

June 1, 2021

PCD File No.:

# Water Quality Report

Crowe Subdivision Filing No. 1

The following describes the quality of the water to serve three (3) residential lots on 20.052 acres located within the northeast one-quarter of the southwest one-quarter of Section 28, Township 11 South, Range 66 west of the 6th principal meridian in El Paso County, Colorado (Subject Property). Crowe Well No. 1 currently exists and is permitted under Permit No. 98194. Two (2) wells (Crowe Wells No. 2 & 3) are proposed following platting of the property into three lots.

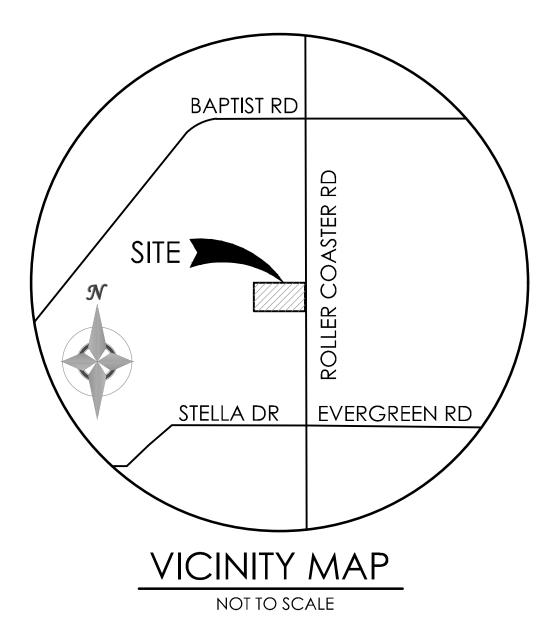
#### WATER QUALITY

M.V.E., inc. has examined water quality testing results for the existing Crowe Well No. 1 (permit No. 98194) located on the subject property. The water samples were drawn from the water well fixtures connected to the State of Colorado permitted well of the Dawson Aquifer at 15980 Roller Coaster Road. The samples were taken on 1/28/21. Testing for the required contaminants was performed by Colorado Analytical Laboratory and Hazen Research, Inc. The examined reports contain tests for each of the required contaminants in accordance with the El Paso County Land Development Code. The Dawson Aquifer is a confined aquifer. M.V.E. Inc. compared the test results to the Maximum Contaminant Level (MCL) for each substance and found the results to be within acceptable levels in accordance with El Paso County standards contained in the Land Development Code. Based on these findings we recommend that the El Paso County Health Department and El Paso County Attorney's office make a finding of sufficiency for water quality for the Crowe Subdivision final plat.

June 1, 2021 Page 2

# Attachments

M.V.E., Inc. • Engineers • Surveyors 1903 Lelaray Street, Suite 200 • Colorado Springs, CO 80909 • Phone 719-635-5736 Fax 719-635-5450 • e-mail mve@mvecivil.com





# **Analytical Results**

TASK NO: 210128041

Report To: David R Gorman, P.E. Company: Monument Valley Engineers - MVE Civil 1903 Lelaray St Suite 200 Colorado Springs CO 80909 Bill To: David R Gorman, P.E. Company: Monument Valley Engineers - MVE Civ 1903 Lelaray St Suite 200 Colorado Springs CO 80909

Task No.: 210128041 Client PO: Client Project:

