



3440 South 700 West
Salt Lake City, UT 84119

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687
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: 1508324

American West Analytical Laboratories received sample(s) on 8/17/2015 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.

Thank You,

Approved by: _____
Laboratory Director or designee



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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: 1508324-001
Client Sample ID: San Juan R at Mexican Hat US163 Xing (4953000)
Collection Date: 8/17/2015 1504h
Received Date: 8/17/2015 2131h

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	8/17/2015 2309h	8/18/2015 349h	E200.7	0.0237	0.100	16.8	
Antimony	7440-36-0	mg/L	8/17/2015 2309h	8/18/2015 453h	E200.8	0.0000366	0.00200	0.000698	J
Arsenic	7440-38-2	mg/L	8/17/2015 2309h	8/18/2015 453h	E200.8	0.0000920	0.00200	0.00685	B
Barium	7440-39-3	mg/L	8/17/2015 2309h	8/18/2015 453h	E200.8	0.000538	0.00200	0.496	
Beryllium	7440-41-7	mg/L	8/17/2015 2309h	8/18/2015 453h	E200.8	0.0000288	0.00200	0.00207	
Cadmium	7440-43-9	mg/L	8/17/2015 2309h	8/18/2015 453h	E200.8	0.000193	0.000500	0.000429	J
Calcium	7440-70-2	mg/L	8/17/2015 2309h	8/18/2015 249h	E200.7	0.401	10.0	92.3	B
Chromium	7440-47-3	mg/L	8/17/2015 2309h	8/18/2015 453h	E200.8	0.00154	0.00200	0.00824	
Cobalt	7440-48-4	mg/L	8/17/2015 2309h	8/18/2015 453h	E200.8	0.0000434	0.00400	0.00982	
Copper	7440-50-8	mg/L	8/17/2015 2309h	8/18/2015 453h	E200.8	0.000692	0.00200	0.0243	
Iron	7439-89-6	mg/L	8/17/2015 2309h	8/18/2015 349h	E200.7	0.0767	0.100	13.5	
Lead	7439-92-1	mg/L	8/17/2015 2309h	8/18/2015 453h	E200.8	0.000264	0.00200	0.0271	
Magnesium	7439-95-4	mg/L	8/17/2015 2309h	8/18/2015 349h	E200.7	0.0294	1.00	18.0	
Manganese	7439-96-5	mg/L	8/17/2015 2309h	8/18/2015 453h	E200.8	0.00153	0.00200	0.641	
Mercury	7439-97-6	mg/L	8/17/2015 2220h	8/18/2015 925h	E245.1	0.0000892	0.000150	0.0000633	J
Molybdenum	7439-98-7	mg/L	8/17/2015 2309h	8/18/2015 453h	E200.8	0.000206	0.00200	0.00106	J
Nickel	7440-02-0	mg/L	8/17/2015 2309h	8/18/2015 453h	E200.8	0.000754	0.00200	0.0141	
Potassium	7440-09-7	mg/L	8/17/2015 2309h	8/18/2015 349h	E200.7	0.247	1.00	6.41	
Selenium	7782-49-2	mg/L	8/17/2015 2309h	8/18/2015 453h	E200.8	0.0000634	0.00200	0.000975	J
Silver	7440-22-4	mg/L	8/17/2015 2309h	8/18/2015 453h	E200.8	0.0000244	0.00200	0.000328	J
Sodium	7440-23-5	mg/L	8/17/2015 2309h	8/18/2015 349h	E200.7	0.0330	1.00	38.4	
Thallium	7440-28-0	mg/L	8/17/2015 2309h	8/18/2015 453h	E200.8	0.0000242	0.00200	0.000261	J
Vanadium	7440-62-2	mg/L	8/17/2015 2309h	8/18/2015 453h	E200.8	0.000438	0.00440	0.0262	
Zinc	7440-66-6	mg/L	8/17/2015 2309h	8/18/2015 453h	E200.8	0.00476	0.00500	0.0726	

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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INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508324-002
Client Sample ID: San Juan R at Sand Island (4953250)
Collection Date: 8/17/2015 1533h
Received Date: 8/17/2015 2131h

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	8/17/2015 2309h	8/18/2015 351h	E200.7	0.0237	0.100	10.2	
Antimony	7440-36-0	mg/L	8/17/2015 2309h	8/18/2015 457h	E200.8	0.0000366	0.00200	0.000454	J
Arsenic	7440-38-2	mg/L	8/17/2015 2309h	8/18/2015 457h	E200.8	0.0000920	0.00200	0.00503	B
Barium	7440-39-3	mg/L	8/17/2015 2309h	8/18/2015 457h	E200.8	0.000538	0.00200	0.300	
Beryllium	7440-41-7	mg/L	8/17/2015 2309h	8/18/2015 457h	E200.8	0.0000288	0.00200	0.000973	J
Cadmium	7440-43-9	mg/L	8/17/2015 2309h	8/18/2015 457h	E200.8	0.000193	0.000500	0.000286	J
Calcium	7440-70-2	mg/L	8/17/2015 2309h	8/18/2015 251h	E200.7	0.401	10.0	85.0	B
Chromium	7440-47-3	mg/L	8/17/2015 2309h	8/18/2015 457h	E200.8	0.00154	0.00200	0.00625	
Cobalt	7440-48-4	mg/L	8/17/2015 2309h	8/18/2015 457h	E200.8	0.0000434	0.00400	0.00591	
Copper	7440-50-8	mg/L	8/17/2015 2309h	8/18/2015 457h	E200.8	0.000692	0.00200	0.0170	
Iron	7439-89-6	mg/L	8/17/2015 2309h	8/18/2015 351h	E200.7	0.0767	0.100	10.2	
Lead	7439-92-1	mg/L	8/17/2015 2309h	8/18/2015 457h	E200.8	0.000264	0.00200	0.0172	
Magnesium	7439-95-4	mg/L	8/17/2015 2309h	8/18/2015 351h	E200.7	0.0294	1.00	16.7	
Manganese	7439-96-5	mg/L	8/17/2015 2309h	8/18/2015 457h	E200.8	0.00153	0.00200	0.414	
Mercury	7439-97-6	mg/L	8/17/2015 2220h	8/18/2015 927h	E245.1	0.0000892	0.000150	0.0000300	J
Molybdenum	7439-98-7	mg/L	8/17/2015 2309h	8/18/2015 457h	E200.8	0.000206	0.00200	0.00126	J
Nickel	7440-02-0	mg/L	8/17/2015 2309h	8/18/2015 457h	E200.8	0.000754	0.00200	0.0102	
Potassium	7440-09-7	mg/L	8/17/2015 2309h	8/18/2015 351h	E200.7	0.247	1.00	5.05	
Selenium	7782-49-2	mg/L	8/17/2015 2309h	8/18/2015 457h	E200.8	0.0000634	0.00200	0.000865	J
Silver	7440-22-4	mg/L	8/17/2015 2309h	8/18/2015 457h	E200.8	0.0000244	0.00200	0.000165	J
Sodium	7440-23-5	mg/L	8/17/2015 2309h	8/18/2015 351h	E200.7	0.0330	1.00	31.8	
Thallium	7440-28-0	mg/L	8/17/2015 2309h	8/18/2015 457h	E200.8	0.0000242	0.00200	0.000188	J
Vanadium	7440-62-2	mg/L	8/17/2015 2309h	8/18/2015 457h	E200.8	0.000438	0.00440	0.0170	
Zinc	7440-66-6	mg/L	8/17/2015 2309h	8/18/2015 457h	E200.8	0.00476	0.00500	0.0555	

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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INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508324-003
Client Sample ID: San Juan River at Town of Montezuma (4953990)
Collection Date: 8/17/2015 1607h
Received Date: 8/17/2015 2131h

