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## CMC RESPONSE LETTER FINAL .docx

1 message

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**Mark Steen** <goldtontine@gmail.com>  
To: Amy.Eschberger@state.co.us  
Cc: Mark Steen <goldtontine@gmail.com>

Sun, Dec 9, 2018 at 11:28 AM

Amy Eschberger:

Attached to this email is the Colorado Milling Company, LLC's Response Letter to the Adequacy Review of the Application for an Amendment to the Gold Hill Mill Limited Impact 110(2) Permit No. M-1994-117. This Response Letter does not have the Attachments that are referenced in the text. The Attachments are being scanned and downloaded, and they will be sent to you in a PDF as soon as they are ready. I will also be filing a hard copy with the DRMS tomorrow. If you need more time to review this Response Letter, please let me know, and I will send you a letter extending the time for you to review everything. Thank you for your assistance with this Adequacy Review Response Letter.

Mark A. Steen  
Colorado Milling Company, LLC

Sent from my iPad



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**COLORADO MILLING COMPANY, LLC**  
**P.O. Box 1523**  
**Longmont, Colorado 80502**

Colorado Division of Reclamation, Mining and Safety  
Amy Eschberger  
Environmental Protection Specialist  
1313 Sherman Street – Room 215  
Denver, Colorado 80203

December 8, 2018

**RE: Gold Hill Mill; DRMS File No. M-1994-117: Adequacy Review No. 1 (AM 01)**

Attention: Amy Eschberger

This is the Colorado Milling Company, LLC's Response Letter to the Michael Cunningham's Adequacy Review of the Application for an Amendment to the Gold Hill Mill Limited Impact 110 (2) Permit No. M-1994-117, to formally add the previously permitted Left Hand Creek Pump Station, Gold Hill Mill Pipeline, and the Times Mine adit portal to the affected land boundary of the Gold Hill Mill Permit. These three features are collectively referred to as the Gold Hill Mill Waterline in this Response Letter. In order to ensure that the responses to the Division of Reclamation, Mining and Safety's request for additional information and clarification can be properly reviewed, the responses are set out below each of Michael Cunningham's Adequacy Review comments. A separate cover letter for each of the responses that require additional material is attached to this Response Letter.

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1. The Division received comments from Boulder County Parks and Open Space, Boulder County Land Use Department, Colorado Historical Society, Division of Water Resources and Pine Brook Water District. The comments have been attached for your review, please make any changes to the application as necessary.

**CMC Response:** The comments received by the DRMS do not require any changes to the Application for an Amendment to the Gold Hill Mill Permit No. M-1994-117. The addition of the Left Hand Creek Pump Station, Gold Hill Mill Pipeline, and the Times Mine adit portal to the affected land boundary of the Gold Hill Mill Permit have either already been addressed in the previous Permit Application that was approved by the Colorado Mined Land Reclamation Board or are being addressed in this Response Letter. The terms and conditions of the Water Pipeline Easement Deed with Boulder County will be monitored by the Boulder County Parks and Open Space Department as the Gold Hill Mill Waterline is installed and operated by the Colorado Milling Company, LLC (CMC). Boulder County Land Use Department determines that CMC needs any building permits to proceed with its activities, they will be obtained from the County Land Use Department. The Office of Archaeology and Historic Preservation has not recorded

any properties of historical significance on this property. If CMC discovers any human remains during the installation of the Gold Hill Mill Waterline, it will follow the requirements under CRS 24-80 part 13. The Colorado Division of Water Resources raised the issue of the Left Hand Ditch Company shares not being decreed to allow for the proposed milling use. A copy of the Water Court Decree for these shares is appended to this Permit Amendment Application. The concerns raised by the Pine Brook Water District do not include any specific ones that need to be addressed by CMC in this Response Letter.

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2. As required by Rule 1.6.2(d) and 1.6.5(2), please submit proof of publication in a newspaper of general circulation in the locality of the proposed mining operation.

**CMC Response:** As required by Rule 1.6.2(d) and 1.6.5(2), proof of publication in the Boulder Daily Camera is attached to this Response Letter.

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3. As required by Rule 1.6.2 (e), please submit proof of the notice to all owners of record of surface and mineral rights of the affected land and the owners of record of all land surface within 200 feet of the boundary of the affected land including all easement holders located on the affected land and within 200 feet of the boundary of the affected land. Proof of notice may be return receipts of a Certified Mailing or by proof of personal service.

**CMC Response:** As required by Rule 1.6.2 (e), CMC is submitting proof that notices were sent to all owners of record of surface and mineral rights of the affected land and to the owners of record of all land surface within 200 feet of the boundary of the affected land including all easement holders on the affected land and within 200 feet of the boundary of the affected land. The addition of the permitted Gold Hill Mill Permit boundary has resulted in only one more land owner within 200 feet of that boundary. Proof of notices by Certified Mailing and proof of personal service is attached to this Response Letter.

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4. Pursuant to Rule 1.10(2), a 110 Amendment Application is not required to contain information which duplicates applicable previous submittals. However, the Applicant shall clearly describe where, in the original Application and supporting documents, the information not included in the Amendment Application, but necessary to render the Amendment technically adequate, may be found. The Amendment Application contains several references to the approved Reclamation Permit. The Applicant shall revise the Application Exhibits which reference the approved Reclamation Permit, to include the specific document name(s) and date(s) in which the existing information may be found.

**CMC Response:** CMC has revised the Application Exhibits to include specific references to the previously approved Cash Mine Limited Impact Permit No. M-1983-141, and the 1985 Amendment to the Cash Mine Permit, which included the Gold Hill Millsite and Tailings Impoundment Area. Copies of the corrected pages are attached to this Response Letter. In addition, CMC is attaching copies of Exhibit D: Wildlife, Water Resources, Vegetation and Soils

Information from the Cash Mine Limited Impact Permit Application for the benefit of anyone interested in this information.

