



Tammie Bishop, P.E.
Consulting Engineer

January 22, 2025

Rob Zuber
Division of Reclamation, Mining & Safety
1313 Sherman St., Room 215
Denver, CO 80203

Re: Bowie No. 2 Mine, Permit C-1996-083,
2023 AHR Adequacy Response #1,

Dear Mr. Zuber:

On behalf of Bowie Resources, LLC, (BRL) attached is the response to the 2023 AHR adequacy review.

1. **DRMS:** Table 1 in the AHR states that streams and ditches will be monitored for lab parameters semi-annually. However, for the Deer-low site, lab data was only analyzed for one month (June). **Please explain why lab data was only analyzed for one month instead of two at this site.**

BRL: The deer-low site laboratory data for the third quarter was inadvertently left off. Please see revised **Figure 68**.

2. **DRMS:** Names of some sites are unclear. The names in Table 5 of the AHR do not all match those in the PAP (e.g., spring monitoring points on page 2.05-128). **Please explain these discrepancies and, as necessary, submit an MR or TR with revised pages in the PAP.**

BRL: An MR will be submitted to change the names in the PAP to match Table 1 in the AHR.

3. **DRMS:** The discussion of wells DH-15, DH-25, and DH-38 on page 6 of the AHR is not reflected on page 2.05-131 in the PAP. Please revise this page with a TR. Also consider if the descriptions for Pond 36-3 and Pond 36-6 need to be revised on this page of the PAP.

BRL: A newer version of Page 2.05-31 was not updated in DRMS' permit due to concurrent revisions when TR-103 was approved. A Technical Revision will be submitted to address this issue to ensure DRMS' permit and BRLs permit matches what is currently approved.

4. **DRMS:** Table 1 in the AHR states that lab analyses will be conducted in the second and

fourth quarters for drill holes and alluvial monitoring wells. However, none of the data tables for groundwater sites have more than one column of lab data. Please explain.

BRL: PAP pages 2.05-24 and 2.05-127 specify that drill holes and alluvial wells will have a laboratory analysis completed annually either during the second or fourth quarters. **Table 1 will be updated to match the PAP for the 2024 AHR.**

5. **DRMS:** Please explain the situation with well DH-67B. The data sheet says “Plugged,” and the text on pages 6-7 of the AHR says, “The Operator was not able to obtain a sample ...” If this is a permanent **problem, please revise the monitoring plan in the PAP with a TR.**

BRL: A laboratory analysis was obtained during 2019, 2020, 2021, and 2022, however no sample was obtained during 2023. DH67B will be monitored during 2024. A decision will be made after the fourth quarter if the Operator is not able to obtain a sample.

6. **DRMS:** Table 3 does not indicate any water quality problems in Deer Trail Ditch in 2023. **However, it is unclear why lab parameters were only recorded for one month (June 2023), and BRL should explain this possible omission.**

BRL: The deer-low site laboratory data for the third quarter was inadvertently left off. Please see revised **Figure 68.**

7. **DRMS:** Further analysis of TREC iron entailed a comparison to baseline data for HUB-low. The June 2023 concentration of 1.81 mg/L is the highest concentration for TREC iron ever recorded at this site. However, the average operation concentration (0.38 mg/L) is lower than the average baseline concentration of 0.54 mg/L, and the Division does not consider TREC iron in Hubbard Creek to be a problem at this time. **This parameter should be closely watched in future sampling data by BRL and the Division**

BRL: TREC for HUB-Low will be monitored during future sampling events and it will be noted in the AHR if the TREC value remains high.

Please let me know if you have any questions.

Sincerely,

Tamme Bishop

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Deer-low
Canal - Deer Trail Ditch
Elevation - 5920

Initiated	6/14/1995	6/14/1995	6/14/1995	6/14/1995
Activated	3/30/1997	3/30/1997	3/30/1997	3/30/1997
Date	11/14/2023	8/28/2023	6/1/2023	3/27/2023

