ANALYTICAL REPORT

Job Number: 280-96754-1

Job Description: Ravenna, OH

For:
Cardno TEC, Inc
1658 Cole Boulevard
Suite 190
Golden, CO 80401

Attention: Ms. Heather Miner

Approved for release.
Stephanie K Rothmeyer
Project Manager I
5/17/2017 10:05 AM

Designee for
Patrick J McEntee, Manager of Project Management
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0107
patrick.mcentee@testamericainc.com
05/17/2017

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 4025.

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

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Table of Contents

Qualifiers

General Chemistry

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Cardno TEC, Inc

Project: Ravenna, OH

Report Number: 280-96754-1

With the 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. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

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

RECEIPT

The samples were received on 5/5/2017 at 9:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.5º C.

Receipt Exceptions

The requested analyses for IDW-050417 (280-96754-3) and the associated trip blank will be reported under a separate job series, 280-96754-2, with TestAmerica's standard flagging and reporting limits per predetermined project specifications. All other requested analyses will be reported under job series 280-96754-1.

HEXAVALENT CHROMIUM

Samples BKGmw-008-050417-GW (280-96754-1) and BKGmw-015-050417-GW (280-96754-2) were analyzed for hexavalent chromium in accordance with 7196A. The samples were analyzed on 05/05/2017.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH

TestAmerica Job ID: 280-96754-1

Client Sample ID: BKGmw-008-050417-GW — Lab Sample ID: 280-96754-1

No Detections.

Client Sample ID: BKGmw-015-050417-GW — Lab Sample ID: 280-96754-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: BKGmw-008-050417-GW

Lab Sample ID: 280-96754-1

Date Collected: 05/04/17 14:35

Matrix: Water

Date Received: 05/05/17 09:10

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	4.0	U	20	4.0	ug/L			05/05/17 11:00	1

Client Sample ID: BKGmw-015-050417-GW

Lab Sample ID: 280-96754-2

Date Collected: 05/04/17 14:35

Matrix: Water

Date Received: 05/05/17 09:10

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	4.0	U	20	4.0	ug/L			05/05/17 11:00	1

Default Detection Limits

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH

TestAmerica Job ID: 280-96754-1

General Chemistry

Analyte	LOQ	DL	Units	Method
Chromium, hexavalent	20	4.0	ug/L	7196A

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 280-372394/10
Matrix: Water
Analysis Batch: 372394

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	4.0	U	20	4.0	ug/L			05/05/17 11:00	1

Lab Sample ID: LCS 280-372394/8
Matrix: Water
Analysis Batch: 372394

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chromium, hexavalent			100	102		ug/L		102	90 - 111		

Lab Sample ID: LCSD 280-372394/9
Matrix: Water
Analysis Batch: 372394

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium, hexavalent			100	98.4		ug/L		98	90 - 111	3	20

Lab Sample ID: 280-96754-1 MS
Matrix: Water
Analysis Batch: 372394

Client Sample ID: BKGmw-008-050417-GW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chromium, hexavalent	4.0	U	100	96.6		ug/L		97	90 - 111		

Lab Sample ID: 280-96754-1 MSD
Matrix: Water
Analysis Batch: 372394

Client Sample ID: BKGmw-008-050417-GW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium, hexavalent	4.0	U	100	97.5		ug/L		98	90 - 111	1	20

Lab Sample ID: 280-96754-1 DU
Matrix: Water
Analysis Batch: 372394

Client Sample ID: BKGmw-008-050417-GW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chromium, hexavalent	4.0	U		4.0	U	ug/L				NC	20

