



3440 South 700 West

Salt Lake City, UT 84119

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e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lenora Sullivan
Utah Division of Water Quality
PO Box 144870
SLC, UT 84114
TEL: (801) 538-6329

RE: Gold King Mine - San Juan River Sampling

Dear Lenora Sullivan:

Lab Set ID: 1508275

American West Analytical Laboratories received sample(s) on 8/13/2015 for the analyses presented in the following report.

American West Analytical Laboratories (AWAL) is accredited by The National Environmental Laboratory Accreditation Program (NELAP) in Utah and Texas; and is state accredited in Colorado, Idaho, New Mexico, Wyoming, and Missouri.

All analyses were performed in accordance to the NELAP protocols unless noted otherwise. Accreditation scope documents are available upon request. If you have any questions or concerns regarding this report please feel free to call.

The abbreviation "Surr" found in organic reports indicates a surrogate compound that is intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitation limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit. Analytical results are reported to three significant figures for quality control and calculation purposes.

This is a revision to a report originally issued 8/14/2014. Pages 1, 4, and 15 have been revised to correct collection times.

Thank You,

Approved by: _____
Laboratory Director or designee



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Laboratory Director

Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508275-001
Client Sample ID: San Juan R at Mexican Hat US163 Xing (4953000)
Collection Date: 8/13/2015 1205h
Received Date: 8/13/2015 2017h

Analytical Results

TOTAL METALS

| Compound | CAS | Units | Date Prepared | Date Analyzed | Method Used | MDL | Reporting Limit | Analytical Result | Qual |
|------------|-----------|-------|-----------------|-----------------|-------------|------------|-----------------|-------------------|----------------|
| Aluminum | 7429-90-5 | mg/L | 8/13/2015 2116h | 8/14/2015 113h | E200.7 | 0.0237 | 0.100 | 44.7 | ² |
| Antimony | 7440-36-0 | mg/L | 8/14/2015 1000h | 8/14/2015 131h | E200.8 | 0.0000366 | 0.00200 | 0.00190 | J ¹ |
| Arsenic | 7440-38-2 | mg/L | 8/14/2015 1000h | 8/14/2015 131h | E200.8 | 0.0000920 | 0.00200 | 0.0165 | |
| Barium | 7440-39-3 | mg/L | 8/14/2015 1000h | 8/14/2015 131h | E200.8 | 0.000538 | 0.00200 | 1.45 | B ¹ |
| Beryllium | 7440-41-7 | mg/L | 8/14/2015 1000h | 8/14/2015 131h | E200.8 | 0.0000288 | 0.00200 | 0.00544 | |
| Cadmium | 7440-43-9 | mg/L | 8/14/2015 1000h | 8/14/2015 131h | E200.8 | 0.000193 | 0.000500 | 0.00125 | |
| Calcium | 7440-70-2 | mg/L | 8/13/2015 2116h | 8/14/2015 105h | E200.7 | 0.401 | 10.0 | 246 | ² |
| Chromium | 7440-47-3 | mg/L | 8/14/2015 1000h | 8/14/2015 131h | E200.8 | 0.00154 | 0.00200 | 0.0183 | |
| Cobalt | 7440-48-4 | mg/L | 8/14/2015 1000h | 8/14/2015 131h | E200.8 | 0.0000434 | 0.00400 | 0.0250 | |
| Copper | 7440-50-8 | mg/L | 8/14/2015 1000h | 8/14/2015 131h | E200.8 | 0.000692 | 0.00200 | 0.0495 | |
| Iron | 7439-89-6 | mg/L | 8/13/2015 2116h | 8/14/2015 113h | E200.7 | 0.0767 | 0.100 | 21.6 | ² |
| Lead | 7439-92-1 | mg/L | 8/14/2015 1000h | 8/14/2015 131h | E200.8 | 0.000264 | 0.00200 | 0.0625 | |
| Magnesium | 7439-95-4 | mg/L | 8/13/2015 2116h | 8/14/2015 113h | E200.7 | 0.0294 | 1.00 | 41.9 | ¹ |
| Manganese | 7439-96-5 | mg/L | 8/14/2015 1000h | 8/14/2015 1304h | E200.8 | 0.00764 | 0.0100 | 1.84 | ² |
| Mercury | 7439-97-6 | mg/L | 8/13/2015 2130h | 8/14/2015 1126h | E245.1 | 0.00000892 | 0.000150 | 0.000127 | J |
| Molybdenum | 7439-98-7 | mg/L | 8/14/2015 1000h | 8/14/2015 131h | E200.8 | 0.000206 | 0.00200 | 0.000677 | J ¹ |
| Nickel | 7440-02-0 | mg/L | 8/14/2015 1000h | 8/14/2015 131h | E200.8 | 0.000754 | 0.00200 | 0.0392 | |
| Potassium | 7440-09-7 | mg/L | 8/13/2015 2116h | 8/14/2015 113h | E200.7 | 0.247 | 1.00 | 12.5 | |
| Selenium | 7782-49-2 | mg/L | 8/14/2015 1000h | 8/14/2015 131h | E200.8 | 0.0000634 | 0.00200 | 0.00159 | J |
| Silver | 7440-22-4 | mg/L | 8/14/2015 1000h | 8/14/2015 131h | E200.8 | 0.0000244 | 0.00200 | 0.000523 | JB |
| Sodium | 7440-23-5 | mg/L | 8/13/2015 2116h | 8/14/2015 1055h | E200.7 | 0.330 | 10.0 | 48.8 | |
| Thallium | 7440-28-0 | mg/L | 8/14/2015 1000h | 8/14/2015 131h | E200.8 | 0.0000242 | 0.00200 | 0.000432 | J |
| Vanadium | 7440-62-2 | mg/L | 8/14/2015 1000h | 8/14/2015 131h | E200.8 | 0.000438 | 0.00440 | 0.0661 | B |
| Zinc | 7440-66-6 | mg/L | 8/14/2015 1000h | 8/14/2015 131h | E200.8 | 0.00476 | 0.00500 | 0.145 | |

¹ - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

² - Analyte concentration is too high for accurate matrix spike recovery and/or RPD.

B - This analyte was also detected in the method blank below the PQL.

J - Estimated value between the MDL and the reporting limit (PQL).



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508275-002
Client Sample ID: San Juan R at Sand Island (4953250)
Collection Date: 8/13/2015 1128h
Received Date: 8/13/2015 2017h

Analytical Results

TOTAL METALS

| Compound | CAS | Units | Date Prepared | Date Analyzed | Method Used | MDL | Reporting Limit | Analytical Result | Qual |
|------------|-----------|-------|-----------------|-----------------|-------------|------------|-----------------|-------------------|------|
| Aluminum | 7429-90-5 | mg/L | 8/13/2015 2116h | 8/14/2015 122h | E200.7 | 0.0237 | 0.100 | 19.3 | |
| Antimony | 7440-36-0 | mg/L | 8/14/2015 1000h | 8/14/2015 148h | E200.8 | 0.0000366 | 0.00200 | 0.000215 | J |
| Arsenic | 7440-38-2 | mg/L | 8/14/2015 1000h | 8/14/2015 148h | E200.8 | 0.0000920 | 0.00200 | 0.00877 | B |
| Barium | 7440-39-3 | mg/L | 8/14/2015 1000h | 8/14/2015 148h | E200.8 | 0.000538 | 0.00200 | 0.661 | |
| Beryllium | 7440-41-7 | mg/L | 8/14/2015 1000h | 8/14/2015 148h | E200.8 | 0.0000288 | 0.00200 | 0.00252 | |
| Cadmium | 7440-43-9 | mg/L | 8/14/2015 1000h | 8/14/2015 148h | E200.8 | 0.000193 | 0.000500 | 0.000744 | |
| Calcium | 7440-70-2 | mg/L | 8/13/2015 2116h | 8/14/2015 112h | E200.7 | 0.401 | 10.0 | 168 | |
| Chromium | 7440-47-3 | mg/L | 8/14/2015 1000h | 8/14/2015 148h | E200.8 | 0.00154 | 0.00200 | 0.00879 | |
| Cobalt | 7440-48-4 | mg/L | 8/14/2015 1000h | 8/14/2015 148h | E200.8 | 0.0000434 | 0.00400 | 0.0136 | |
| Copper | 7440-50-8 | mg/L | 8/14/2015 1000h | 8/14/2015 148h | E200.8 | 0.000692 | 0.00200 | 0.0336 | |
| Iron | 7439-89-6 | mg/L | 8/13/2015 2116h | 8/14/2015 122h | E200.7 | 0.0767 | 0.100 | 12.9 | |
| Lead | 7439-92-1 | mg/L | 8/14/2015 1000h | 8/14/2015 148h | E200.8 | 0.000264 | 0.00200 | 0.0356 | |
| Magnesium | 7439-95-4 | mg/L | 8/13/2015 2116h | 8/14/2015 122h | E200.7 | 0.0294 | 1.00 | 22.8 | |
| Manganese | 7439-96-5 | mg/L | 8/14/2015 1000h | 8/14/2015 148h | E200.8 | 0.00153 | 0.00200 | 1.19 | |
| Mercury | 7439-97-6 | mg/L | 8/13/2015 2130h | 8/14/2015 1119h | E245.1 | 0.00000892 | 0.000150 | 0.0000600 | J |
| Molybdenum | 7439-98-7 | mg/L | 8/14/2015 1000h | 8/14/2015 148h | E200.8 | 0.000206 | 0.00200 | 0.000862 | J |
| Nickel | 7440-02-0 | mg/L | 8/14/2015 1000h | 8/14/2015 148h | E200.8 | 0.000754 | 0.00200 | 0.0188 | |
| Potassium | 7440-09-7 | mg/L | 8/13/2015 2116h | 8/14/2015 122h | E200.7 | 0.247 | 1.00 | 6.83 | |
| Selenium | 7782-49-2 | mg/L | 8/14/2015 1000h | 8/14/2015 148h | E200.8 | 0.0000634 | 0.00200 | 0.00111 | J |
| Silver | 7440-22-4 | mg/L | 8/14/2015 1000h | 8/14/2015 148h | E200.8 | 0.0000244 | 0.00200 | 0.000451 | JB |
| Sodium | 7440-23-5 | mg/L | 8/13/2015 2116h | 8/14/2015 122h | E200.7 | 0.0330 | 1.00 | 31.6 | |
| Thallium | 7440-28-0 | mg/L | 8/14/2015 1000h | 8/14/2015 148h | E200.8 | 0.0000242 | 0.00200 | 0.000294 | J |
| Vanadium | 7440-62-2 | mg/L | 8/14/2015 1000h | 8/14/2015 148h | E200.8 | 0.000438 | 0.00440 | 0.0329 | B |
| Zinc | 7440-66-6 | mg/L | 8/14/2015 1000h | 8/14/2015 148h | E200.8 | 0.00476 | 0.00500 | 0.0927 | |

B - This analyte was also detected in the method blank below the PQL.

J - Estimated value between the MDL and the reporting limit (PQL).



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Laboratory Director

Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508275-003
Client Sample ID: San Juan R at Town of Montezuma
Collection Date: 8/13/2015 1046h
Received Date: 8/13/2015 2017h

Analytical Results

TOTAL METALS

| Compound | CAS | Units | Date Prepared | Date Analyzed | Method Used | MDL | Reporting Limit | Analytical Result | Qual |
|------------|-----------|-------|-----------------|-----------------|-------------|-----------|-----------------|-------------------|------|
| Aluminum | 7429-90-5 | mg/L | 8/13/2015 2116h | 8/14/2015 124h | E200.7 | 0.0237 | 0.100 | 23.7 | |
| Antimony | 7440-36-0 | mg/L | 8/14/2015 1000h | 8/14/2015 151h | E200.8 | 0.0000366 | 0.00200 | 0.000156 | J |
| Arsenic | 7440-38-2 | mg/L | 8/14/2015 1000h | 8/14/2015 151h | E200.8 | 0.0000920 | 0.00200 | 0.0101 | B |
| Barium | 7440-39-3 | mg/L | 8/14/2015 1000h | 8/14/2015 151h | E200.8 | 0.000538 | 0.00200 | 0.722 | |
| Beryllium | 7440-41-7 | mg/L | 8/14/2015 1000h | 8/14/2015 151h | E200.8 | 0.0000288 | 0.00200 | 0.00357 | |
| Cadmium | 7440-43-9 | mg/L | 8/14/2015 1000h | 8/14/2015 151h | E200.8 | 0.000193 | 0.000500 | 0.000708 | |
| Calcium | 7440-70-2 | mg/L | 8/13/2015 2116h | 8/14/2015 114h | E200.7 | 0.401 | 10.0 | 127 | |
| Chromium | 7440-47-3 | mg/L | 8/14/2015 1000h | 8/14/2015 151h | E200.8 | 0.00154 | 0.00200 | 0.00933 | |
| Cobalt | 7440-48-4 | mg/L | 8/14/2015 1000h | 8/14/2015 151h | E200.8 | 0.0000434 | 0.00400 | 0.0173 | |
| Copper | 7440-50-8 | mg/L | 8/14/2015 1000h | 8/14/2015 151h | E200.8 | 0.000692 | 0.00200 | 0.0479 | |
| Iron | 7439-89-6 | mg/L | 8/13/2015 2116h | 8/14/2015 124h | E200.7 | 0.0767 | 0.100 | 17.8 | |
| Lead | 7439-92-1 | mg/L | 8/14/2015 1000h | 8/14/2015 151h | E200.8 | 0.000264 | 0.00200 | 0.0443 | |
| Magnesium | 7439-95-4 | mg/L | 8/13/2015 2116h | 8/14/2015 124h | E200.7 | 0.0294 | 1.00 | 20.8 | |
| Manganese | 7439-96-5 | mg/L | 8/14/2015 1000h | 8/14/2015 151h | E200.8 | 0.00153 | 0.00200 | 1.27 | |
| Mercury | 7439-97-6 | mg/L | 8/13/2015 2130h | 8/14/2015 1128h | E245.1 | 0.0000892 | 0.000150 | 0.000103 | J |
| Molybdenum | 7439-98-7 | mg/L | 8/14/2015 1000h | 8/14/2015 151h | E200.8 | 0.000206 | 0.00200 | 0.000681 | J |
| Nickel | 7440-02-0 | mg/L | 8/14/2015 1000h | 8/14/2015 151h | E200.8 | 0.000754 | 0.00200 | 0.0193 | |
| Potassium | 7440-09-7 | mg/L | 8/13/2015 2116h | 8/14/2015 124h | E200.7 | 0.247 | 1.00 | 6.73 | |
| Selenium | 7782-49-2 | mg/L | 8/14/2015 1000h | 8/14/2015 151h | E200.8 | 0.0000634 | 0.00200 | 0.000948 | J |
| Silver | 7440-22-4 | mg/L | 8/14/2015 1000h | 8/14/2015 151h | E200.8 | 0.0000244 | 0.00200 | 0.000312 | JB |
| Sodium | 7440-23-5 | mg/L | 8/13/2015 2116h | 8/14/2015 124h | E200.7 | 0.0330 | 1.00 | 34.2 | |
| Thallium | 7440-28-0 | mg/L | 8/14/2015 1000h | 8/14/2015 151h | E200.8 | 0.0000242 | 0.00200 | 0.000324 | J |
| Vanadium | 7440-62-2 | mg/L | 8/14/2015 1000h | 8/14/2015 151h | E200.8 | 0.000438 | 0.00440 | 0.0342 | B |
| Zinc | 7440-66-6 | mg/L | 8/14/2015 1000h | 8/14/2015 151h | E200.8 | 0.00476 | 0.00500 | 0.109 | |

B - This analyte was also detected in the method blank below the PQL.

J - Estimated value between the MDL and the reporting limit (PQL).

Reissue of a previously generated report. The collection time has been revised. Information herein supersedes that of the previously issued reports.



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508275-004
Client Sample ID: San Juan R at US160 Xing in CO (4954000)
Collection Date: 8/13/2015 1001h
Received Date: 8/13/2015 2017h

Analytical Results

TOTAL METALS

| Compound | CAS | Units | Date Prepared | Date Analyzed | Method Used | MDL | Reporting Limit | Analytical Result | Qual |
|------------|-----------|-------|-----------------|-----------------|-------------|------------|-----------------|-------------------|------|
| Aluminum | 7429-90-5 | mg/L | 8/13/2015 2116h | 8/14/2015 126h | E200.7 | 0.0237 | 0.100 | 38.7 | |
| Antimony | 7440-36-0 | mg/L | 8/14/2015 1000h | 8/14/2015 154h | E200.8 | 0.0000366 | 0.00200 | 0.000156 | J |
| Arsenic | 7440-38-2 | mg/L | 8/14/2015 1000h | 8/14/2015 154h | E200.8 | 0.0000920 | 0.00200 | 0.0120 | B |
| Barium | 7440-39-3 | mg/L | 8/14/2015 1000h | 8/14/2015 154h | E200.8 | 0.000538 | 0.00200 | 1.11 | |
| Beryllium | 7440-41-7 | mg/L | 8/14/2015 1000h | 8/14/2015 154h | E200.8 | 0.0000288 | 0.00200 | 0.00562 | |
| Cadmium | 7440-43-9 | mg/L | 8/14/2015 1000h | 8/14/2015 154h | E200.8 | 0.000193 | 0.000500 | 0.000941 | |
| Calcium | 7440-70-2 | mg/L | 8/13/2015 2116h | 8/14/2015 116h | E200.7 | 0.401 | 10.0 | 124 | |
| Chromium | 7440-47-3 | mg/L | 8/14/2015 1000h | 8/14/2015 154h | E200.8 | 0.00154 | 0.00200 | 0.0149 | |
| Cobalt | 7440-48-4 | mg/L | 8/14/2015 1000h | 8/14/2015 154h | E200.8 | 0.0000434 | 0.00400 | 0.0289 | |
| Copper | 7440-50-8 | mg/L | 8/14/2015 1000h | 8/14/2015 154h | E200.8 | 0.000692 | 0.00200 | 0.0793 | |
| Iron | 7439-89-6 | mg/L | 8/13/2015 2116h | 8/14/2015 126h | E200.7 | 0.0767 | 0.100 | 31.1 | |
| Lead | 7439-92-1 | mg/L | 8/14/2015 1000h | 8/14/2015 154h | E200.8 | 0.000264 | 0.00200 | 0.0665 | |
| Magnesium | 7439-95-4 | mg/L | 8/13/2015 2116h | 8/14/2015 126h | E200.7 | 0.0294 | 1.00 | 22.5 | |
| Manganese | 7439-96-5 | mg/L | 8/14/2015 1000h | 8/14/2015 154h | E200.8 | 0.00153 | 0.00200 | 1.67 | |
| Mercury | 7439-97-6 | mg/L | 8/13/2015 2130h | 8/14/2015 1129h | E245.1 | 0.00000892 | 0.000150 | 0.000153 | |
| Molybdenum | 7439-98-7 | mg/L | 8/14/2015 1000h | 8/14/2015 154h | E200.8 | 0.000206 | 0.00200 | 0.000529 | J |
| Nickel | 7440-02-0 | mg/L | 8/14/2015 1000h | 8/14/2015 154h | E200.8 | 0.000754 | 0.00200 | 0.0289 | |
| Potassium | 7440-09-7 | mg/L | 8/13/2015 2116h | 8/14/2015 126h | E200.7 | 0.247 | 1.00 | 8.54 | |
| Selenium | 7782-49-2 | mg/L | 8/14/2015 1000h | 8/14/2015 154h | E200.8 | 0.0000634 | 0.00200 | 0.00120 | J |
| Silver | 7440-22-4 | mg/L | 8/14/2015 1000h | 8/14/2015 154h | E200.8 | 0.0000244 | 0.00200 | 0.000395 | JB |
| Sodium | 7440-23-5 | mg/L | 8/13/2015 2116h | 8/14/2015 126h | E200.7 | 0.0330 | 1.00 | 45.0 | |
| Thallium | 7440-28-0 | mg/L | 8/14/2015 1000h | 8/14/2015 154h | E200.8 | 0.0000242 | 0.00200 | 0.000578 | J |
| Vanadium | 7440-62-2 | mg/L | 8/14/2015 1000h | 8/14/2015 154h | E200.8 | 0.000438 | 0.00440 | 0.0510 | B |
| Zinc | 7440-66-6 | mg/L | 8/14/2015 1000h | 8/14/2015 154h | E200.8 | 0.00476 | 0.00500 | 0.177 | |

B - This analyte was also detected in the method blank below the PQL.

