

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: 1508263

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.

Thank You,	
Approved by:	
	Laboratory Director or designee



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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: 1508263-001

Client Sample ID: San Juan R @ Mexican Hat US163 Xing (4953000)

Collection Date: 8/12/2015 1750h **Received Date:** 8/13/2015 1450h

Compound	CAS	Units	Date Prepared	Date Analyzed	Method Used	MDL	Reporting Limit	Analytical Result	Qual
Aluminum	7429-90-5	mg/L	8/13/2015 1632h	8/13/2015 2258h	E200.7	0.237	1.00	71.4	
Antimony	7440-36-0	mg/L	8/14/2015 1431h	8/14/2015 2022h	E200.8	0.0000366	0.00200	0.000224	J
Arsenic	7440-38-2	mg/L	8/13/2015 1632h	8/13/2015 2307h	E200.8	0.0000920	0.00200	0.0227	
Barium	7440-39-3	mg/L	8/13/2015 1632h	8/13/2015 2347h	E200.8	0.00269	0.0100	2.01	
Beryllium	7440-41-7	mg/L	8/13/2015 1632h	8/13/2015 2307h	E200.8	0.0000288	0.00200	0.00874	
Cadmium	7440-43-9	mg/L	8/13/2015 1632h	8/13/2015 2307h	E200.8	0.000193	0.000500	0.00155	
Calcium	7440-70-2	mg/L	8/13/2015 1632h	8/13/2015 2258h	E200.7	0.401	10.0	282	
Chromium	7440-47-3	mg/L	8/13/2015 1632h	8/13/2015 2307h	E200.8	0.00154	0.00200	0.0285	
Cobalt	7440-48-4	mg/L	8/13/2015 1632h	8/13/2015 2307h	E200.8	0.0000434	0.00400	0.0401	
Copper	7440-50-8	mg/L	8/13/2015 1632h	8/13/2015 2307h	E200.8	0.000692	0.00200	0.0824	
Iron	7439-89-6	mg/L	8/13/2015 1632h	8/13/2015 2331h	E200.7	0.0767	0.100	38.6	
Lead	7439-92-1	mg/L	8/13/2015 1632h	8/13/2015 2307h	E200.8	0.000264	0.00200	0.101	
Magnesium	7439-95-4	mg/L	8/13/2015 1632h	8/13/2015 2331h	E200.7	0.0294	1.00	47.9	
Manganese	7439-96-5	mg/L	8/13/2015 1632h	8/13/2015 2347h	E200.8	0.00764	0.0100	3.07	
Mercury	7439-97-6	mg/L	8/13/2015 1830h	8/14/2015 1012h	E245.1	0.00000892	0.000150	0.000180	
Molybdenum	7439-98-7	mg/L	8/13/2015 1632h	8/13/2015 2307h	E200.8	0.000206	0.00200	0.000234	J
Nickel	7440-02-0	mg/L	8/13/2015 1632h	8/13/2015 2307h	E200.8	0.000754	0.00200	0.0517	
Potassium	7440-09-7	mg/L	8/13/2015 1632h	8/13/2015 2331h	E200.7	0.247	1.00	14.0	
Selenium	7782-49-2	mg/L	8/13/2015 1632h	8/13/2015 2307h	E200.8	0.0000634	0.00200	0.00153	J
Silver	7440-22-4	mg/L	8/13/2015 1632h	8/13/2015 2307h	E200.8	0.0000244	0.00200	0.000539	J
Sodium	7440-23-5	mg/L	8/13/2015 1632h	8/13/2015 2331h	E200.7	0.0330	1.00	55.6	
Thallium	7440-28-0	mg/L	8/13/2015 1632h	8/13/2015 2307h	E200.8	0.0000242	0.00200	0.000632	J
Vanadium	7440-62-2	mg/L	8/13/2015 1632h	8/13/2015 2307h	E200.8	0.000438	0.00440	0.0785	
Zinc	7440-66-6	mg/L	8/13/2015 1632h	8/13/2015 2307h	E200.8	0.00476	0.00500	0.210	

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: 1508263-002

Client Sample ID: San Juan R @ Sand Island (4953250)

Collection Date: 8/12/2015 1112h **Received Date:** 8/13/2015 1450h

Compound	CAS	Units	Date Prepared	Date Analyzed	Method Used	MDL	Reporting Limit	Analytical Result	Qual
Aluminum	7429-90-5	mg/L	8/13/2015 1632h	8/13/2015 2333h	E200.7	0.0237	0.100	45.4	2
Antimony	7440-36-0	mg/L	8/14/2015 1431h	8/14/2015 2025h	E200.8	0.0000366	0.00200	0.000202	J^1
Arsenic	7440-38-2	mg/L	8/13/2015 1632h	8/13/2015 2310h	E200.8	0.0000920	0.00200	0.0149	
Barium	7440-39-3	mg/L	8/13/2015 1632h	8/13/2015 2310h	E200.8	0.000538	0.00200	0.971	
Beryllium	7440-41-7	mg/L	8/13/2015 1632h	8/13/2015 2310h	E200.8	0.0000288	0.00200	0.00516	
Cadmium	7440-43-9	mg/L	8/13/2015 1632h	8/13/2015 2310h	E200.8	0.000193	0.000500	0.000940	
Calcium	7440-70-2	mg/L	8/13/2015 1632h	8/13/2015 2300h	E200.7	0.401	10.0	109	2
Chromium	7440-47-3	mg/L	8/13/2015 1632h	8/13/2015 2310h	E200.8	0.00154	0.00200	0.0200	
Cobalt	7440-48-4	mg/L	8/13/2015 1632h	8/13/2015 2310h	E200.8	0.0000434	0.00400	0.0279	
Copper	7440-50-8	mg/L	8/13/2015 1632h	8/13/2015 2310h	E200.8	0.000692	0.00200	0.0767	
Iron	7439-89-6	mg/L	8/13/2015 1632h	8/13/2015 2333h	E200.7	0.0767	0.100	34.6	2
Lead	7439-92-1	mg/L	8/13/2015 1632h	8/13/2015 2310h	E200.8	0.000264	0.00200	0.0674	
Magnesium	7439-95-4	mg/L	8/13/2015 1632h	8/13/2015 2333h	E200.7	0.0294	1.00	21.9	
Manganese	7439-96-5	mg/L	8/13/2015 1632h	8/13/2015 2310h	E200.8	0.00153	0.00200	1.67	2
Mercury	7439-97-6	mg/L	8/13/2015 1830h	8/14/2015 1014h	E245.1	0.00000892	0.000150	0.000128	J
Molybdenum	7439-98-7	mg/L	8/13/2015 1632h	8/13/2015 2310h	E200.8	0.000206	0.00200	0.000344	J1
Nickel	7440-02-0	mg/L	8/13/2015 1632h	8/13/2015 2310h	E200.8	0.000754	0.00200	0.0303	
Potassium	7440-09-7	mg/L	8/13/2015 1632h	8/13/2015 2333h	E200.7	0.247	1.00	8.43	
Selenium	7782-49-2	mg/L	8/13/2015 1632h	8/13/2015 2310h	E200.8	0.0000634	0.00200	0.00110	J
Silver	7440-22-4	mg/L	8/13/2015 1632h	8/13/2015 2310h	E200.8	0.0000244	0.00200	0.000383	J
Sodium	7440-23-5	mg/L	8/13/2015 1632h	8/13/2015 2333h	E200.7	0.0330	1.00	38.4	
Thallium	7440-28-0	mg/L	8/13/2015 1632h	8/13/2015 2310h	E200.8	0.0000242	0.00200	0.000565	J
Vanadium	7440-62-2	mg/L	8/13/2015 1632h	8/13/2015 2310h	E200.8	0.000438	0.00440	0.0514	
Zinc	7440-66-6	mg/L	8/13/2015 1632h	8/13/2015 2310h	E200.8	0.00476	0.00500	0.176	

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.

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: 1508263-003

Client Sample ID: San Juan River @ Town of Montezuma (4953990)

Collection Date: 8/12/2015 1037h **Received Date:** 8/13/2015 1450h

Compound	CAS	Units	Date Prepared	Date Analyzed	Method Used	MDL	Reporting Limit	Analytical Result	Qual
Aluminum	7429-90-5	mg/L	8/13/2015 1632h	8/13/2015 2339h	E200.7	0.0237	0.100	31.5	
Antimony	7440-36-0	mg/L	8/14/2015 1431h	8/14/2015 2035h	E200.8	0.0000366	0.00200	0.000247	J
Arsenic	7440-38-2	mg/L	8/13/2015 1632h	8/13/2015 2320h	E200.8	0.0000920	0.00200	0.0102	
Barium	7440-39-3	mg/L	8/13/2015 1632h	8/13/2015 2320h	E200.8	0.000538	0.00200	0.720	
Beryllium	7440-41-7	mg/L	8/13/2015 1632h	8/13/2015 2320h	E200.8	0.0000288	0.00200	0.00362	
Cadmium	7440-43-9	mg/L	8/13/2015 1632h	8/13/2015 2320h	E200.8	0.000193	0.000500	0.000855	
Calcium	7440-70-2	mg/L	8/13/2015 1632h	8/13/2015 2306h	E200.7	0.401	10.0	108	
Chromium	7440-47-3	mg/L	8/13/2015 1632h	8/13/2015 2320h	E200.8	0.00154	0.00200	0.0147	
Cobalt	7440-48-4	mg/L	8/13/2015 1632h	8/13/2015 2320h	E200.8	0.0000434	0.00400	0.0195	
Copper	7440-50-8	mg/L	8/13/2015 1632h	8/13/2015 2320h	E200.8	0.000692	0.00200	0.0517	
Iron	7439-89-6	mg/L	8/13/2015 1632h	8/13/2015 2339h	E200.7	0.0767	0.100	24.4	
Lead	7439-92-1	mg/L	8/13/2015 1632h	8/13/2015 2320h	E200.8	0.000264	0.00200	0.0491	
Magnesium	7439-95-4	mg/L	8/13/2015 1632h	8/13/2015 2339h	E200.7	0.0294	1.00	18.4	
Manganese	7439-96-5	mg/L	8/13/2015 1632h	8/13/2015 2320h	E200.8	0.00153	0.00200	1.19	
Mercury	7439-97-6	mg/L	8/13/2015 1830h	8/14/2015 1006h	E245.1	0.00000892	0.000150	0.0000783	J
Molybdenum	7439-98-7	mg/L	8/13/2015 1632h	8/13/2015 2320h	E200.8	0.000206	0.00200	0.000450	J
Nickel	7440-02-0	mg/L	8/13/2015 1632h	8/13/2015 2320h	E200.8	0.000754	0.00200	0.0227	
Potassium	7440-09-7	mg/L	8/13/2015 1632h	8/13/2015 2339h	E200.7	0.247	1.00	7.04	
Selenium	7782-49-2	mg/L	8/13/2015 1632h	8/13/2015 2320h	E200.8	0.0000634	0.00200	0.00106	J
Silver	7440-22-4	mg/L	8/13/2015 1632h	8/13/2015 2320h	E200.8	0.0000244	0.00200	0.000481	J
Sodium	7440-23-5	mg/L	8/13/2015 1632h	8/13/2015 2339h	E200.7	0.0330	1.00	33.0	
Thallium	7440-28-0	mg/L	8/13/2015 1632h	8/13/2015 2320h	E200.8	0.0000242	0.00200	0.000458	J
Vanadium	7440-62-2	mg/L	8/13/2015 1632h	8/13/2015 2320h	E200.8	0.000438	0.00440	0.0386	
Zinc	7440-66-6	mg/L	8/13/2015 1632h	8/13/2015 2320h	E200.8	0.00476	0.00500	0.131	

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: 1508263-004

Client Sample ID: San Juan R @ US160 Xing in CO (4954000)

Collection Date: 8/12/2015 950h **Received Date:** 8/13/2015 1450h

Compound	CAS	Units	Date Prepared	Date Analyzed	Method Used	MDL	Reporting Limit	Analytical Result	Qual
Aluminum	7429-90-5	mg/L	8/13/2015 1632h	8/13/2015 2341h	E200.7	0.0237	0.100	31.1	
Antimony	7440-36-0	mg/L	8/14/2015 1431h	8/14/2015 2038h	E200.8	0.0000366	0.00200	0.000230	J
Arsenic	7440-38-2	mg/L	8/13/2015 1632h	8/13/2015 2324h	E200.8	0.0000920	0.00200	0.0111	
Barium	7440-39-3	mg/L	8/13/2015 1632h	8/13/2015 2324h	E200.8	0.000538	0.00200	0.766	
Beryllium	7440-41-7	mg/L	8/13/2015 1632h	8/13/2015 2324h	E200.8	0.0000288	0.00200	0.00316	
Cadmium	7440-43-9	mg/L	8/13/2015 1632h	8/13/2015 2324h	E200.8	0.000193	0.000500	0.000905	
Calcium	7440-70-2	mg/L	8/13/2015 1632h	8/13/2015 2308h	E200.7	0.401	10.0	164	
Chromium	7440-47-3	mg/L	8/13/2015 1632h	8/13/2015 2324h	E200.8	0.00154	0.00200	0.0161	
Cobalt	7440-48-4	mg/L	8/13/2015 1632h	8/13/2015 2324h	E200.8	0.0000434	0.00400	0.0186	
Copper	7440-50-8	mg/L	8/13/2015 1632h	8/13/2015 2324h	E200.8	0.000692	0.00200	0.0437	
Iron	7439-89-6	mg/L	8/13/2015 1632h	8/13/2015 2341h	E200.7	0.0767	0.100	22.6	
Lead	7439-92-1	mg/L	8/13/2015 1632h	8/13/2015 2324h	E200.8	0.000264	0.00200	0.0474	
Magnesium	7439-95-4	mg/L	8/13/2015 1632h	8/13/2015 2341h	E200.7	0.0294	1.00	24.7	
Manganese	7439-96-5	mg/L	8/13/2015 1632h	8/13/2015 2324h	E200.8	0.00153	0.00200	1.25	
Mercury	7439-97-6	mg/L	8/13/2015 1830h	8/14/2015 1015h	E245.1	0.00000892	0.000150	0.0000983	J
Molybdenum	7439-98-7	mg/L	8/13/2015 1632h	8/13/2015 2324h	E200.8	0.000206	0.00200	0.000771	J
Nickel	7440-02-0	mg/L	8/13/2015 1632h	8/13/2015 2324h	E200.8	0.000754	0.00200	0.0289	
Potassium	7440-09-7	mg/L	8/13/2015 1632h	8/13/2015 2341h	E200.7	0.247	1.00	7.90	
Selenium	7782-49-2	mg/L	8/13/2015 1632h	8/13/2015 2324h	E200.8	0.0000634	0.00200	0.00104	J
Silver	7440-22-4	mg/L	8/13/2015 1632h	8/13/2015 2324h	E200.8	0.0000244	0.00200	0.000314	J
Sodium	7440-23-5	mg/L	8/13/2015 1632h	8/13/2015 2341h	E200.7	0.0330	1.00	32.7	
Thallium	7440-28-0	mg/L	8/13/2015 1632h	8/13/2015 2324h	E200.8	0.0000242	0.00200	0.000464	J
Vanadium	7440-62-2	mg/L	8/13/2015 1632h	8/13/2015 2324h	E200.8	0.000438	0.00440	0.0437	
Zinc	7440-66-6	mg/L	8/13/2015 1632h	8/13/2015 2324h	E200.8	0.00476	0.00500	0.131	

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



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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: 1508263-001

Client Sample ID: San Juan R @ Mexican Hat US163 Xing (4953000)