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## **Application**

5. The latitude/longitude coordinates provided on page 3 of the Application Form do not correspond to the primary mine entrance location. Please review and revise the latitude/longitude coordinates on page 3 of the Application Form to correspond with the primary entrance to the Gold Hill Mill.

**CMC Response:** This has been reviewed and revised by the Registered Mineral Surveyor retained by CMC to prepare all the maps submitted with this Application for an Amendment to the Gold Hill Mill Limited Impact Permit. A corrected copy of page 3 of the Application Form is attached to this Response Letter.

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### **6.3.1 Exhibit A – Legal Description and Location Map**

6. Pursuant to Rule 6.3.1(1), the legal description must identify the affected land, specify affected areas and be adequate to field locate the property. The legal description provided under Exhibit A only describes the affected land of the 0.797 acres which are being added to the existing permit area of 8.4 acres. Please revise the legal description to include the entire affected area of the Gold Hill Mill operation.

**CMC Response:** Exhibit A- Legal Description and Location Map has been revised to include the entire area affected by the Gold Hill Mill operation. A copy of this corrected page is attached to this Response Letter.

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7. Pursuant to Rule 6.3.1(2), the latitude and longitude coordinates of the main entrance to the mine must be labeled. Please revise the Location Map to include the coordinates of the mine entrance.

**CMC Response:** The Location Map has been revised to include the coordinates of the entrance to the Gold Hill Mill. These are the coordinates for the entrance gate into the Gold Hill Millsite: Latitude 40 Degrees 03 Minutes 55.7 Seconds North; Longitude 105 Degrees 24 Minutes 12.1 Seconds West.

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8. Pursuant to Rule 6.3.1(3), the Location Map must show the names of all immediately adjacent surface owners of record. Please revise the Location Map to show the names of all immediately adjacent surface owners for the entire affected area of the Gold Hill Mill operation. In addition, the Location Map must contain a label with the mine site name.

**CMC Response:** Map E-2, Surface Ownership & Permit Area has been revised to show the names of all immediately adjacent surface owners of record for the area affected by the inclusion of the Gold Hill Mill Permit boundary. These are shown on Map E-4, Surface Ownership and Permit Area for the entire area affected by the Gold Hill Mill operation.

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### **6.3.2 Exhibit B – Site Description**

9. Pursuant to Rule 6.3.2(b), all permanent man-made structures within 200 feet of the affected area and the owner of each structure must be identified. The list of structures must be revised to include the owners of each structure. In addition, the list must be revised to include any permanent man-made structures within 200 feet of the entire affected area of the Gold Hill Mill operation.

**CMC Response:** There are three small wooden frame structures located on the Mammoth Millsite MS Licksillet Road. It is owned by James K. McCumber and Amy Fortunato, P.O. Box 1927, Boulder, Colorado 80306. There is a single family residence, several sheds and an unused corral located on the Eureka Millsite MS No. 601B. The Eureka Millsite has a property address of 4801 Licksillet Road. It is owned by Gene L. Sapp and Dene F. Sapp. These are the only permanent man-made structures located within 200 feet of the entire area affected by the Gold Hill Mill operation.

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10. Exhibit B states three permanent man-made structures are located within 200 feet of the affected area. This contradicts the statement made under Exhibit L which indicates there are seven permanent man-made structures within 200 feet of the affected area. Please clarify this discrepancy and make the necessary changes to the appropriate Application Exhibit.

**CMC Response:** Exhibit L – Permanent Man-Made Structures has been revised to include any permanent man-made structures within two-hundred (200) feet of the operation or affected land as well as structures that are not on the Boulder County Assessor's list of Improvements on the Mammoth Millsite MS No.17576 and the Eureka Millsite MS No. 601B.

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11. Exhibit B references the approved Reclamation Permit for a complete list of native vegetative species and wildlife species found at the site, as well as water quality sampling and analytical data from sampling the water in Left Hand Creek. Please revise Exhibit B to include a specific reference to this information. Please see additional comments under Item No. 4.

**CMC Response:** Exhibit B has been revised to include a specific reference to this information.

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### **6.3.3 Exhibit C – Mining Plan**

12. Pursuant to Rule 6.3.3(1)(a), the Applicant is to specify the estimated date that mining will

end. The Division understands the life of the mine is in part determined by commodity prices. Please provide an estimate of the date that mining will end based on current commodity prices. In addition, provide an estimate of how long the mill can operate at full capacity before the tailings impoundment is full.

**CMC Response:** The currently permitted mine dumps located at the Cash, Who Do, and White Cloud mines and the mill stockpile contain a minimum of 92,000 tons of material that are available for processing in the Gold Hill Mill. Based upon a 50 ton per day operation at 260 days of operation per year, there are at least 7 years of mine dump production available from this source of feed for the mill. In addition, there are 37,100 tons of Indicated and Inferred Ore Reserves in the permitted Cash mine which will take a minimum of 3 years to process. Based upon these currently available resources, if milling operations commenced on May 1, 2019, milling operations would cease sometime in 2028 or 2029. This production estimate does not include any additional resources that would become available as a result of an increase in precious metal prices, or any successful exploration and development of ore reserves on the many veins that are accessible from the Cash Mine's Third Level Cross-Cut. It also does not include any future possible production from the Rex, Tammany, Victoria, Black Cloud, Who Do, Prussian, and Slide Mines, or the many hundreds of thousands of tons of mine dumps that are available for future processing in the Gold Hill Mill. Any of these activities would extend the life of the operation far beyond the period of cessation of milling operations stated above.