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	8/17/2015 2309h	8/18/2015 353h	E200.7	0.0237	0.100	4.16	¹
Antimony	7440-36-0	mg/L	8/17/2015 2309h	8/18/2015 510h	E200.8	0.0000366	0.00200	0.000350	J ¹
Arsenic	7440-38-2	mg/L	8/17/2015 2309h	8/18/2015 510h	E200.8	0.0000920	0.00200	0.00263	B
Barium	7440-39-3	mg/L	8/17/2015 2309h	8/18/2015 510h	E200.8	0.000538	0.00200	0.141	
Beryllium	7440-41-7	mg/L	8/17/2015 2309h	8/18/2015 510h	E200.8	0.0000288	0.00200	0.000408	J
Cadmium	7440-43-9	mg/L	8/17/2015 2309h	8/18/2015 510h	E200.8	0.000193	0.000500	0.000254	J
Calcium	7440-70-2	mg/L	8/17/2015 2309h	8/18/2015 256h	E200.7	0.401	10.0	65.6	² B
Chromium	7440-47-3	mg/L	8/17/2015 2309h	8/18/2015 510h	E200.8	0.00154	0.00200	0.00242	
Cobalt	7440-48-4	mg/L	8/17/2015 2309h	8/18/2015 510h	E200.8	0.0000434	0.00400	0.00187	J
Copper	7440-50-8	mg/L	8/17/2015 2309h	8/18/2015 510h	E200.8	0.000692	0.00200	0.00689	
Iron	7439-89-6	mg/L	8/17/2015 2309h	8/18/2015 353h	E200.7	0.0767	0.100	3.51	¹
Lead	7439-92-1	mg/L	8/17/2015 2309h	8/18/2015 510h	E200.8	0.000264	0.00200	0.00605	
Magnesium	7439-95-4	mg/L	8/17/2015 2309h	8/18/2015 353h	E200.7	0.0294	1.00	13.5	
Manganese	7439-96-5	mg/L	8/17/2015 2309h	8/18/2015 510h	E200.8	0.00153	0.00200	0.150	
Mercury	7439-97-6	mg/L	8/17/2015 2220h	8/18/2015 920h	E245.1	0.00000892	0.000150	0.0000117	J
Molybdenum	7439-98-7	mg/L	8/17/2015 2309h	8/18/2015 510h	E200.8	0.000206	0.00200	0.00150	J
Nickel	7440-02-0	mg/L	8/17/2015 2309h	8/18/2015 510h	E200.8	0.000754	0.00200	0.00306	
Potassium	7440-09-7	mg/L	8/17/2015 2309h	8/18/2015 353h	E200.7	0.247	1.00	3.63	
Selenium	7782-49-2	mg/L	8/17/2015 2309h	8/18/2015 510h	E200.8	0.0000634	0.00200	0.000656	J
Silver	7440-22-4	mg/L	8/17/2015 2309h	8/18/2015 510h	E200.8	0.0000244	0.00200	0.000114	J
Sodium	7440-23-5	mg/L	8/17/2015 2309h	8/18/2015 353h	E200.7	0.0330	1.00	31.0	
Thallium	7440-28-0	mg/L	8/17/2015 2309h	8/18/2015 510h	E200.8	0.0000242	0.00200	0.000140	J
Vanadium	7440-62-2	mg/L	8/17/2015 2309h	8/18/2015 510h	E200.8	0.000438	0.00440	0.00804	
Zinc	7440-66-6	mg/L	8/17/2015 2309h	8/18/2015 510h	E200.8	0.00476	0.00500	0.0202	

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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INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508324-001
Client Sample ID: San Juan R at Mexican Hat US163 Xing (4953000)
Collection Date: 8/17/2015 1504h
Received Date: 8/17/2015 2131h

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	8/18/2015 527h	8/18/2015 1236h	E200.7	0.0237	0.100	0.0523	J
Antimony	7440-36-0	mg/L	8/18/2015 527h	8/18/2015 1144h	E200.8	0.0000366	0.00200	0.000817	J
Arsenic	7440-38-2	mg/L	8/18/2015 527h	8/18/2015 1144h	E200.8	0.0000920	0.00200	0.00155	J
Barium	7440-39-3	mg/L	8/18/2015 527h	8/18/2015 1144h	E200.8	0.000538	0.00200	0.108	
Beryllium	7440-41-7	mg/L	8/18/2015 527h	8/18/2015 1144h	E200.8	0.0000288	0.00200	< 0.00200	U
Cadmium	7440-43-9	mg/L	8/18/2015 527h	8/18/2015 1144h	E200.8	0.000193	0.000500	< 0.000500	U
Calcium	7440-70-2	mg/L	8/18/2015 527h	8/18/2015 1209h	E200.7	0.401	10.0	59.3	
Chromium	7440-47-3	mg/L	8/18/2015 527h	8/18/2015 1144h	E200.8	0.00154	0.00200	< 0.00200	U
Cobalt	7440-48-4	mg/L	8/18/2015 527h	8/18/2015 1144h	E200.8	0.0000434	0.00400	0.000128	J
Copper	7440-50-8	mg/L	8/18/2015 527h	8/18/2015 1144h	E200.8	0.000692	0.00200	0.00285	
Iron	7439-89-6	mg/L	8/18/2015 527h	8/18/2015 1236h	E200.7	0.0767	0.100	< 0.100	U
Lead	7439-92-1	mg/L	8/18/2015 527h	8/18/2015 1144h	E200.8	0.000264	0.00200	< 0.00200	U
Magnesium	7439-95-4	mg/L	8/18/2015 527h	8/18/2015 1236h	E200.7	0.0294	1.00	10.3	
Manganese	7439-96-5	mg/L	8/18/2015 527h	8/18/2015 1144h	E200.8	0.00153	0.00200	< 0.00200	U
Mercury	7439-97-6	mg/L	8/17/2015 2245h	8/18/2015 848h	E245.1	0.00000892	0.000150	< 0.000150	U
Molybdenum	7439-98-7	mg/L	8/18/2015 527h	8/18/2015 1144h	E200.8	0.000206	0.00200	0.00255	
Nickel	7440-02-0	mg/L	8/18/2015 527h	8/18/2015 1144h	E200.8	0.000754	0.00200	0.00123	J
Potassium	7440-09-7	mg/L	8/18/2015 527h	8/18/2015 1236h	E200.7	0.247	1.00	3.42	
Selenium	7782-49-2	mg/L	8/18/2015 527h	8/18/2015 1144h	E200.8	0.0000634	0.00200	0.000859	J
Silver	7440-22-4	mg/L	8/18/2015 527h	8/18/2015 1144h	E200.8	0.0000244	0.00200	0.000186	J
Sodium	7440-23-5	mg/L	8/18/2015 527h	8/18/2015 1236h	E200.7	0.0330	1.00	37.3	B
Thallium	7440-28-0	mg/L	8/18/2015 527h	8/18/2015 1144h	E200.8	0.0000242	0.00200	0.0000425	J
Vanadium	7440-62-2	mg/L	8/18/2015 527h	8/18/2015 1144h	E200.8	0.000438	0.00440	0.00340	J
Zinc	7440-66-6	mg/L	8/18/2015 527h	8/18/2015 1144h	E200.8	0.00476	0.00500	< 0.00500	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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INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508324-003
Client Sample ID: San Juan River at Town of Montezuma (4953990)
Collection Date: 8/17/2015 1607h
Received Date: 8/17/2015 2131h

