

July 7, 2023

Mr. Ben Langenfeld, P.E.  
Lewicki & Associates, PLLC  
3375 West Powers Circle  
Littleton, CO 80123

**Re: Adequacy Review No.2, Conversion Application (CN-1), Gold Hill Mill, Permit No. M-1994-117**

Mr. Langenfeld:

On May 18, 2023, the Division of Reclamation, Mining and Safety (Division/DRMS) received your responses to the Division's Preliminary Adequacy Review letter dated March 27, 2023. After review of your responses the Division has identified the additional items that need to be addressed.

The following items will need to be addressed to the Division's satisfaction prior to the decision date. If you are unable to satisfactorily address any concerns identified in this review before the decision date, it will be your responsibility to request an extension of the review period. If there are outstanding issues that have not been adequately addressed prior to the end of the review period, and no extension has been requested, the Division may deny this application. In order to allow the Division sufficient time to review your responses to the adequacy issues, please submit your adequacy responses to the Division no later than three (3) weeks prior to the decision date. Subsequent to receipt and review of the Applicant/Operator's response to these items the Division may identify additional adequacy items. Please respond to this Adequacy Review No. 2 with the requested additional/updated information on permit replacement pages (as necessary) and summarize each response in a cover letter titled "Adequacy No. 2 Responses; M-1994-117".

For this review the Division will respond the original numbered item contained in the PAR letter. The Division will note if the Applicants responses to the numbered item was adequate or if additional follow-up is needed. Additional follow-up questions to numbered items will have the same number as the original question followed by a, b, or c. Additional new questions will follow at the end of the letter with a numeral starting with the next numeral from the last question in the PAR letter.

**EXHIBIT A – Legal Description (Rule 6.3.1):**

**1. Adequate.**



**EXHIBIT B – Site Description (Rule 6.3.2):**

2. Adequate.
3. Adequate.
4. Adequate.

**EXHIBIT C –Mining Plan (Rule 6.3.3):**

5. Adequate.
6. Adequate.
7. Please clarify what the stockpiles located south and west of the Mill Building are composed of.

**Applicants Response**

Stockpiles of material intended for milling at the Gold Hill Mill are present to the south and west of the mill building. These piles of material will be processed by the mill as ore upon mill restart as they came from the Cash Mine. The volume and location of these stockpiles can be seen on Map E-2.

**DRMS Follow-up**

- 7a. Do the ore stockpiles, consisting of 5,000 cubic yards, have any secondary containment and have they been placed directly on the existing ground surface?
8. Table U-3 on page U-13 does include the Synthetic Precipitate Leachate Procedure (SPLP) results however, it does not identify the location from which the sample was taken. Please identify the ore material the SPLP sample was collected and describe how the sample was collected. Please note the text on page U-12, last paragraph, needs to be updated as it incorrectly identifies Table U-2 as being the SPLP results.

**Applicants Response**

See the updated tables and appendices in the revised Exhibit U.

**DRMS Follow-up**

- 8a. The table on page U-15 needs additional clarification. Are the results presented on this page still a combination of Cross Mine and Cash Mine samples or just Cross Mine sample results? Please identify the origin of each sample.
9. Adequate.

10. Has the Applicant collected any water samples from the Times-Wynona Mine pool to date? Please note the mine pool will need to be included into the quarterly sampling of groundwater and surface water at the site.

**Applicants Response**

The most recent sample of the Times-Wynona Mine pool was collected in 2021. A copy of the sample results has been included in the revised conversion document.

**DRMS Follow-up**

- 10a. The Division was unable to determine where the water sample results were located within the submittal. Please provide the results of water samples collected from the Times-Wynona mine pool.

11. Adequate.

12. From materials provided by the Left Hand Ditch Company in their objection, part of the water right decree states that 20 acres of irrigated land will need to be dried up to allow for the Applicant to withdraw water from Left Hand Creek for any one year. Please state the current condition of those 20 acres, e.g. currently irrigated, developed or other? If the acreage is still irrigated the Applicant needs to propose a method of demonstrating compliance that the 20 acres are dry during any year that water is withdrawn from Left Hand Creek.

