STATE OF COLORADO

Eschberger - DNR, Amy <amy.eschberger@state.co.us>

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Mark Steen <goldtontine@gmail.com> Fri, Jan 4, 2019 at 10:49 AM
To: "Amy.Eschberger@state.co.us" <Amy.Eschberger@state.co.us>

This is the final, complete Response Letter to the Second Adequacy Review Letter. I will bring all of the Attachments to your office today.

DRMS 2ND RESPONSE LETTER[6509]

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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

January 4, 2019

RE: Gold Hill Mill, Permit No. M-1994-117, Amendment Application (Revision No. AM-01), Adequacy Review No. 2

ATTN: Amy Eschberger

This is the Colorado Milling Company, LLC's Response Letter to the Amy Eschberger's December 21,2018 Adequacy Review No. 2 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 Amy Eschberger's Adequacy Review comments.

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Application Form:

1) The revised page 3 of the application form includes the following coordinates for the primary mine entrance location: 40º 03' 55.74"N, 105º 24' 24.12.1"W. The seconds given for the longitude is not accurate. Based on the coordinates provided on the revised location map, the Division believes the longitude should read: 105º 24' 12.1"W. Please correct this error on page 3.

CMC Response: This has been corrected.

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Exhibit B – Site Description (Rule 6.3.2):

2) The operator's response to item no. 9 states the only structures located within 200 feet of the entire affected area are three small wooden frame structures, a single family residence, several sheds, and an unused corral. However, in Exhibit L, the operator states there is a pole-mounted

utility line extending east-west along the northern boundary of the pump station area, owned by Excel Energy Corporation. Additionally, the operator has not included Sunshine Canyon Drive, Lickskillet Road, or Lefthand Canyon Drive, which are all permanent, man-made structures located within 200 feet of the affected area. Please revise the structure list to include these 4 additional structures and their respective owners.

CMC Response: EXHIBIT L -- PERMANENT MAN-MADE STRUCTURES has been revised to list these other man-made structures.

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3) The operator's response to item no. 11 refers to information regarding water quality sampling and analytical data for Left Hand Creek being available in the files for permit nos. M-1983-141 and M-1994-117. Firstly, any information referenced for the amendment under review must be included in the permit file for M-1994-117. If this information is not already included in the permit file for M-1994-117, please provide the information with your response. Secondly, pursuant to Rule 1.10(2), 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 operator did not specify where in the permit file for M-1994-117 the water quality sampling and analytical data for Left Hand Creek can be found. Please specify where this information can be found in the permit file, or provide the information with your response.

CMC Response: A very thorough review of the Gold Hill Mill Permit No. 1994-117 shows that water quality sampling and analytical data for Left Hand Creek can be found filed with the DRMS on the following dates:

ITEC Environmental submitted water monitoring data on April 28, 1998 for the First Quarter of 1998.

Mount Royale Ventures submitted water monitoring data on March 6, 2009 for the Fourth Quarter of 2005 through the third Quarter of 2008.

Gold Hill Mines, Inc. submitted water monitoring data on January 28, 2013 for the Third and Fourth Quarters of 2012. On October 30, 2013 the DRMS approved Technical Revision No. 9, which removed the requirement to sample Left Hand Creek from the water monitoring plan.

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Exhibit C – Mining Plan (Rule 6.3.3):

4) The operator's response to item no. 15 describes only one 15 foot segment of the existing pipeline that will need to be excavated for removal of the pipeline. This buried portion of the pipeline occurs where it crosses the old mine access road below the Red Cloud and Cold Spring mine dumps. The operator states the decomposed granite that is removed during this activity will be distributed along the access road below the excavation. Please confirm the areas to be disturbed for removal of the existing pipeline, including areas where excavated material will be placed will be located within the proposed affected area.

CMC Response: The only small area that will be disturbed for the burial of the new two (2) inch HDPE pipeline is located along the Water Pipeline Easement Deed and within the proposed affected area.

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5) The operator's response to item no. 18 states the maximum total volume of fuel to be stored at the pump house is 300 gallons. The fuel will be stored in a standard metal container approved for fuel storage. The Bean pump and generator will be installed within metal containment frames that will retain any fuel or lubricants inside the pump house. Please clarify whether the fuel storage container will be double-walled. Additionally, please provide details on the proposed secondary containment, including whether it will hold 110% of the maximum storage volume (in this case, 330 gallons). If the fuel tank will be double-walled, its outer shell capacity may be included in the 110% volume calculated for secondary containment.

CMC Response: The maximum total volume of fuel that will be stored at the pumphouse is 300 gallons. The fuel will be stored in a standard single-walled metal container approved for fuel storage. The fuel storage container will be placed within a secondary containment sump which will hold at least one-hundred and fifty (150%) percent of the maximum storage volume of the actual fuel tank selected for this site. This fuel containment sump will be constructed of HDPE, and therefore will not rust or corrode. This sump will be purchased at the same time as the fuel storage tank and will be large enough to contain more than the maximum volume of the fuel stored at the pumphouse.