Date Received: 1/28/21 Date Reported: 2/4/21 Matrix: Water - Drinking

Customer Sample ID Crowe

Sample Date/Time: 1/28/21

Lab Number: 210128041-01

10:30 AM

| Test                      | Result        | Method      | ML          | Date Analyzed | Analyzed By | MCL   |
|---------------------------|---------------|-------------|-------------|---------------|-------------|-------|
|                           |               |             |             |               |             |       |
| Nitrate/ Nitrite Nitrogen | 0.27 mg/L     | Calculation | 0.05 mg/L   | 2/2/21        | MAT         |       |
| Chloride                  | 0.9 mg/L      | EPA 300.0   | 0.1 mg/L    | 1/29/21       | MAT         |       |
| Fluoride                  | 0.20 mg/L     | EPA 300.0   | 0.09 mg/L   | . 1/29/21     | MAT         | 4     |
| Nitrate Nitrogen          | 0.27 mg/L     | EPA 300.0   | 0.05 mg/L   | 1/29/21       | MAT         | 10    |
| Nitrite Nitrogen          | < 0.03 mg/L   | EPA 300.0   | 0.03 mg/L   | 1/29/21       | MAT         | 1     |
| Sulfate                   | 1.6 mg/L      | EPA 300.0   | 0.1 mg/L    | 1/29/21       | MAT         |       |
| Cyanide-Total             | < 0.005 mg/L  | EPA 335.4   | 0.005 mg/L  | 2/1/21        | CES         | 0.02  |
| <u>Total</u>              |               |             |             |               |             |       |
| Iron                      | < 0.005 mg/L  | EPA 200.7   | 0.005 mg/L  | 2/3/21        | MBN         | 0.3   |
| Aluminum                  | < 0.001 mg/L  | EPA 200.8   | 0.001 mg/L  | 1/29/21       | IPC         | 0.05  |
| Antimony                  | < 0.0012 mg/L | EPA 200.8   | 0.0012 mg/L | . 1/29/21     | IPC         | 0.006 |
| Arsenic                   | < 0.0006 mg/L | EPA 200.8   | 0.0006 mg/L | 1/29/21       | IPC         | 0.01  |
| Barium                    | 0.0140 mg/L   | EPA 200.8   | 0.0007 mg/L | 1/29/21       | IPC         | 2     |
| Beryllium                 | < 0.0001 mg/L | EPA 200.8   | 0.0001 mg/L | . 1/29/21     | IPC         | 0.004 |
| Cadmium                   | < 0.0001 mg/L | EPA 200.8   | 0.0001 mg/L | 1/29/21       | IPC         | 0.005 |
| Chromium                  | < 0.0015 mg/L | EPA 200.8   | 0.0015 mg/L | 1/29/21       | IPC         | 0.1   |
| Manganese                 | < 0.0008 mg/L | EPA 200.8   | 0.0008 mg/L | 1/29/21       | IPC         | 0.05  |
| Mercury                   | < 0.0001 mg/L | EPA 200.8   | 0.0001 mg/L | 1/29/21       | IPC         | 0.002 |
| Selenium                  | < 0.0008 mg/L | EPA 200.8   | 0.0008 mg/L | 1/29/21       | IPC         | 0.05  |

Abbreviations/ References:

ML = Minimum Level = LRL = RL MCL = Maximum Contaminant Level per The EPA mg/L = Milligrams Per Liter or PPM ug/L = Micrograms Per Liter or PPB mpn/100 mls = Most Probable Number Index/ 100 mls Date Analyzed = Date Test Completed

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# **Analytical Results**

TASK NO: 210128041

Report To: David R Gorman, P.E. Company: Monument Valley Engineers - MVE Civil 1903 Lelaray St Suite 200 Colorado Springs CO 80909 Bill To: David R Gorman, P.E. Company: Monument Valley Engineers - MVE Civ 1903 Lelaray St Suite 200 Colorado Springs CO 80909

Task No.: 210128041 Client PO: Client Project:

Date Received: 1/28/21 Date Reported: 2/4/21 Matrix: Water - Drinking

Customer Sample ID Crowe

Sample Date/Time: 1/28/21

Lab Number: 210128041-01

10:30 AM

| Test         | Result        | Method    | ML          | Date Analyzed | Analyzed By | MCL   |
|--------------|---------------|-----------|-------------|---------------|-------------|-------|
| <u>Total</u> |               |           |             |               |             |       |
| Silver       | < 0.0005 mg/L | EPA 200.8 | 0.0005 mg/L | 1/29/21       | IPC         |       |
| Thallium     | < 0.0002 mg/L | EPA 200.8 | 0.0002 mg/L | 1/29/21       | IPC         | 0.002 |
| Zinc         | 0.037 mg/L    | EPA 200.8 | 0.001 mg/L  | 1/29/21       | IPC         | 5     |