**Applicants Response**

Colorado Milling Company is assembling a response to Left Hand Ditch Company, directly. A copy will be provided to CDRMS under separate cover.

**DRMS Follow-up**

- 12a. Please provide an update on this item, as the submittal remains outstanding.

13. Adequate.

14. Adequate.

15. On Map E-2 the ore processing area needs to be shown.

**Applicants Response**

All ore processing will take place within the mill. Ore will only be stored on an ore pad in the Stockpile Area prior to loading into the mill.

**DRMS Follow-up**

- 15a. Ore Storage Pad the needs to include sumps to prevent potential acid generating material from leaving the pad due to water erosion. Please update Map E-2A to include a sump(s).

16. Adequate.

**Appendix C-2:**

17. Adequate.

18. Please provide a sampling and analysis plan (SAP) that addresses how various media samples will be collected, how monitoring will be done during sampling (groundwater and surface water), and what QA/QC protocols will be followed. The Division recommends developing Standard Operating Procedures (SOPs) to include in the SAP to insure samples are collected in a consistent manner over the life of the permit. Additionally individual tables need to be developed demonstrating what analytes each media is being sampled for and the analytes corresponding limit it is being compared to.

**Applicants Response**

Appendix C-2 has been revised to cover all sampling to be conducted at Gold Hill Mill. Please see the revised Appendix C-2.

**DRMS Follow-up**

**18a.** The Sampling Plan lacks sufficient detail and needs to be revised. There is no discussion in the sampling plan regarding Quality Assurance and Quality Control (QA/QC) sampling (e.g., rate of collection of duplicate samples, rinsate blanks, and field blanks). Please update the sampling plan to address how QA/QC sampling will be conducted at the site for surface water, groundwater, and soil/sediment sampling. Additionally, the plan needs more detail to ensure that sampling can be completed in an accurate and repeatable manner throughout the life of the permit. Details such as collection of field parameters during monitoring well purging, which field parameters will be monitored, filtering of samples, recording of groundwater levels prior to purging, and use of field sheets to record field sampling data on, to be submitted along with sample results, on quarterly basis. Again, the Division recommends developing Standard Operation Procedures to aid sampling consistency during the life of the permit.

While the Applicant has stated the groundwater and tailing pond analytes are going to be the same as were approved in TR-9 and AM-1 the Division does not agree. In TR-9 the analytes were reduced because the mill was no longer in operation and AM-1 expanded the permit boundary. The application currently under review would allow for milling operations to resume and this is a fundamental change to the current conditions at the site. The Division will require the Applicant to analyze groundwater and tailings pond samples for the most stringent of the criteria contained in Tables 1-4 of the Water Control Commission (WQCC) Regulation No. 41 – The Basic Standards for Ground Water for a minimum period of five quarters, prior to start of milling activities, to establish baseline conditions at the Site. Once the five quarters concludes the Operator may submit a Technical Revision to reduce the analyte list with sufficient justification.

Please update the analyte tables to show the corresponding regulatory limit for each analyte and provide separate a separate table for each media to be sampled at the Site.

19. Adequate.

**Appendix C-2:**

20. Adequate.

**Appendix C-6:**

21. Adequate, as the Applicant has committed to submitting a Technical Revision to address how the pumped water, estimated to be 370,000 gallons, will be removed and managed.

**EXHIBIT D – Reclamation Plan (Rule 6.3.4):**

22. Adequate.

**EXHIBIT E – Maps (Rule 6.3.5):**

23. Adequate.

24. Adequate.

25. Adequate

26. Adequate.

27. Adequate.

28. Adequate.

29. Adequate.

**EXHIBIT F – List of Permits and Other Licenses Required (Rule 6.3.6):**

30. Please provide an update on the status of the Plan of Operations with the BLM and USFS for relevant areas of the permit.

**Applicants Response**

Colorado Milling Company is awaiting Bureau of Land Management review of the Plan of Operations submittal. Colorado Milling Company is awaiting US Forest Service review of the utility right-of-way

application submittal. CMC has inquired as to each application's review status multiple times and been repeatedly told "it is pending" by each agency.