Collection Date: 8/12/2015 1750h **Received Date:** 8/13/2015 1450h

Compound	CAS	Units	Date Prepared	Date Analyzed	Method Used	MDL	Reporting Limit	Analytical Result	Qual
Aluminum	7429-90-5	mg/L	8/14/2015 830h	8/14/2015 1401h	E200.7	0.0237	0.100	0.105	
Antimony	7440-36-0	mg/L	8/14/2015 830h	8/14/2015 1515h	E200.8	0.0000366	0.00200	0.00223	#B
Arsenic	7440-38-2	mg/L	8/14/2015 830h	8/14/2015 1515h	E200.8	0.0000920	0.00200	0.00179	J
Barium	7440-39-3	mg/L	8/14/2015 830h	8/14/2015 1515h	E200.8	0.000538	0.00200	0.185	
Beryllium	7440-41-7	mg/L	8/14/2015 830h	8/14/2015 1515h	E200.8	0.0000288	0.00200	0.0000863	J
Cadmium	7440-43-9	mg/L	8/14/2015 830h	8/14/2015 1515h	E200.8	0.000193	0.000500	< 0.000500	U
Calcium	7440-70-2	mg/L	8/14/2015 830h	8/14/2015 1401h	E200.7	0.0401	1.00	48.9	
Chromium	7440-47-3	mg/L	8/14/2015 830h	8/14/2015 1515h	E200.8	0.00154	0.00200	< 0.00200	U
Cobalt	7440-48-4	mg/L	8/14/2015 830h	8/14/2015 1515h	E200.8	0.0000434	0.00400	0.0000691	J
Copper	7440-50-8	mg/L	8/14/2015 830h	8/14/2015 1515h	E200.8	0.000692	0.00200	0.00319	
Iron	7439-89-6	mg/L	8/14/2015 830h	8/14/2015 1401h	E200.7	0.0767	0.100	< 0.100	U
Lead	7439-92-1	mg/L	8/14/2015 830h	8/14/2015 1515h	E200.8	0.000264	0.00200	< 0.00200	U
Magnesium	7439-95-4	mg/L	8/14/2015 830h	8/14/2015 1401h	E200.7	0.0294	1.00	7.22	
Manganese	7439-96-5	mg/L	8/14/2015 830h	8/14/2015 1515h	E200.8	0.00153	0.00200	< 0.00200	U
Mercury	7439-97-6	mg/L	8/13/2015 1830h	8/14/2015 1101h	E245.1	0.00000892	0.000150	< 0.000150	U
Molybdenum	7439-98-7	mg/L	8/14/2015 830h	8/14/2015 1515h	E200.8	0.000206	0.00200	0.00264	
Nickel	7440-02-0	mg/L	8/14/2015 830h	8/14/2015 1515h	E200.8	0.000754	0.00200	< 0.00200	U
Potassium	7440-09-7	mg/L	8/14/2015 830h	8/14/2015 1401h	E200.7	0.247	1.00	3.16	
Selenium	7782-49-2	mg/L	8/14/2015 830h	8/14/2015 1515h	E200.8	0.0000634	0.00200	0.00116	JB
Silver	7440-22-4	mg/L	8/14/2015 830h	8/14/2015 1515h	E200.8	0.0000244	0.00200	0.000264	J
Sodium	7440-23-5	mg/L	8/14/2015 830h	8/14/2015 1401h	E200.7	0.0330	1.00	48.7	
Thallium	7440-28-0	mg/L	8/14/2015 830h	8/14/2015 1515h	E200.8	0.0000242	0.00200	< 0.00200	U
Vanadium	7440-62-2	mg/L	8/14/2015 830h	8/14/2015 1515h	E200.8	0.000438	0.00440	0.00434	J
Zinc	7440-66-6	mg/L	8/14/2015 830h	8/14/2015 1515h	E200.8	0.00476	0.00500	0.0161	

^{# -} Sb LCS recovery suggests analyte concentration may be biased low. Samples cannot be rerun due to insufficient sample volume.

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: 1508263-002

Client Sample ID: San Juan R @ Sand Island (4953250)

Collection Date: 8/12/2015 1112h **Received Date:** 8/13/2015 1450h

Compound	CAS	Units	Date Prepared	Date Analyzed	Method Used	MDL	Reporting Limit	Analytical Result	Qual
Aluminum	7429-90-5	mg/L	8/14/2015 830h	8/14/2015 1403h	E200.7	0.0237	0.100	0.623	
Antimony	7440-36-0	mg/L	8/14/2015 830h	8/14/2015 1519h	E200.8	0.0000366	0.00200	0.00108	J#B
Arsenic	7440-38-2	mg/L	8/14/2015 830h	8/14/2015 1519h	E200.8	0.0000920	0.00200	0.00141	J
Barium	7440-39-3	mg/L	8/14/2015 830h	8/14/2015 1519h	E200.8	0.000538	0.00200	0.205	
Beryllium	7440-41-7	mg/L	8/14/2015 830h	8/14/2015 1519h	E200.8	0.0000288	0.00200	0.0000499	J
Cadmium	7440-43-9	mg/L	8/14/2015 830h	8/14/2015 1519h	E200.8	0.000193	0.000500	< 0.000500	U
Calcium	7440-70-2	mg/L	8/14/2015 830h	8/14/2015 1403h	E200.7	0.0401	1.00	46.8	
Chromium	7440-47-3	mg/L	8/14/2015 830h	8/14/2015 1519h	E200.8	0.00154	0.00200	< 0.00200	U
Cobalt	7440-48-4	mg/L	8/14/2015 830h	8/14/2015 1519h	E200.8	0.0000434	0.00400	0.000154	J
Copper	7440-50-8	mg/L	8/14/2015 830h	8/14/2015 1519h	E200.8	0.000692	0.00200	0.00344	
Iron	7439-89-6	mg/L	8/14/2015 830h	8/14/2015 1403h	E200.7	0.0767	0.100	0.310	
Lead	7439-92-1	mg/L	8/14/2015 830h	8/14/2015 1519h	E200.8	0.000264	0.00200	< 0.00200	U
Magnesium	7439-95-4	mg/L	8/14/2015 830h	8/14/2015 1403h	E200.7	0.0294	1.00	6.98	
Manganese	7439-96-5	mg/L	8/14/2015 830h	8/14/2015 1519h	E200.8	0.00153	0.00200	0.00447	
Mercury	7439-97-6	mg/L	8/13/2015 1830h	8/14/2015 1103h	E245.1	0.00000892	0.000150	< 0.000150	U
Molybdenum	7439-98-7	mg/L	8/14/2015 830h	8/14/2015 1519h	E200.8	0.000206	0.00200	0.00193	J
Nickel	7440-02-0	mg/L	8/14/2015 830h	8/14/2015 1519h	E200.8	0.000754	0.00200	< 0.00200	U
Potassium	7440-09-7	mg/L	8/14/2015 830h	8/14/2015 1403h	E200.7	0.247	1.00	2.91	
Selenium	7782-49-2	mg/L	8/14/2015 830h	8/14/2015 1519h	E200.8	0.0000634	0.00200	0.000793	JB
Silver	7440-22-4	mg/L	8/14/2015 830h	8/14/2015 1519h	E200.8	0.0000244	0.00200	0.0000594	J
Sodium	7440-23-5	mg/L	8/14/2015 830h	8/14/2015 1403h	E200.7	0.0330	1.00	37.8	
Thallium	7440-28-0	mg/L	8/14/2015 830h	8/14/2015 1519h	E200.8	0.0000242	0.00200	< 0.00200	U
Vanadium	7440-62-2	mg/L	8/14/2015 830h	8/14/2015 1519h	E200.8	0.000438	0.00440	0.00261	J
Zinc	7440-66-6	mg/L	8/14/2015 830h	8/14/2015 1519h	E200.8	0.00476	0.00500	0.0145	

^{# -} Sb LCS recovery suggests analyte concentration may be biased low. Samples cannot be rerun due to insufficient sample volume.

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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: 1508263-003

Client Sample ID: San Juan River @ Town of Montezuma (4953990)

Collection Date: 8/12/2015 1037h **Received Date:** 8/13/2015 1450h

Compound	CAS	Units	Date Prepared	Date Analyzed	Method Used	MDL	Reporting Limit	Analytical Result	Qual
Aluminum	7429-90-5	mg/L	8/14/2015 830h	8/14/2015 1405h	E200.7	0.0237	0.100	0.0675	J
Antimony	7440-36-0	mg/L	8/14/2015 830h	8/14/2015 1522h	E200.8	0.0000366	0.00200	0.000799	J#B
Arsenic	7440-38-2	mg/L	8/14/2015 830h	8/14/2015 1522h	E200.8	0.0000920	0.00200	0.00110	J
Barium	7440-39-3	mg/L	8/14/2015 830h	8/14/2015 1522h	E200.8	0.000538	0.00200	0.202	
Beryllium	7440-41-7	mg/L	8/14/2015 830h	8/14/2015 1522h	E200.8	0.0000288	0.00200	0.0000304	J
Cadmium	7440-43-9	mg/L	8/14/2015 830h	8/14/2015 1522h	E200.8	0.000193	0.000500	< 0.000500	U
Calcium	7440-70-2	mg/L	8/14/2015 830h	8/14/2015 1405h	E200.7	0.0401	1.00	48.3	
Chromium	7440-47-3	mg/L	8/14/2015 830h	8/14/2015 1522h	E200.8	0.00154	0.00200	< 0.00200	U
Cobalt	7440-48-4	mg/L	8/14/2015 830h	8/14/2015 1522h	E200.8	0.0000434	0.00400	< 0.00400	U
Copper	7440-50-8	mg/L	8/14/2015 830h	8/14/2015 1522h	E200.8	0.000692	0.00200	0.00249	
Iron	7439-89-6	mg/L	8/14/2015 830h	8/14/2015 1405h	E200.7	0.0767	0.100	< 0.100	U
Lead	7439-92-1	mg/L	8/14/2015 830h	8/14/2015 1522h	E200.8	0.000264	0.00200	< 0.00200	U
Magnesium	7439-95-4	mg/L	8/14/2015 830h	8/14/2015 1405h	E200.7	0.0294	1.00	7.23	
Manganese	7439-96-5	mg/L	8/14/2015 830h	8/14/2015 1522h	E200.8	0.00153	0.00200	< 0.00200	U
Mercury	7439-97-6	mg/L	8/13/2015 1830h	8/14/2015 1052h	E245.1	0.00000892	0.000150	< 0.000150	U
Molybdenum	7439-98-7	mg/L	8/14/2015 830h	8/14/2015 1522h	E200.8	0.000206	0.00200	0.00166	J
Nickel	7440-02-0	mg/L	8/14/2015 830h	8/14/2015 1522h	E200.8	0.000754	0.00200	< 0.00200	U
Potassium	7440-09-7	mg/L	8/14/2015 830h	8/14/2015 1405h	E200.7	0.247	1.00	2.67	
Selenium	7782-49-2	mg/L	8/14/2015 830h	8/14/2015 1522h	E200.8	0.0000634	0.00200	0.000798	JB
Silver	7440-22-4	mg/L	8/14/2015 830h	8/14/2015 1522h	E200.8	0.0000244	0.00200	0.0000397	J
Sodium	7440-23-5	mg/L	8/14/2015 830h	8/14/2015 1405h	E200.7	0.0330	1.00	31.9	
Thallium	7440-28-0	mg/L	8/14/2015 830h	8/14/2015 1522h	E200.8	0.0000242	0.00200	< 0.00200	U
Vanadium	7440-62-2	mg/L	8/14/2015 830h	8/14/2015 1522h	E200.8	0.000438	0.00440	0.00168	J
Zinc	7440-66-6	mg/L	8/14/2015 830h	8/14/2015 1522h	E200.8	0.00476	0.00500	0.0135	

^{# -} Sb LCS recovery suggests analyte concentration may be biased low. Samples cannot be rerun due to insufficient sample volume.

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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: 1508263-004

Client Sample ID: San Juan R @ US160 Xing in CO (4954000)

Collection Date: 8/12/2015 950h **Received Date:** 8/13/2015 1450h

Compound	CAS	Units	Date Prepared	Date Analyzed	Method Used	MDL	Reporting Limit	Analytical Result	Qual
Aluminum	7429-90-5	mg/L	8/14/2015 830h	8/14/2015 1407h	E200.7	0.0237	0.100	0.104	
Antimony	7440-36-0	mg/L	8/14/2015 830h	8/14/2015 1525h	E200.8	0.0000366	0.00200	0.000586	J#B
Arsenic	7440-38-2	mg/L	8/14/2015 830h	8/14/2015 1525h	E200.8	0.0000920	0.00200	0.000879	J
Barium	7440-39-3	mg/L	8/14/2015 830h	8/14/2015 1525h	E200.8	0.000538	0.00200	0.178	
Beryllium	7440-41-7	mg/L	8/14/2015 830h	8/14/2015 1525h	E200.8	0.0000288	0.00200	< 0.00200	U
Cadmium	7440-43-9	mg/L	8/14/2015 830h	8/14/2015 1525h	E200.8	0.000193	0.000500	< 0.000500	U
Calcium	7440-70-2	mg/L	8/14/2015 830h	8/14/2015 1427h	E200.7	0.201	5.00	52.1	
Chromium	7440-47-3	mg/L	8/14/2015 830h	8/14/2015 1525h	E200.8	0.00154	0.00200	< 0.00200	U
Cobalt	7440-48-4	mg/L	8/14/2015 830h	8/14/2015 1525h	E200.8	0.0000434	0.00400	0.0000614	J
Copper	7440-50-8	mg/L	8/14/2015 830h	8/14/2015 1525h	E200.8	0.000692	0.00200	0.00239	
Iron	7439-89-6	mg/L	8/14/2015 830h	8/14/2015 1407h	E200.7	0.0767	0.100	< 0.100	U
Lead	7439-92-1	mg/L	8/14/2015 830h	8/14/2015 1525h	E200.8	0.000264	0.00200	< 0.00200	U
Magnesium	7439-95-4	mg/L	8/14/2015 830h	8/14/2015 1407h	E200.7	0.0294	1.00	7.20	
Manganese	7439-96-5	mg/L	8/14/2015 830h	8/14/2015 1525h	E200.8	0.00153	0.00200	< 0.00200	U
Mercury	7439-97-6	mg/L	8/13/2015 1830h	8/14/2015 1104h	E245.1	0.00000892	0.000150	< 0.000150	U
Molybdenum	7439-98-7	mg/L	8/14/2015 830h	8/14/2015 1525h	E200.8	0.000206	0.00200	0.00147	J
Nickel	7440-02-0	mg/L	8/14/2015 830h	8/14/2015 1525h	E200.8	0.000754	0.00200	< 0.00200	U
Potassium	7440-09-7	mg/L	8/14/2015 830h	8/14/2015 1407h	E200.7	0.247	1.00	2.79	
Selenium	7782-49-2	mg/L	8/14/2015 830h	8/14/2015 1525h	E200.8	0.0000634	0.00200	0.000782	JB
Silver	7440-22-4	mg/L	8/14/2015 830h	8/14/2015 1525h	E200.8	0.0000244	0.00200	0.0000252	J
Sodium	7440-23-5	mg/L	8/14/2015 830h	8/14/2015 1407h	E200.7	0.0330	1.00	30.3	
Thallium	7440-28-0	mg/L	8/14/2015 830h	8/14/2015 1525h	E200.8	0.0000242	0.00200	< 0.00200	U
Vanadium	7440-62-2	mg/L	8/14/2015 830h	8/14/2015 1525h	E200.8	0.000438	0.00440	0.00190	J
Zinc	7440-66-6	mg/L	8/14/2015 830h	8/14/2015 1525h	E200.8	0.00476	0.00500	0.0148	

^{# -} Sb LCS recovery suggests analyte concentration may be biased low. Samples cannot be rerun due to insufficient sample volume.

