ	MX7R01AA	
INTRA-LAB CHECK	SOIL	LCS	7440-22-4	Ag	1.01E+00	U	5.00E-02	5.00E-02	7.80E-03	0.2527	L				2/25/2013 20:39		3056084	46DQ	MX7R01AA	
INTRA-LAB CHECK	SOIL	LCS	7440-38-2	As	9.47E-01	U	5.00E-02	5.00E-02	3.60E-03	0.2527	L			1.01	1	2/25/2013 20:39		3056084	46DQ	MX7R01AA
INTRA-LAB CHECK	SOIL	LCS	7440-39-3	Ba	1.01E+00	U	1.00E-02	1.00E-02	1.40E-02	0.2527	L			1.01	1	2/25/2013 20:39		3056084	46DQ	MX7R01AA
INTRA-LAB CHECK	SOIL	LCS	7440-41-7	Beryllium	1.02E+00	U	5.00E-04	5.00E-04	3.40E-03	0.2527	L			1.02	1	2/25/2013 20:39		3056084	46DQ	MX7R01AA
INTRA-LAB CHECK	SOIL	LCS	7440-43-9	Cadmium	9.22E-01	U	1.00E-02	1.00E-02	1.40E-03	0.2527	L			0.92	1	2/25/2013 20:39		3056084	46DQ	MX7R01AA
INTRA-LAB CHECK	SOIL	LCS	7440-47-3	Chromium	1.00E+00	U	5.00E-02	5.00E-02	1.10E-02	0.2527	L			1	1	2/25/2013 20:39		3056084	46DQ	MX7R01AA
INTRA-LAB CHECK	SOIL	LCS	7439-92-1	Lead	9.40E-01	U	5.00E-02	5.00E-02	2.70E-03	0.2527	L			0.94	1	2/25/2013 20:39		3056084	46DQ	MX7R01AA
INTRA-LAB CHECK	SOIL	LCS	7782-49-2	Se	8.45E-01	U	5.00E-02	5.00E-02	5.30E-03	0.2527	L			0.84	1	2/25/2013 20:39		3056084	46DQ	MX7R01AA
J1RFV2 DUP	SOIL	DUP	7440-22-4	Ag	-3.97E-01	U	1.01E+01	1.01E+01	2.10E-01	0.248	G				2/25/2013 21:47		3056084	46DQ	MX7RR1A0	
J1RFV2 DUP	SOIL	DUP	7440-38-2	As	1.92E+00	U	1.01E+01	1.01E+01	2.80E-01	0.248	G				2/25/2013 21:47		3056084	46DQ	MX7RR1A0	
J1RFV2 DUP	SOIL	DUP	7440-39-3	Ba	1.58E+02	U	2.02E+00	2.02E+00	2.40E+00	0.248	G				2/25/2013 21:47		3056084	46DQ	MX7RR1A0	
J1RFV2 DUP	SOIL	DUP	7440-41-7	Beryllium	2.83E-01	U	1.01E-01	1.01E-01	2.50E-02	0.248	G				2/25/2013 21:47		3056084	46DQ	MX7RR1A0	
J1RFV2 DUP	SOIL	DUP	7440-43-9	Cadmium	5.08E-01	U	2.02E+00	2.02E+00	5.20E-02	0.248	G				2/25/2013 21:47		3056084	46DQ	MX7RR1A0	
J1RFV2 DUP	SOIL	DUP	7440-47-3	Chromium	9.56E+00	U	1.01E+01	1.01E+01	1.50E-01	0.248	G				2/25/2013 21:47		3056084	46DQ	MX7RR1A0	
J1RFV2 DUP	SOIL	DUP	7439-92-1	Lead	1.76E+02	U	1.01E+01	1.01E+01	1.30E+00	0.248	G				2/25/2013 21:47		3056084	46DQ	MX7RR1A0	
J1RFV2 DUP	SOIL	DUP	7782-49-2	Se	2.14E-01	U	1.01E+01	1.01E+01	6.00E-01	0.248	G				2/25/2013 21:47		3056084	46DQ	MX7RR1A0	