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6) The operator's response to item no. 19 states there is no other existing infrastructure to remove other than a 3-inch and a 2-inch PVC pipeline. Other portions of the amendment application refer to only one existing 2-inch pipeline. Please clarify if there is more than one pipeline that needs to be removed. Also, please provide an estimate of the maximum length of pipeline to be removed prior to installation of the new pipeline. Please be sure the reclamation bond estimate includes costs for removing all existing pipeline.

CMC Response: There is only one existing pipeline in place on the Water Pipeline Easement. Most of it is three (3) inches in diameter. Some of it is two (2) inches in diameter. This was described in the Amendment Application in Section 14.: Description of Project as follows:

"The Gold Hill Mill's Waterline was initially installed in 1987, with a three (3) inch pipeline that extended from Left Hand Creek to the Times Mine adit portal. Water was pumped from Left Hand Creek on numerous occasions by the then permitted operator, Gold Hill Ventures, Limited Partnership. During the period that COM, Inc. was the permitted operator of the Gold Hill Mill, the lower portion of the water pipeline was replaced with a two (2) inch pipeline, and water was pumped to the Times Mine on several occasions during the period when the mill was controlled by that operator. A portable Bean pump was used to pump the water from Left Hand

Creek to the Times Mine. The pipeline from these initial pumping operations is still in place and will be removed when the new pipeline is installed."

All of the other portions of the Amendment Application refer to the two (2) inch HDPE pipeline that will replace the three (3) inch and two (2) inch pipeline installed by the then permitted operators as described in the above quoted portion of the Amendment Application.

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7) The operator's response to item no. 20 states the pump house (a 10 foot x 8 foot metal connex container) and the metal fuel container will be located well above the Left Hand Creek floodplain, including outside of the area affected by the 2013 flood. Please provide a map of the proposed permit area near the creek which includes the location of the 100-year floodplain of Left Hand Creek with respect to the location of all proposed structures in this area.

CMC Response: The Pumphouse and the metal fuel container with its containment sump will be located well above the Left Hand Creek floodplain and floodway, in order to follow the floodplain management criteria of Boulder County and the State of Colorado. A map of the proposed permit area near Left Hand Creek which includes the location of the 100-year and 500-year floodplains with respect to the location of all proposed structures in this area is attached to this Second Response Letter.

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8) The operator's response to item no. 20 states the footbridge will be situated well above the highest observed level of Left Hand Creek at this location during the 2013 flood. Firstly, please provide the base flood elevation for the section of the creek where the footbridge would be installed, and the anticipated minimum distance above this elevation at which the footbridge would be installed. Secondly, please provide design specifications for the proposed footbridge. Lastly, please state whether a permit will be required for construction of the footbridge (i.e., county bridge construction permit). If so, please commit to providing a copy of any approvals to the Division prior to construction of the bridge.

CMC Response: The footbridge will not be installed as part of this Permit Amendment Application. A field survey has disclosed a gap between the Mammoth Millsite MS No. 17576 and the Paris MS No. 5149A that will provide access to the Pumphouse from Lickskillet Road. This open area is located entirely on the CMC owned Gold Gulch unpatented lode mining claim.

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9) The operator's response to item no. 21 includes maps of the Times Mine and Wynona Mine which were drawn in 1947 and 1934 respectively. These maps do not provide enough details of the workings to sufficiently depict the proposed water storage scenario. Please provide a generalized cross-section of the area between the Times Mine portal and the mill site, showing all underground workings proposed for water storage, including the connection between the Times and Wynona Mines. This cross-section should also include surface features such as the location of the Times Mine portal, Sunshine Canyon Drive, features associated with the mill site, and the shaft from which water would be pumped from the workings to the mill.

CMC Response: CMC is providing a Generalized Cross-Section of the Times Mine Cross-cut below Sunshine Canyon Drive with the 50 foot winze that connects to the Wynona Mine's 100 Foot Level. The Times Mine Cross-cut and the Wynona Mine workings are where the water from Left Hand Creek will be stored for processing ore in the Gold Hill Mill. This water will be drawn from these mine workings from drill holes and pumps that will be connected to these mine workings.

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10) Please clarify how the operation intends to access the waterline easement for pipeline removal, installation, maintenance, and reclamation. Does the operation intend to access the waterline from Lickskillet Gulch? If so, does the operation have a legal right to cross the property between the road and the easement for this purpose?

CMC Response: As set forth in the Permit Amendment Application in EXHIBIT G – SOURCE OF LEGAL RIGHT TO ENTER in the Affidavit Concerning Right to Enter Mining Claims, the Water Pipeline Easement Deed with Boulder County states that said Deed granted a permanent non-exclusive easement on and under said Property for the purpose of:

"Access to and to maintain, repair and improve the existing water pipeline along Lick Skillet Road for the purpose of supplying water from Left Hand Creek to the Gold Hill Mill for Mining and Processing Ore." *(Affidavit Exhibit A)*

CMC will access the Water Pipeline Easement for pipeline removal, installation, maintenance, and reclamation using the four historic mine roads that provide access to the Gold Hill Mill Waterline. The legal right to cross the property between the County Roads and the Gold Hill Mill Waterline was preserved in the Water Pipeline Easement Deed with Boulder County.