J - Estimated value between the MDL and the reporting limit (PQL).



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508275-005
Client Sample ID: San Juan R at Clay Hills
Collection Date: 8/13/2015 1442h
Received Date: 8/13/2015 2017h

Analytical Results

TOTAL METALS

| Compound | CAS | Units | Date Prepared | Date Analyzed | Method Used | MDL | Reporting Limit | Analytical Result | Qual |
|------------|-----------|-------|-----------------|-----------------|-------------|------------|-----------------|-------------------|------|
| Aluminum | 7429-90-5 | mg/L | 8/13/2015 2116h | 8/14/2015 136h | E200.7 | 0.0237 | 0.100 | 42.9 | |
| Antimony | 7440-36-0 | mg/L | 8/14/2015 1000h | 8/14/2015 208h | E200.8 | 0.0000366 | 0.00200 | 0.000144 | J |
| Arsenic | 7440-38-2 | mg/L | 8/14/2015 1000h | 8/14/2015 208h | E200.8 | 0.0000920 | 0.00200 | 0.0184 | B |
| Barium | 7440-39-3 | mg/L | 8/14/2015 1000h | 8/14/2015 208h | E200.8 | 0.000538 | 0.00200 | 1.76 | |
| Beryllium | 7440-41-7 | mg/L | 8/14/2015 1000h | 8/14/2015 208h | E200.8 | 0.0000288 | 0.00200 | 0.00739 | |
| Cadmium | 7440-43-9 | mg/L | 8/14/2015 1000h | 8/14/2015 208h | E200.8 | 0.000193 | 0.000500 | 0.00147 | |
| Calcium | 7440-70-2 | mg/L | 8/13/2015 2116h | 8/14/2015 119h | E200.7 | 0.401 | 10.0 | 355 | |
| Chromium | 7440-47-3 | mg/L | 8/14/2015 1000h | 8/14/2015 208h | E200.8 | 0.00154 | 0.00200 | 0.0156 | |
| Cobalt | 7440-48-4 | mg/L | 8/14/2015 1000h | 8/14/2015 208h | E200.8 | 0.0000434 | 0.00400 | 0.0323 | |
| Copper | 7440-50-8 | mg/L | 8/14/2015 1000h | 8/14/2015 208h | E200.8 | 0.000692 | 0.00200 | 0.0688 | |
| Iron | 7439-89-6 | mg/L | 8/13/2015 2116h | 8/14/2015 136h | E200.7 | 0.0767 | 0.100 | 23.0 | |
| Lead | 7439-92-1 | mg/L | 8/14/2015 1000h | 8/14/2015 208h | E200.8 | 0.000264 | 0.00200 | 0.0834 | |
| Magnesium | 7439-95-4 | mg/L | 8/13/2015 2116h | 8/14/2015 136h | E200.7 | 0.0294 | 1.00 | 49.7 | |
| Manganese | 7439-96-5 | mg/L | 8/14/2015 1000h | 8/14/2015 1314h | E200.8 | 0.00764 | 0.0100 | 2.96 | |
| Mercury | 7439-97-6 | mg/L | 8/13/2015 2130h | 8/14/2015 1135h | E245.1 | 0.00000892 | 0.000150 | 0.000185 | |
| Molybdenum | 7439-98-7 | mg/L | 8/14/2015 1000h | 8/14/2015 208h | E200.8 | 0.000206 | 0.00200 | 0.000560 | J |
| Nickel | 7440-02-0 | mg/L | 8/14/2015 1000h | 8/14/2015 208h | E200.8 | 0.000754 | 0.00200 | 0.0357 | |
| Potassium | 7440-09-7 | mg/L | 8/13/2015 2116h | 8/14/2015 136h | E200.7 | 0.247 | 1.00 | 11.5 | |
| Selenium | 7782-49-2 | mg/L | 8/14/2015 1000h | 8/14/2015 208h | E200.8 | 0.0000634 | 0.00200 | 0.00139 | J |
| Silver | 7440-22-4 | mg/L | 8/14/2015 1000h | 8/14/2015 208h | E200.8 | 0.0000244 | 0.00200 | 0.000491 | JB |
| Sodium | 7440-23-5 | mg/L | 8/13/2015 2116h | 8/14/2015 136h | E200.7 | 0.0330 | 1.00 | 52.0 | |
| Thallium | 7440-28-0 | mg/L | 8/14/2015 1000h | 8/14/2015 208h | E200.8 | 0.0000242 | 0.00200 | 0.000407 | J |
| Vanadium | 7440-62-2 | mg/L | 8/14/2015 1000h | 8/14/2015 208h | E200.8 | 0.000438 | 0.00440 | 0.0643 | B |
| Zinc | 7440-66-6 | mg/L | 8/14/2015 1000h | 8/14/2015 208h | E200.8 | 0.00476 | 0.00500 | 0.162 | |

B - This analyte was also detected in the method blank below the PQL.

J - Estimated value between the MDL and the reporting limit (PQL).



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508275-001
Client Sample ID: San Juan R at Mexican Hat US163 Xing (4953000)
Collection Date: 8/13/2015 1205h
Received Date: 8/13/2015 2017h

Analytical Results

DISSOLVED METALS

| Compound | CAS | Units | Date Prepared | Date Analyzed | Method Used | MDL | Reporting Limit | Analytical Result | Qual |
|------------|-----------|-------|-----------------|-----------------|-------------|------------|-----------------|-------------------|------|
| Aluminum | 7429-90-5 | mg/L | 8/13/2015 2114h | 8/14/2015 143h | E200.7 | 0.0237 | 0.100 | 0.293 | |
| Antimony | 7440-36-0 | mg/L | 8/14/2015 958h | 8/14/2015 217h | E200.8 | 0.0000366 | 0.00200 | 0.00161 | J |
| Arsenic | 7440-38-2 | mg/L | 8/14/2015 958h | 8/14/2015 217h | E200.8 | 0.0000920 | 0.00200 | 0.00206 | |
| Barium | 7440-39-3 | mg/L | 8/14/2015 958h | 8/14/2015 217h | E200.8 | 0.000538 | 0.00200 | 0.201 | |
| Beryllium | 7440-41-7 | mg/L | 8/14/2015 958h | 8/14/2015 217h | E200.8 | 0.0000288 | 0.00200 | < 0.00200 | U |
| Cadmium | 7440-43-9 | mg/L | 8/14/2015 958h | 8/14/2015 217h | E200.8 | 0.000193 | 0.000500 | < 0.000500 | U |
| Calcium | 7440-70-2 | mg/L | 8/13/2015 2114h | 8/14/2015 143h | E200.7 | 0.0401 | 1.00 | 42.6 | |
| Chromium | 7440-47-3 | mg/L | 8/14/2015 958h | 8/14/2015 217h | E200.8 | 0.00154 | 0.00200 | < 0.00200 | U |
| Cobalt | 7440-48-4 | mg/L | 8/14/2015 958h | 8/14/2015 217h | E200.8 | 0.0000434 | 0.00400 | 0.000148 | J |
| Copper | 7440-50-8 | mg/L | 8/14/2015 958h | 8/14/2015 217h | E200.8 | 0.000692 | 0.00200 | 0.00346 | |
| Iron | 7439-89-6 | mg/L | 8/13/2015 2114h | 8/14/2015 143h | E200.7 | 0.0767 | 0.100 | 0.143 | |
| Lead | 7439-92-1 | mg/L | 8/14/2015 958h | 8/14/2015 217h | E200.8 | 0.000264 | 0.00200 | < 0.00200 | U |
| Magnesium | 7439-95-4 | mg/L | 8/13/2015 2114h | 8/14/2015 143h | E200.7 | 0.0294 | 1.00 | 7.21 | |
| Manganese | 7439-96-5 | mg/L | 8/14/2015 958h | 8/14/2015 217h | E200.8 | 0.00153 | 0.00200 | 0.00354 | |
| Mercury | 7439-97-6 | mg/L | 8/13/2015 2130h | 8/14/2015 1153h | E245.1 | 0.00000892 | 0.000150 | < 0.000150 | U |
| Molybdenum | 7439-98-7 | mg/L | 8/14/2015 958h | 8/14/2015 217h | E200.8 | 0.000206 | 0.00200 | 0.00233 | |
| Nickel | 7440-02-0 | mg/L | 8/14/2015 958h | 8/14/2015 217h | E200.8 | 0.000754 | 0.00200 | 0.000764 | J |
| Potassium | 7440-09-7 | mg/L | 8/13/2015 2114h | 8/14/2015 143h | E200.7 | 0.247 | 1.00 | 3.30 | |
| Selenium | 7782-49-2 | mg/L | 8/14/2015 958h | 8/14/2015 217h | E200.8 | 0.0000634 | 0.00200 | 0.00118 | J |
| Silver | 7440-22-4 | mg/L | 8/14/2015 958h | 8/14/2015 217h | E200.8 | 0.0000244 | 0.00200 | 0.000182 | J |
| Sodium | 7440-23-5 | mg/L | 8/13/2015 2114h | 8/14/2015 143h | E200.7 | 0.0330 | 1.00 | 44.4 | B |
| Thallium | 7440-28-0 | mg/L | 8/14/2015 958h | 8/14/2015 217h | E200.8 | 0.0000242 | 0.00200 | < 0.00200 | U |
| Vanadium | 7440-62-2 | mg/L | 8/14/2015 958h | 8/14/2015 217h | E200.8 | 0.000438 | 0.00440 | 0.00713 | B |
| Zinc | 7440-66-6 | mg/L | 8/14/2015 958h | 8/14/2015 217h | E200.8 | 0.00476 | 0.00500 | 0.0198 | |

- The sample pH was unadjustable to a pH <2 due to the sample matrix.

B - This analyte was also detected in the method blank below the PQL.

J - Estimated value between the MDL and the reporting limit (PQL).

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508275-002
Client Sample ID: San Juan R at Sand Island (4953250)
Collection Date: 8/13/2015 1128h
Received Date: 8/13/2015 2017h

Analytical Results

DISSOLVED METALS

| Compound | CAS | Units | Date Prepared | Date Analyzed | Method Used | MDL | Reporting Limit | Analytical Result | Qual |
|------------|-----------|-------|-----------------|-----------------|-------------|------------|-----------------|-------------------|------|
| Aluminum | 7429-90-5 | mg/L | 8/13/2015 2114h | 8/14/2015 147h | E200.7 | 0.0237 | 0.100 | 0.509 | I |
| Antimony | 7440-36-0 | mg/L | 8/14/2015 958h | 8/14/2015 221h | E200.8 | 0.0000366 | 0.00200 | 0.000667 | J |
| Arsenic | 7440-38-2 | mg/L | 8/14/2015 958h | 8/14/2015 221h | E200.8 | 0.0000920 | 0.00200 | 0.00130 | J |
| Barium | 7440-39-3 | mg/L | 8/14/2015 958h | 8/14/2015 221h | E200.8 | 0.000538 | 0.00200 | 0.156 | |
| Beryllium | 7440-41-7 | mg/L | 8/14/2015 958h | 8/14/2015 221h | E200.8 | 0.0000288 | 0.00200 | 0.0000326 | J |
| Cadmium | 7440-43-9 | mg/L | 8/14/2015 958h | 8/14/2015 221h | E200.8 | 0.000193 | 0.000500 | < 0.000500 | U |
| Calcium | 7440-70-2 | mg/L | 8/13/2015 2114h | 8/14/2015 1101h | E200.7 | 0.401 | 10.0 | 53.6 | |
| Chromium | 7440-47-3 | mg/L | 8/14/2015 958h | 8/14/2015 221h | E200.8 | 0.00154 | 0.00200 | < 0.00200 | U |
| Cobalt | 7440-48-4 | mg/L | 8/14/2015 958h | 8/14/2015 221h | E200.8 | 0.0000434 | 0.00400 | 0.000210 | J |
| Copper | 7440-50-8 | mg/L | 8/14/2015 958h | 8/14/2015 221h | E200.8 | 0.000692 | 0.00200 | 0.00310 | |
| Iron | 7439-89-6 | mg/L | 8/13/2015 2114h | 8/14/2015 147h | E200.7 | 0.0767 | 0.100 | 0.275 | |
| Lead | 7439-92-1 | mg/L | 8/14/2015 958h | 8/14/2015 221h | E200.8 | 0.000264 | 0.00200 | < 0.00200 | U |
| Magnesium | 7439-95-4 | mg/L | 8/13/2015 2114h | 8/14/2015 147h | E200.7 | 0.0294 | 1.00 | 8.21 | |
| Manganese | 7439-96-5 | mg/L | 8/14/2015 958h | 8/14/2015 221h | E200.8 | 0.00153 | 0.00200 | 0.00890 | |
| Mercury | 7439-97-6 | mg/L | 8/13/2015 2130h | 8/14/2015 1154h | E245.1 | 0.00000892 | 0.000150 | < 0.000150 | U |
| Molybdenum | 7439-98-7 | mg/L | 8/14/2015 958h | 8/14/2015 221h | E200.8 | 0.000206 | 0.00200 | 0.00162 | J |
| Nickel | 7440-02-0 | mg/L | 8/14/2015 958h | 8/14/2015 221h | E200.8 | 0.000754 | 0.00200 | < 0.00200 | U |
| Potassium | 7440-09-7 | mg/L | 8/13/2015 2114h | 8/14/2015 147h | E200.7 | 0.247 | 1.00 | 2.96 | |
| Selenium | 7782-49-2 | mg/L | 8/14/2015 958h | 8/14/2015 221h | E200.8 | 0.0000634 | 0.00200 | 0.000680 | J |
| Silver | 7440-22-4 | mg/L | 8/14/2015 958h | 8/14/2015 221h | E200.8 | 0.0000244 | 0.00200 | < 0.00200 | U |
| Sodium | 7440-23-5 | mg/L | 8/13/2015 2114h | 8/14/2015 147h | E200.7 | 0.0330 | 1.00 | 29.2 | B |
| Thallium | 7440-28-0 | mg/L | 8/14/2015 958h | 8/14/2015 221h | E200.8 | 0.0000242 | 0.00200 | < 0.00200 | U |
| Vanadium | 7440-62-2 | mg/L | 8/14/2015 958h | 8/14/2015 221h | E200.8 | 0.000438 | 0.00440 | 0.00365 | JB |
| Zinc | 7440-66-6 | mg/L | 8/14/2015 958h | 8/14/2015 221h | E200.8 | 0.00476 | 0.00500 | 0.0204 | |

I - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

B - This analyte was also detected in the method blank below the PQL.

J - Estimated value between the MDL and the reporting limit (PQL).

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508275-003
Client Sample ID: San Juan R at Town of Montezuma
Collection Date: 8/13/2015 1646h
Received Date: 8/13/2015 2017h

Analytical Results

DISSOLVED METALS

| Compound | CAS | Units | Date Prepared | Date Analyzed | Method Used | MDL | Reporting Limit | Analytical Result | Qual |
|------------|-----------|-------|-----------------|-----------------|-------------|------------|-----------------|-------------------|------|
| Aluminum | 7429-90-5 | mg/L | 8/13/2015 2114h | 8/14/2015 155h | E200.7 | 0.0237 | 0.100 | 0.330 | |
| Antimony | 7440-36-0 | mg/L | 8/14/2015 958h | 8/14/2015 237h | E200.8 | 0.0000366 | 0.00200 | 0.00188 | J |
| Arsenic | 7440-38-2 | mg/L | 8/14/2015 958h | 8/14/2015 237h | E200.8 | 0.0000920 | 0.00200 | 0.00128 | J |
| Barium | 7440-39-3 | mg/L | 8/14/2015 958h | 8/14/2015 237h | E200.8 | 0.000538 | 0.00200 | 0.240 | |
| Beryllium | 7440-41-7 | mg/L | 8/14/2015 958h | 8/14/2015 237h | E200.8 | 0.0000288 | 0.00200 | 0.0000654 | J |
| Cadmium | 7440-43-9 | mg/L | 8/14/2015 958h | 8/14/2015 237h | E200.8 | 0.000193 | 0.000500 | < 0.000500 | U |
| Calcium | 7440-70-2 | mg/L | 8/13/2015 2114h | 8/14/2015 155h | E200.7 | 0.0401 | 1.00 | 49.4 | |
| Chromium | 7440-47-3 | mg/L | 8/14/2015 958h | 8/14/2015 237h | E200.8 | 0.00154 | 0.00200 | < 0.00200 | U |
| Cobalt | 7440-48-4 | mg/L | 8/14/2015 958h | 8/14/2015 237h | E200.8 | 0.0000434 | 0.00400 | 0.000180 | J |
| Copper | 7440-50-8 | mg/L | 8/14/2015 958h | 8/14/2015 237h | E200.8 | 0.000692 | 0.00200 | 0.00375 | |
| Iron | 7439-89-6 | mg/L | 8/13/2015 2114h | 8/14/2015 155h | E200.7 | 0.0767 | 0.100 | 0.192 | |
| Lead | 7439-92-1 | mg/L | 8/14/2015 958h | 8/14/2015 237h | E200.8 | 0.000264 | 0.00200 | < 0.00200 | U |
| Magnesium | 7439-95-4 | mg/L | 8/13/2015 2114h | 8/14/2015 155h | E200.7 | 0.0294 | 1.00 | 8.08 | |
| Manganese | 7439-96-5 | mg/L | 8/14/2015 958h | 8/14/2015 237h | E200.8 | 0.00153 | 0.00200 | 0.00530 | |
| Mercury | 7439-97-6 | mg/L | 8/13/2015 2130h | 8/14/2015 1202h | E245.1 | 0.00000892 | 0.000150 | < 0.000150 | U |
| Molybdenum | 7439-98-7 | mg/L | 8/14/2015 958h | 8/14/2015 237h | E200.8 | 0.000206 | 0.00200 | 0.00191 | J |
| Nickel | 7440-02-0 | mg/L | 8/14/2015 958h | 8/14/2015 237h | E200.8 | 0.000754 | 0.00200 | 0.000984 | J |
| Potassium | 7440-09-7 | mg/L | 8/13/2015 2114h | 8/14/2015 155h | E200.7 | 0.247 | 1.00 | 2.62 | |
| Selenium | 7782-49-2 | mg/L | 8/14/2015 958h | 8/14/2015 237h | E200.8 | 0.0000634 | 0.00200 | 0.000978 | J |
| Silver | 7440-22-4 | mg/L | 8/14/2015 958h | 8/14/2015 237h | E200.8 | 0.0000244 | 0.00200 | 0.000235 | J |
| Sodium | 7440-23-5 | mg/L | 8/13/2015 2114h | 8/14/2015 155h | E200.7 | 0.0330 | 1.00 | 32.9 | B |
| Thallium | 7440-28-0 | mg/L | 8/14/2015 958h | 8/14/2015 237h | E200.8 | 0.0000242 | 0.00200 | 0.0000250 | J |
| Vanadium | 7440-62-2 | mg/L | 8/14/2015 958h | 8/14/2015 237h | E200.8 | 0.000438 | 0.00440 | 0.00312 | JB |
| Zinc | 7440-66-6 | mg/L | 8/14/2015 958h | 8/14/2015 237h | E200.8 | 0.00476 | 0.00500 | 0.0327 | |

B - This analyte was also detected in the method blank below the PQL.