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

INORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality Contact: Lenora Sullivan

Project: Gold King Mine - San Juan River Sampling

Lab Sample ID: 1508263-001

Client Sample ID: San Juan R @ Mexican Hat US163 Xing (4953000)

Collection Date: 8/12/2015 1750h **Received Date:** 8/13/2015 1450h

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	112	
Bicarbonate (as CaCO3)		mg/L		8/14/2015 632h	SM2320B	1.86	10.0	112	
Carbonate (as CaCO3)		mg/L		8/14/2015 632h	SM2320B	1.86	10.0	< 10.0	U
Chloride	16887-00-6	mg/L		8/13/2015 2315h	E300.0	0.0751	1.00	9.83	В
Conductivity		μmhos/cm		8/14/2015 601h	SM2510B	0.436	2.00	648	В
Hardness (as CaCO3)		mg/L		8/14/2015 1507h	SM2340B	10.0	10.0	902	
Hardness, Dissolved (as CaCO3)		mg/L		8/14/2015 1507h	SM2340B	10.0	10.0	152	
Nitrate/Nitrite (as N)	7727-37-9	mg/L		8/14/2015 001h	E353.2	0.00833	0.0100	0.415	
pH @ 25° C		pH Units		8/13/2015 1840h	SM4500-H+B	1.00	1.00	8.29	Н
Phosphate, Total (as P)	7723-14-0	mg/L	8/14/2015 1020h	8/14/2015 1301h	SM4500-P-F	0.0424	0.100	5.72	@1B
Sulfate	14808-79-8	mg/L		8/13/2015 2315h	E300.0	0.211	7.50	143	
Total Dissolved Solids		mg/L		8/13/2015 2100h	SM2540C	30.6	50.0	470	
Total Suspended Solids	TSS	mg/L		8/13/2015 1610h	SM2540D	142	150	8,760	

^{@ -} 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.

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

H - Sample was received outside of the holding time.

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: 1508263-002

Client Sample ID: San Juan R @ Sand Island (4953250)

Collection Date: 8/12/2015 1112h **Received Date:** 8/13/2015 1450h

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	105	
Bicarbonate (as CaCO3)		mg/L		8/14/2015 632h	SM2320B	1.86	10.0	105	
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 005h	E300.0	0.0751	1.00	8.35	В
Conductivity		μmhos/cm		8/14/2015 601h	SM2510B	0.436	2.00	560	В
Hardness (as CaCO3)		mg/L		8/14/2015 1507h	SM2340B	10.0	10.0	363	
Hardness, Dissolved (as CaCO3)		mg/L		8/14/2015 1507h	SM2340B	10.0	10.0	146	
Nitrate/Nitrite (as N)	7727-37-9	mg/L		8/14/2015 003h	E353.2	0.00833	0.0100	0.353	
pH @ 25° C		pH Units		8/13/2015 1840h	SM4500-H+B	1.00	1.00	8.36	Н
Phosphate, Total (as P)	7723-14-0	mg/L	8/14/2015 1020h	8/14/2015 1245h	SM4500-P-F	0.0212	0.0500	1.39	В
Sulfate	14808-79-8	mg/L		8/14/2015 005h	E300.0	0.211	7.50	112	
Total Dissolved Solids		mg/L		8/13/2015 2100h	SM2540C	30.6	50.0	450	@
Total Suspended Solids	TSS	mg/L		8/13/2015 1610h	SM2540D	142	150	4,640	@

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

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

H - Sample was received outside of the holding time.

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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: 1508263-003

Client Sample ID: San Juan River @ Town of Montezuma (4953990)

Collection Date: 8/12/2015 1037h **Received Date:** 8/13/2015 1450h

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	101	
Bicarbonate (as CaCO3)		mg/L		8/14/2015 632h	SM2320B	1.86	10.0	101	
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 056h	E300.0	0.0751	1.00	8.39	В
Conductivity		μmhos/cm		8/14/2015 601h	SM2510B	0.436	2.00	557	В
Hardness (as CaCO3)		mg/L		8/14/2015 1507h	SM2340B	10.0	10.0	346	
Hardness, Dissolved (as CaCO3)		mg/L		8/14/2015 1507h	SM2340B	10.0	10.0	150	
Nitrate/Nitrite (as N)	7727-37-9	mg/L		8/14/2015 012h	E353.2	0.00833	0.0100	0.337	
pH @ 25° C		pH Units		8/13/2015 1840h	SM4500-H+B	1.00	1.00	8.32	Н
Phosphate, Total (as P)	7723-14-0	mg/L	8/14/2015 1020h	8/14/2015 1246h	SM4500-P-F	0.0212	0.0500	1.21	В
Sulfate	14808-79-8	mg/L		8/14/2015 056h	E300.0	0.211	7.50	114	
Total Dissolved Solids		mg/L		8/13/2015 2100h	SM2540C	30.6	50.0	560	
Total Suspended Solids	TSS	mg/L		8/13/2015 1610h	SM2540D	142	150	3,860	

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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: 1508263-004

Client Sample ID: San Juan R @ US160 Xing in CO (4954000)

Collection Date: 8/12/2015 950h **Received Date:** 8/13/2015 1450h

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	110	
Bicarbonate (as CaCO3)		mg/L		8/14/2015 632h	SM2320B	1.86	10.0	110	
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 113h	E300.0	0.0751	1.00	9.39	В
Conductivity		μmhos/cm		8/14/2015 601h	SM2510B	0.436	2.00	566	В
Hardness (as CaCO3)		mg/L		8/14/2015 1507h	SM2340B	10.0	10.0	511	
Hardness, Dissolved (as CaCO3)		mg/L		8/14/2015 1507h	SM2340B	10.0	10.0	160	
Nitrate/Nitrite (as N)	7727-37-9	mg/L		8/14/2015 014h	E353.2	0.00833	0.0100	0.317	
рН @ 25° С		pH Units		8/13/2015 1840h	SM4500-H+B	1.00	1.00	8.20	Н
Phosphate, Total (as P)	7723-14-0	mg/L	8/14/2015 1020h	8/14/2015 1247h	SM4500-P-F	0.0212	0.0500	1.67	В
Sulfate	14808-79-8	mg/L		8/14/2015 113h	E300.0	0.211	7.50	118	
Total Dissolved Solids		mg/L		8/13/2015 2100h	SM2540C	30.6	50.0	620	
Total Suspended Solids	TSS	mg/L		8/13/2015 1610h	SM2540D	142	150	3,120	

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

 $^{{\}it H}$ - Sample was received outside of the holding time.

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: 1508263

Project: Gold King Mine - San Juan River Sampling

Contact: Lenora Sullivan

Dept: ME **QC Type:** LCS

Lab Sample ID: Test Code:	LCS-38557				MDL	Limit	Spiked	Amount	%REC	Limits	Amt	% RPD	Limit	Qual
Test Code:	LCD-30337	Date Analyzed:	08/14/201	15 1334h										ı
rest code.	200.7-DIS	Date Prepared:	08/14/201	15 830h										
Aluminum		0.952	mg/L	E200.7	0.0237	0.100	1.000	0	95.2	85 - 115				
Calcium		9.41	mg/L	E200.7	0.0401	1.00	10.00	0	94.1	85 - 115				
Iron		0.935	mg/L	E200.7	0.0767	0.100	1.000	0	93.5	85 - 115				
Magnesium		9.79	mg/L	E200.7	0.0294	1.00	10.00	0	97.9	85 - 115				
Potassium		9.52	mg/L	E200.7	0.247	1.00	10.00	0	95.2	85 - 115				
Sodium		9.24	mg/L	E200.7	0.0330	1.00	10.00	0	92.4	85 - 115				
Lab Sample ID:	LCS-38535	Date Analyzed:	08/13/201	15 2231h										
Test Code:	200.7-W	Date Prepared:	08/13/201	15 1632h										
Aluminum		0.956	mg/L	E200.7	0.0237	0.100	1.000	0	95.6	85 - 115				
Calcium		9.62	mg/L	E200.7	0.0401	1.00	10.00	0	96.2	85 - 115				
Iron		0.916	mg/L	E200.7	0.0767	0.100	1.000	0	91.6	85 - 115				
Magnesium		9.58	mg/L	E200.7	0.0294	1.00	10.00	0	95.8	85 - 115				
Potassium		9.57	mg/L	E200.7	0.247	1.00	10.00	0	95.7	85 - 115				
Sodium		9.31	mg/L	E200.7	0.0330	1.00	10.00	0	93.1	85 - 115				
Lab Sample ID:	LCS-38558	Date Analyzed:	08/14/201	15 1423h										
Test Code:	200.8-DIS	Date Prepared:	08/14/201	15 830h										
Antimony		0.153	mg/L	E200.8	0.0000366	0.00200	0.2000	0	76.3	85 - 115				#
Arsenic		0.204	mg/L	E200.8	0.0000920	0.00200	0.2000	0	102	85 - 115				
Barium		0.184	mg/L	E200.8	0.000538	0.00200	0.2000	0	91.9	85 - 115				
Beryllium		0.200	mg/L	E200.8	0.0000288	0.00200	0.2000	0	100	85 - 115				
Cadmium		0.188	mg/L	E200.8	0.000193	0.000500	0.2000	0	93.9	85 - 115				
Chromium		0.189	mg/L	E200.8	0.00154	0.00200	0.2000	0	94.3	85 - 115				
Cobalt		0.184	mg/L	E200.8	0.0000434	0.00400	0.2000	0	92.1	85 - 115				
Copper		0.188	mg/L	E200.8	0.000692	0.00200	0.2000	0	94.2	85 - 115				
Lead		0.185	mg/L	E200.8	0.000264	0.00200	0.2000	0	92.3	85 - 115				
Manganese		0.187	mg/L	E200.8	0.00153	0.00200	0.2000	0	93.6	85 - 115				
Molybdenum		0.184	mg/L	E200.8	0.000206	0.00200	0.2000	0	92.2	85 - 115				

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Kyle F. Gross Laboratory Director

Jose Rocha **QA** Officer

QC SUMMARY REPORT

Utah Division of Water Quality **Client:**

Lab Set ID: 1508263

Project:

Gold King Mine - San Juan River Sampling

Lenora Sullivan **Contact:**

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-38558	Date Analyzed:	08/14/201	5 1423h										
Test Code:	200.8-DIS	Date Prepared:	08/14/201	5 830h										
Nickel		0.184	mg/L	E200.8	0.000754	0.00200	0.2000	0	92.1	85 - 115				
Selenium		0.202	mg/L	E200.8	0.0000634	0.00200	0.2000	0	101	85 - 115				
Silver		0.186	mg/L	E200.8	0.0000244	0.00200	0.2000	0	92.9	85 - 115				
Thallium		0.182	mg/L	E200.8	0.0000242	0.00200	0.2000	0	91.1	85 - 115				
Vanadium		0.187	mg/L	E200.8	0.000438	0.00440	0.2000	0	93.7	85 - 115				
Zinc		0.978	mg/L	E200.8	0.00476	0.00500	1.000	0	97.8	85 - 115				
Lab Sample ID:	LCS-38536	Date Analyzed:	08/13/201	5 2214h										
Test Code:	200.8-W	Date Prepared:	08/13/201	5 1632h										
Arsenic		0.213	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	98.0	85 - 115				
Beryllium		0.213	mg/L	E200.8	0.0000288	0.00200	0.2000	0	106	85 - 115				
Cadmium		0.198	mg/L	E200.8	0.000193	0.000500	0.2000	0	99.1	85 - 115				
Chromium		0.199	mg/L	E200.8	0.00154	0.00200	0.2000	0	99.5	85 - 115				
Cobalt		0.195	mg/L	E200.8	0.0000434	0.00400	0.2000	0	97.3	85 - 115				
Copper		0.197	mg/L	E200.8	0.000692	0.00200	0.2000	0	98.7	85 - 115				
Lead		0.196	mg/L	E200.8	0.000264	0.00200	0.2000	0	98.0	85 - 115				
Manganese		0.199	mg/L	E200.8	0.00153	0.00200	0.2000	0	99.3	85 - 115				
Molybdenum		0.199	mg/L	E200.8	0.000206	0.00200	0.2000	0	99.4	85 - 115				
Nickel		0.194	mg/L	E200.8	0.000754	0.00200	0.2000	0	97.2	85 - 115				
Selenium		0.214	mg/L	E200.8	0.0000634	0.00200	0.2000	0	107	85 - 115				
Silver		0.193	mg/L	E200.8	0.0000244	0.00200	0.2000	0	96.3	85 - 115				
Thallium		0.189	mg/L	E200.8	0.0000242	0.00200	0.2000	0	94.7	85 - 115				
Vanadium		0.199	mg/L	E200.8	0.000438	0.00440	0.2000	0	99.5	85 - 115				
Zinc		1.05	mg/L	E200.8	0.00476	0.00500	1.000	0	105	85 - 115				
Lab Sample ID:	LCS-38575	Date Analyzed:	08/14/201	5 1942h										
Test Code:	200.8-W	Date Prepared:	08/14/201	5 1431h										
Antimony		0.175	mg/L	E200.8	0.0000366	0.00200	0.2000	0	87.4	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: 1508263

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: Test Code:	LCS-38547 HG-DW-245.1	Date Analyzed: Date Prepared:												
Mercury		0.00338	mg/L	E245.1	0.00000892	0.000150	0.003330	0	102	85 - 115				
Lab Sample ID: Test Code:	LCS-38546 HG-DW-DIS-245.1	Date Analyzed: Date Prepared:												
Mercury		0.00333	mg/L	E245.1	0.00000892	0.000150	0.003330	0	99.9	85 - 115				

^{# -} Sb LCS recovery suggests analyte concentration may be biased low. Samples cannot be rerun due to insufficient sample volume.

A

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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: 1508263

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-38557	Date Analyzed:	08/14/20	15 1332h									ı	
Test Code:	200.7-DIS	Date Prepared:	08/14/20	15 830h										
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-38535	Date Analyzed:	08/13/20	15 2228h								•		
Test Code:	200.7-W	Date Prepared:	08/13/20	15 1632h										
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-38558	Date Analyzed:	08/14/20	15 1420h										
Test Code:	200.8-DIS	Date Prepared:	08/14/20	15 830h										
Antimony		0.000253	mg/L	E200.8	0.0000366	0.00200								JB
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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QC SUMMARY REPORT

Utah Division of Water Quality **Client:**

Lab Set ID: 1508263

Gold King Mine - San Juan River Sampling **Project:**

Lenora Sullivan **Contact:**

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-38558	Date Analyzed:	08/14/20	15 1420h										
Test Code:	200.8-DIS	Date Prepared:	08/14/201	15 830h										
Nickel		< 0.00200	mg/L	E200.8	0.000754	0.00200								U
Selenium		0.0000681	mg/L	E200.8	0.0000634	0.00200								JB
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-38536	Date Analyzed:	08/13/20	15 2211h										
Test Code:	200.8-W	Date Prepared:	08/13/201	15 1632h										
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
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-38575	Date Analyzed:	08/14/20	15 1939h										
Test Code:	200.8-W	Date Prepared:	08/14/201	15 1431h										
Antimony		< 0.00200	mg/L	E200.8	0.0000366	0.00200								U



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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: 1508263

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: Test Code:	MB-38547 HG-DW-245.1	Date Analyzed: Date Prepared:												
Mercury		< 0.000150	mg/L	E245.1	0.00000892	0.000150								U
Lab Sample ID: Test Code:	MB-38546 HG-DW-DIS-245.1	Date Analyzed: Date Prepared:												
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.