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| Analytical                      | LABORATORIES, INC.                                | Commerce City Lab<br>10411 Heinz Way | Commerce City CU 80640<br><u>Lakewood Service Center</u> | 12860 W. Cedar Dr. Suite 100A     | Lakewood CO 80228<br>Phone: 303-659-2313 |                                  | www.coloradolab.com |                       | Ivsis) Subcontract Analyses                        | Nitrite<br>Fluoride<br>Inorganics<br>Alk.Lang. Index (Circle)<br>SUVA, UV 254 (Circle)<br>Radium 226/228<br>Radon<br>Uranium<br>Uranium<br>Chlorite<br>Chlorite                |                 |    |  |  |  | Seals Present Yes No D Headspace Yes Vo | E TTemn °C /Ice Samule Pres Ves Taxin | Received By:                   |   |
|---------------------------------|---|--------------------------------------|--|-----------------------------------|--|----------------------------------|---------------------|-----------------------|--|--|-----------------|----|--|--|--|---|---------------------------------------|--------------------------------|---|
| Custody                         | Project Information                               | PWSID:<br>System Name:               | Compliance Samples: Yes 🗆 No 💋                           | Send Results to CDPHE: Yes 🗆 No 🗹 | Task Number<br>(Lab Use Only) CAL Task   | 210128041                        | DEW                 |                       | Drinking Water Analyses (check requested analysis) | 531.1 Carbamates<br>547 Glyphosate<br>548.1 Endothall<br>549.2 Diquat<br>524.2 TTHMs<br>524.2 TTHMs<br>522.2 HAA55<br>Lead/Copper<br>Nitrate                                   |                 |    |  |  |  | C/S Info:                               | Delivered Via: LAN C/S Charpe Ed      | shed By:                       |   |
| Drinking Water Chain of Custody | Bill To Information (ff different from report to) |                                      | Address:   | City: State: Zip:                 | Phone:                                   | temail:                          |                     | PO Number:            | PHASE I, II, V                                     | No. of Containets       No. of Containets       Residual Chlorine       P/A Samples Only       F/A Samples Only       505 Pests/PCBs       505 Pests/PCBs       505 Pests/PCBs |                 |    |  |  |  | der attached - QBO-                     | Strade                                | Received By: c Bate/Time: (2   |   |
|                                 | Report To Information<br>Commany Name: MVE INC    | Contact Name: DAVE GORMAN            | Address: Rendred ST STR TOD                              | State: & Zip: Bog Of              | 9-635-5136                               | Email: DAVEG & MUTCNU. CONTEMAIL | Sample Collector:   | hone: 79 - 350 - 83CS |  | Date Time Client Sample ID / Sample Pt ID  | 128 10:30 CROWE | +— |  |  |  | Instructions: See boffle of             | 210/0671 for tes                      | Relinquished By:<br>Date/Time: | £ |

Page 3 of 3



**Analytical Results** 

TASK NO: 210128041

Report To: David R Gorman, P.E. Company: Monument Valley Engineers - MVE Civil 1903 Lelaray St Suite 200 Colorado Springs CO 80909 Bill To: David R Gorman, P.E. Company: Monument Valley Engineers - MVE Civ 1903 Lelaray St Suite 200 Colorado Springs CO 80909

| Task No.: 210128041 | Date Received: 1/28/21   |
|---------------------|--------------------------|
| Client PO:          | Date Reported: 2/4/21    |
| Client Project:     | Matrix: Water - Drinking |
|                     |                          |

| Lab Number    | Customer Sample ID | Sample  | Date/Time | Test                     | Result           | Method             | Date Analyzed      |
|---------------|--------------------|---------|-----------|--------------------------|------------------|--------------------|--------------------|
| 210128041-01C | Crowe              | 1/28/21 | 10:30 AM  | Total Coliform<br>E-Coli | Absent<br>Absent | SM 9223<br>SM 9223 | 1/29/21<br>1/29/21 |

Abbreviations/ References:

Absent = Coliform Not Detected Present = Coliform Detected - Chlorination Recommended Date Analyzed = Date Test Completed SM = "Standard Methods for the Examination of Water and Wastewater"; APHA; 19th Edition; 1995

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| Analytical                      | LABORATORIES, INC.                                | Commerce City Lab<br>10411 Heinz Way | Lakewood Service Center           | 12860 W. Cedar Dr, Suite 100A     | Lakewood CU 80228<br>Phone: 303-659-2313 |                                  | <u>www.coloradolab.com</u> |                     | ulysis)SubcoutractAnalyses                         | Vitrite<br>Fluoride<br>Alk/Lang, Index (Circle)<br>Alk/Lang, Index (Circle)<br>SUVA, UV 254 (Circle)<br>Radium 226/228<br>Radon<br>Pranium<br>Chlorite<br>Chlorite<br>Chlorite |                 |    |  |  |  | Seals Present Yes D No D Headspace Yes Vo D | e H Temb. °C //ce                | Received By:                   |      |
|---------------------------------|---|--------------------------------------|-----------------------------------|-----------------------------------|--|----------------------------------|----------------------------|---------------------|--|--|-----------------|----|--|--|--|---|----------------------------------|--------------------------------|------|
| Custody                         | Project Information                               | PWSID:<br>System Name:               | Compliance Samples: Yes 🗆 No 💋    | Send Results to CDPHE: Yes 🗆 No 🗹 | Task Number<br>(Lab Use Only) CAL Task   | 210128041                        | DEW                        |                     | Drinking Wäter Analyses (check requested analysis) | 531.1 Carbamates<br>547 Glyphosate<br>548.1 Endothall<br>549.2 Diquat<br>524.2 TTHMs<br>524.2 TTHMs<br>524.2 TTHMs<br>1.ead/Copper<br>Nitrate                                  |                 |    |  |  |  | C/S Info:                                   | Delivered Via: 110 C/S Charee Fd | shed By:                       | of 3 |
| Drinking Water Chain of Custody | Bill To Information (ff different from report to) |                                      | Address:                          | City: State: Zip:                 | Phone:                                   | temail:                          |                            | PO Number:          | PHASE I, II, V                                     | No. of Containers       No. of Containers       Stat.2 VOCs       505 Pests/PCBs       505 Pests/PCBs       505 Pests/PCBs   |                 |    |  |  |  | der attached - QBO-                         | Se heft                          | Received By: c Bate/Time: (2   |      |
|                                 | Report To Information<br>Commany Name: MVE INC    | Contact Name: DAVE GORMAN            | Address:<br>ROZ LELARN ST STL TOD | State: & Zip: Bog Of              | 9-635-5136                               | Email: DAVEG & MUTCNU. CONTEMAIL | Sample Collector:          | hone: TR - 350-83CS |  | Date Time Client Sample ID / Sample Pt ID  | 128 10:30 CROWE | +— |  |  |  | Instructions: See boffle of                 | 210 act to tes                   | Relinquished By:<br>Date/Time: | £    |

Page 2 of 2



Report To: David R Gorman, P.E. Company: Monument Valley Engineers - MVE Civil 1903 Lelaray St Suite 200 Colorado Springs CO 80909 **Analytical Results** 

TASK NO: 210128041

Bill To: David R Gorman, P.E. Company: Monument Valley Engineers - MVE Civ 1903 Lelaray St Suite 200 Colorado Springs CO 80909

Task No.: 210128041 Client PO: Client Project:

Date Received: 1/28/21 Date Reported: 2/4/21 Matrix: Water - Drinking

| Customer Sample ID | Crowe |
|--------------------|-------|
|--------------------|-------|