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508275-004
Client Sample ID: San Juan R at US160 Xing in CO (4954000)
Collection Date: 8/13/2015 1001h
Received Date: 8/13/2015 2017h

Analytical Results

DISSOLVED METALS

| Compound | CAS | Units | Date Prepared | Date Analyzed | Method Used | MDL | Reporting Limit | Analytical Result | Qual |
|------------|-----------|-------|-----------------|-----------------|-------------|------------|-----------------|-------------------|------|
| Aluminum | 7429-90-5 | mg/L | 8/13/2015 2114h | 8/14/2015 205h | E200.7 | 0.0237 | 0.100 | 0.257 | |
| Antimony | 7440-36-0 | mg/L | 8/14/2015 958h | 8/14/2015 1222h | E200.8 | 0.0000366 | 0.00200 | 0.000158 | J |
| Arsenic | 7440-38-2 | mg/L | 8/14/2015 958h | 8/14/2015 1222h | E200.8 | 0.0000920 | 0.00200 | 0.00125 | J |
| Barium | 7440-39-3 | mg/L | 8/14/2015 958h | 8/14/2015 1222h | E200.8 | 0.000538 | 0.00200 | 0.213 | |
| Beryllium | 7440-41-7 | mg/L | 8/14/2015 958h | 8/14/2015 1222h | E200.8 | 0.0000288 | 0.00200 | 0.0000299 | J |
| Cadmium | 7440-43-9 | mg/L | 8/14/2015 958h | 8/14/2015 1222h | E200.8 | 0.000193 | 0.000500 | < 0.000500 | U |
| Calcium | 7440-70-2 | mg/L | 8/13/2015 2114h | 8/14/2015 205h | E200.7 | 0.0401 | 1.00 | 48.3 | |
| Chromium | 7440-47-3 | mg/L | 8/14/2015 958h | 8/14/2015 1222h | E200.8 | 0.00154 | 0.00200 | < 0.00200 | U |
| Cobalt | 7440-48-4 | mg/L | 8/14/2015 958h | 8/14/2015 1222h | E200.8 | 0.0000434 | 0.00400 | 0.000122 | J |
| Copper | 7440-50-8 | mg/L | 8/14/2015 958h | 8/14/2015 1222h | E200.8 | 0.000692 | 0.00200 | 0.00367 | |
| Iron | 7439-89-6 | mg/L | 8/13/2015 2114h | 8/14/2015 205h | E200.7 | 0.0767 | 0.100 | 0.148 | |
| Lead | 7439-92-1 | mg/L | 8/14/2015 958h | 8/14/2015 1222h | E200.8 | 0.000264 | 0.00200 | 0.000373 | J |
| Magnesium | 7439-95-4 | mg/L | 8/13/2015 2114h | 8/14/2015 205h | E200.7 | 0.0294 | 1.00 | 6.48 | |
| Manganese | 7439-96-5 | mg/L | 8/14/2015 958h | 8/14/2015 1222h | E200.8 | 0.00153 | 0.00200 | 0.00316 | |
| Mercury | 7439-97-6 | mg/L | 8/13/2015 2130h | 8/14/2015 1147h | E245.1 | 0.00000892 | 0.000150 | < 0.000150 | U |
| Molybdenum | 7439-98-7 | mg/L | 8/14/2015 958h | 8/14/2015 1222h | E200.8 | 0.000206 | 0.00200 | 0.00189 | J |
| Nickel | 7440-02-0 | mg/L | 8/14/2015 958h | 8/14/2015 1222h | E200.8 | 0.000754 | 0.00200 | < 0.00200 | U |
| Potassium | 7440-09-7 | mg/L | 8/13/2015 2114h | 8/14/2015 205h | E200.7 | 0.247 | 1.00 | 2.87 | |
| Selenium | 7782-49-2 | mg/L | 8/14/2015 958h | 8/14/2015 1222h | E200.8 | 0.0000634 | 0.00200 | 0.000858 | J |
| Silver | 7440-22-4 | mg/L | 8/14/2015 958h | 8/14/2015 1222h | E200.8 | 0.0000244 | 0.00200 | < 0.00200 | U |
| Sodium | 7440-23-5 | mg/L | 8/13/2015 2114h | 8/14/2015 205h | E200.7 | 0.0330 | 1.00 | 42.5 | B |
| Thallium | 7440-28-0 | mg/L | 8/14/2015 958h | 8/14/2015 1222h | E200.8 | 0.0000242 | 0.00200 | < 0.00200 | U |
| Vanadium | 7440-62-2 | mg/L | 8/14/2015 958h | 8/14/2015 1222h | E200.8 | 0.000438 | 0.00440 | 0.00210 | JB |
| Zinc | 7440-66-6 | mg/L | 8/14/2015 958h | 8/14/2015 1222h | E200.8 | 0.00476 | 0.00500 | 0.0219 | |

B - This analyte was also detected in the method blank below the PQL.

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Laboratory Director

Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508275-005
Client Sample ID: San Juan R at Clay Hills
Collection Date: 8/13/2015 1442h
Received Date: 8/13/2015 2017h

Analytical Results

DISSOLVED METALS

| Compound | CAS | Units | Date Prepared | Date Analyzed | Method Used | MDL | Reporting Limit | Analytical Result | Qual |
|------------|-----------|-------|-----------------|-----------------|-------------|------------|-----------------|-------------------|------|
| Aluminum | 7429-90-5 | mg/L | 8/13/2015 2114h | 8/14/2015 207h | E200.7 | 0.0237 | 0.100 | 0.643 | |
| Antimony | 7440-36-0 | mg/L | 8/14/2015 958h | 8/14/2015 1225h | E200.8 | 0.0000366 | 0.00200 | 0.000180 | J |
| Arsenic | 7440-38-2 | mg/L | 8/14/2015 958h | 8/14/2015 1225h | E200.8 | 0.0000920 | 0.00200 | 0.00176 | J |
| Barium | 7440-39-3 | mg/L | 8/14/2015 958h | 8/14/2015 1225h | E200.8 | 0.000538 | 0.00200 | 0.411 | |
| Beryllium | 7440-41-7 | mg/L | 8/14/2015 958h | 8/14/2015 1225h | E200.8 | 0.0000288 | 0.00200 | 0.0000633 | J |
| Cadmium | 7440-43-9 | mg/L | 8/14/2015 958h | 8/14/2015 1225h | E200.8 | 0.000193 | 0.000500 | < 0.000500 | U |
| Calcium | 7440-70-2 | mg/L | 8/13/2015 2114h | 8/14/2015 207h | E200.7 | 0.0401 | 1.00 | 52.3 | |
| Chromium | 7440-47-3 | mg/L | 8/14/2015 958h | 8/14/2015 1225h | E200.8 | 0.00154 | 0.00200 | < 0.00200 | U |
| Cobalt | 7440-48-4 | mg/L | 8/14/2015 958h | 8/14/2015 1225h | E200.8 | 0.0000434 | 0.00400 | 0.000300 | J |
| Copper | 7440-50-8 | mg/L | 8/14/2015 958h | 8/14/2015 1225h | E200.8 | 0.000692 | 0.00200 | 0.00436 | |
| Iron | 7439-89-6 | mg/L | 8/13/2015 2114h | 8/14/2015 207h | E200.7 | 0.0767 | 0.100 | 0.388 | |
| Lead | 7439-92-1 | mg/L | 8/14/2015 958h | 8/14/2015 1225h | E200.8 | 0.000264 | 0.00200 | 0.000924 | J |
| Magnesium | 7439-95-4 | mg/L | 8/13/2015 2114h | 8/14/2015 207h | E200.7 | 0.0294 | 1.00 | 7.50 | |
| Manganese | 7439-96-5 | mg/L | 8/14/2015 958h | 8/14/2015 1225h | E200.8 | 0.00153 | 0.00200 | 0.0138 | |
| Mercury | 7439-97-6 | mg/L | 8/13/2015 2130h | 8/14/2015 1203h | E245.1 | 0.00000892 | 0.000150 | < 0.000150 | U |
| Molybdenum | 7439-98-7 | mg/L | 8/14/2015 958h | 8/14/2015 1225h | E200.8 | 0.000206 | 0.00200 | 0.00216 | |
| Nickel | 7440-02-0 | mg/L | 8/14/2015 958h | 8/14/2015 1225h | E200.8 | 0.000754 | 0.00200 | 0.00109 | J |
| Potassium | 7440-09-7 | mg/L | 8/13/2015 2114h | 8/14/2015 207h | E200.7 | 0.247 | 1.00 | 3.09 | |
| Selenium | 7782-49-2 | mg/L | 8/14/2015 958h | 8/14/2015 1225h | E200.8 | 0.0000634 | 0.00200 | 0.000913 | J |
| Silver | 7440-22-4 | mg/L | 8/14/2015 958h | 8/14/2015 1225h | E200.8 | 0.0000244 | 0.00200 | < 0.00200 | U |
| Sodium | 7440-23-5 | mg/L | 8/13/2015 2114h | 8/14/2015 207h | E200.7 | 0.0330 | 1.00 | 47.0 | B |
| Thallium | 7440-28-0 | mg/L | 8/14/2015 958h | 8/14/2015 1225h | E200.8 | 0.0000242 | 0.00200 | < 0.00200 | U |
| Vanadium | 7440-62-2 | mg/L | 8/14/2015 958h | 8/14/2015 1225h | E200.8 | 0.000438 | 0.00440 | 0.00499 | B |
| Zinc | 7440-66-6 | mg/L | 8/14/2015 958h | 8/14/2015 1225h | E200.8 | 0.00476 | 0.00500 | 0.0192 | |

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Laboratory Director

Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508275-006
Client Sample ID: Equipment Blank
Collection Date: 8/13/2015 1300h
Received Date: 8/13/2015 2017h

Analytical Results

DISSOLVED METALS

| Compound | CAS | Units | Date Prepared | Date Analyzed | Method Used | MDL | Reporting Limit | Analytical Result | Qual |
|------------|-----------|-------|-----------------|-----------------|-------------|------------|-----------------|-------------------|------|
| Aluminum | 7429-90-5 | mg/L | 8/13/2015 2114h | 8/14/2015 209h | E200.7 | 0.0237 | 0.100 | < 0.100 | U |
| Antimony | 7440-36-0 | mg/L | 8/14/2015 958h | 8/14/2015 1228h | E200.8 | 0.0000366 | 0.00200 | < 0.00200 | U |
| Arsenic | 7440-38-2 | mg/L | 8/14/2015 958h | 8/14/2015 1228h | E200.8 | 0.0000920 | 0.00200 | < 0.00200 | U |
| Barium | 7440-39-3 | mg/L | 8/14/2015 958h | 8/14/2015 1228h | E200.8 | 0.000538 | 0.00200 | < 0.00200 | U |
| Beryllium | 7440-41-7 | mg/L | 8/14/2015 958h | 8/14/2015 1228h | E200.8 | 0.0000288 | 0.00200 | < 0.00200 | U |
| Cadmium | 7440-43-9 | mg/L | 8/14/2015 958h | 8/14/2015 1228h | E200.8 | 0.000193 | 0.000500 | < 0.000500 | U |
| Calcium | 7440-70-2 | mg/L | 8/13/2015 2114h | 8/14/2015 209h | E200.7 | 0.0401 | 1.00 | < 1.00 | U |
| Chromium | 7440-47-3 | mg/L | 8/14/2015 958h | 8/14/2015 1228h | E200.8 | 0.00154 | 0.00200 | < 0.00200 | U |
| Cobalt | 7440-48-4 | mg/L | 8/14/2015 958h | 8/14/2015 1228h | E200.8 | 0.0000434 | 0.00400 | < 0.00400 | U |
| Copper | 7440-50-8 | mg/L | 8/14/2015 958h | 8/14/2015 1228h | E200.8 | 0.000692 | 0.00200 | < 0.00200 | U |
| Iron | 7439-89-6 | mg/L | 8/13/2015 2114h | 8/14/2015 209h | E200.7 | 0.0767 | 0.100 | < 0.100 | U |
| Lead | 7439-92-1 | mg/L | 8/14/2015 958h | 8/14/2015 1228h | E200.8 | 0.000264 | 0.00200 | < 0.00200 | U |
| Magnesium | 7439-95-4 | mg/L | 8/13/2015 2114h | 8/14/2015 209h | E200.7 | 0.0294 | 1.00 | 0.0404 | J |
| Manganese | 7439-96-5 | mg/L | 8/14/2015 958h | 8/14/2015 1228h | E200.8 | 0.00153 | 0.00200 | < 0.00200 | U |
| Mercury | 7439-97-6 | mg/L | 8/13/2015 2130h | 8/14/2015 1205h | E245.1 | 0.00000892 | 0.000150 | < 0.000150 | U |
| Molybdenum | 7439-98-7 | mg/L | 8/14/2015 958h | 8/14/2015 1228h | E200.8 | 0.000206 | 0.00200 | < 0.00200 | U |
| Nickel | 7440-02-0 | mg/L | 8/14/2015 958h | 8/14/2015 1228h | E200.8 | 0.000754 | 0.00200 | < 0.00200 | U |
| Potassium | 7440-09-7 | mg/L | 8/13/2015 2114h | 8/14/2015 209h | E200.7 | 0.247 | 1.00 | < 1.00 | U |
| Selenium | 7782-49-2 | mg/L | 8/14/2015 958h | 8/14/2015 1228h | E200.8 | 0.0000634 | 0.00200 | < 0.00200 | U |
| Silver | 7440-22-4 | mg/L | 8/14/2015 958h | 8/14/2015 1228h | E200.8 | 0.0000244 | 0.00200 | < 0.00200 | U |
| Sodium | 7440-23-5 | mg/L | 8/13/2015 2114h | 8/14/2015 209h | E200.7 | 0.0330 | 1.00 | 0.0534 | JB |
| Thallium | 7440-28-0 | mg/L | 8/14/2015 958h | 8/14/2015 1228h | E200.8 | 0.0000242 | 0.00200 | < 0.00200 | U |
| Vanadium | 7440-62-2 | mg/L | 8/14/2015 958h | 8/14/2015 1228h | E200.8 | 0.000438 | 0.00440 | < 0.00440 | U |
| Zinc | 7440-66-6 | mg/L | 8/14/2015 958h | 8/14/2015 1228h | E200.8 | 0.00476 | 0.00500 | < 0.00500 | U |

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Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508275-001
Client Sample ID: San Juan R at Mexican Hat US163 Xing (4953000)
Collection Date: 8/13/2015 1205h
Received Date: 8/13/2015 2017h

Analytical Results

| Compound | CAS | Units | Date Prepared | Date Analyzed | Method Used | MDL | Reporting Limit | Analytical Result | Qual |
|---|------------|----------|-----------------|-----------------|-------------|---------|-----------------|-------------------|------------------|
| Alkalinity (as CaCO ₃) | | mg/L | | 8/14/2015 632h | SM2320B | 1.86 | 10.0 | 106 | |
| Bicarbonate (as CaCO ₃) | | mg/L | | 8/14/2015 632h | SM2320B | 1.86 | 10.0 | 106 | |
| Carbonate (as CaCO ₃) | | mg/L | | 8/14/2015 632h | SM2320B | 1.86 | 10.0 | < 10.0 | U |
| Chloride | 16887-00-6 | mg/L | | 8/14/2015 240h | E300.0 | 0.0751 | 1.00 | 10.1 | |
| Conductivity | | µmhos/cm | | 8/14/2015 601h | SM2510B | 0.436 | 2.00 | 634 | B |
| Hardness (as CaCO ₃) | | mg/L | | 8/14/2015 1129h | SM2340B | 10.0 | 10.0 | 787 | |
| Hardness, Dissolved (as CaCO ₃) | | mg/L | | 8/14/2015 1129h | SM2340B | 10.0 | 10.0 | 136 | |
| Nitrate/Nitrite (as N) | 7727-37-9 | mg/L | | 8/14/2015 018h | E353.2 | 0.00833 | 0.0100 | 0.481 | |
| pH @ 25° C | | pH Units | | 8/13/2015 2101h | SM4500-H+B | 1.00 | 1.00 | 8.31 | |
| Phosphate, Total (as P) | 7723-14-0 | mg/L | 8/14/2015 1020h | 8/14/2015 1247h | SM4500-P-F | 0.0212 | 0.0500 | 4.51 | @ ¹ B |
| Sulfate | 14808-79-8 | mg/L | | 8/14/2015 240h | E300.0 | 0.211 | 7.50 | 135 | |
| Total Dissolved Solids | | mg/L | | 8/13/2015 2300h | SM2540C | 30.6 | 50.0 | 490 | |
| Total Suspended Solids | TSS | mg/L | | 8/13/2015 2120h | SM2540D | 142 | 150 | 6,200 | |

@ - High RPD due to suspected sample non-homogeneity or matrix interference.

¹ - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

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INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508275-002
Client Sample ID: San Juan R at Sand Island (4953250)
Collection Date: 8/13/2015 1128h
Received Date: 8/13/2015 2017h

Analytical Results

| Compound | CAS | Units | Date Prepared | Date Analyzed | Method Used | MDL | Reporting Limit | Analytical Result | Qual |
|---|------------|----------|-----------------|-----------------|-------------|---------|-----------------|-------------------|------|
| Alkalinity (as CaCO ₃) | | mg/L | | 8/14/2015 632h | SM2320B | 1.86 | 10.0 | 115 | |
| Bicarbonate (as CaCO ₃) | | mg/L | | 8/14/2015 632h | SM2320B | 1.86 | 10.0 | 115 | |
| Carbonate (as CaCO ₃) | | mg/L | | 8/14/2015 632h | SM2320B | 1.86 | 10.0 | < 10.0 | U |
| Chloride | 16887-00-6 | mg/L | | 8/14/2015 332h | E300.0 | 0.0751 | 1.00 | 10.1 | |
| Conductivity | | µmhos/cm | | 8/14/2015 601h | SM2510B | 0.436 | 2.00 | 594 | B |
| Hardness (as CaCO ₃) | | mg/L | | 8/14/2015 1129h | SM2340B | 10.0 | 10.0 | 513 | |
| Hardness, Dissolved (as CaCO ₃) | | mg/L | | 8/14/2015 1129h | SM2340B | 10.0 | 10.0 | 168 | |
| Nitrate/Nitrite (as N) | 7727-37-9 | mg/L | | 8/14/2015 022h | E353.2 | 0.00833 | 0.0100 | 0.258 | |
| pH @ 25° C | | pH Units | | 8/13/2015 2101h | SM4500-H+B | 1.00 | 1.00 | 8.28 | |
| Phosphate, Total (as P) | 7723-14-0 | mg/L | 8/14/2015 1020h | 8/14/2015 1249h | SM4500-P-F | 0.0212 | 0.0500 | 1.48 | B |
| Sulfate | 14808-79-8 | mg/L | | 8/14/2015 332h | E300.0 | 0.211 | 7.50 | 121 | |
| Total Dissolved Solids | | mg/L | | 8/13/2015 2300h | SM2540C | 30.6 | 50.0 | 450 | @ |
| Total Suspended Solids | TSS | mg/L | | 8/13/2015 2120h | SM2540D | 142 | 150 | 3,160 | |

@ - High RPD due to suspected sample non-homogeneity or matrix interference.