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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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Jose Rocha QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality

Lab Set ID: 1508263

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:		Date Analyzed:	08/14/20											•
Test Code:	200.7-DIS	Date Prepared:	08/14/20	15 830h										
Aluminum		1.13	mg/L	E200.7	0.0237	0.100	1.000	0.155	97.0	70 - 130				
Calcium		58.1	mg/L	E200.7	0.0401	1.00	10.00	47.9	102	70 - 130				
Iron		1.00	mg/L	E200.7	0.0767	0.100	1.000	0	100	70 - 130				
Magnesium		17.0	mg/L	E200.7	0.0294	1.00	10.00	6.97	101	70 - 130				
Potassium		12.4	mg/L	E200.7	0.247	1.00	10.00	2.74	96.7	70 - 130				
Sodium		37.6	mg/L	E200.7	0.0330	1.00	10.00	27.3	103	70 - 130				
Lab Sample ID:	1508263-004CMS	Date Analyzed:	08/14/20	15 1409h										
Test Code:	200.7-DIS	Date Prepared:	08/14/20	15 830h										
Aluminum		1.07	mg/L	E200.7	0.0237	0.100	1.000	0.104	96.9	70 - 130				
Iron		0.980	mg/L	E200.7	0.0767	0.100	1.000	0	98.0	70 - 130				
Magnesium		17.2	mg/L	E200.7	0.0294	1.00	10.00	7.2	99.9	70 - 130				
Potassium		12.7	mg/L	E200.7	0.247	1.00	10.00	2.79	99.3	70 - 130				
Sodium		41.4	mg/L	E200.7	0.0330	1.00	10.00	30.3	111	70 - 130				
Lab Sample ID:	1508263-004CMS	Date Analyzed:	08/14/20	15 1429h										
Test Code:	200.7-DIS	Date Prepared:	08/14/20	15 830h										
Calcium		61.5	mg/L	E200.7	0.201	5.00	10.00	52.1	94.7	70 - 130				
Lab Sample ID:	1508262-001BMS	Date Analyzed:	08/13/20	15 2240h										
Test Code:	200.7-W	Date Prepared:	08/13/20	15 1632h										
Aluminum		60.6	mg/L	E200.7	0.237	1.00	1.000	54.7	588	70 - 130				2
Calcium		188	mg/L	E200.7	0.401	10.0	10.00	186	26.3	70 - 130				2
Lab Sample ID:	1508263-002BMS	Date Analyzed:	08/13/20	15 2302h										
Test Code:	200.7-W	Date Prepared:	08/13/20	15 1632h										
Calcium		114	mg/L	E200.7	0.401	10.0	10.00	109	46.1	70 - 130				2

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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: 1508263

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:	1508262-001BMS	Date Analyzed:	08/13/20	15 2312h										
Test Code:	200.7-W	Date Prepared:	08/13/20	15 1632h										
Iron		39.2	mg/L	E200.7	0.0767	0.100	1.000	37.5	163	70 - 130				2
Magnesium		43.4	mg/L	E200.7	0.0294	1.00	10.00	33.3	101	70 - 130				
Potassium		20.3	mg/L	E200.7	0.247	1.00	10.00	10.7	95.3	70 - 130				
Sodium		53.3	mg/L	E200.7	0.0330	1.00	10.00	44.4	89.3	70 - 130				
Lab Sample ID:	1508263-002BMS	Date Analyzed:	08/13/20	15 2335h										
Test Code:	200.7-W	Date Prepared:	08/13/20	15 1632h										
Aluminum		49.8	mg/L	E200.7	0.0237	0.100	1.000	45.4	444	70 - 130				2
Iron		36.3	mg/L	E200.7	0.0767	0.100	1.000	34.6	162	70 - 130				2
Magnesium		31.6	mg/L	E200.7	0.0294	1.00	10.00	21.9	97.1	70 - 130				
Potassium		17.9	mg/L	E200.7	0.247	1.00	10.00	8.43	95.1	70 - 130				
Sodium		47.7	mg/L	E200.7	0.0330	1.00	10.00	38.4	93.2	70 - 130				
Lab Sample ID:	1508262-004CMS	Date Analyzed:	08/14/20	15 1449h										
Test Code:	200.8-DIS	Date Prepared:	08/14/20	15 830h										
Antimony		0.158	mg/L	E200.8	0.0000366	0.00200	0.2000	0.000548	78.6	75 - 125				
Arsenic		0.202	mg/L	E200.8	0.0000920	0.00200	0.2000	0.00121	100	75 - 125				
Barium		0.333	mg/L	E200.8	0.000538	0.00200	0.2000	0.151	90.9	75 - 125				
Beryllium		0.202	mg/L	E200.8	0.0000288	0.00200	0.2000	0	101	75 - 125				
Cadmium		0.186	mg/L	E200.8	0.000193	0.000500	0.2000	0	92.9	75 - 125				
Chromium		0.187	mg/L	E200.8	0.00154	0.00200	0.2000	0	93.6	75 - 125				
Cobalt		0.184	mg/L	E200.8	0.0000434	0.00400	0.2000	0.0000478	92.0	75 - 125				
Copper		0.190	mg/L	E200.8	0.000692	0.00200	0.2000	0.00261	93.7	75 - 125				
Lead		0.184	mg/L	E200.8	0.000264	0.00200	0.2000	0	92.2	75 - 125				
Manganese		0.189	mg/L	E200.8	0.00153	0.00200	0.2000	0.00182	93.8	75 - 125				
Molybdenum		0.188	mg/L	E200.8	0.000206	0.00200	0.2000	0.00148	93.4	75 - 125				
Nickel		0.183	mg/L	E200.8	0.000754	0.00200	0.2000	0	91.7	75 - 125				
Selenium		0.199	mg/L	E200.8	0.0000634	0.00200	0.2000	0.000728	99.2	75 - 125				
Silver		0.183	mg/L	E200.8	0.0000244	0.00200	0.2000	0	91.3	75 - 125				

Report Date: 8/14/2015 Page 21 of 40

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Kyle F. Gross Laboratory Director

Jose Rocha **QA** Officer

QC SUMMARY REPORT

Utah Division of Water Quality **Client:**

Lab Set ID: 1508263

Project: Gold King Mine - San Juan River Sampling

Lenora Sullivan **Contact:**

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:	1508262-004CMS	Date Analyzed:	08/14/201	15 1449h										
Test Code:	200.8-DIS	Date Prepared:	08/14/201	5 830h										
Thallium		0.182	mg/L	E200.8	0.0000242	0.00200	0.2000	0	90.8	75 - 125				
Vanadium		0.191	mg/L	E200.8	0.000438	0.00440	0.2000	0.00287	94.2	75 - 125				
Zinc		0.996	mg/L	E200.8	0.00476	0.00500	1.000	0.0165	98.0	75 - 125				
Lab Sample ID:	1508263-004CMS	Date Analyzed:	08/14/201	15 1528h										
Test Code:	200.8-DIS	Date Prepared:	08/14/201	5 830h										
Antimony		0.158	mg/L	E200.8	0.0000366	0.00200	0.2000	0.000586	78.6	75 - 125				
Arsenic		0.202	mg/L	E200.8	0.0000920	0.00200	0.2000	0.000879	100	75 - 125				
Barium		0.355	mg/L	E200.8	0.000538	0.00200	0.2000	0.178	88.8	75 - 125				
Beryllium		0.200	mg/L	E200.8	0.0000288	0.00200	0.2000	0	100	75 - 125				
Cadmium		0.185	mg/L	E200.8	0.000193	0.000500	0.2000	0	92.4	75 - 125				
Chromium		0.187	mg/L	E200.8	0.00154	0.00200	0.2000	0	93.3	75 - 125				
Cobalt		0.183	mg/L	E200.8	0.0000434	0.00400	0.2000	0.0000614	91.3	75 - 125				
Copper		0.190	mg/L	E200.8	0.000692	0.00200	0.2000	0.00239	93.8	75 - 125				
Lead		0.181	mg/L	E200.8	0.000264	0.00200	0.2000	0	90.7	75 - 125				
Manganese		0.190	mg/L	E200.8	0.00153	0.00200	0.2000	0	94.9	75 - 125				
Molybdenum		0.186	mg/L	E200.8	0.000206	0.00200	0.2000	0.00147	92.0	75 - 125				
Nickel		0.183	mg/L	E200.8	0.000754	0.00200	0.2000	0	91.4	75 - 125				
Selenium		0.201	mg/L	E200.8	0.0000634	0.00200	0.2000	0.000782	99.9	75 - 125				
Silver		0.182	mg/L	E200.8	0.0000244	0.00200	0.2000	0.0000252	91.1	75 - 125				
Thallium		0.178	mg/L	E200.8	0.0000242	0.00200	0.2000	0	89.1	75 - 125				
Vanadium		0.190	mg/L	E200.8	0.000438	0.00440	0.2000	0.0019	94.1	75 - 125				
Zinc		0.997	mg/L	E200.8	0.00476	0.00500	1.000	0.0148	98.3	75 - 125				
Lab Sample ID:	1508262-001BMS	Date Analyzed:	08/13/201	15 2241h										
Test Code:	200.8-W	Date Prepared:	08/13/201	5 1632h										
Arsenic		0.194	mg/L	E200.8	0.0000920	0.00200	0.2000	0.0175	88.2	75 - 125				
Barium		1.53	mg/L	E200.8	0.000538	0.00200	0.2000	1.35	87.4	75 - 125				
Beryllium		0.208	mg/L	E200.8	0.0000288	0.00200	0.2000	0.00677	101	75 - 125				

Report Date: 8/14/2015 Page 22 of 40

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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: 1508263