The available tailings capacity in the existing impoundment is estimated at 5,000 tons. Based upon milling operations at 50 tons per day, the mill can operate at full capacity for one-hundred (100) days without raising the embankment.

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13. The Division requests the following information regarding the installation of the Gold Hill Mill Pipeline:

- a) Specify the length of the pipe segments which will be used to construct the Gold Hill Mill Pipeline.
- b) Specify the number of welds required to fuse the pipe segments together.
- c) Specify the QA/QC procedures which will be used to verify the pipe segment welds were performed properly.
- d) Specify the pressure rating of the HDPE pipeline.
- e) Calculate the potential surge pressure within the HDPE pipeline.

**CMC Response:** The following information regarding the installation of the Gold Hill Mill Pipeline is provided to answer these questions:

- a) The High Density Polyethylene (HDPE) pipe segments that will be used to construct the Gold Hill Mill Pipeline are fifty (50) feet in length.

b) Two welds will be required to fuse each of the pipe segments together. If the entire length of the Gold Hill Mill Pipeline is installed using HDPE pipe it will require a minimum of 94 welds to fuse the pipe segments together. However, it has been determined that the lower 1,500 to 2,000 feet of the Pipeline will be installed using two (2) inch diameter galvanized steel pipe that comes in twenty-one (21) foot lengths. This will reduce the number of welds required to fuse the HDPE pipe to a maximum of 64 welds.

c) The HDPE pipe segment welds will be field tested using compressed air and an air pressure gauge to determine if the welds were performed properly. This will be done as each 1,000 foot length of the HDPE pipeline is installed. Any leaks detected by this test work will be addressed by the workers installing the pipeline by repairing the welded segments before any water is pumped up from Left Hand Creek. At the conclusion of the installation of the Gold Hill Mill Pipeline, when water is first pumped from the creek, the pipeline will be inspected along its entire length for any water leaking from the welded segments. Inspections will be conducted to ensure that the Gold Hill Mill Pipeline is not leaking water, and repairs will be made according to the manufactures' guidelines for this activity.

d) The pressure rating for the HDPE pipeline is 230 psi. For the galvanized steel pipeline, the pressure rating is between 600 and 700 psi, depending upon the location of the pipe.

e) The surge pressure within the HDPE pipeline is 300 psi during recurrent surges and 400 psi during occasional surges.

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12. [Duplicate number 12] Specify the depth and total length of each segment of the pipeline to be buried.

**CMC Response:** The lowermost portion of the Pipeline will be buried at a depth of three (3) feet for a length of one-hundred (100) feet from the point of intake at Left Hand Creek to ensure that access can be obtained across the property in the future. The only other place where the Pipeline will be buried is where it crosses the old mine access road below the Red Cloud and Cold Spring mine dumps. It will be incased in a steel pipe and buried at this location at a maximum depth of three (3) feet for a length of approximately fifteen (15) feet.

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13. [Duplicate number 13] Identify where the check valves and anti-siphon valves will be installed by labeling these features on a revised Mining Plan Map.

**CMC Response:** There will be five (5) check valves placed along the length of the Pipeline. These will be located every one-thousand (1000) feet along the length of the Pipeline. An anti-siphon valve will be installed in the two (2) inch HDPE pipeline inside the Times Mine adit to relieve air pressure when the Bean pump is pushing the water column up from Left Hand Creek. A check valve has already been installed inside the Times Mine adit to prevent water flowing from behind the bulkhead in the future. Four of these five (5) check valves are identified on Map E-1 Mine Plan and on Map E-2 Gold Hill Mill Waterline Map attached to the Response Letter. The fifth check valve is located inside the Times Mine adit.

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14. Clarify if the pump will have an automatic shut-off system installed or otherwise describe what measures will be used to ensure the pump does not continue to operate in the event there is a failure of the pipeline.

**CMC Response:** The Bean pump will have a water pressure sensitive automatic shut-off valve installed to ensure that the pump does not continue to operate in the event there is a loss of water pressure or a failure of the Gold Hill Mill Pipeline.

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15. The Operator has committed to removing the existing pipeline before installing the new 2” HDPE pipeline. Please clarify if there are any segments of the existing pipeline which must be excavated. If so, provide an estimate of the size of the area which must be excavated and describe how the land will be stabilized to prevent erosion and siltation of the affected lands and offsite areas.

**CMC Response:** The existing pipeline was placed on the surface of the land except for one very short segment. The only segment of the existing pipeline which will need to be excavated is the fifteen feet that was buried where it crossed the old mine access road below the Red Cloud and Cold Spring mine dumps. This will be done when the new pipeline is installed, and it will be buried to a maximum depth of three (3) feet by approximately fifteen (15) feet in length. There will be very little land surface disturbed by this excavation, and the decomposed granite that is removed during this activity will be distributed along the access road below the excavation.

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16. Specify if any trees will need to be removed during installation of the Gold Hill Mill Pipeline. If trees will be removed, specify how the woody materials would be put to a beneficial use as required by Rule 3.1.9(2).

**CMC Response:** There are very few large living trees that will need to be removed to install the Gold Hill Mill Pipeline. The Boulder County Parks and Open Space Department will be consulted regarding this activity. The installation of the new pipeline will follow the previous waterline, where the trees were cut and cleared when the first pipeline was installed. The entire length of the Gold Hill Mill Pipeline has been inspected several times during the preparation of this Response Letter, and most of the trees that will have to be removed from the Waterline and Access Easement are dead trees. The only use for the dead trees that will have to be removed is for firewood.

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17. Provide a description of the piping and other infrastructure which will be placed directly in Left Hand Creek.