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	8/18/2015 527h	8/18/2015 1241h	E200.7	0.0237	0.100	0.0273	J
Antimony	7440-36-0	mg/L	8/18/2015 527h	8/18/2015 1150h	E200.8	0.0000366	0.00200	0.000285	J
Arsenic	7440-38-2	mg/L	8/18/2015 527h	8/18/2015 1150h	E200.8	0.0000920	0.00200	0.00117	J
Barium	7440-39-3	mg/L	8/18/2015 527h	8/18/2015 1150h	E200.8	0.000538	0.00200	0.0804	
Beryllium	7440-41-7	mg/L	8/18/2015 527h	8/18/2015 1150h	E200.8	0.0000288	0.00200	< 0.00200	U
Cadmium	7440-43-9	mg/L	8/18/2015 527h	8/18/2015 1150h	E200.8	0.000193	0.000500	< 0.000500	U
Calcium	7440-70-2	mg/L	8/18/2015 527h	8/18/2015 1213h	E200.7	0.401	10.0	60.2	
Chromium	7440-47-3	mg/L	8/18/2015 527h	8/18/2015 1150h	E200.8	0.00154	0.00200	< 0.00200	U
Cobalt	7440-48-4	mg/L	8/18/2015 527h	8/18/2015 1150h	E200.8	0.0000434	0.00400	0.000137	J
Copper	7440-50-8	mg/L	8/18/2015 527h	8/18/2015 1150h	E200.8	0.000692	0.00200	0.00187	J
Iron	7439-89-6	mg/L	8/18/2015 527h	8/18/2015 1241h	E200.7	0.0767	0.100	< 0.100	U
Lead	7439-92-1	mg/L	8/18/2015 527h	8/18/2015 1150h	E200.8	0.000264	0.00200	< 0.00200	U
Magnesium	7439-95-4	mg/L	8/18/2015 527h	8/18/2015 1241h	E200.7	0.0294	1.00	11.6	
Manganese	7439-96-5	mg/L	8/18/2015 527h	8/18/2015 1150h	E200.8	0.00153	0.00200	0.00240	
Mercury	7439-97-6	mg/L	8/17/2015 2245h	8/18/2015 858h	E245.1	0.00000892	0.000150	< 0.000150	U
Molybdenum	7439-98-7	mg/L	8/18/2015 527h	8/18/2015 1150h	E200.8	0.000206	0.00200	0.00197	J
Nickel	7440-02-0	mg/L	8/18/2015 527h	8/18/2015 1150h	E200.8	0.000754	0.00200	< 0.00200	U
Potassium	7440-09-7	mg/L	8/18/2015 527h	8/18/2015 1241h	E200.7	0.247	1.00	2.82	
Selenium	7782-49-2	mg/L	8/18/2015 527h	8/18/2015 1150h	E200.8	0.0000634	0.00200	0.000630	J
Silver	7440-22-4	mg/L	8/18/2015 527h	8/18/2015 1150h	E200.8	0.0000244	0.00200	< 0.00200	U
Sodium	7440-23-5	mg/L	8/18/2015 527h	8/18/2015 1241h	E200.7	0.0330	1.00	29.4	B
Thallium	7440-28-0	mg/L	8/18/2015 527h	8/18/2015 1150h	E200.8	0.0000242	0.00200	< 0.00200	U
Vanadium	7440-62-2	mg/L	8/18/2015 527h	8/18/2015 1150h	E200.8	0.000438	0.00440	0.00218	J
Zinc	7440-66-6	mg/L	8/18/2015 527h	8/18/2015 1150h	E200.8	0.00476	0.00500	< 0.00500	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).

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3440 South 700 West
Salt Lake City, UT 84119

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687
e-mail: awal@awal-labs.com, web: www.awal-labs.com

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: 1508324-004
Client Sample ID: San Juan R at Clay Hills
Collection Date: 8/17/2015 1303h
Received Date: 8/17/2015 2131h

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	8/18/2015 527h	8/18/2015 1243h	E200.7	0.0237	0.100	0.101	
Antimony	7440-36-0	mg/L	8/18/2015 527h	8/18/2015 1153h	E200.8	0.0000366	0.00200	0.000263	J
Arsenic	7440-38-2	mg/L	8/18/2015 527h	8/18/2015 1153h	E200.8	0.0000920	0.00200	0.00163	J
Barium	7440-39-3	mg/L	8/18/2015 527h	8/18/2015 1153h	E200.8	0.000538	0.00200	0.132	
Beryllium	7440-41-7	mg/L	8/18/2015 527h	8/18/2015 1153h	E200.8	0.0000288	0.00200	< 0.00200	U
Cadmium	7440-43-9	mg/L	8/18/2015 527h	8/18/2015 1153h	E200.8	0.000193	0.000500	< 0.000500	U
Calcium	7440-70-2	mg/L	8/18/2015 527h	8/18/2015 1215h	E200.7	0.401	10.0	53.2	
Chromium	7440-47-3	mg/L	8/18/2015 527h	8/18/2015 1153h	E200.8	0.00154	0.00200	< 0.00200	U
Cobalt	7440-48-4	mg/L	8/18/2015 527h	8/18/2015 1153h	E200.8	0.0000434	0.00400	0.000253	J
Copper	7440-50-8	mg/L	8/18/2015 527h	8/18/2015 1153h	E200.8	0.000692	0.00200	0.00465	
Iron	7439-89-6	mg/L	8/18/2015 527h	8/18/2015 1243h	E200.7	0.0767	0.100	< 0.100	U
Lead	7439-92-1	mg/L	8/18/2015 527h	8/18/2015 1153h	E200.8	0.000264	0.00200	< 0.00200	U
Magnesium	7439-95-4	mg/L	8/18/2015 527h	8/18/2015 1243h	E200.7	0.0294	1.00	8.79	
Manganese	7439-96-5	mg/L	8/18/2015 527h	8/18/2015 1153h	E200.8	0.00153	0.00200	0.00270	
Mercury	7439-97-6	mg/L	8/17/2015 2245h	8/18/2015 900h	E245.1	0.00000892	0.000150	< 0.000150	U
Molybdenum	7439-98-7	mg/L	8/18/2015 527h	8/18/2015 1153h	E200.8	0.000206	0.00200	0.00255	
Nickel	7440-02-0	mg/L	8/18/2015 527h	8/18/2015 1153h	E200.8	0.000754	0.00200	0.00136	J
Potassium	7440-09-7	mg/L	8/18/2015 527h	8/18/2015 1243h	E200.7	0.247	1.00	3.89	
Selenium	7782-49-2	mg/L	8/18/2015 527h	8/18/2015 1153h	E200.8	0.0000634	0.00200	0.000731	J
Silver	7440-22-4	mg/L	8/18/2015 527h	8/18/2015 1153h	E200.8	0.0000244	0.00200	< 0.00200	U
Sodium	7440-23-5	mg/L	8/18/2015 527h	8/18/2015 1243h	E200.7	0.0330	1.00	44.5	B
Thallium	7440-28-0	mg/L	8/18/2015 527h	8/18/2015 1153h	E200.8	0.0000242	0.00200	< 0.00200	U
Vanadium	7440-62-2	mg/L	8/18/2015 527h	8/18/2015 1153h	E200.8	0.000438	0.00440	0.00483	
Zinc	7440-66-6	mg/L	8/18/2015 527h	8/18/2015 1153h	E200.8	0.00476	0.00500	< 0.00500	U

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

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3440 South 700 West

Salt Lake City, UT 84119

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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: 1508324-001
Client Sample ID: San Juan R at Mexican Hat US163 Xing (4953000)
Collection Date: 8/17/2015 1504h
Received Date: 8/17/2015 2131h

Analytical Results

Compound	CAS	Units	Date Prepared	Date Analyzed	Method Used	MDL	Reporting Limit	Analytical Result	Qual
Alkalinity (as CaCO3)		mg/L		8/18/2015 604h	SM2320B	1.86	10.0	108	
Bicarbonate (as CaCO3)		mg/L		8/18/2015 604h	SM2320B	1.86	10.0	101	
Carbonate (as CaCO3)		mg/L		8/18/2015 604h	SM2320B	1.86	10.0	6.80	J
Chloride	16887-00-6	mg/L		8/21/2015 2034h	E300.0	0.0751	1.00	12.8	
Conductivity		µmhos/cm		8/18/2015 542h	SM2510B	0.436	2.00	625	
Hardness (as CaCO3)		mg/L		8/18/2015 1342h	SM2340B	10.0	10.0	305	
Hardness, Dissolved (as CaCO3)		mg/L		8/18/2015 1342h	SM2340B	10.0	10.0	190	
Nitrate/Nitrite (as N)	7727-37-9	mg/L		8/18/2015 1304h	E353.2	0.00833	0.0100	0.340	¹
pH @ 25° C		pH Units		8/17/2015 2157h	SM4500-H+B	1.00	1.00	8.38	
Phosphate, Total (as P)	7723-14-0	mg/L	8/18/2015 720h	8/18/2015 1407h	SM4500-P-F	0.0212	0.0500	0.446	¹
Sulfate	14808-79-8	mg/L		8/19/2015 312h	E300.0	0.211	7.50	142	
Total Dissolved Solids		mg/L		8/17/2015 2230h	SM2540C	30.6	50.0	880	
Total Suspended Solids	TSS	mg/L		8/18/2015 2026h	SM2540D	47.2	50.0	1,700	