Project: Gold King Mine - San Juan River Sampling

Contact: Lenora Sullivan

Dept: ME **QC Type:** MS

Lab Sample ID 168/862-091BMS Date Preparate 051/32/01 5 CaSh Test Code 210.8-W Preparate 513/201 5 CaSh Cadmium 1,98 81,2 220.8 0,000193 0,00000 0,0001 98.2 75 - 125 Chomium 1,02 0,21 mgl. E200.8 0,00144 0,0020 0,0032 93.2 75 - 125 Cobalt 1,02 0,221 mgl. E200.8 0,000044 0,0020 0,0030 93.2 75 - 125 Cobalt 1,02 0,227 mgl. E200.8 0,000024 0,0020 0,000 0,0882 96.8 75 - 125 Lody 1,02 mgl. E200.8 0,000264 0,0020 0,000 0,0882 96.8 75 - 125 Nickel 1,02 mgl. E200.8 0,00074 0,0020 0,000 0,0012 83.1 75 - 125 Seleiner 1,01 mgl. E200.8 0,000043 0,000 0,000 0,00048 95.8 <t< th=""><th>Analyte</th><th></th><th>Result</th><th>Units</th><th>Method</th><th>MDL</th><th>Reporting Limit</th><th>Amount Spiked</th><th>Spike Ref. Amount</th><th>%REC</th><th>Limits</th><th>RPD Ref. Amt</th><th>% RPD</th><th>RPD Limit</th><th>Qual</th></t<>	Analyte		Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Chomium	•		•												
Cobalt Coper 0.221 mg/L E200.8 0.0000434 0.04000 0.2000 0.0332 93.7 75 - 125 Coper 0.257 mg/L E200.8 0.000024 0.00200 0.0000 0.0808 88.3 75 - 125 Molybdenum 0.0996 mg/L E200.8 0.000264 0.00200 0.0200 0.000312 49.6 75 - 125 Mickel 0.028 mg/L E200.8 0.000074 0.00200 0.00012 49.6 75 - 125 Mickel 0.167 mg/L E200.8 0.000044 0.00200 0.00012 49.6 75 - 125 Silver 0.167 mg/L E200.8 0.000044 0.00200 0.00004 95.8 75 - 125 Wandum 0.172 mg/L E200.8 0.000042 0.0020 0.000 0.00064 85.7 75 - 125 Lab Samp LD 1.032 mg/L E200.8 0.00048 0.0040 0.000 0.000 87.6 75 - 125	Cadmium		0.198	mg/L	E200.8	0.000193	0.000500	0.2000	0.00117	98.2	75 - 125				
Copper 0.257 mg/L E200.8 0.000692 0.0200 0.2000 0.0808 88.3 75 - 125 Lead 0.277 mg/L E200.8 0.000064 0.00200 0.0200 0.0829 96.8 75 - 125 Molybdenum 0.0996 mg/L E200.8 0.000064 0.00200 0.0200 0.0339 94.6 75 - 125 Nickel 0.0228 mg/L E200.8 0.000064 0.00200 0.2000 0.00389 94.6 75 - 125 Selenium 0.167 mg/L E200.8 0.0000644 0.00200 0.0008 0.00122 83.1 75 - 125 Selenium 0.172 mg/L E200.8 0.000024 0.0020 0.2000 0.00604 85.7 75 - 125 Thallium 0.172 mg/L E200.8 0.00048 0.00200 0.00648 85.7 75 - 125 Vaandium 1.031 mg/L E200.8 0.00048 0.00200 0.0160 85.7 75 - 125 <t< td=""><td>Chromium</td><td></td><td>0.210</td><td>mg/L</td><td>E200.8</td><td>0.00154</td><td>0.00200</td><td>0.2000</td><td>0.0232</td><td>93.2</td><td>75 - 125</td><td></td><td></td><td></td><td></td></t<>	Chromium		0.210	mg/L	E200.8	0.00154	0.00200	0.2000	0.0232	93.2	75 - 125				
Lead	Cobalt		0.221	mg/L	E200.8	0.0000434	0.00400	0.2000	0.0332	93.7	75 - 125				
Molybdenum	Copper		0.257	mg/L	E200.8	0.000692	0.00200	0.2000	0.0808	88.3	75 - 125				
Nickel	Lead		0.277	mg/L	E200.8	0.000264	0.00200	0.2000	0.0829	96.8	75 - 125				
Selenium	Molybdenum		0.0996	mg/L	E200.8	0.000206	0.00200	0.2000	0.000312	49.6	75 - 125				1
Silver 0.192 mg/L E200.8 0.0000244 0.00200 0.2000 0.00488 95.8 75 - 125 Thallium 0.172 mg/L E200.8 0.000042 0.00200 0.2000 0.000604 85.7 75 - 125 Vanadium 0.2399 mg/L E200.8 0.000438 0.0040 0.2000 0.0637 87.6 75 - 125 Zinc 1.19 mg/L E200.8 0.00476 0.0500 1.00 0.19 9.6 75 - 125 Lab Sample ID: 1808263-002BMS Date Analyzed: 08/13/2015 23/4h 87.7 87.7 1.25 Test Code: 200.8-W Date Prepared: 08/13/2015 15/25 98.000020 0.0000 0.0149 89.3 75 - 125 Arsenic 0.193 mg/L E200.8 0.000058 0.0000 0.0000 9.71 79.0 75 - 125 Beryllium 0.193 mg/L E200.8 0.000058 0.0000 0.0000 0.000516 101 75 - 125	Nickel		0.228	mg/L	E200.8	0.000754	0.00200	0.2000	0.0389	94.6	75 - 125				
Thallium	Selenium		0.167	mg/L	E200.8	0.0000634	0.00200	0.2000	0.00122	83.1	75 - 125				
Vanadium 0.239 mg/L E200.8 0.00438 0.00440 0.2000 0.0637 87.6 75 - 125 Zinc 1.19 mg/L E200.8 0.00476 0.0050 1.00 0.19 99.6 75 - 125 Lab Sample ID: 1508263-002BMS Date Analyzed: 08/13/2015 2314h 1.00 0.00200 0.0149 99.6 75 - 125 Arsenic 0.193 mg/L E200.8 0.0000920 0.00200 0.2000 0.0149 89.3 75 - 125 Barjum 1.13 mg/L E200.8 0.0000288 0.00200 0.2000 0.971 79.0 75 - 125 Beryllium 0.0207 mg/L E200.8 0.0000288 0.00200 0.2000 0.00516 101 75 - 125 Cadmium 0.197 mg/L E200.8 0.000154 0.00200 0.2000 0.00294 98.2 75 - 125 Cobalt 0.216 mg/L E200.8 0.00154 0.00200 0.2000 0.0279 94.2	Silver		0.192	mg/L	E200.8	0.0000244	0.00200	0.2000	0.000488	95.8	75 - 125				
Zinc 1.19 mg/L E200.8 0.00476 0.00500 1.00 0.19 99.6 75 - 125 Lab Sample ID: 1508263-002BMS Date Analyzed: 08/13/2015 1632L 0.000092 0.00200 0.2000 0.0149 89.3 75 - 125 Arsenic 0.193 mg/L E200.8 0.000538 0.00200 0.2000 0.971 79.0 75 - 125 Beryllium 0.207 mg/L E200.8 0.000538 0.00200 0.2000 0.0516 101 75 - 125 Cadmium 0.197 mg/L E200.8 0.000153 0.00200 0.2000 0.00516 101 75 - 125 Chromium 0.197 mg/L E200.8 0.00153 0.00200 0.2000 0.0024 98.2 75 - 125 Cobalt 0.216 mg/L E200.8 0.00154 0.00200 0.2000 0.0279 94.2 75 - 125 Lead 0.260 mg/L E200.8 0.00054 0.00200 0.2000 0.0674	Thallium		0.172	mg/L	E200.8	0.0000242	0.00200	0.2000	0.000604	85.7	75 - 125				
Date Analyzed: 08/13/2015 2314h Test Code: 200.8-W Date Prepared: 08/13/2015 1632h Arsenic 0.193 mg/L E200.8 0.0000920 0.00200 0.2000 0.0149 89.3 75 - 125 Barium 0.207 mg/L E200.8 0.0000538 0.00200 0.2000 0.00516 101 75 - 125 Cadmium 0.197 mg/L E200.8 0.000193 0.000500 0.2000 0.00094 98.2 75 - 125 Cadmium 0.197 mg/L E200.8 0.00193 0.000500 0.2000 0.00094 98.2 75 - 125 Chromium 0.210 mg/L E200.8 0.00154 0.00200 0.2000 0.0029 94.9 75 - 125 Cobalt 0.216 mg/L E200.8 0.0000434 0.00400 0.2000 0.0279 94.2 75 - 125 Copper 0.260 mg/L E200.8 0.000692 0.00200 0.2000 0.0767 91.4 75 - 125 Lead 0.260 mg/L E200.8 0.000694 0.00200 0.2000 0.0674 96.4 75 - 125 Lead 0.260 mg/L E200.8 0.000694 0.00200 0.2000 0.0674 96.4 75 - 125 Manganese 1.82 mg/L E200.8 0.000264 0.00200 0.2000 0.2000 0.00344 59.2 75 - 125 Molybdenum 0.119 mg/L E200.8 0.000754 0.00200 0.2000 0.00334 459.2 75 - 125 Selenium 0.175 mg/L E200.8 0.0000634 0.00200 0.2000 0.00334 459.2 75 - 125 Selenium 0.175 mg/L E200.8 0.0000634 0.00200 0.2000 0.00334 59.2 75 - 125 Silver 0.192 mg/L E200.8 0.0000634 0.00200 0.2000 0.000188 95.7 75 - 125	Vanadium		0.239	mg/L	E200.8	0.000438	0.00440	0.2000	0.0637	87.6	75 - 125				
Test Code: 200.8-W Date Prepared: 08/13/2015 1632h Arsenic 0.193 mg/L E200.8 0.0000920 0.00200 0.2000 0.0149 89.3 75 - 125 Barium 1.13 mg/L E200.8 0.000538 0.00200 0.2000 0.971 79.0 75 - 125 Beryllium 0.207 mg/L E200.8 0.0000288 0.00200 0.2000 0.00516 101 75 - 125 Cadmium 0.197 mg/L E200.8 0.000193 0.000500 0.2000 0.00094 98.2 75 - 125 Chromium 0.210 mg/L E200.8 0.00154 0.00200 0.2000 0.02 94.9 75 - 125 Cobal 0.216 mg/L E200.8 0.00144 0.00200 0.2000 0.0279 94.2 75 - 125 Copper 0.260 mg/L E200.8 0.000692 0.00200 0.2000 0.0767 91.4 75 - 125 Manganese 1.82 mg/L <	Zinc		1.19	mg/L	E200.8	0.00476	0.00500	1.000	0.19	99.6	75 - 125				
Arsenic 0.193 mg/L E200.8 0.0000920 0.00200 0.2000 0.0149 89.3 75 - 125 Barium 1.13 mg/L E200.8 0.000538 0.00200 0.2000 0.971 79.0 75 - 125 Beryllium 0.207 mg/L E200.8 0.0000288 0.00200 0.2000 0.00516 101 75 - 125 Cadmium 0.197 mg/L E200.8 0.000193 0.000500 0.2000 0.00094 98.2 75 - 125 Chromium 0.210 mg/L E200.8 0.00154 0.00200 0.2000 0.029 94.9 75 - 125 Cobalt 0.216 mg/L E200.8 0.000434 0.00400 0.2000 0.0279 94.2 75 - 125 Copper 0.260 mg/L E200.8 0.000692 0.00200 0.2000 0.0674 96.4 75 - 125 Lead 0.260 mg/L E200.8 0.00153 0.00200 0.2000 0.0674 96.4	Lab Sample ID:	1508263-002BMS	Date Analyzed:	08/13/20	15 2314h										
Barium 1.13 mg/L E200.8 0.000538 0.00200 0.2000 0.971 79.0 75 - 125 Beryllium 0.207 mg/L E200.8 0.0000288 0.00200 0.2000 0.00516 101 75 - 125 Cadmium 0.197 mg/L E200.8 0.000193 0.000500 0.2000 0.00094 98.2 75 - 125 Chromium 0.210 mg/L E200.8 0.00154 0.00200 0.2000 0.02 94.9 75 - 125 Cobalt 0.216 mg/L E200.8 0.000434 0.00200 0.2000 0.0279 94.2 75 - 125 Copper 0.260 mg/L E200.8 0.000692 0.00200 0.2000 0.0767 91.4 75 - 125 Lead 0.260 mg/L E200.8 0.000264 0.00200 0.2000 0.0674 96.4 75 - 125 Manganese 1.82 mg/L E200.8 0.000264 0.00200 0.2000 0.000344 59.2	Test Code:	200.8-W	Date Prepared:	08/13/20	15 1632h										
Beryllium 0.207 mg/L E200.8 0.0000288 0.00200 0.2000 0.00516 101 75 - 125 Cadmium 0.197 mg/L E200.8 0.00193 0.000500 0.2000 0.00094 98.2 75 - 125 Chromium 0.210 mg/L E200.8 0.00154 0.00200 0.2000 0.0279 94.2 75 - 125 Cobalt 0.216 mg/L E200.8 0.000434 0.00400 0.2000 0.0279 94.2 75 - 125 Copper 0.260 mg/L E200.8 0.000692 0.00200 0.2000 0.0767 91.4 75 - 125 Lead 0.260 mg/L E200.8 0.00153 0.00200 0.2000 0.0674 96.4 75 - 125 Manganese 1.82 mg/L E200.8 0.00153 0.00200 0.2000 0.00344 59.2 75 - 125 Nickel 0.220 mg/L E200.8 0.000754 0.00200 0.2000 0.00334 94.7	Arsenic		0.193	mg/L	E200.8	0.0000920	0.00200	0.2000	0.0149	89.3	75 - 125				
Cadmium 0.197 mg/L E200.8 0.000193 0.000500 0.2000 0.00094 98.2 75 - 125 Chromium 0.210 mg/L E200.8 0.00154 0.00200 0.2000 0.02 94.9 75 - 125 Cobalt 0.216 mg/L E200.8 0.000434 0.00400 0.2000 0.0279 94.2 75 - 125 Copper 0.260 mg/L E200.8 0.000692 0.00200 0.2000 0.0767 91.4 75 - 125 Lead 0.260 mg/L E200.8 0.000264 0.00200 0.2000 0.0674 96.4 75 - 125 Manganese 1.82 mg/L E200.8 0.00153 0.00200 0.2000 1.67 74.3 75 - 125 Molybdenum 0.119 mg/L E200.8 0.000266 0.00200 0.2000 0.000344 59.2 75 - 125 Silver 0.175 mg/L E200.8 0.0000634 0.00200 0.2000 0.0011 86.8	Barium		1.13	mg/L	E200.8	0.000538	0.00200	0.2000	0.971	79.0	75 - 125				
Chromium 0.210 mg/L E200.8 0.00154 0.00200 0.2000 0.02 94.9 75 - 125 Cobalt 0.216 mg/L E200.8 0.0000434 0.00400 0.2000 0.0279 94.2 75 - 125 Copper 0.260 mg/L E200.8 0.000692 0.00200 0.2000 0.0767 91.4 75 - 125 Lead 0.260 mg/L E200.8 0.000264 0.00200 0.2000 0.0674 96.4 75 - 125 Manganese 1.82 mg/L E200.8 0.00153 0.00200 0.2000 0.00344 59.2 75 - 125 Molybdenum 0.119 mg/L E200.8 0.000206 0.00200 0.2000 0.00344 59.2 75 - 125 Nickel 0.220 mg/L E200.8 0.000754 0.00200 0.2000 0.0034 59.2 75 - 125 Silver 0.192 mg/L E200.8 0.0000634 0.00200 0.2000 0.0011 86.8	Beryllium		0.207	mg/L	E200.8	0.0000288	0.00200	0.2000	0.00516	101	75 - 125				
Cobalt 0.216 mg/L E200.8 0.0000434 0.00400 0.2000 0.0279 94.2 75 - 125 Copper 0.260 mg/L E200.8 0.000692 0.00200 0.2000 0.0767 91.4 75 - 125 Lead 0.260 mg/L E200.8 0.000264 0.00200 0.2000 0.0674 96.4 75 - 125 Manganese 1.82 mg/L E200.8 0.00153 0.00200 0.2000 1.67 74.3 75 - 125 Molybdenum 0.119 mg/L E200.8 0.000266 0.00200 0.2000 0.000344 59.2 75 - 125 Nickel 0.220 mg/L E200.8 0.000754 0.00200 0.2000 0.0303 94.7 75 - 125 Selenium 0.175 mg/L E200.8 0.0000634 0.00200 0.2000 0.0011 86.8 75 - 125 Silver 0.192 mg/L E200.8 0.0000244 0.00200 0.2000 0.000383 95.7 <td>Cadmium</td> <td></td> <td>0.197</td> <td>mg/L</td> <td>E200.8</td> <td>0.000193</td> <td>0.000500</td> <td>0.2000</td> <td>0.00094</td> <td>98.2</td> <td>75 - 125</td> <td></td> <td></td> <td></td> <td></td>	Cadmium		0.197	mg/L	E200.8	0.000193	0.000500	0.2000	0.00094	98.2	75 - 125				
Copper 0.260 mg/L E200.8 0.000692 0.00200 0.2000 0.0767 91.4 75 - 125 Lead 0.260 mg/L E200.8 0.000264 0.00200 0.2000 0.0674 96.4 75 - 125 Manganese 1.82 mg/L E200.8 0.00153 0.00200 0.2000 1.67 74.3 75 - 125 Molybdenum 0.119 mg/L E200.8 0.000206 0.00200 0.2000 0.000344 59.2 75 - 125 Nickel 0.220 mg/L E200.8 0.000754 0.00200 0.2000 0.0303 94.7 75 - 125 Selenium 0.175 mg/L E200.8 0.0000634 0.00200 0.2000 0.0011 86.8 75 - 125 Silver 0.192 mg/L E200.8 0.0000244 0.00200 0.2000 0.0011 86.8 75 - 125	Chromium		0.210	mg/L	E200.8	0.00154	0.00200	0.2000	0.02	94.9	75 - 125				
Lead 0.260 mg/L E200.8 0.000264 0.00200 0.2000 0.0674 96.4 75 - 125 Manganese 1.82 mg/L E200.8 0.00153 0.00200 0.2000 1.67 74.3 75 - 125 Molybdenum 0.119 mg/L E200.8 0.000206 0.00200 0.2000 0.000344 59.2 75 - 125 Nickel 0.220 mg/L E200.8 0.000754 0.00200 0.2000 0.0303 94.7 75 - 125 Selenium 0.175 mg/L E200.8 0.0000634 0.00200 0.2000 0.0011 86.8 75 - 125 Silver 0.192 mg/L E200.8 0.0000244 0.00200 0.2000 0.0011 86.8 75 - 125	Cobalt		0.216	mg/L	E200.8	0.0000434	0.00400	0.2000	0.0279	94.2	75 - 125				
Manganese 1.82 mg/L E200.8 0.00153 0.00200 0.2000 1.67 74.3 75 - 125 Molybdenum 0.119 mg/L E200.8 0.000206 0.00200 0.2000 0.000344 59.2 75 - 125 Nickel 0.220 mg/L E200.8 0.000754 0.00200 0.2000 0.0303 94.7 75 - 125 Selenium 0.175 mg/L E200.8 0.0000634 0.00200 0.2000 0.0011 86.8 75 - 125 Silver 0.192 mg/L E200.8 0.0000244 0.00200 0.2000 0.000383 95.7 75 - 125	Copper		0.260	mg/L	E200.8	0.000692	0.00200	0.2000	0.0767	91.4	75 - 125				
Molybdenum 0.119 mg/L E200.8 0.000206 0.00200 0.2000 0.000344 59.2 75 - 125 Nickel 0.220 mg/L E200.8 0.000754 0.00200 0.2000 0.0303 94.7 75 - 125 Selenium 0.175 mg/L E200.8 0.0000634 0.00200 0.2000 0.0011 86.8 75 - 125 Silver 0.192 mg/L E200.8 0.0000244 0.00200 0.2000 0.000383 95.7 75 - 125	Lead		0.260	mg/L	E200.8	0.000264	0.00200	0.2000	0.0674	96.4	75 - 125				
Nickel 0.220 mg/L E200.8 0.000754 0.00200 0.2000 0.0303 94.7 75 - 125 Selenium 0.175 mg/L E200.8 0.0000634 0.00200 0.2000 0.0011 86.8 75 - 125 Silver 0.192 mg/L E200.8 0.0000244 0.00200 0.2000 0.000383 95.7 75 - 125	Manganese		1.82	mg/L	E200.8	0.00153	0.00200	0.2000	1.67	74.3	75 - 125				2
Selenium 0.175 mg/L E200.8 0.0000634 0.00200 0.2000 0.0011 86.8 75 - 125 Silver 0.192 mg/L E200.8 0.0000244 0.00200 0.2000 0.000383 95.7 75 - 125	Molybdenum		0.119	mg/L	E200.8	0.000206	0.00200	0.2000	0.000344	59.2	75 - 125				1
Silver 0.192 mg/L E200.8 0.0000244 0.00200 0.2000 0.000383 95.7 75 - 125	Nickel		0.220	mg/L	E200.8	0.000754	0.00200	0.2000	0.0303	94.7	75 - 125				
	Selenium		0.175	mg/L	E200.8	0.0000634	0.00200	0.2000	0.0011	86.8	75 - 125				
Thallium 0.179 mg/L E200.8 0.0000242 0.00200 0.2000 0.000565 89.2 75 - 125	Silver		0.192	mg/L	E200.8	0.0000244	0.00200	0.2000	0.000383	95.7	75 - 125				
	Thallium		0.179	mg/L	E200.8	0.0000242	0.00200	0.2000	0.000565	89.2	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: 1508263

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: Test Code:	1508263-002BMS 200.8-W	Date Analyzed: Date Prepared:	08/13/201 08/13/201											
Vanadium Zinc		0.238 1.17	mg/L mg/L	E200.8 E200.8	0.000438 0.00476	0.00440 0.00500	0.2000 1.000	0.0514 0.176	93.3 99.1	75 - 125 75 - 125				
Lab Sample ID: Test Code:	1508262-001BMS 200.8-W	Date Analyzed: Date Prepared:	08/13/201 08/13/201											
Manganese		2.30	mg/L	E200.8	0.00764	0.0100	0.2000	2.17	68.8	75 - 125				2
Lab Sample ID: Test Code:	1508262-001BMS 200.8-W	Date Analyzed: Date Prepared:	08/14/201 08/14/201											
Antimony		0.0131	mg/L	E200.8	0.0000366	0.00200	0.2000	0.000775	6.14	75 - 125				1
Lab Sample ID: Test Code:	1508263-002BMS 200.8-W	Date Analyzed: Date Prepared:	08/14/201 08/14/201											
Antimony		0.0206	mg/L	E200.8	0.0000366	0.00200	0.2000	0.000202	10.2	75 - 125				1
Lab Sample ID: Test Code:	1508263-003BMS HG-DW-245.1	Date Analyzed: Date Prepared:	08/14/201 08/13/201											
Mercury		0.00379	mg/L	E245.1	0.00000892	0.000150	0.003330	0.0000783	111	80 - 120				
Lab Sample ID: Test Code:	1508262-002BMS HG-DW-245.1	Date Analyzed: Date Prepared:	08/14/201 08/13/201											
Mercury		0.00374	mg/L	E245.1	0.00000892	0.000150	0.003330	0.00008	110	80 - 120				
Lab Sample ID: Test Code:	1508262-002CMS HG-DW-DIS-245.1	Date Analyzed: Date Prepared:	08/14/201 08/13/201											
Mercury		0.00348	mg/L	E245.1	0.00000892	0.000150	0.003330	0	105	85 - 115				
Lab Sample ID: Test Code:	1508263-003CMS HG-DW-DIS-245.1	Date Analyzed: Date Prepared:	08/14/201 08/13/201											
Mercury		0.00372	mg/L	E245.1	0.00000892	0.000150	0.003330	0	112	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: 1508263