General Chemistry

Analysis Batch: 372394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-96754-1	BKGmw-008-050417-GW	Total/NA	Water	7196A	
280-96754-2	BKGmw-015-050417-GW	Total/NA	Water	7196A	
MB 280-372394/10	Method Blank	Total/NA	Water	7196A	
LCS 280-372394/8	Lab Control Sample	Total/NA	Water	7196A	
LCSD 280-372394/9	Lab Control Sample Dup	Total/NA	Water	7196A	
280-96754-1 MS	BKGmw-008-050417-GW	Total/NA	Water	7196A	
280-96754-1 MSD	BKGmw-008-050417-GW	Total/NA	Water	7196A	
280-96754-1 DU	BKGmw-008-050417-GW	Total/NA	Water	7196A	

Lab Chronicle

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH

TestAmerica Job ID: 280-96754-1

Client Sample ID: BKGmw-008-050417-GW

Lab Sample ID: 280-96754-1

Date Collected: 05/04/17 14:35

Matrix: Water

Date Received: 05/05/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1	10 mL	10 mL	372394	05/05/17 11:00	IEU	TAL DEN

Client Sample ID: BKGmw-015-050417-GW

Lab Sample ID: 280-96754-2

Date Collected: 05/04/17 14:35

Matrix: Water

Date Received: 05/05/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1	10 mL	10 mL	372394	05/05/17 11:00	IEU	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH

TestAmerica Job ID: 280-96754-1

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-17

Analysis Method	Prep Method	Matrix	Analyte

Method Summary

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH

TestAmerica Job ID: 280-96754-1

Method	Method Description	Protocol	Laboratory
7196A	Chromium, Hexavalent	SW846	TAL DEN

Protocol References:

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

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH

TestAmerica Job ID: 280-96754-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-96754-1	BKGmw-008-050417-GW	Water	05/04/17 14:35	05/05/17 09:10
280-96754-2	BKGmw-015-050417-GW	Water	05/04/17 14:35	05/05/17 09:10

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-96754-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
CR6 ICV int_01236	05/06/17	05/05/17	Di Water, Lot na	100 mL	Cr6 ICV Std_00017	0.1 mL	Chromium, hexavalent	1 mg/L
.Cr6 ICV Std_00017	04/30/21		Hach, Lot A6103		(Purchased Reagent)		Chromium, hexavalent	1000 mg/L
CR6 Int cal_00804	05/06/17	05/05/17	Di Water, Lot na	100 mL	CR6 Cal std_00008	0.1 mL	Chromium, hexavalent	1 mg/L
.CR6 Cal std_00008	04/30/19		ERA, Lot 040416		(Purchased Reagent)		Chromium, hexavalent	1000 mg/L
CR6 spike sou_00843	05/06/17	05/05/17	Di Water, Lot na	100 mL	CR6 Cal std_00008	1 mL	Chromium, hexavalent	10 mg/L
.CR6 Cal std_00008	04/30/19		ERA, Lot 040416		(Purchased Reagent)		Chromium, hexavalent	1000 mg/L

Reagent

CR6 Cal std_00008

ERA

A Waters Company

Certificate of Analysis

PRODUCT:	1000 mg/L Hexavalent Chromium
CATALOG NUMBER:	019
LOT NUMBER:	040416
ISSUE DATE:	April 14, 2016
REVISION DATE:	Original
STARTING MATERIAL:	Potassium Dichromate ($K_2Cr_2O_7$)
CERTIFIED CONCENTRATION[1]:	1000 mg/L
UNCERTAINTY[2]:	0.6%
MATRIX:	18 megohm deionized water
DENSITY:	1.0001 ± 0.0008 g/mL at 21.5°C and 758 mm Hg
TRACEABILITY[3]:	101%
NIST/SRM:	SRM 136f Potassium Dichromate
VERIFICATION METHOD:	Spectrophotometry
STORAGE:	Store at 20-25°C

1. The **Certified Concentration** is the actual made-to concentration confirmed by ERA analytical verification.

2. The stated **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation and internal analytical verification of the product by ERA, multiplied by a coverage factor which is equal to the student t factor at a 95% confidence interval at n-1 degrees of freedom. The uncertainty applies to the product as supplied and does not take into account any required or optional dilutions and/or preparations the laboratory may perform while using this product.

