COLORADO
Division of Reclamation, Mining and Safety
Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

February 5, 2016

Mr. Jack Henris
Cripple Creek & Victor Gold Mining Company
100 N. 3rd Street
P. O. Box 191
Victor, CO 80860

Re: Cripple Creek & Victor Mining, Co., Cresson Project, M-1980-244;
Review Comments for Quality Assurance Monitoring & Test Results Final Report for Squaw Gulch VLF Phase 1 (9,550 Bench to Completed Areas Outlined on Figure 2)

Dear Mr. Henris:

The Division of Reclamation, Mining and Safety (Division) has partially completed the review of the Quality Assurance Monitoring and Test Results for the Squaw Gulch VLF Phase 1 (9,550 Bench to Completed Areas Outlined on Figure 2) dated January 2016 and supplemental documents provided in hard copy and/or electronic format on January 28, February 1st, 2nd and 3rd. Pursuant to Rule 7.3.1(5), no chemicals used in the extractive metallurgical process or toxic or acid-forming materials … shall be placed in constructed facilities until the Board or Office accepts the certification of the facility, or phase thereof, that precedes placement. The following comments need to be addressed prior to the Division accepting the submitted report:

The following summarizes concerns from the initial review of the report, the current status, and additional deficiencies that remain:

1. Discrepancies in report documentation and the record of construction (ROC) drawing cause uncertainty in exactly what portion of the liner is being certified:
    a. The header in the report text and Diagram 1 on p. 2 implies the certified liner is from "9,550-foot Elevation Bench to Geomembrane Panel P1635". Amec's emailed February 1 letter (followed by a hard copy delivery on February 3) response to this issue helped clarify the situation along with their responses to Comments 1.b and 1.c below. **No further response is necessary**.
    b. The ROC drawing (6 of 6) in Appendix A provides panel numbers for an estimated 1715 panels. There are three different shades of grey text used to label these panels and no legend or note describing the different meanings of these different shades. In addition, the title block refers to Figure 2 in the report text. Besides the fact that a record of construction drawing should be stand alone and should definitely not refer to a figure in a report, the aforementioned figure does not have enough detail to clarify what part of the liner is being certified. Amec's emailed February 1 letter (followed

by a hard copy delivery on February 3) response to this issue added a legend to the drawing clarifying the panels to be certified. However, the Division is re-emphasizing record of construction (ROC) drawings should not reference a figure for the purpose of defining the extent of that which is to be certified. **No further response is necessary**.

c. The Division attempted to clarify what is being certified by comparing figures in the weekly reports submitted as Appendix D with ROC drawing 6. The Division could not find a "Weekly Liner Acceptance Form" figure that matched the **BOLD** labeled panels on ROC drawing 6. Further review of weekly report SLF, DCF and subgrade acceptance figures provided no clarification either. Amec's emailed February 1 letter (followed by a hard copy delivery on February 3) response to this issue was adequate. **No further response is necessary**.

2. The Division was unable to locate specifications, record of construction drawings or certification reports for the 14-inch barren solution steel pipe that the Division understands is intended to be used to pump barren solution from the Carlton ADR (aka ADR1) to the Squaw Gulch Facility in the near future. As this pipeline is a pumped system, it has the potential to operate under pressure, and given its proximity to the edge of liner, the Division has determined that Rules 7.3.1(5) and 7.3.2(2) apply requiring a certification report prepared by a professional engineer or other appropriately qualified professional that will confirm that the facility (pipeline) was constructed in accordance with the approved design plan (i.e., drawings and specifications approved in MLE2/AM-10). The Division will require submittal of and acceptance by the Division prior to allowing the use of the 14-inch steel pipe to pump designated chemicals. On February 1, 2016 CC&V emailed the Division a letter (dated January 29, 2016) certifying the 14-inch steel pipeline was constructed to specifications. On February 1, 2016, the Division received an electronic copy of specifications which were certified as being met (dated January 29, 2016). Additional information clarifying the 14-inch steel pipe alignment (Drawing "Barren Solution Pipeline D, As Constructed") over certified geomembrane panels was received February 2, 2016 via email. The Division has two items that need to be resolved to adequately demonstrate the 14-inch steel pipe was constructed in accordance with the design plan:

   a. TR-76 proposed a sleeve be installed over the unlined portion of the 14-inch barren solution steel pipe alignment between the Mill Platform Drainline Containment Area and the Squaw Gulch VLF Liner Limit. The Division has verbally requested a ROC drawing demonstrating the required 10+ feet of overlap over the two liner limits. This ROC drawing must be stamped by the engineer of record.

   b. The aforementioned "Barren Solution Pipeline D, As Constructed" received electronically on 2/1/2016 was not stamped by the engineer of record. Please provide a stamped version as a ROC drawing.