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11) The operator's response to item no. 23 states the Times Mine bulkhead is situated 100 feet from the metal door of the 5 foot diameter galvanized steel culvert that provides entrance into the mine. This bulkhead is 3 feet thick and was constructed of concrete and rebar in a wooden form in 1987. There are 3 PVC pipes set within the bulkhead, including a 3-inch intake pipe, a 2-inch pipe, and a 1-1/2- inch pipe, all closed with ball valves. The operator submitted a rudimentary drawing of the existing bulkhead, presumably from the portal side, indicating approximate locations of the three pipes. The description and drawing submitted do not provide enough details for the Division to determine whether the bulkhead was properly designed and installed to be utilized for the proposed water storage. Please provide more details on the design and construction of the bulkhead, including a description of the competency of surrounding bedrock, whether any portions of the surrounding rock were pressure grouted to minimize water seepage, demonstration the bulkhead was designed to withstand the maximum hydrostatic pressure for the proposed water storage, demonstration the bulkhead is sufficiently thick and properly anchored, and an estimated thickness of overlying overburden.

CMC Response: The Times Mine bulkhead is a single concrete bulkhead seal. This type of concrete seal is sometimes referred to as a parallel plug. The bulkhead is situated in a very narrow portion of the Times Mine cross-cut. It is three feet thick and spans the full width and height of the mine. It is estimated that there is at least twenty-four (24) feet of solid Boulder Creek Granite above the top of the concrete bulkhead. It was constructed in a location in the Times Mine adit where the Boulder Creek Granite is very solid, stable and competent. This location is also free of joints and fractures, and no timbers were required to hold the ground in this part of the mine. There was no need to create keyways to anchor the bulkhead, because of the very competent nature of the wallrock in this mine. Pressure grouting impervious Boulder Creek Granite would not have been feasible or necessary to prevent water seepage. There are no water pathways around the bulkhead, and no impounded water has ever been observed leaking around the edges of the bulkhead.

A high strength, acid resistant concrete mixture was used to construct the bulkhead. The concrete that was used to construct the Times Mine bulkhead was mixed underground by hand and placed in wooden forms manually. There was no water present on the floor of the mine when the first concrete was placed into the lowermost wooden forms. The concrete was installed in successive horizontal layers, with the no delay greater than ten or fifteen minutes between mixing and placing the concrete in the wooden forms during the construction of the entire bulkhead. Steel reinforcing rods (rebar) were installed vertically and horizontally in the concrete layers to provide additional strength to the bulkhead. This process took more than five days to complete, which insured that each layer of the concrete was cold before another layer was added to the bulkhead forms. The concrete was worked into the roof cavity in the last wooden forms to ensure that there was a good seal around the back (roof) of the mine bulkhead. Any small, but noticeable voids around the outer edges of the outside of the bulkhead were also filled with concrete. It was installed and in place for more than six months before any water was pumped behind the bulkhead to make certain that the concrete bulkhead was completely cured.

There were no large faults or fractures detected by Russell R. McLellan, Mining Geologist, when he mapped the Times Mine workings in 1947. The very narrow vein that the cross-cut was driven on was not developed for more than one-hundred and twenty-five (125) feet, so there are no old stopes or raises near or above the location of the bulkhead. When the Times Mine was reopened in 1987, the mine workings were examined by a number of people associated with the project. Every geologic and mine feature mapped by Russell R. McLellan was in place. No water inflows were observed, and the mine workings were essentially dry. The underground mine workings were re-surveyed to establish the location for the drill hole that would be used to pump water from the Times Mine. Several weeks were spent hauling all of the old track and any loose wooden timbers out of the mine workings before the concrete bulkhead was installed to ensure that no wooden debris would interfere with the extraction of water from behind the Times Mine bulkhead.

When the Times Mine bulkhead was constructed in the summer of 1987, Gold Hill Ventures, Ltd., was the operator of the Cash Mine and the Gold Hill Mill. The bulkhead was designed by Louis W. Cope, P. E., an independent Colorado Registered Professional Engineer and Gold Hill Ventures, Ltd. retained consultant. It was constructed by two very competent, experienced underground miners who knew what they were building. Practically every Mining Engineers' Handbook ever published in the last hundred years contains a section on constructing underground bulkheads to control or retain water. A review of the literature available at that time discloses that the US Bureau of Mines considered a single three foot thick concrete bulkhead to be more than adequate for this purpose. CMC believes that the Times Mine bulkhead can withstand the maximum hydrostatic pressure for the amount of process water that will be stored behind the bulkhead. The Times Mine bulkhead is three (3) feet thick. At the location of the bulkhead in this narrow point in the Cross-cut, the bulkhead is six (6) feet high and four (4) feet wide. What follows is a calculation for the fluid pressure on the bulkhead:

Maximum Fluid Pressure:

P= D x H D=Water Density 62.4 lbs. / ft3 & H = fluid height in ft.

P= 62.4 x 6'

P= 374.4 lbs. / ft2 or 2.6psi when divided by 144 in2 per ft2

Pressure on bulkhead (using pressure at base, for whole bulkhead 6'x 4' or 3,456 in2)

P = 2.6 psi x 3,456 in2 = 8,985.6 lbs. on bulkhead total height

This would be the maximum load for no more than 6 feet of water for a width of 4 feet where the bulkhead is situated in the Times Mine Cross cut.