3. Traceability Recovery = ((% Recovery certified standard)/(% Recovery NIST SRM))*100.

   The traceability data shown were compiled by analyzing the ERA standards or their associated stock solutions against the applicable NIST SRMs.

This standard **expires 4/2019**. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

This product is intended to be used as either a calibration standard or a quality control check of the entire analytical process for the analytes/matrix included in the standard.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or email to info@eraqc.com

Certifying Officer: Brian Miller

ISO/IEC GUIDE 34:2009

ACCREDITED

REFERENCE MATERIAL PRODUCER
CERTIFICATE NO. 1539.03

ISO/IEC 17025:2005

ACCREDITED

CHEMICAL TESTING LABORATORY
CERTIFICATE NO. 1539.02

16341 Table Mtn Pkwy, Golden, CO 80403 800-372-0122 fax: 303-421-0159 www.eraqc.com

Reagent

Cr6 ICV Std_00017

Certificate of Analysis List

For request number 806710

Catalog Number Entered	Lot Number Entered	Related Catalog Number	Related Lot Code	Description
1466442 1000	6103	N/A	N/A	Chromium Reference Standard Solution

Total Enclosures: 1

HACH COMPANY

P.O.Box 389
Loveland, CO 80539
(970) 669-3050

An ISO 9001 Certified Company

Certificate of Analysis

COMMODITY:**Chromium Reference Standard Solution 1000**
COMMODITY NUMBER: **14664-42** MANUFACTURE DATE: **4/12/2016** DATE OF ANALYSIS: **4/12/2016**
LOT NUMBER: **A6103**

TEST	*SPECIFICATIONS*	*RESULTS*
Hexavalent Chromium Concentration	995 to 1005 ppm	1000.0 ppm
pH of the solution	12 to 14	12.4

The expiration date is Apr 2021

The item 1466442 is traceable to NIST standards SRM 136f Potassium Dichromate LOT N/A.

Certified by _____

Scott Als
Analytical Services Chemist

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-96754-1

SDG No.:

Project: Ravenna, OH

Client Sample ID	Lab Sample ID
BKGmw-008-050417-GW	280-96754-1
BKGmw-015-050417-GW	280-96754-2

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: BKGmw-008-050417-GW
Lab Sample ID: 280-96754-1
Lab Name: TestAmerica Denver
Job No.: 280-96754-1
SDG ID.:
Matrix: Water
Date Sampled: 05/04/2017 14:35
Reporting Basis: WET
Date Received: 05/05/2017 09:10

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Chromium, hexavalent	4.0	20	4.0	4.0	ug/L	U		1	7196A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: BKGmw-015-050417-GW
Lab Sample ID: 280-96754-2
Lab Name: TestAmerica Denver
Job No.: 280-96754-1
SDG ID.:
Matrix: Water
Date Sampled: 05/04/2017 14:35
Reporting Basis: WET
Date Received: 05/05/2017 09:10

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Chromium, hexavalent	4.0	20	4.0	4.0	ug/L	U		1	7196A

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96754-1

SDG No.:

Analyst: IEU Batch Start Date: 05/05/2017

Reporting Units: mg/L Analytical Batch No.: 372394

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
6	ICV	11:00	Chromium, hexavalent	0.0507	0.0500	101	90-110		CR6 ICV int_01236
7	ICB	11:00	Chromium, hexavalent	0.0040				U	
18	CCV	11:00	Chromium, hexavalent	0.104	0.100	104	90-110		CR6 ICV int_01236
19	CCB	11:00	Chromium, hexavalent	0.0040				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96754-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	LOQ	Dil
Batch ID: 372394 Date: 05/05/2017 11:00							
7196A	MB 280-372394/10	Chromium, hexavalent	4.0	U	ug/L	20	1

