



STATE OF
COLORADO

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

Geotechnical stability memorandum

1 message

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Tue, Jul 5, 2022 at 2:54 PM

To: Eric Leigh - DEN <eric.leigh@quikrete.com>, Kyle Regan <kyle@civilresources.com>

Eric and Kyle -

Please review the attached memo and let me know if you have any comments or questions.

Rob

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



COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

I am working remotely and can be reached by cell at 720.601.2276.

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Monarch Geotech Memo 20220630.pdf

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MEMORANDUM

Date: June 30, 2022

To: Rob Zuber; Division of Reclamation, Mining & Safety

From: Peter Hays; Division of Reclamation, Mining & Safety

Re: **Adequacy Review of Exhibit 6.5 - Geotechnical Stability
Monarch Mountain Minerals and Aggregates, LLC; Monarch DENM Mine; File No. M-2022-009**

The Division of Reclamation, Mining and Safety (Division/DRMS) reviewed the Stability Analysis submitted by Civil Resources, LLC dated February 22, 2022 and the adequacy response dated June 8, 2022 for the Monarch DENM 112c permit application.

In accordance with Table 1 - Recommended Factors of Safety for Slope Stability Analysis for Operations and Reclamation within Section 30.4 of the Policies of the Mined Land Reclamation Board (MLRB) effective May 16, 2018, the Division will require the Applicant to comply with the factor of safety (FOS) of 1.5 for critical structures and 1.3 for critical structures in seismic conditions since the Applicant utilized generalized strength measurements in the analysis.

Based on the information provided by the Operator, the Division accepts the Civil Resources, LLC stability analysis as an alternative to the Operator obtaining agreements with all structure owners within 200 feet of the affected lands, if structure agreements cannot be obtained by the Operator.

If groundwater is intercepted and/or the soils differ from the expected and modeled profiles, the Operator must contact the Division immediately and reevaluate the slope stability analysis based on the updated information. Please note any transgression from the proposed slope geometries and/or proposed offsets will be considered a violation, if the application is approved and issued by the Division.

If you have any questions regarding these adequacy items, please contact me at peter.hays@state.co.us or (303) 866-3567, Ext. 8124.