Project: Gold King Mine - San Juan River Sampling

Contact: Lenora Sullivan

Dept: ME

QC Type: MS

					Reporting	Amount	Spike Ref.			RPD Ref.		RPD	
Analyte	Result	Units	Method	MDL	Limit	Spiked	Amount	%REC	Limits	Amt	% RPD	Limit	Qual

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: 1508263

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:	1508262-004CMSD	Date Analyzed:	08/14/201	15 1351h										
Test Code:	200.7-DIS	Date Prepared:	08/14/201	5 830h										
Aluminum		1.15	mg/L	E200.7	0.0237	0.100	1.000	0.155	99.7	70 - 130	1.13	2.42	20	
Calcium		58.8	mg/L	E200.7	0.0401	1.00	10.00	47.9	109	70 - 130	58.1	1.19	20	
Iron		1.02	mg/L	E200.7	0.0767	0.100	1.000	0	102	70 - 130	1	1.62	20	
Magnesium		17.2	mg/L	E200.7	0.0294	1.00	10.00	6.97	102	70 - 130	17	0.867	20	
Potassium		12.6	mg/L	E200.7	0.247	1.00	10.00	2.74	98.8	70 - 130	12.4	1.67	20	
Sodium		38.4	mg/L	E200.7	0.0330	1.00	10.00	27.3	111	70 - 130	37.6	2.22	20	
Lab Sample ID:	1508263-004CMSD	Date Analyzed:	08/14/201											
Test Code:	200.7-DIS	Date Prepared:	08/14/201	15 830h										
Aluminum		1.10	mg/L	E200.7	0.0237	0.100	1.000	0.104	99.4	70 - 130	1.07	2.25	20	
Iron		1.00	mg/L	E200.7	0.0767	0.100	1.000	0	100	70 - 130	0.98	2.26	20	
Magnesium		17.6	mg/L	E200.7	0.0294	1.00	10.00	7.2	104	70 - 130	17.2	2.33	20	
Potassium		12.9	mg/L	E200.7	0.247	1.00	10.00	2.79	101	70 - 130	12.7	1.00	20	
Sodium		41.6	mg/L	E200.7	0.0330	1.00	10.00	30.3	113	70 - 130	41.4	0.520	20	
Lab Sample ID:	1508263-004CMSD	Date Analyzed:	08/14/201	15 1431h										
Test Code:	200.7-DIS	Date Prepared:	08/14/201	15 830h										
Calcium		63.9	mg/L	E200.7	0.201	5.00	10.00	52.1	118	70 - 130	61.5	3.79	20	
Lab Sample ID:	1508262-001BMSD	Date Analyzed:	08/13/201	15 2242h										
Test Code:	200.7-W	Date Prepared:	08/13/201	15 1632h										
Aluminum		61.5	mg/L	E200.7	0.237	1.00	1.000	54.7	678	70 - 130	60.6	1.47	20	2
Calcium		195	mg/L	E200.7	0.401	10.0	10.00	186	97.7	70 - 130	188	3.72	20	
Lab Sample ID:	1508263-002BMSD	Date Analyzed:	08/13/201	15 2304h										
Test Code:	200.7-W	Date Prepared:	08/13/201	15 1632h										
Calcium		116	mg/L	E200.7	0.401	10.0	10.00	109	63.4	70 - 130	114	1.51	20	2

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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: 1508263

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:	1508262-001BMSD	Date Analyzed:	08/13/20	15 2315h										
Test Code:	200.7-W	Date Prepared:	08/13/20	15 1632h										
Iron		39.4	mg/L	E200.7	0.0767	0.100	1.000	37.5	185	70 - 130	39.2	0.559	20	2
Magnesium		43.8	mg/L	E200.7	0.0294	1.00	10.00	33.3	105	70 - 130	43.4	0.988	20	
Potassium		20.4	mg/L	E200.7	0.247	1.00	10.00	10.7	96.8	70 - 130	20.3	0.699	20	
Sodium		54.4	mg/L	E200.7	0.0330	1.00	10.00	44.4	100	70 - 130	53.3	2.06	20	
Lab Sample ID:	1508263-002BMSD	Date Analyzed:	08/13/20	15 2337h										
Test Code:	200.7-W	Date Prepared:	08/13/20	15 1632h										
Aluminum		48.8	mg/L	E200.7	0.0237	0.100	1.000	45.4	339	70 - 130	49.8	2.14	20	2
Iron		34.7	mg/L	E200.7	0.0767	0.100	1.000	34.6	4.30	70 - 130	36.3	4.46	20	2
Magnesium		31.5	mg/L	E200.7	0.0294	1.00	10.00	21.9	96.9	70 - 130	31.6	0.0721	20	
Potassium		17.7	mg/L	E200.7	0.247	1.00	10.00	8.43	92.2	70 - 130	17.9	1.63	20	
Sodium		48.3	mg/L	E200.7	0.0330	1.00	10.00	38.4	98.6	70 - 130	47.7	1.13	20	
Lab Sample ID:	1508262-004CMSD	Date Analyzed:	08/14/20	15 1509h										
Test Code:	200.8-DIS	Date Prepared:	08/14/20	15 830h										
Antimony		0.162	mg/L	E200.8	0.0000366	0.00200	0.2000	0.000548	80.7	75 - 125	0.158	2.60	20	
Arsenic		0.218	mg/L	E200.8	0.0000920	0.00200	0.2000	0.00121	109	75 - 125	0.202	7.67	20	
Barium		0.340	mg/L	E200.8	0.000538	0.00200	0.2000	0.151	94.7	75 - 125	0.333	2.24	20	
Beryllium		0.205	mg/L	E200.8	0.0000288	0.00200	0.2000	0	102	75 - 125	0.202	1.43	20	
Cadmium		0.100	/*	F2 000										
		0.189	mg/L	E200.8	0.000193	0.000500	0.2000	0	94.3	75 - 125	0.186	1.45	20	
Chromium		0.189	mg/L mg/L	E200.8 E200.8	0.000193 0.00154	0.000500 0.00200	0.2000 0.2000	0	94.3 101	75 - 125 75 - 125	0.186 0.187	1.45 8.15	20 20	
Chromium Cobalt			_											
		0.203	mg/L	E200.8	0.00154	0.00200	0.2000	0	101	75 - 125	0.187	8.15	20	
Cobalt		0.203 0.200	mg/L mg/L	E200.8 E200.8	0.00154 0.0000434	0.00200 0.00400	0.2000 0.2000	0 0.0000478	101 99.8	75 - 125 75 - 125	0.187 0.184	8.15 8.16	20 20	
Cobalt Copper		0.203 0.200 0.205 0.185 0.208	mg/L mg/L mg/L	E200.8 E200.8 E200.8 E200.8 E200.8	0.00154 0.0000434 0.000692 0.000264 0.00153	0.00200 0.00400 0.00200 0.00200 0.00200	0.2000 0.2000 0.2000 0.2000 0.2000	0 0.0000478 0.00261 0 0.00182	101 99.8 101 92.3 103	75 - 125 75 - 125 75 - 125 75 - 125 75 - 125	0.187 0.184 0.19 0.184 0.189	8.15 8.16 7.57 0.108 9.24	20 20 20 20 20 20	
Cobalt Copper Lead Manganese Molybdenum		0.203 0.200 0.205 0.185 0.208 0.191	mg/L mg/L mg/L mg/L	E200.8 E200.8 E200.8 E200.8 E200.8	0.00154 0.0000434 0.000692 0.000264 0.00153 0.000206	0.00200 0.00400 0.00200 0.00200 0.00200 0.00200	0.2000 0.2000 0.2000 0.2000 0.2000 0.2000	0 0.0000478 0.00261 0 0.00182 0.00148	101 99.8 101 92.3 103 94.8	75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125	0.187 0.184 0.19 0.184 0.189 0.188	8.15 8.16 7.57 0.108 9.24 1.47	20 20 20 20 20 20 20	
Cobalt Copper Lead Manganese Molybdenum Nickel		0.203 0.200 0.205 0.185 0.208 0.191 0.197	mg/L mg/L mg/L mg/L mg/L	E200.8 E200.8 E200.8 E200.8 E200.8 E200.8	0.00154 0.0000434 0.000692 0.000264 0.00153 0.000206 0.000754	0.00200 0.00400 0.00200 0.00200 0.00200 0.00200 0.00200	0.2000 0.2000 0.2000 0.2000 0.2000 0.2000 0.2000	0 0.0000478 0.00261 0 0.00182 0.00148 0	101 99.8 101 92.3 103 94.8 98.4	75 - 125 75 - 125	0.187 0.184 0.19 0.184 0.189 0.188	8.15 8.16 7.57 0.108 9.24 1.47 7.10	20 20 20 20 20 20 20 20	
Cobalt Copper Lead Manganese Molybdenum		0.203 0.200 0.205 0.185 0.208 0.191	mg/L mg/L mg/L mg/L mg/L mg/L	E200.8 E200.8 E200.8 E200.8 E200.8	0.00154 0.0000434 0.000692 0.000264 0.00153 0.000206	0.00200 0.00400 0.00200 0.00200 0.00200 0.00200	0.2000 0.2000 0.2000 0.2000 0.2000 0.2000	0 0.0000478 0.00261 0 0.00182 0.00148	101 99.8 101 92.3 103 94.8	75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125	0.187 0.184 0.19 0.184 0.189 0.188	8.15 8.16 7.57 0.108 9.24 1.47	20 20 20 20 20 20 20	

Report Date: 8/14/2015 Page 27 of 40

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Kyle F. Gross Laboratory Director

Jose Rocha **QA** Officer

QC SUMMARY REPORT

Utah Division of Water Quality **Client:**

Lab Set ID: 1508263

Gold King Mine - San Juan River Sampling **Project:**

Lenora Sullivan **Contact:**

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: Test Code:	1508262-004CMSD 200.8-DIS	Date Analyzed: Date Prepared:	08/14/201 08/14/201											•
Thallium		0.181	mg/L	E200.8	0.0000242	0.00200	0.2000	0	90.4	75 - 125	0.182	0.420	20	
Vanadium		0.207	mg/L	E200.8	0.000438	0.00440	0.2000	0.00287	102	75 - 125	0.191	7.72	20	
Zinc		1.08	mg/L	E200.8	0.00476	0.00500	1.000	0.0165	106	75 - 125	0.996	7.81	20	
Lab Sample ID:	1508263-004CMSD	Date Analyzed:	08/14/20	15 1532h										
Test Code:	200.8-DIS	Date Prepared:	08/14/201	15 830h										
Antimony		0.164	mg/L	E200.8	0.0000366	0.00200	0.2000	0.000586	81.7	75 - 125	0.158	3.83	20	
Arsenic		0.206	mg/L	E200.8	0.0000920	0.00200	0.2000	0.000879	103	75 - 125	0.202	2.19	20	
Barium		0.367	mg/L	E200.8	0.000538	0.00200	0.2000	0.178	94.6	75 - 125	0.355	3.26	20	
Beryllium		0.207	mg/L	E200.8	0.0000288	0.00200	0.2000	0	103	75 - 125	0.2	3.13	20	
Cadmium		0.191	mg/L	E200.8	0.000193	0.000500	0.2000	0	95.6	75 - 125	0.185	3.35	20	
Chromium		0.193	mg/L	E200.8	0.00154	0.00200	0.2000	0	96.7	75 - 125	0.187	3.52	20	
Cobalt		0.189	mg/L	E200.8	0.0000434	0.00400	0.2000	0.0000614	94.6	75 - 125	0.183	3.48	20	
Copper		0.196	mg/L	E200.8	0.000692	0.00200	0.2000	0.00239	96.9	75 - 125	0.19	3.16	20	
Lead		0.188	mg/L	E200.8	0.000264	0.00200	0.2000	0	93.8	75 - 125	0.181	3.33	20	
Manganese		0.196	mg/L	E200.8	0.00153	0.00200	0.2000	0	97.8	75 - 125	0.19	3.01	20	
Molybdenum		0.193	mg/L	E200.8	0.000206	0.00200	0.2000	0.00147	95.7	75 - 125	0.186	3.86	20	
Nickel		0.190	mg/L	E200.8	0.000754	0.00200	0.2000	0	95.2	75 - 125	0.183	4.10	20	
Selenium		0.206	mg/L	E200.8	0.0000634	0.00200	0.2000	0.000782	102	75 - 125	0.201	2.51	20	
Silver		0.188	mg/L	E200.8	0.0000244	0.00200	0.2000	0.0000252	93.8	75 - 125	0.182	2.87	20	
Thallium		0.184	mg/L	E200.8	0.0000242	0.00200	0.2000	0	92.1	75 - 125	0.178	3.25	20	
Vanadium		0.197	mg/L	E200.8	0.000438	0.00440	0.2000	0.0019	97.7	75 - 125	0.19	3.71	20	
Zinc		1.03	mg/L	E200.8	0.00476	0.00500	1.000	0.0148	101	75 - 125	0.997	2.76	20	
Lab Sample ID: Test Code:	1508262-001BMSD 200.8-W	Date Analyzed: Date Prepared:	08/13/201 08/13/201											
Arsenic		0.195	mg/L	E200.8	0.0000920	0.00200	0.2000	0.0175	88.9	75 - 125	0.194	0.710	20	
Barium		1.55	mg/L	E200.8	0.000538	0.00200	0.2000	1.35	98.9	75 - 125	1.53	1.49	20	
Beryllium		0.213	mg/L	E200.8	0.0000288	0.00200	0.2000	0.00677	103	75 - 125	0.208	2.36	20	

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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: 1508263

Project:

Gold King Mine - San Juan River Sampling

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: Test Code:	1508262-001BMSD 200.8-W	Date Analyzed: Date Prepared:	08/13/20 08/13/20											
Cadmium		0.202	mg/L	E200.8	0.000193	0.000500	0.2000	0.00117	100	75 - 125	0.198	2.17	20	
Chromium		0.215	mg/L	E200.8	0.00154	0.00200	0.2000	0.0232	95.8	75 - 125	0.21	2.43	20	
Cobalt		0.223	mg/L	E200.8	0.0000434	0.00400	0.2000	0.0332	95.1	75 - 125	0.221	1.25	20	
Copper		0.259	mg/L	E200.8	0.000692	0.00200	0.2000	0.0808	88.9	75 - 125	0.257	0.464	20	
Lead		0.281	mg/L	E200.8	0.000264	0.00200	0.2000	0.0829	98.9	75 - 125	0.277	1.48	20	
Molybdenum		0.0972	mg/L	E200.8	0.000206	0.00200	0.2000	0.000312	48.5	75 - 125	0.0996	2.42	20	1
Nickel		0.231	mg/L	E200.8	0.000754	0.00200	0.2000	0.0389	96.0	75 - 125	0.228	1.23	20	
Selenium		0.167	mg/L	E200.8	0.0000634	0.00200	0.2000	0.00122	83.0	75 - 125	0.167	0.152	20	
Silver		0.196	mg/L	E200.8	0.0000244	0.00200	0.2000	0.000488	97.7	75 - 125	0.192	2.02	20	
Thallium		0.175	mg/L	E200.8	0.0000242	0.00200	0.2000	0.000604	87.0	75 - 125	0.172	1.50	20	
Vanadium		0.245	mg/L	E200.8	0.000438	0.00440	0.2000	0.0637	90.7	75 - 125	0.239	2.53	20	
Zinc		1.19	mg/L	E200.8	0.00476	0.00500	1.000	0.19	100	75 - 125	1.19	0.384	20	
Lab Sample ID:	1508263-002BMSD	Date Analyzed:	08/13/20	15 2317h										
Test Code:	200.8-W	Date Prepared:	08/13/20	15 1632h										
Arsenic		0.197	mg/L	E200.8	0.0000920	0.00200	0.2000	0.0149	91.0	75 - 125	0.193	1.71	20	
Barium		1.13	mg/L	E200.8	0.000538	0.00200	0.2000	0.971	78.8	75 - 125	1.13	0.0360	20	
Beryllium		0.209	mg/L	E200.8	0.0000288	0.00200	0.2000	0.00516	102	75 - 125	0.207	0.997	20	
Cadmium		0.200	mg/L	E200.8	0.000193	0.000500	0.2000	0.00094	99.5	75 - 125	0.197	1.33	20	
Chromium		0.210	mg/L	E200.8	0.00154	0.00200	0.2000	0.02	94.8	75 - 125	0.21	0.112	20	
Cobalt		0.219	mg/L	E200.8	0.0000434	0.00400	0.2000	0.0279	95.7	75 - 125	0.216	1.34	20	
Copper		0.261	mg/L	E200.8	0.000692	0.00200	0.2000	0.0767	92.1	75 - 125	0.26	0.566	20	
Lead		0.264	mg/L	E200.8	0.000264	0.00200	0.2000	0.0674	98.1	75 - 125	0.26	1.34	20	
Manganese		1.85	mg/L	E200.8	0.00153	0.00200	0.2000	1.67	86.8	75 - 125	1.82	1.36	20	
						0.00200	0.2000	0.000344	60.4	75 - 125	0.119	2.11	20	1
Molybdenum		0.121	mg/L	E200.8	0.000206	0.00200	0.2000	0.000344	00	75 125	0.119	2.11	20	
Molybdenum Nickel		0.121 0.223	mg/L mg/L	E200.8 E200.8	0.000206 0.000754	0.00200	0.2000	0.0303	96.3	75 - 125	0.22	1.43	20	
•			•											
Nickel		0.223	mg/L	E200.8	0.000754	0.00200	0.2000	0.0303	96.3	75 - 125	0.22	1.43	20	