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

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: 1508324-002
Client Sample ID: San Juan R at Sand Island (4953250)
Collection Date: 8/17/2015 1533h
Received Date: 8/17/2015 2131h

Analytical Results

Compound	CAS	Units	Date Prepared	Date Analyzed	Method Used	MDL	Reporting Limit	Analytical Result	Qual
Alkalinity (as CaCO3)		mg/L		8/18/2015 604h	SM2320B	1.86	10.0	112	
Bicarbonate (as CaCO3)		mg/L		8/18/2015 604h	SM2320B	1.86	10.0	112	
Carbonate (as CaCO3)		mg/L		8/18/2015 604h	SM2320B	1.86	10.0	< 10.0	U
Chloride	16887-00-6	mg/L		8/21/2015 2124h	E300.0	0.0751	1.00	14.8	
Conductivity		µmhos/cm		8/18/2015 542h	SM2510B	0.436	2.00	636	
Hardness (as CaCO3)		mg/L		8/18/2015 1342h	SM2340B	10.0	10.0	281	
Hardness, Dissolved (as CaCO3)		mg/L		8/18/2015 1342h	SM2340B	10.0	10.0	202	
Nitrate/Nitrite (as N)	7727-37-9	mg/L		8/18/2015 1309h	E353.2	0.00833	0.0100	0.251	
pH @ 25° C		pH Units		8/17/2015 2157h	SM4500-H+B	1.00	1.00	8.45	
Phosphate, Total (as P)	7723-14-0	mg/L	8/18/2015 720h	8/18/2015 1413h	SM4500-P-F	0.0212	0.0500	0.283	
Sulfate	14808-79-8	mg/L		8/19/2015 417h	E300.0	0.211	7.50	148	
Total Dissolved Solids		mg/L		8/17/2015 2230h	SM2540C	30.6	50.0	930	
Total Suspended Solids	TSS	mg/L		8/18/2015 2026h	SM2540D	28.3	30.0	856	@

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

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

INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Lenora Sullivan
Project: Gold King Mine - San Juan River Sampling
Lab Sample ID: 1508324-003
Client Sample ID: San Juan River at Town of Montezuma (4953990)
Collection Date: 8/17/2015 1607h
Received Date: 8/17/2015 2131h

Analytical Results

Compound	CAS	Units	Date Prepared	Date Analyzed	Method Used	MDL	Reporting Limit	Analytical Result	Qual
Alkalinity (as CaCO ₃)		mg/L		8/18/2015 604h	SM2320B	1.86	10.0	110	
Bicarbonate (as CaCO ₃)		mg/L		8/18/2015 604h	SM2320B	1.86	10.0	110	
Carbonate (as CaCO ₃)		mg/L		8/18/2015 604h	SM2320B	1.86	10.0	< 10.0	U
Chloride	16887-00-6	mg/L		8/21/2015 2141h	E300.0	0.0751	1.00	14.7	
Conductivity		µmhos/cm		8/18/2015 542h	SM2510B	0.436	2.00	642	
Hardness (as CaCO ₃)		mg/L		8/18/2015 1342h	SM2340B	10.0	10.0	219	
Hardness, Dissolved (as CaCO ₃)		mg/L		8/18/2015 1342h	SM2340B	10.0	10.0	198	
Nitrate/Nitrite (as N)	7727-37-9	mg/L		8/18/2015 1310h	E353.2	0.00833	0.0100	0.176	
pH @ 25° C		pH Units		8/17/2015 2157h	SM4500-H+B	1.00	1.00	8.39	
Phosphate, Total (as P)	7723-14-0	mg/L	8/18/2015 720h	8/18/2015 1414h	SM4500-P-F	0.0212	0.0500	0.0723	
Sulfate	14808-79-8	mg/L		8/19/2015 439h	E300.0	0.211	7.50	150	
Total Dissolved Solids		mg/L		8/17/2015 2230h	SM2540C	30.6	50.0	790	
Total Suspended Solids	TSS	mg/L		8/18/2015 2026h	SM2540D	14.2	15.0	240	

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 Salt Lake City, UT 84119
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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: 1508324
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-38646													
Date Analyzed:		08/18/2015 1207h											
Test Code:		200.7-DIS											
Date Prepared:		08/18/2015 527h											
Aluminum	0.970	mg/L	E200.7	0.0237	0.100	1.000	0	97.0	85 - 115				
Calcium	9.30	mg/L	E200.7	0.0401	1.00	10.00	0	93.0	85 - 115				
Iron	0.911	mg/L	E200.7	0.0767	0.100	1.000	0	91.1	85 - 115				
Magnesium	9.69	mg/L	E200.7	0.0294	1.00	10.00	0	96.9	85 - 115				
Potassium	9.95	mg/L	E200.7	0.247	1.00	10.00	0	99.5	85 - 115				
Sodium	9.59	mg/L	E200.7	0.0330	1.00	10.00	0	95.9	85 - 115				
Lab Sample ID: LCS-38644													
Date Analyzed:		08/18/2015 247h											
Test Code:		200.7-W											
Date Prepared:		08/17/2015 2309h											
Aluminum	0.970	mg/L	E200.7	0.0237	0.100	1.000	0	97.0	85 - 115				
Calcium	9.46	mg/L	E200.7	0.0401	1.00	10.00	0	94.6	85 - 115				
Iron	0.939	mg/L	E200.7	0.0767	0.100	1.000	0	93.9	85 - 115				
Magnesium	9.67	mg/L	E200.7	0.0294	1.00	10.00	0	96.7	85 - 115				
Potassium	9.67	mg/L	E200.7	0.247	1.00	10.00	0	96.7	85 - 115				
Sodium	9.48	mg/L	E200.7	0.0330	1.00	10.00	0	94.8	85 - 115				
Lab Sample ID: LCS-38647													
Date Analyzed:		08/18/2015 1140h											
Test Code:		200.8-DIS											
Date Prepared:		08/18/2015 527h											
Antimony	0.176	mg/L	E200.8	0.0000366	0.00200	0.2000	0	88.1	85 - 115				
Arsenic	0.199	mg/L	E200.8	0.0000920	0.00200	0.2000	0	99.3	85 - 115				
Barium	0.188	mg/L	E200.8	0.000538	0.00200	0.2000	0	94.1	85 - 115				
Beryllium	0.202	mg/L	E200.8	0.0000288	0.00200	0.2000	0	101	85 - 115				
Cadmium	0.192	mg/L	E200.8	0.000193	0.000500	0.2000	0	96.0	85 - 115				
Chromium	0.188	mg/L	E200.8	0.00154	0.00200	0.2000	0	94.2	85 - 115				
Cobalt	0.188	mg/L	E200.8	0.0000434	0.00400	0.2000	0	93.8	85 - 115				
Copper	0.194	mg/L	E200.8	0.000692	0.00200	0.2000	0	96.8	85 - 115				
Lead	0.185	mg/L	E200.8	0.000264	0.00200	0.2000	0	92.5	85 - 115				
Manganese	0.189	mg/L	E200.8	0.00153	0.00200	0.2000	0	94.7	85 - 115				
Molybdenum	0.188	mg/L	E200.8	0.000206	0.00200	0.2000	0	93.9	85 - 115				