**CMC Response:** The only infrastructure that will be placed directly in Left Hand Creek will be a metal box with trash screens. A two (2) inch steel pipe will be used to extract water from Left Hand Creek.



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18. Specify the total volume of fuel which will be stored at the pump house, if any. In addition, describe the secondary containment which will be used to contain all stored fuel.

**CMC Response:** The Bean pump will be powered by a diesel generator unless the Public Service Company is granted access by the owners of the Mammoth Millsite MS No. 17576 to install a pole and transformer and power box to run the pump with electricity. The maximum total volume of fuel that will be stored at the pump house is 300 gallons. This fuel will be stored in a standard metal container approved for fuel storage. The Bean pump and the generator will be installed within metal containment frames that will retain any fuel or lubricants inside the pump house, where they can be properly managed.

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19. Clarify if there is any other existing infrastructure in addition to the PVC pipeline which must be removed before the new HDPE pipeline is installed.

**CMC Response:** No. There is no other existing infrastructure in addition to the three (3) inch and two (2) inch PVC pipeline which must be removed before the new Gold Hill Mill Pipeline is installed to improve the existing Gold Hill Mill Pipeline.

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20. The proposed location of the pump house and footbridge is within the floodplain of Left Hand Creek and this area was heavily impacted by the floods of 2013. Pursuant to Rule 3.1.6(1), disturbances to the prevailing hydrologic balance of the affected land and of the surrounding area and to the quantity and quality of water in surface and groundwater systems shall be minimized. The Division is concerned the pump house and associated infrastructure has the potential to be mobilized during a flood event. If this were to occur, the generator would likely release fuel or oil into the floodwaters. In addition, there is the potential the pump house could become lodged on the upstream side of any bridges located downstream of the pump house location, causing a further impediment to the passage of floodwaters. Please describe how the Operator intends to minimize these potential impacts during a flood event

**CMC Response:** The pump house is a 10 by 8 foot metal “conex” container. It will be located outside of the area affected by the 2013 flood. The pump house and the metal fuel container will be located on the deeded easement on the Golden Gate Millsite well above the Left Hand Creek floodplain. The metal pump house that will contain the Bean pump and generator weigh more than 8,000 pounds, and it is very unlikely that it could be mobilized during a flood event and release fuel or oil into the floodwaters. The nearest bridge located downstream from the pump house is the one that accesses the Slide Mine. This bridge is nearly a quarter of a mile below the location of the pump house. With the pump house and the associated fuel tank located on the Waterline Easement on the Golden Gate Millsite MS No. 5149A, the Left Hand Creek Pump Station will be situated above the floodplain. The footbridge will be situated well above the highest observed level of Left Hand Creek at this location during the 2013 flood. It is constructed of metal and weighs more than 1,500 pounds. It will be located on the Western side of the Pump Station boundary where Left Hand Creek is quite narrow.

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21. The approved Reclamation Permit allows the Operator to store water in the underground working of the Times and Wynona Mines. The Reclamation Permit states there is sufficient capacity within the Times and Wynona Mine to store water to be used in the operation of the mill. The Operator's water right will allow a maximum of 22.53 acre-feet per year to be diverted from Left Hand Creek. The Division requests the following information related to the storage of water in the Times and Wynona Mine:

- a) Specify the total volume of water which can be stored in the underground workings of the Times and Wynona Mines.
- b) Provide a detail drawing which depicts all portions of the Times and Wynona Mines which would be used to store water and which shows how the Times and Wynona Mines are connected.
- c) Provide a description of how water will be discharged into the mine and specify where within the Times Mine the water will be discharged. The description shall account for any supporting infrastructure associated with the delivery of water.

**CMC Response:** The following information relates to the storage of water in the Times and Wynona Mines:

- a) The total volume of water that can be stored in the underground mine workings of the Times and Wynona Mines is in excess of 1,400,000 gallons of water.
- b) The underground mine workings in the Times Mine were mapped by Russell R. McLellan in 1947. It is attached to this Response Letter. The underground mine workings in the Wynona Mine were mapped by A.E. Reardon in 1934 and confirmed by Russell R. McLellan in 1947. A detailed drawing of the Wynona Mine is attached to this Response Letter.
- c) Water will be pumped into the Times Mine by way of a three (3) inch pipeline that was installed through the existing concrete bulkhead in 1987. The new two (2) inch HDPE pipeline has been connected to this pipeline with a standard transition coupling. A check valve has been installed adjacent to this coupling to prevent water stored behind the bulkhead from flowing out of the Times Mine. An anti-siphon valve will also be installed in this HDPE line to release air pressure ahead of the column of water that is being pushed up the Gold Hill Mill Waterline from the Left Hand Creek Pump Station.

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22. The Operator's water right allows for diversion of 10.4 acre-feet of water per dry year and 22.53 acre-feet of water in a wet year. Please clarify how a dry year versus a wet year is determined

**CMC Response:** The determination of a wet year verses a dry year is made by the Left Hand Ditch Company. This determination is made based upon the history of water flow in Left Hand

Creek, and the Left Hand Ditch Company advises its shareholders how much water is available for consumption on a pro-rata share of the water available from Left Hand Creek.

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23. The approved Reclamation Permit references a bulkhead within the Times Mine. A review of the permit file found the Division does not have any information about the bulkhead. Please confirm there is a bulkhead within the Times Mine and provide a detail drawing of the bulkhead, a description of the how the bulkhead was constructed, and specify where within the Times Mine portal the bulkhead is located.

