STATE OF COLORADO

Eschberger - DNR, Amy <amy.eschberger@state.co.us>

Second Quarter 2020 DRMS Memo

Elizabeth Busby <ebusby@ensero.com> Fri, Oct 16, 2020 at 4:17 PM
To: "Eschberger - DNR, Amy" <amy.eschberger@state.co.us>
Cc: Michael Gordon <mgordon@ensero.com>, "jim@coloradolegacy.land" <jim@coloradolegacy.land>, Billy Ray <bray@ensero.com>, "Cunningham - DNR, Michael" <michaela.cunningham@state.co.us>

Hi Amy,

Thank you for reviewing and providing comments on the 2Q 2020 sampling memo. The attached memo has been revised to incorporate your comments. We will use the updated list of groundwater sampling locations and corresponding map in future memo's going forward.

Liz Busby

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Revised_Schwartzwalder_2Q_2020_Sampling_Memo_Draft.pdf
3150K

COLORADO LEGACY LAND
4601 DTC Boulevard, Suite 120, Denver, CO 80237
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October 16, 2020

Mr. Michael Cunningham and Ms. Amy Eschberger
Colorado Division of Reclamation, Mining, and Safety
Department of Natural Resources
1313 Sherman Street, Room 215
Denver, CO 80203

Subject: Second Quarter 2020 Sampling Results, Revised
Schwartzwalder Mine, Golden Colorado,
Mine Land Reclamation Permit No. M-1977-300.

Dear Mr. Cunningham and Ms. Eschberger:

The second quarter sampling event at the Schwartzwalder Mine was conducted by Ensero Solutions Inc. (Ensero) field staff on June 2 to June 17, 2020.

- **Surface Water Data:** There are thirteen quarterly surface water (SW) sampling locations. Figure 1 shows the location of each surface water sample locations along Ralston Creek. Table 1a summarizes surface water field parameters. Table 1b summarizes the analytical data results. The analytical laboratory data report and the chain of custody are attached to this report. A copy of the electronic data deliverable (EDD) excel file for these samples are included in this submittal.

- **Groundwater Data:** There are fifteen quarterly groundwater monitoring well (MW) locations. Figure 2 shows the location of each MW. Table 2a summarizes groundwater field parameters. Table 2b summarizes the analytical data results. The analytical laboratory data report and the chain of custody are attached to this report. A copy of the EDD excel file for these samples are included in this submittal.

- **Mine Pool Elevations:** Table 3 summarize the mine pool elevations for the quarter.

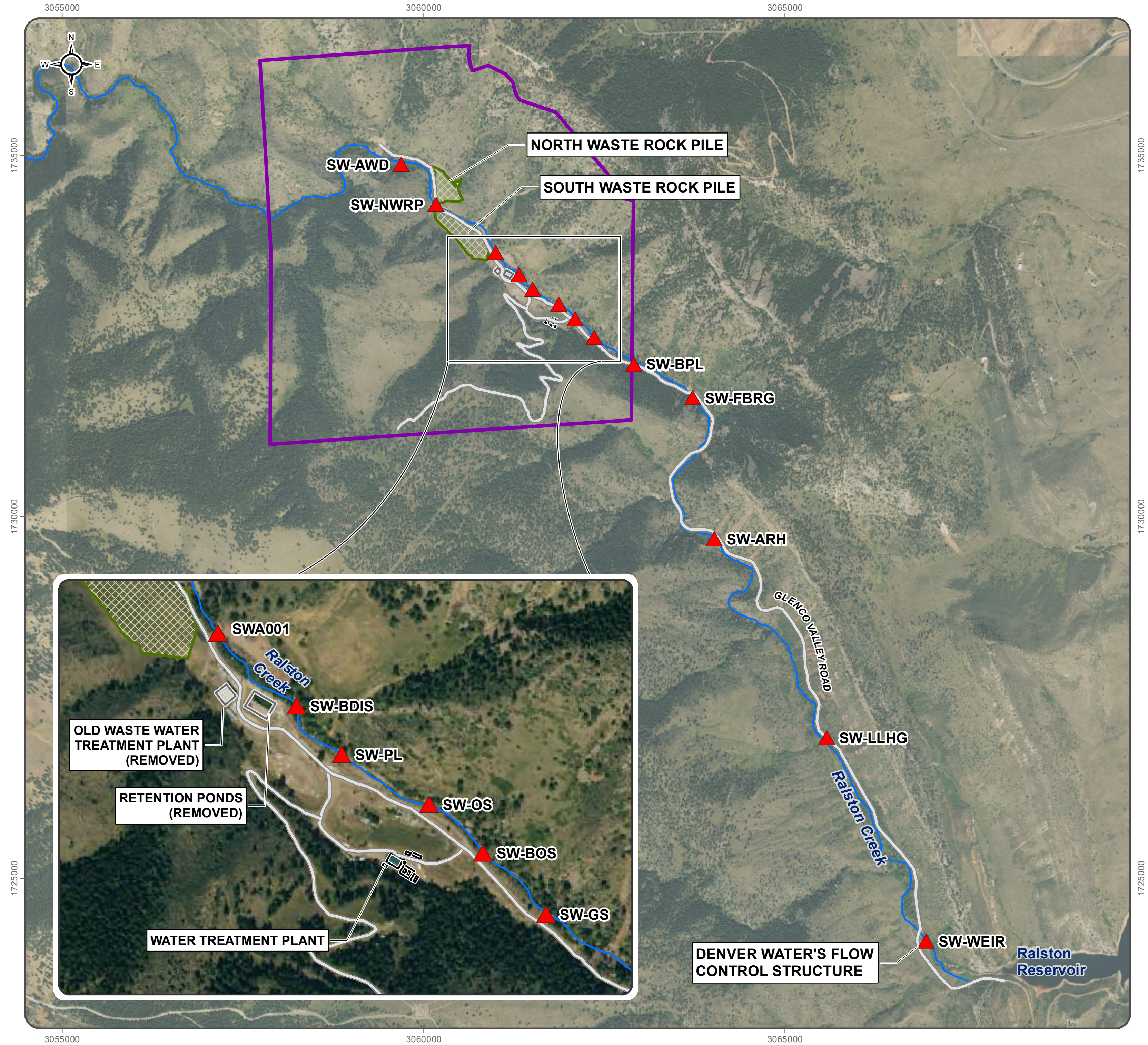
If you have any questions regarding this letter, please do not hesitate to contact me.