3440 South 700 West
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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: 1508324
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-38647		Date Analyzed:	08/18/2015 1140h										
Test Code: 200.8-DIS		Date Prepared:	08/18/2015 527h										
Nickel	0.187	mg/L	E200.8	0.000754	0.00200	0.2000	0	93.6	85 - 115				
Selenium	0.201	mg/L	E200.8	0.0000634	0.00200	0.2000	0	100	85 - 115				
Silver	0.187	mg/L	E200.8	0.0000244	0.00200	0.2000	0	93.5	85 - 115				
Thallium	0.182	mg/L	E200.8	0.0000242	0.00200	0.2000	0	90.9	85 - 115				
Vanadium	0.191	mg/L	E200.8	0.000438	0.00440	0.2000	0	95.5	85 - 115				
Zinc	1.01	mg/L	E200.8	0.00476	0.00500	1.000	0	101	85 - 115				
Lab Sample ID: LCS-38645		Date Analyzed:	08/18/2015 450h										
Test Code: 200.8-W		Date Prepared:	08/17/2015 2309h										
Antimony	0.183	mg/L	E200.8	0.0000366	0.00200	0.2000	0	91.4	85 - 115				
Arsenic	0.210	mg/L	E200.8	0.0000920	0.00200	0.2000	0	105	85 - 115				
Barium	0.193	mg/L	E200.8	0.000538	0.00200	0.2000	0	96.4	85 - 115				
Beryllium	0.202	mg/L	E200.8	0.0000288	0.00200	0.2000	0	101	85 - 115				
Cadmium	0.196	mg/L	E200.8	0.000193	0.000500	0.2000	0	97.9	85 - 115				
Chromium	0.188	mg/L	E200.8	0.00154	0.00200	0.2000	0	94.1	85 - 115				
Cobalt	0.190	mg/L	E200.8	0.0000434	0.00400	0.2000	0	94.8	85 - 115				
Copper	0.194	mg/L	E200.8	0.000692	0.00200	0.2000	0	96.9	85 - 115				
Lead	0.191	mg/L	E200.8	0.000264	0.00200	0.2000	0	95.5	85 - 115				
Manganese	0.194	mg/L	E200.8	0.00153	0.00200	0.2000	0	96.8	85 - 115				
Molybdenum	0.192	mg/L	E200.8	0.000206	0.00200	0.2000	0	96.1	85 - 115				
Nickel	0.188	mg/L	E200.8	0.000754	0.00200	0.2000	0	94.1	85 - 115				
Selenium	0.211	mg/L	E200.8	0.0000634	0.00200	0.2000	0	106	85 - 115				
Silver	0.187	mg/L	E200.8	0.0000244	0.00200	0.2000	0	93.5	85 - 115				
Thallium	0.188	mg/L	E200.8	0.0000242	0.00200	0.2000	0	94.0	85 - 115				
Vanadium	0.193	mg/L	E200.8	0.000438	0.00440	0.2000	0	96.7	85 - 115				
Zinc	1.03	mg/L	E200.8	0.00476	0.00500	1.000	0	103	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: 1508324
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-38640	Date Analyzed:	08/18/2015	904h										
Test Code: HG-DW-245.1	Date Prepared:	08/17/2015	2220h										
Mercury	0.00347	mg/L	E245.1	0.00000892	0.000150	0.003330	0	104	85 - 115				
Lab Sample ID: LCS-38641	Date Analyzed:	08/18/2015	842h										
Test Code: HG-DW-DIS-245.1	Date Prepared:	08/17/2015	2245h										
Mercury	0.00349	mg/L	E245.1	0.00000892	0.000150	0.003330	0	105	85 - 115				



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QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508324
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-38646													
Date Analyzed:		08/18/2015 1204h											
Test Code:		200.7-DIS											
Date Prepared:		08/18/2015 527h											
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	0.0371	mg/L	E200.7	0.0330	1.00								JB
Lab Sample ID: MB-38644													
Date Analyzed:		08/18/2015 244h											
Test Code:		200.7-W											
Date Prepared:		08/17/2015 2309h											
Aluminum	< 0.100	mg/L	E200.7	0.0237	0.100								U
Calcium	0.0582	mg/L	E200.7	0.0401	1.00								JB
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-38647													
Date Analyzed:		08/18/2015 1137h											
Test Code:		200.8-DIS											
Date Prepared:		08/18/2015 527h											
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



3440 South 700 West
 Salt Lake City, UT 84119
 Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687
 e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
 Laboratory Director

Jose Rocha
 QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508324
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-38647	Date Analyzed:	08/18/2015	1137h										
Test Code:	200.8-DIS	Date Prepared:	08/18/2015	527h									
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	< 0.00440	mg/L	E200.8	0.000438	0.00440								U
Zinc	< 0.00500	mg/L	E200.8	0.00476	0.00500								U
Lab Sample ID: MB-38645	Date Analyzed:	08/18/2015	447h										
Test Code:	200.8-W	Date Prepared:	08/17/2015	2309h									
Antimony	< 0.00200	mg/L	E200.8	0.0000366	0.00200								U
Arsenic	0.000159	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	< 0.00200	mg/L	E200.8	0.0000244	0.00200								U
Thallium	< 0.00200	mg/L	E200.8	0.0000242	0.00200								U
Vanadium	< 0.00440	mg/L	E200.8	0.000438	0.00440								U
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: 1508324
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-38640	Date Analyzed:	08/18/2015	902h										
Test Code:	HG-DW-245.1	Date Prepared:	08/17/2015	2220h									
Mercury	< 0.000150	mg/L	E245.1	0.00000892	0.000150								U
Lab Sample ID: MB-38641	Date Analyzed:	08/18/2015	840h										
Test Code:	HG-DW-DIS-245.1	Date Prepared:	08/17/2015	2245h									
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: 1508324
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: 1508324-004CMS													
Date Analyzed:		08/18/2015 1222h											
Test Code:		200.7-DIS											
Date Prepared:		08/18/2015 527h											
Calcium	62.5	mg/L	E200.7	0.401	10.0	10.00	53.2	93.2	70 - 130				
Lab Sample ID: 1508324-004CMS													
Date Analyzed:		08/18/2015 1245h											
Test Code:		200.7-DIS											
Date Prepared:		08/18/2015 527h											
Aluminum	1.06	mg/L	E200.7	0.0237	0.100	1.000	0.101	95.9	70 - 130				
Iron	0.961	mg/L	E200.7	0.0767	0.100	1.000	0	96.1	70 - 130				
Magnesium	18.7	mg/L	E200.7	0.0294	1.00	10.00	8.79	99.5	70 - 130				
Potassium	14.0	mg/L	E200.7	0.247	1.00	10.00	3.89	101	70 - 130				
Sodium	54.9	mg/L	E200.7	0.0330	1.00	10.00	44.5	104	70 - 130				
Lab Sample ID: 1508324-003BMS													
Date Analyzed:		08/18/2015 300h											
Test Code:		200.7-W											
Date Prepared:		08/17/2015 2309h											
Calcium	80.7	mg/L	E200.7	0.401	10.0	10.00	65.6	151	70 - 130				2
Lab Sample ID: 1508324-003BMS													
Date Analyzed:		08/18/2015 356h											
Test Code:		200.7-W											
Date Prepared:		08/17/2015 2309h											
Aluminum	9.73	mg/L	E200.7	0.0237	0.100	1.000	4.16	557	70 - 130				1
Iron	5.90	mg/L	E200.7	0.0767	0.100	1.000	3.51	239	70 - 130				1
Magnesium	24.0	mg/L	E200.7	0.0294	1.00	10.00	13.5	105	70 - 130				
Potassium	14.1	mg/L	E200.7	0.247	1.00	10.00	3.63	105	70 - 130				
Sodium	41.6	mg/L	E200.7	0.0330	1.00	10.00	31	105	70 - 130				
Lab Sample ID: 1508324-004CMS													
Date Analyzed:		08/18/2015 1203h											
Test Code:		200.8-DIS											
Date Prepared:		08/18/2015 527h											
Antimony	0.186	mg/L	E200.8	0.0000366	0.00200	0.2000	0.000263	93.0	75 - 125				
Arsenic	0.206	mg/L	E200.8	0.0000920	0.00200	0.2000	0.00163	102	75 - 125				
Barium	0.321	mg/L	E200.8	0.000538	0.00200	0.2000	0.132	94.6	75 - 125				
Beryllium	0.204	mg/L	E200.8	0.0000288	0.00200	0.2000	0	102	75 - 125				
Cadmium	0.194	mg/L	E200.8	0.000193	0.000500	0.2000	0	96.8	75 - 125				
Chromium	0.187	mg/L	E200.8	0.00154	0.00200	0.2000	0	93.4	75 - 125				