**CMC Response:** The bulkhead was constructed fifty-four (54) feet behind the original portal of the Times Mine adit, which was driven in solid country rock. The Times Mine bulkhead is now situated one-hundred (100) feet from the metal door of the five (5) foot diameter galvanized steel culvert that provides a safe and secure entrance into the Times Mine. The bulkhead is three (3) feet thick and was constructed of concrete and rebar in a wooden form in 1987. There are three PVC pipes set within the concrete bulkhead. One is a three (3) inch intake pipe situated in the upper right hand portion of the bulkhead. Another, two (2) inch pipe is situated in the lower middle of the bulkhead. A third one and one half (1 1/2) inch pipe is situated in the lower left hand portion of the bulkhead. All these pipes are closed with ball valves, and none of them are leaking water.

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24. The Reclamation Plan includes a statement which indicates there is the potential for water to flow from the Times Mine adit. Please verify if the Times Mine currently retains groundwater. In addition, clarify if there have been seasonal discharges of groundwater from the Times Mine during periods when the mine has been inactive and provide the Division with the results of water quality sampling within the Times Mine, if available.

**CMC Response:** There is no ground water flowing from the portal of the Times Mine adit. There have not been any seasonal discharges of groundwater from the Times Mine during the periods when the mine has been inactive, because the Times Mine was thoroughly sealed by the concrete bulkhead constructed in 1987. When the bulkhead was last examined in September 2018, no water was leaking anywhere from behind the bulkhead. The Times Mine still retains water from the last period when water was pumped behind the bulkhead. There have not been any water samples taken within the Times Mine since the bulkhead was constructed in 1987, and there are no water quality sampling results available to provide to the DRMS.

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25. The Operator is proposing to store fresh water from Left Hand Creek in the underground workings of the Times and Wynona Mines. As required by Rule 6.3.3(1)(j), specify how the Operator will ensure there is no injury to existing water rights as a result of comingling fresh water with groundwater. The Operator has stated a meter will be installed at the pump to monitor the amount of water diverted from Left Hand Creek. How will the Operator monitor the amount of water which is pumped from the Wynona?

**CMC Response:** The use of underground mine workings to store process water is a common practice in the mining industry. Many of the mining and milling operations that were historically active in Colorado used underground mine workings for this purpose, as well as to dispose of mill tailings. The decision to store water for milling purposes in the Times and Wynona underground mine workings was arrived at after carefully considering the geology and hydrology of this area. The builders of the Gold Hill Mill did not purchase shares in the Left Hand Ditch Company with the intention of building a costly pumping station and water pipeline in order to observe how fast this expensive water could flow out of underground mine workings. This underground water storage plan was approved by the Mined Land Reclamation Board after a thorough investigation of the proposal by the DRMS when it was first submitted in the original Amendment to the Cash Mine Permit in 1985. CMC is complying with the approved operating permit for the Gold Hill Mill by installing the Left Hand Creek Pump Station; replacing the Gold Hill Mill Pipeline; and utilizing the Times Mine adit bulkhead to store water underground for milling purposes.

Prior utilization of the approved Times and Wynona Mines for underground water storage (circa 1987-1988) successfully demonstrated that no downgradient water rights or wells were impacted, or otherwise injured during the course of operations at the Gold Hill Mill. There are no identified water rights or wells that are at elevations equal to or higher than the underground mine workings in the Times and Wynona Mines in this area. The closest downgradient well is situated approximately 3,670 feet to the Northeast of the Times Mine adit at an elevation of 7,475 feet. This is approximately 905 feet lower than the portal of the Times Mine. The significant distance and difference in elevation between the underground workings in the Times and Wynona Mines and the nearest water well virtually precludes comingling of fresh water pumped from Left Hand Creek with groundwater having any negative impact on these water rights. As noted above, water has been stored behind the Times Mine bulkhead for more than thirty years. There has not been a single claim made by anyone during the ensuing three decades asserting that their water rights have been injured by the water that was stored in the Times and Wynona Mines.

Inasmuch as the Times and Wynona Mines are being utilized for underground water storage, only inflows will be monitored at the Left Hand Creek pump location; and, in a similar manner, withdrawals will be monitored where the water is pumped into the Gold Hill Mill from the Wynona wellhead. An operational balance is required in order to sustain milling operations. Operating at 50 tons per day for 260 days per year and at 4 tons of water per ton of ore processed would result in the removal of 1,651,000 gallons of water per year. This is well below the maximum volume of water that could be withdrawn from Left Hand Creek during the irrigation season, which is 3,388,850 gallons of water. The difference of 1,737,850 gallons of unconsumed water insures that the downstream users of Left Hand Creek will not suffer any injury.

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26. As noted above, the Operator will comingle fresh water pumped from Left Hand Creek with groundwater which is currently in the underground mine workings. As required by Rule 6.3.3(1)(i), describe how mining will affect the quality of groundwater and describe the methods used to minimize disturbance to the groundwater systems.

**CMC Response:** The Times mine adit is situated at an elevation of 8,355 feet. The Times Mine Cross-Cut extends 395 feet in a southeasterly direction towards the Wynona Mine, where it was driven 190 feet along the Times vein. The Times Mine is connected with the Wynona Mine's First Level workings by way of a 50 foot deep winze. The Wynona Mine shaft is collared at an elevation of 8,445 feet and is 210 feet deep. It has total of four levels, with two main working levels that extend 1,500 feet towards the northeast and the southwest. These two levels were driven along the Wynona vein at a depth of 100 feet and 205 feet below the Wynona Mine shaft's collar. The water that will be stored behind the Times Mine bulkhead will fill down to the Second Level of the Wynona Mine by way of the 50 foot winze and the 210 foot shaft. The elevation of the bottom the Wynona shaft is 8,235 feet.