FORM III-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96754-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 372394 Date: 05/05/2017 11:00											
7196A	280-96754-1	Chromium, hexavalent	4.0	U	ug/L						
7196A	280-96754-1 MS	Chromium, hexavalent	96.6		ug/L	100	97	90-111			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96754-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 372394 Date: 05/05/2017 11:00											
7196A	280-96754-1 MSD	Chromium, hexavalent	97.5		ug/L	100	98	90-111	1	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96754-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 372394 Date: 05/05/2017 11:00								
7196A	BKGmw-008-050417-GW	280-96754-1	Chromium, hexavalent	4.0	ug/L			U
7196A	BKGmw-008-050417-GW	280-96754-1 DU	Chromium, hexavalent	4.0	ug/L	NC	20	U

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96754-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 372394	Date: 05/05/2017 11:00										
						LCS Source: CR6 spike sou_00843					
7196A	LCS 280-372394/8	Chromium, hexavalent	102		ug/L	100	102	90-111	3	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96754-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 372394	Date: 05/05/2017 11:00										
						LCSD Source: CR6 spike sou_00843					
7196A	LCSD 280-372394/9	Chromium, hexavalent	98.4		ug/L	100	98	90-111	3	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-96754-1

SDG Number:

Matrix: Water Instrument ID: WC_HSPEC_7196

Method: 7196A DL Date: 02/16/2014 00:00

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Chromium, hexavalent		0.02	0.004

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-96754-1

SDG Number:

Matrix: Water Instrument ID: WC_HSPEC_7196

Method: 7196A XMDL Date: 05/16/2013 14:49

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Chromium, hexavalent		0.02	0.004

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-96754-1

SDG No.:

Instrument ID: WC_HSPEC_7196 Analysis Method: 7196A

Start Date: 05/05/2017 11:00 End Date: 05/05/2017 13:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				Cr6																								
IC 280-372394/1	1		11:00	X																								
IC 280-372394/2	1		11:00	X																								
IC 280-372394/3	1		11:00	X																								
IC 280-372394/4	1		11:00	X																								
IC 280-372394/5	1		11:00	X																								
ICV 280-372394/6	1		11:00	X																								
ICB 280-372394/7	1		11:00	X																								
LCS 280-372394/8	1	T	11:00	X																								
LCSD 280-372394/9	1	T	11:00	X																								
MB 280-372394/10	1	T	11:00	X																								
280-96754-1	1	T	11:00	X																								
280-96754-1 DU	1	T	11:00	X																								
280-96754-1 MS	1	T	11:00	X																								
280-96754-1 MSD	1	T	11:00	X																								
280-96754-2	1	T	11:00	X																								
ZZZZZZ			11:00																									
ZZZZZZ			11:00																									
CCV 280-372394/18	1		11:00	X																								
CCB 280-372394/19	1		11:00	X																								
ZZZZZZ			11:00																									
ZZZZZZ			13:15																									
ZZZZZZ			13:15																									
ZZZZZZ			13:15																									
CCV 280-372394/24			13:15																									
CCB 280-372394/25			13:15																									
ZZZZZZ			13:15																									

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-96754-1

SDG No.:

Batch Number: 372394 Batch Start Date: 05/05/17 11:00 Batch Analyst: Uge, Ikem E

Batch Method: 7196A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ColorBlk	UnCorResp	Initial pH	Final pH
IC 280-372394/1		7196A		10 mL	10 mL				
IC 280-372394/2		7196A		10 mL	10 mL				
IC 280-372394/3		7196A		10 mL	10 mL				
IC 280-372394/4		7196A		10 mL	10 mL				
IC 280-372394/5		7196A		10 mL	10 mL				
ICV 280-372394/6		7196A		10 mL	10 mL				
ICB 280-372394/7		7196A		10 mL	10 mL				
LCS 280-372394/8		7196A		10 mL	10 mL				
LCSD 280-372394/9		7196A		10 mL	10 mL				
MB 280-372394/10		7196A		10 mL	10 mL				
280-96754-A-1	BKGmw-008-050417-GW	7196A	T	10 mL	10 mL	0.005 Absorbance	0.002 Absorbance	4.5 SU	1.5 SU
280-96754-A-1 DU	BKGmw-008-050417-GW	7196A	T	10 mL	10 mL	0.005 Absorbance	0.002 Absorbance	4.5 SU	1.5 SU
280-96754-A-1 MS	BKGmw-008-050417-GW	7196A	T	10 mL	10 mL	0.005 Absorbance	0.117 Absorbance	4.5 SU	1.5 SU
280-96754-A-1 MSD	BKGmw-008-050417-GW	7196A	T	10 mL	10 mL	0.005 Absorbance	0.118 Absorbance	4.5 SU	1.5 SU
280-96754-A-2	BKGmw-015-050417-GW	7196A	T	10 mL	10 mL	0.007 Absorbance	0.002 Absorbance	4 SU	1.5 SU
CCV 280-372394/18		7196A		10 mL	10 mL				
CCB 280-372394/19		7196A		10 mL	10 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	CR6 ICV int 01236	CR6 Int cal 00804	CR6 spike sou 00843			
IC 280-372394/1		7196A			0.1 mL				
IC 280-372394/2		7196A			0.2 mL				
IC 280-372394/3		7196A			0.5 mL				
IC 280-372394/4		7196A			1 mL				
IC 280-372394/5		7196A			2 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-96754-1

SDG No.:

Batch Number: 372394 Batch Start Date: 05/05/17 11:00 Batch Analyst: Uge, Ikem E

Batch Method: 7196A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	CR6 ICV int 01236	CR6 Int cal 00804	CR6 spike sou 00843			
ICV 280-372394/6		7196A		0.5 mL					
ICB 280-372394/7		7196A							
LCS 280-372394/8		7196A				0.1 mL			
LCSD 280-372394/9		7196A				0.1 mL			
MB 280-372394/10		7196A							
280-96754-A-1	BKGmw-008-050417-GW	7196A	T						
280-96754-A-1 DU	BKGmw-008-050417-GW	7196A	T						
280-96754-A-1 MS	BKGmw-008-050417-GW	7196A	T			0.1 mL			
280-96754-A-1 MSD	BKGmw-008-050417-GW	7196A	T			0.1 mL			
280-96754-A-2	BKGmw-015-050417-GW	7196A	T						
CCV 280-372394/18		7196A		1 mL					
CCB 280-372394/19		7196A							

Batch Notes	
Acid Used for pH Adjustment ID	50%H2SO4_00029
Color Reagent ID	CR^6ColorR_00291
pH Paper ID	hc412308, hc601355
Pipette ID	100ix,1000iu,5000iu