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Jose Rocha
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INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508275-003
Client Sample ID: San Juan R at Town of Montezuma
Collection Date: 8/13/2015 1046h
Received Date: 8/13/2015 2017h

Analytical Results

| Compound | CAS | Units | Date Prepared | Date Analyzed | Method Used | MDL | Reporting Limit | Analytical Result | Qual |
|---|------------|----------|-----------------|-----------------|-------------|---------|-----------------|-------------------|------|
| Alkalinity (as CaCO ₃) | | mg/L | | 8/14/2015 632h | SM2320B | 1.86 | 10.0 | 115 | |
| Bicarbonate (as CaCO ₃) | | mg/L | | 8/14/2015 632h | SM2320B | 1.86 | 10.0 | 115 | |
| Carbonate (as CaCO ₃) | | mg/L | | 8/14/2015 632h | SM2320B | 1.86 | 10.0 | < 10.0 | U |
| Chloride | 16887-00-6 | mg/L | | 8/14/2015 350h | E300.0 | 0.0751 | 1.00 | 10.7 | |
| Conductivity | | µmhos/cm | | 8/14/2015 601h | SM2510B | 0.436 | 2.00 | 617 | B |
| Hardness (as CaCO ₃) | | mg/L | | 8/14/2015 1129h | SM2340B | 10.0 | 10.0 | 403 | |
| Hardness, Dissolved (as CaCO ₃) | | mg/L | | 8/14/2015 1129h | SM2340B | 10.0 | 10.0 | 157 | |
| Nitrate/Nitrite (as N) | 7727-37-9 | mg/L | | 8/14/2015 023h | E353.2 | 0.00833 | 0.0100 | 0.318 | |
| pH @ 25° C | | pH Units | | 8/13/2015 2101h | SM4500-H+B | 1.00 | 1.00 | 8.33 | |
| Phosphate, Total (as P) | 7723-14-0 | mg/L | 8/14/2015 1020h | 8/14/2015 1250h | SM4500-P-F | 0.0212 | 0.0500 | 1.49 | B |
| Sulfate | 14808-79-8 | mg/L | | 8/14/2015 350h | E300.0 | 0.211 | 7.50 | 125 | |
| Total Dissolved Solids | | mg/L | | 8/13/2015 2300h | SM2540C | 30.6 | 50.0 | 370 | |
| Total Suspended Solids | TSS | mg/L | | 8/13/2015 2120h | SM2540D | 142 | 150 | 3,600 | |

B - This analyte was also detected in the method blank below the PQL.

Reissue of a previously generated report. The collection time has been revised. Information herein supersedes that of the previously issued reports.

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INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508275-004
Client Sample ID: San Juan R at US160 Xing in CO (4954000)
Collection Date: 8/13/2015 1001h
Received Date: 8/13/2015 2017h

Analytical Results

| Compound | CAS | Units | Date Prepared | Date Analyzed | Method Used | MDL | Reporting Limit | Analytical Result | Qual |
|--------------------------------|------------|----------|-----------------|-----------------|-------------|---------|-----------------|-------------------|------|
| Alkalinity (as CaCO3) | | mg/L | | 8/14/2015 632h | SM2320B | 1.86 | 10.0 | 117 | |
| Bicarbonate (as CaCO3) | | mg/L | | 8/14/2015 632h | SM2320B | 1.86 | 10.0 | 117 | |
| Carbonate (as CaCO3) | | mg/L | | 8/14/2015 632h | SM2320B | 1.86 | 10.0 | < 10.0 | U |
| Chloride | 16887-00-6 | mg/L | | 8/14/2015 407h | E300.0 | 0.0751 | 1.00 | 11.2 | |
| Conductivity | | µmhos/cm | | 8/14/2015 601h | SM2510B | 0.436 | 2.00 | 610 | B |
| Hardness (as CaCO3) | | mg/L | | 8/14/2015 1129h | SM2340B | 10.0 | 10.0 | 402 | |
| Hardness, Dissolved (as CaCO3) | | mg/L | | 8/14/2015 1129h | SM2340B | 10.0 | 10.0 | 147 | |
| Nitrate/Nitrite (as N) | 7727-37-9 | mg/L | | 8/14/2015 025h | E353.2 | 0.00833 | 0.0100 | 0.401 | |
| pH @ 25° C | | pH Units | | 8/13/2015 2101h | SM4500-H+B | 1.00 | 1.00 | 8.30 | |
| Phosphate, Total (as P) | 7723-14-0 | mg/L | 8/14/2015 1020h | 8/14/2015 1251h | SM4500-P-F | 0.0212 | 0.0500 | 2.19 | B |
| Sulfate | 14808-79-8 | mg/L | | 8/14/2015 407h | E300.0 | 0.211 | 7.50 | 121 | |
| Total Dissolved Solids | | mg/L | | 8/13/2015 2300h | SM2540C | 30.6 | 50.0 | 450 | |
| Total Suspended Solids | TSS | mg/L | | 8/13/2015 2120h | SM2540D | 142 | 150 | 5,160 | |

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INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508275-005
Client Sample ID: San Juan R at Clay Hills
Collection Date: 8/13/2015 1442h
Received Date: 8/13/2015 2017h

Analytical Results

| Compound | CAS | Units | Date Prepared | Date Analyzed | Method Used | MDL | Reporting Limit | Analytical Result | Qual |
|---|------------|----------|-----------------|-----------------|-------------|---------|-----------------|-------------------|------|
| Alkalinity (as CaCO ₃) | | mg/L | | 8/14/2015 632h | SM2320B | 1.86 | 10.0 | 117 | |
| Bicarbonate (as CaCO ₃) | | mg/L | | 8/14/2015 632h | SM2320B | 1.86 | 10.0 | 117 | |
| Carbonate (as CaCO ₃) | | mg/L | | 8/14/2015 632h | SM2320B | 1.86 | 10.0 | < 10.0 | U |
| Chloride | 16887-00-6 | mg/L | | 8/14/2015 424h | E300.0 | 0.0751 | 1.00 | 10.1 | |
| Conductivity | | µmhos/cm | | 8/14/2015 601h | SM2510B | 0.436 | 2.00 | 698 | B |
| Hardness (as CaCO ₃) | | mg/L | | 8/14/2015 1129h | SM2340B | 10.0 | 10.0 | 1,090 | |
| Hardness, Dissolved (as CaCO ₃) | | mg/L | | 8/14/2015 1129h | SM2340B | 10.0 | 10.0 | 161 | |
| Nitrate/Nitrite (as N) | 7727-37-9 | mg/L | | 8/14/2015 034h | E353.2 | 0.00833 | 0.0100 | 0.390 | |
| pH @ 25° C | | pH Units | | 8/13/2015 2101h | SM4500-H+B | 1.00 | 1.00 | 8.24 | |
| Phosphate, Total (as P) | 7723-14-0 | mg/L | 8/14/2015 1020h | 8/14/2015 1255h | SM4500-P-F | 0.0212 | 0.0500 | 4.10 | B |
| Sulfate | 14808-79-8 | mg/L | | 8/14/2015 424h | E300.0 | 0.211 | 7.50 | 158 | |
| Total Dissolved Solids | | mg/L | | 8/13/2015 2300h | SM2540C | 30.6 | 50.0 | 500 | |
| Total Suspended Solids | TSS | mg/L | | 8/13/2015 2120h | SM2540D | 142 | 150 | 9,540 | |

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INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508275-006
Client Sample ID: Equipment Blank
Collection Date: 8/13/2015 1300h
Received Date: 8/13/2015 2017h

Analytical Results

| Compound | CAS | Units | Date Prepared | Date Analyzed | Method Used | MDL | Reporting Limit | Analytical Result | Qual |
|---|-----|-------|---------------|-----------------|-------------|------|-----------------|-------------------|------|
| Hardness, Dissolved (as CaCO ₃) | | mg/L | | 8/14/2015 1129h | SM2340B | 10.0 | 10.0 | < 10.0 | U |

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QC SUMMARY REPORT

Client: Utah Division of Water Quality

Contact: Lenora Sullivan

Lab Set ID: 1508275

Dept: ME

Project: Gold King Mine - San Juan River Sampling

QC Type: LCS

| Analyte | Result | Units | Method | MDL | Reporting Limit | Amount Spiked | Spike Ref. Amount | %REC | Limits | RPD Ref. Amt | % RPD | RPD Limit | Qual |
|---------------------------------|--------|------------------|--------|-----------|-----------------|---------------|-------------------|------|----------|--------------|-------|-----------|------|
| Lab Sample ID: LCS-38543 | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 140h | | | | | | | | | | | |
| Test Code: | | 200.7-DIS | | | | | | | | | | | |
| Date Prepared: | | 08/13/2015 2114h | | | | | | | | | | | |
| Aluminum | 0.960 | mg/L | E200.7 | 0.0237 | 0.100 | 1.000 | 0 | 96.0 | 85 - 115 | | | | |
| Calcium | 9.24 | mg/L | E200.7 | 0.0401 | 1.00 | 10.00 | 0 | 92.4 | 85 - 115 | | | | |
| Iron | 0.890 | mg/L | E200.7 | 0.0767 | 0.100 | 1.000 | 0 | 89.0 | 85 - 115 | | | | |
| Magnesium | 9.37 | mg/L | E200.7 | 0.0294 | 1.00 | 10.00 | 0 | 93.7 | 85 - 115 | | | | |
| Potassium | 9.37 | mg/L | E200.7 | 0.247 | 1.00 | 10.00 | 0 | 93.7 | 85 - 115 | | | | |
| Sodium | 8.98 | mg/L | E200.7 | 0.0330 | 1.00 | 10.00 | 0 | 89.8 | 85 - 115 | | | | |
| Lab Sample ID: LCS-38544 | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 109h | | | | | | | | | | | |
| Test Code: | | 200.7-W | | | | | | | | | | | |
| Date Prepared: | | 08/13/2015 2116h | | | | | | | | | | | |
| Aluminum | 0.952 | mg/L | E200.7 | 0.0237 | 0.100 | 1.000 | 0 | 95.2 | 85 - 115 | | | | |
| Calcium | 9.26 | mg/L | E200.7 | 0.0401 | 1.00 | 10.00 | 0 | 92.6 | 85 - 115 | | | | |
| Iron | 0.889 | mg/L | E200.7 | 0.0767 | 0.100 | 1.000 | 0 | 88.9 | 85 - 115 | | | | |
| Magnesium | 9.46 | mg/L | E200.7 | 0.0294 | 1.00 | 10.00 | 0 | 94.6 | 85 - 115 | | | | |
| Potassium | 9.44 | mg/L | E200.7 | 0.247 | 1.00 | 10.00 | 0 | 94.4 | 85 - 115 | | | | |
| Sodium | 9.04 | mg/L | E200.7 | 0.0330 | 1.00 | 10.00 | 0 | 90.4 | 85 - 115 | | | | |
| Lab Sample ID: LCS-38555 | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 214h | | | | | | | | | | | |
| Test Code: | | 200.8-DIS | | | | | | | | | | | |
| Date Prepared: | | 08/14/2015 958h | | | | | | | | | | | |
| Antimony | 0.170 | mg/L | E200.8 | 0.0000366 | 0.00200 | 0.2000 | 0 | 85.2 | 85 - 115 | | | | |
| Arsenic | 0.209 | mg/L | E200.8 | 0.0000920 | 0.00200 | 0.2000 | 0 | 105 | 85 - 115 | | | | |
| Barium | 0.196 | mg/L | E200.8 | 0.000538 | 0.00200 | 0.2000 | 0 | 98.2 | 85 - 115 | | | | |
| Beryllium | 0.210 | mg/L | E200.8 | 0.0000288 | 0.00200 | 0.2000 | 0 | 105 | 85 - 115 | | | | |
| Cadmium | 0.201 | mg/L | E200.8 | 0.000193 | 0.000500 | 0.2000 | 0 | 101 | 85 - 115 | | | | |
| Chromium | 0.203 | mg/L | E200.8 | 0.00154 | 0.00200 | 0.2000 | 0 | 102 | 85 - 115 | | | | |
| Cobalt | 0.200 | mg/L | E200.8 | 0.0000434 | 0.00400 | 0.2000 | 0 | 100 | 85 - 115 | | | | |
| Copper | 0.204 | mg/L | E200.8 | 0.000692 | 0.00200 | 0.2000 | 0 | 102 | 85 - 115 | | | | |
| Lead | 0.200 | mg/L | E200.8 | 0.000264 | 0.00200 | 0.2000 | 0 | 100 | 85 - 115 | | | | |
| Manganese | 0.202 | mg/L | E200.8 | 0.00153 | 0.00200 | 0.2000 | 0 | 101 | 85 - 115 | | | | |
| Molybdenum | 0.202 | mg/L | E200.8 | 0.000206 | 0.00200 | 0.2000 | 0 | 101 | 85 - 115 | | | | |



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality

Contact: Lenora Sullivan

Lab Set ID: 1508275

Dept: ME

Project: Gold King Mine - San Juan River Sampling

QC Type: LCS

| Analyte | Result | Units | Method | MDL | Reporting Limit | Amount Spiked | Spike Ref. Amount | %REC | Limits | RPD Ref. Amt | % RPD | RPD Limit | Qual |
|---------------------------------|--------|----------------|------------------|-----------|-----------------|---------------|-------------------|------|----------|--------------|-------|-----------|------|
| Lab Sample ID: LCS-38555 | | Date Analyzed: | 08/14/2015 214h | | | | | | | | | | |
| Test Code: 200.8-DIS | | Date Prepared: | 08/14/2015 958h | | | | | | | | | | |
| Nickel | 0.199 | mg/L | E200.8 | 0.000754 | 0.00200 | 0.2000 | 0 | 99.3 | 85 - 115 | | | | |
| Selenium | 0.210 | mg/L | E200.8 | 0.0000634 | 0.00200 | 0.2000 | 0 | 105 | 85 - 115 | | | | |
| Silver | 0.197 | mg/L | E200.8 | 0.0000244 | 0.00200 | 0.2000 | 0 | 98.3 | 85 - 115 | | | | |
| Thallium | 0.194 | mg/L | E200.8 | 0.0000242 | 0.00200 | 0.2000 | 0 | 97.2 | 85 - 115 | | | | |
| Vanadium | 0.205 | mg/L | E200.8 | 0.000438 | 0.00440 | 0.2000 | 0 | 102 | 85 - 115 | | | | |
| Zinc | 1.06 | mg/L | E200.8 | 0.00476 | 0.00500 | 1.000 | 0 | 106 | 85 - 115 | | | | |
| Lab Sample ID: LCS-38556 | | Date Analyzed: | 08/14/2015 128h | | | | | | | | | | |
| Test Code: 200.8-W | | Date Prepared: | 08/14/2015 1000h | | | | | | | | | | |
| Antimony | 0.169 | mg/L | E200.8 | 0.0000366 | 0.00200 | 0.2000 | 0 | 84.5 | 85 - 115 | | | | § |
| Arsenic | 0.211 | mg/L | E200.8 | 0.0000920 | 0.00200 | 0.2000 | 0 | 106 | 85 - 115 | | | | |
| Barium | 0.196 | mg/L | E200.8 | 0.000538 | 0.00200 | 0.2000 | 0 | 98.1 | 85 - 115 | | | | |
| Beryllium | 0.211 | mg/L | E200.8 | 0.0000288 | 0.00200 | 0.2000 | 0 | 106 | 85 - 115 | | | | |
| Cadmium | 0.201 | mg/L | E200.8 | 0.000193 | 0.000500 | 0.2000 | 0 | 100 | 85 - 115 | | | | |
| Chromium | 0.202 | mg/L | E200.8 | 0.00154 | 0.00200 | 0.2000 | 0 | 101 | 85 - 115 | | | | |
| Cobalt | 0.199 | mg/L | E200.8 | 0.0000434 | 0.00400 | 0.2000 | 0 | 99.7 | 85 - 115 | | | | |
| Copper | 0.203 | mg/L | E200.8 | 0.000692 | 0.00200 | 0.2000 | 0 | 101 | 85 - 115 | | | | |
| Lead | 0.200 | mg/L | E200.8 | 0.000264 | 0.00200 | 0.2000 | 0 | 100 | 85 - 115 | | | | |
| Manganese | 0.202 | mg/L | E200.8 | 0.00153 | 0.00200 | 0.2000 | 0 | 101 | 85 - 115 | | | | |
| Molybdenum | 0.201 | mg/L | E200.8 | 0.000206 | 0.00200 | 0.2000 | 0 | 100 | 85 - 115 | | | | |
| Nickel | 0.200 | mg/L | E200.8 | 0.000754 | 0.00200 | 0.2000 | 0 | 100 | 85 - 115 | | | | |
| Selenium | 0.210 | mg/L | E200.8 | 0.0000634 | 0.00200 | 0.2000 | 0 | 105 | 85 - 115 | | | | |
| Silver | 0.196 | mg/L | E200.8 | 0.0000244 | 0.00200 | 0.2000 | 0 | 98.1 | 85 - 115 | | | | |
| Thallium | 0.194 | mg/L | E200.8 | 0.0000242 | 0.00200 | 0.2000 | 0 | 97.1 | 85 - 115 | | | | |
| Vanadium | 0.204 | mg/L | E200.8 | 0.000438 | 0.00440 | 0.2000 | 0 | 102 | 85 - 115 | | | | |
| Zinc | 1.06 | mg/L | E200.8 | 0.00476 | 0.00500 | 1.000 | 0 | 106 | 85 - 115 | | | | |



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508275
Project: Gold King Mine - San Juan River Sampling

Contact: Lenora Sullivan
Dept: ME
QC Type: LCS

| Analyte | Result | Units | Method | MDL | Reporting Limit | Amount Spiked | Spike Ref. Amount | %REC | Limits | RPD Ref. Amt | % RPD | RPD Limit | Qual |
|---------------------------------|-----------------|----------------|------------|------------|-----------------|---------------|-------------------|------|----------|--------------|-------|-----------|------|
| Lab Sample ID: LCS-38549 | Date Analyzed: | 08/14/2015 | 1113h | | | | | | | | | | |
| Test Code: | HG-DW-245.1 | Date Prepared: | 08/13/2015 | 2130h | | | | | | | | | |
| Mercury | 0.00347 | mg/L | E245.1 | 0.00000892 | 0.000150 | 0.003330 | 0 | 104 | 85 - 115 | | | | |
| Lab Sample ID: LCS-38548 | Date Analyzed: | 08/14/2015 | 1138h | | | | | | | | | | |
| Test Code: | HG-DW-DIS-245.1 | Date Prepared: | 08/13/2015 | 2130h | | | | | | | | | |
| Mercury | 0.00343 | mg/L | E245.1 | 0.00000892 | 0.000150 | 0.003330 | 0 | 103 | 85 - 115 | | | | |

§ - QC limits are set with an accuracy of two significant figures, therefore the recovery rounds to an acceptable value within the control limits.