Note: The load would decrease with height, such that the pressure at the bottom of the bulkhead is 2.6 psi, while at the top the pressure approaches 0 psi. Since the input pipe is 4.5 feet above the floor, the centroid would be 2.25 feet above the floor of the mine, or 2.25 feet below the water surface.

This is believed to be the maximum pressure that could be present behind the Times Mine bulkhead, with the Cross-cut completely full of water, and it is not more than the bulkhead can safely handle.

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12) What is the maximum elevation at which the operation proposes to store water in the Winona Mine workings versus the elevation of the Times Mine portal, and the collar elevation of the 50 foot winze that connects the Times Mine to the Wynona Mine? Will the operation need to keep water levels below a particular elevation to minimize hydrostatic pressure on the bulkhead? How does the operation intend to monitor water levels in the workings (e.g., pressure transducer with data logger, periodic manual measurements)?

CMC Response: The Times Mine adit portal is located at an elevation of 8,355 feet and the elevation of the collar of the fifty (50) foot winze is approximately 8,360 feet. The Wynona Mine shaft is collared at an elevation of 8,445 feet and the maximum elevation that water will be retained in this mine is 8,360 feet this parameter was incorporated into the bulkhead design by Louis W. Cope, the Colorado Registered Professional Engineer. However, milling operations water demand would provide a constant draw-down on the stored water level in the Times and Wynona Mines. The only time that the water level would rise above the collar of the internal winze connecting the Times Mine with the Wynona Mine would be when full replenishment is accomplished by pumping from of the Left Hand Creek Pumping Station. Given the distance and the rise in elevation between the location of the Bean pump and the Times Mine Bulkhead, it is very unlikely that the pump selected for this project could pump more water into the Times Mine than the amount that would be present in the Times Mine Cross-cut under these parameters. The water levels will be monitored by periodic manual measurements in the Wynona Mine shaft well casing.

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13) The operator's response to item no. 24 states the Times Mine still retains water from the last period when water was pumped behind the bulkhead. Does the operator have any idea of current water levels in the workings? Does the operator have any way to collect water quality samples from the existing mine-pool?

CMC Response: When the Times Mine bulkhead was last examined in September 2018, the water level behind the bulkhead was above the bottom of the three (3) inch PVC pipe shown on the drawing of the bulkhead. Anyone of the three PVC pipes could be used to collect water quality samples from the existing mine-pool, since, as the drawing indicates, there are ball valves on each of the PVC pipes, and they can be opened and closed from this side of the bulkhead.

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14) In accordance with a previous permit commitment made by the operator, once the operation begins storing water in the Wynona Mine, the operator will commence sampling at that location. Therefore, please submit a water quality sampling plan for the Wynona Mine.

CMC Response: The Wynona Mine water will be sampled on a quarterly basis when the operation begins storing water in the mine and when the Gold Hill Mill is in operation. It will be sampled for the same parameters in mg/l (T) as it was previously when the mill was being operated, with the following elements: Arsenic, Cadmium, Copper, Iron, Lead, Mercury, Silver and Zinc, along with pH, Solids (dissolved), and Sulfate as SO4, mg/l.

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15) The operator's response to item no. 25 states that 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. The operator states this amount is well below the maximum volume of water that could be withdrawn from Left Hand Creek during irrigation season, which is 3,388,850 gallons of water. Please clarify the conversion factor that was used to determine the

estimated gallons of water to be used per year by the mill operation. Based on the values given, the Division calculates the operation will use a total of 13,988,520 gallons of water per year [50 tons ore per day x 260 days per year = 13,000 tons ore per year x 4 tons water = 52,000 tons of water used per year; 1 ton water = 269.01 gallons (US liquid); so 52,000 tons water x 269.01 gallons = 13,988,520 gallons water used per year]. If this calculation is correct, the proposed annual water usage for mill operations greatly exceeds the maximum volume of water the operator can withdraw from Left Hand Creek during irrigation season (by 10,599,670 gallons). Please explain this discrepancy.

CMC Response: This discrepancy was a mathematical error. The total amount of water that can be stored in the Times and Wynona Mines is believed to be more than 1,400,000 gallons of water. The amount of water that can be stored in these two mines' workings is believed to be sufficient to allow the Gold Hill Mill to process ore during the time when it will not be pumping water from Left Hand Creek under the conditions of the Water Court Decree. CMC plans to convert the existing tailings pond into a mill water storage facility to make up for any shortfall in water available for processing ore in the Gold Hill Mill.

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16) The operator's response to item no. 26 states that water that has been pumped from 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. Please provide any available monitoring data that supports this statement.

CMC Response: Presumably "any" in the Division's adequacy item above is meant to be "many." The water behind the Hazel A mine bulkhead was monitored on a regular basis when it was part of Colina Oro Molina's permit, and for a short time before ITEC Environmental removed it from being connected to the Gold Hill Mill's tailings pond sometime in April of 1998. A thorough search of the DRMS records has not disclosed any monitoring data, just general statements that the water level behind the Hazel A bulkhead was staying at a constant level.