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

372394

Calibration

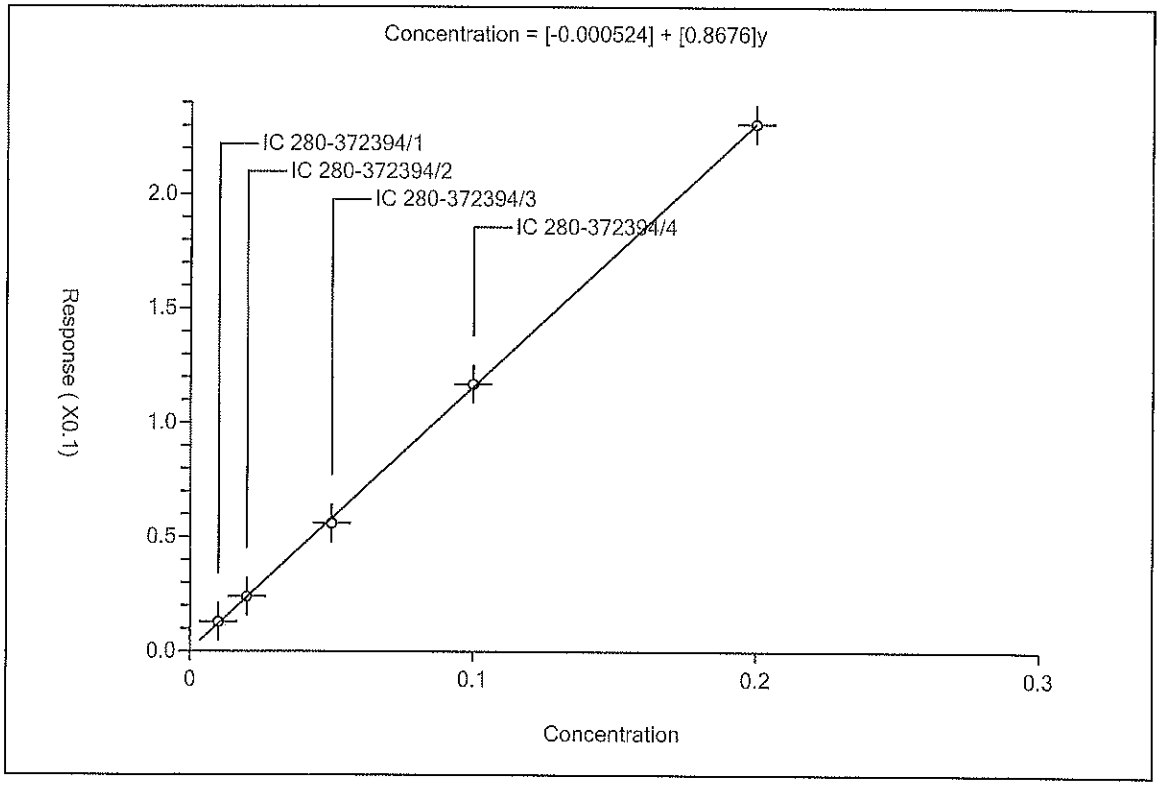
Calib 372394-0 / Cr (VI)

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Concentration
Calib Mode:	ESTD
RF Rounding:	0

Curve Coefficients	
Intercept:	-0.000524
Slope:	0.8676

Error Coefficients	
Standard Error:	0.001341
Relative Standard Error:	5.008
Correlation Coefficient:	0.9999
Coefficient of Determination (Adjusted):	0.9998 (0.9998)

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-372394/1	0.01	0.013			1.3	Y
2	IC 280-372394/2	0.02	0.024			1.2	Y
3	IC 280-372394/3	0.05	0.056			1.12	Y
4	IC 280-372394/4	0.1	0.117			1.17	Y
5	IC 280-372394/5	0.2	0.231			1.155	Y



TALS Raw Data Report

Job Number: 280-96754-1
LIMS Batch: 372394
Equipment: WC_HSPEC_7196

Laboratory: TestAmerica Denver

RS# 6 Lab ID: **ICV 280-372394/6** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.059	.05066440 mg/L	mg/L	101	90 110		

RS# 7 Lab ID: **ICB 280-372394/7** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.001	001391600 mg/L	.0040 U mg/L				

RS# 8 Lab ID: **LCS 280-372394/8** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.118	0.1018528 mg/L	ug/L	102	90 111		

RS# 9 Lab ID: **LCSD 280-372394/9** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.114	.09838240 mg/L	ug/L	98	90 111	3	20

RS# 10 Lab ID: **MB 280-372394/10** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.001	001391600 mg/L	4.0 U ug/L				

RS# 11 Lab ID: **280-96754-A-1** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.0030	003126800 mg/L	4.0 U ug/L				

RS# 12 Lab ID: **280-96754-A-1 DU** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.0030	003126800 mg/L	4.0 U ug/L			NC	20

RS# 13 Lab ID: **280-96754-A-1 MS** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.1120	096647200 mg/L	ug/L	97	90 111		

RS# 14 Lab ID: **280-96754-A-1 MSD** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.1130	097514800 mg/L	ug/L	98	90 111	1	20