Because of the crystalline nature of the of the Boulder Creek granite where these underground mine workings are located, the ground water that is found in this area is only present where the granite has been fractured. Generally, the openings of these fractures (joints and faults) decrease in size with increasing depth, and the chances of obtaining groundwater in any volume is significantly reduced below a depth of 300 feet. The water recharge is by seepage through small joints and voids and intergranular spaces in a diffuse groundwater system. The movement of water in these granitic rocks is very slow and shows little response to changes in precipitation. The groundwater that is present in these rocks probably migrates downward and laterally through a northeast-southwest trending fracture system. All of the veins near the Times and Wynona Mines are particularly narrow and tight, and contained within very competent wallrocks that are nearly impervious. Water that has been pumped from the any of the mines in this district and stored underground behind bulkheads has remained at a nearly constant level behind those bulkheads throughout the year. Water has been stored behind the Times Mine bulkhead for thirty-one years. The historic use of these underground mine workings for water storage has not disturbed the prevailing hydrologic balance of the surrounding area. The quality of the fresh water pumped from Left Hand Creek behind the Times Mine bulkhead is not anticipated to introduce any adverse impacts on the quality of the groundwater found in any mine workings in this area. The elevation and location of the underground mine workings of the Times and Wynona Mines, and the impermeable nature of the wallrocks, insures that there will be no disturbance to the groundwater system.

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27. The Mining Plan calls for installing a footbridge over Left Hand Creek. Please clarify why a footbridge is necessary if the pump house will be located on the south side of Left Hand Creek.

**CMC Response:** The installation of a footbridge over Left Hand Creek is necessary to provide access to the pump house for employees to inspect and maintain the pumping operations, because there is no deeded easement across the Mammoth Millsite MS No. 17576A.

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28. As required by Rule 6.3.3(1)(h), specify how much water will be used in conjunction with the operation. The estimate may be based on annual consumption rates when the mill is operating at full capacity.

**CMC Response:** When the Gold Hill Mill is operating at its full capacity of 50 tons of ore per day and 260 days of operation per year, the annual consumption rate will be 1,651,000 gallons of water. This is well below the 3,388,850 gallons of water that can be pumped from Left Hand Creek during a dry year.

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29. The Hazel A adit was previously utilized to manage the water balance at the mill. The authorization to use the Hazel A adit was primarily based on a lack of adequate storage capacity within the tailings pond to contain a 100 year – 24 hour storm event. On August 5, 1998, the Division approved Technical Revision No. 3, which addressed the expansion of the tailings pond and eliminated the need to utilize the Hazel A adit for additional water storage capacity. On November 11, 2002, the Division received correspondence from Mr. Steen which confirmed the Hazel A adit would no longer be used to store water. A review of the permit file found there are a number of unresolved issues relating to water storage within the Hazel A adit. In order for the Division to determine if the Hazel A adit and attending infrastructure should be included in the affected area; the following information must be provided.

a) Clarify if the decant lines, which connected the tailings pond with the Hazel A adit were removed. If so, provide documentation to demonstrate the removal and proper disposal of the decant lines. (*Inspection Report dated May 20, 1999, noted the decant lines were still in place.*)

b) Demonstrate the tailings placed within the Hazel A adit were removed. (*In a letter dated October 10, 1995, the Division informed the Operator the tailings which were deposited behind the bulkhead within the Hazel A adit were to be removed and deposited in the tailings pond. On November 21, 1995, the Division approved a plan for removal of tailings within the Hazel A adit. In a letter dated, December 15, 1995, the Operator submitted a letter which indicated the tailings were removed. In a letter dated December 17, 1997, the Division noted the Operator had not demonstrated the tailings had been removed from the Hazel A adit. On August 14, 1998, the Operator acknowledged the tailings within the Hazel A adit must be removed.*)

c) Clarify if the bulkhead is still present within the Hazel A adit.

d) Clarify if a discharge permit has been obtained for the Hazel A adit. (*In a letter dated December 17, 1997, the Division notified the Operator the adit would not be allowed to free drain until such time as a discharge permit was obtained from the Water Quality Control Division. Alternately, the Operator could petition the Water Quality Control Division for a finding that discharges from the adit do not require a discharge permit.*)

**CMC Response:** The Hazel A adit has not been a part of the Gold Hill Mill operation since its decommissioning in 1999, and CMC has no plan to use it in the future. The following information should assist the DRMS in the resolution of these issues:

a) The decant lines which connected the tailings pond with the Hazel A adit were disconnected by the undersigned, when it became apparent that Colino Oro Molina's on-site Mill Superintendent, J. Wayne Tatman, was incapable of mastering the operation of the water valve attached to the decant water line. The water line was removed during the period when ITEC Environmental was the permitted operator of the Gold Hill Mill. At that time, the entire length of that PVC pipeline was cut up and hauled away as trash. This was done sometime in 1999.

b) All of the tailings that were deposited behind the wooden bulkhead in the Hazel A Mine by J. Wayne Tatman, were vacuumed out of the mine at the expense of the company responsible for the tailings being deposited in the mine, Colina Oro Molina. This occurred in December of 1995. The actual tailings vacuuming operation at the Hazel A Mine was overseen by Richard L. Fanyo, Esq., an on-site attorney representing Colina Oro Molina.

c) The wooden bulkhead is still present within the Hazel A adit.

d) The Hazel A mine is not discharging water. Colina Oro Molina did not obtain a discharge permit.

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30. Please provide a comprehensive list of the chemicals which will be used at the mill, including total volumes. In addition, provide a comprehensive inventory of all chemicals currently stored at the mill, including the volume of each chemical stored. This information is necessary to evaluate whether this operation meets the definition of a designated mining operation and to calculate the required financial warranty.