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17) The operator's response to item no. 26 states 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. Please describe all known mine openings connected to the Times Mine or Wynona Mine workings. Does the operator anticipate any loss of stored water at these openings either directly or via fracture flow?

CMC Response: The only known mine openings connected to the Times and Wynona Mine workings are the Times Mine adit and the Wynona Mine shaft. The operator does not anticipate any significant loss of stored water from behind the Times Mine bulkhead, because in more than thirty years no water has been found leaking from the concrete seal constructed in 1987. The Wynona Mine shaft has been caved from about ten feet down to about seventy or eighty feet below the surface for many years, and no water has ever been observed flowing from the collar of the shaft. The granitic rocks in this area are very competent, and there are no areas around

either of these mines that show any evidence of significant fractures or faulting in the country rocks.

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18) The operator's response to item no. 29 (a) clarified the decant lines which connected the tailings pond with the Hazel A adit were disconnected, cut up and removed from the site in 1999. Please provide documentation to demonstrate the removal and proper disposal of the decant lines.

CMC Response: There is no documentation that demonstrates the removal and proper disposal of the decant lines during the time when ITEC Environmental was actually active as the permitted operator of the Gold Hill Mill. However, on April 15,1998, ITEC Environmental sent a letter to the Division of Minerals and Geology regarding "Water Balance Techniques applied to the Gold Hill Mill, Boulder, Colorado, M-1994-117" stating that "The single 2" PVC line from the Hazel "A" to the pond has been secured and there are no leaks." During that time, the entire length of that PVC pipeline was cut up and hauled away as trash. The PVC pipeline has not been present on the property since that time period, and, consequently, it has not used by any of the subsequent permitted operators of the Gold Hill Mill.

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19) The operator's response to item no. 29 (b) clarified all of the tailings that had been placed within the Hazel A adit were removed in 1995. This contradicts information found in the permit file, including a letter received from the operator on August 28, 1998 stating the operation was in the process of dewatering the Hazel A adit so they could clean out the remaining tailings sands from the adit. This indicates that all tailings were not removed from the adit in 1995. Please provide documentation to demonstrate the removal and proper disposal of these tailings.

CMC Response: A search of the DRMS records shows that on November 21, 1995, Richard L. Fanyo, Esq. sent Carl Mount a detailed plan for dealing with this problem, and that Allen Sorenson sent Carl Mount a memorandum regarding "Removal of Tailings from the Hazel-A Adit, Colina Oro Molino, Inc. (Com, Inc.), Gold Hill Mill, Permit No. M-1994-117." DRMS records indicate that the removal of the tailings was actually completed by December 3, 1995. Allen Sorenson reported to the Mined Land Reclamation Board with a "Board Update" on December 14,1995 that the "Mill tailing impounded behind the Hazel – A bulkhead" requiring a "Corrective Action" to 'Remove tailing from Hazel – A, reestablish and seal bulkhead" with a "Deadline Established by Division of 12/1/95" and a "Deadline Established by Board of 12/10/95" had been dealt with by Colina Oro Molina, Inc., under the heading "Date that Problem was Corrected" with the notation "Tailings removal completed 12/3/95: Operator reports that bulkhead sealing is now complete". On December 18, 1995, Richard Fox, P.E. sent Allen Sorenson a letter describing in detail his examination of the Hazel-A Adit, and there is no mention of any tailings being present.

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20) The operator's response to item no. 29 (d) states a discharge permit has not been obtained from the CDPHE for the Hazel A adit as it is not discharging water. This contradicts information found in the permit file, including a Division inspection report for May 27, 2004 which notes

standing water was observed outside the entrance to the Hazel A adit and within the opening. Please explain this discrepancy. What has been done to ensure zero discharge at the Hazel A adit?

CMC Response: The standing water observed outside the Hazel A adit was caused by intermittent rain water and snowmelt collecting in the depression between the Cash Mine access road and the entrance to the Hazel A adit. This depression was recently leveled by an employee of CMC. The Hazel A mine is not discharging water and a discharge permit is not necessary for the Hazel A Mine.

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21) The operator's response to item no. 30 states the mill originally used standard flotation reagents to process ore from the Cash Mine dump, including pine oil, soda ash, and a xanthate. However, the operator anticipates using different flotation reagents in the future to improve recovery. The Division will continue to review the Designated Mining status of this operation and will formally notify the operator under separate cover of any determination that the operation is, or has a reasonable potential to be, a Designated Mining Operation, in accordance with Rule 7.2.2. Please be advised, an approval of this amendment application would not authorize the operation to store or use designated chemicals on site.

CMC Response: CMC understands that an approval of this Permit Amendment Application would not authorize the operation to store or use designated chemicals on site.

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22) The operator's response to item no. 31 states the operation anticipates processing batches of 500 tons of material from the Cash Mine stockpile to determine which combination of reagents will be used during initial milling operations; and that 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. Please refer to the Division's comments in item no. 21 above. Approval of this amendment application would not authorize the operation to store or use designated chemicals on site. Prior to conducting such activities at the site (including smaller scale operations), the operation must first be converted to a Designated Mining Operation through submittal and Division approval of the appropriate application.