RS# 15 Lab ID: **280-96754-A-2** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.0050	004862000 mg/L	4.0 U ug/L				

RS# 18 Lab ID: **CCV 280-372394/18** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.120	0.1035880 mg/L	mg/L	104	90 110		

RS# 19 Lab ID: **CCB 280-372394/19** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A_DOD5

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.002	001211200 mg/L	.0040 U mg/L				

TALS Raw Data Report

Job Number: 280-96757-1
LIMS Batch: 372394
Equipment: WC_HSPEC_7196

Laboratory: TestAmerica Denver

RS# 6 Lab ID: **ICV 280-372394/6** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.059	.05066440 mg/L	mg/L	101	90 110		

RS# 7 Lab ID: **ICB 280-372394/7** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.001	001391600 mg/L	mg/L				

RS# 8 Lab ID: **LCS 280-372394/8** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.118	0.1018528 mg/L	mg/L	102	85 115		

RS# 9 Lab ID: **LCSD 280-372394/9** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.114	.09838240 mg/L	mg/L	98	85 115	3	20

RS# 10 Lab ID: **MB 280-372394/10** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.001	001391600 mg/L	mg/L				

RS# 11 Lab ID: **280-96754-A-1** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.0030	003126800 mg/L	mg/L				

RS# 12 Lab ID: **280-96754-A-1 DU** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.0030	003126800 mg/L	mg/L			NC	20

RS# 13 Lab ID: **280-96754-A-1 MS** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.1120	096647200 mg/L	mg/L	97	85 115		

RS# 14 Lab ID: **280-96754-A-1 MSD** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.1130	097514800 mg/L	mg/L	98	85 115	1	20

RS# 16 Lab ID: **280-96757-P-1** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.0010	000343600 mg/L	mg/L				

RS# 18 Lab ID: **CCV 280-372394/18** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.120	0.1035880 mg/L	mg/L	104	90 110		

RS# 19 Lab ID: **CCB 280-372394/19** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.002	001211200 mg/L	mg/L				

TALS Raw Data Report

Job Number: 280-96758-1
LIMS Batch: 372394
Equipment: WC_HSPEC_7196

Laboratory: TestAmerica Denver

RS# 6 Lab ID: **ICV 280-372394/6** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.059	.05066440 mg/L	mg/L	101	90 110		

RS# 7 Lab ID: **ICB 280-372394/7** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.001	001391600 mg/L	mg/L				

RS# 8 Lab ID: **LCS 280-372394/8** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.118	0.1018528 mg/L	mg/L	102	85 115		

RS# 9 Lab ID: **LCSD 280-372394/9** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.114	.09838240 mg/L	mg/L	98	85 115	3	20

RS# 10 Lab ID: **MB 280-372394/10** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.001	001391600 mg/L	mg/L				

RS# 11 Lab ID: **280-96754-A-1** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.0030	003126800 mg/L	mg/L				

RS# 12 Lab ID: **280-96754-A-1 DU** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.0030	003126800 mg/L	mg/L			NC	20

RS# 13 Lab ID: **280-96754-A-1 MS** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.1120	096647200 mg/L	mg/L	97	85 115		

RS# 14 Lab ID: **280-96754-A-1 MSD** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.1130	097514800 mg/L	mg/L	98	85 115	1	20

RS# 17 Lab ID: **280-96758-G-1** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.0150	012490000 mg/L	0.012 J mg/L				

RS# 18 Lab ID: **CCV 280-372394/18** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.120	0.1035880 mg/L	mg/L	104	90 110		

RS# 19 Lab ID: **CCB 280-372394/19** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.002	001211200 mg/L	mg/L				

TALS Raw Data Report

Job Number: 280-96769-1
LIMS Batch: 372394
Equipment: WC_HSPEC_7196

Laboratory: TestAmerica Denver

RS# 6 Lab ID: **ICV 280-372394/6** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.059	.05066440 mg/L	mg/L	101	90 110		