**CMC Response:** As originally permitted, the Gold Hill Mill used standard flotation reagents to process ore from the Cash Mine dump. These were pine oil, soda ash, and a xanthate. There have been many advances in the reagents used in flotation concentration since the mill was constructed in 1986-1987, and it is anticipated that different flotation reagents will be used in the future to improve recovery. Before CMC resumes processing operations in the mill, it will furnish the DRMS with a comprehensive list of the chemicals it will be using in the mill, including the total volumes that will be on hand at the beginning of milling operations.

The following chemicals are currently stored at the Gold Hill Mill in their original shipping containers: Aerofroth 68 Frother, 2,150 lbs.; Sodium Isopropyl Xanthate Aero 470, 55 gallons; Aero 3477 Promoter, 55 gallons; Sodium Isopropyl Xanthate, 55 gallons; Aero 470 Promoter, 25 gallons; 25 bags of soda Ash weighing 80 lbs. each.

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31. The approved Reclamation Permit specifies xanthate will be used in the mill. Please specify the type of xanthate which will be used.

**CMC Response:** The type of xanthate that will be used in the Gold Hill Mill has not yet been determined. It is anticipated that the mill will process batches of 500 tons of material from the Cash Mine stockpile to determine which combination of reagents will be used during initial

milling operations. Once a combination of reagents that results in the best recovery has been determined from these mill tests, these reagents will be used during future processing operations. CMC anticipates that whatever flotation reagents it determines are most suitable and provides the best recovery for the various ore minerals found in the Gold Hill Mining District, that it will become a Designated Mining Operation (DMO) and require an Emergency Response Plan. Therefore, as soon as CMC begins planning to commence milling operations, it will notify the DRMS that it will be applying for DMO status for the Gold Hill Mill Permit No. M-1994-117.

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### **6.3.4 Exhibit D – Reclamation Plan**

32. Section No. 1 of the Reclamation Plan references an incorrect permit number (M-1999-117). Please correct this section of the Reclamation Plan. In addition, specify where within the permit file the pertinent documents may be found. See additional comments under Item No. 4 of this letter.

**CMC Response:** The Reclamation Plan Permit Number should be Permit No. M-1994-117. The Reclamation Plan has been corrected to reflect this change. A copy of this corrected page is attached to this Response Letter.

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33. The Reclamation Plan states the water pipeline within the Times Mine adit will be decommissioned by capping the pipeline to prevent water from discharging from the mine. The Division will require the pipeline to be removed or grouted for its entire length. Please revise the financial warranty estimate to account for this reclamation task.

**CMC Response:** The one-hundred (100) feet of water pipeline within the Times Mine adit will be removed up to the concrete bulkhead where it will be cemented to prevent water from discharging from the mine. The removal of this pipeline and the grouting will require five hours of labor to remove the pipeline and cement the three PVC pipes that are present in the Times Mine bulkhead. This will require 1 Miner at \$40/hour x 5 hours = \$200, plus 1 Laborer at \$18/hour x 5 hours = \$90 for a total of \$290 to cut and remove one-hundred (100) feet of pipe and cement three PVC pipes that extend through the three (3) feet of concrete bulkhead. The only supplies that will need to be purchased for this reclamation task is one bag of cement costing \$30. The total estimated cost for completing this task is \$320. This revision to the financial warranty estimate has been added to the Reclamation Cost Estimate on Exhibit D – Reclamation Plan of the Gold Hill Mill Permit Application Amendment. A copy of this corrected page is attached to this Response Letter.

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34. The reclamation cost estimate is structured as an incremental acreage increase, which is based on the cost of the individual reclamation tasks applied on a per acre basis. The Division does not calculate financial warranties solely on the basis of acres disturbed, but rather on the specific reclamation task which must be accomplished. Therefore, any increase over the current financial warranty amount of \$56,200.00 must account for the full cost of the identified reclamation tasks. Please revise the financial warranty accordingly. The Division



will calculate the required financial warranty once all of the adequacy items have been addressed.

**CMC Response:** This has been revised to a reclamation task based estimate, and a corrected page is being submitted with this Response Letter.

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#### **6.3.5 Exhibit E – Map**

35. The Mining Plan and Reclamation Plan Maps only depict the affected area of 0.797 acres which are being added through the Amendment Application. Please revise both maps so the entire affected area of the Gold Hill Mill operation is depicted.

**CMC Response:** The Mining Plan and Reclamation Plan Maps have been revised so that the entire area of the Gold Hill Mill operation is depicted. The addition of the Gold Hill Mill Waterline to the affected land boundary of the Gold Hill Mill will increase the total permitted acreage to 9.187 acres.

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36. As required by Rule 6.3.5(2)(e), the Mining Plan Map must note the location of any permanent man-made structures within 200 feet of the affected area. Please ensure the structures on the Mining Plan Map can be correlated with the description of the structure owners in Exhibit B.

**CMC Response:** The Mining Plan Map has been revised to show the location of any permanent man-made structures within 200 feet of the affected area. All of the structures on the Mining Plan Map can be correlated with the description of the structure owners on Exhibit B.

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37. The Mining Plan Map does not depict the proposed footbridge. Please revise the Mining Plan Map to include an outline and label for the footbridge.

**CMC Response:** The Mining Plan Map has been revised to depict the proposed footbridge with an outline and label for the footbridge.

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#### **6.3.6 Exhibit F – List of Other Permits and Licenses**

38. The permit file for the Gold Hill Mill contains correspondence from the Bureau of Land Management (BLM) dated April 3, 2013, which ordered an immediate, temporary suspension of operations until such time as a Plan of Operations was approved. Please update the Division on the status of the Plan of Operations. If the Plan of Operations has not been approved, explain why and provide a plan for gaining compliance with the BLM.