J1RFV2	SOIL	MS	7440-22-4	Ag	1.96E+02	% REC	9.92E+00	9.92E+00	6.70E-01	0.2521	L			0.99	198	2/25/2013 21:35		3056084	46DQ	MX7RR1A0
J1RFV2	SOIL	MS	7440-38-2	As	1.83E+02	% REC	9.92E+00	9.92E+00	1.60E+00	0.2521	L			0.92	198	2/25/2013 21:35		3056084	46DQ	MX7RR1A0
J1RFV2	SOIL	MS	7440-39-3	Ba	1.80E+02	% REC	1.98E+00	1.98E+00	2.10E+00	0.2521	L			0.91	198	2/25/2013 21:35		3056084	46DQ	MX7RR1A0
J1RFV2	SOIL	MS	7440-41-7	Beryllium	2.03E+02	% REC	9.92E-02	9.92E-02	1.90E+00	0.2521	L			1.02	198	2/25/2013 21:35		3056084	46DQ	MX7RR1A0
J1RFV2	SOIL	MS	7440-43-9	Cadmium	1.80E+02	% REC	1.98E+00	1.98E+00	4.90E-01	0.2521	L			0.91	198	2/25/2013 21:35		3056084	46DQ	MX7RR1A0
J1RFV2	SOIL	MS	7440-47-3	Chromium	1.94E+02	% REC	9.92E+00	9.92E+00	1.50E+00	0.2521	L			0.98	198	2/25/2013 21:35		3056084	46DQ	MX7RR1A0
J1RFV2	SOIL	MS	7439-92-1	Lead	1.62E+02	% REC	9.92E+00	9.92E+00	2.10E+00	0.2521	L			0.82	198	2/25/2013 21:35		3056084	46DQ	MX7RR1A0
J1RFV2	SOIL	MS	7782-49-2	Se	1.64E+02	% REC	9.92E+00	9.92E+00	1.90E+00	0.2521	L			0.83	198	2/25/2013 21:35		3056084	46DQ	MX7RR1A0
J1RFV2	SOIL	MSD	7440-22-4	Ag	1.95E+02	% REC	9.96E+00	9.96E+00	3.90E-01	0.2509	L			0.98	199	2/25/2013 21:41		3056084	46DQ	MX7RR1A0
J1RFV2	SOIL	MSD	7440-38-2	As	1.84E+02	% REC	9.96E+00	9.96E+00	1.60E+00	0.2509	L			0.92	199	2/25/2013 21:41		3056084	46DQ	MX7RR1A0
J1RFV2	SOIL	MSD	7440-39-3	Ba	1.82E+02	% REC	1.99E+00	1.99E+00	8.10E+00	0.2509	L			0.91	199	2/25/2013 21:41		3056084	46DQ	MX7RR1A0
J1RFV2	SOIL	MSD	7440-41-7	Beryllium	2.04E+02	% REC	9.96E-02	9.96E-02	9.90E-01	0.2509	L			1.02	199	2/25/2013 21:41		3056084	46DQ	MX7RR1A0
J1RFV2	SOIL	MSD	7440-43-9	Cadmium	1.80E+02	% REC	1.99E+00	1.99E+00	2.50E-01	0.2509	L			0.9	199	2/25/2013 21:41		3056084	46DQ	MX7RR1A0
J1RFV2	SOIL	MSD	7440-47-3	Chromium	1.96E+02	% REC	9.96E+00	9.96E+00	3.10E-01	0.2509	L			0.98	199	2/25/2013 21:41		3056084	46DQ	MX7RR1A0
J1RFV2	SOIL	MSD	7439-92-1	Lead	1.77E+02	% REC	9.96E+00	9.96E+00	1.50E+00	0.2509	L			0.89	199	2/25/2013 21:41		3056084	46DQ	MX7RR1A0
J1RFV2	SOIL	MSD	7782-49-2	Se	1.68E+02	% REC	9.96E+00	9.96E+00	9.80E-01	0.2509	L			0.83	199	2/25/2013 21:41		3056084	46DQ	MX7RR1A0

