

State of New Mexico
Energy, Minerals and Natural Resources Department

Michele Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Cabinet Secretary

Albert Chang, Director
Mining and Minerals Division



Electronic Transmission

May 4, 2023

Eric Burch, Project Manager
LAC Minerals (USA) LLC
Cunningham Hill Mine Reclamation Project
P.O. Box 98
Grants, NM 87020

RE: Agency Comments on the Amendment to Application for Revision 20-1, Pit Wall Slope Stability Work Plan, Cunningham Hill Mine, Permit No. SF002RE

Dear Mr. Burch,

The New Mexico Mining and Minerals Division (“MMD”) is currently processing an application to revise Permit No. SF002RE, Cunningham Hill Mine (Revision 20-1) operated by LAC Minerals (USA) LLC (“LAC”). As part of Revision 20-1, LAC most recently submitted a pit slope stability analysis work plan, dated April 10, 2023 (Slope Stability Work Plan) for MMD review and approval. After reviewing the Slope Stability Work Plan, MMD is requesting that LAC respond to the following comments:

1. *Data Review.* Does LAC have documentation of past mine slope performance over the life of the mine that can be reviewed?
2. *Data Review.* Does LAC have discontinuity information obtained from past drilling programs available for review?
3. *Site Visit.* MMD is concerned that a one-day site assessment by a single staff member does not budget enough time for safety and a proper field evaluation, especially if this assessment is performed concurrently with the drone flight. Is the drone crew separate from the geotechnical investigation crew? Please provide discussion on how the site assessments will adequately describe the performance of the slopes over time.
4. *Site Visit.* Field measurements should include mapping the pit walls to characterize the orientation, distribution, and condition of critical discontinuities, especially of discontinuities dipping into the pit. Past signs of slope failure and rock loosening also need to be noted.

5. *Site Visit.* Much of the mine pit is inaccessible to the ground crew, and the engineering geologist will be unable to examine discontinuities directly in these areas. Please confirm that the drone flight will include collecting imagery in the vertical z-dimension of the pit to identify critical discontinuities in these areas.
6. *Drone Data Processing.* A topographic map should be developed to assist in creating geometry profiles for slope stability analysis, and for creating a baseline topographic map to compare future mine slope performance.
7. *Slope Stability Analysis.* Please confirm the rock unit thicknesses and orientation will be developed using published geologic resources and field observations. Information from rock core data would also be useful. Does LAC have any rock core data available from previous mine exploration drilling programs?
8. *Slope Stability Analysis.* LAC states that no rock strength testing data is available. In the absence of this data, please list the published resources that will be used to estimate rock strength and any other material properties.
9. *Slope Stability Analysis.* Please confirm the slope stability model will include the area of the mine below the existing pit lake. The effect of the acidic pit lake water on discontinuities shall also be considered.
10. *Slope Stability Analysis.* Please include applicable seismic considerations in the analysis.
11. *Slope Stability Analysis.* MMD will require that LAC report Rocscience Slide2 results as an Appendix to the Technical Memo. Slide2 has a reporting function to create these reports. Rocscience reports should include model properties, geometry, and results.

Please respond to the comments above within 30 days of receipt of this letter. If you have any questions or concerns, please contact me at (505) 216-8399 or at carmen.rose@emnrd.nm.gov.

Sincerely,



Carmen Rose, Permit Lead
Mining Act Reclamation Program (“MARF”)
Mining and Minerals Division

CC: David Ennis, Program Manager, MMD
Joe Fox, Program Manager, NMED
Anne Maurer, Permit Lead, NMED
Daniel Lattin, Sr. Closure Program Manager, LAC
Brad Bingham, Director of Closure Operations, Barrick Gold Corporation
Gabe Wade, Assistant General Counsel, MMD
Eric Jantz, Attorney, NM Environmental Law Center
Mara Yarbrough, NM Environmental Law Center

**RE: Agency Comments on the Amendment to Application for Revision 20-1, Pit Wall Slope Stability Work Plan,
Cunningham Hill Mine, Permit No. SF002RE**

May 4, 2023

Page 3 of 3

Tom Parker, Friends of Santa Fe County
Ross Lockridge, Friends of Santa Fe County
Dennis Kurtz, President, San Marcos Association