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QC SUMMARY REPORT

Client: Utah Division of Water Quality

Contact: Lenora Sullivan

Lab Set ID: 1508275

Dept: ME

Project: Gold King Mine - San Juan River Sampling

QC Type: MBLK

| Analyte | Result | Units | Method | MDL | Reporting Limit | Amount Spiked | Spike Ref. Amount | %REC | Limits | RPD Ref. Amt | % RPD | RPD Limit | Qual |
|--------------------------------|------------|------------------|--------|-----------|-----------------|---------------|-------------------|------|--------|--------------|-------|-----------|------|
| Lab Sample ID: MB-38543 | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 138h | | | | | | | | | | | |
| Test Code: | | 200.7-DIS | | | | | | | | | | | |
| Date Prepared: | | 08/13/2015 2114h | | | | | | | | | | | |
| Aluminum | < 0.100 | mg/L | E200.7 | 0.0237 | 0.100 | | | | | | | | U |
| Calcium | < 1.00 | mg/L | E200.7 | 0.0401 | 1.00 | | | | | | | | U |
| Iron | < 0.100 | mg/L | E200.7 | 0.0767 | 0.100 | | | | | | | | U |
| Magnesium | < 1.00 | mg/L | E200.7 | 0.0294 | 1.00 | | | | | | | | U |
| Potassium | < 1.00 | mg/L | E200.7 | 0.247 | 1.00 | | | | | | | | U |
| Sodium | 0.142 | mg/L | E200.7 | 0.0330 | 1.00 | | | | | | | | JB |
| Lab Sample ID: MB-38544 | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 106h | | | | | | | | | | | |
| Test Code: | | 200.7-W | | | | | | | | | | | |
| Date Prepared: | | 08/13/2015 2116h | | | | | | | | | | | |
| Aluminum | < 0.100 | mg/L | E200.7 | 0.0237 | 0.100 | | | | | | | | U |
| Calcium | < 1.00 | mg/L | E200.7 | 0.0401 | 1.00 | | | | | | | | U |
| Iron | < 0.100 | mg/L | E200.7 | 0.0767 | 0.100 | | | | | | | | U |
| Magnesium | < 1.00 | mg/L | E200.7 | 0.0294 | 1.00 | | | | | | | | U |
| Potassium | < 1.00 | mg/L | E200.7 | 0.247 | 1.00 | | | | | | | | U |
| Sodium | < 1.00 | mg/L | E200.7 | 0.0330 | 1.00 | | | | | | | | U |
| Lab Sample ID: MB-38555 | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 211h | | | | | | | | | | | |
| Test Code: | | 200.8-DIS | | | | | | | | | | | |
| Date Prepared: | | 08/14/2015 958h | | | | | | | | | | | |
| Antimony | < 0.00200 | mg/L | E200.8 | 0.0000366 | 0.00200 | | | | | | | | U |
| Arsenic | < 0.00200 | mg/L | E200.8 | 0.0000920 | 0.00200 | | | | | | | | U |
| Barium | < 0.00200 | mg/L | E200.8 | 0.000538 | 0.00200 | | | | | | | | U |
| Beryllium | < 0.00200 | mg/L | E200.8 | 0.0000288 | 0.00200 | | | | | | | | U |
| Cadmium | < 0.000500 | mg/L | E200.8 | 0.000193 | 0.000500 | | | | | | | | U |
| Chromium | < 0.00200 | mg/L | E200.8 | 0.00154 | 0.00200 | | | | | | | | U |
| Cobalt | < 0.00400 | mg/L | E200.8 | 0.0000434 | 0.00400 | | | | | | | | U |
| Copper | < 0.00200 | mg/L | E200.8 | 0.000692 | 0.00200 | | | | | | | | U |
| Lead | < 0.00200 | mg/L | E200.8 | 0.000264 | 0.00200 | | | | | | | | U |
| Manganese | < 0.00200 | mg/L | E200.8 | 0.00153 | 0.00200 | | | | | | | | U |
| Molybdenum | < 0.00200 | mg/L | E200.8 | 0.000206 | 0.00200 | | | | | | | | U |



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Kyle F. Gross
Laboratory Director

Jose Rocha
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QC SUMMARY REPORT

Client: Utah Division of Water Quality

Contact: Lenora Sullivan

Lab Set ID: 1508275

Dept: ME

Project: Gold King Mine - San Juan River Sampling

QC Type: MBLK

| Analyte | Result | Units | Method | MDL | Reporting Limit | Amount Spiked | Spike Ref. Amount | %REC | Limits | RPD Ref. Amt | % RPD | RPD Limit | Qual |
|--------------------------------|----------------|----------------|------------|-----------|-----------------|---------------|-------------------|------|--------|--------------|-------|-----------|------|
| Lab Sample ID: MB-38555 | Date Analyzed: | 08/14/2015 | 211h | | | | | | | | | | |
| Test Code: | 200.8-DIS | Date Prepared: | 08/14/2015 | 958h | | | | | | | | | |
| Nickel | < 0.00200 | mg/L | E200.8 | 0.000754 | 0.00200 | | | | | | | | U |
| Selenium | < 0.00200 | mg/L | E200.8 | 0.0000634 | 0.00200 | | | | | | | | U |
| Silver | < 0.00200 | mg/L | E200.8 | 0.0000244 | 0.00200 | | | | | | | | U |
| Thallium | < 0.00200 | mg/L | E200.8 | 0.0000242 | 0.00200 | | | | | | | | U |
| Vanadium | 0.000809 | mg/L | E200.8 | 0.000438 | 0.00440 | | | | | | | | JB |
| Zinc | < 0.00500 | mg/L | E200.8 | 0.00476 | 0.00500 | | | | | | | | U |
| Lab Sample ID: MB-38556 | Date Analyzed: | 08/14/2015 | 125h | | | | | | | | | | |
| Test Code: | 200.8-W | Date Prepared: | 08/14/2015 | 1000h | | | | | | | | | |
| Antimony | < 0.00200 | mg/L | E200.8 | 0.0000366 | 0.00200 | | | | | | | | U |
| Arsenic | 0.000113 | mg/L | E200.8 | 0.0000920 | 0.00200 | | | | | | | | JB |
| Barium | < 0.00200 | mg/L | E200.8 | 0.000538 | 0.00200 | | | | | | | | U |
| Beryllium | < 0.00200 | mg/L | E200.8 | 0.0000288 | 0.00200 | | | | | | | | U |
| Cadmium | < 0.000500 | mg/L | E200.8 | 0.000193 | 0.000500 | | | | | | | | U |
| Chromium | < 0.00200 | mg/L | E200.8 | 0.00154 | 0.00200 | | | | | | | | U |
| Cobalt | < 0.00400 | mg/L | E200.8 | 0.0000434 | 0.00400 | | | | | | | | U |
| Copper | < 0.00200 | mg/L | E200.8 | 0.000692 | 0.00200 | | | | | | | | U |
| Lead | < 0.00200 | mg/L | E200.8 | 0.000264 | 0.00200 | | | | | | | | U |
| Manganese | < 0.00200 | mg/L | E200.8 | 0.00153 | 0.00200 | | | | | | | | U |
| Molybdenum | < 0.00200 | mg/L | E200.8 | 0.000206 | 0.00200 | | | | | | | | U |
| Nickel | < 0.00200 | mg/L | E200.8 | 0.000754 | 0.00200 | | | | | | | | U |
| Selenium | < 0.00200 | mg/L | E200.8 | 0.0000634 | 0.00200 | | | | | | | | U |
| Silver | 0.0000404 | mg/L | E200.8 | 0.0000244 | 0.00200 | | | | | | | | JB |
| Thallium | < 0.00200 | mg/L | E200.8 | 0.0000242 | 0.00200 | | | | | | | | U |
| Vanadium | 0.000847 | mg/L | E200.8 | 0.000438 | 0.00440 | | | | | | | | JB |
| Zinc | < 0.00500 | mg/L | E200.8 | 0.00476 | 0.00500 | | | | | | | | U |



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QC SUMMARY REPORT

Client: Utah Division of Water Quality

Lab Set ID: 1508275

Project: Gold King Mine - San Juan River Sampling

Contact: Lenora Sullivan

Dept: ME

QC Type: MBLK

| Analyte | Result | Units | Method | MDL | Reporting Limit | Amount Spiked | Spike Ref. Amount | %REC | Limits | RPD Ref. Amt | % RPD | RPD Limit | Qual |
|--------------------------------|-----------------|----------------|------------|------------|-----------------|---------------|-------------------|------|--------|--------------|-------|-----------|------|
| Lab Sample ID: MB-38549 | Date Analyzed: | 08/14/2015 | 1112h | | | | | | | | | | |
| Test Code: | HG-DW-245.1 | Date Prepared: | 08/13/2015 | 2130h | | | | | | | | | |
| Mercury | < 0.000150 | mg/L | E245.1 | 0.00000892 | 0.000150 | | | | | | | | U |
| Lab Sample ID: MB-38548 | Date Analyzed: | 08/14/2015 | 1137h | | | | | | | | | | |
| Test Code: | HG-DW-DIS-245.1 | Date Prepared: | 08/13/2015 | 2130h | | | | | | | | | |
| Mercury | < 0.000150 | mg/L | E245.1 | 0.00000892 | 0.000150 | | | | | | | | U |

B - This analyte was also detected in the method blank below the PQL.

J - Estimated value between the MDL and the reporting limit (PQL).

U - This flag indicates the compound was analyzed for but not detected above the MDL.



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QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508275
Project: Gold King Mine - San Juan River Sampling

Contact: Lenora Sullivan
Dept: ME
QC Type: MS

| Analyte | Result | Units | Method | MDL | Reporting Limit | Amount Spiked | Spike Ref. Amount | %REC | Limits | RPD Ref. Amt | % RPD | RPD Limit | Qual |
|--------------------------------------|--------|------------------|--------|-----------|-----------------|---------------|-------------------|-------|----------|--------------|-------|-----------|------|
| Lab Sample ID: 1508275-002CMS | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 151h | | | | | | | | | | | |
| Test Code: | | 200.7-DIS | | | | | | | | | | | |
| Date Prepared: | | 08/13/2015 2114h | | | | | | | | | | | |
| Aluminum | 1.78 | mg/L | E200.7 | 0.0237 | 0.100 | 1.000 | 0.509 | 127 | 70 - 130 | | | | |
| Iron | 1.27 | mg/L | E200.7 | 0.0767 | 0.100 | 1.000 | 0.275 | 99.5 | 70 - 130 | | | | |
| Magnesium | 17.9 | mg/L | E200.7 | 0.0294 | 1.00 | 10.00 | 8.21 | 96.9 | 70 - 130 | | | | |
| Potassium | 12.4 | mg/L | E200.7 | 0.247 | 1.00 | 10.00 | 2.96 | 94.4 | 70 - 130 | | | | |
| Sodium | 39.5 | mg/L | E200.7 | 0.0330 | 1.00 | 10.00 | 29.2 | 103 | 70 - 130 | | | | |
| Lab Sample ID: 1508275-002CMS | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 1103h | | | | | | | | | | | |
| Test Code: | | 200.7-DIS | | | | | | | | | | | |
| Date Prepared: | | 08/13/2015 2114h | | | | | | | | | | | |
| Calcium | 63.7 | mg/L | E200.7 | 0.401 | 10.0 | 10.00 | 53.6 | 101 | 70 - 130 | | | | |
| Lab Sample ID: 1508275-001BMS | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 118h | | | | | | | | | | | |
| Test Code: | | 200.7-W | | | | | | | | | | | |
| Date Prepared: | | 08/13/2015 2116h | | | | | | | | | | | |
| Aluminum | 58.5 | mg/L | E200.7 | 0.0237 | 0.100 | 1.000 | 44.7 | 1,380 | 70 - 130 | | | | 2 |
| Iron | 27.7 | mg/L | E200.7 | 0.0767 | 0.100 | 1.000 | 21.6 | 612 | 70 - 130 | | | | 2 |
| Magnesium | 57.1 | mg/L | E200.7 | 0.0294 | 1.00 | 10.00 | 41.9 | 152 | 70 - 130 | | | | 1 |
| Potassium | 23.0 | mg/L | E200.7 | 0.247 | 1.00 | 10.00 | 12.5 | 106 | 70 - 130 | | | | |
| Lab Sample ID: 1508275-001BMS | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 107h | | | | | | | | | | | |
| Test Code: | | 200.7-W | | | | | | | | | | | |
| Date Prepared: | | 08/13/2015 2116h | | | | | | | | | | | |
| Calcium | 251 | mg/L | E200.7 | 0.401 | 10.0 | 10.00 | 246 | 46.7 | 70 - 130 | | | | 2 |
| Lab Sample ID: 1508275-001BMS | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 1057h | | | | | | | | | | | |
| Test Code: | | 200.7-W | | | | | | | | | | | |
| Date Prepared: | | 08/13/2015 2116h | | | | | | | | | | | |
| Sodium | 58.4 | mg/L | E200.7 | 0.330 | 10.0 | 10.00 | 48.8 | 95.8 | 70 - 130 | | | | |
| Lab Sample ID: 1508275-002CMS | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 230h | | | | | | | | | | | |
| Test Code: | | 200.8-DIS | | | | | | | | | | | |
| Date Prepared: | | 08/14/2015 958h | | | | | | | | | | | |
| Antimony | 0.173 | mg/L | E200.8 | 0.000366 | 0.00200 | 0.2000 | 0.000667 | 86.1 | 75 - 125 | | | | |
| Arsenic | 0.214 | mg/L | E200.8 | 0.0000920 | 0.00200 | 0.2000 | 0.0013 | 107 | 75 - 125 | | | | |
| Barium | 0.363 | mg/L | E200.8 | 0.000538 | 0.00200 | 0.2000 | 0.156 | 103 | 75 - 125 | | | | |



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QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508275
Project: Gold King Mine - San Juan River Sampling

Contact: Lenora Sullivan
Dept: ME
QC Type: MS

| Analyte | Result | Units | Method | MDL | Reporting Limit | Amount Spiked | Spike Ref. Amount | %REC | Limits | RPD Ref. Amt | % RPD | RPD Limit | Qual |
|--------------------------------------|--------|----------------|------------------|-----------|-----------------|---------------|-------------------|------|----------|--------------|-------|-----------|------|
| Lab Sample ID: 1508275-002CMS | | Date Analyzed: | 08/14/2015 230h | | | | | | | | | | |
| Test Code: 200.8-DIS | | Date Prepared: | 08/14/2015 958h | | | | | | | | | | |
| Beryllium | 0.211 | mg/L | E200.8 | 0.0000288 | 0.00200 | 0.2000 | 0.0000326 | 106 | 75 - 125 | | | | |
| Cadmium | 0.201 | mg/L | E200.8 | 0.000193 | 0.000500 | 0.2000 | 0 | 100 | 75 - 125 | | | | |
| Chromium | 0.204 | mg/L | E200.8 | 0.00154 | 0.00200 | 0.2000 | 0 | 102 | 75 - 125 | | | | |
| Cobalt | 0.201 | mg/L | E200.8 | 0.0000434 | 0.00400 | 0.2000 | 0.00021 | 100 | 75 - 125 | | | | |
| Copper | 0.206 | mg/L | E200.8 | 0.000692 | 0.00200 | 0.2000 | 0.0031 | 102 | 75 - 125 | | | | |
| Lead | 0.202 | mg/L | E200.8 | 0.000264 | 0.00200 | 0.2000 | 0 | 101 | 75 - 125 | | | | |
| Manganese | 0.215 | mg/L | E200.8 | 0.00153 | 0.00200 | 0.2000 | 0.0089 | 103 | 75 - 125 | | | | |
| Molybdenum | 0.207 | mg/L | E200.8 | 0.000206 | 0.00200 | 0.2000 | 0.00162 | 103 | 75 - 125 | | | | |
| Nickel | 0.199 | mg/L | E200.8 | 0.000754 | 0.00200 | 0.2000 | 0 | 99.4 | 75 - 125 | | | | |
| Selenium | 0.210 | mg/L | E200.8 | 0.0000634 | 0.00200 | 0.2000 | 0.00068 | 105 | 75 - 125 | | | | |
| Silver | 0.197 | mg/L | E200.8 | 0.0000244 | 0.00200 | 0.2000 | 0 | 98.5 | 75 - 125 | | | | |
| Thallium | 0.195 | mg/L | E200.8 | 0.0000242 | 0.00200 | 0.2000 | 0 | 97.7 | 75 - 125 | | | | |
| Vanadium | 0.208 | mg/L | E200.8 | 0.000438 | 0.00440 | 0.2000 | 0.00365 | 102 | 75 - 125 | | | | |
| Zinc | 1.08 | mg/L | E200.8 | 0.00476 | 0.00500 | 1.000 | 0.0204 | 105 | 75 - 125 | | | | |
| Lab Sample ID: 1508275-001BMS | | Date Analyzed: | 08/14/2015 141h | | | | | | | | | | |
| Test Code: 200.8-W | | Date Prepared: | 08/14/2015 1000h | | | | | | | | | | |
| Antimony | 0.0199 | mg/L | E200.8 | 0.0000366 | 0.00200 | 0.2000 | 0.0019 | 9.01 | 75 - 125 | | | | 1 |
| Arsenic | 0.201 | mg/L | E200.8 | 0.0000920 | 0.00200 | 0.2000 | 0.0165 | 92.2 | 75 - 125 | | | | |
| Barium | 1.70 | mg/L | E200.8 | 0.000538 | 0.00200 | 0.2000 | 1.45 | 125 | 75 - 125 | | | | 1 |
| Beryllium | 0.209 | mg/L | E200.8 | 0.0000288 | 0.00200 | 0.2000 | 0.00544 | 102 | 75 - 125 | | | | |
| Cadmium | 0.200 | mg/L | E200.8 | 0.000193 | 0.000500 | 0.2000 | 0.00125 | 99.3 | 75 - 125 | | | | |
| Chromium | 0.217 | mg/L | E200.8 | 0.00154 | 0.00200 | 0.2000 | 0.0183 | 99.2 | 75 - 125 | | | | |
| Cobalt | 0.217 | mg/L | E200.8 | 0.0000434 | 0.00400 | 0.2000 | 0.025 | 96.1 | 75 - 125 | | | | |
| Copper | 0.227 | mg/L | E200.8 | 0.000692 | 0.00200 | 0.2000 | 0.0495 | 88.9 | 75 - 125 | | | | |
| Lead | 0.263 | mg/L | E200.8 | 0.000264 | 0.00200 | 0.2000 | 0.0625 | 100 | 75 - 125 | | | | |
| Molybdenum | 0.109 | mg/L | E200.8 | 0.000206 | 0.00200 | 0.2000 | 0.000677 | 54.0 | 75 - 125 | | | | 1 |
| Nickel | 0.238 | mg/L | E200.8 | 0.000754 | 0.00200 | 0.2000 | 0.0392 | 99.2 | 75 - 125 | | | | |
| Selenium | 0.175 | mg/L | E200.8 | 0.0000634 | 0.00200 | 0.2000 | 0.00159 | 86.7 | 75 - 125 | | | | |



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508275
Project: Gold King Mine - San Juan River Sampling

Contact: Lenora Sullivan
Dept: ME
QC Type: MS

| Analyte | Result | Units | Method | MDL | Reporting Limit | Amount Spiked | Spike Ref. Amount | %REC | Limits | RPD Ref. Amt | % RPD | RPD Limit | Qual |
|--------------------------------------|------------------|-------|--------|------------|-----------------|---------------|-------------------|------|----------|--------------|-------|-----------|--------------|
| Lab Sample ID: 1508275-001BMS | | | | | | | | | | | | | |
| Date Analyzed: | 08/14/2015 141h | | | | | | | | | | | | |
| Test Code: | 200.8-W | | | | | | | | | | | | |
| Date Prepared: | 08/14/2015 1000h | | | | | | | | | | | | |
| Silver | 0.193 | mg/L | E200.8 | 0.0000244 | 0.00200 | 0.2000 | 0.000523 | 96.2 | 75 - 125 | | | | |
| Thallium | 0.173 | mg/L | E200.8 | 0.0000242 | 0.00200 | 0.2000 | 0.000432 | 86.3 | 75 - 125 | | | | |
| Vanadium | 0.249 | mg/L | E200.8 | 0.000438 | 0.00440 | 0.2000 | 0.0661 | 91.3 | 75 - 125 | | | | |
| Zinc | 1.16 | mg/L | E200.8 | 0.00476 | 0.00500 | 1.000 | 0.145 | 101 | 75 - 125 | | | | |
| Lab Sample ID: 1508275-001BMS | | | | | | | | | | | | | |
| Date Analyzed: | 08/14/2015 1307h | | | | | | | | | | | | |
| Test Code: | 200.8-W | | | | | | | | | | | | |
| Date Prepared: | 08/14/2015 1000h | | | | | | | | | | | | |
| Manganese | 1.99 | mg/L | E200.8 | 0.00764 | 0.0100 | 0.2000 | 1.84 | 74.1 | 75 - 125 | | | | ² |
| Lab Sample ID: 1508275-002BMS | | | | | | | | | | | | | |
| Date Analyzed: | 08/14/2015 1122h | | | | | | | | | | | | |
| Test Code: | HG-DW-245.1 | | | | | | | | | | | | |
| Date Prepared: | 08/13/2015 2130h | | | | | | | | | | | | |
| Mercury | 0.00356 | mg/L | E245.1 | 0.00000892 | 0.000150 | 0.003330 | 0.00006 | 105 | 80 - 120 | | | | |
| Lab Sample ID: 1508275-004CMS | | | | | | | | | | | | | |
| Date Analyzed: | 08/14/2015 1149h | | | | | | | | | | | | |
| Test Code: | HG-DW-DIS-245.1 | | | | | | | | | | | | |
| Date Prepared: | 08/13/2015 2130h | | | | | | | | | | | | |
| Mercury | 0.00360 | mg/L | E245.1 | 0.00000892 | 0.000150 | 0.003330 | 0 | 108 | 85 - 115 | | | | |

¹ - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

² - Analyte concentration is too high for accurate matrix spike recovery and/or RPD.