**DRMS Follow-up**

**30a.** Please keep the Division apprised of any progress that is made on either Plan of Operation.

- 31.** On February 24, 2023 the Boulder County Community Planning and Permitting Department provided the Division with a comment letter that was subsequently forwarded to the Applicant. In the letter it states the site may not be in compliance with County Land Use Code. Please provide more information on this subject and what steps are being pursued to determine whether the site is in compliance or not.

**Applicants Response**

A formal appeal has been filed with Boulder County. A copy of this appeal was provided to CDRMS under a separate cover.

**DRMS Follow-up**

**31a.** Please keep the Division apprised of the status of the appeal with Boulder County.

**EXHIBIT L – Permanent Man-made Structures (Rule 6.3.12):**

- 32.** Exhibit L states there are structure agreements attached, however the Division was unable to locate the structure agreements. Please provide the missing documents.

**Applicants Response**

Structure agreement certified mail receipts were provided to CDRMS in a document on March 27, 2023.

**DRMS Follow-up**

**32a.** Pursuant to Rule 6.3.12(b) where such an agreement cannot be reached, the applicant shall provide an engineering evaluation that demonstrates that such structure shall not be damaged by activities occurring at the mining operation. The Applicant should be prepared to provide the appropriate engineering evaluation for structure agreements that have not been signed.

**EXHIBIT U - Environmental Protection Plan (EPP) (Rule 6.4.21):**

- 33.** On page U-2 the Applicant states groundwater samples are collected and analyzed for the analytes listed in Table U-4. However in Appendix C page C2-2 Table 2 the listed analytes are different. Please clarify this discrepancy and note comments made for Appendix C above.

**Applicants Response**

Sampling discussion has been consolidated to Appendix C-2 for simplicity and clarity. Analytes sampled for are standardized as much as possible, i.e. sampling for lead in both soil matrix and water matrix but only sample acid generating potential in a soil matrix.

**DRMS Follow-up**

**33a.** Please see comments in 18a above.

**34.** Adequate.

**35.** Adequate.

**36.** Adequate, however the Division has requested additional information that is relevant to this item.

**37.** Please provide the missing information pursuant to Rule 6.4.21(13)(a) and (b).

**Applicants Response**

Climate data for the site has been added to Exhibit B, section 5.

**DRMS Follow-up**

**37a.** Pursuant to Rule 6.4.21(13)(a) the Applicant is to provide adequate climatic data representative of the site to perform an acceptable "water balance" for all liquid containment systems open to the environment and intended to contain designated chemicals or acid mine drainage, and demonstrate that the amount of evaporation required to maintain reserve facility capacity will occur, or that there is sufficient reserve capacity to compensate for the uncertainty associated with the data. Please provide the missing data and perform an acceptable "water balance" for the site as indicated by the Rule.

For Rule 6.4.21(13)(b) please clarify if the data provided is for a five year period? The data indicates it is only for a three year period from 2020 to 2023. Also, one set of data for the wettest year on record for the area is missing. Please provide a discussion on specific evaporation and sublimation rates for the Site.

**Objections and Comments:**

**38.** The Division received a timely objections and comments, in accordance with Rule 1.7.1(2)(b), from The Watershed Center, Stephen Strand, Left Hand Canyon Residences, Town of Gold Hill, Boulder Watershed Collective, Gold Hill Fire Protection District, Boulder Flycasters and St. Vrain chapters of Trout Unlimited, Norman Skarstad, Amy Fotunato, Left Hand Ditch Company, John Daspit, and Pine Brook Water District. Please respond to the objections and comments. Please inform the Division if the Applicant does not have a copy of the comments or objections from the parties listed and they will be resent. Additionally the Division received an untimely letter of objection from the Four Mile Fire Protection District and a letter of support from Rene Murphy.

**Applicants Response**

Response letters addressing the issues of each of the commenting entities have been mailed to those parties. Copies of these letters will be provided under separate cover.

**DRMS Follow-up**

**38a.** Submission of the letters remains outstanding.

**Other:**

**39.** Adequate, however there are additional items from Lucas West that need to addressed.

**40.** Adequate.

**41.** Adequate.

**42.** Adequate.

**New Items:**

**43.** In Exhibit D the Applicant states that mulch stockpiles are shown on Map E-2. The Division was unable to locate the indicated stockpiles on the map. Please revise the map to show the indicated stockpiles.

