FLSmidth Salt Lake City Inc. 7158 S. FLSmidth Drive · Midvale, UT 84047 · USA Tel +1 801 233 5600 · Fax +1 801 233 5601 www.fismidth.com



DATE: July 10, 2012

ATTN: Mr. Ron Roberts Cripple Creek and Victor Gold Mining Co. P.O. Box 191 Victor, CO 80860

SUBJECT: Mill Foundation/ Liner Analysis

Dear Ron,

FLSmidth has done the analysis for the Ball and Rod Mill foundations as part of the High Grade Mill Ore Project for Cripple Creek and Victor Gold Mining Inc. To provide containment for the mill site, the entire site is underlain with a geomembrane liner. There have been some concerns about the loading that the mills will impose onto this liner and whether the integrity of the containment will be compromised.

FLS has analyzed the vibration of the Mill foundation using the software package Dyna 6.0, which analyzes foundations for dynamic loading. Using this software, with the soil properties as given by AMEC and the foundation as currently designed, FLS has determined the system stiffness and damping values, and the resultant deflections. The result of this analysis is that the maximum amount of vertical movement due to dynamic forces alone will less than be 1/16". The lateral movement due to dynamic forces will be less than 0.005 inches.

Both of the mills are supported from a 4'-0 thick mat foundation. The maximum bearing pressure on the mat is less than 4000 psf, while the average soil bearing pressure on the mat is 2000 psf. These values are much less than the 6000 psf allowable bearing pressure given by AMEC. It is expected that the total deflection of the mill mat will be less than 1", with less than 5/8" differential settlement. This is according to the information given by AMEC, assuming all fill is properly compacted.

To prevent any leaks that may occur due to foundation settlement waterstops have been placed between the slab and pedestals throughout the mill building. The waterstops will allow for ³/₄" differential settlement without compromising the primary containment.

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The design and analysis of the liner has been done by AMEC and is not part of **FLS**midth scope. However, it is our opinion that the loading imposed on the liner will not affect the integrity of the liner system.

Sincerely,

Ed Summers, P.E.