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508275
Project: Gold King Mine - San Juan River Sampling

Contact: Lenora Sullivan
Dept: ME
QC Type: MSD

| Analyte | Result | Units | Method | MDL | Reporting Limit | Amount Spiked | Spike Ref. Amount | %REC | Limits | RPD Ref. Amt | % RPD | RPD Limit | Qual |
|---------------------------------------|--------|------------------|--------|-----------|-----------------|---------------|-------------------|------|----------|--------------|-------|-----------|------|
| Lab Sample ID: 1508275-002CMSD | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 153h | | | | | | | | | | | |
| Test Code: | | 200.7-DIS | | | | | | | | | | | |
| Date Prepared: | | 08/13/2015 2114h | | | | | | | | | | | |
| Aluminum | 1.83 | mg/L | E200.7 | 0.0237 | 0.100 | 1.000 | 0.509 | 132 | 70 - 130 | 1.78 | 2.77 | 20 | 1 |
| Iron | 1.30 | mg/L | E200.7 | 0.0767 | 0.100 | 1.000 | 0.275 | 103 | 70 - 130 | 1.27 | 2.33 | 20 | |
| Magnesium | 17.9 | mg/L | E200.7 | 0.0294 | 1.00 | 10.00 | 8.21 | 96.9 | 70 - 130 | 17.9 | 0 | 20 | |
| Potassium | 12.4 | mg/L | E200.7 | 0.247 | 1.00 | 10.00 | 2.96 | 94.4 | 70 - 130 | 12.4 | 0 | 20 | |
| Sodium | 39.3 | mg/L | E200.7 | 0.0330 | 1.00 | 10.00 | 29.2 | 101 | 70 - 130 | 39.5 | 0.508 | 20 | |
| Lab Sample ID: 1508275-002CMSD | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 1105h | | | | | | | | | | | |
| Test Code: | | 200.7-DIS | | | | | | | | | | | |
| Date Prepared: | | 08/13/2015 2114h | | | | | | | | | | | |
| Calcium | 63.6 | mg/L | E200.7 | 0.401 | 10.0 | 10.00 | 53.6 | 99.3 | 70 - 130 | 63.7 | 0.198 | 20 | |
| Lab Sample ID: 1508275-001BMSD | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 120h | | | | | | | | | | | |
| Test Code: | | 200.7-W | | | | | | | | | | | |
| Date Prepared: | | 08/13/2015 2116h | | | | | | | | | | | |
| Aluminum | 51.3 | mg/L | E200.7 | 0.0237 | 0.100 | 1.000 | 44.7 | 662 | 70 - 130 | 58.5 | 13.1 | 20 | 2 |
| Iron | 23.8 | mg/L | E200.7 | 0.0767 | 0.100 | 1.000 | 21.6 | 218 | 70 - 130 | 27.7 | 15.3 | 20 | 2 |
| Magnesium | 53.6 | mg/L | E200.7 | 0.0294 | 1.00 | 10.00 | 41.9 | 117 | 70 - 130 | 57.1 | 6.36 | 20 | |
| Potassium | 22.4 | mg/L | E200.7 | 0.247 | 1.00 | 10.00 | 12.5 | 98.9 | 70 - 130 | 23 | 2.93 | 20 | |
| Lab Sample ID: 1508275-001BMSD | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 110h | | | | | | | | | | | |
| Test Code: | | 200.7-W | | | | | | | | | | | |
| Date Prepared: | | 08/13/2015 2116h | | | | | | | | | | | |
| Calcium | 257 | mg/L | E200.7 | 0.401 | 10.0 | 10.00 | 246 | 109 | 70 - 130 | 251 | 2.44 | 20 | |
| Lab Sample ID: 1508275-001BMSD | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 1059h | | | | | | | | | | | |
| Test Code: | | 200.7-W | | | | | | | | | | | |
| Date Prepared: | | 08/13/2015 2116h | | | | | | | | | | | |
| Sodium | 57.0 | mg/L | E200.7 | 0.330 | 10.0 | 10.00 | 48.8 | 81.9 | 70 - 130 | 58.4 | 2.41 | 20 | |
| Lab Sample ID: 1508275-002CMSD | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 234h | | | | | | | | | | | |
| Test Code: | | 200.8-DIS | | | | | | | | | | | |
| Date Prepared: | | 08/14/2015 958h | | | | | | | | | | | |
| Antimony | 0.175 | mg/L | E200.8 | 0.0000366 | 0.00200 | 0.2000 | 0.000667 | 87.4 | 75 - 125 | 0.173 | 1.54 | 20 | |
| Arsenic | 0.212 | mg/L | E200.8 | 0.0000920 | 0.00200 | 0.2000 | 0.0013 | 105 | 75 - 125 | 0.214 | 0.962 | 20 | |
| Barium | 0.359 | mg/L | E200.8 | 0.000538 | 0.00200 | 0.2000 | 0.156 | 102 | 75 - 125 | 0.363 | 0.909 | 20 | |



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Jose Rocha
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QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508275
Project: Gold King Mine - San Juan River Sampling

Contact: Lenora Sullivan
Dept: ME
QC Type: MSD

| Analyte | Result | Units | Method | MDL | Reporting Limit | Amount Spiked | Spike Ref. Amount | %REC | Limits | RPD Ref. Amt | % RPD | RPD Limit | Qual |
|---------------------------------------|--------|----------------|------------------|-----------|-----------------|---------------|-------------------|------|----------|--------------|--------|-----------|------|
| Lab Sample ID: 1508275-002CMSD | | Date Analyzed: | 08/14/2015 234h | | | | | | | | | | |
| Test Code: 200.8-DIS | | Date Prepared: | 08/14/2015 958h | | | | | | | | | | |
| Beryllium | 0.209 | mg/L | E200.8 | 0.0000288 | 0.00200 | 0.2000 | 0.0000326 | 105 | 75 - 125 | 0.211 | 1.01 | 20 | |
| Cadmium | 0.200 | mg/L | E200.8 | 0.000193 | 0.000500 | 0.2000 | 0 | 99.9 | 75 - 125 | 0.201 | 0.529 | 20 | |
| Chromium | 0.203 | mg/L | E200.8 | 0.00154 | 0.00200 | 0.2000 | 0 | 101 | 75 - 125 | 0.204 | 0.459 | 20 | |
| Cobalt | 0.199 | mg/L | E200.8 | 0.0000434 | 0.00400 | 0.2000 | 0.00021 | 99.5 | 75 - 125 | 0.201 | 0.862 | 20 | |
| Copper | 0.206 | mg/L | E200.8 | 0.000692 | 0.00200 | 0.2000 | 0.0031 | 101 | 75 - 125 | 0.206 | 0.354 | 20 | |
| Lead | 0.200 | mg/L | E200.8 | 0.000264 | 0.00200 | 0.2000 | 0 | 100 | 75 - 125 | 0.202 | 0.689 | 20 | |
| Manganese | 0.213 | mg/L | E200.8 | 0.00153 | 0.00200 | 0.2000 | 0.0089 | 102 | 75 - 125 | 0.215 | 0.836 | 20 | |
| Molybdenum | 0.205 | mg/L | E200.8 | 0.000206 | 0.00200 | 0.2000 | 0.00162 | 102 | 75 - 125 | 0.207 | 1.10 | 20 | |
| Nickel | 0.199 | mg/L | E200.8 | 0.000754 | 0.00200 | 0.2000 | 0 | 99.6 | 75 - 125 | 0.199 | 0.210 | 20 | |
| Selenium | 0.209 | mg/L | E200.8 | 0.0000634 | 0.00200 | 0.2000 | 0.00068 | 104 | 75 - 125 | 0.21 | 0.684 | 20 | |
| Silver | 0.194 | mg/L | E200.8 | 0.0000244 | 0.00200 | 0.2000 | 0 | 97.1 | 75 - 125 | 0.197 | 1.44 | 20 | |
| Thallium | 0.194 | mg/L | E200.8 | 0.0000242 | 0.00200 | 0.2000 | 0 | 96.9 | 75 - 125 | 0.195 | 0.838 | 20 | |
| Vanadium | 0.208 | mg/L | E200.8 | 0.000438 | 0.00440 | 0.2000 | 0.00365 | 102 | 75 - 125 | 0.208 | 0.110 | 20 | |
| Zinc | 1.07 | mg/L | E200.8 | 0.00476 | 0.00500 | 1.000 | 0.0204 | 105 | 75 - 125 | 1.08 | 0.831 | 20 | |
| Lab Sample ID: 1508275-001BMSD | | Date Analyzed: | 08/14/2015 145h | | | | | | | | | | |
| Test Code: 200.8-W | | Date Prepared: | 08/14/2015 1000h | | | | | | | | | | |
| Antimony | 0.0210 | mg/L | E200.8 | 0.0000366 | 0.00200 | 0.2000 | 0.0019 | 9.56 | 75 - 125 | 0.0199 | 5.37 | 20 | 1 |
| Arsenic | 0.208 | mg/L | E200.8 | 0.0000920 | 0.00200 | 0.2000 | 0.0165 | 95.7 | 75 - 125 | 0.201 | 3.48 | 20 | |
| Barium | 1.69 | mg/L | E200.8 | 0.000538 | 0.00200 | 0.2000 | 1.45 | 120 | 75 - 125 | 1.7 | 0.658 | 20 | |
| Beryllium | 0.212 | mg/L | E200.8 | 0.0000288 | 0.00200 | 0.2000 | 0.00544 | 103 | 75 - 125 | 0.209 | 1.22 | 20 | |
| Cadmium | 0.203 | mg/L | E200.8 | 0.000193 | 0.000500 | 0.2000 | 0.00125 | 101 | 75 - 125 | 0.2 | 1.50 | 20 | |
| Chromium | 0.214 | mg/L | E200.8 | 0.00154 | 0.00200 | 0.2000 | 0.0183 | 98.1 | 75 - 125 | 0.217 | 1.07 | 20 | |
| Cobalt | 0.219 | mg/L | E200.8 | 0.0000434 | 0.00400 | 0.2000 | 0.025 | 97.0 | 75 - 125 | 0.217 | 0.842 | 20 | |
| Copper | 0.230 | mg/L | E200.8 | 0.000692 | 0.00200 | 0.2000 | 0.0495 | 90.4 | 75 - 125 | 0.227 | 1.31 | 20 | |
| Lead | 0.263 | mg/L | E200.8 | 0.000264 | 0.00200 | 0.2000 | 0.0625 | 100 | 75 - 125 | 0.263 | 0.0753 | 20 | |
| Molybdenum | 0.115 | mg/L | E200.8 | 0.000206 | 0.00200 | 0.2000 | 0.000677 | 57.4 | 75 - 125 | 0.109 | 5.96 | 20 | 1 |
| Nickel | 0.238 | mg/L | E200.8 | 0.000754 | 0.00200 | 0.2000 | 0.0392 | 99.4 | 75 - 125 | 0.238 | 0.171 | 20 | |
| Selenium | 0.179 | mg/L | E200.8 | 0.0000634 | 0.00200 | 0.2000 | 0.00159 | 88.7 | 75 - 125 | 0.175 | 2.33 | 20 | |



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QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508275
Project: Gold King Mine - San Juan River Sampling

Contact: Lenora Sullivan
Dept: ME
QC Type: MSD

| Analyte | Result | Units | Method | MDL | Reporting Limit | Amount Spiked | Spike Ref. Amount | %REC | Limits | RPD Ref. Amt | % RPD | RPD Limit | Qual |
|---------------------------------------|------------------|-------|--------|------------|-----------------|---------------|-------------------|------|----------|--------------|--------|-----------|------|
| Lab Sample ID: 1508275-001BMSD | | | | | | | | | | | | | |
| Date Analyzed: | 08/14/2015 145h | | | | | | | | | | | | |
| Test Code: | 200.8-W | | | | | | | | | | | | |
| Date Prepared: | 08/14/2015 1000h | | | | | | | | | | | | |
| Silver | 0.193 | mg/L | E200.8 | 0.0000244 | 0.00200 | 0.2000 | 0.000523 | 96.4 | 75 - 125 | 0.193 | 0.282 | 20 | |
| Thallium | 0.173 | mg/L | E200.8 | 0.0000242 | 0.00200 | 0.2000 | 0.000432 | 86.4 | 75 - 125 | 0.173 | 0.0791 | 20 | |
| Vanadium | 0.253 | mg/L | E200.8 | 0.000438 | 0.00440 | 0.2000 | 0.0661 | 93.5 | 75 - 125 | 0.249 | 1.77 | 20 | |
| Zinc | 1.16 | mg/L | E200.8 | 0.00476 | 0.00500 | 1.000 | 0.145 | 101 | 75 - 125 | 1.16 | 0.0908 | 20 | |
| Lab Sample ID: 1508275-001BMSD | | | | | | | | | | | | | |
| Date Analyzed: | 08/14/2015 1310h | | | | | | | | | | | | |
| Test Code: | 200.8-W | | | | | | | | | | | | |
| Date Prepared: | 08/14/2015 1000h | | | | | | | | | | | | |
| Manganese | 2.00 | mg/L | E200.8 | 0.00764 | 0.0100 | 0.2000 | 1.84 | 79.5 | 75 - 125 | 1.99 | 0.545 | 20 | |
| Lab Sample ID: 1508275-002BMSD | | | | | | | | | | | | | |
| Date Analyzed: | 08/14/2015 1124h | | | | | | | | | | | | |
| Test Code: | HG-DW-245.1 | | | | | | | | | | | | |
| Date Prepared: | 08/13/2015 2130h | | | | | | | | | | | | |
| Mercury | 0.00366 | mg/L | E245.1 | 0.00000892 | 0.000150 | 0.003330 | 0.00006 | 108 | 80 - 120 | 0.00356 | 2.59 | 20 | |
| Lab Sample ID: 1508275-004CMSD | | | | | | | | | | | | | |
| Date Analyzed: | 08/14/2015 1151h | | | | | | | | | | | | |
| Test Code: | HG-DW-DIS-245.1 | | | | | | | | | | | | |
| Date Prepared: | 08/13/2015 2130h | | | | | | | | | | | | |
| Mercury | 0.00383 | mg/L | E245.1 | 0.00000892 | 0.000150 | 0.003330 | 0 | 115 | 85 - 115 | 0.0036 | 6.15 | 20 | |

¹ - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

² - Analyte concentration is too high for accurate matrix spike recovery and/or RPD.



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QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508275
Project: Gold King Mine - San Juan River Sampling

Contact: Lenora Sullivan
Dept: WC
QC Type: DUP

| Analyte | Result | Units | Method | MDL | Reporting Limit | Amount Spiked | Spike Ref. Amount | %REC | Limits | RPD Ref. Amt | % RPD | RPD Limit | Qual |
|---|---------------------------------|----------|------------|-------|-----------------|---------------|-------------------|------|--------|--------------|-------|-----------|------|
| Lab Sample ID: 1508262-001ADUP Test Code: COND-W-2510B | Date Analyzed: 08/14/2015 601h | | | | | | | | | | | | |
| Conductivity | 620 | µmhos/cm | SM2510B | 0.436 | 2.00 | | | | | 617 | 0.485 | 5 | |
| Lab Sample ID: 1508263-001ADUP Test Code: COND-W-2510B | Date Analyzed: 08/14/2015 601h | | | | | | | | | | | | |
| Conductivity | 651 | µmhos/cm | SM2510B | 0.436 | 2.00 | | | | | 648 | 0.462 | 5 | |
| Lab Sample ID: 1508275-001ADUP Test Code: COND-W-2510B | Date Analyzed: 08/14/2015 601h | | | | | | | | | | | | |
| Conductivity | 632 | µmhos/cm | SM2510B | 0.436 | 2.00 | | | | | 634 | 0.316 | 5 | |
| Lab Sample ID: 1508275-001ADUP Test Code: PH-4500H+B | Date Analyzed: 08/13/2015 2101h | | | | | | | | | | | | |
| pH @ 25° C | 8.28 | pH Units | SM4500-H+B | 1.00 | 1.00 | | | | | 8.31 | 0.362 | 5 | |
| Lab Sample ID: 1508275-002ADUP Test Code: TDS-W-2540C | Date Analyzed: 08/13/2015 2300h | | | | | | | | | | | | |
| Total Dissolved Solids | 510 | mg/L | SM2540C | 30.6 | 50.0 | | | | | 450 | 12.5 | 5 | @ |
| Lab Sample ID: 1508275-002ADUP Test Code: TSS-W-2540D | Date Analyzed: 08/13/2015 2120h | | | | | | | | | | | | |
| Total Suspended Solids | 3,260 | mg/L | SM2540D | 142 | 150 | | | | | 3160 | 3.12 | 5 | |

@ - High RPD due to suspected sample non-homogeneity or matrix interference.



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QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508275
Project: Gold King Mine - San Juan River Sampling

Contact: Lenora Sullivan
Dept: WC
QC Type: LCS

| Analyte | Result | Units | Method | MDL | Reporting Limit | Amount Spiked | Spike Ref. Amount | %REC | Limits | RPD Ref. Amt | % RPD | RPD Limit | Qual |
|----------------------------------|--------|----------|------------|---------|-----------------|---------------|-------------------|------|----------|--------------|-------|-----------|------|
| Lab Sample ID: LCS-R81618 | | | | | | | | | | | | | |
| Date Analyzed: 08/14/2015 223h | | | | | | | | | | | | | |
| Test Code: 300.0-W | | | | | | | | | | | | | |
| Chloride | 4.94 | mg/L | E300.0 | 0.00751 | 0.100 | 5.000 | 0 | 98.7 | 90 - 110 | | | | |
| Sulfate | 4.90 | mg/L | E300.0 | 0.0211 | 0.750 | 5.000 | 0 | 97.9 | 90 - 110 | | | | |
| Lab Sample ID: LCS-R81615 | | | | | | | | | | | | | |
| Date Analyzed: 08/14/2015 632h | | | | | | | | | | | | | |
| Test Code: ALK-W-2320B | | | | | | | | | | | | | |
| Alkalinity (as CaCO3) | 49,000 | mg/L | SM2320B | 1.86 | 10.0 | 50,000 | 0 | 98.0 | 90 - 110 | | | | |
| Lab Sample ID: LCS-R81612 | | | | | | | | | | | | | |
| Date Analyzed: 08/14/2015 601h | | | | | | | | | | | | | |
| Test Code: COND-W-2510B | | | | | | | | | | | | | |
| Conductivity | 994 | µmhos/cm | SM2510B | 0.436 | 2.00 | 1,000 | 0 | 99.4 | 98 - 102 | | | | |
| Lab Sample ID: LCS | | | | | | | | | | | | | |
| Date Analyzed: 08/13/2015 2352h | | | | | | | | | | | | | |
| Test Code: NO2/NO3-W-353.2 | | | | | | | | | | | | | |
| Nitrate/Nitrite (as N) | 0.910 | mg/L | E353.2 | 0.00833 | 0.0100 | 1.000 | 0 | 91.0 | 90 - 110 | | | | |
| Lab Sample ID: LCS-R81603 | | | | | | | | | | | | | |
| Date Analyzed: 08/13/2015 2101h | | | | | | | | | | | | | |
| Test Code: PH-4500H+B | | | | | | | | | | | | | |
| pH @ 25° C | 9.01 | pH Units | SM4500-H+B | 1.00 | 1.00 | 9.000 | 0 | 100 | 98 - 102 | | | | |
| Lab Sample ID: LCS-38561 | | | | | | | | | | | | | |
| Date Analyzed: 08/14/2015 1235h | | | | | | | | | | | | | |
| Test Code: PO4-W-4500PF | | | | | | | | | | | | | |
| Date Prepared: 08/14/2015 1020h | | | | | | | | | | | | | |
| Phosphate, Total (as P) | 0.912 | mg/L | SM4500-P-F | 0.0212 | 0.0500 | 1.000 | 0 | 91.2 | 90 - 110 | | | | |
| Lab Sample ID: LCS-R81645 | | | | | | | | | | | | | |
| Date Analyzed: 08/13/2015 2300h | | | | | | | | | | | | | |
| Test Code: TDS-W-2540C | | | | | | | | | | | | | |
| Total Dissolved Solids | 220 | mg/L | SM2540C | 6.13 | 10.0 | 205.0 | 0 | 107 | 80 - 120 | | | | |
| Lab Sample ID: LCS-R81631 | | | | | | | | | | | | | |
| Date Analyzed: 08/13/2015 2120h | | | | | | | | | | | | | |
| Test Code: TSS-W-2540D | | | | | | | | | | | | | |
| Total Suspended Solids | 91.0 | mg/L | SM2540D | 2.83 | 3.00 | 100.0 | 0 | 91.0 | 80 - 120 | | | | |



