



01/31/11

Technical Report for

KRW Consulting, Inc.

PCU 296-6A

Background

Accutest Job Number: D20596

Sampling Date: 01/21/11

Report to:

KRW Consulting, Inc.
8000 West 14th Avenue Suite 200
Lakewood, CO 80214
jhess@krwconsulting.com; dknudson@krwconsulting.com;
gknell@krwconsulting.com; crachak@krwconsulting.com
ATTN: Joe Hess

Total number of pages in report: 18



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

A handwritten signature in black ink, appearing to read 'John Hamilton'.

John Hamilton
Laboratory Director

Client Service contact: Amanda Kissell 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

Test results relate only to samples analyzed.

Table of Contents

-1-

Section 1: Sample Summary	3
Section 2: Case Narrative/Conformance Summary	4
Section 3: Sample Results	5
3.1: D20596-1: BG1	6
3.2: D20596-2: BG2	7
3.3: D20596-3: BG3	8
3.4: D20596-4: BG4	9
3.5: D20596-5: BG5	10
Section 4: Misc. Forms	11
4.1: Chain of Custody	12
Section 5: Metals Analysis - QC Data Summaries	13
5.1: Prep QC MP3900: As	14



Sample Summary

KRW Consulting, Inc.

Job No: D20596

PCU 296-6A
Project No: Background

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D20596-1	01/21/11	12:00 BB	01/25/11	SO	Soil	BG1
D20596-2	01/21/11	12:15 BB	01/25/11	SO	Soil	BG2
D20596-3	01/21/11	12:40 BB	01/25/11	SO	Soil	BG3
D20596-4	01/21/11	13:05 BB	01/25/11	SO	Soil	BG4
D20596-5	01/21/11	13:30 BB	01/25/11	SO	Soil	BG5

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: KRW Consulting, Inc.

Job No D20596

Site: PCU 296-6A

Report Date 1/31/2011 9:44:06 AM

On 01/25/2011, 5 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 5.8 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D20596 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals By Method SW846 6020

Matrix SO

Batch ID: MP3900

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D20595-1MS, D20595-1MSD, D20595-1SDL were used as the QC samples for the metals analysis.

Wet Chemistry By Method SM19 2540B M

Matrix SO

Batch ID: GN8011

- The data for SM19 2540B M meets quality control requirements.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	BG1	Date Sampled:	01/21/11
Lab Sample ID:	D20596-1	Date Received:	01/25/11
Matrix:	SO - Soil	Percent Solids:	81.1
Project:	PCU 296-6A		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	4.8	0.51	mg/kg	5	01/26/11	01/27/11 GJ	SW846 6020 ¹	SW846 3050B ²

(1) Instrument QC Batch: MA1279
(2) Prep QC Batch: MP3900

RL = Reporting Limit

Report of Analysis

Client Sample ID:	BG2	Date Sampled:	01/21/11
Lab Sample ID:	D20596-2	Date Received:	01/25/11
Matrix:	SO - Soil	Percent Solids:	81.1
Project:	PCU 296-6A		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	6.0	0.52	mg/kg	5	01/26/11	01/27/11 GJ	SW846 6020 ¹	SW846 3050B ²

(1) Instrument QC Batch: MA1279
(2) Prep QC Batch: MP3900

RL = Reporting Limit

Report of Analysis

Client Sample ID:	BG3	Date Sampled:	01/21/11
Lab Sample ID:	D20596-3	Date Received:	01/25/11
Matrix:	SO - Soil	Percent Solids:	76.3
Project:	PCU 296-6A		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	6.3	0.52	mg/kg	5	01/26/11	01/27/11 GJ	SW846 6020 ¹	SW846 3050B ²

(1) Instrument QC Batch: MA1279
(2) Prep QC Batch: MP3900

RL = Reporting Limit

Report of Analysis

Client Sample ID:	BG4		
Lab Sample ID:	D20596-4	Date Sampled:	01/21/11
Matrix:	SO - Soil	Date Received:	01/25/11
		Percent Solids:	82.1
Project:	PCU 296-6A		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	7.8	0.48	mg/kg	5	01/26/11	01/27/11 GJ	SW846 6020 ¹	SW846 3050B ²

(1) Instrument QC Batch: MA1279
(2) Prep QC Batch: MP3900

RL = Reporting Limit

Report of Analysis

Client Sample ID:	BG5	Date Sampled:	01/21/11
Lab Sample ID:	D20596-5	Date Received:	01/25/11
Matrix:	SO - Soil	Percent Solids:	83.6
Project:	PCU 296-6A		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	4.6	0.47	mg/kg	5	01/26/11	01/27/11 GJ	SW846 6020 ¹	SW846 3050B ²

(1) Instrument QC Batch: MA1279
(2) Prep QC Batch: MP3900

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Accutest Laboratories Mountain States
4036 Youngfield Street Wheat Ridge, Co 80033
TEL. 303-425-6021 877-737-4521
FAX 303-425-6021

[illegible]

D20596: Chain of Custody

Page 1 of 1

Metals Analysis

5

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D20596
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 296-6A