Sample Date/Time: 1/28/21 10:30 AM Lab Number: 210128041-01

| Test                   | Result             | Method      | ML   | Date Analyzed | Analyzed By |
|------------------------|--------------------|-------------|------|---------------|-------------|
| Bicarbonate            | 35.5 mg/L as CaCO3 | SM 2320-B   | 4    | 1/29/21       | ECM         |
| Calcium as CaCO3       | 21.6 mg/L          | EPA 200.7   | 0.1  | 2/3/21        | MBN         |
| Carbonate              | < 4 mg/L as CaCO3  | SM 2320-B   | 4    | 1/29/21       | ECM         |
| Hydroxide              | < 4 mg/L as CaCO3  | SM 2320-B   | 4    | 1/29/21       | ECM         |
| Langelier Index        | -1.88 units        | SM 2330-B   |      | 2/4/21        | SAN         |
| pН                     | 6.95 units         | SM 4500-H-B | 0.01 | 1/29/21       | MBN         |
| Temperature            | 20 °C              | SM 4500-H-B | 1    | 1/29/21       | MBN         |
| Total Alkalinity       | 35.5 mg/L as CaCO3 | SM 2320-B   | 4    | 1/29/21       | ECM         |
| Total Dissolved Solids | 75 mg/L            | SM 2540-C   | 5    | 2/3/21        | ISG         |

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|---------------------------------|---|--------------------------------------|-----------------------------------|-----------------------------------|--|----------------------------------|----------------------------|---------------------|--|--|-----------------|----|--|--|--|---|----------------------------------|--------------------------------|------|
| Custody                         | Project Information                               | PWSID:<br>System Name:               | Compliance Samples: Yes 🗆 No 💋    | Send Results to CDPHE: Yes 🗆 No 🗹 | Task Number<br>(Lab Use Only) CAL Task   | 210128041                        | DEW                        |                     | Drinking Wäter Analyses (check requested analysis) | 531.1 Carbamates<br>547 Glyphosate<br>548.1 Endothall<br>549.2 Diquat<br>524.2 TTHMs<br>524.2 TTHMs<br>524.2 TTHMs<br>1.ead/Copper<br>Nitrate                                  |                 |    |  |  |  | C/S Info:                                   | Delivered Via: 110 C/S Charee Fd | shed By:                       | of 3 |
| Drinking Water Chain of Custody | Bill To Information (ff different from report to) |                                      | Address:                          | City: State: Zip:                 | Phone:                                   | temail:                          |                            | PO Number:          | PHASE I, II, V                                     | No. of Containers       No. of Containers       Stat.2 VOCs       505 Pests/PCBs       505 Pests/PCBs       505 Pests/PCBs   |                 |    |  |  |  | der attached - QBO-                         | Se heft                          | Received By: c Bate/Time: (2   |      |
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Page 2 of 2



Hazen Research, Inc. 4601 Indiana Street Golden, CO 80403 USA Tel: (303) 279-4501 Fax: (303) 278-1528

Lab Control ID: 21M01166 Received: Jan 29, 2021 Reported: Feb 22, 2021 Purchase Order No. None Received

Customer ID: 20040H Account ID: Z01034

Stuart Nielson Colorado Analytical Laboratories, Inc. 10411 Heinz Way Commerce City, CO 80640

# ANALYTICAL REPORT

Report may only be copied in its entirety. Results reported herein relate only to discrete samples submitted by the client. Hazen Research, Inc. does not warrant that the results are representative of anything other than the samples that were received in the laboratory

Ú By:

Jessica Axen Analytical Laboratories Director



## Customer ID: 20040H Account ID: Z01034

### ANALYTICAL REPORT

## Stuart Nielson Colorado Analytical Laboratories, Inc.

| La          | ab Sam | ple ID | 21M01166-001 |            |              |              |               |         |
|-------------|--------|--------|--------------|------------|--------------|--------------|---------------|---------|
| Custom      | er Sam | ple ID | 210128043-0  | 01 - Crowe |              |              |               |         |
|             |        |        |              | sampled or | n 01/28/21 @ | @ 1030       |               |         |
|             |        |        |              | Precision* | Detection    |              | Analysis      |         |
| Parameter   | Units  | Code   | Result       | +/-        | Limit        | Method       | Date / Time   | Analyst |
| Gross Alpha | pCi/L  | Т      | 0.7          | 1.3        | 0.2          | SM 7110 B    | 2/9/21 @ 0919 | KT      |
| Gross Beta  | pCi/L  | Т      | <3.9         | 2.1        | 3.9          | SM 7110 B    | 2/9/21 @ 0919 | KT      |
| Radium-226  | pCi/L  | Т      | NR           | -          | -            | SM 7500-Ra B | -             | -       |
| Radium-228  | pCi/L  | Т      | NR           | -          | -            | EPA Ra-05    | -             | -       |

NR - Not Requested - Analysis not requested on this sample.