Sincerely,

Jim Harrington, Managing Director
COLORADO LEGACY LAND
Jim@ColoradoLegacy.Land

cc:

Paul Newman – CLL, Managing Director, paul@coloradolegacy.land
Eric Williams – CLL, Managing Director, eric@coloradolegacy.land
Billy Ray – Ensero Solutions Inc, Site Manager, bray@ensero.com



COLORADO LEGACY LAND SCHWARTZWALDER MINE

FIGURE 1

SURFACE WATER QUALITY MONITORING LOCATIONS

SEPTEMBER 2020

COLORADO LEGACY LAND

- Surface Water Quality Monitoring Station
- CLL Property Boundary
- Building, Existing
- Reclaimed Mine Feature
- Waste Rock Dump
- Road
- Watercourse

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0 500 1,000 1,500 2,000 Feet

ENSERO solutions

Satelite imagery obtained from ArcGIS on services.arcgisonline.com on September 2020

Datum: NAD 1983 (CORS96) StatePlane Colorado Central FIPS 0502 (US Feet)

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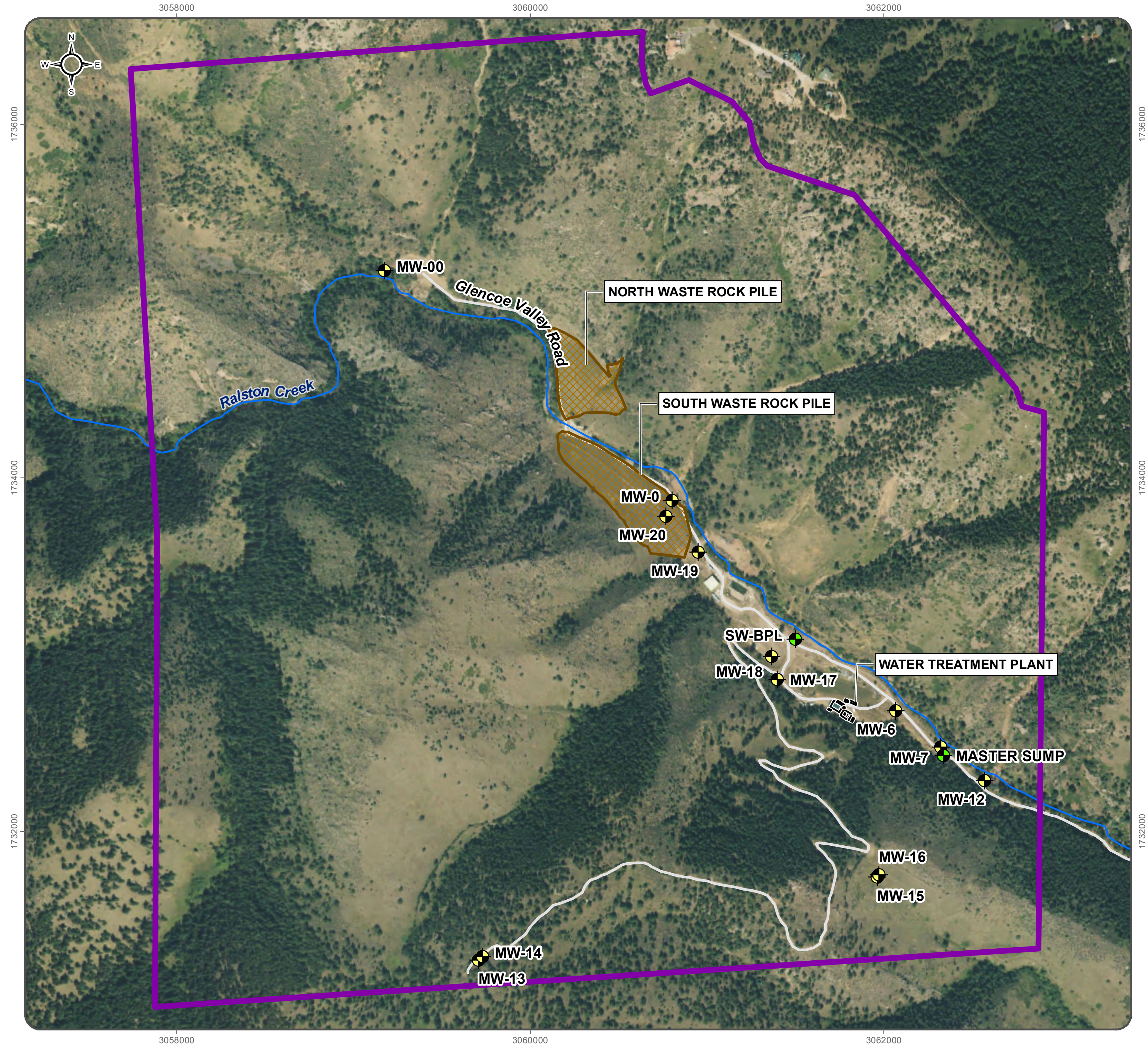