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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: 1508263

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: Test Code:	1508263-002BMSD 200.8-W	Date Analyzed: Date Prepared:	08/13/201 08/13/201											
Vanadium Zinc		0.239 1.19	mg/L mg/L	E200.8 E200.8	0.000438 0.00476	0.00440 0.00500	0.2000 1.000	0.0514 0.176	93.9 101	75 - 125 75 - 125	0.238 1.17	0.490 1.76	20 20	
Lab Sample ID: Test Code:	1508262-001BMSD 200.8-W	Date Analyzed: Date Prepared:	08/13/201 08/13/201											
Manganese		2.37	mg/L	E200.8	0.00764	0.0100	0.2000	2.17	101	75 - 125	2.3	2.73	20	
Lab Sample ID: Test Code:	1508262-001BMSD 200.8-W	Date Analyzed: Date Prepared:	08/14/201 08/14/201											
Antimony		0.0145	mg/L	E200.8	0.0000366	0.00200	0.2000	0.000775	6.87	75 - 125	0.0131	10.6	20	1
Lab Sample ID: Test Code:	1508263-002BMSD 200.8-W	Date Analyzed: Date Prepared:	08/14/201 08/14/201											
Antimony		0.0250	mg/L	E200.8	0.0000366	0.00200	0.2000	0.000202	12.4	75 - 125	0.0206	19.2	20	1
Lab Sample ID: Test Code:	1508263-003BMSD HG-DW-245.1	Date Analyzed: Date Prepared:	08/14/201 08/13/201											
Mercury		0.00365	mg/L	E245.1	0.00000892	0.000150	0.003330	0.0000783	107	80 - 120	0.00379	3.85	20	
Lab Sample ID: Test Code:	1508262-002BMSD HG-DW-245.1	Date Analyzed: Date Prepared:	08/14/201 08/13/201											
Mercury		0.00372	mg/L	E245.1	0.00000892	0.000150	0.003330	0.00008	109	80 - 120	0.00374	0.760	20	
Lab Sample ID: Test Code:	1508262-002CMSD HG-DW-DIS-245.1	Date Analyzed: Date Prepared:	08/14/201 08/13/201											
Mercury		0.00373	mg/L	E245.1	0.00000892	0.000150	0.003330	0	112	85 - 115	0.00348	7.02	20	
Lab Sample ID: Test Code:	1508263-003CMSD HG-DW-DIS-245.1	Date Analyzed: Date Prepared:	08/14/201 08/13/201											
Mercury		0.00351	mg/L	E245.1	0.00000892	0.000150	0.003330	0	105	85 - 115	0.00372	5.72	20	_

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Jose Rocha QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality

Contact: Lenora Sullivan

Lab Set ID: 1508263

Project:

Dept: ME

Gold King Mine - San Juan River Sampling

QC Type: MSD

					Reporting	Amount	Spike Ref.			RPD Ref.		RPD	
Analyte	Result	Units	Method	MDL	Limit	Spiked	Amount	%REC	Limits	Amt	% RPD	Limit	Qual

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: 1508263

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: 1508262-001 Test Code: COND-W-25		alyzed: 08/14/20	015 601h										
Conductivity	620	μmhos/cm	SM2510B	0.436	2.00					617	0.485	5	
Lab Sample ID: 1508263-001 Test Code: COND-W-25		alyzed: 08/14/20	015 601h										
Conductivity	651	μmhos/cm	SM2510B	0.436	2.00					648	0.462	5	
Lab Sample ID: 1508275-001 Test Code: COND-W-25		alyzed: 08/14/20	015 601h										
Conductivity	632	μmhos/cm	SM2510B	0.436	2.00					634	0.316	5	
Lab Sample ID: 1508262-004 Test Code: PH-4500H+B		alyzed: 08/13/20	015 1840h										
pH @ 25° C	8.24	pH Units	SM4500-H+B	1.00	1.00					8.22	0.243	5	Н
Lab Sample ID: 1508263-004 Test Code: PH-4500H+B		alyzed: 08/13/20	015 1840h										
pH @ 25° C	8.18	pH Units	SM4500-H+B	1.00	1.00					8.2	0.244	5	Н
Lab Sample ID: 1508262-002 Test Code: TDS-W-2540		alyzed: 08/13/20	015 2100h										
Total Dissolved Solids	470	mg/L	SM2540C	30.6	50.0					410	13.6	5	@
Lab Sample ID: 1508263-002 Test Code: TDS-W-2540		alyzed: 08/13/20	015 2100h										
Total Dissolved Solids	360	mg/L	SM2540C	30.6	50.0					450	22.2	5	@
Lab Sample ID: 1508262-002 Test Code: TSS-W-2540		alyzed: 08/13/20	015 1610h										
Total Suspended Solids	2,640	mg/L	SM2540D	142	150					2760	4.44	5	



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QC SUMMARY REPORT

Client: Utah Division of Water Quality

Lab Set ID: 1508263

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: 1508263-002ADUP	Date Analyzed:	08/13/201	15 1610h										
Test Code: TSS-W-2540D													
Total Suspended Solids	4,220	mg/L	SM2540D	142	150					4640	9.48	5	@

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

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H - Sample was received outside of the holding time.



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Jose Rocha QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality

Lab Set ID: 1508263

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: Test Code:	LCS-R81617 300.0-W	Date Analyzed:	08/13/20	15 1229h										
Chloride		4.97	mg/L	E300.0	0.00751	0.100	5.000	0	99.4	90 - 110				
Sulfate		4.94	mg/L	E300.0	0.0211	0.750	5.000	0	98.7	90 - 110				
Lab Sample ID: Test Code:	LCS-R81615 ALK-W-2320B	Date Analyzed:	08/14/20	15 632h										
Alkalinity (as Ca	CO3)	49,000	mg/L	SM2320B	1.86	10.0	50,000	0	98.0	90 - 110				
Lab Sample ID: Test Code:	LCS-R81612 COND-W-2510B	Date Analyzed:	08/14/20	15 601h										
Conductivity		994	µmhos/cm	SM2510B	0.436	2.00	1,000	0	99.4	98 - 102				
Lab Sample ID: Test Code:	LCS NO2/NO3-W-353.2	Date Analyzed:	08/13/20	15 2352h										
Nitrate/Nitrite (as	s N)	0.910	mg/L	E353.2	0.00833	0.0100	1.000	0	91.0	90 - 110				
Lab Sample ID: Test Code:	LCS-R81601 PH-4500H+B	Date Analyzed:	08/13/20	15 1840h										
pH @ 25° C		8.95	pH Units	SM4500-H+B	1.00	1.00	9.000	0	99.4	98 - 102				
Lab Sample ID: Test Code:	LCS-38561 PO4-W-4500PF	Date Analyzed: Date Prepared:	08/14/20 08/14/20											
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: Test Code:	LCS-R81644 TDS-W-2540C	Date Analyzed:	08/13/20	15 2100h										
Total Dissolved S	Solids	222	mg/L	SM2540C	6.13	10.0	205.0	0	108	80 - 120				
Lab Sample ID: Test Code:	LCS-R81629 TSS-W-2540D	Date Analyzed:	08/13/20	15 1610h										
Total Suspended	Solide	91.0	mg/L	SM2540D	2.83	3.00	100.0	0	91.0	80 - 120				



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Jose Rocha QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality

Lab Set ID: 1508263

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: Test Code:	MB-R81617 300.0-W	Date Analyzed:	08/13/201	5 1213h										
Chloride		0.00760	mg/L	E300.0	0.00751	0.100								JB
Sulfate		< 0.750	mg/L	E300.0	0.0211	0.750								U
Lab Sample ID: Test Code:	MB-R81615 ALK-W-2320B	Date Analyzed:	08/14/201	.5 632h										
Alkalinity (as Ca	CO3)	< 10.0	mg/L	SM2320B	1.86	10.0								U
Bicarbonate (as C	CaCO3)	< 10.0	mg/L	SM2320B	1.86	10.0								U
Carbonate (as Ca	CO3)	< 10.0	mg/L	SM2320B	1.86	10.0								U
Lab Sample ID: Test Code:	MB-R81612 COND-W-2510B	Date Analyzed:	08/14/201	5 601h										
Conductivity		0.710	umhos/cm	SM2510B	0.436	2.00								JB
Lab Sample ID: Test Code:	MB NO2/NO3-W-353.2	Date Analyzed:	08/13/201	5 2350h										
Nitrate/Nitrite (as	s N)	< 0.0100	mg/L	E353.2	0.00833	0.0100								U
Lab Sample ID:	MB-38561	Date Analyzed:	08/14/201	5 1234h										
Test Code:	PO4-W-4500PF	Date Prepared:	08/14/201	5 1020h										
Phosphate, Total	(as P)	0.0226	mg/L	SM4500-P-F	0.0212	0.0500								JB
Lab Sample ID: Test Code:	MB-R81644 TDS-W-2540C	Date Analyzed:	08/13/201	5 2100h										
Total Dissolved S	Solids	< 10.0	mg/L	SM2540C	6.13	10.0								U
Lab Sample ID: Test Code:	MB-R81629 TSS-W-2540D	Date Analyzed:	08/13/201	5 1610h										
Total Suspended	Solids	< 3.00	mg/L	SM2540D	2.83	3.00								U



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Jose Rocha QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality

Contact:

Lenora Sullivan

Lab Set ID: 1508263

Project:

Dept: WC

Gold King Mine - San Juan River Sampling

QC Type: MBLK

					Reporting	Amount	Spike Ref.			RPD Ref.		RPD	
Analyte	Result	Units	Method	MDL	Limit	Spiked	Amount	%REC	Limits	Amt	% RPD	Limit	Qual

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

Contact: Lenora Sullivan

Lab Set ID: 1508263

Dept: WC **QC Type:** MS

Project: Gold King Mine - San Juan River Sampling

Analyte		Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: Test Code:	1508262-001AMS 300.0-W	Date Analyzed:	08/13/20	15 2151h										
Chloride		58.4	mg/L	E300.0	0.0751	1.00	50.00	8.7	99.4	90 - 110				
Sulfate		208	mg/L	E300.0	0.211	7.50	50.00	157	103	90 - 110				
Lab Sample ID: Test Code:	1508263-001AMS 300.0-W	Date Analyzed:	08/13/20	15 2332h										
Chloride		59.4	mg/L	E300.0	0.0751	1.00	50.00	9.83	99.1	90 - 110				
Sulfate		195	mg/L	E300.0	0.211	7.50	50.00	143	103	90 - 110				
Lab Sample ID: Test Code:	1508262-001AMS ALK-W-2320B	Date Analyzed:	08/14/20	15 632h										
Alkalinity (as Ca	CO3)	204	mg/L	SM2320B	1.86	10.0	100.0	108	96.3	80 - 120				
Lab Sample ID: Test Code:	1508263-001AMS ALK-W-2320B	Date Analyzed:	08/14/20	15 632h										
Alkalinity (as Ca	CO3)	211	mg/L	SM2320B	1.86	10.0	100.0	112	99.8	80 - 120				
Lab Sample ID: Test Code:	1508275-001AMS ALK-W-2320B	Date Analyzed:	08/14/20	15 632h										
Alkalinity (as Ca	CO3)	204	mg/L	SM2320B	1.86	10.0	100.0	107	98.0	80 - 120				
Lab Sample ID: Test Code:	1508263-004DMS NO2/NO3-W-353.2	Date Analyzed:	08/14/20	15 015h										
Nitrate/Nitrite (as	s N)	4.91	mg/L	E353.2	0.0417	0.0500	5.000	0.317	91.9	90 - 110				
Lab Sample ID: Test Code:	1508275-001DMS NO2/NO3-W-353.2	Date Analyzed:	08/14/20	15 019h										
Nitrate/Nitrite (as	s N)	5.16	mg/L	E353.2	0.0417	0.0500	5.000	0.481	93.6	90 - 110				



Lab Set ID: 1508263

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Jose Rocha **QA** Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality

Project: Gold King Mine - San Juan River Sampling

Lenora Sullivan **Contact:**

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: 1508262-004DMS Test Code: NO2/NO3-W-353.2	Date Analyzed:	08/13/2015	5 2359h										
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:1508263-001DMSTest Code:PO4-W-4500PFPhosphate, Total (as P)	Date Analyzed: Date Prepared: 5.70	08/14/2015 08/14/2015 mg/L		0.0424	0.100	1.000	5.72	-1.90	90 - 110				1
Lab Sample ID: 1508275-001DMS Test Code: PO4-W-4500PF Phosphate, Total (as P)	Date Analyzed: Date Prepared: 6.13	08/14/2015 08/14/2015 mg/L		0.0424	0.100	1.000	4.51	161	90 - 110				1
Lab Sample ID: 1508262-001DMS Test Code: PO4-W-4500PF	Date Analyzed: Date Prepared:		5 1236h										
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: 1508263

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: Test Code:	1508262-001AMSD 300.0-W	Date Analyzed:	08/13/20	15 2207h										
Chloride		58.0	mg/L	E300.0	0.0751	1.00	50.00	8.7	98.5	90 - 110	58.4	0.721	20	
Sulfate		208	mg/L	E300.0	0.211	7.50	50.00	157	102	90 - 110	208	0.324	20	
Lab Sample ID: Test Code:	1508263-001AMSD 300.0-W	Date Analyzed:	08/13/20	15 2349h										
Chloride		59.0	mg/L	E300.0	0.0751	1.00	50.00	9.83	98.4	90 - 110	59.4	0.605	20	
Sulfate		193	mg/L	E300.0	0.211	7.50	50.00	143	99.8	90 - 110	195	0.758	20	
Lab Sample ID: Test Code:	1508262-001AMSD ALK-W-2320B	Date Analyzed:	08/14/20	15 632h										
Alkalinity (as Ca	CO3)	203	mg/L	SM2320B	1.86	10.0	100.0	108	94.6	80 - 120	205	0.835	10	
Lab Sample ID: Test Code:	1508263-001AMSD ALK-W-2320B	Date Analyzed:	08/14/20	15 632h										
Alkalinity (as Ca	CO3)	208	mg/L	SM2320B	1.86	10.0	100.0	112	96.4	80 - 120	211	1.62	10	
Lab Sample ID: Test Code:	1508275-001AMSD ALK-W-2320B	Date Analyzed:	08/14/20	15 632h										
Alkalinity (as Ca	CO3)	204	mg/L	SM2320B	1.86	10.0	100.0	107	98.0	80 - 120	205	0	10	
Lab Sample ID: Test Code:	1508263-004DMSD NO2/NO3-W-353.2	Date Analyzed:	08/14/20	15 016h										
Nitrate/Nitrite (as	s 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: Test Code:	1508275-001DMSD NO2/NO3-W-353.2	Date Analyzed:	08/14/20	15 021h										
Nitrate/Nitrite (as	5 N)	5.00	mg/L	E353.2	0.0417	0.0500	5.000	0.481	90.4	90 - 110	5.16	3.17	10	



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: 1508263

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
•	8262-004DMSD 2/NO3-W-353.2	Date Analyzed:	08/14/201	5 000h										
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	
•	8262-001DMSD 4-W-4500PF	Date Analyzed: Date Prepared: 3.07	08/14/201 08/14/201 mg/L		0.0212	0.0500	1.000	3.05	1.80	90 - 110	3.55	14.4	10	@1
•	8263-001DMSD 4-W-4500PF	Date Analyzed: Date Prepared: 4.86	08/14/201 08/14/201 mg/L		0.0212	0.0500	1.000	5.72	-85.3	90 - 110	5.7	15.8	10	@1
Lab Sample ID: 1508	8275-001DMSD 4-W-4500PF	Date Analyzed: Date Prepared:	08/14/201 08/14/201											
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.