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508275
Project: Gold King Mine - San Juan River Sampling

Contact: Lenora Sullivan
Dept: WC
QC Type: MBLK

| Analyte | Result | Units | Method | MDL | Reporting Limit | Amount Spiked | Spike Ref. Amount | %REC | Limits | RPD Ref. Amt | % RPD | RPD Limit | Qual |
|---|----------|----------|------------|---------|-----------------|---------------|-------------------|------|--------|--------------|-------|-----------|------|
| Lab Sample ID: MB-R81618 Date Analyzed: 08/14/2015 205h | | | | | | | | | | | | | |
| Test Code: 300.0-W | | | | | | | | | | | | | |
| Chloride | < 0.100 | mg/L | E300.0 | 0.00751 | 0.100 | | | | | | | | U |
| Sulfate | < 0.750 | mg/L | E300.0 | 0.0211 | 0.750 | | | | | | | | U |
| Lab Sample ID: MB-R81615 Date Analyzed: 08/14/2015 632h | | | | | | | | | | | | | |
| Test Code: ALK-W-2320B | | | | | | | | | | | | | |
| Alkalinity (as CaCO ₃) | < 10.0 | mg/L | SM2320B | 1.86 | 10.0 | | | | | | | | U |
| Bicarbonate (as CaCO ₃) | < 10.0 | mg/L | SM2320B | 1.86 | 10.0 | | | | | | | | U |
| Carbonate (as CaCO ₃) | < 10.0 | mg/L | SM2320B | 1.86 | 10.0 | | | | | | | | U |
| Lab Sample ID: MB-R81612 Date Analyzed: 08/14/2015 601h | | | | | | | | | | | | | |
| Test Code: COND-W-2510B | | | | | | | | | | | | | |
| Conductivity | 0.710 | µmhos/cm | SM2510B | 0.436 | 2.00 | | | | | | | | JB |
| Lab Sample ID: MB Date Analyzed: 08/13/2015 2350h | | | | | | | | | | | | | |
| Test Code: NO2/NO3-W-353.2 | | | | | | | | | | | | | |
| Nitrate/Nitrite (as N) | < 0.0100 | mg/L | E353.2 | 0.00833 | 0.0100 | | | | | | | | U |
| Lab Sample ID: MB-38561 Date Analyzed: 08/14/2015 1234h | | | | | | | | | | | | | |
| Test Code: PO4-W-4500PF Date Prepared: 08/14/2015 1020h | | | | | | | | | | | | | |
| Phosphate, Total (as P) | 0.0226 | mg/L | SM4500-P-F | 0.0212 | 0.0500 | | | | | | | | JB |
| Lab Sample ID: MB-R81645 Date Analyzed: 08/13/2015 2300h | | | | | | | | | | | | | |
| Test Code: TDS-W-2540C | | | | | | | | | | | | | |
| Total Dissolved Solids | < 10.0 | mg/L | SM2540C | 6.13 | 10.0 | | | | | | | | U |
| Lab Sample ID: MB-R81631 Date Analyzed: 08/13/2015 2120h | | | | | | | | | | | | | |
| Test Code: TSS-W-2540D | | | | | | | | | | | | | |
| Total Suspended Solids | < 3.00 | mg/L | SM2540D | 2.83 | 3.00 | | | | | | | | U |

B - This analyte was also detected in the method blank below the PQL.

J - Estimated value between the MDL and the reporting limit (PQL).

U - This flag indicates the compound was analyzed for but not detected above the MDL.



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508275
Project: Gold King Mine - San Juan River Sampling

Contact: Lenora Sullivan
Dept: WC
QC Type: MS

| Analyte | Result | Units | Method | MDL | Reporting Limit | Amount Spiked | Spike Ref. Amount | %REC | Limits | RPD Ref. Amt | % RPD | RPD Limit | Qual |
|--|--------|-------|------------|---------|-----------------|---------------|-------------------|-------|----------|--------------|-------|-----------|------|
| Lab Sample ID: 1508275-001AMS Date Analyzed: 08/14/2015 258h | | | | | | | | | | | | | |
| Test Code: 300.0-W | | | | | | | | | | | | | |
| Chloride | 59.8 | mg/L | E300.0 | 0.0751 | 1.00 | 50.00 | 10.1 | 99.4 | 90 - 110 | | | | |
| Sulfate | 185 | mg/L | E300.0 | 0.211 | 7.50 | 50.00 | 135 | 101 | 90 - 110 | | | | |
| Lab Sample ID: 1508262-001AMS Date Analyzed: 08/14/2015 632h | | | | | | | | | | | | | |
| Test Code: ALK-W-2320B | | | | | | | | | | | | | |
| Alkalinity (as CaCO3) | 204 | mg/L | SM2320B | 1.86 | 10.0 | 100.0 | 108 | 96.3 | 80 - 120 | | | | |
| Lab Sample ID: 1508263-001AMS Date Analyzed: 08/14/2015 632h | | | | | | | | | | | | | |
| Test Code: ALK-W-2320B | | | | | | | | | | | | | |
| Alkalinity (as CaCO3) | 211 | mg/L | SM2320B | 1.86 | 10.0 | 100.0 | 112 | 99.8 | 80 - 120 | | | | |
| Lab Sample ID: 1508275-001AMS Date Analyzed: 08/14/2015 632h | | | | | | | | | | | | | |
| Test Code: ALK-W-2320B | | | | | | | | | | | | | |
| Alkalinity (as CaCO3) | 204 | mg/L | SM2320B | 1.86 | 10.0 | 100.0 | 107 | 98.0 | 80 - 120 | | | | |
| Lab Sample ID: 1508263-004DMS Date Analyzed: 08/14/2015 015h | | | | | | | | | | | | | |
| Test Code: NO2/NO3-W-353.2 | | | | | | | | | | | | | |
| Nitrate/Nitrite (as N) | 4.91 | mg/L | E353.2 | 0.0417 | 0.0500 | 5.000 | 0.317 | 91.9 | 90 - 110 | | | | |
| Lab Sample ID: 1508275-001DMS Date Analyzed: 08/14/2015 019h | | | | | | | | | | | | | |
| Test Code: NO2/NO3-W-353.2 | | | | | | | | | | | | | |
| Nitrate/Nitrite (as N) | 5.16 | mg/L | E353.2 | 0.0417 | 0.0500 | 5.000 | 0.481 | 93.6 | 90 - 110 | | | | |
| Lab Sample ID: 1508262-004DMS Date Analyzed: 08/13/2015 2359h | | | | | | | | | | | | | |
| Test Code: NO2/NO3-W-353.2 | | | | | | | | | | | | | |
| Nitrate/Nitrite (as N) | 1.19 | mg/L | E353.2 | 0.00833 | 0.0100 | 1.000 | 0.307 | 88.3 | 90 - 110 | | | | 1 |
| Lab Sample ID: 1508263-001DMS Date Analyzed: 08/14/2015 1301h | | | | | | | | | | | | | |
| Test Code: PO4-W-4500PF Date Prepared: 08/14/2015 1020h | | | | | | | | | | | | | |
| Phosphate, Total (as P) | 5.70 | mg/L | SM4500-P-F | 0.0424 | 0.100 | 1.000 | 5.72 | -1.90 | 90 - 110 | | | | 1 |



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Kyle F. Gross
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QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508275
Project: Gold King Mine - San Juan River Sampling

Contact: Lenora Sullivan
Dept: WC
QC Type: MS

| Analyte | Result | Units | Method | MDL | Reporting Limit | Amount Spiked | Spike Ref. Amount | %REC | Limits | RPD Ref. Amt | % RPD | RPD Limit | Qual |
|--------------------------------------|----------------|------------|------------|--------|-----------------|---------------|-------------------|------|----------|--------------|-------|-----------|--------------|
| Lab Sample ID: 1508275-001DMS | Date Analyzed: | 08/14/2015 | 1306h | | | | | | | | | | |
| Test Code: PO4-W-4500PF | Date Prepared: | 08/14/2015 | 1020h | | | | | | | | | | |
| Phosphate, Total (as P) | 6.13 | mg/L | SM4500-P-F | 0.0424 | 0.100 | 1.000 | 4.51 | 161 | 90 - 110 | | | | ¹ |
| Lab Sample ID: 1508262-001DMS | Date Analyzed: | 08/14/2015 | 1236h | | | | | | | | | | |
| Test Code: PO4-W-4500PF | Date Prepared: | 08/14/2015 | 1020h | | | | | | | | | | |
| Phosphate, Total (as P) | 3.55 | mg/L | SM4500-P-F | 0.0212 | 0.0500 | 1.000 | 3.05 | 49.6 | 90 - 110 | | | | ¹ |

¹ - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.



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QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508275
Project: Gold King Mine - San Juan River Sampling

Contact: Lenora Sullivan
Dept: WC
QC Type: MSD

| Analyte | Result | Units | Method | MDL | Reporting Limit | Amount Spiked | Spike Ref. Amount | %REC | Limits | RPD Ref. Amt | % RPD | RPD Limit | Qual |
|---------------------------------------|--------|------------------|------------|---------|-----------------|---------------|-------------------|------|----------|--------------|-------|-----------|----------------|
| Lab Sample ID: 1508275-001AMSD | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 315h | | | | | | | | | | | |
| Test Code: | | 300.0-W | | | | | | | | | | | |
| Chloride | 59.6 | mg/L | E300.0 | 0.0751 | 1.00 | 50.00 | 10.1 | 99.0 | 90 - 110 | 59.8 | 0.352 | 20 | |
| Sulfate | 185 | mg/L | E300.0 | 0.211 | 7.50 | 50.00 | 135 | 101 | 90 - 110 | 185 | 0.108 | 20 | |
| Lab Sample ID: 1508262-001AMSD | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 632h | | | | | | | | | | | |
| Test Code: | | ALK-W-2320B | | | | | | | | | | | |
| Alkalinity (as CaCO3) | 203 | mg/L | SM2320B | 1.86 | 10.0 | 100.0 | 108 | 94.6 | 80 - 120 | 205 | 0.835 | 10 | |
| Lab Sample ID: 1508263-001AMSD | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 632h | | | | | | | | | | | |
| Test Code: | | ALK-W-2320B | | | | | | | | | | | |
| Alkalinity (as CaCO3) | 208 | mg/L | SM2320B | 1.86 | 10.0 | 100.0 | 112 | 96.4 | 80 - 120 | 211 | 1.62 | 10 | |
| Lab Sample ID: 1508275-001AMSD | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 632h | | | | | | | | | | | |
| Test Code: | | ALK-W-2320B | | | | | | | | | | | |
| Alkalinity (as CaCO3) | 204 | mg/L | SM2320B | 1.86 | 10.0 | 100.0 | 107 | 98.0 | 80 - 120 | 205 | 0 | 10 | |
| Lab Sample ID: 1508263-004DMSD | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 016h | | | | | | | | | | | |
| Test Code: | | NO2/NO3-W-353.2 | | | | | | | | | | | |
| Nitrate/Nitrite (as N) | 4.86 | mg/L | E353.2 | 0.0417 | 0.0500 | 5.000 | 0.317 | 90.8 | 90 - 110 | 4.91 | 1.15 | 10 | |
| Lab Sample ID: 1508275-001DMSD | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 021h | | | | | | | | | | | |
| Test Code: | | NO2/NO3-W-353.2 | | | | | | | | | | | |
| Nitrate/Nitrite (as N) | 5.00 | mg/L | E353.2 | 0.0417 | 0.0500 | 5.000 | 0.481 | 90.4 | 90 - 110 | 5.16 | 3.17 | 10 | |
| Lab Sample ID: 1508262-004DMSD | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 000h | | | | | | | | | | | |
| Test Code: | | NO2/NO3-W-353.2 | | | | | | | | | | | |
| Nitrate/Nitrite (as N) | 1.22 | mg/L | E353.2 | 0.00833 | 0.0100 | 1.000 | 0.307 | 91.1 | 90 - 110 | 1.19 | 2.33 | 10 | |
| Lab Sample ID: 1508262-001DMSD | | | | | | | | | | | | | |
| Date Analyzed: | | 08/14/2015 1237h | | | | | | | | | | | |
| Test Code: | | PO4-W-4500PF | | | | | | | | | | | |
| Date Prepared: | | 08/14/2015 1020h | | | | | | | | | | | |
| Phosphate, Total (as P) | 3.07 | mg/L | SM4500-P-F | 0.0212 | 0.0500 | 1.000 | 3.05 | 1.80 | 90 - 110 | 3.55 | 14.4 | 10 | @ ¹ |



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Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508275
Project: Gold King Mine - San Juan River Sampling

Contact: Lenora Sullivan
Dept: WC
QC Type: MSD

| Analyte | Result | Units | Method | MDL | Reporting Limit | Amount Spiked | Spike Ref. Amount | %REC | Limits | RPD Ref. Amt | % RPD | RPD Limit | Qual |
|---------------------------------------|----------------|------------|------------|--------|-----------------|---------------|-------------------|-------|----------|--------------|-------|-----------|----------------|
| Lab Sample ID: 1508263-001DMSD | Date Analyzed: | 08/14/2015 | 1245h | | | | | | | | | | |
| Test Code: PO4-W-4500PF | Date Prepared: | 08/14/2015 | 1020h | | | | | | | | | | |
| Phosphate, Total (as P) | 4.86 | mg/L | SM4500-P-F | 0.0212 | 0.0500 | 1.000 | 5.72 | -85.3 | 90 - 110 | 5.7 | 15.8 | 10 | @ ¹ |
| Lab Sample ID: 1508275-001DMSD | Date Analyzed: | 08/14/2015 | 1249h | | | | | | | | | | |
| Test Code: PO4-W-4500PF | Date Prepared: | 08/14/2015 | 1020h | | | | | | | | | | |
| Phosphate, Total (as P) | 3.98 | mg/L | SM4500-P-F | 0.0212 | 0.0500 | 1.000 | 4.51 | -53.6 | 90 - 110 | 6.13 | 42.6 | 10 | @ |

@ - High RPD due to suspected sample non-homogeneity or matrix interference.

¹ - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

Corrections made to collection time for sample #3 -RW GenericEDD QC

WORK ORDER Summary

Work Order: **1508275** Page 1 of 5

Client: Utah Division of Water Quality
Client ID: UTD200
Project: Gold King Mine - San Juan River Sampling
Comments: Same Day Rush. QC2+. Dissolved metals have been field filtered. Evaluated down to the MDL. Use sparingly, do not preserve entire sample. Include EDD. CC: Jim Harris and Trisha Johnson;

Contact: Lenora Sullivan
QC Level: II+ MDL
WO Type: Standard

Due Date: 8/14/2015

| Sample ID | Client Sample ID | Collected Date | Received Date | Test Code | Matrix | Sel | Storage |
|--------------|--|-----------------|-----------------|---|---------|-------------------------------------|-------------------|
| 1508275-001A | San Juan R at Mexican Hat US163 Xing (4953000) | 8/13/2015 1205h | 8/13/2015 2017h | 300.0-W | Aqueous | <input checked="" type="checkbox"/> | df - wc |
| | | | | 2 SEL Analytes: CL SO4 | | | |
| | | | | ALK-W-2320B | | <input checked="" type="checkbox"/> | df - wc |
| | | | | 3 SEL Analytes: ALK ALKB ALKC | | | |
| | | | | COND-W-2510B | | <input type="checkbox"/> | df - wc |
| | | | | PH-4500H+B | | <input type="checkbox"/> | df - wc |
| | | | | TDS-W-2540C | | <input type="checkbox"/> | df - wc |
| | | | | TSS-W-2540D | | <input type="checkbox"/> | df - wc |
| 1508275-001B | | | | 200.7-W | | <input checked="" type="checkbox"/> | df - total metals |
| | | | | 6 SEL Analytes: AL CA FE MG K NA | | | |
| | | | | 200.7-W-PR | | <input type="checkbox"/> | df - total metals |
| | | | | 200.8-W | | <input checked="" type="checkbox"/> | df - total metals |
| | | | | 17 SEL Analytes: SB AS BA BE CD CR CO CU PB MN MO NI SE AG TL V ZN | | | |
| | | | | 200.8-W-PR | | <input type="checkbox"/> | df - total metals |
| | | | | HARD-2340B | | <input type="checkbox"/> | df - total metals |
| | | | | HG-DW-245.1 | | <input type="checkbox"/> | df - total metals |
| | | | | HG-DW-PR | | <input type="checkbox"/> | df - total metals |
| 1508275-001C | | | | 200.7-DIS | | <input checked="" type="checkbox"/> | df - dis metals |
| | | | | 6 SEL Analytes: AL CA FE MG K NA | | | |
| | | | | 200.7-DIS-PR | | <input type="checkbox"/> | df - dis metals |
| | | | | 200.8-DIS | | <input checked="" type="checkbox"/> | df - dis metals |
| | | | | 17 SEL Analytes: SB AS BA BE CD CR CO CU PB MN MO NI SE AG TL V ZN | | | |
| | | | | 200.8-DIS-PR | | <input type="checkbox"/> | df - dis metals |
| | | | | HARD-2340B | | <input checked="" type="checkbox"/> | df - dis metals |
| | | | | 1 SEL Analytes: HARD | | | |
| | | | | HG-DW-DIS-245.1 | | <input type="checkbox"/> | df - dis metals |