COLORADO LEGACY LAND SCHWARTZWALDER MINE

FIGURE 2

GROUNDWATER MONITORING LOCATIONS

OCTOBER 2020

COLORADO LEGACY LAND

- GW Monitoring Well
- Pumpback Sump
- CLL Property Boundary
- Waste Rock Dump
- Existing Mine Feature Footprint
- Glencoe Valley Road
- Ralston Creek

1:9,000 ***when printed on 8x11 inch paper***

0 250 500 750 1,000 Feet

ENSERO solutions

Satelitte imagery obtained from ArcGIS on services.arcgisonline.com on October 2020

Datum: NAD 1983 (CORS96) StatePlane Colorado Central FIPS 0502 (US Feet)

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Table 1a. Surface Water Sample Field Parameters								
Location ID / Sample ID	Sample Date	Field Parameters						Notes / Location Description
		Flowrate (ft^3/s)	pH (unitless)	Temperature (°C)	Conductivity (µS/cm)	ORP (mV)	Dissolved Oxygen (mg/L)	
SW-AWD	6/2/2020	6.17	7.87	13.4	285.0	111.4	9.32	Upstream sample location. Above waste dump (AWD). Onsite.
SW-NWRP	6/2/2020	2.61	7.80	13.8	287.0	19.6	9.42	Downstream of the North Waster Rock Pile (NWRP).
SW-A001	Not Sampled, Dry[1]	--	--	--	--	--	--	Above former discharge point. Onsite. Directly below the west waste rock pile.
SW-BDIS	Not Sampled, Dry[1]	--	--	--	--	--	--	Below former discharge (BDIS). Onsite. Below former concrete containment structure.
SW-PL	Not Sampled, Dry[1]	--	--	--	--	--	--	Former parking lot (PL) location. Onsite.
SW-OS	Not Sampled, Dry[1]	--	--	--	--	--	--	Former ore sorter (OS) location. Onsite.
SW-BOS	Not Sampled, Dry[1]	--	--	--	--	--	--	Below former ore sorter (BOS) location. Onsite.
SW-GS	Not Sampled, Dry[1]	--	--	--	--	--	--	Former guard shack (GS) location. Onsite.
SW-BPL	6/3/2020	4.34	7.67	12.6	279.1	62.4	9.43	Below property line (BPL). Downstream sample location, just below entrance gate. Offsite.
SW-FBRG	6/3/2020	10.48	7.95	13.2	284.4	75.9	9.39	First bridge (FBRG) after leaving site. Offsite.
SW-ARH	6/3/2020	5.94	8.13	14.0	298.1	83.5	9.47	Above red hill (ARH). Near the large red boulders in the creek bed. Offsite.
SW-LLHG	6/3/2020	0.35[2]	8.08	14.9	304.6	25.2	8.89	Long lake head gate (LLHG). Just above head gate. Offsite.
SW-WEIR	6/3/2020	4.77	8.07	15.1	312.8	77.2	7.64	Weir structure before Ralston Reservoir Offsite.