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QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508324
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: 1508324-004CMS	Date Analyzed:	08/18/2015 1203h											
Test Code:	200.8-DIS	Date Prepared:	08/18/2015 527h										
Cobalt	0.188	mg/L	E200.8	0.0000434	0.00400	0.2000	0.000253	94.1	75 - 125				
Copper	0.196	mg/L	E200.8	0.000692	0.00200	0.2000	0.00465	95.7	75 - 125				
Lead	0.187	mg/L	E200.8	0.000264	0.00200	0.2000	0	93.7	75 - 125				
Manganese	0.193	mg/L	E200.8	0.00153	0.00200	0.2000	0.0027	95.4	75 - 125				
Molybdenum	0.196	mg/L	E200.8	0.000206	0.00200	0.2000	0.00255	96.7	75 - 125				
Nickel	0.186	mg/L	E200.8	0.000754	0.00200	0.2000	0.00136	92.2	75 - 125				
Selenium	0.204	mg/L	E200.8	0.0000634	0.00200	0.2000	0.000731	102	75 - 125				
Silver	0.187	mg/L	E200.8	0.0000244	0.00200	0.2000	0	93.3	75 - 125				
Thallium	0.184	mg/L	E200.8	0.0000242	0.00200	0.2000	0	92.1	75 - 125				
Vanadium	0.197	mg/L	E200.8	0.000438	0.00440	0.2000	0.00483	96.2	75 - 125				
Zinc	1.02	mg/L	E200.8	0.00476	0.00500	1.000	0	102	75 - 125				
Lab Sample ID: 1508324-003BMS	Date Analyzed:	08/18/2015 520h											
Test Code:	200.8-W	Date Prepared:	08/17/2015 2309h										
Antimony	0.139	mg/L	E200.8	0.0000366	0.00200	0.2000	0.00035	69.2	75 - 125				1
Arsenic	0.206	mg/L	E200.8	0.0000920	0.00200	0.2000	0.00263	102	75 - 125				
Barium	0.327	mg/L	E200.8	0.000538	0.00200	0.2000	0.141	93.0	75 - 125				
Beryllium	0.195	mg/L	E200.8	0.0000288	0.00200	0.2000	0.000408	97.2	75 - 125				
Cadmium	0.189	mg/L	E200.8	0.000193	0.000500	0.2000	0.000254	94.1	75 - 125				
Chromium	0.189	mg/L	E200.8	0.00154	0.00200	0.2000	0.00242	93.4	75 - 125				
Cobalt	0.187	mg/L	E200.8	0.0000434	0.00400	0.2000	0.00187	92.6	75 - 125				
Copper	0.195	mg/L	E200.8	0.000692	0.00200	0.2000	0.00689	93.9	75 - 125				
Lead	0.190	mg/L	E200.8	0.000264	0.00200	0.2000	0.00605	91.9	75 - 125				
Manganese	0.337	mg/L	E200.8	0.00153	0.00200	0.2000	0.15	93.8	75 - 125				
Molybdenum	0.180	mg/L	E200.8	0.000206	0.00200	0.2000	0.0015	89.2	75 - 125				
Nickel	0.187	mg/L	E200.8	0.000754	0.00200	0.2000	0.00306	91.9	75 - 125				
Selenium	0.202	mg/L	E200.8	0.0000634	0.00200	0.2000	0.000656	101	75 - 125				
Silver	0.180	mg/L	E200.8	0.0000244	0.00200	0.2000	0.000114	89.9	75 - 125				
Thallium	0.181	mg/L	E200.8	0.0000242	0.00200	0.2000	0.00014	90.4	75 - 125				



3440 South 700 West
 Salt Lake City, UT 84119
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QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508324
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: 1508324-003BMS	Date Analyzed:	08/18/2015	520h										
Test Code:	200.8-W	Date Prepared:	08/17/2015	2309h									
Vanadium	0.201	mg/L	E200.8	0.000438	0.00440	0.2000	0.00804	96.6	75 - 125				
Zinc	1.01	mg/L	E200.8	0.00476	0.00500	1.000	0.0202	99.5	75 - 125				
Lab Sample ID: 1508324-003BMS	Date Analyzed:	08/18/2015	921h										
Test Code:	HG-DW-245.1	Date Prepared:	08/17/2015	2220h									
Mercury	0.00344	mg/L	E245.1	0.00000892	0.000150	0.003330	0	103	80 - 120				
Lab Sample ID: 1508324-001CMS	Date Analyzed:	08/18/2015	853h										
Test Code:	HG-DW-DIS-245.1	Date Prepared:	08/17/2015	2245h									
Mercury	0.00347	mg/L	E245.1	0.00000892	0.000150	0.003330	0	104	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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QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508324
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: 1508324-004CMSD		Date Analyzed:	08/18/2015 1224h										
Test Code: 200.7-DIS		Date Prepared:	08/18/2015 527h										
Calcium	62.3	mg/L	E200.7	0.401	10.0	10.00	53.2	91.6	70 - 130	62.5	0.263	20	
Lab Sample ID: 1508324-004CMSD		Date Analyzed:	08/18/2015 1247h										
Test Code: 200.7-DIS		Date Prepared:	08/18/2015 527h										
Aluminum	1.08	mg/L	E200.7	0.0237	0.100	1.000	0.101	98.1	70 - 130	1.06	2.00	20	
Iron	0.970	mg/L	E200.7	0.0767	0.100	1.000	0	97.0	70 - 130	0.961	0.948	20	
Magnesium	19.0	mg/L	E200.7	0.0294	1.00	10.00	8.79	102	70 - 130	18.7	1.16	20	
Potassium	14.2	mg/L	E200.7	0.247	1.00	10.00	3.89	103	70 - 130	14	1.31	20	
Sodium	55.4	mg/L	E200.7	0.0330	1.00	10.00	44.5	109	70 - 130	54.9	1.03	20	
Lab Sample ID: 1508324-003BMSD		Date Analyzed:	08/18/2015 302h										
Test Code: 200.7-W		Date Prepared:	08/17/2015 2309h										
Calcium	82.8	mg/L	E200.7	0.401	10.0	10.00	65.6	172	70 - 130	80.7	2.58	20	²
Lab Sample ID: 1508324-003BMSD		Date Analyzed:	08/18/2015 358h										
Test Code: 200.7-W		Date Prepared:	08/17/2015 2309h										
Aluminum	8.26	mg/L	E200.7	0.0237	0.100	1.000	4.16	410	70 - 130	9.73	16.4	20	¹
Iron	5.53	mg/L	E200.7	0.0767	0.100	1.000	3.51	202	70 - 130	5.9	6.48	20	¹
Magnesium	24.2	mg/L	E200.7	0.0294	1.00	10.00	13.5	107	70 - 130	24	0.735	20	
Potassium	14.0	mg/L	E200.7	0.247	1.00	10.00	3.63	103	70 - 130	14.1	1.21	20	
Sodium	42.2	mg/L	E200.7	0.0330	1.00	10.00	31	112	70 - 130	41.6	1.60	20	
Lab Sample ID: 1508324-004CMSD		Date Analyzed:	08/18/2015 1206h										
Test Code: 200.8-DIS		Date Prepared:	08/18/2015 527h										
Antimony	0.189	mg/L	E200.8	0.0000366	0.00200	0.2000	0.000263	94.3	75 - 125	0.186	1.42	20	
Arsenic	0.209	mg/L	E200.8	0.0000920	0.00200	0.2000	0.00163	104	75 - 125	0.206	1.55	20	
Barium	0.326	mg/L	E200.8	0.000538	0.00200	0.2000	0.132	97.1	75 - 125	0.321	1.56	20	
Beryllium	0.207	mg/L	E200.8	0.0000288	0.00200	0.2000	0	104	75 - 125	0.204	1.51	20	
Cadmium	0.196	mg/L	E200.8	0.000193	0.000500	0.2000	0	97.8	75 - 125	0.194	1.10	20	
Chromium	0.194	mg/L	E200.8	0.00154	0.00200	0.2000	0	96.8	75 - 125	0.187	3.53	20	



