



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

June 10, 2024

Eric Detmer
Climax Molybdenum Company
Highway 91 - Fremont Pass
Climax, CO 80429

RE: Climax Mine, File No. M-1977-493 , Technical Revision (TR-37) Adequacy Review-2

The Division of Reclamation, Mining and Safety (Division) received your responses to Adequacy Review #1 for TR-37 on May 17, 2024. The Division has reviewed all material submitted to date and determined that the following issue(s) of concern shall be adequately addressed before a decision can be rendered.

Adequacy Review #1 - Outstanding

- 4) The LBS PLS/Acre listed in Table E-2, E-4, and E-6 do not sum to the totals and subtotals listed in the table - please clarify. Revised LBS PLS/Acre sum to the total and subtotals as currently listed. However, on Table E-7.1.4 Hydric Seed Mix, the Mertens Rush LBS PLS/Acre is 0.00. Please provide a LBS PLS/Acre for this species and update table totals.
- 13) Disposal of Reagents - The Division cannot assume that the mill would operate until all mixed chemicals as Nokes Reagent in solution would be consumed by the milling process. Please provide an inventory of Nokes by the typical volume(s) located on site. The Division will also account for those chemicals mentioned in TR-28 Table T-A-1. Please also designate the chemical state (solid or liquid) and if they are hazardous vs non-hazardous for disposal. No updated discussion provided yet.

New- Exhibit L – Bonding Specific

Open Pit

- 1) What is “Grade west open pit periphery”? How is this different from the overburden and topsoil grading or final finish grade?
 - a) Task is not included on L-17 but provided under CSV as a volume of 26,560.
 - b) What is the material consistency and push gradient?
- 2) What is the material consistency of the “Haul overburden-Waste rock removal task”?

Physical Address: 1313 Sherman Street, Room 215, Denver, CO 80203 P 303.866.3567 F 303.832.8106
Mailing Address: DRMS Room 215, 1001 E 62nd Ave, Denver, CO 80216 <https://drms.colorado.gov>
Jared S. Polis, Governor | Dan Gibbs, Executive Director | Michael A. Cunningham, Director



- 3) What is the push gradient associated with spreading/grading the 27,000 CY of topsoil at the Open Pit?
- 4) Where is the overburden associated with task 110.8 being hauled from? The CVS states Arkansas Basin while L-2 and Table 1 state haul from mill and Ceresco Ridge. Is 15,840 LF the average haul distance of all of these locations?
- 5) What is the number of acres to be revegetated at the Open Pit? This is the area being covered by the 27,000 CY of topsoil. Table E-8 states 241.1 associated with the Mill and Pit area.
- 6) Please verify the number of "No Trespassing" signs to be installed around the open pit. According to L-2 40 signs will be installed vs the CVS state 41 signs.
- 7) Has the 2,800 LF of pipe for the dewatering system been installed to date?
 - a) If not, it needs to be bonded until it has been installed. Please provide cost data for installation of this feature.

Mill Complex

- 8) CVS Cost data covers 236 ac to be reclaimed while page L-17 states 241 ac to be reclaimed. Please clarify the number of acres to receive topsoil and be revegetated.

North 40 OSF

- 9) 1,919,000 cy of material will be graded to a 2H: 1V. What is the push gradient used?

McNulty OSF

- 10) Please clarify the total volume of cover material to be used at McNulty OSF. CVS Cost data states 2,187,00 CY between 3 piles, while page L-16 states 2,206,000.
- 11) 9,253,000 cy of material will be graded to a 2H: 1V. What is the push gradient used?
- 12) 60,000 cy of material will be graded for the haul road. What is the push gradient used?

Tenmile Tunnel

- 13) Is the TDL considered hazardous or can it be buried in place?

Ten Mile TSF

- 14) Please clarify the total volume of cover material to be used at Tenmile OSF. CVS Cost data states 2,121,032 CY between 5 piles, while page L-4 and L-14 states 2,077,000.
- 15) The 2019 estimate includes a task for pumping (Dredge and Pump Sludge to Tunnel) which accounts for 388.26 hrs and \$87,098. No mention of this task was included in this estimate. Please either provide bonding information or a justification as to why the Division no longer needs to bond for this item.