Notes:

[1]There was no water present at these locations.
[2]From 2019 to present the flow was inadvertently measured outflow from head gate, not full stream. Future measurements shall reflect full stream flow at sample location.
µS/cm = microSiemens per centimeter
°C = degrees Celsius
ft^3/s= cubic feet per second
kg / day = kilogram per day
mg/L = milligrams per liter
mV =millivolts
ORP = Oxidization Reduction Potential

TABLE 1B: SUMMARY OF SURFACE WATER ANALYTICAL DATA										
Parameter	Units	Surface Water Quality Standards Segment 17b, Ralston Creek (CDPHE 2019)[1]		Sample Location						
				SW-ARH	SW-BPL	SW-FBRG	SW-LLHG	SW-Weir	SW-AWD	SW-NWRP
		Acute	Chronic	6/3/2020	6/3/2020	6/3/2020	6/3/2020	6/3/2020	6/2/2020	6/2/2020
Physical Properties										
TDS - Total Dissolved Solids	mg/L	-	-	264	260	252	270	270	210	212
TSS - Total Suspended Solids	mg/L	-	-	<5	<5	<5	7	<5	6	5
Major Ions										
Alkalinity as $CaCO_3$	mg/L	-	-	57.4	54.7	54.9	59.5	61.2	51.5	53.0
Bicarbonate as $CaCO_3$	mg/L	-	-	57.4	54.7	54.9	59.5	61.2	51.5	53.0
Calcium - Dissolved	mg/L	-	-	29.6	29.1	29.1	30.2	30.3	30.0	30.4
Carbonate as $CaCO_3$	mg/L	-	-	<2	<2	<2	<2	<2	<2	<2
Chloride	mg/L	-	250	61.7	60.6	60.7	60.9	60.2	62.6	64.5
Fluoride	mg/L	-	-	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Hydroxide as $CaCO_3$	mg/L	-	-	<2	<2	<2	<2	<2	<2	<2
Magnesium - Dissolved	mg/L	-	-	8.3	8.1	8.1	8.4	8.5	8.1	8.2
Potassium - Dissolved	mg/L	-	-	2.0	1.9	1.9	2.0	2.0	1.9	1.9
Sodium - Dissolved	mg/L	-	-	17.4	16.0	16.0	17.7	17.9	16.6	16.7
Sulfate	mg/L	-	250	18.6	16.5	15.5	18.7	19.4	11.6	12.1
Nutrients										
Cyanide - Weak Acid Dissociable	mg/L	0.005	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Nitrate+Nitrite as N	mg/L	NO_3=10	NO_2=0.05	<0.02	<0.02	<0.02	0.03	<0.02	<0.02	<0.02
Phosphate - Total	mg/L	-	-	<0.03	<0.03	<0.03	0.06	<0.03	<0.03	<0.03
Phosphorus - Total	mg/L	-	0.11	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01
Metals-Dissolved										
Aluminum	mg/L	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Antimony	mg/L	-	-	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Arsenic	mg/L	0.34	-	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002
Boron	mg/L	-	0.75	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chromium	mg/L	- Chromium IV = 0.016	Chromium III=0.11 Chromium IV = 0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper	mg/L	0.0213	0.0136	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Iron	mg/L	-	0.3	<0.06	<0.06	<0.06	0.09	<0.06	<0.06	<0.06
Lead	mg/L	0.109	0.0043	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Manganese	mg/L	3.51	1.94	<0.01	<0.01	<0.01	0.07	0.02	<0.01	<0.01
Mercury	mg/L	-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	mg/L	-	-	0.0013	0.0008	0.0009	0.0016	0.0022	0.0005	0.0007
Silver	mg/L	0.0047	0.00017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Thallium	mg/L	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Uranium	mg/L	-	-	0.0084	0.0072	0.0076	0.0087	0.0086	0.0009	0.0028
Zinc	mg/L	0.249	0.188	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Metals-Total										
Aluminum	mg/L	-	-	0.13	0.13	0.12	0.18	0.11	0.17	0.15
Antimony	mg/L	-	-	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Arsenic	mg/L	-	0.00002	0.0002	<0.0002	0.0002	0.0005	0.0003	<0.0002	<0.0002
Boron	mg/L	-	0.75	0.02	0.02	<0.02	<0.02	<0.02	0.02	0.02
Chromium	mg/L	Chromium III = 0.005 Chromium IV = 0.016	- Chromium IV = 0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper	mg/L	0.0213	0.0136	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Table 1b: Summary of Surface Water Analytical Data										
Parameter	Units	Surface Water Quality Standards Segment 17b, Ralston Creek (CDPHE 2019)[1]		Sample Location						
				SW-ARH	SW-BPL	SW-FBRG	SW-LLHG	SW-Weir	SW-AWD	SW-NWRP
		Acute	Chronic	6/3/2020	6/3/2020	6/3/2020	6/3/2020	6/3/2020	6/2/2020	6/2/2020
Iron	mg/L	-	1	0.22	0.21	0.22	0.49	0.30	0.27	0.26
Lead	mg/L	0.05	-	0.0001	<0.0001	<0.0001	0.0003	0.0002	0.0001	0.0001
Manganese	mg/L	0.05	-	0.02	0.02	0.02	**0.09**	0.04	0.02	0.02
Mercury	mg/L	3.513	1.941	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	mg/L	-	0.15	0.0012	0.0007	0.0008	0.0015	0.0021	0.0005	0.0007
Silver	mg/L	0.0047	0.00017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Thallium	mg/L	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Uranium	mg/L	-	-	0.0083	0.0073	0.0077	0.0093	0.0090	0.0013	0.0028
Zinc	mg/L	0.249	0.188	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Radionuclides										
Gross Alpha	pCi/L	-	-	6.0	7.8	8.7	7.2	5.6	3.5	2.9
Gross Beta	pCi/L	-	-	6.6	5.9	2.9	4.0	4.6	5.5	2.9
Radium 226 - Dissolved	pCi/L	-	-	0.41	0.26	0.53	0.55	0.31	0.24	0.72
Radium 226 - Total	pCi/L	-	-	0.44	0.38	0.19	0.67	0.53	0.32	0.26
Radium 228 - Total	pCi/L	-	-	0.61	0.73	0.73	0.68	0.0	0.81	0.5
Radium 226 + Radium 228 - Total	pCi/L	-	-	0.44	0.38	0.19	0.67	0.53	0.32	0.26