Certification ID's: CO/EPA CO00008

\*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than



## Customer ID: 20040H Account ID: Z01034

### ANALYTICAL REPORT

## Stuart Nielson Colorado Analytical Laboratories, Inc.

| La                 | ab Sam | ple ID | 21M01166-002 |             |              |              |                |         |
|--------------------|--------|--------|--------------|-------------|--------------|--------------|----------------|---------|
| Custom             | er Sam | ple ID | 210128043-   | 01A - Crowe |              |              |                |         |
|                    |        |        |              | sampled or  | n 01/28/21 ( | D 1030       |                |         |
|                    |        |        |              | Precision*  | Detection    |              | Analysis       |         |
| Parameter          | Units  | Code   | Result       | +/-         | Limit        | Method       | Date / Time    | Analyst |
| <b>Gross Alpha</b> | pCi/L  | Т      | NR           | -           | -            | SM 7110 B    | -              | -       |
| Gross Beta         | pCi/L  | Т      | NR           | -           | -            | SM 7110 B    | -              | -       |
| Radium-226         | pCi/L  | Т      | 0.4          | 0.2         | 0.1          | SM 7500-Ra B | 2/15/21 @ 1136 | AS      |
| Radium-228         | pCi/L  | Т      | 1.9          | 0.9         | 0.3          | EPA Ra-05    | 2/1/21 @ 1140  | JR      |

NR - Not Requested - Analysis not requested on this sample.

Certification ID's: CO/EPA CO00008

\*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

Date: 02/09/2021

#### **Batch QC Summary Form**

| Analyte: Gross Alpha        |     |           |         |      |                 |
|-----------------------------|-----|-----------|---------|------|-----------------|
| Control Standard/LFB:       | ID: | C-11      | pCi/mL: | 57.4 | (use 1 diluted) |
| Spike Solution:             | ID: | C-11      | pCi/mL: | 57.4 | (use 1 mL)      |
| Spike Recovery Calculation: |     | Sample: T | ap*     |      |                 |
|                             |     |           |         |      |                 |

| Calculation: | (52.2) | (1.000) | -    | (0.4) | (0.200) | x 100 = | 91% |
|--------------|--------|---------|------|-------|---------|---------|-----|
|              |        |         | 57.4 |       |         |         |     |

#### Batch QC Evaluation:

| Parameter        | Criteria                        | Pass | Fail | N/A |
|------------------|---------------------------------|------|------|-----|
|                  |                                 |      |      |     |
| Control Std./LFB | +/- 30 %                        | x    |      |     |
| Spike Recovery   | 70 - 130 %                      | x    |      |     |
| Blank            | < or = 3 x Uncertainty          | X    |      |     |
| Duplicate 1      | 95% confidence interval overlap | X    |      |     |
| Duplicate 2 *    | 95% confidence interval overlap |      |      | X   |

\* Required for batch size greater than 10 samples.

#### Conclusions:

Batch QC Passes\*\* х Batch QC Fails Batch QC Passes, with exceptions\*\*:

**Reruns Required:** 

Narrative:

\*\*All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluted in this report.

#### Batch Listing by Lab Control Number:

| 21M01165 |                   |
|----------|-------------------|
| 21M01166 |                   |
| 21M01182 |                   |
| 21M01183 |                   |
| 21M01206 | <u>Evaluator:</u> |
| 21M01207 |                   |
| 21M01208 | Jynnea Rectwell   |
|          | Olympica .        |
|          | U                 |
|          | <br>02/12/2021    |
|          | <br>Data          |

