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Cripple Creek & Victor Gold Mining Company  
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September 12, 2017

SENT CERTIFIED RETURN RECEIPT REQUESTED  
7015 1660 0000 0779 9611

Mr. Timothy Cazier, P.E.  
Environmental Protection Specialist  
Colorado Department of Natural Resources  
Division of Reclamation, Mining and Safety  
Office of Mined Land Reclamation  
1313 Sherman Street, Room 215  
Denver, Colorado 80203

**Re: DRMS Permit No. M-1980-244; Cresson Project; Cripple Creek & Victor Gold Mining Company CC&V; – HGM to SGVLF Solution Line – TR#92 – Response to Preliminary Adequacy Review**

Dear Mr. Cazier:

On July 19, 2017, the Cripple Creek and Victor Gold Mining Company (CC&V) submitted Technical Revision No. 92 (TR-92) which proposes rerouting excess High Grade Mill (HGM) solution from the injection wells located on the Arequa Gulch Valley Leach Facility (AGVLF) to an infiltration gallery or into drip lines located on the Squaw Gulch Valley Leach Facility (SGVLF). On September 1, 2017, CC&V received the Preliminary Adequacy Review letter from the Division of Reclamation, Mining and Safety (DRMS). CC&V has reviewed DRMS' review letter; CC&V has included DRMS' questions in italics with CC&V response provided below in bold.

- A. *Background (p. 1) – The text states the “chemistry of the solution is essentially the same as the solution circulating within the VLFs”. Additional text on p.2 indicates placing the proposed 4-inch HDPE line “on lined facility its entire route” eliminates “any potential impacts to the environment”. Furthermore, Attachment 2 shows two flatter sections of the proposed alignment (Approximately Station 3+50 to 4+00, and ~9+25 to 10+00). On April 12, 2012 a spill occurred in the vicinity of the perimeter safety berm overlying the anchor trench at the toe of the Phase V VLF. The spill occurred in an area where the edge of the VLF liner is relatively flat (as is the pipe conveying process solution). It was later determined the manganese precipitate in the pipe may have contributed to restricting the flow causing the leak. The extent of the liner was also implicated. This leak did have the potential for environmental impact as the spill went off liner. Please discuss how this proposed pipeline, seemingly similar to a situation that did have potential for environmental impact is “eliminated” in this proposed change.*

**CC&V Response:** The release mentioned above occurred on the northwest side of Phase 5 adjacent to the crusher access road. There is a major drain tile in this area that collects pregnant solution from the whole northern end of Phase 5. When the release occurred the drain tile was partially exposed, allowing air into the system, thus increasing oxidation. The topography in this portion of Phase 5 is relatively flat, which has resulted in drainage issues. The slow moving or stagnant solution allowed manganese to precipitate. When the release occurred pregnant solution was backing up in the drain tile pipe and

began to seep out. Solution flowed along the edges of the drain tile to more permeable areas, but because the topography was so flat some of the solution spilled off liner. Since the release, the liner in this area has been extended up the hill side and other measures have been put in place to prevent this from occurring again.

The modification/scenario in this TR is very different from the referenced 2012 event. The proposed pipe is solid smooth-wall HDPE and is open to the atmosphere at the discharge end which is over 150 feet below the inlet. The pipe will not seep, leak, or burst from over pressuring. The two flat areas in question are small benches; one is located on the south side of the HGM platform and the other is located where the SGVLF bench access roads intersect. The pipe will not be flat in either one of these locations. Actual slope dimensions combined with the limited flexibility of the pipe will ensure the pipe is sloped downhill in the upper section near the High Grade Mill. The pipe will be partially buried on the lower segment to maintain a downhill gradient. Unlike Phase 5, drainage around both of these areas is sufficient and all drains directly towards the center of SGVLF.

The HGM solution is used in the leach circuit at the HGM, some of the solution is recycled in the process, and the excess solution is currently added to the AGVLF. In regards to the chemistry issue previously observed, the precipitation issues at the AGVLF are the result of many different solutions being mixed and continuously circulated through the AGVLF, causing isolated areas where precipitation occurs. The HGM solution will not be recycled through the process multiple times and no other solutions will be mixed in causing changes in chemistry; it will only be HGM discharge. The chemistry of the HGM solution is such that it will not cause precipitation within the SGVLF. When it was stated that this solution is similar to the leach solution CC&V was referring to pH, alkalinity and cyanide concentrations.

- B. Modifications to the approved plan (p. 1) – Please clarify whether the proposed four inch HDPE pipeline is to be smooth or corrugated on the inside.*

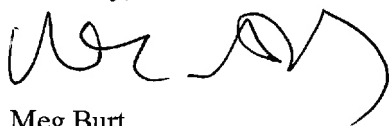
**CC&V Response:** The pipe will be solid smooth-wall HDPE DR11.

- C. Modifications to the approved plan (p. 2) – A statement is made to the effect that maintaining a similar solution application rate for the proposed infiltration gallery (as compared to the rest of the pad) so as to not adversely impact the stability of the pad. Please quantify the two application rates so the DRMS can is not required to assess a qualitative comparison.*

**CC&V Response:** Normal leach application rates are in the range of 0.003-0.006 gallons per minute (gpm) per foot (ft)<sup>2</sup>. Infiltration rates proposed in this TR will be on the order of 1 gpm/ft<sup>2</sup>. This application rate is approximately 1/10<sup>th</sup> of the application rate for the current injection wells and is less than 1/100<sup>th</sup> of rates demonstrated to be stable in the Geotechnical Stability Report submitted in TR-79.

Should you require further information please do not hesitate to contact Tyler O'Donnell at 719.689.4056 or [Tyler.O'Donnell@newmont.com](mailto:Tyler.O'Donnell@newmont.com) or myself at 719.689.4055 or [Meg.Burt@newmont.com](mailto:Meg.Burt@newmont.com).

Sincerely,



Meg Burt  
Senior Environmental Manager  
Cripple Creek & Victor Gold Mining Co

MB/tvo

Ec: T. Cazier – DRMS