**CMC Response:** CMC has prepared a Plan of Operation for the Gold Hill Mill and will be submitting it as soon as the Application for an Amendment to the Gold Hill Mill Limited Impact Permit Adequacy Review has been completed by the DRMS.

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39. The Applicant listed a U.S. Forest Service Plan of Operations as a permit that is potentially required. Please clarify if this permit has been obtained. If so, provide a copy of the approved Plan of Operations.

**CMC Response:** CMC has prepared a Plan of Operations for the Gold Hill Mill's Left Hand Creek Pump Station and will be submitting it as soon as the Application for an Amendment to the Gold Hill Mill Limited Impact Permit Adequacy Review has been completed by the DRMS.

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40. As noted under Item No. 1, the Division received comments from the Division of Water Resources (DWR) regarding the Operator's water right on Left Hand Creek. As required by DWR, provide a demonstration the 20 shares of water have been changed from the originally decreed irrigation use to allow for the proposed mining/milling use. If the appropriate approvals have not been secured to use water in the mill, then Exhibit F must be revised to list either a temporary substitute water supply plan or an augmentation plan as permits or approvals which must be obtained.

**CMC Response:** Attached is a copy of the Water Court Decree for the use of the Left Hand Creek Ditch Company shares owned for the benefit of the Gold Hill Mill.

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41. Specify if the Applicant has contacted the Air Pollution Control Division to determine if an Air Pollutant Emission Notice is required.

**CMC Response:** The Applicant has not contacted the Air Control Pollution Control Division to determine if an Air Pollution Emission Notice is required, because the activities associated with the installation of the Gold Hill Mill Pipeline will not create any air pollution. The generator that will be installed to power the Bean pump has not been purchased as of this date. As soon as one has been purchased, the Air Pollution Control Division will be contacted to determine if the operation of the generator will require a permit. The DRMS will be sent copies of any correspondence between CMC and the Air Pollution Control Division.

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42. Exhibit F indicates a Utility Construction Permit is required from the Boulder County Transportation Department. Please clarify why this permit is necessary.

**CMC Response:** The inclusion of the Utility Construction Permit from the Boulder County Transportation Department was included because a Permit was obtained in order to complete the rehabilitation of the Times Mine adit portal.

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43. Specify if the Applicant will need a floodplain development permit to locate the pump house and attending infrastructure within the floodplain of Left Hand Creek.

**CMC Response:** The new location of the Pump House onto the Water Pipeline Easement on the Golden Gate Millsite MS No. 5149A above the Left Hand Creek floodplain has obviated the need to obtain a floodplain development permit.

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#### **6.3.7 Exhibit G – Source of Legal Right to Enter**

44. The Reclamation Permit for the Gold Hill Mill was issued with a stipulation that no disturbance would occur on the Gold Crown Mining claim until such time as the Operator (Colina Oro Molino) demonstrated a legal right to enter the Gold Crown Mining claim. Please demonstrate Colorado Milling Company, LLC has the legal right to enter the Gold Crown Mining Claim to conduct mining and reclamation.

**CMC Response:** The Gold Crown unpatented lode mining claim is not located near the Gold Hill Mill Pipeline in Akins Gulch, or the Gold Hill Mill on Horsfal Flat. It is located more than 2,000 feet from the Gold Hill Millsite. The Gold Crown Lode is owned by the Colorado Milling Company, LLC, and as the owner of this claim it has the legal right to conduct mining and reclamation on this claim if it is permitted for those purposes.

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#### **6.3.8 Exhibit H – Municipalities Within a Two Mile Radius**

No comment.

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#### **6.3.9 Exhibit I – Proof of Filing with County Clerk**

No comment.

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#### **6.3.10 Exhibit J – Proof of Mailing of Notices to Board of County Commissioners and Soil Conservation District**

No comment.

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#### **6.3.12 Exhibit L – Permanent Man-Made Structures**

45. The Applicant has stated there are seven permanent man-made structures located within 200 feet of the affected land. Please revise Exhibit L to include a detailed list of all permanent man-made structures for the entire affected area of the Gold Hill Mill.

**CMC Response:** Exhibit L has been revised to include a detailed list of all permanent man-made structures located within 200 feet of the affected land. There are no other additional permanent man-made structures for the entire affected area of the Gold Hill Millsite and the Waterline.

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46. As required by Rule 6.3.12, the Applicant shall provide information sufficient to demonstrate that the stability of any structures located within 200 feet of the affected land will not be adversely affected. A statement that mining/milling activities and reclamation will have ‘no negative effect’ on the permanent man-made structures is not sufficient to demonstrate the stability of the structures will not be adversely impacted.

**CMC Response:** After the Gold Hill Mill Pipeline is restored, it will only be used for pumping water from Left Hand Creek to behind the bulkhead located in the Times Mine. There will not be any mining conducted on the property associated with the Gold Hill Mill Waterline. The Gold Hill Mill Pipeline access road will be maintained to provide access to the Water Pipeline Easement. The only other activity associated with the use of this Waterline Easement that is within 200 feet of any structure is foot traffic along the lowermost portions of the Gold Hill Mill Pipeline. The replenishment of the fuel for the generator will not require anything more than a pump and a hose and the use of an ATV to transport the fuel. None of these activities will adversely affect the stability of any of the permanent man-made structures identified on the Mining Plan and Reclamation Plan Maps.

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Please contact me at (303) 651-2985 in Longmont if you have any questions regarding this Response Letter. Thank you and Michael Cunningham for your assistance with this Application for an Amendment to the Gold Hill Mill Limited Impact Permit.

Sincerely,

Mark A. Steen  
For: Colorado Milling Company, LLC