Notes:

[1] Acute and chronic standards for cadmium, chromium III, copper, lead, manganese, nickel, silver, uranium and zinc are calculated using an average hardness value of 163 mg/L as CaCO3.
Bold and grey-shaded analytical results are greater than one or more criteria.
NO_3= Nitrate
NO_2= Nitrite
$CaCO_3$= Calcium Carbonate
mg/L= milligrams per Liter
pCi/L= picocuries per Liter
Chromium III = Trivalent Chromium
Chromium IV = Tetravalent Chromium

Source:

CDPHE. 2019. Regulation No. 38 Stream Classification and Water Quality Standards, Clear Creek Basin, Segment 17b. Mainstem of Ralston Creek Including all Tributaries and Wetlands from the Source to the Inlet of Arvada Reservoir. June

TABLE 2A. GROUNDWATER SAMPLE FIELD PARAMETERS								
		Field Parameters						
Location ID / Sample ID[3]	Sample Date	Static Depth to Water (ft btoc)	pH (unitless)	Temperature (°C)	Conductivity (µS/cm)	ORP (mV)	Dissolved Oxygen (mg/L)	Notes / Location Description
MW-00	6/2/2020	8.07	7.18	9.0	234.2	176.2	7.06	Alluvial well. Above waste dumps, upstream of site.
MW-0	6/2/2020	12.02	6.84	9.0	454.5	42.2	2.15	Alluvial well. Toe of south waste rock pile.
MW-6	6/2/2020.	8.73	7.15	11.1	786	97.0	4.95	Alluvial well. Near former Sump #2.
MW-7	6/3/2020.	8.40	6.79	10.1	1,112	86.9	3.95	Alluvial well. Near Sump #1
MW-12	Not Sampled, Insufficient Volume[1].	16.8	--	--	--	--	--	Below Sump #1. Alluvial well.
MW-13	6/17/2020	446.37	7.80	13.9	357.2	82.2	8.26	Nitrogen purge. Replaced MW-10. Previous Sample ID = L1. Background well.
MW-14	6/17/2020	94.60	7.59	11.1	229.5	-98.2	0.45	Nitrogen purge. Replaced MW-11. Previous Sample ID = L2. Background well.
MW-15	6/17/2020	373.40	7.72	11.5	791	33.9	7.25	Nitrogen purge. Previous Sample ID = L3. Bedrock well.
MW-16	N/A. Monitor Water Level Only.	Transducer malfunction.[2]	N/A	N/A	N/A	N/A	N/A	Previous Sample ID = L4. Bedrock well.
MW-17	6/17/2020.	112.15	7.43	12.3	1284	64.8	0.33	Nitrogen purge. Previous Sample ID = L5.
MW-18	6/4/2020	124.70	7.80	15.1	997	-184.2	1.23	Previous Sample ID = L6. Bedrock well, installation targeted Illinois fault zone in alluvial valley.
MW-19	6/4/2020	18.18	7.08	12.0	558	91.9	3.99	Toe of south waste rock pile. Previous Sample ID = L7.
MW-20	Not Sampled, Insufficient Volume[1].	50.40	--	--	--	--	--	Usually dry. Top of south waste rock pile.
Raw Feed	6/4/2020	N/A	7.39	19.1	1,940	-71.0	3.87	Sample collected from spigot inside water treatment plant. This is the water treatment plant intake from the mine pool. Previous Sample ID = Mine Refill.
Sumps	6/4/2020	N/A	7.21	13.13	1,061	37.8	4.87	Sample collected from spigot inside water treatment plant. This is the collected sump water from Sump #1 (Master Sump).