3. The Division noted a discrepancy between the hard copies of this report and the electronic/pdf copy. In the electronic/pdf version of Appendix M, the ROC drawings for the Underdrain GCL panel layout (Appendix M.1) and the underdrain LLDPE panel layout (Appendix M.3) are both labeled "DRAFT"; whereas the hard copies are issued as ROC drawings and stamped by a professional engineer. Amec's emailed February 1 letter provided the corrected electronic (pdf versions) of these drawings. **No further response is necessary**.

4. The aforementioned "Barren Solution Pipeline D, As Constructed" drawing shows approximately 45 lineal feet of the pipe crossing geomembrane panels P1387 and P1388 which are not to be certified until some future date (according to both this drawing and ROC drawing 6 of 6). The Division understands from weekly construction reports and conversations with mine personnel that these two panels and the soil liner fill (SLF) below them meet specifications, but are not certified constructed at this time because the edge of these geomembrane panels must be left exposed to accommodate future construction. However, pursuant to Rule 7.3.1(5), this area must be certified as meeting the design plan prior to conveying designated chemicals. CC&V has verbally agreed to address this discrepancy with appropriate documentation to assure the Division and the record that the liner in the area of panels P1387 and 1388 meets the design plan.

5. The Division's review of Appendices I.5 and M.5 (40-mil and 80-mil Geomembrane - Roll Quality Control Certificates, respectively) demonstrate a failure to meet the specifications (Section 02776.0 Geomembrane) for thickness approved as part of MLE2/AM-10. Specifically:

   Appendix I.5 - 40-mil LLDPE Smooth Geomembrane - Roll Quality Control Certificates:
   - Roll # F14D402025, Lot # CEH810040: Thickness Measurement MIN = *37 mil*
   - Roll # F14D402026, Lot # CEH810040: Thickness Measurement MIN = *37 mil*
   - Roll # F14D403032, Lot # CEH810040: Thickness Measurement MIN = *37 mil*

   According to **Appendix E - Technical Specifications** - Section 02776.0 Geomembrane - Typical Properties - TABLE 2.01-A, Thickness MIN (lowest individual value) for 40 mil LLDPE is *38 mils*.

   Appendix M.5 - 80-mil LLDPE DSMS Geomembrane Roll Quality Control Certificates:
   - Roll # 429780-13, Lot # CDE810570: Thickness Measurement AVE = *78 mil*
   - Roll # 429782-13, Lot # CDE810570: Thickness Measurement AVE = *78 mil*
   - Roll # 430103-13, Lot # CDE810570: Thickness Measurement AVE = *78 mil*

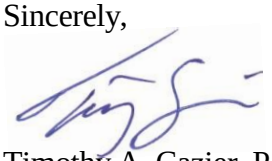
   According to **Appendix E - Technical Specifications** - Section 02776.0 Geomembrane - Typical Properties - TABLE 2.01-A, Thickness MIN AVG (minimum average roll value) for Smooth or Textured 80 mil LLDPE is *80 mils*.

   The Division understands industry standards may have changed, but this does not relieve CC&V from their obligation to meet the approved design plan. CC&V has verbally agreed to demonstrate the current industry standard is equivalent to the approved thickness specifications. Please provide documentation to demonstrate equivalency. (*Note: if this condition or circumstance arises in the future, a Technical Revision must be submitted to revise and/or modify the approved specifications*.)

6. Appendix D, Weekly Reports: the Report for Week Ending October 10, 2015 is missing a signature for CC&V Projects review. Please provide a CC&V Projects review signed and dated copy of this weekly report.
7. Underground workings remediation: Weekly reports included in this report summarize underground working remediation activity (e.g., Week Ending: November 14, 2015), yet no underground workings remediation certification section was included in this report. Please confirm no underground workings remediation occurred within the area to be certified by this report.

If you have any questions or need further information, please contact me at (303)866-3567 x8169.

Sincerely,



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