		Summary Information							
Field Parameters	UNITS	Baseline			Operation				
		Min	Ave	Max	Min	Ave	Max		
Flow	GPM	0	8	32	0	6	83	0.98	0.08
Water Level in Flume	Feet				0.00	0.17	0.40	0.4	0.05
FieldComment								Dry	Ditch off
ph	su	6.8	8.3	9.0	7.1	8.4	9.2	8.2	7.9
Conductivity	umhos/cm	80	276	638	60	222	720	194	107
Temperature	Celsius	4.9	13.1	21.2	3.1	11.9	21.5	17.5	11.3
DO	mg/L	0.0	3.7	10.7	0.0	6.8	18.6	18.6	13.4
Lab Parameters	UNITS								
Bicarbonate	mg/L	41	70	118	39	90	131		48.7
Chloride	mg/L	<MDL	1	2	<MDL	1.7	4.0	1.16	<MDL
Chromium III CrIII	mg/L				<MDL	<MDL	<MDL		
Chromium VI CrIV	mg/L				<MDL	<MDL	<MDL	<MDL	
Cyanide, Total	mg/L				<MDL	<MDL	<MDL		
Conductivity	umhos/cm	97	148	238	98	185	308		100
Hardness	mg/L	48	67	96	33	80	119	67	48
Nitrate-Nitrite	mg/L	<MDL	0.07	0.17	<MDL	0.02	0.04	0.025	0.041
Nitrate	mg/L	<MDL	0.08	0.17	<MDL	0.47	2.69	<MDL	
Nitrite	mg/L	<MDL	0.01	0.02	<MDL	0.00	0.01		
Dissolved Oxygen		0	0	0	<MDL	7.93	7.95		
Ammonia	mg/L				0.10	0.18	0.25		
Oil and Grease	mg/L	<MDL	<MDL	<MDL	<MDL	2	2	<MDL	<MDL
pH	su	7.5	7.8	8.0	7.6	8.1	8.6	7.6	8
Phosphate	mg/L	<MDL	0.03	0.08	<MDL	0.03	0.08		0.019
ResidueFilterable-TDS	mg/L	30	93	150	70	161	302	124	110
ResidueNonFilterable-TSS	mg/L	6	101	286	<MDL	15	41		15
SAR		0.21	0.38	0.68	<MDL	0.78	6.50		0.28
Sulfate	mg/L	<MDL	7	10	<MDL	11	20	<MDL	<MDL
Sulfide S	mg/L				<MDL	<MDL	<MDL		
Aluminum (TREC)	mg/L	0.25	3.03	7.68	0.14	0.72	2.27		2.27
Arsenic (TREC)	mg/L	<MDL	0.001	0.002	<MDL	0.0018	0.0150	0.00099	0.00066
Boron	mg/L				0.78	0.78	0.78	<MDL	
Cadmium (TREC)	mg/L	<MDL	0.001	0.003	<MDL	0.01	0.05	<MDL	<MDL
Calcium (TREC)	mg/L	13.4	18.8	26.9	9.1	22.5	33.8	19.4	13.1
Copper (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.004	0.017	<MDL	<MDL
Iron (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	0.06	0.15	<MDL	0.117
Iron (TREC)	mg/L	0.45	3.83	9.79	0.10	0.89	5.29	1.84	1.74
Lead (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.0049	0.0400	0.00143	0.0013
Magnesium (TREC)	mg/L	3.4	4.9	6.9	2.5	6.0	8.6		3.58
Manganese (Dissolved)	mg/L	<MDL	<MDL	<MDL	<MDL	1.6	6.2	<MDL	
Manganese (TREC)	mg/L	0.012	0.075	0.193	0.001	0.037	0.166	0.023	0.022
Mercury (TREC)	mg/L	<MDL	0.00007	0.0002	<MDL	0.00005	0.0002	<MDL	<MDL
Molybdenum (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.0003	0.0010		<MDL
Nickel	mg/L				<MDL	<MDL	<MDL	<MDL	
Selenium (TREC)	mg/L	<MDL	<MDL	<MDL	<MDL	0.002	0.010	0.00021	0.00023
Silver	mg/L				<MDL	<MDL	<MDL	<MDL	
Sodium (TREC)	mg/L	3.7	7.6	15.3	3.9	10.8	31.5		4.4
Zinc (TREC)	mg/L	0.03	0.03	0.04	<MDL	0.02	0.05	<MDL	<MDL

The lower end of Deer Trail Ditch is monitored at a point where the ditch empties into the Fire Mountain Canal.