Notes:

[1]Water present in well, insufficient volume to collect sample.
[2]Obstruction in well. Transducer was unable to be installed and static water level meter was unable to collect measurement.
[3]MW-1, MW-2, MW-3A, and MW-8 were removed in 2019; MW-4 and MW-5 were removed in 2008. MW-8 was replaced with MW-12. MW-10 and MW-11 were fouled (bentonite in screened interval) and replaced with MW-13 and MW-14.
µS/cm = microSemiens per centimeter
°C = degrees Celsius
ft btoc = feet below top of casing
ID = Identifier
mg/L = milligrams per liter
mV =millivolts
MW = Monitoring Well
ORP = Oxidization Reduction Potential

TABLE 2B: SUMMARY OF GROUND WATER ANALYTICAL DATA														
Parameter	Units	Domestic Water Supply - Drinking Water Standards (CDPHE 2018)	Sample Location											
			MW-00	MW-0	MW-6	MW-7	MW-13	MW-14	MW-15	MW-17	MW-18	MW-19	Raw Feed	Sump Composite
			6/2/2020	6/2/2020	6/2/2020	6/3/2020	6/17/2020	6/17/2020	6/17/2020	6/17/2020	6/4/2020	6/4/2020	6/4/2020	6/4/2020
Physical Properties														
TDS - Total Dissolved Solids	mg/L	-	208	394	684	1,080	286	220	640	1,020	718	456	1,540	678
TSS - Total Suspended Solids	mg/L	-	<5	6.0	<5	<5	<5	35	9.0	5.0	<5	<5	<5	<5
Major Ions														
Alkalinity as $CaCO_3$	mg/L	-	80.5	144	189	217	169	104	310	212	218	165	492	184
Bicarbonate as $CaCO_3$	mg/L	-	80.5	144	189	217	169	104	293	212	218	165	492	184
Calcium - Dissolved	mg/L	-	34.9	75.1	116	162	49.1	24.2	14.6	115	91.5	72.1	153	105
Carbonate as $CaCO_3$	mg/L	-	<2	<2	<2	<2	<2	<2	16.6	<2	<2	<2	<2	<2
Chloride	mg/L	250	52.4	37.4	28.2	27.8	6.9	5.1	21.7	22.6	18.1	26.5	26.5	29.1
Fluoride	mg/L	4.0	0.1	<0.1	0.2	0.2	0.5	0.3	2.1	0.8	0.4	0.4	0.8	0.2
Hydroxide as $CaCO_3$	mg/L	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Magnesium - Dissolved	mg/L	-	9.8	23.7	46.5	70.0	16.3	5.9	6.6	45.2	32.7	46.3	112	42.5
Potassium - Dissolved	mg/L	-	1.6	3.3	5.3	6.2	6.0	4.1	6.1	8.9	5.3	4.1	15.0	5.0
Sodium - Dissolved	mg/L	-	14.9	15.2	28.8	40.3	23.6	27.1	156	131	76.2	26.9	139	27.9
Sulfate	mg/L	250	15.5	124	**288**	**608**	66.0	40.9	134	**525**	**314**	182	**692**	**291**
Nutrients														
Cyanide - Weak Acid Dissociable	mg/L	0.2	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Nitrate+Nitrite as N	mg/L	10.0	0.04	1.05	1.86	1.97	0.83	<0.02	<0.02	0.02	<0.02	0.98	<0.02	1.89
Phosphate - Total	mg/L	-	<0.03	0.06	<0.03	<0.03	<0.03	0.06	<0.03	0.03	<0.03	<0.03	0.09	<0.03
Phosphorus - Total	mg/L	-	<0.01	0.02	<0.01	<0.01	<0.01	0.02	<0.01	0.01	<0.01	<0.01	0.03	<0.01
Metals-Dissolved														
Aluminum	mg/L	5.0	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Antimony	mg/L	0.006	<0.0004	<0.0004	<0.0004	0.0006	<0.0004	0.0008	<0.0004	0.0005	<0.0004	<0.0004	<0.0004	<0.0004
Arsenic	mg/L	0.01	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0006	0.0027	0.0002	0.0016	0.0008	0.0022	<0.0002
Boron	mg/L	0.75	<0.02	0.03	0.04	0.06	0.02	0.02	0.17	0.23	0.12	0.04	0.16	0.05
Chromium	mg/L	0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper	mg/L	1.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Iron	mg/L	0.3	<0.06	0.19	<0.06	<0.06	<0.06	**0.64**	<0.06	<0.06	**0.76**	**2.06**	**0.77**	<0.06
Lead	mg/L	0.1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002
Manganese	mg/L	0.05	<0.01	0.01	<0.01	<0.01	**0.57**	**0.65**	0.02	**0.11**	**0.14**	**0.18**	**0.65**	<0.01
Mercury	mg/L	0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	mg/L	0.21	0.0004	0.0137	0.0308	0.0356	0.105	0.0053	0.0042	0.0462	0.0431	0.0417	0.077	0.0274
Silver	mg/L	0.05	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0001
Thallium	mg/L	0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Uranium	mg/L	0.03	0.0016	**0.243**	**1.33**	**1.85**	0.026	0.002	**0.034**	**0.112**	**0.363**	**0.802**	**5.02**	**1.20**
Zinc	mg/L	5.0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Metals-Total														
Aluminum	mg/L	5.0	<0.05	<0.05	<0.05	0.21	<0.05	0.34	0.07	0.3	0.12	<0.05	<0.05	<0.05
Antimony	mg/L	0.006	<0.0004	<0.0004	<0.0004	0.0005	<0.0004	0.0032	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Arsenic	mg/L	0.01	<0.0002	0.0002	<0.0002	<0.0002	0.0002	0.0008	0.0038	0.0003	0.0019	<0.0002	0.0026	<0.0002
Boron	mg/L	0.75	0.02	0.03	0.05	0.07	<0.02	<0.02	0.17	0.23	0.1	0.04	0.15	0.03
Chromium	mg/L	0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper	mg/L	1.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

