



STATE OF  
COLORADO

Zuber - DNR, Rob <rob.zuber@state.co.us>

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## Bowie #1 AHR review

1 message

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**Zuber - DNR, Rob** <rob.zuber@state.co.us>

Wed, Aug 26, 2020 at 7:33 AM

To: Basil Bear <basilbear@wolverinefuels.com>, Tamme Bishop <tamme.jestover@bresnan.net>

Good morning.

Please see attached letter and contact me with any questions.

Thanks,  
Rob

Rob Zuber, P.E.  
Environmental Protection Specialist II  
Active Mines Regulatory Program



**COLORADO**  
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**DRMS\_review\_\_2018\_AHR\_Aug2020\_review.pdf**  
364K

August 26, 2020

Basil Bear  
Bowie Resources, LLC  
P.O. Box 1488  
Paonia, CO 81428

**Re: Bowie No. 1 Mine, Permit C-1981-038,  
Review of 2018 Annual Hydrology Report (Second Review)**

Dear Mr. Bear:

The Division received the BRL response to the Division's review of the 2018 AHR for the Bowie No. 1 Mine (submitted with cover letter by Tamme Bishop dated August 25, 2020).

Ms. Bishop's letter and the revised report alleviated my concerns regarding frequency of sampling at the two surface water sites and at the wells and springs. It is a good idea, as she mentions in her letter, to clearly show in future reports when a site was not accessible. This can be done in the text or in the data tables; both text and table is preferable.

Because new data is submitted with the revised AHR, an analysis of this data for the downstream sampling site for East Roatcap Creek (SW06) was performed.

At SW06, samples were collected for four quarters, and the results of laboratory analyses (along with field sampling results) are shown in the revised Figure 18 in Ms. Bishop's letter. For those parameters with a CDPHE standard, a comparison was made to determine potential water quality problems. Table 1 lists monitoring results and standards from Regulation 35 (Segment 5b.). For some parameters, water supply (WS) standards are shown for reference, although it is unlikely that the creek water will be used for this use.

**Table 1. 2018 AHR Data from SW-06 Sampling Site in East Roatcap Creek, with Standard Comparison**

Parameter	Units	Maximum Concentration in 2018 AHR	CDPHE Standard	Comments
pH	su	8.56	6.5 - 9.0	Standard includes low limit and high limit. No 2018 values below 6.5.
Temperature	deg C	12.5	17	CS-II standard for non-winter months.
Chloride	mg/L	6.3	250	
Sulfate	mg/L	111	250	WS standard from Regulation 31.
Iron, dissolved	mg/L	0.0236	0.3	WS standard from Regulation 31.
Iron, total	mg/L	<b>79.9</b>	1.0	
Manganese, total	mg/L	<b>14.1</b>	0.05	WS standard from Regulation 31.



**The extremely high concentrations for total iron and total manganese (both from 14 March 2018 sample) warrant further discussion. Please look closer at these values and attempt to explain them. For example, maybe there were typographical errors, or the laboratory QC data indicates that these concentrations may not be accurate.**

The highest Total Dissolved Solids (TDS) value in the 2018 data for SW-06 is 496 mg/L, significantly less than the guideline of 750 mg/L. This parameter is not considered problematic at this time.

Thank you,

A handwritten signature in blue ink, appearing to read "Robert D. Zuber".

Robert D. Zuber, P.E.  
Environmental Protection Specialist II

Cc via email: Tamme Bishop, J.E. Stover & Associates, Inc.