RS# 7 Lab ID: **ICB 280-372394/7** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.001	001391600 mg/L	mg/L				

RS# 8 Lab ID: **LCS 280-372394/8** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.118	0.1018528 mg/L	mg/L	102	85 115		

RS# 9 Lab ID: **LCSD 280-372394/9** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.114	.09838240 mg/L	mg/L	98	85 115	3	20

RS# 10 Lab ID: **MB 280-372394/10** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.001	001391600 mg/L	mg/L				

RS# 11 Lab ID: **280-96754-A-1** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.0030	003126800 mg/L	mg/L				

RS# 12 Lab ID: **280-96754-A-1 DU** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.0030	003126800 mg/L	mg/L			NC	20

RS# 13 Lab ID: **280-96754-A-1 MS** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.1120	096647200 mg/L	mg/L	97	85 115		

RS# 14 Lab ID: **280-96754-A-1 MSD** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.1130	097514800 mg/L	mg/L	98	85 115	1	20

RS# 18 Lab ID: **CCV 280-372394/18** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.120	0.1035880 mg/L	mg/L	104	90 110		

RS# 19 Lab ID: **CCB 280-372394/19** Inj Date: 5/5/2017 11:00:26AM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.002	001211200 mg/L	mg/L				

RS# 20 Lab ID: **280-96769-E-3** Inj Date: 5/5/2017 11:00:26AM Dil: 2 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.0460	040433600 mg/L	mg/L				

RS# 21 Lab ID: **280-96769-E-4** Inj Date: 5/5/2017 1:15:13PM Dil: 2 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt

Cr (VI)	-0.0370	032625200 mg/L	mg/L					

RS# 22 Lab ID: **280-96769-E-1** Inj Date: 5/5/2017 1:15:13PM Dil: 2 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.1310	.11417960 mg/L	mg/L				

RS# 23 Lab ID: **280-96769-E-5** Inj Date: 5/5/2017 1:15:13PM Dil: 2 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.0250	022214000 mg/L	mg/L				

RS# 24 Lab ID: **CCV 280-372394/24** Inj Date: 5/5/2017 1:15:13PM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	0.118	0.1018528 mg/L	mg/L	102	90 110		

RS# 25 Lab ID: **CCB 280-372394/25** Inj Date: 5/5/2017 1:15:13PM Dil: 1.0 Meth: 7196A

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Cr (VI)	-0.002	002259200 mg/L	mg/L				

Shipping and Receiving Documents

TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Khroenke/Seik	Lab PM: McEntee, Patrick J	Carrier Tracking No(s): 810486084848	COC No:
Client Contact: Ms. Heather Miner	Phone: 330 388 1598	E-Mail: patrick.mcentee@testamericainc.com		Page: Page:
Company: Cardno TEC, Inc				Job #:

Analysis Requested

Address: 1658 Cole Boulevard Suite 190	Due Date Requested:	
City: Golden	TAT Requested (days): Standard	
State, Zip: CO, 80401		
Phone:	PO #: 0091979	
Email: heather.miner@cardno-gs.com	WO #: 076003.009.007	
Project Name: Ravenna, OH	TestAmerica Project #: 28014271	
Site:	SSOW#:	

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note:
			Preservation Code:					
BLGMW-008-050417-GW	5/4/17	1435	G	W	N	N	1	
BLGMW-015-050417-GW	5/4/17	1435	G	W	N	N	1	

280-96754 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 5/4/17 1830	Company ATC	Received by: FedEx	Date/Time: 5/4/17 1830	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 5/5/17 0910	Company TAD
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.5+0.0 IR#7 transfered by SF 5/5/17

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Login Sample Receipt Checklist

Client: Cardno TEC, Inc

Job Number: 280-96754-1

Login Number: 96754
List Number: 1
Creator: True, Joshua A

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received Trip Blank(s) not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	