**44.** Please provide a justification for leaving the monitoring wells in place after the five quarters of monitoring following final reclamation at the site, page D-5 section 1.9. If sampling shows that impacts to the hydrologic balance have been minimized and the permit is eligible for release the monitoring wells should be plugged and abandoned according to relevant statutes. Please note costs associated for plugging and abandoning wells needs to be added to the reclamation cost estimate for the site.

**45.** Table U-2 is incomplete as the Ore Pad Status cell is blank, please fill in the blank cell.

**46.** On page U-5, section 4.1 it is stated that no Boulder County permits or land use approvals are required. However in section 5 on page U-6 it states that Boulder County land use approval is needed. Please clarify this discrepancy and update the sections as needed for consistency and clarity.

**47.** On page U-6, section 4.2, there is no mention of the Plan of Operations needed from the US Forest Service, please update this section.

**Other:**

**48.** Please respond the Adequacy Review Letter No. 2, included as Attachment 1, from Lucas West.



49. Pursuant to Rule 1.6.2(2), please demonstrate that the Applicant's response to these adequacy issues have been placed with the application materials previously placed with the County Clerk or Records Office, and made available for public review

Please respond to these adequacy issues no later than three weeks before the decision deadline, to ensure ample time for the Division to complete its review prior to its decision deadline. **The current decision due date for this application is September 20, 2023.** If additional time is required to respond to these adequacy issues please submit a written request for extension of the review period. The Division reserves the right to further supplement this document with additional adequacy issues and details as necessary.

If you need additional information or have any questions, please contact me by telephone at **303-866-3567 x8114**, or by email at [patrick.lennberg@state.co.us](mailto:patrick.lennberg@state.co.us).

Sincerely,

A handwritten signature in blue ink, appearing to read "Patrick Lennberg".

Patrick Lennberg  
Environmental Protection Specialist

Attachments: Gold Hill Mill, CN-1, Adequacy Review Letter No. 2 by Lucas West

cc: Jared Ebert; DRMS  
Lucas West, DRMS

ec: Ben Langenfeld, Lewicki & Associates, PLLC, [benl@lewicki.biz](mailto:benl@lewicki.biz)

## **Attachments**



July 5, 2023

Ben Langenfeld, P.E.  
Lewicki & Associates, PLLC  
3375 West Powers Circle  
Littleton, CO 80123

**RE: Gold Hill Mill, File No. M-1994-117, Conversion Application (CN-1) Additional Adequacy Review-2**

Dear Mr. Langenfeld:

The Division of Reclamation, Mining and Safety (Division) is in the process of reviewing the above referenced application in order to ensure that it adequately satisfies the requirements of the Colorado Mined Land Reclamation Act (Act) and the associated Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for Hard Rock, Metal, and Designated Mining Operations (Rules). This portion of the review is primarily focused on Exhibits C and U as well as their appendices. During review of the material submitted, the Division determined that the following issue(s) of concern shall be adequately addressed before a decision can be rendered.

**Appendix C-5; Tailings Storage Facility As-Built**

1. Appendix C-5 of the Adequacy Review Responses contained a new set of Factor of Safety calculations as performed through Galena Analysis and the results are noted to be mostly above the minimum required Factor of Safety of 1.5. However the Factor of Safety calculation conducted at the time of construction were considerably less. Please provide a narrative interpreting the Galena Analysis results and address the significant difference in calculations between the two sets of data.

**Exhibit U- Environmental Protection Plan (EPP) - Rule 6.4.21**

There appears to be a Page number discrepancy, the numbering begins for several pages then begins again. Please correct this discrepancy moving forward.

2. On Pg. U-1 of the revised Exhibit U it is stated that "These tailings will be stored in the Tailings Storage Facility to allow for dewatering and then stored in a permanent embankment on-site or used as part of Paste Backfill Operations." The Division infers the "permanent embankment" to be the Tailings Storage Facility after reclamation is complete, however there is no other details anywhere in the application nor the approved permit that allows for paste backfill. If paste backfill operations are contemplated a significant amount of detail will be required, as well as possible permitting the the US EPA's UIC Class V Program. Please provide more details regarding paste backfill operations such as, deposition method including the use of binders, location, volume, geologic information of the deposition location, correspondence with EPA indicating permitting requirements through the UIC program, etc. Alternatively, please clarify if



paste backfill is not contemplated at this time. Please note, that if paste backfill operations would like to be pursued at a later date, it will need to be addressed through the Division's Revision process.

