# LAC MINERALS (USA) LLC





July 27, 2023

Ms. Carmen Rose, Permit Lead Mining Act Reclamation Program (MARP) Mining and Minerals Division 1220 S. St. Francis Drive Santa Fe, NM 87505

## RE: Response to Agency Comments on the Amendment to Application for Revision 20-1 and Proposed Cost Estimate, Closure/Closeout Plan Update, Cunningham Hill Mine, Permit No. SF002RE

Dear Ms. Rose,

LAC Minerals LLC (USA) (LAC) with technical support from John Shoemaker & Associates Inc. (JSAI) is providing the below responses to comments on the Amendment to Application for Revision 20-1 and Proposed Cost Estimate for the Cunningham Hill Mine received from New Mexico Mining and Minerals Division (MMD) and New Mexico Environment Department (NMED) on June 13, 2023.

LAC recognizes MMD's assertions that certain financial assurance costs should be accounted for in the cost model for SF002RE however LAC strongly feels that the appropriate place to account for these costs is in the DP-55 model.

Accordingly, in addition to the responses, LAC is providing a DP-55 cost model updated to include additional financial assurance in the following amounts.

- \$103,834 (contract amount) scheduled in 2026 for waste rock pile bench regrading.
- \$371,976 (quote based) scheduled at 5% of the total every 5 years for the next 100 years for contingency cover placement/repair.

As LAC had no objections to removing the NPV analysis for these costs the changes represent an increase of \$475,810 in the financial assurance over the initial proposal, resulting in an overall new proposed financial assurance across DP-55, SF002RE, and AP-27 of \$9,609,559. An increase of approximately \$6.3 Million over current financial assurance.

Agency comments are provided in **bold** font followed by LAC's responses in standard text.

### **MMD** Comments

1. The costs associated with the contingency plan for 8 acres of cover material to be placed on the waste rock pile (also referred to as the *borrow material location study*) are considered earthwork/revegetation costs and should be addressed under Permit No. SF002RE. These costs are not eligible for a Net Present Value (NPV) analysis. MMD will require that these costs be accounted for under the Permit No. SF002RE cost estimate.

Contingency placement of 8 acres of cover material on the WRP was an option arrived at to address concerns resulting from the July 2019 JSAI report on an investigation to improve source controls for the WRP. The investigation was undertaken to identify alternatives for reducing the source of acid rock drainage at the toe of the WRP and is based on the long-term DP-55 site-wide performance standards for erosion control and maintenance of drainage channels and diversion structures. The recommendation from the report pertinent to including 8 acres of contingency cover material in the cost estimation is for the installation of additional cover where rills have locally eroded cover material from the slopes of the WRP during abnormal flash flood events over the 100-plus year span of DP-55. Including these costs in the SF002RE would not be consistent with either the criteria used to develop the recommendation, or the intended use for intermittent as-needed repair as reflected in the schedule for the spend in the cost model (5% of total cost every 5 years for the next 100 years). For these reasons, LAC feels strongly that the appropriate place to account for the financial assurance for this work is in the DP-55 but has no objections to removing NPV analysis.

To alleviate any concerns about the costs being related to earthworks from a borrow source onsite that would subsequently be required to be reclaimed and therefore need to be included in the SF002RE, LAC has included additional costing to commercially source borrow material from offsite in the DP-55 cost model for this repair work.

2. In the *Waste Rock Dumps* tab of the Permit No. SF002RE SRCE spreadsheet, there are no revegetation costs reported for the waste rock pile. As LAC has not yet demonstrated that the waste rock pile has met MMD revegetation standards pursuant to Permit No. SF002RE, LAC is required to provide financial assurance to address the revegetation costs for the waste rock pile and any other disturbed areas that have not yet been released from the New Mexico Mining Act.

While the bond release has not yet been completed, interim revegetation monitoring is an ongoing requirement performed every three years. The Cunningham Hill Reclamation Project 2020 Revegetation Evaluation Report prepared by Cedar Creed indicates all but the smallest unreleased monitoring area, Sludge Cell 2, exceeded the three performance criteria of vegetative ground cover, species diversity, and woody plant density for revegetation bond release. Sludge Cell 2 measures 0.33 acres (less than 1% of the total unreleased area) and met or exceeded the performance criteria for all but woody

plant density. Based on the 2020 Report and previous interim monitoring activities there is no reasonable expectation that revegetation of any relevant amount will be required or should be included in the financial assurance at this time.

3. Please provide a figure depicting the location of the proposed borrow area for the 8 acres of cover as contingency on the waste rock pile. The "Quarries and Borrow Pits" tab in the DP-55 cost estimate accounts for only one acre of disturbance for the borrow area, and a haul distance of 5,100 ft (found under the "Waste Rock Dumps" tab). These numbers seem low. Confirm that the haul distance and borrow area size is correct based on the location of the borrow area and anticipated depth (volume) of borrow material.