Date: 02/09/2021

#### **Batch QC Summary Form**

| Analyte: Gross Beta         |       |           |         |       |                 |         |     |
|-----------------------------|-------|-----------|---------|-------|-----------------|---------|-----|
| Control Standard/LFB:       | ID:   | C-11      | pCi/mL: | 44    | (use 1 diluted) |         |     |
| Spike Solution:             | ID:   | C-11      | pCi/mL: | 44    | (use 1 mL)      |         |     |
| Spike Recovery Calculation: |       | Sample: 7 | Гар*    |       |                 |         |     |
| Calculation:(4              | 40.1) | (1.000)   | - 44    | (0.4) | (0.200)         | x 100 = | 91% |

#### Batch QC Evaluation:

| Parameter                    | Criteria                        | Pass | Fail | N/A |
|------------------------------|---------------------------------|------|------|-----|
|                              |                                 |      |      |     |
| Control Std./LFB             | +/- 20 %                        | X    |      |     |
| Spike Recovery               | 80 - 120 %                      | X    |      |     |
| Blank < or = 3 x Uncertainty |                                 | Х    |      |     |
| Duplicate 1                  | 95% confidence interval overlap | X    |      |     |
| Duplicate 2 *                | 95% confidence interval overlap |      |      | X   |

\* Required for batch size greater than 10 samples.

#### Conclusions:

Batch QC Passes\*\* х Batch QC Fails Batch QC Passes, with exceptions\*\*:

**Reruns Required:** 

Narrative:

\*\*All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluted in this report.

#### Batch Listing by Lab Control Number:

| 21M01165 |                   |
|----------|-------------------|
| 21M01166 |                   |
| 21M01182 |                   |
| 21M01183 |                   |
| 21M01206 | <u>Evaluator:</u> |
| 21M01207 |                   |
| 21M01208 | Jynnea Rectwell   |
|          | Olympica .        |
|          | U                 |
|          | <br>02/12/2021    |
|          | <br>Data          |

Date: 02/15/2021

#### **Batch QC Summary Form**

| Analyte: Radium-226         |       |           |          |         |                 |         |     |
|-----------------------------|-------|-----------|----------|---------|-----------------|---------|-----|
| Control Standard/LFB:       | ID:   | NBL-6A    | pCi/mL:  | 23      | (use 2 diluted) |         |     |
| Spike Solution:             | ID:   | NBL-6A    | pCi/mL:  | 23      | (use 2 mL)      |         |     |
| Spike Recovery Calculation: |       | Sample: 2 | 1M01167- | 1a      |                 |         |     |
| Calculation:(42             | 28.7) | (0.400)   | -        | (334.0) | (0.400)         | x 100 = | 82% |

46

#### Batch QC Evaluation:

| Parameter        | Criteria                        | Pass | Fail | N/A |
|------------------|---------------------------------|------|------|-----|
|                  |                                 |      |      |     |
| Control Std./LFB | +/- 20 %                        | Х    |      |     |
| Spike Recovery   | 80 - 120 %                      | Х    |      |     |
| Blank            | < or = 3 x Uncertainty          | Х    |      |     |
| Duplicate 1      | 95% confidence interval overlap | Х    |      |     |
| Duplicate 2 *    | 95% confidence interval overlap |      |      | X   |

\* Required for batch size greater than 10 samples.

#### Conclusions:

 x
 Batch QC Passes\*\*

 Batch QC Fails
 Batch QC Passes, with exceptions\*\*:

Reruns Required:

Narrative:

\*\*All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluted in this report.

#### Batch Listing by Lab Control Number:

| 21M01167 |                   |
|----------|-------------------|
| 21M01193 |                   |
| 21M01166 |                   |
| 21M01201 |                   |
| 21M01202 | <u>Evaluator:</u> |
| 21M01209 |                   |
| 21M01210 | Jynnea Rectwell   |
| 21M01230 | Olympica          |
| 21M01231 | 0                 |
| 21M01235 | <br>02/19/2021    |
|          | Data              |

