STATE OF COLORADO

DIVISION OF RECLAMATION, MINING AND SAFETY Department of Natural Resources

1313 Sherman St., Room 215 Denver, Colorado 80203 Phone: (303) 866-3567 FAX: (303) 832-8106



John W. Hickenlooper Governor

Mike King Executive Director

Loretta E. Pineda Director

September 13, 2013

Mr. Chris McCourt Colowyo Coal Company 5731 State Highway 13 Meeker, CO 81641

Re: Colowyo Mine, Permit No. C-1981-019, TR-100 Adequacy

Dear Mr. McCourt:

The Division has reviewed your submittal for TR-100, including the geotechnical analysis. We have the following comments and questions.

- In the report by Agapito Associates, Inc. (AA), there is no mention of potential impacts of highwall mining the G78 Seam under the previously mined E Seam along the North End Wall in the South Taylor Pit. Please add a discussion of these potential impacts on future G78 panels.
- 2. AA recommends avoiding the previously mined E Seam highwall miner workings when designing the F Seam panels. Does Colowyo plan on avoiding the previously mined E Seam highwall miner working when designing the F Seam panels as recommended by AA?
- 3. When reviewing the proposed highwall mining section in the North End Wall in the South Taylor pit, the maximum penetration distance appears to undermine a section of the temporary East Taylor Fill. In AA's geotechnical assessment, web pillars are designed based upon a range of design depth of cover. It is unclear to the Division it the temporary section of the East Taylor Fill has been incorporated into the total depth when calculating web pillar widths. Please address whether the temporary section of the East Taylor Fill has been accounted for in AA's proposed web pillar design and whether potential web pillar failure would have any adverse effect to the East Taylor Fill.

- 4. Reviewing lithology logs for selected boreholes, multiple seams that are proposed to be mined have carbonaceous mudstone/mudstone as the immediate roof, floor, or both. AA states in their report that previous highwall mining experience at Colowyo Mine has shown weak mudstone roofs tend to fall when exposed and soft floor conditions could hinder trafficability. Please address whether you plan on leaving a four-inch coal roof/floor barrier as recommended by AA when encountering weak mudstone to prevent roof falls and any other issues that may occur.
- 5. According to AA, interburden thickness-to-lower seam mining height ratio needs to be 2.0 or greater. Please discuss how you plan on highwall mining a section of E and F Seams with an interburden thickness-to-lower seam mining height less than 2.0 while maintaining a safety factor of at least 1.5.

Please contact me (extension 8113) if you have any questions.

Sincerely,

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Robert Zuber, P.E. Environmental Protection Specialist