3. Sections 1.5.1 and 1.5.2 on Pg U-2 give general details regarding liner and pipe installation however it is unclear what liners and pipes this specifically applies to. Please clarify the EPF(s) that sections 1.5.1 and 1.5.2 apply to.
4. Section 2.7 provides that the Mill Building with three working levels has a containment capacity of 200,000 cubic feet. To support the narrative, please provide a table showing the volumes in gallons of all tanks, lines and slurry bearing equipment including the thickener within the building compared with the containment volume in gallons to demonstrate adequate containment capacity. Additionally please provide a profile view drawing of the mill building with its three working levels.
5. Table U-3 on Pg. U-2 gives the amount of chemicals to be stored on site as well as dosing information. At the provided rate of consumption, it appears that there are excesses and deficits of chemicals on site. i.e. soda ash would need to be delivered nearly daily at the given rate of production and consumption. Please clarify if the given amounts and dosing in Table U-5 are correct, if they need to be adjusted please revise the table and any other applicable sections of Exhibit U.
6. Additionally, Table U-3 and Map E-7 do a better job discussing and showing reagent storage onsite, however no volumetric demonstration was provided. Please provide the volumetric demonstration that both the interior and exterior containment structures, including segregated internal sections of the containment structures are adequate.
7. Section 1.4 references Table U-2 as the reference on where to find the requested information regarding the Environmental Protection Facilities, however the details requested for the Mill Building, Chemical Storage, Tailings Transport system and Ore pad were not provided. For the Mill Building please provide an as-built package with drawings in both plan and profile view, certified and stamped by a licensed P.E. pursuant to Rule 7.3.2(2). For the Chemical Storage Areas, Tailings Transport System and Ore Pad, please provide detailed construction drawings, construction schedule, proposed incremental inspection points with QA/QC checks during construction pursuant to Rule 7.3 and 7.4. Please note that certified as built packages will be required upon the completion of construction to be accepted, and no EPF may be used until certification documentation is provided by the Division.
8. Section 7 beginning on Pg. U-7, which is supplemented by appendix U-1 discusses the various chemicals to be used. However the narrative nor supporting documents discuss the chemicals known potential to affect human health, property of the environment, or the fate of designated chemicals to be used in the extractive metallurgical process. Pursuant to Rule 6.4.21(5) please provide this information for each chemical covered in section 7 of the application. Additionally please provide more detail regarding mixing and delivery into the mill systems as requested in the Division's Preliminary Adequacy Review.

9. Section 8, Facilities Information only discusses the Reagent Storage Area and fails to address the other Environmental Protection Facilities. The Division understands that most of the information may be found elsewhere, however at a minimum a summary of each facility that addresses the requirements of Rule 6.4.21(7) should be included. Please provide a narrative that addresses the requirements of Rule 6.4.21(7) of **each** of the EPF's listed in Table U-2.
10. Section 7 is stated to pertain to Designated Chemicals only, however when compared with Table U-3 and the MSDS sheets found in the Materials Containment Plan, Section 7 failed to address Methyl Isobutyl-Carbinol (MIBC) which is considered a designated chemical by the Division. Please revise Section 7 and Table U-4 to address MIBC as a Designated Chemical.

The Division will continue to review your application and will contact you if additional information is needed. Based on the additional information requested please update all applicable exhibits, tables, maps and drawings where necessary. If additional changes are made please annotate them in your responses. If you require additional information, or have questions or concerns, please contact me at the Division's Grand Junction Field Office, by phone at 303-866-3567 Ext. 8187 or by email at [lucas.west@state.co.us](mailto:lucas.west@state.co.us).

Sincerely,



**Lucas West**  
Environmental Protection Specialist  
Division of Reclamation, Mining and Safety

Cc: Patrick Lennberg, DRMS  
Jared Ebert, DRMS