3 Dam

- 16) Please provide the haul distance and grade for the 94,000 CY of cover material to be transported.
- 17) Is additional revegetation required in touch up areas for installation of the new channel? If so please state how many acres?

Pond Shop

- 18) How many acres are associated with revegetation at the Pond Shop?
- 19) Please provide the haul distance and grade for the 538 CY of cover material to be transported.

Mayflower Seepage Collection Building

- 20) Please clarify the total volume of cover material to be used at Mayflower Seepage Collection Buildings. CVS Cost data states 2,690 CY while Exhibit L states 2,700.
- 21) Similarly the total amount to be graded varies between 33,873 CY and 34,000 CY.

Robinson TSF

- 22) Please clarify the total volume of cover material and backfill to be used at Robinson TSF. Total volumes (cover + import) vary between the CVS Cost data and page L-5 and L-13 by approximately 54,000 CY.
- 23) What is the total number of acres to be revegetated? 457 ac and 455 ac are referenced on page L-5. Table 1 states 457 ac.

Roads

- 24) Will any contouring/grading be required or are roads only going to be topsoiled?
- 25) Several road segments were identified on the CVS Cost Data. Slopes and seed mixes will vary site wide, please provide the following information by road segment.
 - a) How many acres of roads are associated with each seed mix type?
 - b) What is the CY of material to be hauled for cover material to each segment?
 - c) What is the haul distance and grade for each segment?
 - d) Will ripping (decompaction) be employed? If not, provide rationale.
- 26) What areas are covered under the Misc. Roads?

Robinson Lake

- 27) On the CVS Cost Data there is an item "Pre-Excavation Work and Water Management" which costs \$519,326. Please describe what is associated with this cost? This information should also be described in other applicable exhibits.
- 28) On the CVS Cost Data there is an item "Finish Work" which costs \$129,000. Please describe what is associated with this cost? This information should also be described in other applicable exhibits.

- 29) 30,000 CY of waste rock from McNulty OSF is called out to build the temporary haul platforms on the CVS Cost Data. Is 30K the total amount of waste rock to be used or is it 15k and the 30k is the total volume to be hauled to and from Robinson Lake?
- a) Please confirm if waste rock will be returned to McNulty OSF. If the material will be hauled to a different location, please provide haul distance and grade.
- 30) What is the material type for hauling of the temporary platform?
- 31) Please clarify the seed mix to be used at Robinson Lake. CVS states Alpine, while pages L-6 and L-15 say Hydric/Wetland.
- 32) Does the 43 acres to be reclaimed at Robinson Lake include revegetation of the temporary haul platforms once removed?
- 33) The CVS mentioned installing 1,720 LF of Clean surface water channel at Robinson Lake. However, L-6, Table 1 states 3,100 LF between Robinson Lake and Eagle Park Reservoir and Chalk Mountain Reservoir to Robinson Lake. This means that based on L-6, 1,380 LF of clean water channel is unaccounted for. Please address.

5 Dam

- 34) Please clarify the total volume of cover material to be used at 5 Dam. Total volume on the CVS Cost data is 196,170 CY while page L-6 and L-13 state 197,000 CY.
- 35) Page L-7 states that 2,800 LF of a Clean Water Surface Channel will need to be constructed. While Table 1 item 103.7 and the CVS states that 2,900 LF is required. Please clarify the total distance of the new channel to be installed.

Underground Mine Openings

- 36) Will any grading or earth work take place in addition to the concrete seals?
- 37) Please provide total job hours per closure for the four openings.

Impacted Water Treatment

- 38) Commit to providing the Division with the actual additional cost for Molybdenum WTP within 6 months of the plant operating.
- a) Until such time, please provide an anticipated cost.

Maintenance, Monitoring and Environmental Controls

- 39) Please provide cost data for the 13 water monitoring wells to be plugged and abandoned.
- 40) How many hours annually are associated with Water Quality Monitoring? *Annual hours will be multiplied by 30 yrs.