CMC Response: CMC expects to convert the Gold Hill Mill to a Designated Mining Operation through submittal and DRMS approval before conducting any milling operations.

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Exhibit D – Reclamation Plan (Rule 6.3.4):

23) The operator's response to item no. 32 corrected the permit number referenced in the reclamation plan to M-1994-117. However, the response did not specify where in the referenced permit file the pertinent documents may be found, as required by Rule 1.10(2). Please specify where this information can be found in the permit file or provide the mill site reclamation plan with your response.

CMC Response: On July 26, 1995, the Colorado Mined Land Reclamation Board approved Colina Oro Molina's application for a permit for the Gold Hill Mill. This permit's Reclamation Plan essentially followed the original Reclamation Plan filed by the Gold Hill Ventures Limited Partnership on July 20, 1985, which was approved by the Mined land Reclamation Board on September 26, 1985, under the Cash Mine Permit No. M-1983-141. The sole purpose of Colina Oro Molina's Reclamation Plan was to close the Gold Hill Mill and cease further milling operations at this site. Various Reclamation Plan Maps were filed by Colina Oro Molina's representatives and consultants during the time between when they applied for a Reclamation Permit on December 12, 1994, and when it was finally approved on July 26, 1995. None of the documents that were filed by Colina Oro Molina altered the approved Reclamation Plan filed on July 20, 1985. On June 16, 1998, ITEC Environmental became the successor operator to Colina Oro Molina of the Gold Hill Mill Permit No. M-1994-117. Although ITEC Environmental altered the permit boundaries and enlarged and rebuilt the tailings pond, this permitted operator did not revise the original Reclamation Plan filed by the Gold Hill Ventures Limited Partnership on July 20, 1985. Therefore, the pertinent documents may be found under the original Reclamation Plan filed with the Amendment to the Cash Mine Permit No. M-1983-141 on July 20, 1985.

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24) The operator provided a revised reclamation cost estimate that removes language regarding an incremental acreage increase and adds costs for decommissioning the Times Mine water pipeline. However, the estimate does not provide enough details for the Division to calculate the actual costs to reclaim the site based on what it would cost the State of Colorado using an independent contractor to complete reclamation, as required by Rule 6.3.4(2). Please provide more details for the tasks listed in the estimate, including specific structures to be removed, and material volumes, dimensions, lengths, etc. Additionally, please provide an estimated distance to the site at which demolished/removed materials will be disposed.

CMC Response: The only structures that would be removed are the Gold Hill Mill Waterline and the Pump Station. The elimination of the formerly proposed (and subsequently withdrawn) footbridge across Left Hand Creek eliminates some of the time and effort to reclaim the Left Hand Creek Pump Station, but CMC is not reducing the cost estimate because of this decision. The specific structures that would be removed at the Left Hand Creek Pump station would still include the 8 by 10 foot metal conex. The maximum size of the fuel tank that would be inside a containment sump would also be 8 x 10 feet. This would require a Fork Lift and a Flat Bed/Trailer and an operator for this equipment. Two laborers would be needed to assist the Fork Lift and Flat Bed/Trailer operator/driver. This should not require more than one full day to complete this work based on previous experience of the Applicant. However, the maximum time that might be required by an independent contractor could be two full days. The Gold Hill Mill Pipeline will still require two workers cutting the two (2) inch HDPE pipeline into manageable lengths of approximately ten (10) foot lengths and hauling these pipe sections down hill to the nearest of the four historic mine access roads that come in from Lickskillet Road to the Waterline. CMC has estimated that it will take 2 laborers working 8 hours a day for 5 days to complete the removal of the pipeline based on previous experience. A contractor might need seven days to complete this task. If the lower 1,500 to 2,000 feet of the pipeline is installed using two (2) inch galvanized steel pipe in twenty-one foot lengths, the cost of removing the Pipeline

will increase because of the extra time involved in removing these lengths of galvanized steel pipe. Inasmuch as the pipe is still the same two (2) inches in diameter, the volume of pipeline removed will be the same, but an additional two days could be required to remove this portion of the Pipeline. It will be located at the bottom end of the Pipeline, in an area that is fairly flat and is very close to the old mine access road that parallels the Pipeline. All of these features are very close to Lickskillet Road, so the removal of this lower section should be much easier than on the steeper sections of the Pipeline. The distance to the Western Disposal Yard in Boulder is no more than fifteen miles from the lowest point that a Flat Bed/Trailer would be loaded with pipe segments. The average round trip between the Gold Hill Mill Waterline and the disposal site would be less than thirty miles.

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Exhibit E – Map (Rule 6.3.5):

25) The operator's response to item no. 35 states the mining and reclamation plan maps have been revised so that the entire area of the Gold Hill Mill operation is depicted. However, only the revised map labeled E-4 - Surface Ownership and Permit Area shows the entire affected area. The revised map labeled E-1 – Mine Plan shows only the proposed permit area near the creek, and the revised map labeled E-3 – Reclamation Plan shows only the proposed permit area to add through this amendment application. Given the scale of the permit area, the separate maps submitted showing closer views of portions of the permit area are very helpful. However, please submit at least one mining plan map and one reclamation plan map that depict the entire affected area of the Gold Hill Mill operation.