QC Batch ID: MP3900
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 01/26/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	25	.14	1.2		
Antimony	0.20	.001	.0095		
Arsenic	0.40	.049	.22	0.30	<0.40
Barium	1.0	.0035	.1		
Beryllium	0.10	.0075	.014		
Boron	20	.97	1		
Cadmium	0.050	.023	.048		
Calcium	200	1.8	8.2		
Chromium	1.0	.021	.24		
Cobalt	0.10	.0033	.003		
Copper	1.0	.011	.063		
Iron	20	.81	3.7		
Lead	0.25	.0012	.015		
Magnesium	50	.067	2.6		
Manganese	0.50	.007	.029		
Molybdenum	0.50	.0044	.023		
Nickel	1.0	.0029	.031		
Phosphorus	30	1.8	3.5		
Potassium	100	2	3.2		
Selenium	0.20	.075	.19		
Silver	0.050	.0008	.002		
Sodium	250	.8	4.4		
Strontium	10	.004	.04		
Thallium	0.10	.015	.02		
Tin	5.0	.006	.028		
Titanium	1.0	.035	.062		
Uranium	0.25	.00038	.0009		
Vanadium	2.0	.052	.29		
Zinc	5.0	.039	.12		

Associated samples MP3900: D20596-1, D20596-2, D20596-3, D20596-4, D20596-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D20596
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 296-6A

QC Batch ID: MP3900
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 01/26/11

Metal	D20595-1 Original MS		Spikelot MPICPALL % Rec		QC Limits
Aluminum					
Antimony					
Arsenic	4.6	108	128	81.0	60-119
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP3900: D20596-1, D20596-2, D20596-3, D20596-4, D20596-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D20596
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 296-6A

QC Batch ID: MP3900
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 01/26/11

Metal	D20595-1 Original	MSD	Spikelot MPICPAL	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	4.6	109	125	83.5	0.9	20
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP3900: D20596-1, D20596-2, D20596-3, D20596-4, D20596-5

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D20596
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 296-6A

QC Batch ID: MP3900
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 01/26/11

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	96.3	100	96.3	80-120
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP3900: D20596-1, D20596-2, D20596-3, D20596-4, D20596-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D20596
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 296-6A

QC Batch ID: MP3900
Matrix Type: SOLID

Methods: SW846 6020
Units: ug/l

Prep Date: 01/26/11

Metal	D20595-1 Original SDL 5:25 %DIF			QC Limits
Aluminum				
Antimony				
Arsenic	39.9	36.8	0.7	0-10
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP3900: D20596-1, D20596-2, D20596-3, D20596-4, D20596-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Accutest Mountain States					Jan 31, 2011 09:34 am	
Job Number:	D20596					
Account:	KRW Consulting, Inc.					
Project:	PCU 296-6A					
Project Number:	Background					
					Legend:	Hit
Client Sample ID:		BG1	BG2	BG3	BG4	BG5
Lab Sample ID:		D20596-1	D20596-2	D20596-3	D20596-4	D20596-5
Date Sampled:		01/21/2011	01/21/2011	01/21/2011	01/21/2011	01/21/2011
Matrix:		Soil	Soil	Soil	Soil	Soil
Metals Analysis						
Arsenic	mg/kg	4.8	6.0	6.3	7.8	4.6
General Chemistry						
Solids, Percent	%	81.1	81.1	76.3	82.1	83.6

From: [Gregory Knell](#)
To: [Christie Rachak](#)
Subject: FW: Accutest e-Hardcopy 2.0 Report D20596: PCU 296-6A
Date: Monday, January 31, 2011 9:52:37 AM
Attachments: [D20596.PDF](#)
[D1-14885.PDF](#)
[d20596 table.htm](#)

CoC matches invoice. The prelim report was received last Friday, as was the prelim report for the other lab report I okayed earlier this AM.
GK

-----Original Message-----

From: Accutest LabLink Mountain States [<mailto:lablink@accutest.com>]
Sent: Monday, January 31, 2011 9:35 AM
To: Joe Hess; Dwayne Knudson; Gregory Knell; Christie Rachak
Subject: Accutest e-Hardcopy 2.0 Report D20596: PCU 296-6A

Enclosed is the e-Hardcopy 2.0 report for the following Accutest job:

D20596: PCU 296-6A
Received: 25-JAN-11 3 day TAT
KRW Consulting, Inc.

The attached PDF file contains your report; 18 pages.
Report includes QC summaries.
The scanned chain of custody is also included in this report.
A copy of invoice D1-14885 for this job is also attached; 1 page.

NOTE: This PDF contains complete COMMBN deliverables.
No paper report will be mailed.

A RESULT SUMMARY TABLE is also attached in HTM format. This file can be opened as a web page -or- it can be saved to disk and opened using Excel. In order for tables to display properly, use of Excel 2003 or later is recommended.

NOTE: This PDF file is an e-Hardcopy 2.0 report. It is a complete, self-contained report with bookmarks, table of contents, and section markers, all with hypertext links for ease of navigation. We believe you will find it to be the most easy to use data package in the industry.

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