Report Date: 8/14/2015 Page 40 of 40

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

American West Analytical Laboratories

Next Day Rush

WORK ORDER Summary

Work Order: 1508263

Page 1 of 4

Client:

Utah Division of Water Quality

Due Date: 8/14/2015

Client ID:

UTD200

Contact:

Lenora Sullivan

Project:

Gold King Mine - San Juan River Sampling

II+ MDL QC Level:

WO Type: Standard

Comments:

Next Day Rush QC2+ / dissolved metals have been field filtered. Flag any concentrations detected less than RL and at or greater than the MDL with a J

flag. Include EDD Use sparingly, do not preserve entire sample. Footnote report, pH received outside of hold.; Email to lenoras@utah.gov.; CC: Jim Harris;

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel Storage
508263-001A	San Juan R @ Mexican Hat US163 Xing (4953000)	8/12/2015 1750h	8/13/2015 1450h	300.0-W	Aqueous	df - wc
				2 SEL Analytes: CL	SO4	
				ALK-W-2320B		df - wc
				3 SEL Analytes: ALI	K ALKB ALKC	
				COND-W-2510B		df - wc
				PH-4500H+B		df - wc
				TDS-W-2540C		df - wc
				TSS-W-2540D		df - wc
08263-001B				200.7-W		df - total metals
				6 SEL Analytes: AL	CA FE MG K NA	
				200.7-W-PR		df - total metals
				200.8-W		df - total metals
				17 SEL Analytes: Si AG TL V ZN	B AS BA BE CD CR CO CU PB	MN MO NI SE
				200.8-W-PR		df - total metals
				HARD-2340B		df - total metals
				HG-DW-245.1		df - total metals
				HG-DW-PR		df - total metals
08263-001C				200.7-DIS		df - dis metals
				6 SEL Analytes: AL	. CA FE MG K NA	
				200.7-DIS-PR		df - dis metals
				200.8-DIS		df - dis metals
				17 SEL Analytes: S AG TL V ZN	B AS BA BE CD CR CO CU PB	MN MO NI SE
				200.8-DIS-PR		df - dis metals
				HARD-2340B		df - dis metals
				1 SEL Analytes: HA	ARD	
				HG-DW-DIS-245.1		df - dis metals
				HG-DW-DIS-PR		df - dis metals
508263-001D				NO2/NO3-W-353.2		df - po4 / no2/no3
				PO4-W-4500PF	The state of the s	df - po4 / no2/no3

WORK ORDER Summary

Work Order: **1508263**

Page 2 of 4

Client:

Utah Division of Water Quality

Due Date: 8/14/2015

Client:	Utah Division of Water Quality	MARKET TO THE RESERVE				16 Date: 8/14/2013
Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel Storage
508263-001D	San Juan R @ Mexican Hat US163 Xing (4953000)	8/12/2015 1750h	8/13/2015 1450h	PO4-W-PR	Aqueous	df - po4 / no2/no3
508263-002A	San Juan R @ Sand Island (4953250)	8/12/2015 1112h	8/13/2015 1450h	300.0-W	Aqueous	df - wc
				2 SEL Analytes: Cl	L SO4	
				ALK-W-2320B		df - wc
				3 SEL Analytes: Al	LK ALKB ALKC	
				COND-W-2510B		df - wc
				PH-4500H+B	All and a second a	df - wc
				TDS-W-2540C		df - wc
				TSS-W-2540D		df - wc
1508263-002B				200.7-W		df - total metals
				6 SEL Analytes: A	L CA FE MG K NA	
				200.7-W-PR		df - total metals
				200.8-W		df - total metals
				17 SEL Analytes: . AG TL V ZN	SB AS BA BE CD CR CO CU PI	B MN MO NI SE
				200.8-W-PR		df - total metals
				HARD-2340B		df - total metals
		the state of		HG-DW-245.1		df - total metals
				HG-DW-PR		df - total metals
1508263-002C				200.7-DIS		df - dis metals
				6 SEL Analytes: A	L CA FE MG K NA	
				200.7-DIS-PR		df - dis metals
			3,643,7	200.8-DIS		df - dis metals
				17 SEL Analytes: AG TL V ZN	SB AS BA BE CD CR CO CU P.	B MN MO NI SE
				200.8-DIS-PR		df - dis metals
				HARD-2340B		df - dis metals
				1 SEL Analytes: F	HARD	
				HG-DW-DIS-245.1		df - dis metals
				HG-DW-DIS-PR	1.1111	df - dis metals
1508263-002D				NO2/NO3-W-353.2		df - po4 / no2/no3
				PO4-W-4500PF		df - po4 / no2/no3
				PO4-W-PR		df - po4 / no2/no3
1508263-003A	San Juan R @ Town of Montezuma (49539	90) 8/12/2015 1037h	8/13/2015 1450h	300.0-W 2 SEL Analytes: (Aqueous CL SO4	df - wc
				ALK-W-2320B		df - wc
				3 SEL Analytes: A	ALK ALKB ALKC	
				COND-W-2510B		df - wc
	and the second s					

WORK ORDER Summary

Work Order: 1508263

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Client:

Utah Division of Water Quality

Due Date: 8/14/2015

ample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel Storage
508263-003A	San Juan R @ Town of Montezuma (4953990)	8/12/2015 1037h	8/13/2015 1450h	PH-4500H+B	Aqueous	df - wc
				TDS-W-2540C		df - wc
				TSS-W-2540D		df - wc
08263-003B				200.7-W		df - total metals
				6 SEL Analytes: A	L CA FE MG K NA	
				200.7-W-PR		df - total metals
				200.8-W		df - total metals
				17 SEL Analytes: S AG TL V ZN	SB AS BA BE CD CR CO CU PB	MN MO NI SE
				200.8-W-PR		df - total metals
				HARD-2340B		df - total metals
				HG-DW-245.1		df - total metals
				HG-DW-PR		df - total metals
08263-003C				200.7-DIS		df - dis metals
				6 SEL Analytes: A	L CA FE MG K NA	
				200.7-DIS-PR		df - dis metals
		M. F. Sp.		200.8-DIS		df - dis metals
				17 SEL Analytes: AG TL V ZN	SB AS BA BE CD CR CO CU PB	MN MO NI SE
				200.8-DIS-PR		df - dis metals
				HARD-2340B		df - dis metals
				1 SEL Analytes: H	HARD	
				HG-DW-DIS-245.1		df - dis metals
				HG-DW-DIS-PR		df - dis metals
08263-003D				NO2/NO3-W-353.2		df - po4 / no2/no3
				PO4-W-4500PF	•	df - po4 / no2/no3
				PO4-W-PR		df - po4 / no2/no3
08263-004A	San Juan R @ US160 Xing in CO (4954000)	8/12/2015 0950h	8/13/2015 1450h	300.0-W	Aqueous	df - wc
				2 SEL Analytes: (CL SO4	
				ALK-W-2320B		df - wc
				3 SEL Analytes: A	ALK ALKB ALKC	
				COND-W-2510B	· · · · · · · · · · · · · · · · · · ·	df - wc
				PH-4500H+B		df - wc
				TDS-W-2540C		df - wc
				TSS-W-2540D		df - wc
508263-004B				200.7-W		df - total metals
					AL CA FE MG K NA	
				200.7-W-PR		df - total metals
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
rinted: 8/13/2015	FOR LABORATORY USE ONLY [fill out on page 1]:	%M □ RT □	CN 🗌 TAT [□ QC □ HOI	K HOK	HOK COC Emailed

WORK ORDER Summary

Work Order: 1508263

Page 4 of 4

Client:

Printed: 8/13/2015

Utah Division of Water Quality

Due Date: 8/14/2015

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel Storage	
1508263-004B	San Juan R @ US160 Xing in CO (4954000)	8/12/2015 0950h	8/13/2015 1450h	200.8-W 17 SEL Analytes: SI AG TL V ZN	Aqueous BASBABECDCRCOCUPB	df - total metals	1
				200.8-W-PR		df - total metals	
				HARD-2340B		df - total metals	
			WALK	HG-DW-245.1		df - total metals	
				HG-DW-PR		df - total metals	
1508263-004C				200.7-DIS		df - dis metals	
				6 SEL Analytes: AL	. CA FE MG K NA		
				200.7-DIS-PR		df - dis metals	
				200.8-DIS		df - dis metals	
				17 SEL Analytes: S AG TL V ZN	B AS BA BE CD CR CO CU PI	B MN MO NI SE	
				200.8-DIS-PR	10000000	df - dis metals	
				HARD-2340B		df - dis metals	
				1 SEL Analytes: HA	4RD		
				HG-DW-DIS-245.1		df - dis metals	
				HG-DW-DIS-PR		df - dis metals	
1508263-004D				NO2/NO3-W-353.2		df - po4 / no2/no3	
				PO4-W-4500PF		df - po4 / no2/no3	
				PO4-W-PR		df - po4 / no2/no3	

Chain of Custody

Client: Utah Division of Water Quality

Contact: Lenora Sullivan

Phone: 801-536-4367

QC Level: 2+

Address: **PO Box 144870**

Salt Lake City, UT 84114-4870

Fax: 801-536-4301

Email: lenoras@utah.gov

TAT - ASAP

PO#:

Project Name: Gold King Mine - San Juan River Sampling

jamesharris@utah.gov (please copy on results)

PO#:						jannes	ilailis(W	utan.gov (piease copy	On results)
Sample ID:	Date Sampled	Time	# of Containers Sample Matrix	Total Chemistry: pH, Alkalinity, Anions, TDS, TSS, Conductivity	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, Tl, 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, Tl, V, Zn, 245.1; Hg)	Total Nutrients: Phosphate, Nitratc&Nitrite	Comments	Samples Were: 1 Shipped or had delivered 2 Ambientor Chilled 3 Temperature 5.5 4 Received Broken/Leaking (Improperly Sealed) Y N 5 Properly Preserved N 6 Received Within
SAN JUAN R AT MEXICAN HAT US163 XING (4953000)	8/12/15	1750	J	×	7	8	8	Dissolved Metals	Holding Times
SAN JUAN R AT SAND ISLAND (4953250)	02/12/15	1112	4	×	-	1	À	samples have been field filtered.	(Y) n
San Juan River at Town of Montezuma 4953990	08/17/15	1037	4	×	ř	×	X	Samples collected	COC Tape Was:
SAN JUAN R AT US160 XING IN CO (4954000)	08/12/15	0950	4	×	1		K	from river monitoring following a mine	1 Present on Outer Package
•								waste dump release.	Y N (NA)
						Ì		Please flag any	2 Unbroken on Outer Pankage
								concentrations detected less than RL	Y N UNA
								and at or greater	3 Present on Sample
								than the MDL with a	Y N (NA)
								J qualifier. Please include EDD.	4 Unbroken on Sample
								, morado BBB.	y n (na)
									Discrepancies Between Sample
									Labels and COC Record?
									Y (N) Y

Special Instructions:

Relinquished by: Signature	Date:08/13/15	Received by: Fighture Line Service Brush	Date: 8/13/15
Print Name Ben Brown	Time: 1450	Print Name Denise Bruun	Time: 1450
Relinquished by: Signature	Date:	Received by: Signature	Date:
Frint Name	Time:	Print Name	Time:

Preservation Check Sheet

Sample Set Extension and pH

Analysis Preservative FOOT FOOT ONE ONLY																		
Preservative	100	-002	005	-004														
pH <2 H ₂ SO ₄																		
pH <2 H ₂ SO ₄																		
pH >12																	ļ	
]										
pH <2 HNO ₃		ves	Ye5	V05														
	ı	l	l	1												**		
$pH < 2 H_2SO_4$																		
Zn Acetate																		
$pH < 2 H_2SO_4$																		
	pH <2 H ₂ SO ₄ pH <2 H ₂ SO ₄ pH >12 NaOH pH <2 HNO ₃ pH <2 H ₂ SO ₄ pH <2 HCL pH <2 H ₂ SO ₄ pH > 9NaOH,	pH <2 H ₂ SO ₄ pH >12 NaOH pH <2 HNO ₃ pH <2 HNO ₃ pH <2 HCL pH <2 HCL pH <2 HCL pH <2 H ₂ SO ₄ pH >9NaOH, Zn Acetate pH <2 H ₂ SO ₄	pH <2 H ₂ SO ₄ pH >12 NaOH pH <2 HNO ₃ pH <2 HNO ₃ pH <2 HCL pH <2 HCL pH <2 H ₂ SO ₄ pH > 9NaOH, Zn Acetate pH <2 H ₂ SO ₄	pH <2 H ₂ SO ₄ pH >12 NaOH pH <2 HNO ₃ pH <2 HNO ₃ pH <2 HCL pH <2 HCL pH <2 HCL pH >9NaOH, Zn Acetate pH <2 H ₂ SO ₄	pH <2 H ₂ SO ₄ pH >12 NaOH pH <2 HNO ₃ pH <2 HCL pH <2 HCL pH <2 HCL pH <2 H ₂ SO ₄ pH > 9NaOH, Zn Acetate pH <2 H ₂ SO ₄	Preservative pH <2 H ₂ SO ₄ pH >12 NaOH pH <2 HNO ₃ pH <2 HNO ₃ pH <2 H ₂ SO ₄ pH <2 HCL pH <2 HCL pH <2 H ₂ SO ₄ pH >9 NaOH, Zn Acetate pH <2 H ₂ SO ₄	Preservative pH <2 H ₂ SO ₄ pH >12 NaOH pH <2 HNO ₃ pH <2 HNO ₃ pH <2 HC pH <2 HC pH <2 HCL pH <2 HCL pH <2 H ₂ SO ₄ pH >9 NaOH, Zn Acetate pH <2 H ₂ SO ₄	Preservative pH <2 H ₂ SO ₄ pH >12 NaOH pH <2 HNO ₃ pH <2 HNO ₃ pH <2 HCL pH <2 HCL pH <2 H ₂ SO ₄ pH >9NaOH, Zn Acetate pH <2 H ₂ SO ₄	Preservative pH <2 H ₂ SO ₄ pH >12 NaOH pH <2 HNO ₃ pH <2 HCL pH <2 HCL pH <2 HCL pH <2 H ₂ SO ₄ pH >9NaOH, Zn Acetate pH <2 H ₂ SO ₄	Preservative pH <2 H ₂ SO ₄ pH >12 NaOH pH <2 HNO ₃ pH <2 HNO ₃ pH <2 HCL pH <2 HCL pH <2 H ₂ SO ₄ pH >9NaOH, Zn Acetate pH <2 H ₂ SO ₄	Preservative pH <2 H ₂ SO ₄ pH >12 NaOH pH <2 HNO ₃ pH <2 HCV pH <2 HCL pH <2 HCL pH <2 H ₂ SO ₄ pH >9NaOH, Zn Acetate pH <2 H ₂ SO ₄	Preservative pH <2 H ₂ SO ₄ pH >12 NaOH pH <2 HNO ₃ pH <2 HCL pH <2 HCL pH <2 H ₂ SO ₄ pH >9 NaOH, Zn Acetate pH <2 H ₂ SO ₄	Preservative	Preservative	Preservative	Preservative	Preservative	Preservative

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 \leq 2 due to the sample matrix.
- The sample pH was unadjustable to a pH > ____ due to the sample matrix interference.