Lot No., Due Date: J3B250424; 02/26/2013  
Client, Site: 127642; S00X235B00 HANFORD  
QC Batch No., Method Test: 3056084; M6010\_S 6010A  
SDG, Matrix: J01722; SOIL

1.1	Performed at required frequency with required number of levels?	Yes	No	N/A	2nd
1.2	Correlation coefficient within QC limits?	Yes	No	N/A	2nd
1.3	Initial calibration verification (ICV) analyzed immediately after calibr. and results within QC limits of +/- 10% at 0.75 ppm?	Yes	No	N/A	2nd
1.4	ICB analyzed immediately after ICV and concentration of all parameters +/- report limit from zero? RL per RadCalc.	Yes	No	N/A	2nd
2.1	CCV analyzed at required frequency and all parameters within QC limits or +/- 10% at 0.7500 ppm?	Yes	No	N/A	2nd
2.2	CCB analyzed at required frequency and all results +/- reporting limit from zero?	Yes	No	N/A	2nd
3.1	Were any samples with concentration above the linear range diluted and reanalyzed?	Yes	No	N/A	2nd
3.2	Were all sample holding times met?	Yes	No	N/A	2nd
4.1	All results for the preparation blank < reporting limits?	Yes	No	N/A	2nd
4.2	MS or MS/MSD recoveries within 20% at 1 ppm and within 20% RPD (for MSD)?	Yes	No	N/A	2nd
4.3	LCS percent recovery within 20% at 1 ppm and 20% RPD (for LCSD)?	Yes	No	N/A	2nd
4.4	Analytical spikes within QC limits where applicable?	Yes	No	N/A	2nd
4.5	ICP only: One serial dilution performed and within 10% of parent per SDG?	Yes	No	N/A	2nd
4.6	ICP only: RLV run per batch and within 20% of current values?	Yes	No	N/A	2nd
4.7	ICP only: ICSA, ICSAB analyzed at the required frequencies and within 20% of values per dilution record?	Yes	No	N/A	2nd
5.1	Are all nonconformances included and noted?	Yes	No	N/A	2nd
5.2	Is the correct date and time of analysis shown?	Yes	No	N/A	2nd
5.3	Did the analyst sign and date the digestion log for the analytical run?	Yes	No	N/A	2nd
5.4	Correct methodology used?	Yes	No	N/A	2nd
5.5	Transcriptions checked?	Yes	No	N/A	2nd
5.6	Calculations checked at minimum frequency?	Yes	No	N/A	2nd
5.7	Units checked?	Yes	No	N/A	2nd
5.8	Verified that appropriate data transferred to ReportDB?	Yes	No	N/A	2nd

First Level *[Signature]*

Date 02/25/13

Second *[Signature]*

Date 2/26/13



**Sample Check-in List**

Date/Time Received: 2-25-13/1100V Container GM Screen Result: (Airlock) .4 Initials B ]  
 Sample GM Screen Result (Sample Receiving) .4 Initials B ]

Client: WCH SDG #: JD1722 NA [ ] SAF #: RC-233 NA [ ]

Lot Number: J3B250424

Chain of Custody # RC-233-018

Shipping Container ID: hand deliv. NA NA Air Bill Number: \_\_\_\_\_ NA NA

Samples received inside shipping container/cooler/box Yes  ] 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  ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal  ]
3. Cooler temperature: 3.7 °C on ICE NA [ ]
4. Vermiculite/packing materials is NA  ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes  ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 1 x 125ml

8. Sample holding times exceeded? NA [ ] Yes [ ] No  ]

9. Samples have:  
 tape  hazard labels  
 custody seals  appropriate sample labels

10. Matrix:  
 A (FLT, Wipe, Solid, Soil) \_\_\_\_\_ I (Water)  
 S (Air, Niosh 7400) \_\_\_\_\_ T (Biological, Ni-63)

11. Samples:  
 are in good condition \_\_\_\_\_ are leaking  
 are broken \_\_\_\_\_ have air bubbles (Only for samples requiring no head space)  
 Other \_\_\_\_\_

12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA  ]  
 (If acidification is necessary, then document sample ID, initial pH, amount of HNO<sub>3</sub> added and pH after addition on table overleaf)

RPL ID # of preservative used: D/A

13. Were any anomalies identified in sample receipt? Yes [ ] No  ]

14. Description of anomalies (include sample numbers): NA