CMC Response: CMC is submitting a Revised E-1 Mine Plan Map to depict all of the permanent man-made structures near Left Hand Creek; a Revised E-2 Surface Ownership and Permit Area Map; a Revised E-3 Mine Reclamation Plan Map; a Revised E-4 Revised Surface Ownership and Permit Area Map; a new map E-5 of the Gold Hill Millsite; as well as a Floodplain Map of the area where the Pump Station will be located above the five-hundred year floodplain. Map E-1 now shows the location of the Power Line and the Power Poles and the location of the FEMA Flood Plain in relation to the permanent man-made structures in this location. Map E-2 shows the new location of the Pump Station and the fuel tank situated on the twelve foot Waterline Easement and the two (2) inch Pipeline up to the Times Mine portal that will be installed under the Mining Plan. Map E-3 shows the Pump Station and the fuel tank and the two (2) inch Pipeline that will be removed under the Reclamation Plan. Map E-4 has been revised to show all of the features from the Left Hand Creek to the Gold Hill Millsite and the property ownership adjacent to the Permit Area. Map E-5 shows the Gold Hill Millsite in relation to the Waterline as it enters the Times Mine portal. Maps E-3 and E-4 depict the entire affected area of the Gold Hill Mill operation.

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26) The operator's response to item no. 36 states the mining plan map has been revised to show the location of any permanent man-made structures within 200 feet of the affected area; and that all structures can be correlated with the description provided in Exhibit B. However, the only revised map labeled Mine Plan is E-1, and this map only shows structures located in the area

near the creek. Please provide a mining plan map that shows the location of all permanent, man-made structures within 200 feet of the entire affected area, including the existing mill site.

CMC Response: Maps E-3 and E-4 have been revised to show the location of all permanent, man-made structures within 200 feet of the entire affected area including the existing Gold Hill Millsite.

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Exhibit F – List of Other Permits and Licenses (Rule 6.3.6):

27) The operator's response to item no. 38 states a Plan of Operations has been prepared for the Gold Hill Mill and will be submitted (to the BLM) as soon as the Division has completed its review of this amendment application. Please commit to providing the Division with a copy of the BLM approval once attained.

CMC Response: CMC commits to providing the DRMS with a copy of the Bureau of Land Management approval once it is attained.

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28) The operator's response to item no. 39 states a Plan of Operations has been prepared for the Gold Hill Mill's Left Hand Creek pump station and will be submitted (to the USFS) as soon as the Division has completed its review of this amendment application. Please commit to providing the Division with a copy of the USFS approval once attained.

CMC Response: CMC commits to providing the DRMS with a copy of the U.S. Forest Service approval once it is attained.

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Exhibit L – Permanent Man-Made Structures (Rule 6.3.12):

29) The operator's response to item no. 45 states Exhibit L has been revised to include a detailed list of all permanent, man-made structures located within 200 feet of the affected land. The revised exhibit states there are 7 permanent man-made structures located within 200 feet of the operation or affected land, as well as an Excel Energy Corporation pole-mounted utility line extending east-west along the northern boundary of the pump station area. The exhibit also states all structures are shown on the E-1 Mine Plan Map. Firstly, the revised list does not include Sunshine Canyon Drive, Lickskillet Road, or Lefthand Canyon Drive, which are all permanent, man-made structures located within 200 feet of the affected area. Please add these structures to the list. Secondly, the Division could not locate the pole-mounted utility line on the E-1 Mine Plan Map. Please be sure this structure is located on the mining plan map.

CMC Response: Exhibit L – Permanent Man-Made Structures has been revised to include the Power Line and Power Poles owned by Excel Energy in this location and they are now depicted on Map E – 1 Mine Plan Map.

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30) Please provide demonstration that structure agreements have been attempted with all owners of permanent, man-made structures located on or within 200 feet of the affected land in accordance with Rule 6.3.12(a) and (c). Demonstration may be in the form of return receipts for Certified Mailing (or proof of hand delivery) and copies of the structure agreements that were sent to each structure owner.

CMC Response: Structure Agreements were hand delivered to Excel Energy and the Boulder County Transportation Department. CMC does not believe that the proposed infrastructure at the Left Hand Creek Pump Station poses any adverse damage potential with respect to the three wooden frame structures that are located on the Mammoth Millsite. The nature of the proposed operations is limited to that normally associated with a small diameter, segmented waterline. No mining operations are proposed along the entire length of the Gold Hill Mill Waterline. There will not even be any excavation at the lower end of the Pipeline, because the Pump Station will be connected with a high pressure rubber hose to the intake that will be inserted in Left Hand Creek to draw water from the creek. The three wooden frame structures on the Mammoth Millsite will not be subjected to shock waves or vibration from the pumping operations, and there is no potential for subsidence since no underground mining operations are ever going to occur in this location. There will be no significant disturbance of the land surface with the installation and removal of the pipeline and the Pump Station because all of the pipe will be set on the ground without the need for any excavation with a backhoe or front end loader. The nearest structure on the Mammoth Millsite is approximately one (100) hundred feet from the two (2) inch pipeline, and approximately two (200) hundred feet from the new proposed location of the Pump Station which will house the Bean pump and the generator in an insulated metal conex. The closest power pole is approximately one (100) hundred feet from the pipeline and nearly two (200) hundred feet from the Pump Station. The relatively insignificant volume of water that can be maintained within a given segment of the Pipeline (due to the line being equipped with check valves every one (1,000) thousand feet and the Bean pump having an automatic shut-off pressure control mechanism) really limits the amount of water that can escape from the Gold Hill Mill Waterline.