Demolition Tasks

- 41) The reclamation plan states that foundations greater than 3ft below final grade will be pulverized and left in place. While any foundations closer than 3 ft to final grade will be removed.
 - a) Please indicate which foundations will be pulverized vs. removed.
 - b) Also indicate where removed materials will be disposed of. If on site, please provide haul distance and grade information.
 - c) No cost data for foundations/footers were provided under the Demolition -Structure CVS, only removal of superstructures were accounted for. Please include cost data for the various foundations and footers based on their disposal methods.
- 42) Please address how you will decontaminate concrete which has come into contact with reagents. Additional clarifications may need to be made under other exhibits as well.
- 43) Open Pit Phase 2 Shop was previously noted to be 400 x 80 x 70 in the 2019 calc. In the CVS it is listed as 440 x 80 x 70. What is the actual size?
- 44) The new mill building volume was previously listed as 11,497,500 CF while the 2024 estimate states 11,563,825 CF. Please confirm the actual size of this structure.
- 45) The Supply Canal No. 2 Pipeline volume was previously listed as 393 CF while the 2024 estimate states 565 CF. Please confirm the actual size of this structure.
- 46) The following structures were included on the 2019 bond calc but were not a part of the 2024 estimate. Have they been removed? Or has the structure been renamed?
 - a) "Chalk Mountain / Robinson Lake Sub" with dimensions of 20x8x8
 - b) "Carv Substation - Superstructure" 28x20x15,
 - c) "Carv Substation – Floor" 10x20x12
 - d) "Old Hospital Sub - Super Structure" 60x30x
 - e) "Old Hospital Sub - Floor" 44x8x12
 - f) "Tailings Delivery House Substation" 8x8x8
 - g) "Tailings Delivery House Substation - Containment Cell" 8x8x12
 - h) "3 Dam Pumpstation" 36x30x30
- 47) Two separate line items for decommissioning (\$150K and \$250K) are included on the Demolition-Structures CVS. Please provide a detailed list as to what items are covered under each of these items to make up the lump sum.
- 48) Does decommissioning of the mill include cleaning (decontamination) of all the tanks and equipment prior to removal?
- 49) Please elaborate as to what is covered under the \$100,000 associated with "Remove Regulated Materials" on the Demolition-Structures CVS
- 50) Will the Seep Pump Stations ever be removed, or are they expected to operate indefinitely? If at the end of the 30 year period water treatment ceases, they too should be removed. Please clarify and address this concern.

Misc. / All

- 51) What is the material description, materials cycle time and bucket fill factor for Loading/Hauling of the Cover Material?
- 52) For the bedding material. Please provide the: material description, material type, materials cycle time and bucket fill factor for Loading/Hauling of the Bedding Material?
- 53) E-6.2 states that cover material may be ripped to reduce compaction.
- a) Specifically, which areas will be ripped, and how many acres by area are anticipated?
 - b) What is the average ripper distance per pass?
 - c) If ripping is not employed, will other surface roughening/seedbed preparation take place?
- 54) There was no mention of removing culverts. If roads will be removed the culverts should be removed as well. Please provide an itemized list of all applicable culverts which includes length, diameter and building material. Clarify the disposal method.
- 55) Please provide the updated 2024 cost for 30" corrugated HDPE Installed (RS Means 33 31 11.20 3160)

Please submit your response(s) to the above listed issue(s) by **Friday, June 21, 2024**, in order to allow the Division sufficient time for technical review. The current decision due date is **July 29, 2024**. If any adequacy issues remain by the decision due date the Division may deny your request. The Division will continue to review your Technical Revision and will contact you if additional information is needed.

If you require additional information, or have questions or concerns, please feel free to contact me.

Sincerely,



Amy Yeldell

Environmental Protection Specialist

Ec:

Travis Marshall, Senior EPS, DRMS
Dustin Czapla, DRMS
Todd Jesse, DRMS
Alex Ungers, Climax