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QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508324
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: 1508324-004CMSD	Date Analyzed:	08/18/2015 1206h											
Test Code:	200.8-DIS	Date Prepared:	08/18/2015 527h										
Cobalt	0.192	mg/L	E200.8	0.0000434	0.00400	0.2000	0.000253	95.8	75 - 125	0.188	1.84	20	
Copper	0.201	mg/L	E200.8	0.000692	0.00200	0.2000	0.00465	98.3	75 - 125	0.196	2.57	20	
Lead	0.191	mg/L	E200.8	0.000264	0.00200	0.2000	0	95.6	75 - 125	0.187	1.95	20	
Manganese	0.197	mg/L	E200.8	0.00153	0.00200	0.2000	0.0027	97.1	75 - 125	0.193	1.80	20	
Molybdenum	0.198	mg/L	E200.8	0.000206	0.00200	0.2000	0.00255	97.9	75 - 125	0.196	1.26	20	
Nickel	0.192	mg/L	E200.8	0.000754	0.00200	0.2000	0.00136	95.5	75 - 125	0.186	3.43	20	
Selenium	0.204	mg/L	E200.8	0.0000634	0.00200	0.2000	0.000731	102	75 - 125	0.204	0.132	20	
Silver	0.188	mg/L	E200.8	0.0000244	0.00200	0.2000	0	94.0	75 - 125	0.187	0.772	20	
Thallium	0.186	mg/L	E200.8	0.0000242	0.00200	0.2000	0	93.1	75 - 125	0.184	1.08	20	
Vanadium	0.201	mg/L	E200.8	0.000438	0.00440	0.2000	0.00483	98.1	75 - 125	0.197	1.89	20	
Zinc	1.03	mg/L	E200.8	0.00476	0.00500	1.000	0	103	75 - 125	1.02	1.58	20	
Lab Sample ID: 1508324-003BMSD	Date Analyzed:	08/18/2015 542h											
Test Code:	200.8-W	Date Prepared:	08/17/2015 2309h										
Antimony	0.133	mg/L	E200.8	0.0000366	0.00200	0.2000	0.00035	66.3	75 - 125	0.139	4.25	20	1
Arsenic	0.199	mg/L	E200.8	0.0000920	0.00200	0.2000	0.00263	98.3	75 - 125	0.206	3.28	20	
Barium	0.330	mg/L	E200.8	0.000538	0.00200	0.2000	0.141	94.3	75 - 125	0.327	0.798	20	
Beryllium	0.192	mg/L	E200.8	0.0000288	0.00200	0.2000	0.000408	95.7	75 - 125	0.195	1.50	20	
Cadmium	0.188	mg/L	E200.8	0.000193	0.000500	0.2000	0.000254	94.0	75 - 125	0.189	0.123	20	
Chromium	0.190	mg/L	E200.8	0.00154	0.00200	0.2000	0.00242	93.9	75 - 125	0.189	0.540	20	
Cobalt	0.189	mg/L	E200.8	0.0000434	0.00400	0.2000	0.00187	93.6	75 - 125	0.187	1.03	20	
Copper	0.197	mg/L	E200.8	0.000692	0.00200	0.2000	0.00689	95.2	75 - 125	0.195	1.31	20	
Lead	0.193	mg/L	E200.8	0.000264	0.00200	0.2000	0.00605	93.2	75 - 125	0.19	1.41	20	
Manganese	0.343	mg/L	E200.8	0.00153	0.00200	0.2000	0.15	96.5	75 - 125	0.337	1.60	20	
Molybdenum	0.179	mg/L	E200.8	0.000206	0.00200	0.2000	0.0015	88.7	75 - 125	0.18	0.538	20	
Nickel	0.191	mg/L	E200.8	0.000754	0.00200	0.2000	0.00306	93.9	75 - 125	0.187	2.12	20	
Selenium	0.193	mg/L	E200.8	0.0000634	0.00200	0.2000	0.000656	96.4	75 - 125	0.202	4.59	20	
Silver	0.184	mg/L	E200.8	0.0000244	0.00200	0.2000	0.000114	91.9	75 - 125	0.18	2.12	20	
Thallium	0.182	mg/L	E200.8	0.0000242	0.00200	0.2000	0.00014	90.8	75 - 125	0.181	0.371	20	



3440 South 700 West
 Salt Lake City, UT 84119
 Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687
 e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
 Laboratory Director

Jose Rocha
 QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508324
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: 1508324-003BMSD	Date Analyzed:	08/18/2015	542h										
Test Code:	200.8-W	Date Prepared:	08/17/2015	2309h									
Vanadium	0.202	mg/L	E200.8	0.000438	0.00440	0.2000	0.00804	97.1	75 - 125	0.201	0.497	20	
Zinc	0.998	mg/L	E200.8	0.00476	0.00500	1.000	0.0202	97.8	75 - 125	1.01	1.71	20	
Lab Sample ID: 1508324-003BMSD	Date Analyzed:	08/18/2015	923h										
Test Code:	HG-DW-245.1	Date Prepared:	08/17/2015	2220h									
Mercury	0.00349	mg/L	E245.1	0.00000892	0.000150	0.003330	0	105	80 - 120	0.00344	1.68	20	
Lab Sample ID: 1508324-001CMSD	Date Analyzed:	08/18/2015	855h										
Test Code:	HG-DW-DIS-245.1	Date Prepared:	08/17/2015	2245h									
Mercury	0.00345	mg/L	E245.1	0.00000892	0.000150	0.003330	0	104	85 - 115	0.00347	0.577	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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 Salt Lake City, UT 84119
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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: 1508324
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: 1508316-001ADUP Date Analyzed: 08/18/2015 542h													
Test Code: COND-W-2510B													
Conductivity	532	µmhos/cm	SM2510B	0.436	2.00					534	0.375	5	
Lab Sample ID: 1508324-001ADUP Date Analyzed: 08/18/2015 542h													
Test Code: COND-W-2510B													
Conductivity	627	µmhos/cm	SM2510B	0.436	2.00					625	0.319	5	
Lab Sample ID: 1508324-004ADUP Date Analyzed: 08/17/2015 2157h													
Test Code: PH-4500H+B													
pH @ 25° C	8.46	pH Units	SM4500-H+B	1.00	1.00					8.44	0.237	5	
Lab Sample ID: 1508324-003ADUP Date Analyzed: 08/17/2015 2230h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	830	mg/L	SM2540C	30.6	50.0					790	4.94	5	
Lab Sample ID: 1508324-002ADUP Date Analyzed: 08/18/2015 2026h													
Test Code: TSS-W-2540D													
Total Suspended Solids	936	mg/L	SM2540D	28.3	30.0					856	8.93	5	@

