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



November 16, 2012

Mr. Tom Day Rio Grande Silver, Inc. 112 E. 12th Street Creede, CO 81130 John W. Hickenlooper Governor

Mike King Executive Director

Loretta E. Piñeda Director

Re: Bulldog Mine, Permit No. M-1977-215, Technical Revision TR-20, Request for Change of "Core Shed" Building, Approved. (Letter Revised)

Dear Mr. Day,

Thank you for providing adequate responses to the Division's questions regarding the proposed changes to a portion of the recent Technical Revision TR-20, specifically, changing the location of the core shed that is planned to be built. The Division agrees that placement of the core shed in this revised location will result in less overall disturbance than the originally approved plan. (This is a revised approval letter.)

The questions that arose from the Division's analysis of your request for this change, plus your responses (*italicized*), are shown below:

Question 1: Cross-section A-A' shows more cut than fill, but that's just along one cross-section. Do you anticipate approximately balanced cut and fill volumes? If not, will fill need to be hauled in or will cut material need to be disposed of somewhere?

Response: There is anticipated to be a slightly greater amount of cut than fill. We plan on screening the cut material with a Grizzly and using everything that is 3" and less in the fill area. We are planning to take the excess material to the Bulldog Decline dump. Any additional balance of smaller materials needed for the fill area will be back-hauled from the portal excavation area and used for fill behind the retaining wall. The filled area will be utilized for additional parking as previously noted.

Question 2: Looking at the diagram, the NE end of the retaining wall does not seem to tie into the existing hill slope topography, as it does on the SW end. Will the wall simply end there, or will it curve into the slope closer to the affected area boundary? Please modify the drawing if needed.

Response: The drawing accurately reflects what we intended to do at the NE corner. It will end as shown. From an engineering standpoint, we feel comfortable that the Geofabric return on the slope will hold everything stable. There is a natural drainage gully immediately East of the end of the wall that we did not want to disturb. The actual contours at that end would require a substantially larger wall due to existing conditions if we were to continue it beyond there. We will dress the area at this end of the wall with larger rocks and provide an erosion—control treatment consisting of straw waddles immediately below the fill area and seed it for final stabilization.

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Question 3: How will the changed runoff be controlled?

Response: The runoff will be directed towards the southern end of the retaining wall. We already have a natural depression there with an existing sump and straw waddles to provide check dam for run-off.

Question 4: The retaining wall, as presented, is a 10-foot tall structure of stacked blocks with minimal amount of interlocking. Will there be any type of anchoring into the hill/fill material to keep it from toppling outward? If not, would it be built slightly inclined into the hill, say at 30 degrees from vertical, to offset the outward pressure on a vertical wall? If anchors (such as deadmen) or pilons are part of the design, or if the angle of the structure needs to change, please modify the drawing with your explanation.

Response: The wall blocks are interlocking concrete blocks. The intent is to use geo fabric to pin the wall back to the level area at the existing parking lot grade. We will provide a stamped engineered drawing to confirm the wall construction stability. We are waiting to determine the exact location and height based on how easy it is to cut into the hillside.

Question 5: The cut material removed behind the core building is thought to be bedrock, so is presumed to be competent enough to stand as a steep surface, correct? Or if not, are any cut slope treatments anticipated to be necessary to stabilize the slope?

Response: The cut behind the building is definitely anticipated to be solid. No cut slope treatment should be necessary. However, if it is we will address it in the final as-built and adjust accordingly for bond requirements.

The Division appreciates your prompt and adequate responses concerning these small changes to the revision. We also look forward to receiving the as-built diagrams and photos of the structures as they are constructed. The bond increase for Technical Revision TR-20 has already been received and accepted by the Division. The approved changes described in this letter do not involve further bond increases. As such, the bond is sufficient and the Division grants approval for Rio Grande Silver to proceed with the revised plan.

If you have any questions, please contact me at the Division's Durango Field Office: 691 CR 233, Room A-2, Durango, CO 81301; telephone 970-247-5193.

Sincerely,

Bob Oswald

Environmental Protection Specialist

Ec: Russ Means, DRMS Grand Junction Randy McClure, Rio Grande Silver

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