TABLE 2B: SUMMARY OF GROUND WATER ANALYTICAL DATA														
Parameter	**Units**	**Domestic Water Supply - Drinking Water Standards (CDPHE 2018)**	**Sample Location**											
			MW-00	**MW-0**	**MW-6**	**MW-7**	**MW-13**	**MW-14**	**MW-15**	**MW-17**	**MW-18**	**MW-19**	**Raw Feed**	**Sump Composite**
			6/2/2020	**6/2/2020**	**6/2/2020**	**6/3/2020**	**6/17/2020**	**6/17/2020**	**6/17/2020**	**6/17/2020**	**6/4/2020**	**6/4/2020**	**6/4/2020**	**6/4/2020**
Iron	mg/L	0.3	<0.06	0.12	<0.06	0.24	0.10	**1.66**	**0.34**	**0.45**	**1.14**	<0.06	**0.85**	<0.06
Lead	mg/L	0.05	<0.0001	0.0001	<0.0001	0.0002	0.0004	0.0006	0.0002	0.0004	0.0003	<0.0001	<0.0001	0.0002
Manganese	mg/L	0.05	<0.01	<0.01	<0.01	0.02	**0.57**	**0.72**	0.03	**0.12**	**0.15**	<0.01	**0.68**	<0.01
Mercury	mg/L	0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	mg/L	0.21	0.0007	0.0131	0.0283	0.0331	0.10	0.0058	0.0038	0.0453	0.0457	0.0437	0.0814	0.0264
Silver	mg/L	0.05	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0008	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Thallium	mg/L	0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Uranium	mg/L	0.03	0.0081	**0.227**	**1.23**	**1.80**	0.025	0.002	**0.032**	**0.096**	**0.372**	**0.896**	**5.13**	**1.22**
Zinc	mg/L	5.0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Radionuclides														
Gross Alpha	pCi/L	15	3.5	**130**	**620**	**1,300**	**24**	7.0	**230**	**82**	**240**	**610**	**4,800**	**770**
Gross Beta	pCi/L	-	5.2	43	170	360	12	9.5	83	29	81	180	1600	230
Radium 226 - Dissolved	pCi/L	-	0.37	0.33	0.86	0.71	0.85	0.56	40	0.71	4.7	1.7	73	0.68
Radium 226 - Total	pCi/L	-	0.27	0.31	0.79	0.83	0.49	0.53	34	0.98	5.0	1.7	67	0.58
Radium 228 - Total	pCi/L	-	0.52	0.85	1.0	0.56	0.68	0.13	0.94	0.52	3.6	0.25	1.1	0.24
Radium 226 + Radium 228 - Total	pCi/L	5.0	0.27	0.31	0.79	0.83	0.49	0.53	**34**	.98	**8.6**	1.7	**67**	0.58

Notes:

Bold and grey shaded analytical results are greater than the criteria.
Raw Feed sample was collected from Shaft #2.
$CaCO_3$= Calcium Carbonate
mg/L= milligrams per Liter
pCi/L= picocuries per Liter
Chromium III = Trivalent Chromium
Chromium IV = Tetravalent Chromium
NO_2= Nitrite
NO_3= Nitrate
N/A= Standard not Defined

Source:

CDPHE. 2018. Regulation No. 41 – The Basic Standards for Ground Water (5 CCR 1002-41). Water Quality Control Commission. December.

