



September 1, 2020

Richard Mittasch
Calais Resources Colorado, Inc.
P.O. Box 3395
Nederland, CO 80466

RE: Cross Gold Mine, Permit No. M-1977-410, Technical Revision No. 8 (TR-08), Preliminary Adequacy Review

Mr. Mittasch:

On August 25, 2020, the Division of Reclamation, Mining and Safety (Division) received your Technical Revision application (TR-08) for the Cross Gold Mine, addressing the following:

To provide a detailed plan for the rehabilitation and replacement of the liners of Ponds 3A, 3B, and 3C at the Caribou mine as well as additional improvements to the water treatment system.

After reviewing the materials submitted, the Division has identified the following adequacy items that must be addressed before an approval of TR-08 can be issued:

- 1) On Figure 1 – Water Management System, please address the following:
 - a. Please identify the approved Permit Boundary as such and not as “SWMP boundary”.
 - b. Please identify the location of the discharge point on Coon Track Creek that is monitored under the NPDES permit.
 - c. Please identify the location of the proposed lime feed and control building.
 - d. Please clarify if Pond 3C is shown at its current dimensions or at its proposed expanded dimensions.
- 2) Figure 1 – Water Management System shows Ponds 3A-C, especially Pond 3A, to be located very close to the approved permit boundary in that area. Does the operator believe there is enough room present around these ponds to complete the rehabilitation project proposed in this revision? Please be advised, any disturbance that occurs outside of the approved permit boundary would be considered offsite damage for which enforcement actions may be pursued. If additional space is required, the permit area must be expanded through the Amendment process.
- 3) Please address the following items regarding the sludge present in Ponds 3B and 3C:



- a. On page 4, the operator states there is a small amount of sludge settled in the bottom of Ponds 3B and 3C that was left over from treatment 34 years ago. Please provide an estimated volume for the sludge present in these ponds.
 - b. On page 4, the operator states that multiple samples (of the sludge) have been tested through Colorado Analytical for their metals concentration as well as toxicity. The laboratory results provided appear to be for a composite sample. However, the operator does not specify how many samples were collected from the sludge in each pond, and how the sampling plan was developed to sufficiently characterize this material. Please provide more details on the sampling process utilized and how this process produced representative samples for adequately characterizing the sludge.
 - c. The laboratory results provided for the sludge show a total lead concentration of 253.8 mg/kg, which is more than 20 times the toxicity characteristic leaching procedure (TCLP) regulatory limit. To be exact, the lead concentration in the sludge is 153.8% more than 20 times the TCLP limit for lead, which is 100 mg/kg. This means the sludge may be a hazardous waste and should be handled as such until further testing, using the TCLP analysis, confirms the waste's toxicity characteristic results. Please commit to collecting representative samples of the sludge, having a TCLP metals test run on these samples for arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver, and reporting the results of the TCLP test(s) to the Division prior to handling the sludge.
 - d. Please provide a disposal plan for the sludge in the event the TCLP results indicate the material is a "toxicity characteristic" hazardous waste. The operator may wish to contact the Hazardous Materials and Waste Management Division of the Colorado Department of Public Health and Environment to determine proper disposal of this type of waste.
- 4) Please provide a maintenance plan for the sediment ponds, including inspection frequency, sludge removal and disposal, vegetation management, and monitoring the condition of inlet/outlet pipes and other associated infrastructure.
 - 5) Please provide a reclamation plan for the sediment ponds and associated infrastructure. Will the liners on the ponds be removed, and the ponds backfilled, retopsoiled, and revegetated? Will the pipelines, sheds, and other associated infrastructure be removed for reclamation? Do the sheds have concrete foundations or any other permanent features which will require demolition for reclamation? Are there any portions of the pipeline which are buried and require excavation for reclamation? If the operator proposes leaving any features and/or structures for reclamation, please describe how this would be consistent with the approved post-mining land use of forestry with minor residential use, and with county land use and zoning regulations.
 - 6) Please provide estimated costs for reclaiming the features/structures described in Item #5 above, including approximate material volumes, haul distances, dimensions of structures to be removed/demolished, and the approximate distance to any proposed disposal location(s) on and/or off site. This information is necessary for the Division to calculate the required financial warranty for reclaiming these features/structures.

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This completes the Division's preliminary adequacy review of the materials submitted for TR-08. The decision date for TR-08 is currently set for **September 24, 2020**. If additional time is needed to address the adequacy items, an extension request must be received by our office prior to the decision date.

If you have any questions, you may contact me by telephone at (303) 866-3567, ext. 8129, or by email at amy.eschberger@state.co.us.

Sincerely,

A handwritten signature in blue ink that reads "Amy Eschberger". The signature is written in a cursive style with a large initial "A".

Amy Eschberger
Environmental Protection Specialist

Cc: Michael Cunningham, DRMS