The four man-made structures that are located on the Eureka Millsite are covered by a permanent Easement for a Water Line between the owners of the property and CMC which grants access for the purposes of installing, laying, constructing, maintaining, inspecting, repairing, removing, replacing, renewing, using, and operating a Water Line, including the right of ingress and egress for any of these purposes. Gene L. Sapp and Dene F. Sapp granted this Easement on September 24, 2015 to the Colorado Milling Company, LLC. This Water Line easement includes language that requires CMC to restore the real property of the owners of the Eureka Millsite to "as nearly as reasonably possible to its condition prior to any material disturbance from the construction, operation, maintenance, repair, or replacement of the Water Line." A copy of this Easement for the Waterline and Access is attached to this Response Letter.

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31) The operator's response to item no. 46 does not address potential impacts to Sunshine Canyon Drive from utilization of the Times Mine for water conveyance and storage. Given the operator's activities in the Times Mine adit which led to Violation No. MV-2017-036, it is

especially important the stability of Sunshine Canyon Drive be addressed in this amendment application. Please provide a notarized structure agreement with the owner of Sunshine Canyon Drive. If such an agreement cannot be reached, please provide an appropriate engineering evaluation that demonstrates this road will not be damaged by activities occurring at the mining operation in accordance with Rule 6.3.12(b).

CMC Response: CMC and the Boulder County Transportation Department entered into an Agreement to address the stability and safety of that portion of Sunshine Canyon that was damaged when the Times Mine adit's old timbers collapsed. For the last two years, the slope above the Times Mine adit portal has been observed and monitored for any signs of weakness or slope failure. Because the galvanized culvert was extended much further out from the hard rock entrance to the Times Mine Cross-cut, the angle of repose of the material built up over the years is now much less steep than before. Additional material composed of decomposed granite was used to lessen the angle of repose above the Times Mine adit, and the slope above the entrance to the mine appears to have stabilized. The Boulder County Transportation Department was given a notarized Structure Agreement, and it is under consideration and will be forwarded to the DRMS as soon as possible.

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Additional Item(s):

32) The Division previously forwarded all comment letters received for the amendment application during the public comment period that closed on January 24, 2018. Please respond to any jurisdictional concerns expressed by objectors, including the Pine Brook Water District (objection letter enclosed).

CMC Response: CMC responded to everyone who sent the DRMS negative comments about the Amendment Application. Copies of all of the letters that CMC sent to the objectors, including the Pine Brook Water District are attached to this Response Letter.

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33) The Division accepts the operator's response to comments received from Boulder County Parks and Open Space, Boulder County Land Use Department, Colorado Historical Society, and Division of Water Resources. Please address any concerns or recommendations in agency comment letters received from the U.S. Army Corps of Engineers (February 6, 2018; comment letter enclosed) and the City of Boulder Public Works (March 5, 2018; comment letter enclosed).

CMC Response: CMC addressed any concerns and accepted the recommendations of the U.S. Army Corps of Engineers by contacting the Boulder County Engineer's Office about obtaining a Floodplain Development Permit for the installation of the lowermost portion of the Gold Hill Mill Waterline. This will now be limited to the flexible hose and the metal screened box that the intake pipe will be inserted into to pump water from Left Hand Creek under the terms of the Water Court Decree obtained on October 2, 1985.

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34) Pursuant to Rule 1.6.2(e), the operator must submit proof of the notice 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 owners. To comply with this Rule, the operator submitted copies of return receipts of Certified Mailing. However, the following receipts were copied in a way that portions of the Certified Mailing number are not visible: Gene Sapp and Dene Sapp, Rene Murphy, and Finnlandia Minerals. Please either provide the Certified Mailing numbers for these receipts, or submit new copies of these receipts which show the entire Certified Mailing number.

CMC Response: The Certified Mailing Numbers for the receipts showing proof of notice to these adjacent landowners are as follows:

Gene Sapp and Dene Sapp: 7017 2400 0000 8703 5451; Rene Murphy: 7017 2400 0000 8703 5413; and Finnlandia Minerals: 7017 2400 0000 8703 5345.

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35) Please remember that, pursuant to Rule 1.6.2(1)(c), any changes or additions to the application on file in our office must also be reflected in the public review copy which was placed with the County Clerk and Recorder. Pursuant to Rule 6.4.18, you must provide our office with an affidavit or receipt indicating the date this was done.

CMC Response: CMC will provide the DRMS with a file stamped receipt or an affidavit from the Boulder County Clerk and Recorder's Office.

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Please contact me at (303) 651-2985 in Longmont if you have any questions regarding this Response Letter.

Sincerely,

Mark A. Steen
For: Colorado Milling Company, LLC