Date

Date: 02/01/2021

#### **Batch QC Summary Form**

| Analyte: Radium-228                              |     |        |         |      |                  |
|--|-----|--------|---------|------|------------------|
| Control Standard/LFB:                            | ID: | NBL-7A | pCi/mL: | 13.3 | (use 10 diluted) |
| Spike Solution:                                  | ID: | NBL-7A | pCi/mL: | 13.3 | (use 10 mL)      |
| Spike Recovery Calculation: Sample: 21M01142-01c |     |        |         |      |                  |
|  |     |        |         |      |                  |

| Calculation: | (146.9) (1.000) | -   | (3.8) (1.000) | x 100 = | 108% |
|--------------|-----------------|-----|---------------|---------|------|
|              |                 | 133 |               | —       |      |

#### Batch QC Evaluation:

| Parameter        | Criteria                        | Pass | Fail | N/A |
|------------------|---------------------------------|------|------|-----|
|                  |                                 |      |      |     |
| Control Std./LFB | +/- 20 %                        | Х    |      |     |
| Spike Recovery   | 80 - 120 %                      | Х    |      |     |
| Blank            | < or = 3 x Uncertainty          | Х    |      |     |
| Duplicate 1      | 95% confidence interval overlap | Х    |      |     |
| Duplicate 2 *    | 95% confidence interval overlap |      |      | X   |

\* Required for batch size greater than 10 samples.

#### Conclusions:

 x
 Batch QC Passes\*\*

 Batch QC Fails
 Batch QC Passes, with exceptions\*\*:

Reruns Required:

Narrative:

\*\*All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluted in this report.

#### Batch Listing by Lab Control Number:

| 21M01142<br>21M01151<br>21M01153<br>21M01154<br>21M01165<br>21M01166<br>21M01167 | <u>Evaluator:</u><br>Jymea Rectwell |
|--|-------------------------------------|
|  | <br>02/08/2021                      |

Date



# Ship To: Hazen Research

1 of 1

Sub-Lab Chain of Custody Form

21/01165

| Report To Information   |  | Bill To Information (If different from report to) | Project Name                 |  |                          |  |  |  |  |
|---|--|---|------------------------------|--|--------------------------|--|--|--|--|
| Company Name:<br>Report To:<br>E-Mail:  | <u>Colorado Analytical Laboratory</u><br><u>Stuart Nielson</u><br><u>stuartnielson@coloradolab.com</u> |   | -                            |  |                          |  |  |  |  |
| Address:<br><u>10411 Heinz Way</u><br><u>Commerce City, C</u><br>Phone: <u>303-65</u> |  | Address:  | CAL TASK<br>210128043<br>DEW | Compliance Samples:<br>Submit Data to CDPHE: | Yes │ No ✔<br>Yes │ No ✔ |  |  |  |  |

|           |           |                       |                  | Tests Requested   |  |  |  |   |   |  |  |  |      |                        |
|-----------|-----------|-----------------------|------------------|---|--|--|--|---|---|--|--|--|------|------------------------|
|           |           | Sample ID             | Matrix           | Kaarum 228 (Sub)<br>IGross Alpha/Beta (Sub)<br>Radium 226 (Sub) |  |  |  |   |   |  |  |  | <br> |                        |
| Sample Da | te/ i ime | Sample ID             | watrix           | 1 :   |  |  |  |   |   |  |  |  |      | Container Type         |
| 1/28/21   | 10:30 AM  | 210128043-01 - Crowe  | Water - Drinking | X   |  |  |  | Π |   |  |  |  |      | 11 Cylinder - HNO3     |
| 1/28/21   | 10:30 AM  | 210128043-01A - Crowe | Water - Drinking | XIX   |  |  |  |   | ľ |  |  |  |      | 3 - 1L Cylinder - HNO3 |
| Comment   |           |                       | -                | 1   |  |  |  |   |   |  |  |  |      |                        |

Comment:

| Relinquished by:<br>(Signature) Date: Time: Received by:<br>(Signature) (Signature) (Signature) Received by: | Date: Time: Relinquished by: | Date: Time: | Received by:<br>(Signature) | Date: Time: |
|--|------------------------------|-------------|-----------------------------|-------------|
| - F F F IIZ IIZI ANNU FOLLOW   | 13212 R                      | ec'o presid |                             | Page 1 of 1 |