As discussed in the response to MMD Comment 1, LAC has included costing for the commercial sourcing and transport of borrow material for cover repair from offsite which eliminates the need for an onsite borrow area and associated distance/area/volumetric estimations for inclusion in the cost model for financial assurance. These lines have been updated in the DP-55 cost model accordingly.

### Waste Rock Pile Bench Regrade Request

4. MMD and NMED have responded jointly to address the Waste Rock Pile Bench Regrade Request on May 17, 2023. LAC must provide adequate financial assurance to address the Waste Rock Pile Work Plan that was conditionally approved on October 14, 2022. MMD will require that these costs be included in the cost estimate for Permit No. SF002RE and are not eligible for NPV analysis.

Like the response to MMD Comment 1 and as discussed in Condition 2 of May 19, 2023, Joint Agency Approval of Postponement of Bench Regrade letter, the approved Waste Rock Pile Work Plan was developed to maintain performance standards as outlined in DP-55 and has the ultimate purpose of long-term protection of groundwater and surface water from ARD impacts from the WRP. Including these costs in the SF002RE cost model would not be consistent with either the criteria used to develop the work plan or the ultimate purpose that the plan is intended to achieve. For these reasons, LAC feels strongly that the appropriate place to account for the financial assurance for this work is in the DP-55 cost model but has no objections to removing NPV analysis.

#### Agency Comments

- 5. Refer to the April 10, 2023, NMOSE comment letter (attached).
- a. Provide justification of what inflows/outflows are used to describe the major decreases and increases in the pit lake elevation "no-diversion" line (e.g. 1996 and 2005), particularly before 2006.

The pit lake elevation no-diversion line is derived from the detailed groundwaterflow model developed in support of AP-27. The model has been updated and is subject to agency approval over time as required by AP-27 permit conditions. Model-simulated components are as follows:

Open pit inflow

- Precipitation (onsite weather station)
- Groundwater inflow (from model calibration)
- Upper Cunningham Gulch surface water diversions (metered)
- Added water source (Residue Pile and Guest House wells metered pumping)

Open pit outflow

- Evaporation (estimated from climate and Class A pan data)
- Groundwater outflow (from model calibration)
- Pumping (directly from the open pit or from dewatering wells, metered)

A table of metered inputs and pumping is attached. In summary the reasons for notable (+/- 4 ft) changes in pit water levels are as follows:

- 1. Notable decreases in open pit water levels are related to engineered controls for pumping related to NMED permit requirements (reclamation and RO treatment).
- 2. Notable increases in open pit water levels are related to natural precipitation events or groundwater inflow after pumping.

Also noteworthy is that inputs from Residue Pile extraction well pumping averages about 3 ac-ft/yr, which is insignificant to the water budget and water-level response, at most it offsets a fraction of pit water surface evaporation that would otherwise be offset by groundwater inflow.

#### b. Is the pit lake elevation being manipulated over time in order to follow the "nodiversion" line, or are the pit lake elevation changes due primarily to natural causes (i.e. storm events, evaporation changes, etc.)?

Pit lake elevation is in no way being manipulated to follow model-simulated nodiversion pit lake elevations. As similarly summarized above, observed changes in pit lake elevation are primarily due to natural causes but are also influenced by pumping related to the agency-required reclamation and pit lake treatment.

Actual pit lake elevation closely following simulated no-diversion pit lake elevation is the result of a properly calibrated model and lower than anticipated inflow from Upper Cunningham Gulch into the open pit. Diversions to facilitate inflow were constructed in 1999 as a part of the existing reclamation plan to raise open pit water levels and create a sustainable ecosystem. Open pit water levels not increasing as anticipated due to the lack of inflow is a primary reason for performing a closure-closeout plan update and is also why a Pit Wavier was required. Recognizing that LAC's responses are a departure from MMD's preferred options, please don't hesitate to contact me with any questions or to arrange a meeting to discuss any points in detail at (775) 934 - 1766 or <u>eburch@barrick.com</u>.

Regards,

Tic Burch

Eric Burch Project Manager

Attachments: CHMRP–NMED DP-55 Financial Assurance Cost Estimate Model Update CHMRP 2020 Revegetation Evaluation Report CHMRP Open Pit Pumping Summary

EC: Daniel Lattin David Ennis Kevin Myers Anne Maurer Joseph Fox Brad Bingham Gabriel Wade Eric Jantz Mara Yarbrough Tom Parker Ross Lockridge Dennis Kurtz Jon Indall Elizabeth Rudolf Steve Finch