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



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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: 1508324
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-R81926	Date Analyzed: 08/18/2015 2122h												
Test Code:	300.0-W												
Sulfate	4.62	mg/L	E300.0	0.0211	0.750	5.000	0	92.5	90 - 110				
Lab Sample ID: LCS-R82027	Date Analyzed: 08/21/2015 1745h												
Test Code:	300.0-W												
Chloride	4.97	mg/L	E300.0	0.00751	0.100	5.000	0	99.5	90 - 110				
Lab Sample ID: LCS-R81790	Date Analyzed: 08/18/2015 604h												
Test Code:	ALK-W-2320B												
Alkalinity (as CaCO3)	49,900	mg/L	SM2320B	1.86	10.0	50,000	0	99.7	90 - 110				
Lab Sample ID: LCS-R81789	Date Analyzed: 08/18/2015 542h												
Test Code:	COND-W-2510B												
Conductivity	996	µmhos/cm	SM2510B	0.436	2.00	1,000	0	99.6	98 - 102				
Lab Sample ID: LCS-R81818	Date Analyzed: 08/18/2015 1303h												
Test Code:	NO2/NO3-W-353.2												
Nitrate/Nitrite (as N)	0.921	mg/L	E353.2	0.00833	0.0100	1.000	0	92.1	90 - 110				
Lab Sample ID: LCS-R81771	Date Analyzed: 08/17/2015 2157h												
Test Code:	PH-4500H+B												
pH @ 25° C	9.00	pH Units	SM4500-H+B	1.00	1.00	9.000	0	100	98 - 102				
Lab Sample ID: LCS-38648	Date Analyzed: 08/18/2015 1402h												
Test Code:	PO4-W-4500PF												
Phosphate, Total (as P)	0.900	mg/L	SM4500-P-F	0.0212	0.0500	1.000	0	90.0	90 - 110				
Lab Sample ID: LCS-R81807	Date Analyzed: 08/17/2015 2230h												
Test Code:	TDS-W-2540C												
Total Dissolved Solids	220	mg/L	SM2540C	6.13	10.0	205.0	0	107	80 - 120				



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Salt Lake City, UT 84119

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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: 1508324

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-R81799	Date Analyzed: 08/18/2015 2026h												
Test Code: TSS-W-2540D													
Total Suspended Solids	90.0	mg/L	SM2540D	2.83	3.00	100.0	0	90.0	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: 1508324
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-R81926	Date Analyzed:	08/18/2015	2100h										
Test Code:	300.0-W												
Sulfate	< 0.750	mg/L	E300.0	0.0211	0.750								U
Lab Sample ID: MB-R82027	Date Analyzed:	08/21/2015	1728h										
Test Code:	300.0-W												
Chloride	< 0.100	mg/L	E300.0	0.00751	0.100								U
Lab Sample ID: MB-R81790	Date Analyzed:	08/18/2015	604h										
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-R81789	Date Analyzed:	08/18/2015	542h										
Test Code:	COND-W-2510B												
Conductivity	< 2.00	µmhos/cm	SM2510B	0.436	2.00								U
Lab Sample ID: MB-R81818	Date Analyzed:	08/18/2015	1302h										
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-38648	Date Analyzed:	08/18/2015	1401h										
Test Code:	PO4-W-4500PF	Date Prepared:	08/18/2015 720h										
Phosphate, Total (as P)	< 0.0500	mg/L	SM4500-P-F	0.0212	0.0500								U
Lab Sample ID: MB-R81807	Date Analyzed:	08/17/2015	2230h										
Test Code:	TDS-W-2540C												
Total Dissolved Solids	< 10.0	mg/L	SM2540C	6.13	10.0								U



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QC SUMMARY REPORT

Client: Utah Division of Water Quality

Lab Set ID: 1508324

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-R81799	Date Analyzed: 08/18/2015 2026h												
Test Code: TSS-W-2540D													
Total Suspended Solids	< 3.00	mg/L	SM2540D	2.83	3.00								U

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: 1508324
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: 1508316-001AMS													
Date Analyzed: 08/19/2015 017h													
Test Code: 300.0-W													
Sulfate	170	mg/L	E300.0	0.211	7.50	50.00	118	103	90 - 110				
Lab Sample ID: 1508324-001AMS													
Date Analyzed: 08/19/2015 333h													
Test Code: 300.0-W													
Sulfate	192	mg/L	E300.0	0.211	7.50	50.00	142	100	90 - 110				
Lab Sample ID: 1508316-001AMS													
Date Analyzed: 08/21/2015 1819h													
Test Code: 300.0-W													
Chloride	63.4	mg/L	E300.0	0.0751	1.00	50.00	13.8	99.2	90 - 110				
Lab Sample ID: 1508324-001AMS													
Date Analyzed: 08/21/2015 2051h													
Test Code: 300.0-W													
Chloride	61.9	mg/L	E300.0	0.0751	1.00	50.00	12.8	98.3	90 - 110				
Lab Sample ID: 1508316-001AMS													
Date Analyzed: 08/18/2015 604h													
Test Code: ALK-W-2320B													
Alkalinity (as CaCO ₃)	208	mg/L	SM2320B	1.86	10.0	100.0	110	98.0	80 - 120				
Lab Sample ID: 1508324-001AMS													
Date Analyzed: 08/18/2015 604h													
Test Code: ALK-W-2320B													
Alkalinity (as CaCO ₃)	208	mg/L	SM2320B	1.86	10.0	100.0	108	99.7	80 - 120				
Lab Sample ID: 1508324-001AMS													
Date Analyzed: 08/18/2015 1306h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.20	mg/L	E353.2	0.00833	0.0100	1.000	0.34	86.5	90 - 110				1
Lab Sample ID: 1508316-001DMS													
Date Analyzed: 08/18/2015 1403h													
Test Code: PO4-W-4500PF													
Date Prepared: 08/18/2015 720h													
Phosphate, Total (as P)	1.21	mg/L	SM4500-P-F	0.0212	0.0500	1.000	0.198	101	90 - 110				



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

Kyle F. Gross
 Laboratory Director

Jose Rocha
 QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1508324
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: 1508324-001DMS	Date Analyzed:	08/18/2015 1412h											
Test Code: PO4-W-4500PF	Date Prepared:	08/18/2015 720h											
Phosphate, Total (as P)	1.52	mg/L	SM4500-P-F	0.0212	0.0500	1.000	0.446	108	90 - 110				

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: 1508324
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: 1508316-001AMSD Test Code: 300.0-W	Date Analyzed:	08/19/2015 039h											
Sulfate	168	mg/L	E300.0	0.211	7.50	50.00	118	100	90 - 110	170	0.918	20	
Lab Sample ID: 1508324-001AMSD Test Code: 300.0-W	Date Analyzed:	08/19/2015 355h											
Sulfate	192	mg/L	E300.0	0.211	7.50	50.00	142	99.8	90 - 110	192	0.176	20	
Lab Sample ID: 1508316-001AMSD Test Code: 300.0-W	Date Analyzed:	08/21/2015 1836h											
Chloride	63.3	mg/L	E300.0	0.0751	1.00	50.00	13.8	99.0	90 - 110	63.4	0.189	20	
Lab Sample ID: 1508324-001AMSD Test Code: 300.0-W	Date Analyzed:	08/21/2015 2107h											
Chloride	62.1	mg/L	E300.0	0.0751	1.00	50.00	12.8	98.7	90 - 110	61.9	0.361	20	
Lab Sample ID: 1508316-001AMSD Test Code: ALK-W-2320B	Date Analyzed:	08/18/2015 604h											
Alkalinity (as CaCO ₃)	210	mg/L	SM2320B	1.86	10.0	100.0	110	99.7	80 - 120	208	0.814	10	
Lab Sample ID: 1508324-001AMSD Test Code: ALK-W-2320B	Date Analyzed:	08/18/2015 604h											
Alkalinity (as CaCO ₃)	206	mg/L	SM2320B	1.86	10.0	100.0	108	98.0	80 - 120	208	0.821	10	
Lab Sample ID: 1508324-001AMSD Test Code: NO2/NO3-W-353.2	Date Analyzed:	08/18/2015 1307h											
Nitrate/Nitrite (as N)	1.20	mg/L	E353.2	0.00833	0.0100	1.000	0.34	85.6	90 - 110	1.21	0.750	10	1
Lab Sample ID: 1508316-001DMSD Test Code: PO4-W-4500PF	Date Analyzed:	08/18/2015 1404h											
	Date Prepared:	08/18/2015 720h											
Phosphate, Total (as P)	1.21	mg/L	SM4500-P-F	0.0212	0.0500	1.000	0.198	101	90 - 110	1.21	0.496	10	



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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: 1508324

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: 1508324-001DMSD	Date Analyzed:	08/18/2015	1413h										
Test Code: PO4-W-4500PF	Date Prepared:	08/18/2015	720h										
Phosphate, Total (as P)	1.57	mg/L	SM4500-P-F	0.0212	0.0500	1.000	0.446	113	90 - 110	1.53	3.16	10	¹

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