TABLE 3: DAILY AVERAGE MINE POOL ELEVATIONS		
Date	**Distance Below Steve Level (feet)**	**Elevation of Water Level (feet above mean sea level)**
4/1/2020	178.76	6,423.24
4/2/2020	178.25	6,423.75
4/3/2020	177.78	6,424.22
4/4/2020	177.51	6,424.49
4/5/2020	177.18	6,424.82
4/6/2020	176.57	6,425.43
4/7/2020	176.04	6,425.96
4/8/2020	175.64	6,426.36
4/9/2020	175.12	6,426.88
4/10/2020	174.81	6,427.19
4/11/2020	174.38	6,427.62
4/12/2020	173.39	6,428.61
4/13/2020	172.34	6,429.66
4/14/2020	171.05	6,430.95
4/15/2020	170.01	6,431.99
4/16/2020	168.77	6,433.23
4/17/2020	167.77	6,434.23
4/18/2020	166.84	6,435.16
4/19/2020	166.37	6,435.63
4/20/2020	168.75	6,433.25
4/21/2020	171.27	6,430.73
4/22/2020	173.50	6,428.50
4/23/2020	174.99	6,427.01
4/24/2020	175.02	6,426.98
4/25/2020	173.36	6,428.64
4/26/2020	170.94	6,431.06
4/27/2020	168.13	6,433.87
4/28/2020	165.28	6,436.72
4/29/2020	162.49	6,439.51
4/30/2020	159.88	6,442.12
5/1/2020	157.47	6,444.53
5/2/2020	157.12	6,444.88
5/3/2020	156.97	6,445.03
5/4/2020	156.64	6,445.36
5/6/2020	156.99	6,445.01
5/7/2020	156.77	6,445.23
5/8/2020	156.40	6,445.60
5/9/2020	155.89	6,446.11
5/10/2020	156.00	6,446.00
5/11/2020	156.78	6,445.22

Table 3: Daily Average Mine Pool Elevations		
Date	Distance Below Steve Level (feet)	Elevation of Water Level (feet above mean sea level)
5/12/2020	157.89	6,444.11
5/13/2020	158.63	6,443.37
5/14/2020	159.66	6,442.34
5/15/2020	160.58	6,441.42
5/16/2020	161.46	6,440.54
5/17/2020	162.63	6,439.37
5/18/2020	163.46	6,438.54
5/19/2020	163.92	6,438.08
5/20/2020	164.03	6,437.97
5/21/2020	164.72	6,437.28
5/22/2020	165.49	6,436.51
5/23/2020	165.69	6,436.31
5/24/2020	165.85	6,436.15
5/25/2020	166.01	6,435.99
5/26/2020	166.23	6,435.77
5/27/2020	165.95	6,436.05
5/28/2020	166.22	6,435.78
5/29/2020	165.02	6,436.98
5/30/2020	163.61	6,438.39
5/31/2020	162.39	6,439.61
6/1/2020	161.11	6,440.89
6/2/2020	159.91	6,442.09
6/3/2020	158.68	6,443.32
6/4/2020	158.71	6,443.29
6/5/2020	161.51	6,440.49
6/8/2020	168.99	6,433.01
6/9/2020	171.31	6,430.69
6/10/2020	173.36	6,428.64
6/11/2020	173.89	6,428.11
6/12/2020	173.12	6,428.88
6/13/2020	174.82	6,427.18
6/14/2020	175.82	6,426.18
6/15/2020	176.36	6,425.64
6/16/2020	177.23	6,424.77
6/17/2020	178.05	6,423.95
6/18/2020	178.58	6,423.42
6/19/2020	179.17	6,422.83
6/20/2020	179.62	6,422.38
6/21/2020	180.41	6,421.59
6/22/2020	181.11	6,420.89

TABLE 3: DAILY AVERAGE MINE POOL ELEVATIONS		
Date	Distance Below Steve Level (feet)	Elevation of Water Level (feet above mean sea level)
6/23/2020	181.70	6,420.30
6/24/2020	182.52	6,419.48
6/25/2020	183.11	6418.89
6/26/2020	183.35	6418.65
6/27/2020	184.97	6417.03
6/28/2020	186.47	6415.53
6/29/2020	187.25	6414.75