WORK ORDER Summary

Work Order: **1508275** Page 2 of 5

Client: Utah Division of Water Quality

Due Date: 8/14/2015

| Sample ID | Client Sample ID | Collected Date | Received Date | Test Code | Matrix | Sel | Storage | | | | |
|--------------|---|-----------------|-----------------|---|---------|-------------------------------------|-------------------|---|-------------------------------------|-------------------|--|
| 1508275-001C | San Juan R at Mexican Hat US163 Xing (4953000) | 8/13/2015 1205h | 8/13/2015 2017h | HG-DW-DIS-PR | Aqueous | <input type="checkbox"/> | df - dis metals | 1 | | | |
| 1508275-001D | | | | NO2/NO3-W-353.2 | | <input type="checkbox"/> | df -po4, no2/no3 | | | | |
| | | | | PO4-W-4500PF | | <input type="checkbox"/> | df -po4, no2/no3 | | | | |
| | | | | PO4-W-PR | | <input type="checkbox"/> | df -po4, no2/no3 | | | | |
| 1508275-002A | San Juan R at Sand Island (4953250) | 8/13/2015 1128h | 8/13/2015 2017h | 300.0-W | Aqueous | <input checked="" type="checkbox"/> | df - wc | 1 | | | |
| | | | | <i>2 SEL Analytes: CL SO4</i> | | | | | | | |
| | | | | ALK-W-2320B | | <input checked="" type="checkbox"/> | df - wc | | | | |
| | | | | <i>3 SEL Analytes: ALK ALKB ALKC</i> | | | | | | | |
| | | | | COND-W-2510B | | <input type="checkbox"/> | df - wc | | | | |
| | | | | PH-4500H+B | | <input type="checkbox"/> | df - wc | | | | |
| | | | | TDS-W-2540C | | <input type="checkbox"/> | df - wc | | | | |
| | | | | TSS-W-2540D | | <input type="checkbox"/> | df - wc | | | | |
| 1508275-002B | | | | | | | 200.7-W | | <input checked="" type="checkbox"/> | df - total metals | |
| | | | | <i>6 SEL Analytes: AL CA FE MG K NA</i> | | | | | | | |
| | | | | 200.7-W-PR | | <input type="checkbox"/> | df - total metals | | | | |
| | | | | 200.8-W | | <input checked="" type="checkbox"/> | df - total metals | | | | |
| | <i>17 SEL Analytes: SB AS BA BE CD CR CO CU PB MN MO NI SE AG TL V ZN</i> | | | | | | | | | | |
| | | | | 200.8-W-PR | | <input type="checkbox"/> | df - total metals | | | | |
| | | | | HARD-2340B | | <input type="checkbox"/> | df - total metals | | | | |
| | | | | HG-DW-245.1 | | <input type="checkbox"/> | df - total metals | | | | |
| | | | | HG-DW-PR | | <input type="checkbox"/> | df - total metals | | | | |
| 1508275-002C | | | | 200.7-DIS | | <input checked="" type="checkbox"/> | df - dis metals | | | | |
| | <i>6 SEL Analytes: AL CA FE MG K NA</i> | | | | | | | | | | |
| | | | | 200.7-DIS-PR | | <input type="checkbox"/> | df - dis metals | | | | |
| | | | | 200.8-DIS | | <input checked="" type="checkbox"/> | df - dis metals | | | | |
| | <i>17 SEL Analytes: SB AS BA BE CD CR CO CU PB MN MO NI SE AG TL V ZN</i> | | | | | | | | | | |
| | | | | 200.8-DIS-PR | | <input type="checkbox"/> | df - dis metals | | | | |
| | | | | HARD-2340B | | <input checked="" type="checkbox"/> | df - dis metals | | | | |
| | <i>1 SEL Analytes: HARD</i> | | | | | | | | | | |
| | | | | HG-DW-DIS-245.1 | | <input type="checkbox"/> | df - dis metals | | | | |
| | | | | HG-DW-DIS-PR | | <input type="checkbox"/> | df - dis metals | | | | |
| 1508275-002D | | | | NO2/NO3-W-353.2 | | <input type="checkbox"/> | df -po4, no2/no3 | | | | |
| | | | | PO4-W-4500PF | | <input type="checkbox"/> | df -po4, no2/no3 | | | | |
| | | | | PO4-W-PR | | <input type="checkbox"/> | df -po4, no2/no3 | | | | |
| 1508275-003A | San Juan R at Town of Montezuma | 8/13/2015 1046h | 8/13/2015 2017h | 300.0-W | Aqueous | <input checked="" type="checkbox"/> | df - wc | 1 | | | |
| | | | | <i>2 SEL Analytes: CL SO4</i> | | | | | | | |

WORK ORDER Summary

Work Order: **1508275** Page 3 of 5

Client: Utah Division of Water Quality

Due Date: 8/14/2015

| Sample ID | Client Sample ID | Collected Date | Received Date | Test Code | Matrix | Sel | Storage | | | |
|--------------|--|--------------------------|-----------------|---|---------|-------------------------------------|-------------------|---|--|--|
| 1508275-003A | San Juan R at Town of Montezuma | 8/13/2015 1046h | 8/13/2015 2017h | ALK-W-2320B | Aqueous | <input checked="" type="checkbox"/> | df - wc | 1 | | |
| | | | | <i>3 SEL Analytes: ALK ALKB ALKC</i> | | | | | | |
| | | | | COND-W-2510B | | <input type="checkbox"/> | df - wc | | | |
| | | | | PH-4500H+B | | <input type="checkbox"/> | df - wc | | | |
| | | | | TDS-W-2540C | | <input type="checkbox"/> | df - wc | | | |
| | | | | TSS-W-2540D | | <input type="checkbox"/> | df - wc | | | |
| 1508275-003B | | | | 200.7-W | | <input checked="" type="checkbox"/> | df - total metals | | | |
| | | | | <i>6 SEL Analytes: AL CA FE MG K NA</i> | | | | | | |
| | | | | 200.7-W-PR | | <input type="checkbox"/> | df - total metals | | | |
| | | | | 200.8-W | | <input checked="" type="checkbox"/> | df - total metals | | | |
| | | | | <i>17 SEL Analytes: SB AS BA BE CD CR CO CU PB MN MO NI SE AG TL V ZN</i> | | | | | | |
| | | | | 200.8-W-PR | | <input type="checkbox"/> | df - total metals | | | |
| | | | | HARD-2340B | | <input type="checkbox"/> | df - total metals | | | |
| | | | | HG-DW-245.1 | | <input type="checkbox"/> | df - total metals | | | |
| | | | | HG-DW-PR | | <input type="checkbox"/> | df - total metals | | | |
| | | | | 200.7-DIS | | <input checked="" type="checkbox"/> | df - dis metals | | | |
| 1508275-003C | | | | <i>6 SEL Analytes: AL CA FE MG K NA</i> | | | | | | |
| | | | | 200.7-DIS-PR | | <input type="checkbox"/> | df - dis metals | | | |
| | | | | 200.8-DIS | | <input checked="" type="checkbox"/> | df - dis metals | | | |
| | | | | <i>17 SEL Analytes: SB AS BA BE CD CR CO CU PB MN MO NI SE AG TL V ZN</i> | | | | | | |
| | | | | 200.8-DIS-PR | | <input type="checkbox"/> | df - dis metals | | | |
| | | | | HARD-2340B | | <input checked="" type="checkbox"/> | df - dis metals | | | |
| | | | | <i>1 SEL Analytes: HARD</i> | | | | | | |
| | | | | HG-DW-DIS-245.1 | | <input type="checkbox"/> | df - dis metals | | | |
| | | | | HG-DW-DIS-PR | | <input type="checkbox"/> | df - dis metals | | | |
| | | | | NO2/NO3-W-353.2 | | <input type="checkbox"/> | df -po4, no2/no3 | | | |
| 1508275-003D | | | | PO4-W-4500PF | | <input type="checkbox"/> | df -po4, no2/no3 | | | |
| | | | | PO4-W-PR | | <input type="checkbox"/> | df -po4, no2/no3 | | | |
| | | | | | | | | | | |
| 1508275-004A | San Juan R at US160 Xing in CO (4954000) | 8/13/2015 1001h | 8/13/2015 2017h | 300.0-W | Aqueous | <input checked="" type="checkbox"/> | df - wc | 1 | | |
| | | | | <i>2 SEL Analytes: CL SO4</i> | | | | | | |
| | | | | ALK-W-2320B | | <input checked="" type="checkbox"/> | df - wc | | | |
| | | | | <i>3 SEL Analytes: ALK ALKB ALKC</i> | | | | | | |
| | | | | COND-W-2510B | | <input type="checkbox"/> | df - wc | | | |
| | | | | PH-4500H+B | | <input type="checkbox"/> | df - wc | | | |
| TDS-W-2540C | | <input type="checkbox"/> | df - wc | | | | | | | |
| TSS-W-2540D | | <input type="checkbox"/> | df - wc | | | | | | | |

WORK ORDER Summary

Work Order: **1508275** Page 4 of 5

Client: Utah Division of Water Quality

Due Date: 8/14/2015

| Sample ID | Client Sample ID | Collected Date | Received Date | Test Code | Matrix | Sel | Storage |
|---|--|-------------------------------------|-------------------|---|---------|-------------------------------------|-------------------|
| 1508275-004B | San Juan R at US160 Xing in CO (4954000) | 8/13/2015 1001h | 8/13/2015 2017h | 200.7-W | Aqueous | <input checked="" type="checkbox"/> | df - total metals |
| | | | | <i>6 SEL Analytes: AL CA FE MG K NA</i> | | | |
| | | | | 200.7-W-PR | | <input type="checkbox"/> | df - total metals |
| | | | | 200.8-W | | <input checked="" type="checkbox"/> | df - total metals |
| | | | | <i>17 SEL Analytes: SB AS BA BE CD CR CO CU PB MN MO NI SE AG TL V ZN</i> | | | |
| | | | | 200.8-W-PR | | <input type="checkbox"/> | df - total metals |
| | | | | HARD-2340B | | <input type="checkbox"/> | df - total metals |
| | | | | HG-DW-245.1 | | <input type="checkbox"/> | df - total metals |
| | | | | HG-DW-PR | | <input type="checkbox"/> | df - total metals |
| | | | | 1508275-004C | | | |
| <i>6 SEL Analytes: AL CA FE MG K NA</i> | | | | | | | |
| 200.7-DIS-PR | | <input type="checkbox"/> | df - dis metals | | | | |
| 200.8-DIS | | <input checked="" type="checkbox"/> | df - dis metals | | | | |
| <i>17 SEL Analytes: SB AS BA BE CD CR CO CU PB MN MO NI SE AG TL V ZN</i> | | | | | | | |
| 200.8-DIS-PR | | <input type="checkbox"/> | df - dis metals | | | | |
| HARD-2340B | | <input checked="" type="checkbox"/> | df - dis metals | | | | |
| <i>1 SEL Analytes: HARD</i> | | | | | | | |
| HG-DW-DIS-245.1 | | <input type="checkbox"/> | df - dis metals | | | | |
| HG-DW-DIS-PR | | <input type="checkbox"/> | df - dis metals | | | | |
| 1508275-004D | | | | NO2/NO3-W-353.2 | | <input type="checkbox"/> | df -po4, no2/no3 |
| | | | | PO4-W-4500PF | | <input type="checkbox"/> | df -po4, no2/no3 |
| | | | | PO4-W-PR | | <input type="checkbox"/> | df -po4, no2/no3 |
| | | | | | | | |
| 1508275-005A | San Juan R at Clay Hills | 8/13/2015 1442h | 8/13/2015 2017h | 300.0-W | Aqueous | <input checked="" type="checkbox"/> | df - wc |
| | | | | <i>2 SEL Analytes: CL SO4</i> | | | |
| | | | | ALK-W-2320B | | <input checked="" type="checkbox"/> | df - wc |
| | | | | <i>3 SEL Analytes: ALK ALKB ALKC</i> | | | |
| | | | | COND-W-2510B | | <input type="checkbox"/> | df - wc |
| | | | | PH-4500H+B | | <input type="checkbox"/> | df - wc |
| | | | | TDS-W-2540C | | <input type="checkbox"/> | df - wc |
| | | | | TSS-W-2540D | | <input type="checkbox"/> | df - wc |
| 1508275-005B | | | | 200.7-W | | <input checked="" type="checkbox"/> | df - total metals |
| | | | | <i>6 SEL Analytes: AL CA FE MG K NA</i> | | | |
| | | | | 200.7-W-PR | | <input type="checkbox"/> | df - total metals |
| | | | | 200.8-W | | <input checked="" type="checkbox"/> | df - total metals |
| | | | | <i>17 SEL Analytes: SB AS BA BE CD CR CO CU PB MN MO NI SE AG TL V ZN</i> | | | |
| 200.8-W-PR | | <input type="checkbox"/> | df - total metals | | | | |

WORK ORDER Summary

Work Order: **1508275** Page 5 of 5

Client: Utah Division of Water Quality

Due Date: 8/14/2015

| Sample ID | Client Sample ID | Collected Date | Received Date | Test Code | Matrix | Sel | Storage |
|-----------------------------|-------------------------------------|-----------------|-----------------|---|-------------------------------------|-------------------------------------|-------------------|
| 1508275-005B | San Juan R at Clay Hills | 8/13/2015 1442h | 8/13/2015 2017h | HARD-2340B | Aqueous | <input type="checkbox"/> | df - total metals |
| | | | | HG-DW-245.1 | | <input type="checkbox"/> | df - total metals |
| | | | | HG-DW-PR | | <input type="checkbox"/> | df - total metals |
| 1508275-005C | | | | 200.7-DIS | | <input checked="" type="checkbox"/> | df - dis metals |
| | | | | <i>6 SEL Analytes: AL CA FE MG K NA</i> | | | |
| | | | | 200.7-DIS-PR | <input type="checkbox"/> | df - dis metals | |
| | | | | 200.8-DIS | <input checked="" type="checkbox"/> | df - dis metals | |
| | | | | <i>17 SEL Analytes: SB AS BA BE CD CR CO CU PB MN MO NI SE AG TL V ZN</i> | | | |
| | | | | 200.8-DIS-PR | <input type="checkbox"/> | df - dis metals | |
| | | | | HARD-2340B | <input checked="" type="checkbox"/> | df - dis metals | |
| <i>1 SEL Analytes: HARD</i> | | | | | | | |
| 1508275-005D | | | | HG-DW-DIS-245.1 | | <input type="checkbox"/> | df - dis metals |
| | | | | HG-DW-DIS-PR | <input type="checkbox"/> | df - dis metals | |
| | | | | NO2/NO3-W-353.2 | <input type="checkbox"/> | df -po4, no2/no3 | |
| | | | | PO4-W-4500PF | <input type="checkbox"/> | df -po4, no2/no3 | |
| 1508275-006A | Equipment Blank | 8/13/2015 1300h | 8/13/2015 2017h | PO4-W-PR | | <input type="checkbox"/> | df -po4, no2/no3 |
| | | | | 200.7-DIS | Aqueous | <input checked="" type="checkbox"/> | df - dis metals |
| | | | | <i>6 SEL Analytes: AL CA FE MG K NA</i> | | | |
| | | | | 200.7-DIS-PR | <input type="checkbox"/> | df - dis metals | |
| | | | | 200.8-DIS | <input checked="" type="checkbox"/> | df - dis metals | |
| | | | | <i>17 SEL Analytes: SB AS BA BE CD CR CO CU PB MN MO NI SE AG TL V ZN</i> | | | |
| | | | | 200.8-DIS-PR | <input type="checkbox"/> | df - dis metals | |
| HARD-2340B | <input checked="" type="checkbox"/> | df - dis metals | | | | | |
| <i>1 SEL Analytes: HARD</i> | | | | | | | |
| | | | | HG-DW-DIS-245.1 | | <input type="checkbox"/> | df - dis metals |
| | | | | HG-DW-DIS-PR | | <input type="checkbox"/> | df - dis metals |

American West Analytical Laboratories

Chain of Custody

Lab Sample Set # 1508275

Client: **Utah Division of Water Quality**
 Address: **PO Box 144870**
Salt Lake City, UT 84114-4870

Contact: **Lenora Sullivan**
 Phone: **801-536-4367**
 Fax: **801-536-4301**

Page 1 of 1

Project Name: **Gold King Mine - San Juan River Sampling**
 PO#:

Email: **lenoras@utah.gov**
jamesharris@utah.gov (please copy on results)

QC Level: **2+**

TAT - ASAP

| Sample ID: | Date Sampled | Time | # of Containers | Sample Matrix | Total Chemistry: pH, Alkalinity, Anions, TDS, TSS, Conductivity No Nitrate | Total TAL Metals + Mo + Hardness (200.7: Al, Ca, Fe, K, Mg, Na, 200.8: Sb, As, Ba, Be, Cd, Cr, Co, Cu, Pb, Mn, Mo, N, Ag, Se, Ti, V, Zn, 245.1: Hg) | Dissolved TAL Metals + Mo + Hardness (200.7: Al, Ca, Fe, K, Mg, Na, 200.8: Sb, As, Ba, Be, Cd, Cr, Co, Cu, Pb, Mn, Mo, N, Ag, Se, Ti, V, Zn, 245.1: Hg) | Total Nutrients: Phosphate, Nitrate&Nitrite | Comments |
|--|--------------|-------|-----------------|---------------|---|---|---|---|---|
| SAN JUAN R AT MEXICAN HAT US163 XING (4953000) | 8/13/15 | 1205 | 4 | W | X | X | X | X | Dissolved Metals samples have been field filtered. Samples collected from river monitoring following a mine waste dump release. Please flag any concentrations detected less than RL and at or greater than the MDL with a J qualifier. Please include EDD. |
| SAN JUAN R AT SAND ISLAND (4953250) | 8/13/15 | 1128 | 4 | W | X | X | X | | |
| San Juan River at Town of Montezuma | 8/13/15 | 1646 | 4 | W | X | X | X | | |
| SAN JUAN R AT US160 XING IN CO (4954000) | 8/13/15 | 1001 | 4 | W | X | X | X | | |
| SAN JUAN R @ CLAY HILLS | 8/13/15 | 1442 | 4 | W | X | X | X | | |
| Equipment Blank | 8/13/15 | 13:00 | 1 | W | | | | | |

Laboratory Use Only

Samples Were:

- Shipped hand delivered
- Ambient Chilled
- Temperature 1.6°C
- Received Broken/Leaking (Improperly Sealed) Y N
- Properly Preserved Y N
- Received Within Holding Times Y N

COC Tape Was:

- Present on Outer Package Y N NA
- Unbroken on Outer Package Y N NA
- Present on Sample Y N NA
- Unbroken on Sample Y N NA

Discrepancies Between Sample Labels and COC Record? Y N

Special Instructions:

| | | | |
|---|--|---|--|
| Relinquished by: <i>Signature</i> <i>J. Harris</i> Print Name: JAMES HARRIS | Date: 8/13/15 Time: 18:00 | Received by: <i>Signature</i> <i>Kent Hanson</i> Print Name: Kent Hanson | Date: 13 Aug 15 Time: 18:00 |
| Relinquished by: <i>Signature</i> <i>Calah Seese</i> Print Name: Calah Seese | Date: 8/13 Time: 20:17 | Received by: <i>Signature</i> <i>Calah Seese</i> Print Name: Calah Seese | Date: 8.13.15 Time: 20:00 |

Received by *Kyle F. Gross* **8/13/2015**
Kyle F. Gross **20:17h**

Preservation Check Sheet

Sample Set Extension and pH

| Analysis | Preservative | -001 | -002 | -003 | -004 | -005 | -006 | | | | | | | | | | | |
|-----------------------------------|--------------------------------------|------|------|------|------|------|------|--|--|--|--|--|--|--|--|--|--|--|
| Ammonia | pH <2 H ₂ SO ₄ | | | | | | | | | | | | | | | | | |
| COD | pH <2 H ₂ SO ₄ | | | | | | | | | | | | | | | | | |
| Cyanide | pH >12 NaOH | | | | | | | | | | | | | | | | | |
| Metals | pH <2 HNO ₃ | Yes | Yes | Yes | Yes | Yes | Yes | | | | | | | | | | | |
| NO ₂ & NO ₃ | pH <2 H ₂ SO ₄ | Yes | Yes | Yes | Yes | Yes | Yes | | | | | | | | | | | |
| O & G | pH <2 HCL | | | | | | | | | | | | | | | | | |
| Phenols | pH <2 H ₂ SO ₄ | | | | | | | | | | | | | | | | | |
| Sulfide | pH > 9NaOH, Zn Acetate | | | | | | | | | | | | | | | | | |
| TKN | pH <2 H ₂ SO ₄ | | | | | | | | | | | | | | | | | |
| T PO ₄ | pH <2 H ₂ SO ₄ | Yes | Yes | Yes | Yes | Yes | Yes | | | | | | | | | | | |
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- Procedure:
- 1) Pour a small amount of sample in the sample lid
 - 2) Pour sample from Lid gently over wide range pH paper
 - 3) **Do Not** dip the pH paper in the sample bottle or lid
 - 4) If sample is not preserved, properly list its extension and receiving pH in the appropriate column above
 - 5) Flag COC, notify client if requested
 - 6) Place client conversation on COC
 - 7) Samples may be adjusted

Frequency: All samples requiring preservation

- * The sample required additional preservative upon receipt.
- + The sample was received unpreserved
- ▲ The Sample was received unpreserved and therefore preserved upon receipt.
- # The sample pH was unadjustable to a pH < 2 due to the sample matrix
- The sample pH was unadjustable to a pH > ____ due to the sample matrix interference